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Inspection & Assessment in relation to Bats & Breeding Birds

November 2024

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The Wells Centre

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Manchester

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Executive Summary

As part of a proposed planning application with Manchester City Council concerning The Wells Centre in Clayton, Tyrer Ecological Consultants Ltd carried out a daytime preliminary roost assessment in relation to bats with an inclusive inspection for breeding birds in October 2024.

The survey was commissioned by Drees & Sommer; proposals entail the decarbonisation of the site through the incorporation of an Air Source Heat Pump (ASHP), which is understood to be placed on existing hardstanding, and the installation of a PV solar panel on the roof.

Detailed methods, findings, conclusions and recommendations are presented throughout the report; however, the reader should be aware of the following **Key** points:

Biodiversity Gain

Based on the information gathered during the diurnal assessment, the site is host to the following biodiversity value:

- Habitat: **0.49**
- Hedgerow: **0.00**
- Watercourse: **0.00**

However, based upon the information provided at the time of writing, it is understood that the ASHP to be installed at the site will be placed within an existing hardstanding area to the north of the building.

*As such The Wells Centre is likely **exempt** from the Biodiversity Gain Planning Condition under the de minimis exemption; the proposals do not impact on any priority habitats, and less than 25m² of area habitat onsite will be affected (no watercourse or hedgerow units are present).*

Bats:

Based upon the findings of the DBW and associated GLTA, covered through sections 5.0 – 6.0 of the report and supported by **Appendix I**, The Wells Centre is categorised as pertaining to a bat roost suitability of '**None**', in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.		
Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).

No further surveys in the form of dusk/dawn emergence / re-entry surveys are therefore recommended owing to a total absence of PRFs or suitability noted at the building.

Breeding birds:

No impacts are applicable in relation to any Sch.1 (WCA) specially protected bird species such as peregrine, and no further surveys or recommendations are necessary in relation to specially protected birds, with no viability of nesting within the site boundary. No recommendations are necessary in relation to wider breeding birds, with it understood that the works will be limited to the building and hardstanding areas which provide no suitability for nesting.

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1.0 Introduction & Reasons for Survey

- 1.1 As part of a proposed planning application with Manchester City Council concerning The Wells Centre in Clayton, Tyrer Ecological Consultants Ltd carried out a daytime preliminary roost assessment in relation to bats with an inclusive inspection for breeding birds in October 2024.
- 1.2 The survey was commissioned by Drees & Sommer; proposals entail the decarbonisation of the site through the incorporation of an Air Source Heat Pump (ASHP), which is understood to be placed on existing hardstanding, and the installation of a PV solar panel on a pitched section of the roof. See **Figure 1.1** for a site location plan.

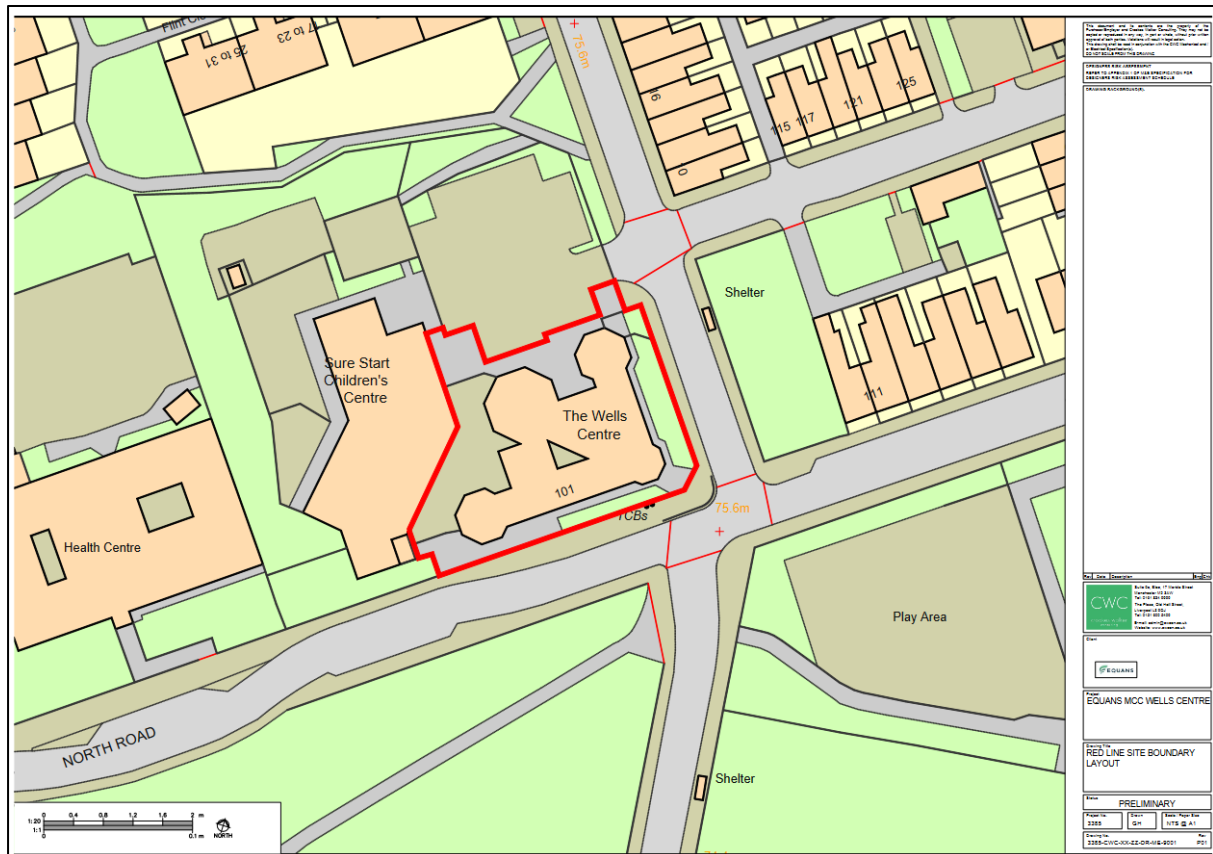


Figure 1.1 – Site location plan © Crookes Walker Consulting

- 1.3 The aim of the survey was to ascertain if the structure is of value to bats, whilst an assessment of nesting and general suitability for birds was also carried out. If any potential roost features (PRFs) were found to be suitable for bats, or signs of use were observed, where suitable habitats and / or bat records exist in the locality, then more detailed surveys would be recommended i.e. dusk emergence surveys during the main active season of bats which is May – August (extending into September).
- 1.4 If additional surveys are required following the initial site visit, this report will outline the details of those further requirements, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).
- 1.5 If it was determined that bat(s) or their roost / place of rest / shelter will be subsequently impacted by the works then a European Protected Species (EPS) licence would be legally required to proceed with the development.
- 1.6 If evidence indicated breeding birds may be impacted by proposals, tailored recommendations would be made accordingly, species pending.

- 1.7 As part of the local authority's planning policies and obligations to the Planning Framework, ecological surveys are generally required prior to planning permission being granted where protected / priority habitats and species are, or may be present, that could be affected by the proposals for which the application seeks consent. Where more detailed surveys are recommended by the ecologist, following an initial daytime investigation, then Local Planning Authorities (LPA), on the advice of their ecological advisors, will not grant permission until such time that all relevant information is gathered.

Biodiversity Gain

- 1.8 In addition to the above, the survey aimed to ascertain the baseline value of the habitats on site, to allow for the completion of a 'Biodiversity Statement'. Habitats would thus be identified, measured and mapped using UK Habitat Classification – Habitat Definitions Version 2.0 (2023), before they would be condition assessed in accordance with Biodiversity Net Gain Principles and Rules (DEFRA, July 2024) covered in the most recent User Guide.¹

¹ See:
https://assets.publishing.service.gov.uk/media/669e45fba3c2a28abb50d426/The_Statutory_Biodiversity_Metric_-_User_Guide_23.07.24_.pdf

2.0 Protected Species & Their Requirements

Bats

2.1 All British bats and their **roosts are afforded full protection under the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of the Conservation of Habitats and Species Regulations (2019) (EU Exit). When dealing with cases where an EPS (all UK bats) may be affected, a planning authority is a competent authority within the meaning of Regulation 7 of the Regulations, and therefore has a statutory duty, as the local authority, to have due regard to the provisions of the Regulations in the exercise of its functions.

2.2 Uses of Buildings by Bats

- a) Summer breeding roost (May – August)
- b) Hibernation roost (October – March)
- c) Transitional or temporary roost (other months)

2.3 Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance; climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

*** The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats and Species Regulations (2019) (EU Exit) (Regulation 43 (d) the term roost is not used but refers to “a breeding site or resting place of such an animal” and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used is legally protected whether or not bats are in occupation.*

2.4 Up to ten bat species have been recorded within Greater Manchester to date, most of which use built structures, notably occupied residential buildings, for roosting. The most frequently encountered bat species is the common pipistrelle (*Pipistrellus pipistrellus*) and its abundant status in Manchester is reflected throughout the UK.

Breeding birds

2.5 All wild birds, no matter how common, their eggs, young and nests, whilst being built or occupied, are protected under both the Wildlife and Countryside Act (WCA 1981) and Natural Environment and Rural Communities Act (NERC Act 2006).

2.6 Any work that would damage an occupied nest, eggs or young of breeding birds, regardless of priority status, must be avoided; any damage to nests that may occur as a result of the development should be outside of the main breeding bird season (March – August). On occasions nests can become unoccupied during the breeding season but the status of the nest(s) should be determined by a suitably experienced ecologist / ornithologist.

2.7 Birds listed on Schedule 1 (Sch.1) of the WCA 1981, for example peregrine (*Falco peregrinus*) are afforded a greater level of protection and are safeguarded also from disturbance. This raptor is known to inhabit urban environments, where suitable nesting sites, such as churches, cathedrals and other taller structures, coincide with an abundance of prey items in the form of urban bird species, including feral pigeon.

Policy

2.8 Paragraph 186 of the National Policy Planning Framework (as revised in December 2023) states:

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

a) if significant harm to biodiversity resulting from a development cannot be avoided (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 a Site 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 features 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 developments 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.”

2.9 Policy EN 15 of the Manchester City Council Core Strategy 2012 – 2027 entitled ‘Biodiversity and Geological Conservation’ echoes this national focus on preserving and enhancing biodiversity for the benefit of protected species, and says:

“The Council will seek to maintain or enhance sites of biodiversity and geological value throughout the City. Particular consideration will be given to:

- priority habitats found within Manchester, as listed in the Manchester Biodiversity Strategy and included in the Greater Manchester Biodiversity Action Plan (GM BAP);*
- protected and priority species, as listed in the Manchester Biodiversity Strategy and included in the Greater Manchester Biodiversity Action Plan (GM BAP);*
- the Council’s objective to protect and conserve the City’s existing trees and woodlands and the aim for a net increase in trees across the City.*

Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate, with reference to:

- the Manchester Biodiversity Strategy, which provides further details of priority habitats within Manchester and opportunities for biodiversity enhancement including corridors such as the Mersey, Medlock and Irk river valleys, the canals and disused railway lines and areas of managed greenspace particularly in parks;*
- the Green Infrastructure Framework for Greater Manchester, which encompasses an ecological framework that seeks to guide and inform habitat creation and repair, including identifying large ‘biodiversity opportunity areas’ including the Moston Brook Corridor and Nutsford Vale;*
- the Open Space, Sport & Recreation Study, which identifies areas where there is a deficit of natural and semi-natural greenspace, opportunities for green corridors and other linkages;*
- Manchester’s Climate Change Action Plan;*
- the Strategic Flood Risk Assessment (SFRA) for Manchester;*
- the Habitats Regulations Assessment (HRA) for Manchester, which gives detailed consideration to Special Areas of Conservation (SACs), including the Rochdale Canal SAC just outside the district boundary;*

- *the River Basin Management Plan for the North West;*
- *the Manchester Tree Strategy.*

Any adverse impacts on biodiversity will need to be justified against the wider benefits of the proposal, assessed against other LDF policies. Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and/or compensation.

Development should wherever possible seek to maintain, enhance or restore existing geology.”

Biodiversity Gain

- 2.10 The National Planning Policy Framework (NPPF), revised in December 2023, legislates net gain in biodiversity through paragraphs 180(d), 185(b) and 186(d). An effort should be made, therefore, through the development design to provide ecological enhancement in order to deliver an overall increase in biodiversity, and opportunities to incorporate biodiversity in and around developments should be encouraged.
- 2.11 The Environment Act 2021 ('The Act') came into force in November 2021. Aspects of the Act relating to BNG came into force on the 12th February 2024, whereby BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021).
- 2.12 The Act is supported by secondary legislation, consisting of six statutory instruments laid within law, of which the relevant legislation includes:
- The Environment Act 2021 (Commencement No. 8 and Transitional Provisions) Regulations 2024²
 - The Biodiversity Gain Site Register Regulations 2024³
 - The Biodiversity Gain Site Register (Financial Penalties and Fees) Regulations 2024⁴
 - The Biodiversity Gain Requirements (Exemptions) Regulations 2024⁵
 - The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024⁶
 - The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024⁷

Priority Habitats & Species

- 2.13 In the United Kingdom, legal protection and otherwise legislative recognition is afforded to particular habitats and species based on a variety of ecological factors. These are typically referred to as priority habitats and species, and can be identified under a variety of legislation and local policy, notably the UK Biodiversity Action Plan (UKBAP), Section 41 (s.41) of the NERC Act as well as under Local Biodiversity Action Plans (LBAPS).

² <https://www.legislation.gov.uk/uksi/2024/44/contents/made>

³ <https://www.legislation.gov.uk/uksi/2024/45/contents/made>

⁴ <https://www.legislation.gov.uk/uksi/2024/45/contents/made>

⁵ <https://www.legislation.gov.uk/uksi/2024/47/contents/made>

⁶ <https://www.legislation.gov.uk/uksi/2024/48/contents/made>

⁷ <https://www.legislation.gov.uk/uksi/2024/50/contents/made>

3.0 Survey Methodology

- 3.1 As part of the Inspection & Assessment in relation to Bats & Breeding Birds report, a desk-top and field-based study is conducted. Methods for both components of the appraisal are given below.

Desktop study

- 3.2 Prior to a site visit, a desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations for nature conservation within 2.0 kilometres of the site boundary. To do so, the Multi Agency Geographic Information for the Countryside (MAGiC – provided by DEFRA) was accessed to gather such information; this particular interactive mapping service was also used to locate any locally granted European Protected Species Mitigation Licenses (EPSML) and species records to further inform conclusions concerning such species in the context of the study site and its proposed development.
- 3.3 Historic satellite imagery was reviewed using sources such as Google Earth (© 2023/24) to help establish past use of the land and determine the nature of adjoining and extending habitats; such information aids in the understanding of how the site might interact with its surroundings ecologically and its value in that context, and how the development may impact at a wider scale.
- 3.4 In addition, the Manchester City Council 'Planning – Public Access' online function was utilised to help inform the desktop study by analysis of existing publicly accessible ecological survey results that have been carried out locally within the previous five years.
- 3.5 A commercial data request to the Local Environment Records Centre serving the area – in this case Greater Manchester Local Record Centre (GMLRC) – has not been sourced and is justified through application of the following recent guidance:

1) The Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK (CIEEM, 2020) states:

"It is generally expected that a desk study, including a data search, will be a key part of the ecological surveys or reports produced to inform a planning application. Freely available web-based sources of data and contextual information should always be used; in some cases, it may be acceptable to not undertake a data search with the LERC or other relevant NSS or local interest groups, for example:

- ii) Situations where the **data search would be extremely unlikely to provide information needed to inform the assessment, due to the scale and location of the proposed development**. The appropriateness of excluding a data search will need to be judged on a case-by-case basis as, in most situations, it will be essential to carry out such a search even if the development is very small or is likely to have a low impact. It can be very difficult to demonstrate that a data search would not have provided relevant information without obtaining and reviewing those data.*
- iii) In some cases for Preliminary Roost Assessments of buildings in **low impact / small-scale scenarios**, such as an extension to a residential property, loft conversions (full or partial), installation of Velux/dormer windows, single modern agricultural or similar building conversion or demolition; however, it should not be assumed that data searches are never required for such scenarios and this must be judged on a case by case basis and justified accordingly.*

- 3.6 As exemptions as made **bold** above can be applied at the site, whilst following best practice, it is considered unnecessary to conduct a commercial data request following the desk study effort and daytime assessment at this time, which offers a proportionate level of survey effort. If, however, a data search is considered necessary by the Local Authority advisory body to inform the ecological impact assessment following any further surveys recommended in this report, a proportionate data search should be commissioned with results interpreted into the conclusions and recommendations of a re-issued / updated report.

Field survey

- 3.7 In context with the above, a diurnal inspection and assessment of the building and the immediate environment in relation to bats and breeding birds was conducted on 22nd October 2024 in overcast conditions (11°C), wind 2/12 (Beaufort scale), 90% cloud, by the following surveyor (see **Table 3.1**):

Table 3.1 – Site surveyor credentials

Name	Description of most relevant credentials
Mr. H. Mulligan Qualifying CIEEM	• Consultant Ecologist with 2 years training and experience, • MBiolSci in Biological Sciences (Zoology), • Accredited agent on the Natural England Class 2 bat license of Mrs K Wilding CEnv MIEMA ACIEEM (CLS-14227), • Holder of a FISC Level 3 (2023) (Botanical competency), • Meets the requirements of CIEEM's Competency Framework Section S (Surveying) to Capable level.

Bats

- 3.8 Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023), states:

“The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. The questions should not be whether the guidelines were followed, but were the defined objectives of the surveys met? Where examples are used in the guidelines, they are descriptive rather than prescriptive.”

- 3.9 The site was assessed for bats; a daytime bat walkover (DBW) was undertaken to observe, assess and record any habitats or features suitable for usage by bats, either as commuting, foraging or roosting provision. Wider connectivity to other habitats was also considered during the DBW.
- 3.10 Buildings and other permanent / semi-permanent structures (where present) were subject to a preliminary roost assessment (PRA), to identify potential areas which may be of value to bats and to determine evidence of use. This typically involves a systematic search of the external aspects of any structure(s), comprising an investigation of features known to be used by bats (for example roofing material, soffits, fascia, lead flashing hanging tiles) using a high-powered torch and close-focus binoculars, where necessary. An internal assessment of the structure(s) was also carried out, with the aid of a high-powered torch and endoscope, where necessary, to identify any evidence of bat use of a structure. Field signs of bats typically comprise bat droppings, urine splashing, fur-oil staining, incidental animal presence, dead specimens and / or the presence of prey items, such as moth wings.

- 3.11 Trees (where present) would be subject to a ground level tree assessment (GLTA) using equipment such as close-focus binoculars and a high powered-torch. Potential roost features (PRFs) can include woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed lifted bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached climbing species with stem diameters in excess of 50mm or pre-existing bat / bird boxes. These PRFs can then be determined as PRF-I or PRF-M, dependent on their suitability for individual / low numbers of bats or their capability to host multiple bats.
- 3.12 Criteria for roost assessment are based upon the determinants given in the Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023): (see **Figures 3.1 – 3.3** overleaf).
- 3.13 Factors considered during the preliminary roost assessment include:
- Practical experience of the surveyor,
 - Knowledge of bat species relevant to the site location and geographical range,
 - Nature of the immediate / surrounding habitat in relation to foraging opportunities,
 - Presence / absence of roost potential,
 - Value and types of roost potential, if present (i.e. – maternity, hibernation, transitional).

Birds

- 3.14 The site and any built structure(s) on site were inspected for evidence of nesting and suitability for relevant species. Bird species observed and heard were recorded on site, and a search was made for nest material, or areas suitable for nesting – this can take the form of searching structures, woody vegetation, semi-aquatic vegetation such as reeds and / or ground flora. Elevations of any buildings or structures on site were inspected for evidence of birds that show a high dependency upon built structures, many of which are in a state of decline. These might include the following species for example (list non-extensive):
- **Starling** (*Sturnus vulgaris*): Birds of Conservation Concern (BoCC) red status
 - **House sparrow** (*Passer domesticus*): BoCC red status
 - **House martin** (*Delichon urbica*): BoCC red status
 - **Swift** (*Apus apus*): BoCC red status

- 3.15 Additional to the site's capacity to support generally common species for breeding, the area was also subject to an assessment for wider capacity to support species with extra protection under Sch.1 of the Wildlife & Countryside Act (1981) (as amended), as well as those listed in s.41 of the NERC Act and on the Greater Manchester BAP.

Biodiversity Gain

- 3.16 Assessment of baseline Area Habitat / Hedgerow / Watercourse units have been carried out and assessed separately in accordance with the guidance, principles, and rules – where present on site.
- 3.17 Measurement of habitats was carried out using a combination of desktop software – QGIS, Google Earth and MAGiC Maps 2023/24, whilst physical habitat measurements were also taken in the field during ground truthing, where necessary.

- 3.18 The results, conclusions and recommendations of this report have been assessed by Mrs. K. Wilding, the Director of Tyrer Ecological Consultants Ltd, and her assessment is consistent with that of the surveyor Mr. H. Mulligan.

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.		
Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute). b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance. c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten <i>et al.</i>, 2016 and Jansen <i>et al.</i>, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.		

Figure 3.1 – BCT guidelines extract

Table 4.2. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement.	
Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

Figure 3.2 – BCT extract on tree roost suitability criteria

Table 6.2. Guidelines for categorising the potential suitability of PRFs on a proposed development site for bats, to be applied using professional judgement.	
Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Figure 3.3 – BCT extract on tree roost categorisation criteria

4.0 Limitations

- 4.1 The survey took place at a time when bats are outside of their active season and birds are outside of their breeding season; as such, there is a lower chance of encountering direct evidence of these groups. However, suitability for these groups can be readily identified at any time of the year, and thus survey timing is not considered to be a significant constraint in this instance.
- 4.2 The optimal time of the year to carry out a UK Habitats survey is April to October; the survey was therefore carried out within an optimal period.
- 4.3 While internal access to the whole structure was possible, much of the building features a false ceiling with no access to any potential void above; as such, it was not possible to ascertain the character of any potential voids in the structure. While this is accepted as a limitation, all other areas of the structure could be accessed, and there were no visual constraints; thus, it is considered that enough information was gathered to accurately classify the building's suitability to support bats and birds.
- 4.4 In considering all potential survey constraints, no significant limitations were experienced that might adversely influence the results, conclusions, and recommendations of this report.

5.0 Desk Study Results

- 5.1 The site of the proposed works (referred to in-part as “the application site” and “the site”) is situated to the north of North Road in Clayton, approximately 4.0km east of Manchester city centre (see **Figure 5.1** below). The site broadly comprises a large children’s centre with small, landscaped areas and hardstanding access.



Figure 5.1 – Location of the red line boundary within the landscape © Google Earth Pro 2023/24

- 5.2 The immediate environment to the north, east and west is largely sub-urban in nature, with land use dominated by semi-detached and terraced housing with associated gardens. In contrast, directly to the south of North Road lies an area of urban green space within Clayton Park, comprised of open grassland, scattered trees and deciduous woodland, providing more semi-natural habitat in the immediacy, with further areas of scattered green space also present throughout the development, while Ashton Canal passes approximately 350 metres to the south.

Relevant planning history

- 5.3 No previous planning applications have been undertaken at the site in the past 10 years. A number of applications have been undertaken within the neighbouring development, though the only ecological documentation provided as part of any of the applications is a 2019 Preliminary Roost Assessment (PRA) produced by Gritstone Ecology relating to 119 North Road nearby to the east (Ref: 122762/FO/2019) that is readily available online. However, this PRA did not discover any field signs indicating usage of the structure by bats.

Designated sites

- 5.4 A search of MAGiC Maps revealed a single statutory designated site for nature conservation present within a 2.0km search radius of the site (see **Table 5.1** for further information and **Figure 5.2** overleaf for a visual aid).

Table 5.1 – Statutory designation types and reasons for designation within 2.0km buffer

Site name	Designation type	Interest features
Clayton Vale (0.5 kilometres north)	Local Nature Reserve (LNR)	Natural England Citation states: “It was reclaimed from land fill by Manchester City Council in the early 1980’s and forms a valley with the river Medlock running along its base.”

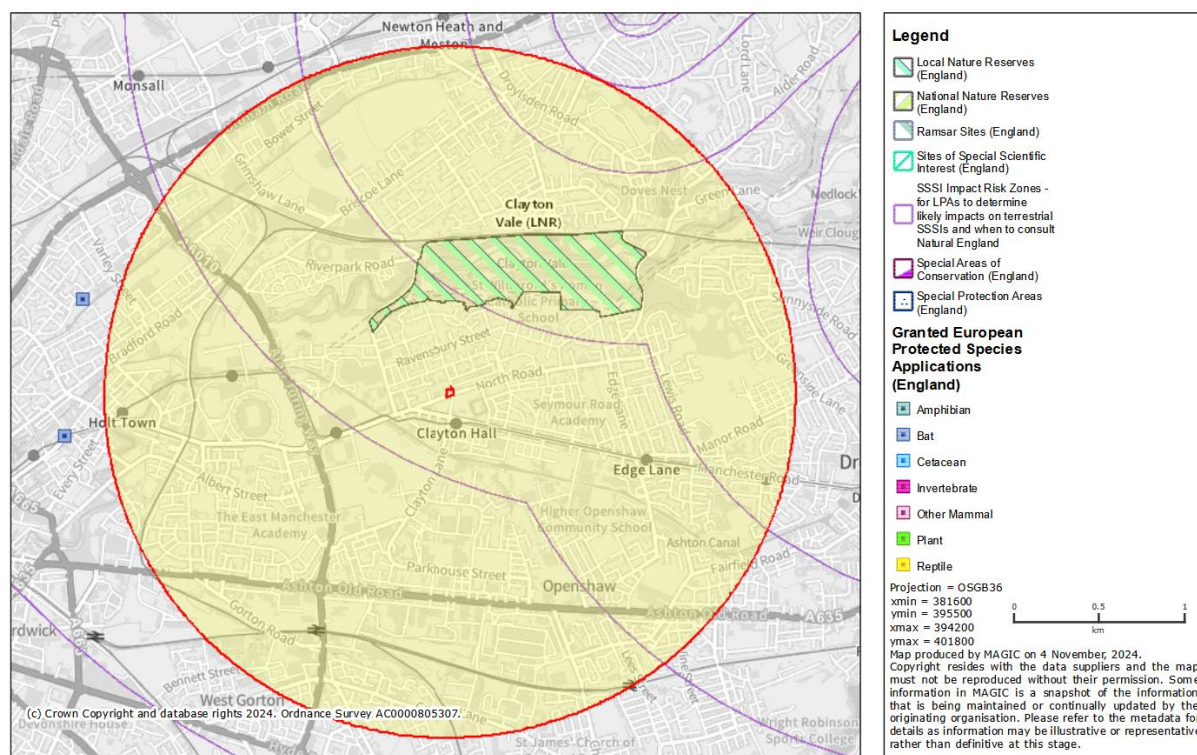


Figure 5.2 – Designated site data for the area within 2.0km of application site © MAGiC Maps 2024

- 5.5 The site is also positioned within the Impact Risk Zone (IRZ) for a number of Sites of Special Scientific Interest (SSSI), including Rochdale Canal at a distance of approximately 2.5km to the north-east. Based on the IRZ – Threshold Checker⁸ available on MAGiC Maps 2024, the proposals do not present a likely risk of having a harmful effect on the surrounding terrestrial SSIs and the Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites that they underpin.
- 5.6 Where no impact to SSSI's is predicted, NE issue the following advice within their standing guidance on SSSI impact zones (NE, 2019):

⁸ See:

[https://irz.geodata.org.uk/IRZ/step2.html?irzcode=3111221502000¬es=&location=351359,399223%20\(IRZ%20polygon%20centre\)](https://irz.geodata.org.uk/IRZ/step2.html?irzcode=3111221502000¬es=&location=351359,399223%20(IRZ%20polygon%20centre))

“It is important to note that the SSSI IRZs only indicate Natural England’s assessment of likely risk to the notified features of SSSIs. Where they indicate such a risk is unlikely, this does not mean that there are no potential impacts on biodiversity or the wider natural environment.”

Habitats

- 5.7 An online search of MAGiC Maps identified the following priority habitats within a 2.0km search radius (see **Table 5.2** below).

Table 5.2 – Priority habitats located within 2.0km buffer

Habitat Type	Designation	Distance to site
Deciduous woodland	Priority Habitat Inventory	0.1km south-east
Open mosaic habitat	National Land Use Database	0.3km south-west
Woodpasture and parkland	BAP Priority Habitat	0.6km north-west

Bats

- 5.8 An online search of MAGiC Maps revealed an absence of European Protected Species Mitigation Licenses (EPSMLs) for bats granted within a 2.0km radius of the site boundary.
- 5.9 Habitats in the immediate vicinity of the site provide moderate value foraging opportunities for bats, with the urban green space to the south providing favourable habitat in the form of deciduous woodland and scattered trees, and offers loose connectivity from the site toward the Ashton Canal, which is bordered by further areas of suitable habitat. The habitats present are considered most likely to support species associated with roosting in occupied dwellings such as the common pipistrelle.

NB: *Where quality habitat is present close to buildings then the percentage use of those buildings, by bats, increases given that roost opportunities are available and vice versa.*

Birds

- 5.10 The nature of the surrounding habitat means that the species most likely to be present in proximity are species adapted to urbanisation and common garden species, such as house sparrow (*Passer domesticus*), house martin (*Delichon urbicum*) and swallow (*Hirundo rustica*), though the green spaces in proximity and associated woodland likely also act as stepping-stone habitats and offer connectivity to the wider semi-natural habitats in proximity.

Biodiversity Gain

- 5.11 The Greater Manchester Local Nature Recovery Strategy Pilot (Draft) provides information pertaining to the application of strategic significance to areas and habitats within Greater Manchester. Based upon this, the site does not appear to fall within any areas designated for nature recovery.
- 5.12 The Manchester City Council ‘Interactive Proposals Map’, which displays spatial data for policies and land use priorities in accordance with the Core Strategy and Unitary Development Plan, was also accessed and used to assess the strategic significance of habitats present within the site; based upon this data, the site lies within no areas specially designated for nature or biodiversity.

- 5.13 The Greater Manchester Biodiversity Action Plan (GMBAP) was also accessed to assist with determining the strategic significance of on-site habitats.

6.0 Field Study Results

Bats

- 6.1 The Wells Centre is an actively used children's centre, and is a single storey, brick-built structure with a multi-pitched, tiled roof that also features four turreted sections, to approximate maximum dimensions of 30m x 38m x 6m (length x width x height). Structural components include UPVC soffits, metal windows and doors, while a small triangular courtyard is present in the centre of the structure. While the surveyor is not qualified to assess structural integrity of buildings, it was considered to be in a good aesthetic condition with no evident deterioration or dilapidation noted.
- 6.2 False ceilings are present beneath each of the pitched roof sections of the building, and as stated previously, it was not possible to enter any void present above these areas; as such, it was not possible to ascertain the thermal or structural character of these spaces. However, based on the height of the structure, it is reasonably assumed that any potential void has an apex of approximately 1.0 metre. Each of the turreted sections are open to the roof, and these areas are brightly illuminated, warm and non-draughty, but are under a high disturbance regime due to the building's active use.
- 6.3 It is therefore considered that the building is broadly unsuitable for the breeding requirements of loft-dwelling bats such as the brown long-eared; this species prefers warm, dark, undisturbed and dry loft spaces with room for free flying when selecting maternity roosts.
- 6.4 In the turreted sections, plastering is present beneath the roof tiles, though it is unknown whether any underlining is present beneath the tiles in the pitched sections; where present, traditional bitumen underfelt or other such roof lining typically improves a building's value to bats, notably for crevice-dwelling bats, whilst a lack of a lining can reduce the value of a structure for members of this genus.

***NB:** The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.*

- 6.5 Externally, the building was noted to be entirely absent of potential roost features (PRFs); the soffits are in good condition throughout, and all of the roof tiles were well-fitted, with none lifted, slipped or missing.
- 6.6 Despite the access constraints, given the total absence of PRFs, the building is duly categorised as pertaining to a bat roost suitability of 'None', in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).

Breeding birds

- 6.7 In relation to WCA Schedule 1 specially protected bird species such as peregrine (*Falco peregrinus*), the site provides no suitable nesting platforms, direct evidence, or evidence of historic nesting, with favourable hunting habitat largely absent within the surrounding area. Direct impacts to specially protected bird species can likely be ruled out as a result of the proposals.
- 6.8 No direct evidence of nesting birds was located on site, with the building considered to be unsuitable for breeding birds given a lack of ingress opportunities. While the trees and shrubbery within the landscaped areas are likely to support breeding common passerine

species during the nesting bird season of March – August inclusive, these areas will not be affected by the proposals.

BNG Baseline Summary

- 6.9 See **Table 6.1** (below) for baseline information and habitat descriptions; refer to **Appendix I** for any supporting imagery. Refer to **Appendix III** for condition assessment criteria and **Appendix IV** – UK Habitats Map for the location of described habitats.

Table 6.1 – UK Habitat types within the survey area

Area habitat	Sec. Codes	Description
g4 Modified grassland Habitat Ref.: 1	-	Two small patches of modified grassland are present to the east and south of the site, mown and species-poor; species composition includes cock's-foot, Yorkshire-fog, perennial rye-grass, springy turf-moss, dandelion, cat's-ear and common ragwort, with approximately five species per m ² .
		Condition: Poor Habitat Area: 0.0155 ha Strategic Significance: Area / compensation not in local strategy / no local strategy
u1 Built up areas and gardens Habitat Ref.: 2	847 Introduced shrub	A small strip to the south-west of the site is comprised of non-native, introduced shrubbery.
		Condition: N/A Habitat Area: 0.0022 ha Strategic Significance: Area / compensation not in local strategy / no local strategy
u1b5 Buildings Habitat Ref.: 3	-	The Wells Centre structure located in the centre of the site.
		Condition: N/A Habitat Area: 0.0708 ha Strategic Significance: Area / compensation not in local strategy / no local strategy
u1b6 Other developed land Habitat Ref.: 4	-	Areas of hardstanding access and pathways surrounding the structure.
		Condition: N/A Habitat Area: 0.0225 ha Strategic Significance: Area / compensation not in local strategy / no local strategy

Individual trees Deciduous, medium Habitat Ref.: 5	-	Two medium wild cherry trees are located within the grassland areas, denoted as T1 and T3 within Appendix IV , with each being condition assessed as 'Good'.
		Condition: Good Habitat Area: 0.0326 ha Strategic Significance: Area / compensation not in local strategy / no local strategy
Individual trees Deciduous, medium Habitat Ref.: 6	-	Two small rowan trees are located within the grassland areas, denoted as T2 and T4 within Appendix IV , with each being condition assessed as 'Moderate'.
		Condition: Moderate Habitat Area: 0.0081 ha Strategic Significance: Area / compensation not in local strategy / no local strategy

7.0 Conclusions & Recommendations

Bats

- 7.1 Based upon the findings of the DBW and associated GLTA, covered through sections 5.0 – 6.0 of the report and supported by **Appendix I**, The Wells Centre is categorised as pertaining to a bat roost suitability of '**None**', in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023) (see **Figure 7.1** below).

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.		
Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).

Figure 7.1 – BCT extract on 'None' suitability criteria

- 7.2 No further surveys in the form of dusk/dawn emergence / re-entry surveys are therefore recommended owing to a total absence of PRFs or suitability noted at the building.
- 7.3 Bats are a transient species group and buildings can deteriorate over time. In the highly unlikely event that bat(s), or evidence of bat(s), are found during the proposed works, then, as a legal requirement, the work at the site should immediately cease and an Ecologist should be contacted for further advice. If bat(s) or their roost(s) will be affected, then an EPSML may be required to legally commence with the works. See **Figure 7.2** for indicative evidence of bats.



Figure 7.2 – Evidence of bats – droppings on the left / a common pipistrelle bat on the right – indicative

- 7.4 No further surveys or supervisory works are required in relation to trees, with it understood that none will be affected by the proposals.

- 7.5 Installation of overly harsh artificial lighting as part of any development that exceeds current levels may have a negative impact upon foraging / commuting bats in the landscape, subject to their presence, particularly if increased light spillage occurs in areas of that are currently free from illumination, particularly including the trees at the site boundaries. A bat-sensitive lighting plan is therefore recommended in order to avoid potential impacts to bats that may use the surrounding treelines. Several options to consider have been listed below, though the reader is referred to the Bat Conservation Trust's 'Bats and Artificial Lighting at Night' guidelines (August 2023) for further information.

Appropriate luminaire specifications: Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion-sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

Birds

- 7.6 No impacts are applicable in relation to any Sch.1 (WCA) specially protected bird species such as peregrine, and no further surveys or recommendations are necessary in relation to specially protected birds, with no viability of nesting within the site boundary.

- 7.7 No recommendations are necessary in relation to wider breeding birds, with it understood that the works will be limited to the building and hardstanding areas which provide no suitability for nesting.

8.0 Biodiversity Statement

- 8.1 Based on the information gathered during the diurnal assessment, the site is host to the following biodiversity value:
- Habitat: **0.49**
 - Hedgerow: **0.00**
 - Watercourse: **0.00**
- 8.2 However, based upon the information provided at the time of writing, it is understood that the ASHP to be installed at the site will be placed within an existing hardstanding area to the north of the building, which is absent of any vegetation.
- 8.3 As such The Wells Centre is likely **exempt** from the Biodiversity Gain Planning Condition under the de minimis exemption; the proposals do not impact on any priority habitats, and less than 25m² of area habitat onsite will be affected (no watercourse or hedgerow units are present).
- 8.4 This should be read in conjunction with the hard copy of the Statutory Biodiversity Metric tool – see external Appendix.

9.0 Bibliography

- **Bat Conservation Trust (BCT)**, 2023. *Bats and Artificial Lighting at Night, Guidance Note GN08/23*. Available from: <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>
- **CIEEM et al**, 2019. *Biodiversity Net Gain: Good practice principles for development*. Available from: www.cieem.net/data/files/Publications/Biodiversity_Net_Gain_Principles.pdf
- **CIEEM**, 2016. *Guidelines for Ecological Impact Assessment in the UK and Ireland*, 2nd edition. Available from: www.cieem.net/data/files/Publications/EclA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- **CIEEM**. 2020. *Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK*. 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester, UK
- **CIEEM**, 2017. *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Available from: www.cieem.net/data/files/Publications/Guidelines_for_Preliminary_Ecological_Appraisal_Jan2018_1.pdf
- **Collins, J** (ed.) 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition). The Bat Conservation Trust, London.
- **Communities & Local Government (C&LG)**, 2018. *National Planning Policy Framework*. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/60777/2116950.pdf
- **DEFRA**, 2018. *Net gain: Consultation Proposals*. Available from: https://consult.defra.gov.uk/land-use/net-gain/supporting_documents/netgainconsultationdocument.pdf
- **Gunnell, K. Grant, G. and Williams, C.** 2012. 'Landscape and urban design for bats and biodiversity'. Bat Conservation Trust.
- **Magic Maps Application**, 2024. Available from: www.natureonthemap.naturalengland.org.uk/MagicMap.aspx
- **Mitchell-Jones, A.J. and McLeish, A.P.** (Eds) (2004). *Bat Workers' Manual*, Joint Nature Conservation Committee, Peterborough.
- **Reason, P.F. and Wray, S.** (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.
- **UKHab Ltd.**, 2023. *UK Habitat Classification Version 2.0*. Available from: <https://ukhab.org/>

Appendix I: Site Photographs



Plate 1 – *The Wells Centre as seen from the north, where ASHP will be placed*



Plate 2 – *Grassland area with medium wild cherry T3*



Plate 3 – *Strip of introduced shrubbery*



Plate 4 – *Western aspect of the structure*



Plate 5 – *Eastern elevation of the building, with T1 and grassland bordering*



Plate 6 – *Southern elevation of the building*



Plate 7 – *Character of false ceilings within pitched areas of the building*



Plate 8 – *Open nature of turreted sections of building*

Appendix II: Biodiversity Enhancement: General Recommendations

Bats

Externally fitted boxes

The 2F is the standard and most popular Schwegler bat box. It is ideal as a starter box to see if there are bats in your area or to provide much needed secure roosting space. It has been designed as a summer roosting space for bats and has a simple entrance hole at the front.

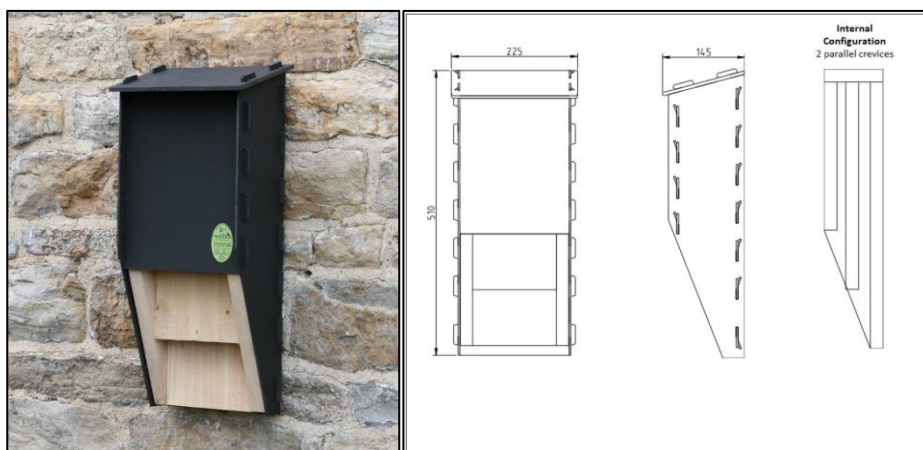
The 2F is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years, making it suitable for long-term mitigation projects. Woodcrete is breathable and maintains a stable temperature inside the box and the 2F is painted black to absorb warmth. It also provides a rough surface for bats to cling to and climb up.

The 2F bat box can be sited on a tree or building and is best positioned at a height of between 3m to 6m in an open sunny position. A group of 3 to 5 boxes facing in different directions will provide a variety of micro-habitats.



An alternative to the above is the Eco Kent Bat Box, which is suitable for crevice-dwelling species. The two crevices inside the box are approximately 18mm wide, ideal for common and soprano pipistrelles. The FSC-certified spruce wood is rough on the inside providing good grip for bats once inside the box. This box is self-cleaning and does not require any maintenance, as the droppings fall straight down out of the bottom entrance.

These bat boxes can be mounted on either a tree or building using the 3 concealed keyhole fixings located at the top of the box. If possible, site the box at a height of between 4m and 6m in a sheltered sunny place, away from artificial light sources. The box should not be positioned in direct sunlight. Ideally, several boxes should be placed facing different directions, as this provides a choice for roosting bats. A clear path to the entrance of the box is essential



Breeding Birds – House Sparrow

The sparrow terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population is now half of what it previously was in 1980 and this is widely attributed to habitat destruction and lack of suitable nesting spaces. House sparrows are social birds and like to nest in company, therefore, this terrace provides ideal nesting opportunities for three families. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of buildings.



Breeding Birds – Starling

Starling populations have declined dramatically in recent years and are now on the Red List of birds of high conservation concern. Loss of habitat is one of the major pressures on this species and household renovations and new buildings offer much fewer nesting sites than have previously been available. Providing these birds with a safe and secure habitat and nesting environment is a great way to help ensure their future survival.

This Vivara Pro WoodStone® Starling Nest Box has a 45mm diameter entrance hole which makes it ideal for starlings. It should be sited on an external wall or tree at a height of at least 1.5m using an aluminium nail or screw and wall plug (not included). Site near to vegetation if possible as this will provide additional protection and cover.



Breeding Birds – Other

This traditional design has proved to be highly effective in attracting Robins, as well as other small species such as Black Redstart, Spotted Flycatcher and Wren. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.

This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box. Alternatively hide the box in Ivy, Honeysuckle or other climbing plants.



Invertebrates – Bee bricks

The Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees. Alternatively, it can be used as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.

Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back. Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used. Available in a choice of four colours: white grey, dark grey, yellow and red.



Specification:

- * Material: Concrete
- * Origin: Cornwall, UK
- * Dimensions: W 215mm x D 105mm x H 65mm

* Weight: 2.9kg

* Colours: White grey, yellow, dark grey and red

Native Planting and/or Landscaping

New feature landscaping should incorporate native woody plants as opposed to non-native species that are of significantly less benefit to biodiversity. Species such as Blackthorn (*Prunus spinosa*), Honeysuckle (*Lonicera periclymenum*), Rowan (*Sorbus aucuparia*), Guelder-rose (*Viburnum opulus*) and Hawthorn (*Crataegus monogyna*) are native and will provide a valuable resource for a myriad of wildlife as opposed to non-native, exotic species which are generally much less effective, particularly to pollinator groups including bees, butterflies and moths.

Suitable Trees	Suitable Woody Shrubs
English Oak (<i>Quercus robur</i>)	Hawthorn (<i>Crataegus monogyna</i>)
Rowan (<i>Sorbus aucuparia</i>)	Honeysuckle (<i>Lonicera periclymenum</i>)
Wild Service Tree (<i>Sorbus torminalis</i>)	Guelder Rose (<i>Viburnum opulus</i>)
Silver Birch (<i>Betula pendula</i>)	Elder (<i>Sambucus nigra</i>)
Ash (<i>Fraxinus excelsior</i>)	Wild Privet (<i>Ligustrum vulgare</i>)
Goat Willow (<i>Salix capraea</i>)	Blackthorn (<i>Prunus spinosa</i>)
Beech (<i>Fagus sylvatica</i>)	
Wild Cherry (<i>Prunus avium</i>)	

Appendix III: Condition Assessment Sheets

Condition Assessment Score – Grassland (Low) (*Habitat ref.: 1*)

Condition Assessment Criteria		Ref. 1
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	N
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y
G	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).	Y
Total Score		5
Condition Assessment Result		Condition Assessment Score
Passes 6 or 7 criteria including passing essential criterion A		Good
Passes 4 or 5 criteria including passing essential criterion A		Moderate
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)		Poor

Condition Assessment Score – Individual Trees (Habitat refs. 5 & 6)

Condition Assessment Criteria		Ref. 5	Ref. 6
A	The tree is a native species (or at least 70% within the block are native species).	Y	Y
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Y	Y
C	The tree is mature (or more than 50% within the block are mature).	Y	N
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y	Y
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	N
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	Y
Total Score		5	4
Condition Assessment Result		Condition Assessment Score	
Passes 5 or 6 criteria		Good – Ref. 5 (Medium trees)	
Passes 3 or 4 criteria		Moderate – Ref. 6 (Small trees)	
Passes 2 or fewer criteria		Poor	

Appendix IV: UK Habitats Map

