



Preliminary Ecological Appraisal Report

Sandilands Primary School, Wythenshawe

Reference:81-240-R1-1

Date: May 2023



PRELIMINARY ECOLOGICAL APPRAISAL REPORT

Sandilands Primary School
Wythenshawe

Prepared for:
Tilbury Douglas Construction Ltd

Report Ref: 81-240-R1-1
Date Issued: 10/05/2023

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QUALITY ASSURANCE

PROJECT NUMBER	81-240		
VERSION	Version 1		
REMARKS	Final		
DATE	May 2023		
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EXECUTIVE SUMMARY

Site Address	Sandilands Primary School, Wendover Road, Manchester M23 9JX
Coordinates	E 379597, N 389649
Site Area	Approximately 3.2 ha
Current Site Use and Adjacent Site Use	The site comprised Sandilands Primary School, comprising numerous school buildings hardstanding car parks and associated amenity grassland. Residential housing surrounded the site to the south, east and west, whilst a large area of broadleaved woodland lay adjacent to the north.
Designated Sites	The site is located within the impact risk zone of Rostherne Mere Site of Special Scientific Interest (SSSI) located approximately 7 km south-west of the site. This also encompasses Rostherne Mere Ramsar and Rostherne Mere National Nature Reserve (NNR). Due to the distance between the site and these designated sites, as well as the lack of connectivity between them, no detrimental impacts on the designated sites are anticipated as a result of the development. Furthermore, as per the criteria listed on MAGIC (accessed May 2023), the proposed site will not require further consultation with Natural England to proceed. Additionally, due to the small scale of the works and the distance between the site and the Ramsar site, a Habitat Regulations Assessment (HRA) screening assessment will not be required to assess whether the proposed development will have any 'likely significant effects' on the designated sites.
Survey Results	The site was found to comprise hardstanding, buildings, broadleaved woodland, amenity grassland, introduced shrub, dense scrub, hedgerow, treeline and scattered trees. The site was found to have the following potential ecological constraints: ✿ Foraging and commuting opportunities for bats within the woodland, scattered trees and treeline. ✿ Tres T28 and T30 were found to have Low bat roosting potential. ✿ Tree T29 was found to have Moderate bat roosting potential. ✿ Potential presence of common amphibians within the woodland, dense scrub, introduced shrub, treeline and hedgerow. ✿ Hedgehog may utilise the woodland, dense scrub and understory of the hedgerows and treeline. ✿ Potential for nesting birds in the woodland, dense scrub, introduced shrub, hedgerow, treeline and scattered trees. ✿ Invasive species, wall cotoneaster and rhododendron, were identified in the site.



Conclusions

Based on current proposals no further surveys are required to inform a planning application.

T29 will be retained as part of the development. If proposals change and T29 is to be impacted, it will require further Nocturnal Bat Surveys. Two nocturnal bat surveys between May and September (inclusive) would be required with at least one survey between May and August (inclusive). The surveys would be valid for two years to inform a planning application. If bats are identified roosting within the tree, three surveys in total would be required to characterise the roost and a European Protected Species Licence will be required with up-to-date surveys from the survey season prior to the application submission.

The following mitigation is recommended:

- ✿ Common amphibians are to be removed by hand from the working area during the clearance of any vegetation.
- ✿ Precautionary Working Methods for badger.
- ✿ Updated badger walkover prior to start of works.
- ✿ Vegetation should be retained where possible. If any scrub requires clearance, this should be strimmed to 50 cm and checked for hedgehog prior to clearance to ground level. If trees or hedgerow are removed, their bases should be checked, prior to removal, for sheltering hedgehogs. It is recommended that any vegetation clearance takes place outside of December-March to avoid impacting hibernating hedgehogs.
- ✿ T29 and T31 are due to be retained. However, if they require removal they should be soft felled under the supervision of a qualified ecologist.
- ✿ Vegetation should be retained where possible. Any vegetation clearance should occur outside of the breeding bird season (March to September inclusive). If this is not possible, a suitably qualified ecologist should undertake a nesting bird check up to 24 hrs before works commence. If a nest, or nest in construction, is located, then a stand-off distance should be maintained until the young have fledged.
- ✿ A lighting strategy is recommended to protect any retained on-site habitats (woodland, hedgerows, treelines and scattered trees), as well as the broadleaved woodland to the north of the site as dark habitats.

A 10% gain in biodiversity will be required on-site. If this cannot be achieved on-site, a conservation offset payment, or off-site compensation may be required.



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1. INTRODUCTION

1.1. BACKGROUND

E3P were commissioned by Tilbury Douglas Ltd Projects Limited to undertake a Preliminary Ecological Appraisal at Sandilands Primary School, Wythenshawe, hereafter referred to as “the site”.

This report has been produced by Lowri Thomas BSc (Hons), Project Manager (Ecology) at E3P. Lowri holds an Associate membership of CIEEM and has over three 3 years of professional experience as an ecologist. Lowri has experience undertaking Preliminary Ecological Appraisals, protected species surveys and ecological mitigation on a range of projects across the UK.

1.2. PREVIOUS SURVEYS

A Preliminary Ecological Appraisal of the site was undertaken by 1st Horizon in May 2021 (report ref: SL01-R13). During the survey, the site was found to comprise buildings, bare ground, amenity grassland, poor semi-improved grassland, introduced shrub, broadleaved woodland, scattered trees, and scattered shrubs. The site was found to have the potential to support bats, badgers and nesting birds, with further surveys recommended to determine the suitability of the on-site trees and buildings for roosting bats.

1.3. PROPOSED DEVELOPMENT

Development proposals include the demolition of the school buildings in the centre of the site, to facilitate the construction of a new school building with associated gardens and landscaping. The existing caretaker’s property and Surestart nursery buildings in the east of the site will be retained, as well as the habitat area in the north-east and hardstanding in the south-west.

1.4. SITE LOCATION

The site is located in the predominantly residential area of Wythenshawe, South Manchester. It is surrounded by residential developments to the south, east and west, with an area of broadleaved woodland located adjacent to the north. Fairywell Brook is located approximately 200 m west of the site at its’ closest point, which defines the eastern boundary of Beech Fields, a series of grassland playing fields. The A560 dual carriageway and an active railway line are located approximately 260 m and 400 m south of the site, respectively. Wythenshawe Park and Gardens is located approximately 990 m east of the site. Please refer to Figure 1.1 for the approximate site location.



FIGURE 1.1 APPROXIMATE SITE LOCATION



1.5. OBJECTIVES

The objectives of the Preliminary Ecological Appraisal are as follows:

- ✦ Identify the major habitats present.
- ✦ Ascertain the presence or potential presence of any legally protected species and habitats.
- ✦ Recommend any further surveys or mitigation that may be required.

The Preliminary Ecological Appraisal comprises a desk study and site walkover. This survey has been completed as a baseline assessment of the site, and as such please see the end of the report for further surveys and mitigation proposed.



2. METHODOLOGY

2.1. DESKTOP STUDY

The following sources of information and ecological records were consulted:

- ✚ MAGIC – A web-based interactive mapping system, on which geographic information regarding key environmental schemes and designations are collated, including details of statutory conservation sites, accessed March 2023.
- ✚ Aerial mapping and ordnance survey maps.
- ✚ Local data records from the past 10 years provided by the Greater Manchester Ecology Unit (GMEU) on 05th April 2023

A 1 km search area was utilised for the data search, with this being deemed an appropriate distance for the Zone of Influence of the site. The 1 km search was selected as the site largely comprised built-up habitats anticipated to be of little ecological value. The surrounding habitat was also considered, which includes residential housing to the east, south and west which is also expected to offer few opportunities for local wildlife.

The data search included the request for details of protected and notable species of flora and fauna within 1 km of the central grid reference of the site. In addition, a request was made for any non-statutory designated sites within 1 km of the site boundary.

Please note that a lack of up-to-date records does not confirm the absence of a species from the area. The lack of records may simply be a result of a lack of protected species surveys being undertaken within the local area.

2.2. VEGETATION AND HABITATS

A Preliminary Ecological Appraisal of the proposed development site was undertaken by Lowri Thomas on 06th April 2023. The weather was dry, still with intermittent sun.

The walkover survey was undertaken to the standard methodology as detailed by the JNCC Handbook for Phase 1 Habitat Survey, 2010. The assessment follows the methodology as per "Guidelines for Preliminary Ecological Appraisal" (CIEEM, 2017).

A vegetation and habitat plan has been produced for the proposed development site and the immediate surrounding area (please refer to Appendix I). The mapping is based on the Joint Nature Conservation Committee Phase I Habitat Survey Methodology (JNCC 2010).

Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act 1981 (as amended) and species which are indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).

Searches were carried out for the presence of invasive species, including those listed on the revised (April 2010) Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) including Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*).



2.3. FAUNA

A thorough search of the site for signs of protected species of fauna was undertaken during the site walkover. These searches considered the following:

- ✳ Suitability of any ponds to support notable amphibians, and the suitability of the site's terrestrial habitats to support amphibians.
- ✳ Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- ✳ Signs of badgers (*Meles meles*), by way of setts, mammal paths, foraging signs or latrines to indicate usage of the site by the species.
- ✳ Search of any watercourses for signs or suitability for water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts and foraging signs.
- ✳ Suitability of the site to support roosting, foraging and commuting bats.
- ✳ Suitability of the site to support notable bird species.
- ✳ Suitability of the site to support notable invertebrates.
- ✳ Search of the site for any invasive species.

2.4. PRELIMINARY ROOST ASSESSMENT

The Preliminary Roost Assessment (PRA) was undertaken by Lowri Thomas on 06th April 2023. Lowri holds a Natural England Bat Licence (2021-55376-CLS-CLS).

The survey involved undertaking a systematic search of the buildings and trees, searching for signs of bats, or spaces where bats would be able to access. The methodology followed that described in *Bat Surveys for Professional Ecologists, 3rd Edition (Collins, 2016)*. Building 5 (B5) – Building 8 (B8) are not to be impacted by the development. Therefore a PRA on these buildings was not required.

The structures and trees were categorised for their bat roosting potential as described in Table 2.1 in accordance with Collins (2016).

TABLE 2.1 BAT ROOSTING POTENTIAL CLASSIFICATION OF BUILDINGS AND TREES

CATEGORY	DESCRIPTION
NEGLIGIBLE	A building or tree with no potential roosting features present or a tree of an age or species that would not support roosting bats.
LOW	A building with one or more potential roost sites. However, the potential roost sites do not provide suitability for large numbers of bats (i.e. for maternity or hibernation).
MODERATE	A building or tree with one or more potential roosting features which could support bats but is of a suitability meaning that it would be unlikely to support a roost of high conservation status.



CATEGORY	DESCRIPTION
HIGH	A building or tree with several potential roosting features which would be able to support a large number of bats on a regular basis and for longer periods of time.

The survey was undertaken utilising suitable binoculars and ladders to access all areas where safe to do so.

2.5. SURVEY LIMITATIONS

A Preliminary Ecological Appraisal does not constitute a full botanical survey. Instead, key species are identified to give a representative description of each habitat type.

This survey was undertaken in April and as a result of seasonal vegetation dieback and differing flowering times, it is possible that some species of flora may have been missed or misidentified. It is possible that some invasive/non-native species could have been missed during the survey.

Internal access to the buildings in the east of the site, including the existing caretaker's property and associated garages and Surestart nursery building (Building 5 - Building 8) was not possible during the survey. However, these buildings are not to be impacted by the development therefore a Preliminary Roost Assessment was not undertaken on these buildings.

Internal access to the substation unit, Building 4 (B4), was not possible during the survey.

Access to all areas within 30 m of the site to search for field signs of badger was not possible due to the presence of private residential properties to the east, south and west. Additionally, a full inspection of the dense scrub and broadleaved woodland on-site as well as the broadleaved woodland adjacent to the north could not be undertaken due to their density. As such, some features could have been missed.

These constraints have been taken into consideration during the assessment.



3. SURVEY RESULTS

3.1. SITE CONTEXT

The site predominantly comprises buildings, hardstanding and amenity grassland associated with Sandilands Primary School. As the site largely comprises urban habitats it has limited opportunities for local wildlife. However, several scattered trees, hedgerows and treelines are present on-site, which are likely to offer valuable foraging and commuting opportunities for local bat and bird species. Mature trees may also offer roosting potential for local bat species. Additionally, an area of Deciduous Woodland, a UK Biodiversity Action Plan (BAP) Priority Habitat, is located in the north of the site, which extends beyond the site boundary to the north. This is likely to provide important foraging and refuge habitats for a range of local fauna, including terrestrial mammals such as hedgehogs (*Erinaceus europaeus*) and badgers. A wet ditch is present in the woodland, terminating at the northern aspect of the site boundary. The ditch is likely to offer a range of resources for fauna and flora, with its ecological value increased due to the surrounding broadleaved woodland.

Fairywell Brook and Baguley Brook are located approximately 200 m west and 600 m north of the site respectively. The watercourses are expected to provide commuting and foraging opportunities for local wildlife, particularly those that specialise feeding along aquatic habitats such as waterfowl and Daubenton's bat (*Myotis daubentonii*). However, residential housing is situated between these habitats and the site, which may deter species from commuting from the watercourses to the site.

An allotment is located approximately 460 m west of the site, adjacent to Beech Fields. The mosaic of habitats at the allotment is expected to offer valuable resources for a plethora of wildlife, including shelter for amphibians and foraging opportunities for terrestrial mammals. Although, anthropogenic features located between the site and the allotments which may act as a dispersal barrier to the site for some species.

No waterbodies were located within the site boundary or in 250 m of the site.

3.2. DESIGNATED SITES

The site is located within the impact risk zone of the following Rostherne Mere Sites of Special Scientific Interest (SSSI) located approximately 7 km south-west of the site. The site is nationally important for its birds. It acts as a winter roost for large numbers of ducks and holds nationally significant numbers of pochard (*Aythya farina*) and pintail (*Anas acuta*) as well as good numbers of all other common species associated with freshwater. Over 10,000 gulls regularly roost on the water and up to 90 cormorants (*Phalacrocorax carbo*) roost in the trees along the edge. Because of its size and depth, it is the last freshwater body in the area to freeze in winter and is consequently an important refuge in severe weather. The site is of international importance and has been designated under the terms of the European Community Directive 79/409/EEC on the Conservation of Wild Birds for inclusion on the list of Wetlands of International Importance under the Ramsar Convention. Rostherne Mere is also designated as National Nature Reserve (NNR), with its wintering wildfowl, otter, and harvest mouse (*Micromys minutus*) populations cited as features of interest, as well as its importance for freshwater research. After being absent for many years, otters have returned to the area. The reserve supports a population of harvest mice which are uncommon in Cheshire.



3.3. HABITATS

The main habitats encountered during the survey are described in the following subsections. Please refer to Appendix I for the Phase 1 Habitat Plan.

3.3.1. BUILDINGS AND HARDSTANDING

The south of the site is almost entirely formed of buildings and hardstanding. The hardstanding in the site included car parks, access roads and pathways. The hardstanding has been well unmanaged with few species colonising the edges including broad-leaved dock (*Rumex obtusifolius*) and dandelion (*Taraxacum officinale* agg.).

Eight buildings were present within and adjacent to the site boundary. A detailed assessment and further photographs of the buildings are outlined in Appendix II.

PLATE 1 SHOWING AREA OF HARDSTANDING



3.3.2. AMENITY GRASSLAND

A large playing field comprising amenity grassland used for sports and recreational purposes by the pupils was located in the north of the site. Additional smaller areas of grassland were located in the east and south. The grassland was well maintained, as such its sward was short and species were difficult to ascertain. The flora composition included daisy (*Bellis perennis*), perennial rye-grass (*Lolium perenne*), ragwort (*Jacobaea vulgaris*), ribwort plantain (*Plantago lanceolata*), red clover (*Trifolium pratense*), creeping buttercup (*Ranunculus repens*), dandelion, wood avens (*Geum urbanum*) and red dead nettle (*Lamium purpureum*).



PLATE 2 SHOWING AMENITY GRASSLAND



3.3.3. INTRODUCED SHRUB

A small area of introduced shrub was located adjacent to Building 1 (B1). The shrub comprised Spanish bluebells (*Hyacinthoides hispanica*), spindle species (*Euonymus sp.*), meadow buttercup, wood avens and ornamental species. Invasive species wall cotoneaster (*Cotoneaster horizontalis*) and rhododendron (*Rhododendron ponticum*) were identified in the introduced shrub.

PLATE 3 SHOWING INTRODUCED SHRUB



3.3.4. BROADLEAVED WOODLAND

Broadleaved woodland was identified in the north of the site, which provided connectivity to the adjacent woodland outside of the site. The species included silver birch (*Betula pendula*), pedunculate oak (*Quercus robur*), hazel (*Corylus avellana*), and elm (*Ulmus sp.*). The flora in the understory of the woodland comprised cleavers (*Galium aparine*), wood avens, broadleaved dock, bramble (*Rubus fruticosus agg.*) and dandelion.

PLATE 3 BROADLEAVED WOODLAND



3.3.5. SCATTERED TREES

Numerous scattered trees were located in the site boundary including early mature, semi-mature and mature trees. The species included whitebeam (*Sorbus aria*), magnolia, Corsican pine (*Pinus nigra*), Scots pine (*Pinus sylvestris*), cypress sp. (*Cupressus sp.*), cherry (*Prunus sp.*) western red cedar (*Thuja plicata*), sycamore (*Acer pseudoplatanus*), laurel (*Prunus laurocerasus*), pedunculate oak, hornbeam (*Carpinus betulus*), holly (*Ilex aquifolium*), Lombardy poplar (*Populus nigra 'Italica'*), bird cherry (*Prunus padus*), apple (*Malus domestica*), pear (*Pyrus communis*), Norway maple (*Acer platanoides*) and larch (*Larix decidua*).



PLATE 4 SHOWING SCATTERED TREE



3.3.6. DENSE SCRUB

Dense scrub was located in the north-east of the site. The scrub was largely dominated by bramble with additional species noted including common nettle (*Urtica dioica*), rosebay willowherb (*Chamaenerion angustifolium*), creeping thistle (*Cirsium arvense*) and broadleaved dock.

PLATE 5 SHOWING DENSE SCRUB



3.3.7. OTHER HABITAT

Sections of artificial grass were located in the site associated with the areas of hardstanding and buildings. The artificial grass comprised play equipment for the school pupils.

PLATE 6 SHOWING ARTIFICIAL GRASS



3.3.8. HEDGEROW

In total four hedgerows were located in and adjacent to the site. Details of which can be found in Table 3.1.

TABLE 3.1 HEDGEROW DESCRIPTION

HEGDEROW REF	DESCRIPTION	PHOTOGRAPH
H1	Hedgerow 1 (H1) defined the west of the site. The hedgerow was situated adjacent to the hardstanding and amenity grassland. The hedgerow was managed and predominately formed of hawthorn with other species noted including cherry laurel (<i>Prunus laurocerasus</i>), holly and sycamore. The hedgerow was approximately 2 m in height and 1 m wide.	



HEGDEROW REF	DESCRIPTION	PHOTOGRAPH
H2	Hedgerow 2 (H1) defined the north of the site. The hedgerow was situated adjacent to the amenity grassland and broadleaved woodland. The hedgerow predominately formed of hawthorn with holly, bramble (<i>Rubus fruticosus</i> agg.), elder (<i>Sambucus nigra</i>) and pedunculate oak saplings. The hedgerow was approximately 3 m in height and joined into the adjoining hedgerow. The width of the hedgerow was approximately 2 m wide.	
H3	Hedgerow 3 (H3) was located in the south of the site. The hedgerow was entirely formed of beech (<i>Fagus sylvatica</i>). The hedgerow was approximately 1 m wide and 1.5 m in height.	
H4	Hedgerow 4 (H4) was a hedgerow situated adjacent to the east of the site. The hedgerow comprised privet (<i>Ligustrum ovalifolium</i>) with a sycamore and cypress species tree. The hedgerow was approximately 2 m wide and 3 m in height.	



3.3.9. TREELINE

In total three treelines are located in the site, in the south-west of the site defining an access road and in the north-east along the grassland field.

TABLE 3.2 TREELINE DESCRIPTIONS

TREELINE NUMBER	DESCRIPTION	PHOTOGRAPH
TL1	Treeline 1 (TL1) was located in the north-east of the site, defining the amenity grassland. The tree species included pedunculate oak, lime and sycamore. The understory of the treeline included daffodils (<i>Narcissus pseudonarcissus</i>), sycamore saplings, false oat grass (<i>Arrhenatherum elatius</i>), wood avens, bramble and cleavers.	
TL2	Treeline 2 (TL2) was situated along a hardstanding road in the south-west of the site. The tree species entirely comprised silver birch.	



TREELINE NUMBER	DESCRIPTION	PHOTOGRAPH
TL3	Treeline 3 (TL3) was situated along a hardstanding road in the south-west of the site. The tree species entirely comprised silver birch.	

3.4. PROTECTED AND NOTABLE SPECIES

3.4.1. AMPHIBIANS

Consultation with the GMEU did not identify any records of great crested newts (*Triturus cristatus*) within the 1 km search area.

Consultation with MAGIC did not identify any great crested newt European Protected Species Licences within the 1 km search area. The closest licence was located approximately 4.3 km south of the site, active in 2019 and 2021 for the damage and destruction of a great crested newt resting place.

Great crested newts' upper dispersal limit is generally considered to be up to 250 m from a waterbody (though occurrence of greater distances does exist where habitat connectivity is of high quality) (English Nature, 2001). Considering this, the presence of great crested newts on-site is reasonably discounted as no waterbodies were located on-site or within 250 m of the site.

Consultation with GMEU did not identify any records of other common amphibians within the search area.

The large expanse of shortly mown amenity grassland on-site does not provide suitable shelter and cover from predators and as such does not comprise high-value habitat for amphibians. However, the dense scrub, introduced shrub and understory of the broadleaved woodland, treeline, and hedgerow on-site have the potential to support the species group within their terrestrial phase. Common amphibians may therefore be present on site.

3.4.2. BATS

Consultation with the GMEU identified records of common pipistrelle (*Pipistrellus pipistrellus*), myotis species (*Myotis spp.*) and pipistrelle species (*Pipistrellus spp.*). The closest record was of a common pipistrelle, located within the broadleaved woodland adjacent to the site's northern boundary.



Consultation with MAGIC did not identify any Natural England Bat Mitigation Licences within 1 km of the site boundary. The closest licence was located approximately 1.5 km north of the site, active between 2011 and 2013 for the destruction of a common pipistrelle non-breeding roost.

Eight buildings were located on-site, each of which was assessed for their suitability to support roosting bats, as detailed in Collins (2016). All buildings were assessed as having Negligible bat roosting potential as they did not comprise any features which could support roosting bats. Please see Appendix II for detailed descriptions of these structures and their associated Preliminary Roost Assessments.

Three trees (T28, T29 and T30), all located within TL1, were assessed as having features which may support roosting bats. T28 and T30 were assessed as having Low bat roosting potential. Whereas T29 was assessed as having Moderate bat roosting potential. A detailed description of these trees can be found in Appendix II. Tree references are taken from the Arboricultural Impact Assessment Report produced by E3P, 2023 (report reference: 81-240-R3).

The amenity grassland, artificial grass, buildings and hardstanding on-site offer poor habitat for local bat species. However, the broadleaved woodland, dense scrub, scattered trees, treeline, and hedgerow are likely to attract a range of invertebrate prey for bats, in turn providing foraging value for the species group. The linear features on-site including TL1, H1 and H2 are also expected to offer commuting opportunities for bats. These features provide connectivity to the broadleaved woodland to the north of the site. However, as residential housing is situated east and west of the site their commuting value for bats is limited.

3.4.3. BADGER

Consultation with GMEU did not identify any recent records of badger (*Meles meles*) within the 1 km search area.

No badger setts or field signs of badger were located on-site or within 30 m of the site boundary where access was possible.

The site is assessed as having suitability for badger as sett building opportunities are present within the broadleaved woodland, dense scrub and understory of TL1 and the hedgerows. The amenity grassland on-site is also anticipated to provide foraging resources for the species, as well as the fruit from the flowering trees.

3.4.4. OTHER TERRESTRIAL MAMMALS

Ten records of European hedgehog were located within 1 km of the site boundary. The closest of these was located approximately 250 m south of the site within a residential area.

The site was assessed as having suitability for hedgehogs. The broadleaved woodland, dense scrub, introduced shrub and understory of TL1 and the hedgerows are anticipated to provide suitable cover for the species. Furthermore, due to the density of the scrub, it may support hibernating hedgehog.

3.4.5. OTTER AND WATER VOLE

Consultation with GMEU did not identify any positive records of otter or water vole within 1 km of the site.



No watercourses are present within the site boundary. A wet ditch is located north of the site. However, upon inspection, the watercourse was found to comprise minimal water. Furthermore, the ditch was found to be isolated in the landscape. Otters favour established watercourses for foraging and refuge. Taking this into consideration as well as the isolated nature of the ditch otter are not anticipated to be present within the ditch. The ditch was also determined to be unsuitable for water vole due to its limited suitable bankside vegetation and poor water quality and as it was heavily shaded by broadleaved woodland.

PLATE 7 SHOWING WET DITCH



3.4.6. BREEDING BIRDS

Consultation with GMEU identified records of house sparrow (*Passer domesticus*), peregrine (*Falco peregrinus*) and curlew within the search area. The house sparrow record was located along Baguley Brook approximately 780 m north-east of the site boundary. An eight digit grid reference for the peregrine record was not provided, as such the exact location could not be determined.

During the survey magpie (*Pica pica*), great tit (*Parus major*), blackbird (*Turdus merula*) and blue tit (*Cyanistes caeruleus*) were observed utilising the site.

Common and notable bird species are anticipated to be present within the broadleaved woodland, dense scrub, scattered trees, treeline, hedgerow and introduced shrub. Ground nesting birds are not anticipated to utilise the site for nesting, the amenity grassland is expected to be subject to a high-level of disturbance from the pupils of the school, furthermore, the short sward of the grassland offers little cover from predators.

3.4.7. REPTILES

Consultation with GMEU did not identify any records of reptile within 1 km of the site.



The broadleaved woodland and scrub habitats in the northern area of the site could provide some terrestrial cover for the species. However, overall the site offers limited habitat for reptiles, given the majority of the site comprised hardstanding, buildings and managed amenity grassland.

3.4.8. INVERTEBRATES

The data search did not identify any records of notable invertebrates within the search area.

Notable invertebrates may use the woodland on-site. However, the remainder of the site offers poor quality habitat due to the lack of floristic diversity.

3.5. INVASIVE PLANT SPECIES

Consultation with GMEU did not identify any records of invasive plant species within the 1 km search area.

Wall cotoneaster (*Cotoneaster horizontalis*) and rhododendron (*rhododendron ponticum*) was identified on-site during the survey. Please see Appendix I for the approximate location of the invasive species.



4. ECOLOGICAL CONSTRAINTS AND MITIGATION

4.1. DEVELOPMENT PROPOSALS

Development proposals include the demolition of the school buildings in the centre of the site, to facilitate the construction of a new school building with associated gardens and landscaping. The existing caretaker's property and Surestart nursery buildings in the east of the site will be retained, as well as the habitat area in the north-east and hardstanding in the south-west.

4.2. DESIGNATED SITES

The site is located within the impact risk zone of Rostherne Mere SSSI, located approximately 7 km south-west of the site. This also encompasses Rostherne Mere Ramsar and Rostherne Mere NNR.

Due to the distance between the site and these designated sites, as well as the built-up nature of the land between them, no detrimental impacts on the designated sites are anticipated as a result of the development. Furthermore, as per the criteria listed on MAGIC (accessed May 2023), the proposed site will not require further consultation with Natural England to proceed.

Additionally, due to the small scale of the works and the distance between the site and the Ramsar site, a Habitat Regulations Assessment (HRA) screening assessment will not be required to assess whether the proposed development will have any 'likely significant effects' on the designated sites.

4.3. HABITATS

The site comprises habitats that were found to be widespread within the local area; however, they did contain value for wildlife such as common amphibians, bats, birds and terrestrial mammals. The hardstanding, amenity grassland and artificial grass is of lowest value for wildlife, with the broadleaved woodland, dense scrub, introduced shrub, hedgerow and treeline comprising the areas of highest value.

4.3.1. BROADLEAVED WOODLAND, SCATTERED TREES, TREELINE AND HEDGEROW

It is recommended that, where possible, the broadleaved woodland, scattered trees, hedgerow and treeline are retained and protected through development. Current proposals include the retention of these majority of these habitats. It is anticipated that some areas may require removal, and where this is needed, the trees should be replaced as soon as practicable. Any replacement planting should endeavour to be on the same aspect as that to be lost.

If any treeline or hedgerow are to be removed, they should be replaced as soon as practicable using lengths of more valuable treeline/hedgerow. Any compensation planting should equate to a minimum of 1.5 times the length of treeline/hedgerow to be lost. Any replacement planting should endeavour to be on the same aspect as that to be lost, in order to retain commuting features through the site.



It is recommended that the landscape planting comprises native species and species known to be of value for the attraction of wildlife. This will include fruiting and flowering species. Species deemed suitable for this development could include berry-bearing native species such as:

- ✿ Hawthorn.
- ✿ Rowan (*Sorbus aucuparia*).
- ✿ Holly.
- ✿ Whitebeam.
- ✿ Spindle (*Euonymus europaea*).
- ✿ Dog rose (*Rosa canina*).
- ✿ Guelder rose (*Viburnum opulus*).
- ✿ Elder.

All planting should be from a trusted pest-free source and, where possible, be of local provenance.

Any trees or shrubs within the site or boundary, to be retained, are to be appropriately protected during the construction phase. Temporary protective demarcation fencing will be used to protect the trees and shrubs. The fencing must extend outside the canopy of the retained trees and must remain in position until all plots have been developed to ensure protection is provided throughout the construction phase.

The fencing will be in accordance with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations*.

4.4. PROTECTED AND NOTABLE SPECIES

4.4.1. AMPHIBIANS

The site may support small numbers of common amphibians within the broadleaved woodland, scrub, hedgerow, treeline and introduced shrub habitats on-site. It is recommended that during the clearance phase of works, any common amphibians encountered be moved by hand, away from construction activities.

4.4.2. BREEDING BIRDS

The site was assessed as having value for common and notable bird species within the broadleaved woodland, dense scrub, scattered trees, treeline, hedgerow and introduced shrub.

Vegetation should be retained where possible. If any vegetation requires removal, it should be removed outside of the breeding bird season (March to September inclusive). If this is not possible, a nesting bird check will be undertaken by a suitably qualified ecologist up to 24 hours before works commence. If a nest, or nest in construction, is located then a stand-off distance will be maintained until the young have fledged. The ecologist will advise on suitable standoff and provide a toolbox talk to all site contractors regarding their working limits and legal implications.



Post-development, bird boxes should be installed throughout the development to enhance the site's value for the species group.

4.4.3. BATS

The site was found to have value for foraging bats along the woodland, treeline, hedgerow, scattered trees, scrub and adjacent broadleaved woodland. TL1, H1 and H2 may also offer commuting opportunities as they connect to broadleaved woodland to the north. The majority of these habitats are being retained as part of the development.

It is recommended that the proposed Lighting Plan considers the habitats of the highest importance and maintains the on-site woodland, scrub, scattered trees, treeline and hedgerow, as well as the broadleaved woodland as dark areas during and post-construction. It is recommended that any security lighting during construction is appropriately placed to avoid being directed at any retained habitats or habitats to the north or south of the site.

To reduce the potential lighting impacts for bats, the following recommendations are advised for the lighting strategy:

-  Lighting should be pre-fixed on any proposed buildings, to ensure impacts on sensitive areas such as on-site woodland, scrub, Woodhouse Lane Brook and adjacent Naden Brook and broadleaved woodland are diminished.
-  Warm white tones are preferable to blue-toned lights (3000k).
-  LED lights are preferable as they produce minimal UV.
-  To avoid light spill skyward, ensure lights face downward.
-  Make use of vegetation to block light spill into dark areas.

Lighting should follow the protocols outlined in the Institute for Lighting Engineers document "Guidance for the Reduction of Obtrusive Lighting" (2005) and BCT's "Bats and Artificial Lighting in the UK" (2018) to minimise disturbance and sky-glow off site.

T28 and T30 were assessed as having Low bat roosting potential. They are due to be retained as part of the development. However, if they require removal in the future they are to be soft felled under the supervision by an ecologist. The tree should be cut below the potential roost feature and lowered to the ground slowly. If the roost feature cannot be inspected on the ground, the tree should be left with the roost feature facing upward overnight before being chipped.

T29 was assessed as having Moderate bat roosting potential. The tree is not to be impacted by the works. If in the future the tree is to be impacted, it will be subject to additional Nocturnal Bat Surveys. Two nocturnal bat surveys between May and September (inclusive) would be required with at least one survey between May and August (inclusive). The surveys would be valid for two years to inform a planning application. If bats are identified roosting within the tree, three surveys in total would be required to characterise the roost and a European Protected Species Licence will be required with up-to-date surveys from the survey season prior to the application submission.

It is recommended that any planting within the site be of native fruiting/flowering species in order to enhance the site for foraging bats post-completion. Bat boxes could be installed throughout the site post-construction to enhance the site for the species group



4.4.4. BADGERS

No badger setts were located during the survey, though the habitats were identified as being suitable for the species. Badgers are highly mobile and can create new setts in a short period of time. It is recommended that an updated site walkover prior to the development is carried out to identify any new badger setts.

If a badger sett is located, a stand-off distance may be required as well as precautionary working methods. If the sett requires closure, a Natural England Badger Licence would be required. Please note that badger licences can only be obtained between July and November each year to avoid potential impact on pregnant females.

The following precautionary working methods will be adhered to during construction phase to ensure that no badgers within the local area are impacted by the proposed development:

-  All site operatives will be inducted to the presence of the species and their working limits and legal responsibilities.
-  All site operatives will be inducted as to identifying potential badger setts, and should be vigilant if they suspect they locate a new sett during works and inform the project ecologist immediately.
-  All excavations will be battened at a 45 degree angle to allow escape should animals become trapped.
-  All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year when extra care is needed to avoid potential impacts on pregnant females.

It is not anticipated that the development will have a significant negative impact on badgers within the local area.

4.4.5. HEDGEHOGS

During site clearance, the scrub and introduced shrub is to be strimmed to 50 cm and checked for hedgehog prior to clearance to ground level. If trees are to be removed, their bases should be checked prior to removal for sheltering hedgehogs. It is recommended that vegetation clearance takes place outside of December-March (inclusive) to avoid impacting hibernating hedgehogs. If hedgehogs are located, they should be carefully moved by hand to an area outside of construction workings.

Post-development, a series of hedgehog houses could be installed throughout the site to enhance the site's value for the species.

4.5. INVASIVE PLANT SPECIES

Wall cotoneaster and rhododendron was identified during the site walkover. As such, it is recommended, prior to the development, that these species should be eradicated following the most current guidance set out by the Environment Agency by a qualified contractor.



5. FURTHER SURVEYS

No further surveys are required to inform a planning application.



6. BIODIVERSITY NET GAIN

The scheme should strive to achieve a 10% in biodiversity net gain. In line with The Environment Act 2021, this will be a mandatory requirement from November 2023. Full details of this and a calculation of net gain could be finalised after detailed landscape plans have been prepared. It is recommended that an ecologist is consulted during the design stage to ensure, where possible, biodiversity net gain can be achieved. The following habitat measures will increase the on-site biodiversity:

-  Retaining the dense scrub, scattered trees, woodland, treeline and hedgerow.
-  Native tree planting.
-  Native hedgerow and treeline planting.
-  Native scrub planting.

Habitat measures should be provided within areas of open space or designated wildlife zones. A 30-year management plan should be produced to ensure biodiversity is secured on-site.



7. REFERENCES

- ✿ Bat Conservation Trust (2018). Bats and Artificial Lighting in the UK: Bats and the Built Environment Series.
- ✿ Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal.
- ✿ CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.
- ✿ Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition. The Bat Conservation Trust, London.
- ✿ English Nature (2001). Great Crested Newt Mitigation Guidelines.
- ✿ 1st Horizon (2021) Preliminary Ecological Appraisal SL01-R13
- ✿ Institute of Lighting Engineers (2005). Guidance Notes for the Reduction of Obtrusive Light.
- ✿ JNCC (2010). Handbook for Phase 1 habitat survey: A technique for environmental audit. English Field Unit, Nature Conservancy Council.
- ✿ Natural England Joint Publication JP029 (2019). The Biodiversity Metric 2.0. Auditing and Accounting for Biodiversity, User Guide, Beta Version.
- ✿ Oldham, R. S., Keeble J., Swan, M. J. S. & Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143–155.
- ✿ Stace, C. A. (2019). *New Flora of the British Isles*. Fourth Edition. Cambridge University Press.
- ✿ UK Habitat Classification Working Group (2018). UK Habitat Classification User Manual.
- ✿ Wildlife and Countryside Act (2010) Schedule 9 of the Wildlife and Countryside Act 1981.

END OF REPORT



APPENDIX I

PHASE 1 HABITAT PLAN



Key:

- Site boundary
- Scattered trees
- Wall cotoneaster
- Bat potential tree
- Rhododendron
- Hedgerow
- Treeline
- Wet ditch
- hardstanding
- Amenity grassland
- Dense scrub
- Artificial grass
- Broadleaved woodland
- Building
- Introduced shrub

Notes

Issue: 1	Revision: 1	Date: 13/04/2023	Drawn: LT	Authorised: CB
Client: Tilbury Douglas Construction Ltd			Job No. 81-240	Date: 13/04/2023
Job title: Sandilands Primary School, Wythenshawe			Drawing No. 81-240-001	Scale:1:2900 @A4
			Drawing title: Phase 1 Habitat Plan	



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APPENDIX II BUILDING AND TREE PRELIMINARY ROOST ASSESSMENTS

REF.	DESCRIPTION	PHOTOGRAPH
B1	Building 1 (B1) comprised a yellow brick building with PVC windows, plastic cladding and barge board and a flat roof. The eastern aspect of the building was one-storey, with the western aspect of the building comprising two-storeys. Internally the building comprised a series of class rooms, offices, a canteen and dining area. The rooms within the building were in moderate condition with no features identified which could support roosting bats. No loft voids or basements were located within the building. Externally, the brickwork was generally in good condition. No evidence of damaged brickwork or missing mortar was noted. Therefore the brickwork did not offer suitable roosting opportunities for bats. The barge board, PVC windows and roof lining were all well sealed. No crevices or evidence of damage was identified which could support roosting bats. B1 was assessed as having Negligible bat roosting potential.	



REF.	DESCRIPTION	PHOTOGRAPH
		
B2	Building 2 (B2) comprised a single storey, red brick building with a pitched clay tiled roof. Internally the building comprised a series of class rooms. No features were identified which could support roosting bats. Externally, the brickwork was well sealed with no opportunities for roosting bats identified. Furthermore, the tiles were in excellent condition with no lifted or damaged tiles noted which could support roosting bats. The barge board and windows were all well sealed. No crevices or evidence of damage was identified which could support roosting bats. B2 was assessed as having Negligible bat roosting potential.	 



REF.	DESCRIPTION	PHOTOGRAPH
B3	Building 3 (B3) comprised a single storey, yellow brick building with a pitched clay tiled roof. Internally the building comprised a series of class rooms. No features were identified which could support roosting bats. Externally, the brickwork was in good condition sealed with no opportunities for roosting bats identified. Furthermore, the tiles were well sealed with no lifted or damaged tiles noted which could support roosting bats. The barge board and windows were all well sealed. No crevices or evidence of damage was identified which could support roosting bats. B3 was assessed as having Negligible bat roosting potential.	
B4	Building 4 (B4) comprised a single storey, red brick substation unit with a flat concrete roof. Internal access to the building could not be acquired during the survey. Externally, the brickwork was in good condition. No crevices in the brickwork were noted which could support roosting bats.	



REF.	DESCRIPTION	PHOTOGRAPH
	Gaps between the brickwork were noted providing ventilation to the building. However, upon closer inspection the gaps were lined with a fine wire mesh. This was determined to act as a sufficient barrier for bats. Therefore it was assessed that the wire mesh prevents bats from utilising any potential roost features situated internally. The concrete roof was well sealed providing no opportunities for roosting bats. B4 was assessed as having Negligible bat roosting potential.	
B5	Not to be impacted by development – Preliminary Roost Assessment not required.	
B6	Not to be impacted by development – Preliminary Roost Assessment not required.	

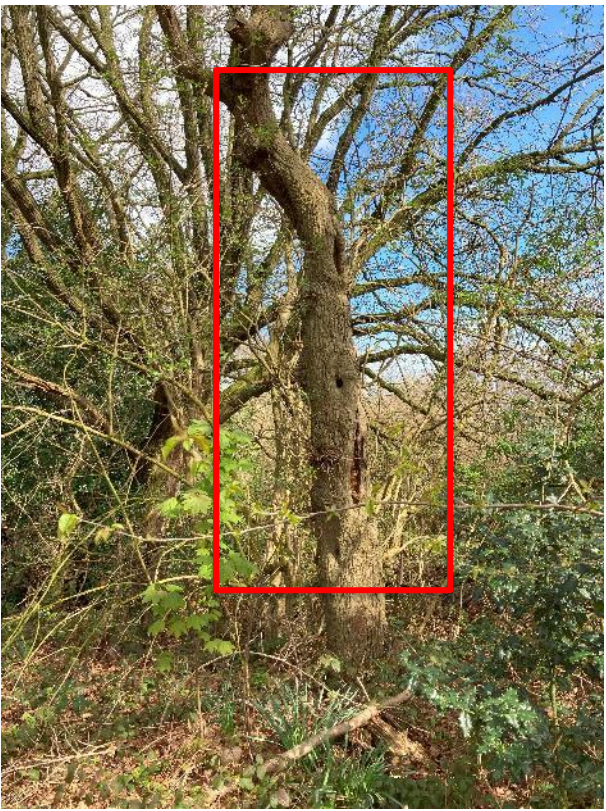


REF.	DESCRIPTION	PHOTOGRAPH
B7	Not to be impacted by development – Preliminary Roost Assessment not required.	
B8	Not to be impacted by development – Preliminary Roost Assessment not required.	

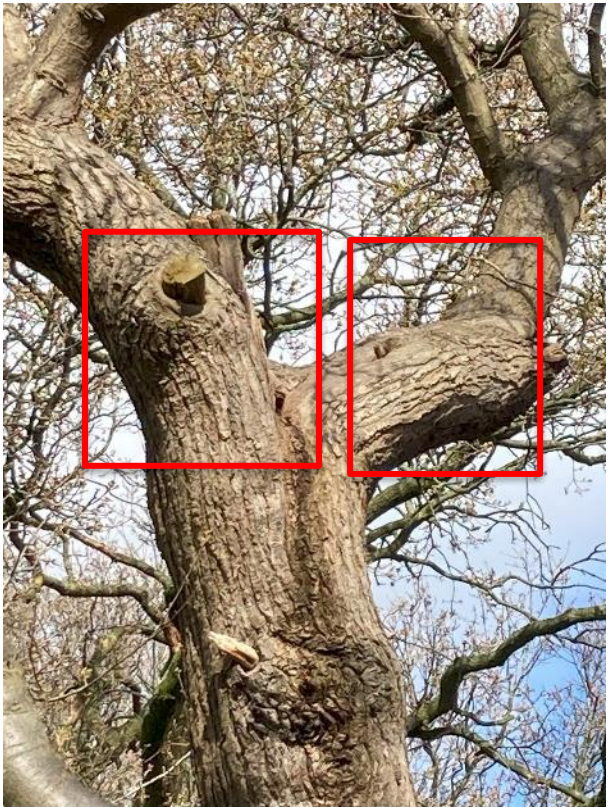


REF.	DESCRIPTION	PHOTOGRAPH
T28	T28 comprised a mature pedunculate oak approximately 15 m in height. Areas of peeling bark and broken limbs were identified, which may offer roosting opportunities for crevice dwelling species on an occasional basis. T28 was assessed as having Low bat roosting potential.	
T29	T29 comprised a monolith pedunculate oak tree approximately 5 m in height. Decay was noted in the stem of the tree with numerous cavities. These features may provide crevice dwelling bats with more regular roosting opportunities. T29 was assessed as having Moderate bat roosting potential.	



REF.	DESCRIPTION	PHOTOGRAPH
		
T30	T30 comprised a mature pedunculate oak approximately 15 m in height. Areas of damage from pruning, crevices between the branches and adjoining stems as well as occasional splits within the branches were noted. These features may offer crevice dwelling species with roosting opportunities on an occasional basis. T30 was assessed as having Low bat roosting potential.	



REF.	DESCRIPTION	PHOTOGRAPH
		 A photograph of a large tree trunk, likely a mature oak, showing rough, textured bark. Two red rectangular boxes are drawn on the trunk to highlight specific features. The box on the left highlights a small, dark, circular hole or cavity in the bark. The box on the right highlights a larger, more irregular area of bark that appears to be peeling or damaged. The background shows the upper branches of the tree and a clear blue sky.

