



Preliminary Ecological Appraisal of Former Working Mens Club, Woodfield Avenue, Flint

Date	Author	Approved by	Version	Comments
15/07/25	Josie Wynn	Lucy Boyett	1	
06/07/26	Josie Wynn	Lucy Boyett	2	Removal of Mitigation, Compensation and Enhancement sections. Now detailed in a separate Conservation Plan (Boyett.L (2026))

Report Reference: EE.5074.JW.25V2

Author contact information: lucy@enfysecology.co.uk

This report has been prepared by Enfys Ecology Ltd with all reasonable skill, care and diligence, within the terms of the Contract with the Client and in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Code of Practice. The report is confidential to the Client and Enfys Ecology Ltd accepts no responsibility of whatever nature to third parties to whom this report may be made known.



Wildlife Trust
Consultancies

Aelod o Cymdeithas Ymgynghoriaethau Ymddiriedolaethau Natur
Mae Enfys Ecology yn is-gwmni I Ymddiriedolaeth Natur Gogledd Cymru

Enfys Ecology is a subsidiary of North Wales Wildlife Trust

Rhif Cwmni/ Company Number 2535184



Ymddiriedolaeth Natur
Gogledd Cymru
North Wales
Wildlife Trust

Executive Summary

Site	Former working men's club, Flint, Flintshire.	OS Grid Reference	SJ 24587 72392
Surveyors	Lucy Boyett and Josie Wynn	Survey Date	01/04/2025
Type of Survey	Preliminary Ecological Appraisal		
Summary of Proposed Work	Residential Development of an apartment block comprising 22 units.		
Designated Sites Affected	No direct impacts on designated sites.		
Habitats Affected	Short improved grassland Species poor intact native hedge and Leyland Cypress hedge Bramble scrub		
Species Affected	The hedgerows and scrub may be used by bats for foraging and commuting and by nesting birds.		
Survey Conclusions	- The main ecological feature of the site was the species poor hedge surrounding the site. - The majority of the area comprised species-poor improved grassland and hardstanding. - Limited potential for protected and other species due to the isolation of the site within a wider residential area.		
Further Surveys Required	No further surveys required.		
Avoidance Requirements	Retaining hedgerow where possible. Work is largely on habitat with low ecological value.		
Mitigation, Compensation and Enhancements	Mitigation, compensation and enhancement measures are detailed in a separate Conservation Plan (Boyett.L, 2026)		

Contents

Executive Summary.....	2
Contents	3
1.0 Introduction	4
2.0 Site Description	5
3.0 Methodology.....	7
4.0 Results.....	8
5.0 Discussion.....	18
5.0 Discussion.....	18
6.0 Mitigation, Compensation & Enhancements.....	21
7.0 References.....	21
APPENDIX A Legislation and Planning Policy	22
APPENDIX B Desk Study.....	27
APPENDIX C Plant Species List	27

1.0 Introduction

- 1.1 Enfys Ecology were commissioned by Wales and West Housing Ltd to undertake a Preliminary Ecological Appraisal (PEA), of an area of land at the Former Working Men's Club, Flint, Flintshire.
- 1.2 The proposed works comprise the construction of a residential development of 22 one-bedroom apartments.
- 1.3 The site comprised an area of concrete hardstanding, rubble and improved grassland, which was the former site of the Working's Men's Club in Flint. It was located in a residential area, south-east of the town centre of Flint.
- 1.4 The primary objectives (CIEEM, 2017a) of a Preliminary Ecological Appraisal Report (PEAR) are to:
 - identify the likely ecological constraints associated with a project;
 - identify any mitigation measures likely to be required;
 - identify any additional surveys that may be required to inform an Ecological Impact Assessment (EclA); and,
 - identify the opportunities offered by a project to deliver ecological enhancement.
- 1.5 This document has been produced to advise the client of ecological constraints and opportunities to inform their design options (avoidance), likely mitigation, restoration and compensation requirements, and the need for further surveys. In addition, the report may provide initial recommendations in relation to relevant ecological enhancement opportunities given the site's context. This report may not necessarily provide the Local Planning Authority with enough information to assess the ecological impacts of a proposal.
- 1.6 This report has been produced in accordance with CIEEM (2017a) 'Guidelines for Preliminary Ecological Appraisal' and CIEEM (2017b) 'Guidelines for Ecological Report Writing'.
- 1.7 The survey work to inform this report was carried out in April 2025. Habitats and species found within a discrete area of land are subject to change, this report should therefore be considered valid for a period of eighteen months in accordance with best practice (CIEEM, 2019).
- 1.8 Relevant legislation and planning policy information are included in Appendix A.

2.0 Site Description

2.1 Survey Area

- 2.1.1 The site was located in the residential area of Flint, south-east of the town centre. It comprised an area of hardstanding and improved grassland encompassed by hedgerow and some scrub. To the north, east and south were residential areas, however, to the west of the site was a large area of amenity grassland known as Pen Goch Hill. The survey area is shown in Figure 2.1 below.



Figure 2.1: The survey area (red outline) Base image © Google Maps 2025

2.2 Wider Area - Connectivity and Green Infrastructure

- 2.2.1 Flint is situated on the south-western shore of the Dee Estuary SSSI, Ramsar, SAC and SPA site, with saltmarsh and intertidal mudflat habitat approximately 1km from the site. Furthermore, just 1km south from the site is Flint Mountain SSSI site, designated for its semi-natural grassland habitat. Within Flint, there are a number of amenity grassland areas, some having hedgerow boundaries, which appear to be playground areas of schools or parks. Among the residential areas there are scattered trees, gardens and hedges, which provide some connectivity between the grassland areas. The ancient monument ruin of Flint Castle lies approximately 800m from the site and is surrounded by amenity grassland and semi-natural broadleaved woodland habitat. The ancient monument of Pentre Bridge Roman site is approximately 900m from the site and also contains semi-natural broadleaved woodland and amenity grassland habitat.
- 2.2.2 To the south, east and west of Flint there is open countryside and agricultural land with scattered villages. The nearest large town is Connah's Quay (4.5km southwest), which forms part of the Deeside urban area. The designated sites are described in more detail in Section 4.1. The wider area is shown in Figure 2.2.

- 2.2.3 (PPW 12, paragraph 6.2.1). Green infrastructure (GI) is defined in Planning Policy for Wales (PPW) Edition 12¹ as “*the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places*”. Green infrastructure (GI) can function at a range of different scales; from entire ecosystems such as wetlands and rivers to parks, fields and gardens at the local scale and street trees, hedgerows, roadside verges, and green roofs/walls at the micro scale. Development proposals should take GI into consideration in order to avoid negative impacts on habitats and species, and seek ways to maintain and enhance biodiversity.
- 2.2.4 This site and the surrounding areas were, at the time of assessment, considered to be comprised of areas considered green infrastructure under current planning guidance. The entire site is in a semi natural state, and it may support a range of species, both plant and animal, with low-moderate connectivity to similar surrounding habitat.

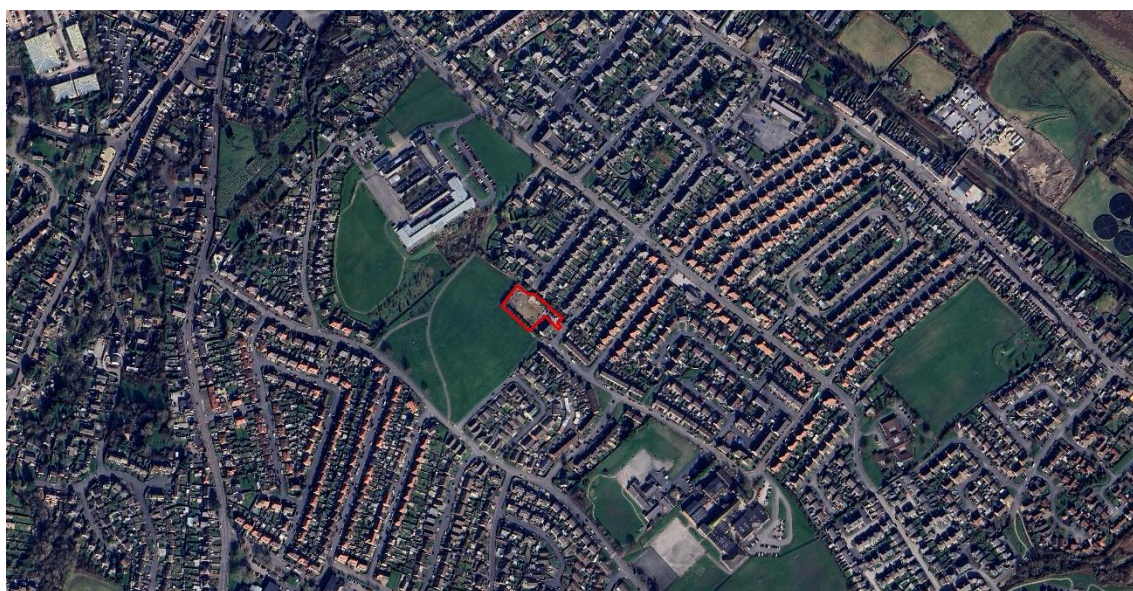


Figure 2.2: The wider landscape Base image © Google Maps 2025

¹ See: <https://www.gov.wales/planning-policy-wales>

3.0 Methodology

3.1 Desk Study

- 3.1.1 A desk study was undertaken through Cofnod, the North Wales Environmental Information Service, to determine the presence of statutory and non-statutory sites for nature conservation, and records of protected, or species and habitats of principal importance listed under Section 7 of the Environment (Wales) Act 2016. Desk study data was provided by Cofnod on 3rd April 2025. The records were used to inform the survey and recommendations, and to provide context for evaluating the species and habitats found during the survey. Any relevant species results from the desk study are referred to in Section 4.
- 3.1.2 The desk study used the following search radii for this project: 1km.

3.2 Field Survey

- 3.2.1 The field survey was conducted on 1st April 2025 by Lucy Boyett, a suitably experienced professional ecologist and assistant Josie Wynn.
- 3.2.2 The weather conditions during the survey were dry and sunny.
- 3.2.3 All parts of the site were visited where possible, the habitats were mapped following the standard Phase 1 Habitat Survey methodology (JNCC, 2010). Any rare or invasive species or incidental sightings of protected species were recorded, as necessary. A search for evidence or potential for protected species was carried out, including amphibians, bats, and reptiles. Evidence of badgers (*Meles meles*) including setts, dung pits, hairs, footprints, and scratching posts or trees was searched for. Trees were assessed for suitable features for roosting bats, including knot holes and other crevices, hollow trunks and dense ivy coverage.

3.3 Limitations

- 3.3.1 The results of this survey consist only of those species encountered during a short space of time on one day. Species that use the site infrequently or are present at different times of the year may not be recorded, and the absence of species from the results of a single survey should not be taken as indicating the species' definite absence from the area in question. Descriptions of plant species concentrate on the most obvious and abundant species present as determinant of habitats present.
- 3.3.2 While reasonable efforts have been made to search for invasive non-native species (INNS), and any seen were recorded, this is not a comprehensive invasive species survey and does not claim or imply the definite absence of Japanese knotweed or other invasive plants, for which a specific survey should be commissioned.

3.4 Terminology

- 3.4.1 In this report 'site' and 'survey area' are used to refer to the area surveyed by the ecologist, which is subject to the proposed development or planning application. The only exception may be some unavoidable use of 'site' when discussing designated sites such as SSSIs. 'Search area' refers to the area from which data was obtained for the desk study.
- 3.4.2 English species names are generally (but not exclusively) used in the text for readability, however Appendix C contains a list of species recorded and gives scientific names.

4.0 Results

4.1 Desk Study – Designated and Notable Sites

- 4.1.1 There were two statutory designated sites within 1km of the survey area.
- 4.1.2 Details of the designated sites are provided in Table 4.1.

Table 4.1: Designated Sites within 1km of the Site

Name	Designation	Approximate distance from site (km)	Reason for designation
Dee Estuary	SSSI, SPA, SAC, Ramsar.	1km	Nutrient-rich intertidal wetland habitats. Habitat of breeding, feeding, wintering and migrating rare and vulnerable species of birds. Pioneer glasswort <i>Salicornia</i> spp. Saltmarsh. Atlantic saltmarsh meadows. Common saltmarsh-grass <i>Puccinellia maritima</i> , sea aster <i>Aster tripolium</i> , and sea arrowgrass <i>Triglochin maritima</i> . In a few areas there are unusual transitions to wet woodland habitats.
Flint Mountain	SSSI	1km	Unimproved neutral grassland and semi-natural broad-leaved woodland. Scrub, fen-meadow and swamp vegetation.

4.2 Desk Study – Species Records

- 4.2.1 Cofnod holds records of 217 different species (Category 1, 2 and 3), within 1km of the site, from the previous 20 years. 66 of these species were species with European and/or UK Legal Protection, Section 7 (Environment Act Wales 2016) or priority species, which were predominantly bird species. There were no records of flora or fauna from within the survey area itself.
- 4.2.2 The results of the desk study for protected fauna are detailed in Table 4.2. Results of the Cofnod data search are provided in Appendix B; full data (e.g. specific locations) has not been provided for sensitive data.

4.3 Phase 1 Habitat Survey

- 4.3.1 The following Phase 1 Habitat and feature types were recorded within the site:
- | | |
|--------|---------------------------|
| A2.1 | Dense scrub |
| B4 | Improved grassland |
| J2.1.2 | Species Poor Intact hedge |
| J2.4 | Fence |
| J4 | Bare ground |
| | Hardstanding |
- 4.3.2 A Phase 1 Habitat map is provided in Figure 4.1 below. Descriptions of the habitats are provided in Table 4.3. Where relevant, photographs are included with the text.



Figure 4.1: Phase 1 Habitat Map Base image © Google Maps 2025

Table 4.2: Habitat Descriptions

Habitat Description	Photo
The southern half of the site comprised improved grassland. Grasses included Yorkshire fog, cocks' foot and false oat grass. Other species included broadleaved dock, ribwort plantain, clover, thistle, dandelion and ragwort. There was a small slightly wetter area of grassland in the southern corner with species such as pendulous sedge, young willow saplings, greater willow herb and a number of patches of hard and soft rush. Scattered young buddleia was also found on the grassland area. The overall sward height of the grass was short. Amongst the grassland there was a lot of litter and rubble.	
Improved grassland	
 <i>Strip of improved grassland - eastern arm of the site (the bramble scrub beyond is outside of the site boundary)</i>	 <i>Scattered buddleia amongst the improved grassland</i>
 <i>Improved grassland, facing south-east</i>	 <i>Pendulous sedge and rushes amongst the grassland</i>

Hedgerow

Along part of the north eastern boundary, was an unmanaged Leyland Cypress hedge with bramble growing amongst it.

Along the western boundary there was a native hawthorn and elder mature hedgerow. There was one standard mature sycamore tree centre to the south western edge of the hedgerow. Several trees in the hedgerow were wrapped in ivy. A handful of 'garden escapers' were found in the understory of the hedgerow, these included a small patch of non-native red flowering currant, an individual Spanish bluebell and buddleia.

The south western part of the hawthorn and elder hedgerow was dense with minimal gaps and was greater than 1m wide and 1m tall. The north-western part of the hedgerow was slightly less dense and gappier, with a handful of gaps big enough for people to pass through into the amenity grassland on the other side.

The south western part of the hedgerow is on a steep embankment.



Leyland Cypress hedge – north eastern boundary



Hawthorn and elder hedge – western boundary



*Hawthorn and elder hedge western boundary
(photograph taken on the amenity grassland outside
of the site)*



*Hawthorn and elder hedge – facing north
western corner*

Scrub		
Dense scrub comprising predominantly bramble, was along the northern boundary.		
	<i>Dense bramble scrub along the northern site boundary</i>	
Hardstanding		
There was a large area of intact hardstanding, with a number of piles of rubble and larger stones.		
Scattered waste across site.	<i>Area of intact concrete hardstanding with scattered waste</i>	<i>Hardstanding, rocks and rubble</i>

4.4 Flora

- 4.4.1 Floral diversity of the site was low; the site is almost all species-poor improved grassland. The hedgerows were species poor, comprising a limited number of species and non-native leylandii.
- 4.4.2 None of the species recorded during the survey are protected by the Wildlife and Countryside Act 1981 (as amended) or listed under Section 7 of the Environment (Wales) Act 2016. No other nationally or locally rare species were recorded.

4.5 Invasive Non-Native Species

- 4.5.1 Small number of buddleia were present within the improved grassland and along the southern boundary.

4.6 Fauna

- 4.6.1 No protected or notable species or signs of the presence of protected or notable species were seen within the survey area during the survey.
- 4.6.2 The survey results for protected species including records within a 1km radius of the site are described in Table 4.3 below.

Table 4.3: Results of Protected and Notable Species Assessment

Species	Suitability of Habitat	Desk Study Records	Further Species Consideration Required?
Amphibians – including great crested newts <i>Triturus cristatus</i> (GCN)	The site does not contain standing water, and so there is no breeding habitat for amphibians within the survey area. The area of grassland was small and isolated from further areas of suitable habitat and so it is unlikely to be suitable for foraging common amphibians, but the hedgerows were suitable. Great crested newts are very unlikely to breed on site due to the lack of standing water and there were no records of GCN within close proximity of the site, suggesting that their presence is unlikely.	There were no records of GCN within a 1km radius of the site within the last 20 years. There were records of common frog, however these were over 500m away from the site.	Reasonable Avoidance measures (RAMS) required only. See Conservation Plan (Boyett.L, 2026)
Badger <i>Meles meles</i>	The hedgerow boundary edges of the site were suitable foraging habitat for badgers as they provided sheltered connectivity to a small area of woodland (roughly 1km²) approx. 75m from the site. However, is unlikely to be suitable for sett building as the site was quite isolated. The lack of badger records in the area suggests that they are overall unlikely to use the site.	There were badger records within the 1km search radius however these were not near to the site.	Reasonable Avoidance measures (RAMS) required only. See Conservation Plan (Boyett.L, 2026)
Bats	There was no suitable roosting habitat on site, but the hedgerows offered suitable foraging and commuting habitat.	There were six records of bats within the 1km search radius, including one record of common pipistrelle being the closest to the site (96m away at Gwynedd School). The other five bat records do not specify the species and are all over 280m from the site.	Lighting considerations. See Conservation Plan (Boyett.L, 2026)

Table 4.3: Results of Protected and Notable Species Assessment

Species	Suitability of Habitat	Desk Study Records	Further Species Consideration Required?
Birds	The hedgerows and scrub provide suitable habitat for nesting birds. There is less potential for ground nesting species, with only exposed improved grassland.	There were over 814 recent records of 135 species of birds within a 1km radius of the site. Records include 54 Schedule 1 species. These were predominantly species associated with the nearby estuarine habitats.	Nesting bird surveys if vegetation removed in breeding season. See Conservation Plan (Boyett.L, 2026)
Hedgehog <i>Erinaceus europaeus</i>	The site is suitable for hedgehogs, with hedgerows and scrub providing sheltered connectivity to gardens and the wider rural landscape. Records suggest that hedgehogs are present in close proximity to the site.	There were 13 hedgehog records from within 1km of the site within the last 20 years. The closest one recorded was 168m from the site in 2020.	Reasonable Avoidance measures (RAMS) and habitat enhancement. See Conservation Plan (Boyett.L, 2026)
Reptiles	The site is not suitable for reptiles due to how isolated it is from further suitable habitat.	One record of a slow worm, however, this is over 850m away and was recorded in 1997.	No.
Water vole <i>Arvicola amphibius</i>	There are no watercourses within the site and no nearby records of water vole. It is therefore very unlikely that water vole will be present onsite.	The nearest record of a water vole was 775m away in 2017.	No.

Table 4.3: Results of Protected and Notable Species Assessment

Species	Suitability of Habitat	Desk Study Records	Further Species Consideration Required?
Other species	The area does not have habitat suitable for otter <i>Lutra lutra</i> .	There are five records of otter, all recorded on the same day in 2020. The nearest to the site was 765m away.	No.

5.0 Discussion

5.1 Proposed Works

- 5.1.1 Plans dated 05/06/2026 (Hughes O'Hanlon Proposed – Detailed Site Plan, Drawing No. WAF-HOH-XX-00-DR-S-1201 Rev P10) show the proposed development of a residential apartment block comprising 22 units. The development will include areas of open amenity space, a cycle store, a bin store, and a parking area providing 22 parking spaces.
- 5.1.2 The existing hawthorn and elder hedgerow along the southern boundary will be retained as part of the proposed development. The hedgerow along the western boundary, together with the adjacent Leyland cypress hedgerow and scrub, will be removed to accommodate the proposed development.

5.2 Impacts on Designated and Notable Sites

- 5.2.1 The proposed works will not impact on any statutory designated nature conservation sites which are located >1km from the site.

5.3 Habitats

- 5.3.1 Table 5.1 provides information with respect to the habitats which were recorded on site and whether these habitats are listed as a 'habitat of principal importance' under Environment (Wales) Act 2016 or listed as a local Biodiversity Action Plan habitat, or other local conservation priority habitats. Consideration of the potential impacts of the proposed project on the habitats are also discussed.

Table 5.1: Overall Site Assessment Rating

Habitat Recorded	Habitat Value	Brief Discussion
Improved grassland	Low	The improved grassland is not considered to be in good condition on the site, being generally species-poor. This will be lost as part of the development.
Dense scrub	Moderate	Areas of dense scrub along the northern site boundary will be lost. Along with the Leylandii hedge, this provided some habitat for a number of different species and connectivity along the northern boundary of the site.
Hedgerows	HPI	The native hedgerows along the western and southern site boundaries, were Habitats of Principal Importance. Without the (minimum) five woody species within one 30m section, they were not native species rich hedges under the technical definition. The Leyland cypress hedge, which is to be removed would not be classed

		as ecologically important due to being non-native and lacking diversity.
Key: HPI – Habitat of Principal Importance under Environment (Wales) Act 2016		

- 5.3.2 The most important ecological feature of the site were the hedgerows, in particular the native hawthorn and elder on the western and southern boundaries. This was a broad, unmanaged and intact hedgerow (with some gaps in the north-western boundary). They provided some connectivity to other green infrastructure within the wider area. The ground flora was relatively poor (which may be partly, but not entirely, due to the time of year). Hedgerows are considered Habitats of Principal Importance under Section 7 of the Environment (Wales) Act 2016, and these are in relatively good condition, though not meeting the definition of native species rich hedgerows.
- 5.3.3 The improved grassland was generally species poor, with a small slightly wetter area providing a transitional habitat and boasting slightly more diversity. The bramble scrub and Leyland cypress hedge has some ecological value as they are quite dense and therefore a good habitat for nesting birds, however, they are not HPI.

5.4 Flora

- 5.4.1 None of the plant species recorded during the survey are protected by the Wildlife and Countryside Act 1981 (as amended) or listed on Section 7 of the Environment (Wales) Act 2016. In addition, no nationally or locally rare species were recorded.

5.5 Fauna

- 5.5.1 Most of the affected area comprised short improved grassland, which has limited value for most wildlife, though may be used for foraging. The hedgerows are suitable habitat for a number of species, including birds and invertebrates in the canopy, foraging and commuting bats and invertebrates and small mammals at ground level. The hedgerows do have some connectivity to similar habitat, which may support wildlife communities.
- 5.5.2 **Amphibians** - The majority of the site is not optimal habitat for amphibians, being very short grassland, and it is not likely that this area is commonly used by them. The hedgerows however are suitable and may be used as refuges and for moving across the wider landscape, therefore common amphibians could be present in the hedges and may be encountered during any works. Amphibians are considered unlikely to be breeding within the site as no suitable breeding habitat was recorded.
- 5.5.3 There are no records of great crested newt (GCN) within the 1km data search radius is not considered likely to be present.
- 5.5.4 Basic Reasonable Avoidance Measures (RAMS) should be put in place during any works to minimise any risk of harm to amphibians. These are provided in Boyett.L (2026).

- 5.5.5 **Badger** - The hedgerow is suitable for foraging by badgers, and so it is possible that they access the site at least occasionally. Due to the site being quite isolated, it isn't suitable for sett building, but no evidence of this, or badger activity in general was seen. Badgers are not likely to be resident on or near the site but may access it from time to time. Basic Reasonable Avoidance Measures (RAMS) put in place during any works will also serve to minimise any risk of harm to badgers. These are provided in Boyett.L (2026).
- 5.5.6 **Bats** - The site is unlikely to be used by roosting bats, as no potential roosting features were identified. There were some records of bats within 1km of the site and the hedgerows are likely to be used for foraging and commuting as they provide flight lines and sheltered areas where flying insects may collect. The removal of the Leylandii hedge and therefore the loss of foraging and commuting habitat, however the diversity of the hedge was low and the retained hedgerows will maintain the connectivity of the site.
- 5.5.7 The primary impact of the scheme on bats will be from any increase in lighting. It is understood that no significant lighting is proposed, but there will inevitably be an increase in light spill from the apartment blocks and street lights.
- 5.5.8 It is recommended therefore that the proposed lighting for the scheme is designed to minimise light spill onto the hedgerows, which should be kept as dark as possible.
- 5.5.9 **Birds** - No evidence of nesting birds was seen within the site; however, all of the trees, scrub and shrubs on-site would provide suitable nesting and foraging opportunities and must be considered potential nesting habitat. RAMs detailed in Boyett.L (2026) will be followed to prevent disturbance to nesting birds.
- 5.5.10 **Hedgehog** - The site had good potential for hedgehogs and some connectivity to other suitable hedgehog areas, and there are records in the vicinity. However, the works are considered unlikely to negatively affect hedgehogs, provided that they are not disturbed during their hibernation period; see Section Boyett.L (2026) for specific mitigation for hedgehogs.
- 5.5.11 **Reptiles** – The site is considered unlikely to support a population of reptiles due to its isolation; however, the base of the hedgerows contains good habitat including earth banks with crevices around roots and rocks, and it is possible that reptiles use the hedges.
- 5.5.12 There are no records of most reptile species, but, there is one record of a slow worm, however, this is over 850m away and was recorded in 1997. Due to the distance from site and how long ago this sighting was, the likelihood of reptiles using the site is very low. However, should a reptile be encountered on site, the RAMS set out in Boyett.L (2026) should be put in place to minimise any impacts on them during the development.
- 5.5.13 **Other Species** - No specific mitigation is necessary for other protected species as none are expected to be present

5.6 Invasive Non-Native Species (INNS)

- 5.6.1 There were no Schedule 9 invasive non-native species present on this site, however, buddleia, a non-native species was present. There were a handful scattered on the improved grassland and by the south-western part of the hawthorn and elder hedgerow.

6.0 Mitigation, Compensation & Enhancements

- 6.1 The proposed development has been designed in accordance with the mitigation hierarchy, following a step-wise approach to avoid, minimise, mitigate and, where necessary, compensate for potential ecological impacts. Appropriate enhancement measures have also been incorporated to deliver biodiversity benefits as part of the scheme. Full details of the avoidance, mitigation, compensation and enhancement measures are provided in Boyett.L (2026).

7.0 References

CIEEM. (2017a). *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM. (2017b). *Guidelines for Ecological Report Writing*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM. (2019). 'Advice Note on the Lifespan of Ecological Reports and Surveys'. Chartered Institute of Ecology and Environmental Management, Winchester.

JNCC. (2010). *Handbook for Phase 1 Habitat Survey: a technique for environmental audit*. JNCC, Peterborough.

ILP. (2023). *Bats and Artificial Lighting At Night*. Guidance Note GN08/23. Institute of Lighting Professionals & Bat Conservation Trust.

ILP. (2021). 'Guidance Note 1 for the reduction of obtrusive light. Available: <https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/>

APPENDIX A Legislation and Planning Policy

Amphibians

The most common species are protected from sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These are as follows: common frog, *Rana temporaria*; common toad, *Bufo bufo*; palmate newt, *Lissotriton helveticus*; and, smooth / common newt, *Lissotriton vulgaris*. This legislation protects them from sale, or advertising / offering them for sale.

The UK's two rarest amphibians are protected under the Conservation of Habitats and Species Regulations 2017 (known as 'the Habitats Regulations'). This is because they have declined throughout Europe in recent decades. The Habitats Regulations lists the following amphibians as European Protected Species (EPS):

- Great crested (or Warty) newt, *Triturus cristatus*
- Natterjack toad, *Epidalea calamita*

Under the Habitats Regulations, it is an offence if you:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb wild animals of any such species;
- Deliberately take or destroy the eggs of such an animal; or,
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance is defined as that which is likely:

- To impair their ability: to survive, to breed or reproduce, or to rear or nurture their young, or, in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- To affect significantly the local distribution or abundance of the species to which they belong.

There are other offences relating to the possession, transport, selling or exchange of a protected species.

Badgers

The Protection of Badgers Act 1992 fully protects badgers and their setts. Offences include:

- killing, injuring and taking (or attempting these);
- possession of a dead badger (or derivative);
- cruelly ill-treating a badger;
- damaging a badger sett or any part of it;
- destroying a badger sett;
- obstructing access to / entrance of a badger sett;
- causing a dog to enter a badger sett;
- disturbing a badger whilst occupying a sett.

Badgers are also listed on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), which prohibits certain methods of killing and capture.

Bats

All species of bat, their breeding sites and their resting places in England and Wales are protected through a 'dual' system of protection, under the England and Wales Habitats Regulations and Wildlife and Countryside Act (1981) as amended. Because two regimes give legal protection to bats, the implications of both regimes must be fully understood.

Regulation (Reg.) 43 of the England and Wales Habitats Regulations makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats (which includes any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong);
- damage or destroy a breeding site or resting place of a bat; or
- possess, control, transport, sell or exchange, or offer for sale or exchange, any live or dead bat or part of a bat or anything derived from a bat or any part of a bat

Under Section 9 of the W&CA (s.9(4)(b), 9(4)(c) and 9(5) only), it is an offence (in relation to bats) to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place of shelter or protection;
- intentionally or recklessly obstruct access to any structure or place used by a bat for shelter or protection; or
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead bat or any part of, or anything derived from a bat (or be responsible for adverts suggesting the intention to do this).

Under both laws Natural Resources Wales are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest. It is not illegal to tend to a disabled bat pending recovery.

Birds

Under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way (CROW) Act 2000, all wild birds, their nests and eggs are protected during the breeding season (typically March to August inclusive). This makes it an offence to:

- Intentionally kill, injure or take any wild bird.
- Take, damage or destroy the nest of a wild bird included in Schedule ZA1.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

Hedgehogs

Hedgehogs are listed under Section 7 of the Environment (Wales) Act 2016, therefore public bodies have a duty to conserve them in the exercise of their functions.

They are listed under Section 6 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence for them to be killed or taken by certain methods.

Reptiles

All British reptiles are protected from intentional killing, injuring and sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), including the four common species:

- Adder, *Vipera berus*
- Grass snake, *Natrix helvetica**
- Slow worm, *Anguis fragilis*
- Common lizard, *Zootoca vivipara*

* The native UK grass snake (as referred to as the barred grass snake) was originally listed under *Natrix natrix* in the W&CA 1981 (as amended); formerly considered to be a sub-species of *N. natrix* (*N. natrix helvetica*), the barred grass snake was recognised as a separate species in 2017 following genetic analysis of European *Natrix* populations.

This legislation aims to protect them from persecution and also from exploitation in the pet trade, and for which the following are offences:

- Intentional killing, injuring or taking.
- Intentionally or recklessly damaging / destroying a place of shelter / protection.
- Intentionally or recklessly disturbing an animal in its place of shelter / protection.
- Intentionally or recklessly obstructing access to its place of shelter / protection.
- Possession (live or dead, including derivatives), sale and offering for sale.

The UK's two rarest reptiles are afforded additional protection under the Conservation of Habitats and Species Regulations 2017 (known as 'the Habitats Regulations'). This is because they have declined throughout Europe in recent decades. The Habitats Regulations lists the following reptiles as European Protected Species (EPS):

- Sand lizard, *Lacerta agilis*
- Smooth snake, *Coronella austriaca*

Under the Habitats Regulations, it is an offence if you:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb wild animals of any such species;
- Deliberately take or destroy the eggs of such an animal; or,
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance is defined as that which is likely:

- To impair their ability: to survive, to breed or reproduce, or to rear or nurture their young, or, in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

- To affect significantly the local distribution or abundance of the species to which they belong.

There are other offences relating to the possession, transport, selling or exchange of a protected species.

- Intentionally or recklessly damaging/destroying a place of shelter/protection [Section 9(4)(a)].
- Intentionally or recklessly disturbing any water vole while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)].
- Intentionally or recklessly obstructing access to any structure or place used by a water vole for shelter or protection [Section 9(4)(c)].
- Selling, offering or exposing for sale any water vole [Section 9(5)].

Protected Plants

The Wildlife and Countryside Act 1981 (as amended) makes it illegal to uproot any wild plant without the permission of the landowner. In addition, plants which are either rare or vulnerable to exploitation are listed on Schedule 8, for which it is an offence to:

- Intentionally pick, uproot or destroy.
- Sell, offer or expose for sale.

Invasive Non-Native Species

Invasive non-native species are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), for which the following are offences:

- Release into the wild, or to allow the escape of, any animal which is not ordinarily resident, or a regular visitor to, Great Britain in a wild state, or which is included in Part 1, Schedule 9.
- Plant in the wild, or otherwise cause to grow there, any plant included in Part 2, Schedule 9.

National Planning Policy

National Planning Policy in Wales is set out in Planning Policy Wales, Edition 12, issued in February 2024. This document sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, MTANs and policy clarification letters comprise national planning policy.

PPW Edition 12 Section 6.4 states that “*biodiversity underpins the structure and functioning of ecosystems*” and identifies that the “*planning system has a key role to play in helping to reverse the decline in biodiversity and increase the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement*”. The broad framework for implementing the Environment (Wales) Act 2016 Section 6 Duty, securing a net benefit for biodiversity and building resilience through the planning system includes addressing all of the following attributes: diversity, extent, condition, connectivity, and adaptability to change.

Green infrastructure (GI) is defined in Planning Policy for Wales (PPW) Edition 12 as “*the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places*”. Green infrastructure can function at a range of different scales, from entire ecosystems to street trees and is capable of providing several functions at the same time and as a result offers multiple benefits, for social, economic and cultural as well as environmental resilience.

Development proposals should take biodiversity and green infrastructure (GI) into consideration in order to avoid negative impacts on habitats and species, and seek ways to maintain and enhance biodiversity. Impacts on habitats and species should be treated in a step-wise manner (PPW 12, paragraph 6.4.15), by seeking to:

- **Avoid** damage to biodiversity in its widest sense by maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly Section 7 habitats and species where present, through careful development design and consideration of long-term maintenance and management and ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species.
- **Mitigate or restore** by identifying measures to address the specific negative effects by repairing damaged habitats and disturbed species. The measures should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area.
- As a last resort off-site **compensation** for unavoidable damage must be provided. This must be of significant magnitude to fully compensate for any loss.
- All development must **deliver a net benefit** for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed).

PPW12 also sets out the national policy requirements in relation to planning permissions where protected species, trees, hedgerows and woodlands and *irreplaceable natural resources* have the potential to be impacted.

Local Planning Policy

The Flintshire Local Development Plan 2015 – 2023 and Supplementary Planning Guidance documents provide relevant information associated with biodiversity and green infrastructure in Flintshire County Council area:

- FCC LDP 2015 – 2030 Policy STR13: Natural and Built Environment, Green Networks and Infrastructure;
- FCC LDP 2015 - 2030 Policy EN2: Green Infrastructure;
- FCC LDP 2015 – 2030 Policy EN6: Sites of Biodiversity and Geodiversity Importance
- FCC LDP 2015 – 2030 Policy EN7: Development Affecting trees, Woodland and Hedgerows;

- Supplementary Planning Guidance Note – No.8 Nature Conservation and Development;
- Supplementary Planning Guidance 8a - Great Crested Newt Mitigation Requirements; and,
- Supplementary Planning Guidance Note – No.4 Trees and Development

APPENDIX B Desk Study

Desk Study data included as separate Document.

APPENDIX C Plant Species List

This list is not exhaustive but refers to species observed during the site visit. Mosses (except indicators of bog habitat if present), lichens, algae and other lower plants and fungi were not identified. No protected or notably rare plant species were found.

Table C.1: Plant Species List

English Name	Scientific Name
Bramble	<i>Rubus fruticosus</i> agg.
Broadleaved dock	<i>Rumex obtusifolius</i>
Buddleia	<i>Buddleja davidii</i>
Cleavers	<i>Galium aparine</i>
Cock's foot	<i>Dactylis glomerata</i>
Common ragwort	<i>Jacobaea vulgaris</i>
Dandelion	<i>Taraxacum</i> sp.
Elder	<i>Sambucus nigra</i>
False oat grass	<i>Arrhenatherum elatius</i>
Great willowherb	<i>Epilobium hirsutum</i>
Hard rush	<i>Juncus inflexus</i>
Hawthorn	<i>Crataegus monogyna</i>
Ivy	<i>Hedera helix</i>
Leyland Cypress	<i>Cuprocyparis leylandii</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Soft rush	<i>Juncus effusus</i>
Spear thistle	<i>Cirsium vulgare</i>
Stinking iris	<i>Iris foetidissima</i> .
Sycamore	<i>Acer pseudoplatanus</i>
White clover	<i>Trifolium repens</i>
Willow	<i>Salix</i> sp.
Yorkshire fog	<i>Holcus lanatus</i>