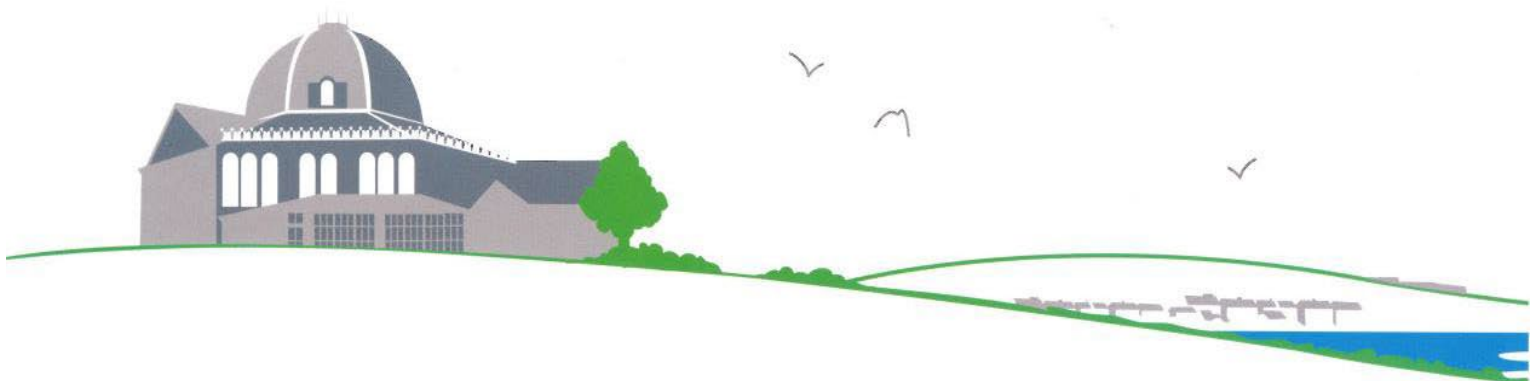




CHALLENGER HOMES (MOSTON) LTD
SULBY STREET, MANCHESTER
EXTENDED PHASE 1 HABITAT SURVEY AND
BAT ASSESSMENT
(REVISED MARCH 2022)



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(REVISED MARCH 2022)

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March 2022

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed: 

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1. INTRODUCTION

- 1.1 Penny Anderson Associates Ltd (PAA) was commissioned by Challenger Homes (Moston) Limited to undertake an Ecological Assessment at Sulby Street, Moston, Greater Manchester (centred on grid reference SD 87411 01572), hereafter referred to as the 'site'. This comprised an extended Phase 1 habitat survey, building inspection and ground level tree inspection for bats.
- 1.2 A desk study review of available habitat and species data for the site and the local areas was also completed to support the survey.
- 1.3 The surveys were carried out by Ecologists Victoria Burton ACIEEM¹ and Caroline Boffey ACIEEM on 16th December 2021, with bat surveys completed as Accredited Agents to Dr Sarah Ross (MCIEEM², Level 2 Class Licence Registration Number 2015-12600-CLS-CLS). All methods, equipment and assessment criteria were consistent with current good practice guidelines for each survey type and the surveyors were competent for the assigned tasks based on the CIEEM competency framework (CIEEM 2013).
- 1.4 This report presents the methods and results of the surveys and assessments and any potential constraints and opportunities for the proposed works in relation to ecological features identified. In addition, recommendations are made for further survey as required.
- 1.5 Unless stated otherwise in the Recommendations section of this report, the survey findings are considered valid for a 12-month period from the date of the survey.
- 1.6 The proposals at the time of this report are for around 20 residential properties.
- 1.7 Since the Phase 1 habitat survey was completed, a detailed post-development proposed landscaping plan (Appendix 6) has been developed and this report has been updated (March 2022) to include these proposals.

Site Location

- 1.8 The site is situated within the north-east Manchester within a predominately residential area, bordered by a church to the south-west and a school to the north.

Legislative Context

- 1.9 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (amended); further details can be obtained from the Joint Nature Conservation Committee (JNCC) web site at www.jncc.defra.gov.uk.
- 1.10 Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the

¹ Associate member of Chartered Institute of Ecology and Environmental Management (CIEEM)

² Full member of CIEEM

protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA) (1981) (as amended) and Countryside and Rights of Way (CROW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).

- 1.11 At the national level, the UK Post-2010 Biodiversity Framework published in 2012 is the Government's response to the Convention on Biological Diversity (2010). It describes the UK's biological resources, commits a detailed plan for the protection of these resources within the UK's devolved framework across England, Wales, Scotland and Northern Ireland. The document identifies future priorities for nature conservation and adopts a more strategic approach, including ecosystem services and sustainability alongside biodiversity. Despite administrative changes following devolution, there is still an underlying objective of protecting and enhancing a range of priority species and habitats, often still based on the objectives and classifications of the original UK Biodiversity Action Plan (BAP). Biodiversity 2020 is England's national biodiversity strategy. Building on the Natural Environment White Paper published in 2011, this provides a means of delivering the international and EU commitments to biodiversity. Under Biodiversity 2020, Priority Species and Habitats referred to are those of 'Principal Importance' for the conservation of biodiversity in England listed on Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006 (amended).
- 1.12 Finally, the National Planning Policy Framework (NPPF 2021) provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for habitats and biodiversity, with a particular focus on the maintenance and creation of ecological networks.
- 1.13 The NPPF identifies the following principals that should be applied by local planning authorities when determining planning applications:
 - 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 SSSI, 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 SSSI;
 - 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.
- 1.14 The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:
 - protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
 - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; and

- minimising impacts on biodiversity and providing net gains for biodiversity including establishing coherent ecological networks that are more resilient to current and future pressures.

1.15 To protect and enhance biodiversity and geodiversity, plans should:

- 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
- 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.

1.16 Relevant protected species legislation summaries are presented as Appendix 1.

Invasive Species

1.17 Certain non-native species that have been introduced into the UK are regarded as being a threat to native biodiversity. Legislative measures have, therefore, been put in place to prevent the spread of these invasive species in the wild.

1.18 Under section 14 of the WCA, 1981 (as amended), it is illegal to introduce plants listed under Part II of Schedule 9 of the WCA into the wild or sell these species. Offences include causing the spread of viable plant material or neglecting to contain or appropriately manage non-native species.

1.19 Commonly introduced Schedule 9 species include non-native cotoneaster species, specifically, small-leaved cotoneaster³ (*Cotoneaster microphyllus*) and wall cotoneaster (*C. horizontalis*), Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Reynoutria japonica*).

³ Plant names follow Stace 2019

2. METHODS

Desk Study

- 2.1 A request for details of protected and notable species and locally designated sites within 2km of the centre of the site was made to Greater Manchester Ecology Unit (GMEU). Additionally, the Multi-Agency Geographic Information for the Countryside (MAGIC⁴) website was consulted for details of statutory designated sites and Priority Habitats within a 2km search area from the centre of the site.
- 2.2 It is important to note that the desk study results provide an indication of the species present in and around the site, and do not confirm current presence or absence of any species. Protected species are often under-recorded in county wildlife databases.

Extended Phase 1 Habitat Survey

- 2.3 The survey was carried out in accordance with the methodology in the *Handbook for Phase 1 Habitat Survey* (JNCC 2010). This entailed mapping, describing and collating plant species lists for habitats within the site boundary. The broad habitat types were mapped, with each habitat type coded according to the standard JNCC Phase 1 habitat survey procedure.
- 2.4 Each plant species was assigned abundance codes within each habitat. This was done using the 'DAFOR' scale (where: d = Dominant; a = Abundant; f = Frequent; o = Occasional; r = Rare), which provides an indication of the relative abundance of each plant species present within a particular habitat. Common names and scientific names according to Stace (2019) are provided in the species list (Appendix 2) but common names only are referred to in the text.
- 2.5 The survey was 'extended' (Institute of Environmental Assessment 1995, CIEEM 2017) to include notes on fauna and habitats which could potentially support protected or notable species. The presence of, or potential for, protected or notable species was noted on the field map and in the written target notes (TN) during the survey. In addition, the following dedicated surveys were carried out at the same time as the extended Phase 1 habitat survey.

Building Inspection for Bat Roost Potential

- 2.6 The external inspection followed guidance in Collins 2016 and involved walking slowly around the buildings and visually inspecting features, such as gaps around door frames, gaps under felt/lead flashing, gaps at the wall plates and eaves, any fascia boards, barge boards and soffits, and areas of missing mortar, for any evidence of bat use. These features were also assessed for their potential to provide crevices for roosting bats or access points to other parts of the building, which may also be used for roosting.
- 2.7 The structure and orientation of the building was also noted, including roof structure and materials, wall construction and likely presence of cavity or rubble-filled walls and internal exposed beams which may act as night roosting or feeding roost sites for some species.
- 2.8 The building was assigned a roost potential category based on its suitability for supporting bat roosts (see Table 1). These criteria have been adapted from the Bat Conservation Trust (Collins 2016) as well as through professional experience.

⁴ <https://magic.defra.gov.uk/MagicMap.aspx> (last accessed 05/01/2022)

Ground Level Inspection of Trees for Bat Roosting Potential

- 2.9 A detailed inspection of trees on the site was carried out to assess potential to support roosting bats. The approach followed criteria described in current good practice guidelines published by the Bat Conservation Trust (Collins 2016) and The British Standards Institution (2015) and entailed using high-powered torches and binoculars, making detailed notes.
- 2.10 Following this methodology, trees of sufficient age and size to support potential bat roost features (PRF) were carefully inspected and assigned an overall roost potential category, based on the suitability for supporting roosting bats and any evidence found, using criteria in Table 1 adapted from the Bat Mitigation Guidelines (Mitchell-Jones 2004) and Bat Surveys Good Practice Guidelines (Collins 2016).

Table 1 Bat Roost Assessment Criteria

Suitability	Description of Roosting Habitats
Negligible	No features likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically, but does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats. A tree of sufficient size to contain potential roost features but none seen from the ground or only those with very limited suitability. (i.e. suitable for occasional day roost ⁵ but clearly unsuitable for more consistent occupation or use as maternity roost ⁶ or hibernation roost ⁷ .)
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost type of high conservation significance (i.e. suitable for day roosting but unsuitable for maternity or hibernation roost.)
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. (i.e. suitable for maternity and/or hibernation roost.)
Confirmed roost	A structure or tree with direct evidence of bat presence, for example bat droppings found or bats observed using potential roost features.

⁵ Day roost – a place where individual bats (or small groups) rest or shelter in the day but are rarely found by night in the summer

⁶ Maternity roost – a place where female bats give birth and raise their young to independence

⁷ Hibernation roost – a place where bats may be found individually or together during winter, spending extended periods in torpor

Limitations

- 2.11 The extended Phase 1 habitat survey took place outside the optimum season (of March to October) for this type of survey. It is likely that some plant species may, therefore, have been under-recorded due to the time of year. However, the impact of this on the project has been minimised by ensuring that the survey was undertaken by an experienced botanist who was able to identify the majority of plant species in their vegetative state. In addition, it was considered that a sufficient number of species could be identified to be able to confidently make a preliminary assessment of the value of the habitats present within the site.
- 2.12 Internal access was not available to the on-site building (B1) due to health and safety reasons. However, this building was viewed externally and a bat roosting potential category was assigned to the building using the external assessment. Furthermore, close inspection of the north-west and north-east faces was not possible due to locked gates. These faces were, therefore, viewed from a distance. Where relevant, these considerations are reflected in the results and conclusions.

3. RESULTS

Desk Study

- 3.1 The desk study utilised data obtained from GMEU in December 2021, searching within a 2km radius of the site centre. The MAGIC search engine was also used to obtain additional data on European Protected Species (EPS) licences, as well as designated and non-designated sites.

Statutory Protected Sites

European Sites

- 3.2 European protected sites include Special Areas of Conservation (SAC), Special Protection Areas (SPA), RAMSAR wetland sites, possible SAC, potential SPA and proposed RAMSAR sites.
- 3.3 Rochdale Canal SAC falls within the 2km search area. This site is located 1.64km east of the central grid reference. The primary reason for the designation of this site is due to the presence of floating water-plantain (*Luronium natans*), a species listed under Section 41 of the NERC Act (2006) and also a EPS under the Conservation of Habitats and Species Regulations 2017 (amended).
- 3.4 No other European protected sites fall within the 2km search area.

Sites of Special Scientific Interest

- 3.5 SSSI represent a selection of this country's best wildlife and geological sites, and cover approximately 7% of the terrestrial area of the country (with over 4,000 separate sites in England).
- 3.6 Rochdale Canal SSSI falls within the 2km search area. This site is located 1.64km east of the central grid reference. The Rochdale Canal contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce species floating water-plantain.
- 3.7 No other SSSI were identified within the 2km search area. However, the site does fall within the SSSI Impact Risk Zones (IRZ) of Rochdale Canal SSSI, indicating that Local Planning Authorities would consult Natural England on the likely risks from all planning applications – except householder applications.

National and Local Nature Reserves

- 3.8 No National Nature Reserves were identified within the 2km search area.
- 3.9 The Local Nature Reserve (LNR) Boggart Hole Clough was identified within the 2km search area. This site is located 880m north-west of the site boundary. Boggart Hole Clough contains the largest woodland clough in Manchester, with its parkland forming a landscape of mature woodland, grasslands, and lakes in the Charlestown ward. Parts of the woodland are classed as Ancient.

Non-Statutory Protected Sites

- 3.10 Seven Sites of Biological Interest (SBI; also known as Local Wildlife Sites (LWS)) were identified within the 2km search area. These sites are described in Table 2 below.

Table 2 Sites of Biological Interest/Local Wildlife Sites

Site Name	Site Description	Distance from Site Boundary
Bailey's Wood	The site is part of a complex of Clough woodlands associated with the Irk Valley, which also includes Boggart Hole Clough. Part of Baileys Wood is ancient woodland, the remainder consists of secondary semi-natural broadleaved woodland.	1.64km NW
Boggart Hole Clough	Boggart Hole Clough is a large and varied site. It is the largest area of Clough Woodland remaining in Manchester. It supports a wide range of habitats including broadleaved woodland, grassland, lakes and more 'active' recreation areas.	880m NW
Reservoirs at Harpurhey	Series of reservoirs containing a rich aquatic flora and fauna with marginal reedbed, marsh and scrub.	1.99km W
Broadhurst Clough	A mosaic of mature broadleaved woodland, semi-mature broad-leaved plantation, scrub, tall ruderal communities, grassland and wetland habitats.	148m NE
Moston Fairway	Unusual marsh flora is present and contains a variety of species including rushes and orchids	660m E
Rochdale Canal: Stott's Lane to Ducie Street Basin	Canal supporting regionally important aquatic habitat and species, including internationally important populations of floating water plantain	1.04km S
Rochdale Canal: Lock at Scowcroft Farm to Stott's Lane	Canal supporting regionally important aquatic habitat and species, including internationally important populations of floating water plantain	1.54km SE

Priority Habitats

- 3.11 An area of Priority Habitat purple moor-grass (*Molinia caerulea*) and rough pasture was identified within the 2km search area. This site is located 910m east of the central grid reference.
- 3.12 Twenty-four areas of Priority Habitat lowland fen were identified within the 2k search area. The nearest of these sites to the central grid reference is located 260m east.
- 3.13 Two areas of Priority Habitat ancient and semi-natural woodland were identified within the 2km search area. The nearest of these sites to the central grid reference is located 920m north-west at Boggart Hole Clough.
- 3.14 Many areas of Priority Habitat deciduous woodland were identified within the 2km search area. The nearest of these sites to the central grid reference is located 170m north-east.
- 3.15 An area of Priority Habitat wood-pasture and parkland was identified within the 2km search area. This site is located 1.94km south-west of the central grid reference.
- 3.16 Twenty-two areas of open mosaic Priority Habitat were identified within the 2km search area. The closest of these to the site boundary is located 628m west.
- 3.17 Eight areas of unspecified Priority Habitat areas were identified within the 2km search area. The closest of these to the site boundary is located 859m north-west.

Protected and Notable Species

Granted European Protected Species Application

- 3.18 A single record for a granted EPS Licence relating to bats was identified within the 2km search area. Details of this record are presented in Table 3.

Table 3 Bat European Protected Species Licenses

Species	License to Allow	Date Licence Granted	Date Licence Expires	Distance from Site Boundary
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	Destruction of a resting place	04/2014	07/2015	1.88km E

Badger

- 3.19 Three records of badger (*Meles meles*) setts were identified within the 2km search area. One of these records falls within 500m of the site boundary. Due to the confidential nature of this data the precise location of these records is not presented in this report.

Otter and Water Vole

- 3.20 No records of otter (*Lutra lutra*) or water vole (*Arvicola amphibius*) were identified within the 2km search area.

Bats

- 3.21 Ten records for bat roosts were returned within the 2km search area, dated between 1997 and 2017. Seven of the records were for common pipistrelle (*Pipistrellus pipistrellus*) roosts, the closest of these to the site boundary is located 590m south-east. The remaining three records are for pipistrelle species (*Pipistrellus* sp.) roosts, the closest to the site boundary is located 260m south-west.
- 3.22 Table 4 presents each bat species recorded (excluding roost data) in the search zone and the proximity to the site of the closest record for each species.

Table 4 Bat Records

Common Name	Scientific Name	No. of Records	Closest Record (approximate distance and direction from site boundary)
Bat species	Chiroptera	3	700m NE
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	69	140m S
Daubenton's bat	<i>Myotis daubentonii</i>	1	1.18km NW
Myotis species	<i>Myotis</i> sp.	1	1.67km SW
Noctule bat	<i>Nyctalus</i> sp.	1	996m W
Pipistrelle species	<i>Pipistrellus</i> sp.	6	642m S
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	5	1.14km SE

Other Mammals

- 3.23 Thirteen records of hedgehog (*Erinaceus europaeus*) were identified within the 2km search area, dated between 2015 and 2021. The closest of these records to the site boundary is located 300m west.
- 3.24 A record of brown hare (*Lepus europaeus*) was identified within the 2km search area dated 2015. This record is located 842m east of the site boundary.

Birds

- 3.25 All nesting birds, their nests and eggs are protected from harm under the WCA, 1981 (as amended). In addition, species listed under Schedule 1 of the WCA are further protected against disturbance when breeding.
- 3.26 A number of bird species are listed under Section 41 in the NERC Act (2006, amended) as species 'of principal importance for the purpose of conserving biodiversity'. These species are often known as the 'S41 species'. There is a legal requirement for a public body to 'have regard to' these species in relation to maintaining biodiversity. The S41 list overlaps somewhat with the UK BAP species, with national or local targets to maintain and enhance populations.
- 3.27 Furthermore, the Birds of Conservation Concern (BoCC) report lists those bird species that are classed as being of High (Red listed) and Medium (Amber Listed) conservation concern based on population monitoring (Stanbury *et al.* 2021). This Red and Amber classification helps guide the assessment of bird species of conservation interest on or near to a site, alongside legislative and policy requirements.
- 3.28 A small number of Schedule 1 species, including kingfisher (*Alcedo atthis*), little ringed plover (*Charadrius dubius*) and peregrine (*Falco peregrinus*) were recorded within the 2km search area; these records are classed as **confidential**. All other protected and notable bird species records within the 2km search area are listed in Table 5, along with their conservation status.

Table 5 Bird Species of Principal Importance

Common Name	Scientific Name	Amber ⁸ Listed	Red Listed	Section 41 Priority Species ⁹
Bullfinch	<i>Pyrrhula pyrrhula</i>	x		x
Dunnock	<i>Prunella modularis</i>	x		x
Herring gull	<i>Larus argentatus</i>		x	x
House sparrow	<i>Passer domesticus</i>		x	x
Lapwing	<i>Vanellus vanellus</i>		x	x
Lesser redpoll	<i>Acanthis caberet</i>			x
Reed bunting	<i>Emberiza schoeniclus</i>	x		x
Song thrush	<i>Turdus philomelos</i>	x		x

⁸ The UK's birds can be split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green.

⁹ Species of Principal Importance under Section 41 of the NERC Act 2006.

Common Name	Scientific Name	Amber ⁸ Listed	Red Listed	Section 41 Priority Species ⁹
Spotted flycatcher	<i>Muscicapa striata</i>		x	x
Starling	<i>Sturnus vulgaris</i>		x	x
Wood warbler	<i>Phylloscopus sibilatrix</i>		x	x

Amphibians

- 3.29 A record of great crested newt (*Triturus cristatus*, GCN) presence was identified within the 2km search area, dating from 2019. This record is located 1.23km north-east of the site boundary.
- 3.30 Consultation with Natural England's GCN Geoportal revealed no known locations with confirmed presence of GCN within 2km of the central grid reference.
- 3.31 An Ordnance Survey map search revealed a single pond located within 500m of the central grid reference. This pond is located 441m north-east of the centre of the site at Broadhurst Park.
- 3.32 A record of common toad (*Bufo bufo*) was identified within the 2km search area, dated 2015. The record is located 1.15km north of the site boundary.

Reptiles

- 3.33 Four records of slow-worm (*Anguis fragilis*) were identified within the 2km search area, dated 2010 and 2011. The closest record to the site boundary is located 1.31km south.

Invertebrates

- 3.34 Records for nine priority terrestrial invertebrate species were identified within the 2km search area, dated between 2011 and 2021. The closest record to the site is for white letter hairstreak (*Satyrion w-album*) located 342m north-east of the site boundary.

Table 6 Invertebrate Records

Common Name	Scientific Name
Blood vein	<i>Timandra comae</i>
Bordered gothic	<i>Sideridis reticulata hibernica</i>
Cinnabar	<i>Tyria jacobaeae</i>
Dot moth	<i>Melanchra persicariae</i>
Dusky thorn	<i>Ennomos fuscantaria</i>
Ghost moth	<i>Hepialus humuli</i>
Latticed heath	<i>Chiasmia clathrata</i>
Small pheonix	<i>Ecliptopera silaceata</i>
White letter hairstreak	<i>Satyrion w-album</i>

White-clawed Crayfish

- 3.35 No records of white-clawed crayfish (*Austropotamobius pallipes*) were identified within the 2km search area.

Notable Fish

- 3.36 A record of European eel (*Anguilla anguilla*) was identified within the 2km search area, dated 2015. This record is located 1.05km north-west of the site boundary at Boggart Hole Clough.

Notable Plant Species

- 3.37 A single record for the notable plant species bee orchid (*Ophrys apifera*) was identified within the 2km search area, dated 2021. This record is located 1.41km east of the site boundary.

Phase 1 Habitat Survey

General Site Description

- 3.38 The site was roughly rectangular in shape and comprised a disused building (former social club) occupying much of the north-west part of the site, with hardstanding perimeter and area of hardstanding car park adjacent to the south-west. Scattered butterfly-bush and ephemeral/short perennial species had established in cracks within the hardstanding. Tussocky grassland was concentrated in the south-western part of the site, with a patch of scrub and occasional mature trees in the southern corner. Along the boundary to the west and north-west was a line of scattered (predominantly mature) trees, and an intermittent thin hedgerow along part of the boundary to the east. The site was readily used by pedestrians crossing from Sulby Street to Bacup Street.
- 3.39 The main habitats found on site (presented on Figure 1 along with the TN) are as follows and described in more detail below:
- Scrub;
 - Scattered trees;
 - Poor semi-improved grassland;
 - Tall ruderal;
 - Ephemeral/short perennial;
 - Hedgerow – species-poor;
 - Hardstanding and bare ground; and
 - Buildings.

- 3.40 Illustrative photographs are presented in Appendix 3.

Description of Habitats

Scrub – Continuous and Scattered

- 3.41 There was an area of continuous scrub occupying the southern corner of the site containing bramble and raspberry, with a stand of Japanese knotweed (TN1), and a patch of abundant variegated yellow archangel in the ground flora (TN2). There was a mature ash tree and mature goat willow, and patches of abundant ash and cherry saplings (some of the ash showing signs of dieback disease)
- 3.42 Scattered young butterfly-bush scrub had established in cracks in the hardstanding, particularly concentrated at the base of the building and along the boundary at the east of the site. A cluster of three Japanese rose bushes were present in the grassland next to the hardstanding at the north-western side of the site, a single Japanese rose bush on the north-eastern boundary, and an individual bush of an ornamental introduced species (firethorn species) along the fence on the south-eastern side.

Scattered Trees

- 3.43 Scattered trees were concentrated along the north-western side of the site, with two mature goat willows (trees T4 and T5, Figure 1) near the western corner, three mature London planes along the fencing (trees T1-3, Figure 1) and a cluster of immature cherry species, with cherry saplings extending out into the grassland. Near the building there was a cut ash stump and an immature ash tree. Scattered trees were also present at the south of the site with a mature ash (tree T6, Figure 1) and a mature goat willow tree (tree T7, Figure 1) amongst the scrub, ash and cherry saplings, and a coppiced mature sycamore (tree T8, Figure 1). Also, within the hardstanding adjacent to the building along the north-eastern boundary there were several ash saplings up to 1m high.

Poor Semi-improved Grassland

- 3.44 Tussocky grass-dominated poor semi-improved grassland covered most of the south-western part of the site, extending in a strip along the north-western boundary. Currently unmown, there were clumps of grass, with creeping bent, Yorkshire-fog and cock's-foot featuring strongly, and red fescue and perennial rye-grass more patchily distributed. Forb diversity was low, although dandelion were frequent to patchily abundant; other species present, at lower frequency, included ribwort plantain, common ragwort, and broad-leaved dock. Leaf litter was frequent to abundant across the grassland and there was scattered refuse/fly tipping.

Tall Ruderal

- 3.45 A patch of common nettle-dominated tall ruderal vegetation with frequent cock's-foot was present at the edge of the scrub at the south, merging into the scrub.

Ephemeral/Short Perennial

- 3.46 At the edge of the grassland adjoining the hardstanding in the centre of the site the vegetation became more open in patches, with abundant moss and bare ground visible between the plants, and species such as slender rush and daisy were abundant.
- 3.47 Scattered ephemeral/short perennial vegetation was also present at the base of buildings and in cracks in the hardstanding, with a wide range of commonly occurring annuals and short perennials, such as bittercress species, common ragwort, creeping bent, procumbent pearlwort, dandelion, and willowherb species.

Hedgerow

- 3.48 There was a thin, intermittent species-poor hedgerow along the eastern side of the site, approximately 2-3m high, dominated by young ash, along with occasional elder. Some of the branches were showing symptoms of ash dieback disease. Hedgerows are classified as Priority Habitats.

Hardstanding and Bare Ground

- 3.49 Hardstanding within the site comprised a central area of tarmac car park in front of the building (leading off Sulby Street), a tarmac track leading away from the car park (cutting through the grassland towards Bacup Road at the west) and strips of concrete and gravel hardstanding surrounding the building on three sides.
- 3.50 There were two small areas of bare ground at the western corner where the vegetation had worn away, probably due to pedestrian usage.

Building

- 3.51 There was a single building within the site (B1 on Figure 1) which is described in full under the Building Inspection paragraph (3.54).

Invasive Non-Native Species

- 3.52 Three invasive non-native species (INNS) Schedule 9 plants were present within the site:
- Japanese knotweed – a stand of Japanese knotweed was present amongst the scrub in the southern corner of the site (TN1);
 - Variegated yellow archangel – there was a patch of abundant variegated yellow archangel next to the boundary at the south (TN2); and
 - Japanese rose – there was a small patch of three bushes in the grassland at the north-west of the site (TN3), and a single bush on the north-eastern boundary (TN4).
- 3.53 In addition, immediately adjacent to the site boundary on the south-western side there was a small clump of two bushes of the Schedule 9 species Himalayan cotoneaster (TN5).

Building Inspection

- 3.54 The building (B1 on Figure 1, Photographs 4.1 to 4.6 in Appendix 4) was brick-built with large sections of the building obscured by wooden panelling on the north-west and south-west faces. All windows and doors were also covered by the wooden panelling or had been bricked-up. The building was likely single-storey with a predominately pitched roof, with flat roofed extensions on most sides (excluding the north-western side). Dormer windows, gable ends with wooden barge boards and a chimney with a lead flashing base were present on the pitched roof. The roof layer was of tile-effect corrugated metal, with a section of the south-eastern flat roof covered with roofing felt. The majority of the base of the roof had wooden barge boards, with a section of the eastern corner also containing soffit boxes.
- 3.55 PRF for bats included a gap into a soffit box, small gaps behind and holes within wooden barge boards (especially on south-eastern face) and lifted corrugated metal roofing material.
- 3.56 The building was not inspected internally due to health and safety concerns regarding the structural safety of the building due to vandalism, which had resulted in water damage from the leaking of the roof. The building has been unoccupied for reportedly two years and had previously been used as a social club. It is not known whether the building contains a roof void.
- 3.57 No evidence of bats was recorded during the inspection. Overall, B1 was identified as holding **Low** potential for roosting bats, associated with some exterior roof features and due to the possibility of the presence of a roof void. These PRF are most suited to crevice dwelling species such as pipistrelles (*Pipistrellus* sp.), the most frequently encountered species of bat in the UK. The PRF are unlikely to be suitable for maternity roosts (which require warm, dry and large spaces) or hibernation roosts (which require cool, constant temperatures) and are, therefore, most likely to be potentially used by small numbers of non-breeding pipistrelle species for summer day roosting.

Ground-Level Tree Inspection

- 3.58 Eight semi-mature trees were identified within the site, along some of the boundaries. They were assessed for their potential to support roosting bats. The results are summarised in Table 7. Figure 1 illustrates the location of these trees, with colour coding to highlight the suitability or otherwise of each tree. Photographs 5.1 to 5.6 provide a selection of illustrative photographs of these trees (Appendix 5).

Table 7 Summary of Assessed Roost Status Following Ground Level Inspections

Tree No	Species	Assessed Roost Status	Features	Emergence and/or Re-entry Surveys Required
T1	London plane	Negligible potential	Two small branch unions	No
T2	London plane	Negligible potential	One branch union (completely fused) and small knot holes with no cavities	No
T3	London plane	Negligible potential	A small number of small branch tears, mostly low down	No
T4	Goat willow	Negligible potential	Hazard beam in small branch	No
T5	Goat willow	Negligible potential	Small areas of decay on trunk and small knot holes with no cavities	No
T6	Ash	Negligible potential	No features observed	No
T7	Goat willow	Low potential	Branch tear and small holes on main trunk, small tears on branches, small knot holes with no cavities	No
T8	Sycamore	Negligible potential	No features observed	No

3.59 Only one tree (T7) was assessed as having low bat roosting suitability. It was difficult to assess the PRF of T7 from the ground, although due to the small external size of the PRF, it is unlikely that they were large enough to support the stable roosting environment required by hibernating bats. T7 is, therefore, likely to be used by individual summer roosting bats.

4. DISCUSSION AND RECOMMENDATIONS

Designated Sites

- 4.1 The site lies within the IRZ of Rochdale Canal SAC/SSSI, however, this is at a distance of 1.64km from the centre of the site, beyond roads, railway and built-up areas, and the site also lacks hydrological connectivity to the Rochdale Canal SAC/SSSI. It is, therefore, considered unlikely to be affected by the proposed works within the site.
- 4.2 Broadhurst Clough LWS lies 148m north-east of the site boundary, and Priority Habitat lowland fen occurs at 260m east of the site centre. Although close to the site, both areas lie beyond roads (including the busy Lightbowne Road) and built-up areas and are considered unlikely to be affected by proposed works within the site.
- 4.3 All other designated sites and Priority Habitats are located at a far enough distance from the site to be unaffected by the works.

Habitats

- 4.4 Habitats of intrinsic ecological value within the site comprise the scattered trees, hedgerow and area of continuous scrub. These habitats should ideally be avoided under any proposed development, and mitigation should be put in place if the proposed works would impact on these areas, including the rooting zones around trees.
- 4.5 The remaining habitats of poor semi-improved grassland, ephemeral/short perennial, tall ruderal vegetation, scattered scrub, and hardstanding and bare ground have little or no ecological value and no mitigation is required with regard to these habitats (although they may hold potential for protected species). The working footprint of the development should ideally be kept within these areas of the site.

Invasive Non-Native Species

- 4.6 Specific measures will be required where works pass through, or close to, the INNS Schedule 9 plants identified in TN1 to 5 (Figure 1) particularly Japanese knotweed (TN1). Appropriate control and eradication measures to prevent the spread of each species, both on- and off-site, would need to be implemented.
- 4.7 As a precaution, they should ideally be removed before site clearance in an appropriate way (see Environment Agency guidance notes^{10,11}) so as to ensure they are not inadvertently spread onto other areas. Good practice measures during site clearance (e.g. wheel-washing and/or soil management protocols) plus appropriate waste disposal mechanisms should be sufficient if implemented correctly.

¹⁰ <https://www.gov.uk/government/publications/treatment-and-disposal-of-invasive-non-native-plants-rps-178/treatment-and-disposal-of-invasive-non-native-plants-rps-178>

¹¹ <https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants>

Japanese Knotweed

- 4.8 It is important to note that Japanese knotweed spreads by underground rhizomes (roots) as well as very small fragments of stem, and the rhizomes can extend for several metres around the visible parts of the plant.
- 4.9 A detailed Method Statement will be required to set out suitable control measures, and this should be prepared by a suitably experienced contractor. Control measures could include some or all of the following:
- Detailed and up-to-date inspection to record the full extent of all Japanese knotweed growth prior to works commencing;
 - Chemical treatment to eradicate knotweed prior to works commencing (this can take several seasons);
 - Dig and remove to landfill, bury on site or carry out *in-situ* treatment;
 - Temporary fencing to demarcate areas contaminated with Japanese knotweed stems and roots and no vehicles or storage or materials etc in these areas; and
 - Best practice biosecurity measures, e.g. wheel washing to avoid accidental spread of small fragments of stem or root.

Further Survey Requirements for Protected and Notable Species

Badger

- 4.10 The field survey recorded no badger setts present within the site, or within visible land adjacent to the site, and the site itself was considered unsuitable for sett construction. In addition, there were no field signs of badger activity such as footprints or foraging snuffle holes present within the site. Although the desk study showed that badger setts had been recorded within the wider area, with a sett record within 500m of the site, the land immediately surrounding the site was predominantly built environment with limited opportunity or suitability for sett construction.
- 4.11 No further surveys for badger are, therefore, considered to be required.

Bats

- 4.12 The desk study identified that bats, mostly common pipistrelle, are present and roosting in the wider landscape, with the closest record, for a pipistrelle species roost, at 140m to the south.
- 4.13 The commuting and foraging habitat was assessed as Low as the habitats (grassland and trees) on-site were small, with little connectivity to surrounding greenspaces (such as Broadhurst Park to the north-east) due to a predominately urban landscape, although this included residential gardens.
- 4.14 The site bordered buildings in many places, including a church on the south-western boundary, a school to the north and residential properties. Many of these buildings contained features suitable for roosting bats. In addition, the majority of these built-up areas contained greenspaces, including a row of mature trees adjacent to the north-eastern boundary. These habitats provided Moderate commuting and foraging habitat. Nearby trees were observed from distance, but no features suitable for roosting bats were sighted.
- 4.15 The building (B1) on site was classed as holding Low potential to support roosting bats, partly as a precaution due to lack of access to the interior of the building and some exterior features being fenced off and unable to be inspected closely. The dilapidated nature of the building and the presence of nearby bat roosts is also taken into account. Building B1 is proposed for demolition.

- 4.16 Further surveys are required to confirm presence/absence of roosting bats, following guidance in Collins (2016) as summarised in Table 8.

Table 8 Summary of Further Surveys Required Following Building Inspections

Building No.	Assessed Roost Status	Recommended No. of Survey Visits	Type of Survey Visit Required	Recommended Timings of Survey Visits
B1	Low potential	1	Dusk emergence or dawn re-entry	May to August

- 4.17 Under the current proposals, only trees T1 to T3 are to be retained. Only one tree within the site (T7) was identified as having bat roosting potential. Due to its assessed status as a Low potential roost, no further surveys are needed, however, mitigation is recommended via the installation of bat boxes is recommended, as described within Mitigation Measures (para. 4.51 and 4.52).
- 4.18 In addition to the above recommendations, in the event that bats are unexpectedly encountered during the course of works on site, work in that area must cease immediately and advice sought from a suitably experienced and licensed bat ecologist (see Appendix 1 for summary legislation).
- 4.19 All other trees present within the site were assessed as having negligible roosting potential and do not require any further surveys or mitigation in respect of bats and their roosts.
- 4.20 In addition, light spill near sensitive habitats (adjacent off-site semi-natural areas of the school grounds to the north and church grounds to the south-west) and lighting near any installed bat boxes should be avoided unless absolutely necessary via an ecologically sensitive management plan. This will ensure that disturbance to foraging and roosting bats is minimised.

Other Mammals

- 4.21 The desk study returned 13 records for hedgehog, with the closest record at 300m to the west. Should any vegetation clearance be required within suitable hedgehog habitat within the site (the patch of dense scrub to the south) then the scrub clearance should be timed to avoid the hedgehog hibernation period (approximately October to April). If this is unavoidable then a precautionary approach should be adopted by checking beneath the scrub habitat for hibernating hedgehogs prior to the habitat clearance. Any hedgehog found should be carefully moved to a suitable, undisturbed location.
- 4.22 A record of brown hare was identified within the 2km search area, the record dated 2015. The location, however, is at a distance from the site and the small area and isolation of suitable habitat within the site within the adjacent built-up area makes it unsuitable for brown hare. No further action is recommended.

Breeding Birds

- 4.23 A number of Section 41 bird species within the wider 2km search area had been identified in the desk study, including species such as house sparrow (*Passer domesticus*) and starling (*Sturnus vulgaris*), which can live in urban areas and gardens.
- 4.24 Disturbance and clearance of habitats suitable for nesting birds, such as the scattered trees and dense scrub, should be avoided during the bird nesting season (generally considered to be March to end of August). If this timing is unavoidable then a check for nesting birds must first be undertaken by a suitably experienced ecologist. Any active nests should be protected by an undisturbed buffer zone (usually 5m radius) until the young have fledged. This may take several

weeks, depending on the species. If no active nests are found, then the vegetation should be removed within 48hrs of the ecologist's check.

- 4.25 It should also be noted that some species of bird, such as feral pigeon (*Columba livia*), are able to breed year-round. This is a species which can take opportunity of suitable space in disused buildings to breed, however, the interior of the building within the site appeared to be currently inaccessible to birds and no signs of its presence was noted during the survey.

Amphibians

- 4.26 There were no waterbodies within the site to support breeding amphibians.
- 4.27 The nearest waterbody to the site, identified from an Ordnance Survey search, was at a distance of 441m, with intervening roads and built-up areas, and although the tussocky grassland within the site would provide some suitable terrestrial habitat for amphibians, it was limited in extent and lacked connectivity to suitable breeding habitat.
- 4.28 In addition, the closest amphibian records from the desk study (single records of GCN and common toad) were both greater than 1km from the site, considered beyond the commuting distance for amphibians.
- 4.29 No further surveys for amphibians are, therefore, recommended.

Reptiles

- 4.30 Suitable scrub habitat for reptiles is limited to a small patch at the south of the site, with wider built-up environment in the surrounding area. In addition, the closest record to the site, for slow-worm, was at a distance of 1.31km. Reptiles are considered unlikely to be occupying the site, therefore, and no further action is recommended.

Invertebrates

- 4.31 Nine priority species of invertebrate have been recorded in the wider area. Habitats and food plants within the site would be suitable for six of these species, for example common ragwort (*Jacobaea vulgaris*), providing a food plant for cinnabar moth (*Tyria jacobaeae*).
- 4.32 The closest record to the site, however, is for white letter hairstreak located 342m north-east of the site boundary; this species favours woodland margins with elm species (*Ulmus* sp.) as the foodplant – habitats and species not found within the site. In addition, the suitable habitats are small, therefore, any potential impacts upon these priority species are considered to be low and no further action is recommended.

Summary

- 4.33 In summary, the key recommendations are:
- Habitats of intrinsic ecological value within the site comprise the scattered trees, hedgerow and area of continuous scrub. These habitats should ideally be avoided under any proposed development, and mitigation should be put in place if the proposed works would impact on these areas;
 - Specific measures will be required where works pass through, or close to, the INNS Schedule 9 plants identified in TN1 to 5 (Figure 1) particularly Japanese knotweed (TN1), which will require a detailed Method Statement. As a precaution, they should ideally be removed before site clearance in an appropriate way;
 - Further surveys are required to confirm presence/absence of roosting bats within building B1;

- The installation of bat boxes within the new scheme design is recommended;
- Ecologically sensitive management plan, detailing the avoidance of lighting near sensitive habitats for bats and any installed bat boxes;
- Timing scrub clearance to avoid the hedgehog hibernation period (approximately October to April). If this is unavoidable then a precautionary approach should be adopted by checking beneath the scrub habitat for hibernating hedgehogs prior to the habitat clearance. Any hedgehog found should be carefully moved to a suitable, undisturbed location; and
- Avoidance of disturbance and clearance of certain habitats during the breeding bird season.

Biodiversity Enhancement Opportunities

- 4.34 National Planning policy requires that all developments seek to incorporate ecological enhancements where feasible. The site is currently of low ecological value and development presents an opportunity to further increase biodiversity.
- 4.35 Overall, the proposals include areas of ground level landscape planting, including lawns and trees, which will provide opportunity to improve the habitat quality of the site for local populations of birds (for nesting, shelter and foraging) and bats (for foraging). There may be some opportunity for use of lawned areas by foraging hedgehog (closest record around 300m of the site).
- 4.36 The planting within the landscape scheme will link to and support the network of open spaces within the local area, including some of the protected sites as identified within the desk study, such as the nearby Broadhurst Clough LWS.
- 4.37 Mitigation measures incorporated into the landscaping plan are presented in the next section of this report.
- 4.38 Please note, these are ecologically-based recommendations and the final design, planting specifications, establishment and management regimes should be developed alongside input from a suitably qualified Landscape Professional and Architect (for integrated habitat box installation) as required.

Mitigation Measures

Trees

- 4.39 Three trees, T1 to T3, will be retained, however, a total of five trees, T4 to T8, will be removed (Figure 1). This loss will be mitigated for by the planting of three fastigate trees along the north-western boundary and eight ornamental trees (Appendix 6).
- 4.40 This planting will comprise native or wildlife-friendly plant species where possible, such as those which provide nectar, fruit or seeds to attract invertebrates and, in turn, provide a foraging resource for foraging bats and nesting and wintering birds.

4.41 It is recommended that the species mix include some of the following native tree species¹²¹³¹⁴ which are all suitable to provide both amenity and biodiversity value:

- Bird cherry (*Prunus padus*);
- Downy birch (*Betula pubescens*);
- Hornbeam (*Carpinus betulus*)¹⁵;
- Rowan (*Sorbus aucuparia*);
- Hawthorn (*Crataegus monogyna*); and
- Silver birch (*Betula pendula*).

Management

4.42 It is recommended that standard horticultural practices are undertaken for the first five years to ensure the successful establishment of street trees, including staking and watering as necessary. The trees should be subject to an annual inspection for the first five years to assess establishment and replace any failures.

4.43 Once the trees have become established it is expected that occasional arboricultural works may be required to retain tree shape and vigour.

Hedgerow

4.44 The existing hedgerow along a section of the south-eastern boundary (Figure 1) will be removed under the current proposals due to site access requirements. A new evergreen hedgerow will be installed along the north-western boundary (Appendix 6).

4.45 This planting should favour native species or those with recognised benefit to wildlife in preference to purely ornamental varieties. It is recommended that the species mix include the following evergreen native species¹⁶ which are all suitable to provide both amenity and biodiversity value:

- Yew (*Taxus baccata*);
- Holly (*Ilex aquifolium*);
- Gorse (*Ulex europaeus*); and
- Wild privet (*Ligustrum vulgare*).

Management

4.46 It is recommended that the new hedgerow is managed by trimming back the top and sides once established, to maintain hedgerow shape and vigour. This should be done annually in late winter

¹² www.woodlandtrust.org.uk/blog/2021/11/british-trees-to-plant-in-your-garden/

¹³ www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/plants-for-wildlife/garden-trees/best-trees/

¹⁴ www.gardenersworld.com/plants/native-trees-and-shrubs-to-grow/

¹⁵ Including the fastigate variety *Carpinus betulus* 'Fastigiata'

¹⁶ www.hedgesdirect.co.uk/acatalog/native-hedge-plants.html#usestorage

(but before bird nesting season commences) so that the hedgerow carries its berries over the winter as a source of food for birds.

Wildlife-Friendly Shrub Planting

4.47 The existing area of continuous scrub within the southern tip of the site (Figure 1) will be removed under the current proposals. This loss will be mitigated for by:

- New shrub planting also providing screen planting along the south-western boundary and a section of the south-eastern boundary (Appendix 6); and
- New ornamental shrub planting within residential areas (Appendix 6).

4.48 The shrubs will comprise a mix of native and non-native wildlife-friendly species which provide nectar, fruit or seeds to attract invertebrates and, in turn, provide a foraging resource for foraging bats and nesting and wintering birds. Suitable native species¹⁷¹⁸ recommended include:

- Hazel (*Corylus avellana*);
- Holly (*Ilex aquifolium*);
- Field maple (*Acer campestre*);
- Hawthorn (*Crataegus monogyna*); and
- Guelder-rose (*Viburnum opulus*).

Management

4.49 No long-term management of shrubs is recommended, other than replacement of failures and light trimming in late winter prior to the nesting bird season beginning.

Amenity Grassland

4.50 Amenity grassland will be established in the western section of the site, forming the resident's communal garden.

Management

4.51 It is recommended that standard horticultural practices are undertaken to ensure the successful establishment of amenity grassland areas, including weed control and watering as necessary. The grassland should be subject to an annual inspection for the first five years to assess establishment and replace any failures. A suitable mowing regime will be required for maintenance.

Bat, Bird and Insect Boxes

4.52 Under the current proposals, one tree with Low bat roosting potential (T7, Figure 1) will be removed, in addition to the demolition of the existing building also with low bat roosting potential (B1, Figure 1). To mitigate for these losses and to increase the value of the proposed development for biodiversity, external bat roost features and artificial bird nesting boxes will be installed onto the proposed dwellings and insect habitats will be provided within the landscaping scheme. The location, number and specification of features is illustrated in Appendix 6.

¹⁷ www.wildlifetrusts.org/actions/how-make-shrub-garden-wildlife

¹⁸ www.gardenersworld.com/plants/native-trees-and-shrubs-to-grow/

4.53 Bat, bird and insect box types, numbers and locations will comprise:

- 1No. Beaumaris Woodstone Bat Box to be installed on a north-west-facing elevation a minimum of 4m above ground level with unobstructed access for roosting bats and located away from light sources;
- 1No. Flatpack Double Chamber Bat Box to be installed on a north-east-facing elevation a minimum of 4m above ground level with unobstructed access for roosting bats and located away from light sources;
- 2No. House Sparrow Nest Box to be installed on north-west and south-east-facing elevations with open, uncluttered entrances to allow access/egress by nesting birds, located 2 to 4m above ground level; and
- 2No. National Trust Apex Insect House to be installed no higher than 2m above the ground (on the cycle store), close to suitable nectar/pollen-rich planting and in sunny sheltered locations, and away from areas where they may be subject to disturbance or appear to cause a nuisance.

Management

4.54 It is recommended that all bat, bird and insect boxes installed across the site are subject to the following management for the first five years:

- An annual inspection from ground level to assess any damage, inspections dates and results to be logged; and
- Repair or replacement of any damaged or missing boxes under the guidance of a suitably qualified and licensed Ecologist.

Sensitive Lighting for Bats

4.55 It is recommended all lighting that is in the vicinity of artificial bat roost features to be installed on new dwellings should be fitted with cowls or baffles to direct the lighting downwards and away from the bat roost features.

Timing of Installation of Features

4.56 It is recommended that all features to be incorporated into the development for the benefit of wildlife should be installed prior to completion and handover/sale. For clarity, this will comprise the following features:

- Wildlife-friendly landscape planting comprising trees, hedgerows and shrub planting; and
- Bat, bird and insect boxes.

Management Programme

4.57 A summary of the recommended ecological habitat management programme is provided in Table 9.

Table 9 Recommended Management Programme

Feature	Proposed Management	Timing
Trees	Following initial establishment period, occasional thinning and crown/formative pruning only.	As required: October to February.
Wildlife Friendly Shrub Planting	Replacement of failures	As required
Hedgerows	Following an initial establishment period, trimming back of top and sides to maintain shape and vigour.	Trim annually in February so that hedgerows carry berries over the winter as food source for birds.
Amenity Grass	Frequent mowing throughout growing season.	April to October.
Bird and Bat Boxes	Inspect and repair/replace under the guidance of an Ecologist any damaged or missing boxes.	Annually.

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6. ABBREVIATIONS

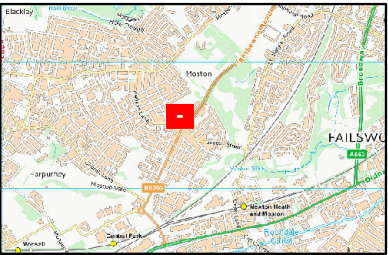
BAP	Biodiversity Action Plan(s)
BoCC	Birds of Conservation Concern
CIEEM	Chartered Institute of Ecology and Environmental Management
CRoW	Countryside and Rights of Way
EPS	European Protected Species
EU	European Union
GCN	Great Crested Newt(s)
GMEU	Greater Manchester Ecology Unit
INNS	Invasive Non-Native Species
IRZ	Impact Risk Zone(s)
JNCC	Joint Nature Conservation Committee
LNR	Local Nature Reserve(s)
LWS	Local Wildlife Site(s)
MAGIC	Multi Agency Geographic Information for the Countryside
NERC	National Environment and Rural Communities
NPPF	National Planning Policy Framework
PAA	Penny Anderson Associates Ltd
PRF	Potential Roost Feature(s)
SAC	Special Area(s) of Conservation
SBI	Site(s) of Biological Interest
SPA	Special Protection Area(s)
SSSI	Site(s) of Special Scientific Interest
TN	Target Note(s)
WCA	Wildlife and Countryside Act

FIGURE



TARGET NOTES

1. Japanese knotweed
2. Variegated yellow archangel
3. Japanese rose
4. Japanese rose
5. Himalayan cotoneaster



Legend

Site boundary

Habitat

- Dense scrub
- SI Poor semi-improved grassland
- Tall ruderal
- Ephemeral/short perennial
- Building
- Bare ground
- Hardstanding
- Hedgerow - defunct, species-poor
- Fence
- Wall
- Scattered tree
- Scattered scrub
- Sapling
- Ephemeral/short perennial
- Target note

Bat roosting potential assessment

- Tree with low bat roosting potential
- Tree with negligible bat roosting potential
- Building with low bat roosting potential

British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: 100000.000000
Central Meridian: 2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

ISO A3

Metres

0 2.5 5 10 15

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Project Name
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Discipline
Ecology

Title:
**Phase 1
Habitats Map**

Scale
1:400

Drawing No.
Figure 1

Drawn By
CC

Originator
CB

Date
14/01/2022

PAA Ref.
1.0

APPENDICES

APPENDIX 1

Relevant Protected Species Legislation Summaries

SUMMARY OF THE LEGISLATION RELATING TO BATS

All wild species of bat are protected under the Wildlife and Countryside Act (WCA) 1981, which has also been amended by later legislation, including the Countryside and Rights of Way (CROW) Act 2000. Bats are listed on Schedule 5 of the WCA and are therefore subject to some the provisions of Section 9 which, with the amendments, make it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection (S9:4b).
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat (S9:4c).

There are additional offences in relation to buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Bat species are also listed under Annexes IIa and IVa of the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017 (amended).

The Conservation of Habitats and Species Regulations 2017 (amended) state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead bat or part of such an animal.

In addition, seven native British bat species, including the soprano pipistrelle (*Pipistrellus pygmaeus*) and the brown long-eared bat (*Plecotus auritus*), are listed as 'species of principal importance' for the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (amended). In Wales, Section 7 of the Environment (Wales) Act 2016 provide a list of organisms of 'principal importance for maintaining and enhancing biodiversity' and lists several species of bat including the common pipistrelle (*Pipistrellus pipistrellus*) which is absent from England's S41 list.

Please note: the above text provides a brief summary of the legislation in relation to bats and their roosts and the original Acts, Regulations and any amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO BREEDING BIRDS

All wild species of breeding birds and their nests and eggs are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CROW) Act 2000. This legislation applies in England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CROW Act 2000) refers to specific birds listed on Schedule 1 of the WCA, and states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Schedule 1 includes birds such as Western barn owl (*Tyto alba*), black redstart (*Phoenicurus ochrurus*), woodlark (*Lullula arborea*) and Cetti's warbler (*Cettia cetti*). Please refer to the WCA for a complete list of Schedule 1 species¹.

Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- Birds listed on Schedule 2 (Part 1) of the Act may be taken or killed outside of the 'close season' for each individual species (the 'close season' is defined by the Act). This includes various wild duck and geese species.
- Birds listed on Schedule 2 (Part 2) of the Act may be killed or taken by authorised persons at all times. This includes species such as carrion crow (*Corvus corone*), Eurasian magpie (*Pica pica*), feral pigeon² (*Columba livia*) and greater Canada goose (*Branta canadensis*). An 'authorised person' is defined as a person who has written authorisation to undertake the act from the relevant statutory authority. The written authority is in the form of a licence, either a general licence which covers a number of the more typical 'pest' species, or an individual licence for other individual species. In England these licences are issued by Natural England and in Wales by the Welsh Assembly Government.

Please note: the above text provides a brief summary of the legislation in relation to breeding birds in England and Wales and the original Act and any amendments should be referred to for the precise wording.

¹ <https://www.legislation.gov.uk/ukpga/1981/69/schedule/1>

² Also known as rock dove

APPENDIX 2

Botanical Species List

Appendix 2 Botanical Species List

Common Name	Scientific Name	Scrub	Scattered Trees	Poor Semi-improved Grassland	Tall Ruderal	Ephemeral/ Short Perennial	Hedgerow
Woody Species							
Ash	<i>Fraxinus excelsior</i>		R-O				A
Ash (saplings)	<i>Fraxinus excelsior</i>		LA		R-O		
Bramble	<i>Rubus fruticosus</i> agg.	F		R	R		
Butterfly-bush	<i>Buddleja davidii</i>	LO					
Cherry species	<i>Prunus</i> sp.		LF				
Cherry species (saplings)	<i>Prunus</i> sp.		LO-LA				
Elder	<i>Sambucus nigra</i>	R-LO					O
Firethorn species	<i>Pyracantha</i> sp.	R					
Goat willow	<i>Salix caprea</i>		O				
Hawthorn	<i>Crataegus monogyna</i>	R					
Himalayan cotoneaster	<i>Cotoneaster simonsii</i> *	(R)					
Japanese rose	<i>Rosa rugosa</i> *	R-LA					
London plane	<i>Platanus acerifolia</i>		LO				
Raspberry	<i>Rubus idaeus</i>	A					
Rose species	<i>Rosa</i> sp.	R					
Sycamore	<i>Acer pseudoplatanus</i>		R				
Sycamore (saplings)	<i>Acer pseudoplatanus</i>	R					
Herbs, Grasses and Ferns							
Annual meadow-grass	<i>Poa annua</i>					LF	
Bittercress species	<i>Cardamine</i> sp.					LF	
Broad-leaved dock	<i>Rumex obtusifolius</i>	R		LF	R		
Bush vetch	<i>Vicia sepium</i>			R			
Cleavers	<i>Galium aparine</i>	O			LO		
Cock's-foot	<i>Dactylis glomerata</i>			F-A	F		
Common bent	<i>Agrostis capillaris</i>			O-LF			
Common mouse-ear	<i>Cerastium fontanum</i>					R	
Common nettle	<i>Urtica dioica</i>	LF		R	A		
Common ragwort	<i>Jacobaea vulgaris</i>			LO		O	
Creeping bent	<i>Agrostis stolonifera</i>			A		F-A	
Creeping buttercup	<i>Ranunculus repens</i>			O	F		
Creeping thistle	<i>Cirsium arvense</i>			R		R	
Cuckooflower	<i>Cardamine pratensis</i>			R			
Daisy	<i>Bellis perennis</i>			R		F-LA	
Dandelion	<i>Taraxacum officinale</i> agg.			F-LA		O-F	
Fern species	<i>Dryopteris</i> sp.					R	
Garlic mustard	<i>Alliaria petiolata</i>				O		
Great willowherb	<i>Epilobium hirsutum</i>			R			
Herb-Robert	<i>Geranium robertianum</i>			R	R		
Ivy	<i>Hedera helix</i>	LA					
Japanese knotweed	<i>Reynoutria japonica</i> *	R-LA					
Lesser trefoil	<i>Trifolium dubium</i>					LF	
Meadow buttercup	<i>Ranunculus acris</i>			R			
Perennial rye-grass	<i>Lolium perenne</i>			O-LA		O-LA	
Procumbent pearlwort	<i>Sagina procumbens</i>					LO	
Red fescue	<i>Festuca rubra</i>			LA			
Ribwort plantain	<i>Plantago lanceolata</i>			R-O			
Slender rush	<i>Juncus tenuis</i>			R		LA	
Smooth sow-thistle	<i>Sonchus oleraceus</i>					R	
Spear thistle	<i>Cirsium vulgare</i>					R	
Thyme-leaved speedwell	<i>Veronica serpyllifolia</i>					R	
Variegated yellow archangel	<i>Lamium galeobdolon</i> subsp. <i>Argentatum</i> *	LD					
Wall lettuce	<i>Mycelis muralis</i>					R	
Wall speedwell	<i>Veronica arvensis</i>					LF	
White clover	<i>Trifolium repens</i>			R		R	
Willowherb species	<i>Epilobium</i> sp.			R		O	
Wood avens	<i>Geum urbanum</i>	LF		R-LO	O		
Yorkshire-fog	<i>Holcus lanatus</i>			F		R	
Mosses							
Pointed spear-moss	<i>Calliergonella cuspidata</i>			LA		LA	
Springy turf-moss	<i>Rhytidiadelphus squarrosus</i>			LA			

KEY

D-Dominant, A-Abundant, F-Frequent, O-Occasional, R-Rare, L-Locally

*- Schedule 9 INNS

APPENDIX 3

General Site Photographs



Photograph 3.1
Overview of site, view south-west



Photograph 3.2
Overview of site, view north-east



Photograph 3.3
Target Note 1, Japanese knotweed in scrub in southern tip of site



Photograph 3.4
Target Note 2, variegated
yellow archangel



Photograph 3.5
Target Note 3, Japanese rose



Photograph 3.6
Target Note 5, Himalayan
cotoneaster

APPENDIX 4

Building Inspection Photographs



Photograph 4.1
North-east face of building 1



Photograph 4.2
South-east face of building 1



Photograph 4.3
South-west face of building 1



Photograph 4.4
North-west face of building 1



Photograph 4.5
Holes in wooden barge boards



Photograph 4.6
Hole into wooden soffit box

APPENDIX 5

Ground Level Tree Inspection Photographs



Photograph 5.1
Tree T1 - Two small branch unions



Photograph 5.2
Tree T2 - One branch union (completely fused) and small knot holes with no cavities



Photograph 5.3
Tree T3 - A small number of small branch tears, mostly low down



Photograph 5.4
Tree T4 (left) and T5 (right) – T4 with hazard beam in small branch and T5 with small areas of decay on trunk and small knot holes with no cavities

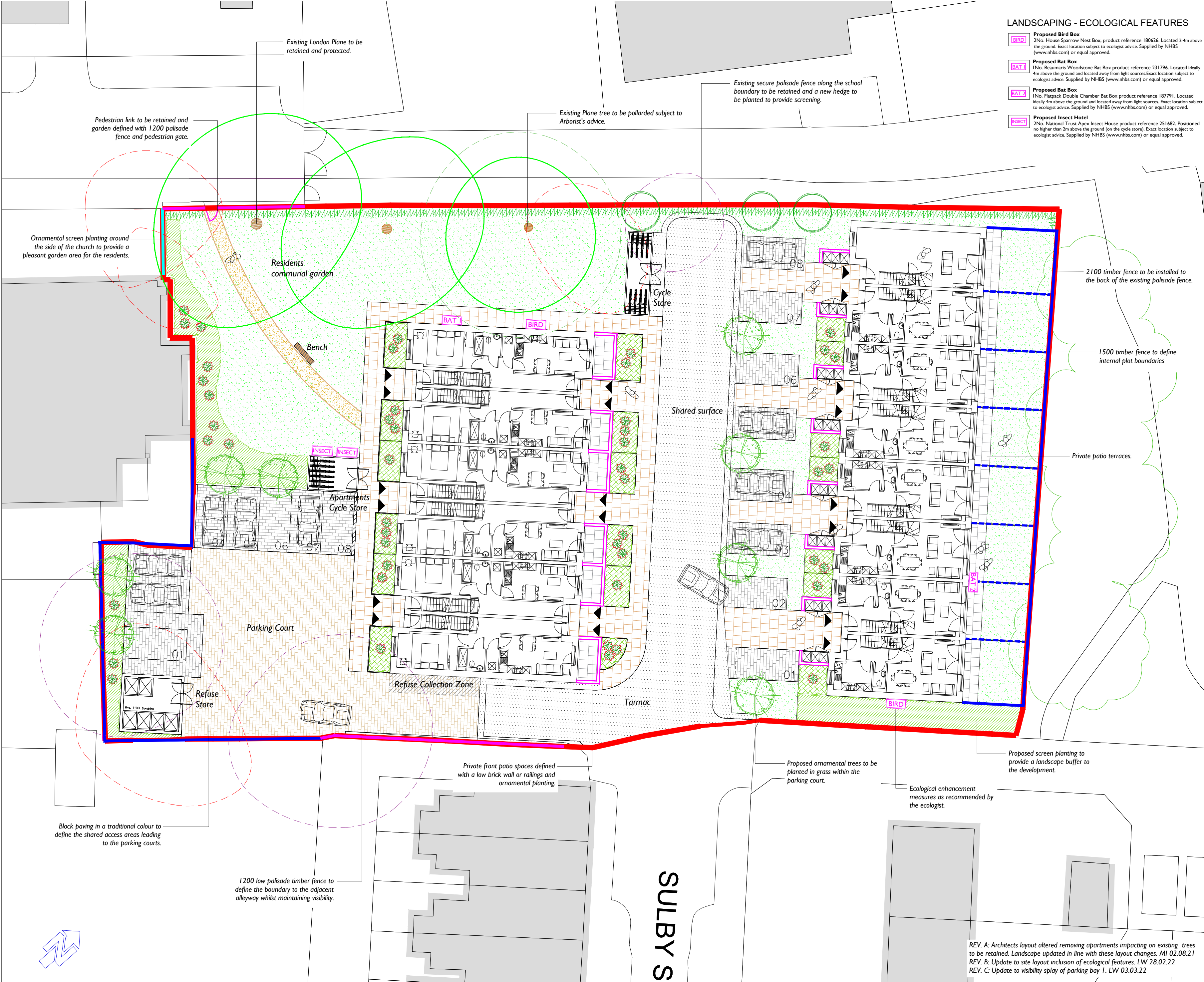
Photograph 5.5
Tree T6 (right) and T7 (left) – T6 with no features observed and T7 with multiple small features



Photograph 5.6
Tree T8 – no features observed

APPENDIX 6

Landscape Layout



LANDSCAPING - ECOLOGICAL FEATURES

- Proposed Bird Box**
2No. House Sparrow Nest Box, product reference 180626. Located 2-4m above the ground. Exact location subject to ecologist advice. Supplied by NHBS (www.nhbs.com) or equal approved.
- Proposed Bat Box**
1No. Beaumaris Woodstone Bat Box product reference 231796. Located ideally 4m above the ground and located away from light sources. Exact location subject to ecologist advice. Supplied by NHBS (www.nhbs.com) or equal approved.
- Proposed Bat Box**
1No. Flagpack Double Chamber Bat Box product reference 187791. Located ideally 4m above the ground and located away from light sources. Exact location subject to ecologist advice. Supplied by NHBS (www.nhbs.com) or equal approved.
- Proposed Insect Hotel**
2No. National Trust Apex Insect House product reference 251682. Positioned no higher than 2m above the ground (on the cycle store). Exact location subject to ecologist advice. Supplied by NHBS (www.nhbs.com) or equal approved.

KEY

LANDSCAPING - SOFT LANDSCAPE

- Existing Trees to be Retained**
Existing trees to be retained and protected inline with BS5837:2012. Please refer to the Arboricultural Impacts Assessment for further information.
- Existing Trees to be Removed**
Existing trees to be removed as a result of their condition. Please refer to the Arboricultural Impacts Assessment for further information.
- Existing Trees to be Removed**
Existing trees to be removed as a result of the development. Please refer to the Arboricultural Impacts Assessment for further information.
- Proposed Ornamental Trees**
Trees within the parking courts to be ornamental species and planted as 14-16cm Extra Heavy Standards to include fruiting and flowering species for the benefit of wildlife and visual amenity.
- Proposed Fatsiglate Trees**
Trees with a compact form to be planted along the site boundary to mitigate for the loss of existing trees and planted as 18-20cm Semi-Mature trees.
- Proposed Ornamental Planting**
Shrubs to be planted as 3L pots at 3-5 per sq.m within the residents front gardens to provide seasonal interest and will include flower and berry producing species for the benefit of wildlife.
- Proposed Screen Planting**
Shrubs to be planted as 3L pots at 3-5 per sq.m in the communal areas to provide screening and a landscape buffer around the development.
- Proposed Evergreen Hedge**
Hedge to be planted as 100-120cm high RB at 4 per lin.m as a single species row to provide screening to the adjacent school.
- Proposed General Amenity Grass**
Areas to be laid with a general amenity turf sward.

LANDSCAPING - HARD LANDSCAPE

- Proposed Block Paving**
Parking court to be surfaced in a block paving product in a traditional colour.
- Proposed Block Paving**
Parking bays to be surfaced in a block paving product in a charcoal colour.
- Proposed Paths and Patios**
Paving units in a textured natural buff colour to be laid for pedestrian access paths around the development.
- Proposed Paths and Patios**
Paving units in a textured warm grey colour to be laid for private patios.
- Proposed pedestrian link**
Path to be surfaced in a compacted Breendon gravel with a timber edge to provide an informal pedestrian link through the site.
- Proposed tarmac**
Site entrance to be surfaced in black tarmacadam to tie into the existing highways.

LANDSCAPING - FEATURES

- Proposed bench**
Timber bench to be installed in the residents communal garden.

LANDSCAPING - BOUNDARIES

- Existing Wall to be retained**
Brick wall along the church boundary to be retained.
- Existing Palisade Fence**
Palisade fencing along the school site boundary to be retained.
- Proposed 2100 Closed Boarded Fence with trellis**
1800mm high closed boarded fence panels with 300mm trellis on top to secure the site, to be installed in front of the existing palisade fence.
- Proposed 1500 Closed Boarded Fence with trellis**
1200mm high closed boarded fence with 300mm trellis on top to be installed between the private gardens.
- Proposed 1200 Boundary**
1200mm low brick wall or railings to the private patio terraces.



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Client

Abacus Solicitors

Project

Sulby Street, Manchester

Description

Landscape Layout

Status

For Planning

Scale

1:200@A2

Drawn

MI chkd EP

Job number

4698

Drawing number

01

Date

Feb 22

Revision

C

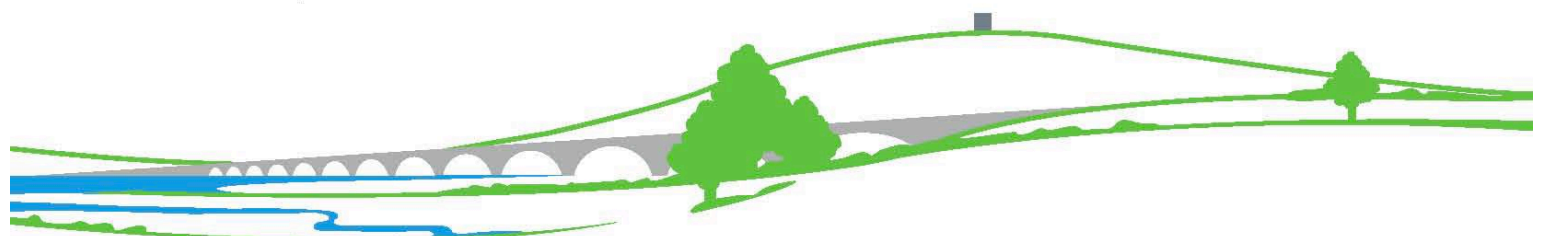
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All levels and dimensions to be checked on site by contractor prior to commencement; Any variations to be reported to the client. This drawing is to be read in conjunction with all others relating to the project and all information derived accordingly; any anomalies to be reported to the client. Do not scale from this drawing. Use figured dimensions only. Work shown on this drawings to be carried out in accordance with current British Standards and Codes of Practice.

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REV. A: Architects layout altered removing apartments impacting on existing trees to be retained. Landscape updated in line with these layout changes. MI 02.08.21
REV. B: Update to site layout inclusion of ecological features. LW 28.02.22
REV. C: Update to visibility splay of parking bay 1. LW 03.03.22

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