Preliminary Ecological Appraisal

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Summary of Key Information Within this Report

A Preliminary Ecological Appraisal was conducted at the Site on the 17th February 2026.

The survey has determined that the Site contains other developed land, buildings, modified grassland, a non-native and ornamental hedgerow and one standalone apple tree. The ecological value of the habitats is low.

The Site also contains habitats which are suitable for the use of nesting birds and roosting bats.

Based on the characteristics of the Site it is expected that further data would be required to inform a planning application. This includes one emergence survey for bats on Building 2, between May and August. General precautionary measures are recommended for nesting birds.

A Net Benefit for Biodiversity has been undertaken for the proposals and is included within a separate report.

1. Introduction

1.1 Background

Helen Odunaiya (the Client) is seeking planning permission for an extension to the rear of a property, the demolition of an existing garage and the addition of a turning point within the front aspect of the property at Sunnyside, Wrexham Road, Holt, LL13 9YU (the Site). Arthian Ltd (Arthian) was appointed by the Client to undertake a Preliminary Ecological Appraisal (PEA), which included a UK Habitat (UKHab) Survey on 17th February 2026 to determine the need for further surveys.

The aim of the instructed work was to:

- Understand the broad habitat types and their suitability for protected and notable species;
- Identify whether any further ecological survey work is necessary; and
- Identify high-level ecological constraints and opportunities presented by the proposals.

1.2 Purpose of this Report

This report has been produced to document the methods, results and conclusions from the ecology work undertaken in respect of the Proposed Development. It is anticipated that some further work and assessment in respect of bats may be requested by the local authority to complete the ecological requirements of the application.

1.3 The Proposed Development

The planning application will be for an extension to the rear of a property, the demolition of an existing garage and the addition of a turning point within the front aspect of the property on areas that are currently hardstanding and grassland.

1.4 Site Location

The Site is demarked by the red line boundary on Plate 1 below.

The Site is situated within the residential village of Holt and is c.250m north of the A534 and c.5km northeast of the city of Wrexham. Surrounding the property in all directions are residential houses.

Plate 1: Site Location



2. Methodology

2.1 Desk Study

The desk study was informed by a review of existing available information provided by COFNOD and RECORD and web-based resourced such as Multi-Agency Geographic Information for the Countryside (MAGIC) (see Table 1). Ordnance Survey (OS) maps and aerial imagery were used to gain contextual information about the Site.

Table 1: Desk Study Information

Source	Information Sought (search buffer from Site)
COFNOD and RECORD	• Statutory designated wildlife sites (1km) • Non-statutory designated wildlife sites (1km) • Protected and notable species (1km)
MAGIC maps	• Designated sites of international importance, including SPAs, SACs and Ramsar sites (1km) • Designated sites of national importance, including SSSIs and National Nature Reserves (1km) • Priority habitats listed on Section 41 on NERC Act (0.25km) • Granted European Protected Species (EPS) Licences (1km) • Ponds (250m)

2.2 UKHab Survey

A UKHab survey was undertaken on 17th February 2026 by an Arthian ecologist.

Although the survey was undertaken outside of the main planting growing season, the habitats onsite were easily recognisable and the plant species onsite easily identified and therefore this was not considered a constraint to the survey effort.

In addition to the mapping and description of habitats, the survey also incorporated observations of protected and/or notable species and the potential for such species to occur on site (and in the surrounding landscape where relevant). The survey was based on professional judgement. Where specific assessment methodologies were used, they are described in more detail in the following sections.

The weather conditions at the time of the survey are shown in the table below.

Table 2: Survey Weather Conditions

Parameter	Recorded Figure
Temperature (°C)	1
Cloud Cover (in Oktas)	7
Wind Speed (Beaufort Scale)	1
Precipitation	None

2.3 Foraging and Commuting Bats

A Daytime Bat Walkover (DBW) of the Site was undertaken to observe, assess and record any habitats suitable for bats to roost, commute and forage both on Site and in the surrounding area, following Bat Conservation Trust (BCT) good practice guidelines (Collins, 2023).

The broad habitats present within and around the site were also assessed to determine their level of suitability for commuting and foraging and commuting bats and categorised as per the table below.

Table 3: Guidelines for Assessing Flight Paths and Foraging Habitats for Bats

Potential Suitability	Potential flightpaths and foraging habitats
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect population available for foraging bats).
Negligible	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly for foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

2.4 Roosting Bats

A Preliminary Roost Assessment (PRA) was undertaken on buildings, trees and other structures within the Site, where accessible. These were externally inspected from ground level, recording any Potential Roost Features (PRFs), potential access points, surrounding habitat and other relevant characteristics, and categorised as per the table below.

Table 4: BCT Guidelines for Assessing the Suitability of Structures for Bats

Potential Suitability	Roosting habitats in structures
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure 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 of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity or classic cool/stable hibernation sites.

A Ground Level Tree Assessment (GLTA) was undertaken of tree on the Site. These were visually inspected from ground level, recording any Potential Roost Features (PRFs). The suitability of trees and PRFs were categorised according to the categories outlined in the tables below and categorised and are shown in the table below.

Table 5: Guidelines for Assessing the Suitability of Trees for Bats

Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any.
FAR	Further assessment required to establish if PRFs are present in the tree.
PRF	A tree with at least one PRF present.
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

[redacted]

2.6 Otter and Water Vole

The Site was systematically searched for any habitat features or evidence of otter (*Lutra lutra)* due to the Site being within c.250m of the River Dee which is a designated site for otters. Water vole (*Arvicola amphibius*) is scoped out of the assessment as they tend to stay close by to a watercourses bank for food and sheltering opportunities.

2.7 Birds

A habitat assessment was carried out onsite which was used to determine the potential importance of the Site for their value for assemblages of birds and/or as a breeding site for notable bird species such as red list or Schedule 1 species.

2.8 Great Crested Newt

A habitat assessment and visual search was carried out onsite for great crested newt (GCN) (*Triturus cristatus*) paying particular attention to mosaics or habitats with a varied structure, as well as hedgerows and trees, and connectivity with the surrounding habitat.

A desk-based search was carried out to identify waterbodies within 500m of the Site which were not separated by a barrier to dispersal. One pond was located *c*.370m east of the Site, however, was scoped out of further assessment due to a barrier to dispersal of residential dwellings and roads and the habitats within the wider landscape of the Site not providing suitable habitat connectivity to the pond.

2.9 Reptiles

A habitat assessment and visual search was carried out onsite for reptiles paying particular attention to mosaics or habitats with a varied structure, as well as hedgerows, trees and scrub and connectivity with the surrounding habitat. This also included searches for reptiles under any natural refugia such as log piles, rock piles etc.

2.9 Invasive Weeds

The survey was undertaken to detect invasive and injurious flora, including giant hogweed (*Heracleum mantegazzium*), Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*). The survey included a visual search and close-range inspection of floral species.

3. Results

3.1 Designated Wildlife Sites

A desk-based search revealed one designated site within 1km of the Site boundary. This was the River Dee which is c.250m east of the Site and which is a Site of Specific Scientific Interest (SSSI) and a Special Area of Conservation (SAC).

The River Dee is designated for its Salmon (*Salmo salar*), bullhead (*Cottus gobio*), brook lamprey (*Lampetra planeri*), sea lamprey (*Petromyzon marinus*), otters (*Lutra lutra*), aquatic and shingle swelling invertebrates, floating water plantain (*Luronium natans*), saltmarsh transition habitats and vascular plants.

3.2 Priority Habitats

There are no priority habitats within 250m of the Site boundary.

3.3 Habitats Onsite

The location and extent of the habitats onsite are shown in Appendix A and photos of the habitats are shown in Appendix B. All habitats within the Site boundary are shown below.

3.3.1 Modified grassland g4 (108)

One of the main habitats onsite is modified grassland that is frequently mown and therefore consists of a short sward length of c.10cm. There are two areas of modified grassland within the Site, one to the northwest and one to the southeast, at the front and rear of the property. The grassland species consisted of creeping buttercup (*Ranunculus repens*), perennial ryegrass, white clover (*Trifolium repens*) and broad-leaved dock (*Rumex obtusifolius*).

3.3.2 Other developed land u1b6

To northeast and southwest of the Site, there are areas of hardstanding which are concrete and slabs, which are currently utilised as a driveway at the front of the property and patio at the rear of the property.

3.3.3 Buildings u1b5

There are two buildings onsite. The first building (Building 1) is located within the central area of the Site and is utilised as the main residential dwelling. The building consists of a two storey, brick-built house with a pitched roof surrounded by metal guttering. The second building (Building 2) is within the rear of the property and is being utilised as a garage. The building consists of a single storey brick-built structure with a pitched roof with large wooden doors at the entrance to the building.

3.3.4 Non-native and ornamental hedgerow

To the western extent of the Site there is a small area of garden privet *(Ligustrum ovalifolium*) that is c.6m tall with a ground flora of ivy *(Hedera helix)*.

3.3.5 Individual tree

Within the garden area to the rear of the property is one apple tree (*Malus domestica)* which is c.6m heigh with a diameter at breast height of c.25cm.

3.4 Invasive Weeds

The desk study returned twenty-four records of invasive weeds within 1km of the Site boundary. There were:

- One record of wall cotoneaster (*Cotoneaster horizontalis*) which was c.775m from Site;
- One record of orange balsam (*Impatiens capensis*) which was c.855m from Site;
- One record of Japanese rose (*Rosa rugosa*) which was c.914m from Site
- Two records of Japanese knotweed (*Reynoutria japonica*) with the closest to Site being c.878m from Site; and
- 19 records of Himalayan Balsam (*Impatiens glandulifera*) with the closest record to Site being c.245m away.

During the Site walkover, no invasive weeds were present within the Site boundary.

3.5 Protected Species Assessment

3.5.1 Bats

The desk study returned five records of bats within 1km of the Site boundary. These were:

- One record of an unidentified bat species, c.188m west of Site;
- One record of a brown long-eared bat (*Plecotus auritus),* c.650m northwest of Site;
- One record of a common pipistrelle (*Pipistrellus pipistrellus),* c.650m northwest of Site;
- One record of a soprano pipistrelle (*Pipistrellus pygmaeus),* c.650m northwest of Site; and
- One record of a noctule bat *(Nyctalus noctula),* c.650m northwest of Site.

No EPS Licences have been granted for bats within 1km of the Site boundary.

Roosting Bats

A Ground Level Tree Assessment (GLTA) was undertaken on the apple tree within the Site; however, the tree did not contain any potential roosting features (PRFs). The tree was mature, however was decaying and rotten within with some limbs of the tree having fallen.

A Preliminary Roost Assessment (PRA) was undertaken on Building 1 and Building 2. The results are shown in the table below.

Table 6: PRA Results

Building Reference	Description	Photo	Overall Suitability

1	The property is a two-storey, brick-built dwelling featuring a pitched roof with metal guttering. No PRFs were observed from the exterior, with soffits fully sealed, intact roofing tiles, and no accessible entry points. Within the loft, the roof structure comprises timber rafters and ceiling joists, with no evident access or suitable features for roosting bats.	 	**Negligible**
2	The building is a single-storey, brick-constructed structure with a pitched roof and large timber entrance doors. Externally, the roof comprises of corrugated metal sheeting over MDF panels, with some areas of the MDF having deteriorated or fallen away, creating gaps between the metal sheeting and MDF. Ivy growth was observed penetrating the external walls and entering the interior of the building. While the building experiences light ingress, the roof space represents a darker, more sheltered environment, potentially providing suitable areas for bat roosting. The external roof is heavily covered in dense ivy, offering a potential roosting habitat for bats. Direct visual inspection of the roof for potential roost features was not possible due to the extent of the ivy coverage.		**Low**

			

As building 2 onsite provides suitability for roosting bats, they are considered further for assessment.

Foraging and Commuting Bats

Following the DBW under best practise guidelines, the Site was assessed as providing negligible potential for foraging and commuting bats, as the Site itself only contains a small non-native hedgerow and isn't connected to suitable habitats and linear features that bats would utilise within the wider landscape. The main habitat onsite is modified grassland which is regularly mown and does not contain suitable habitats for a diverse assemblage of invertebrates for bats to feed on. On this basis, foraging and commuting bats are scoped out of further assessment.

[redacted]

3.5.3 Otter

The Site does not provide suitable habitat for commuting or foraging otters. It lacks connectivity to the wider landscape, particularly to any watercourses, and does not offer suitable foraging opportunities or sheltering features that otters would typically utilise away from aquatic environments. Therefore, otters are scoped out of further assessment.

3.5.4 Birds

The desk study returned 827 records of birds within 1km of the Site boundary. Due to the large set of records, only species records within the past 10 years and birds that are protected under Schedule 1 of the Wildlife and Countryside Act are mentioned within this report. No Section 41 of the Natural Environment of Rural and Communities Act 2006 were returned by the data search. These were:

Marsh harrier (*Circus aeruginosus*), whooper swan (*Cygnus cygnus*), brambling (*Fringilla montifringilla*), black-tailed godwit (*Limosa limosa*), green sandpiper (*Tringa ochropus*), redwing (*Turdus iliacus*), fieldfare (*Turdus pilaris*), quail (*Coturnix coturnix*), little ringed plover (*Charadrius dubius*), peregrine (*Falco peregrinus*), and osprey (*Pandion haliaetus*) which are protected under Schedule 1 of the Wildlife and Countryside Act 1981, which lists bird species that receive extra legal protection in the UK. This includes specific prohibitions on disturbing them, particularly when they are nesting or having young. These were recorded between c.245m and c.970m from Site between 2016 and 2021.

The small size and nature of the Site dictate it is of negligible value for breeding or wintering birds, due to its location of being centred within an established residential area and provides no suitable habitat for Schedule 1 birds. There is also minimal loss of habitat onsite and therefore unlikely to have an adverse impact upon the conservation status of the species. No further surveys for birds were required to inform this assessment, however the apple tree and ivy on the roof of the garage does provide nesting habitat for common and widespread species.

3.5.5 Great Crested Newts

The data search returned one record of amphibians within 1km of the Site boundary, this was a common frog *(Rana temporaria),* c.988m from Site in 1987. No records of GCN were returned within 1km of the Site boundary.

No EPS Licences have been granted for GCN within 1km of the Site boundary.

There are no waterbodies onsite. The habitats onsite offer no suitability for GCN due to the isolation of the Site from any nearby ponds and the habitats onsite being predominantly hardstanding and short sward grassland in a residential area, offering limited dispersal opportunities. Therefore, no further surveys or further assessment is required.

3.5.6 Reptiles

The data search returned no records of reptiles within 1km of the Site boundary.

The Site was considered unsuitable for supporting permanent populations of reptiles due to the dominant habitat onsite being regularly disturbed and surrounded by residential developments which lacks the habitat mosaic and diverse vegetation required to support reptiles. Therefore, reptiles are scoped out of further assessment.

3.5.7 Other Mammals

The data search returned six records of other mammals within 1km of the Site boundary. These were hedgehog *(Erinaceus europaeus)* and hare *(Lepus europaeus)* which were between c.240m and c.790m from Site between 2005 and 2022.

No evidence of other mammals was found across the Site. The Site does offer foraging opportunities for opportunistic mammals such as sheltering hedgehogs; however given the nature of the development and the minimal chance of the species being onsite, no direct impacts are likely to occur and therefore are scoped out of further assessment.

4. Constraints and Opportunities

4.1 Designated Wildlife Sites

There is one statutory designated site within 1km of the Proposed Development, which is the River Dee (SSSI & SAC), situated c.250m east of the Site. The nature of the Proposed Development is an extension to an existing building, the demolition of a garage and a turning point within the front of the property whereby dust and noise deposition is unlikely to spread far from the development Site and therefore will be localised. Therefore, with the small scale of the development and the distance of the site and that the Site does not have any ecological links with the designated site, means that there are unlikely to be any direct or indirect impacts to this Site and therefore are not considered further.

4.2 Onsite Habitats

A Net Benefit for Biodiversity has been undertaken for the proposals and included within a separate report.

4.3 Protected Species Assessment

4.3.1 Roosting Bats

One bat emergence survey is recommended due to the suitability of the garage that is proposed for demolition for roosting bats. This is in accordance with the 'low' assessment of suitability as per the Bat Conservation (BCT) guidelines. This includes one bat emergence survey between May and August.

Artificial lighting has severe adverse impacts on bats and other nocturnal wildlife. The use of external lighting should be avoided or reduced to the minimum required for its intended purpose, during both construction and operation. Where external lighting is to be used, it should follow guidance provided by the Institution of Lighting Professionals (ILP, 2023) and Eurobats (Voigt, 2018) to avoid impacts on wildlife. Precautionary working measures can be detailed in a method statement.

4.3.2 Birds

If removal of the tree or the ivy on the garage is required during the nesting bird season (March – September), an ecologist should undertake a pre-commencement check for nesting birds and vegetation will be removed within the following 48 hours if no active nests are recorded. If an active nest is recorded, it will be maintained with an appropriate buffer until subsequent checks by the ecologist confirm the nest is no longer active.

5. Conclusion

The survey identified suitable on-site habitats for bats. Further surveys are recommended for bats including one activity survey which comprises of an emergence survey which can be undertaken between May and August.

The impacts of the scheme are minimal, and extremely localised due to the Site being small in nature; however, precautionary working measures have been recommended for birds.

As mentioned in Section 4 a Net Benefit for Biodiversity has been undertaken for the proposals and included within a separate report.

After the bat emergence survey is complete, the information gathered will be used to inform the EcIA which can be submitted as part of the planning application.

6. References

Collins, J., 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. London: The Bat Conservation Trust.

Harris, S., Cresswell, P. & Jefferies, D., 1989. *Surveying Badgers,* London: Mammal Society.

Natural England, 2009. *Guidance on 'Current Use' in definition of a Badger Sett, WMLG17,* Peterborough: Natural England.

Appendices

Appendix A – Site Photos



Front driveway and garden – Modified grassland and other developed land



Nonnative ornamental hedgerow within the western extent of the Site



Rear garden – Modified grassland



Apple tree





Building 2 interior





Building 2 exterior





Building 1 loft





Exterior of building 1

Appendix B – UKHabitat Map



Basemap Sourced from Google Sattelite Imagery

Figure 1 - UKHabitat Map

Helen Odunaiya	Sunnyside, Wrexham

Key:

- Site Boundary

UKHab

- g4 - modified grassland
- u1b5 - buildings
- u1b6 - other developed land
- Individual Tree
- Non Native and Ornamental Hedgerow

0 4 8 m

N

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