

The logo consists of the letters 'SA' in a bold, white, sans-serif font, centered within a dark blue square. This square is positioned on the left side of a horizontal header bar that transitions from dark blue on the left to light blue on the right.

**SA**

# **PRELIMINARY ECOLOGICAL APPRAISAL**

**ABER ROAD, FLINT**

Cassidy and Ashton  
19 July 2023

## Sambrook Associates Ltd

5 Barnhill Grange | Old Coach Road | Barnhill | Broxton | Cheshire CH3 9JJ  
sambrookassociates.co.uk

Report prepared by	Rebecca Sambrook
Date	19-07-2023
Report Reference	R001
Version	V2
Status	Final

*This report has been prepared by Sambrook Associates Ltd on behalf of Cassidy and Ashton in connection with the proposed development at Aber Road, Flint and takes into account their particular instructions and requirements. It is not intended for, and should not be relied on, by any third party and no responsibility is undertaken to any third party.*

## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>4</b>
1.1	Background Information .....	4
1.2	Site Description .....	4
<b>2</b>	<b>LEGISLATION AND PLANNING POLICY .....</b>	<b>5</b>
<b>3</b>	<b>METHODOLOGY.....</b>	<b>7</b>
3.1	Introduction .....	7
3.2	Desk-top Study .....	7
3.3	Walk-over Survey.....	7
3.4	Bat Nocturnal Surveys .....	8
3.5	Limitations.....	9
<b>4</b>	<b>RESULTS.....</b>	<b>10</b>
4.1	Introduction .....	10
4.2	Desk-top Study .....	10
4.3	Walk-over Survey.....	10
4.4	Appraisal of Potential Effects.....	12
<b>5</b>	<b>CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>18</b>
<b>6</b>	<b>REFERENCES .....</b>	<b>20</b>
	<b>PHOTOGRAPHS.....</b>	<b>21</b>

# 1 INTRODUCTION

## 1.1 Background Information

- 1.1.1 Sambrook Associates Ltd was instructed by Cassidy and Ashton on behalf of the Hollins Murray Group to undertake a Preliminary Ecology Appraisal in relation to the planning application for the development of up to six industrial units at Aber Road, Flint.
- 1.1.2 To inform the Appraisal, a desk-top study, extended Phase 1 habitat survey and bat surveys were undertaken. This report provides the results of the study, an appraisal of the potential effects the proposed development may have on biodiversity, and where required, opportunities to avoid, offset or minimise such impacts.
- 1.1.3 The aim of the appraisal is to provide sufficient ecological information for the local planning authority (LPA) to determine the planning application. The objectives of the study were to:
- Provide baseline information on the current habitats and ecological features both on-site and in the immediate surrounding area;
  - Identify the presence or potential presence of any protected species or habitats and provide an appraisal of any potential effects that the proposed development may have on these;
  - Identify the proximity of any sites designated for nature conservation interest and provide an appraisal of any potential effects that the proposed development may have on these; and
  - Provide recommendations for further survey work and / or mitigation measures if required and present opportunities for biodiversity net gain.
- 1.1.4 The assessment is based upon Proposed Site Plan Drawing No. AS786-SK01 (Cube Architecture and Design, dated 23.02.2022).

## 1.2 Site Description

- 1.2.1 The Site is a brownfield site comprising hard standing (with a shallow soil/dirt covering in places) and a single storey building bound by chain link fencing, trees and the Swinchiard Brook. The Site is located on a main road on the outskirts of Flint and is surrounded by industrial and retail units with associated infrastructure and mature trees.
- 1.2.2 The proposed development area is hereby referred to as the Site and comprises the land within the red line boundary. The Extended Phase 1 Habitat Survey covered the Site plus 30m, where required (where access available) to take into consideration mobile species and badger setts.

## 2 LEGISLATION AND PLANNING POLICY

2.1.1 Many sites, animals and plants are protected by European and/or UK legislation either because of their decline across Europe and the UK or due to the persecution they have placed upon them by negligent or illegal acts such as baiting or trade. Legislation is also in place to prevent the spread of introduced or non-native invasive species and harmful weeds. When undertaking an appraisal of a proposed development, such legislation is taken into account as follows.

- **European:** Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the ‘Habitats Directive’); and Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (codified version of Directive 79/409/EEC as amended) (the ‘Birds Directive’).
- **UK (England & Wales):** The Conservation of Habitats and Species Regulations 2017, as amended (the ‘Habitat Regulations’) which transposes the Habitats Directive in UK law. Since 1st January 2021, the UK is no longer a member of Europe but since the Habitats Directives are embedded into UK statute, The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 was published and still applies in England and Wales; The Wildlife and Countryside Act 1981 (as amended); the Countryside and Rights of Way Act (CRoW) 2000; the Protection of Badgers Act 1992; the Natural Environment and Rural Communities Act (NERC) (2006) and the Environmental Protection Act (EPA) 1990.

2.1.2 Species such as bats, great crested newts, otter, water vole, reptiles and badgers are all protected to varying degrees under this legislation.

2.1.3 The Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (Section 6 Duty). This duty applies to public authorities in the exercise of their functions in relation to Wales and will help maximise contributions to achieving the well-being goals. The Nature Recovery Action Plan supports this legislative requirement to reverse the decline in biodiversity, address the underlying causes of biodiversity loss by putting nature at the heart of decision-making and increasing the resilience of ecosystems by taking specific action focused around the 6 objectives for habitats and species.

2.1.4 Species such as birds, bats, great crested newts, otter *Lutra lutra*, water vole *Arvicola amphibious*, reptiles and badgers *Meles meles* are all protected to varying degrees under this legislation.

2.1.5 In addition to legislation, there are also national and local planning policies pertaining to the protection of biodiversity. Planning Policy Wales (PPW) Edition 11 (February 2021) states: ‘the planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Development plan strategies, policies and development proposals must consider the need to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;

- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.'

- 2.1.6 To accompany the PPW, Technical Advice Note 5 (TAN5) demonstrates how local authorities, developers and stakeholders can deliver sustainable development that does not result in losses to biodiversity and takes the opportunity to protect and enhance it. Flintshire council also have their own guidance and local policy to promote ecological resilience in their decision making.
- 2.1.7 Under the NERC Act, local authorities (and other public bodies) have a duty to conserve biodiversity. The Act confers responsibility on the local authority to take the protection of priority habitats and species (as listed in Section 41) into consideration when making a planning decision. Habitats listed in this section include eutrophic standing waters, rivers, lowland meadows and lowland mixed deciduous woodland. Species listed in this section include great crested newt *Triturus cristatus*, sky lark *Alauda arvensis*, hedgehog *Erinaceus europaeus*, otter *Lutra lutra*, soprano pipistrelle *Pipistrellus pygmaeus* and red squirrel *Sciurus vulgaris*. Full habitats and species' lists can be found at the Natural History Museum website, [nhm.ac.uk](http://nhm.ac.uk) or [jncc.defra.gov.uk](http://jncc.defra.gov.uk).
- 2.1.8 The RSPB's Birds of Conservation Concern 3' (Eaton et al., 2009) is also taken into consideration when undertaking this appraisal.

## 3 METHODOLOGY

### 3.1 Introduction

3.1.1 To inform this Ecological Appraisal, an Extended Phase 1 habitat survey was undertaken in September 2022. A desktop study of the assumed zone of influence was undertaken in February 2023. The phase 1 habitat survey highlighted the need for bat activity surveys of two trees to the boundary of the site; these were conducted in the 2023 season.

### 3.2 Desk-top Study

3.2.1 The desktop study involved a search for information on statutory sites within 1km radius of the Site and non-statutory sites within 500m. The centre of the Site (Ordnance Survey Grid Reference SJ23967339) was used for the search.

3.2.2 The following sources were searched for information about the Site:

- Defra's 'MAGIC' website;
- Google Earth;
- Bing Maps;
- Flintshire County Council.

### 3.3 Walk-over Survey

3.3.1 The purpose of the Extended Phase 1 Habitat Survey was to determine:

- the habitats present;
- any potential constraints to development;
- the potential for legally protected species to be present;
- the presence of invasive plant and animals; and
- any requirement for additional ecological surveys.

3.3.2 Sambrook Associates Ltd. carried out an Extended Phase 1 Habitat Survey of the Site on 23 September 2022. The weather was mild with an average temperature of 15°C with no wind or rain. The survey was carried out by Rebecca Sambrook BSc. (Hons) MCIEEM. The surveyor is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and adheres to that organisation's Code of Professional Conduct.

3.3.3 The survey was carried out in accordance with the Extended Phase 1 Habitat Survey methodology as described in Guidelines for Ecological Assessment (Institute of Environmental Assessment, 1995). This is a development of the original methodology outlined in the Handbook for Phase 1 habitat survey – A technique for environmental audit (JNCC, 2010). Photographs are included within the document. Plant names follow the third edition of the New Flora of the British Isles (Stace, 2010). The common name of the plant is stated first and is followed by the Latin name, on the first occasion that it is used. Only the common name is used subsequently.

3.3.4 The Site was searched for evidence of fields signs or habitats that may support protected species such as bats, great crested newts, badgers, birds, reptiles, otters, water vole and also

any invasive plants or animals. Trees and the building were assessed for their potential to support bats using the criteria set out by the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines, 2016 (3rd edn).

### 3.4 Bat Nocturnal Surveys

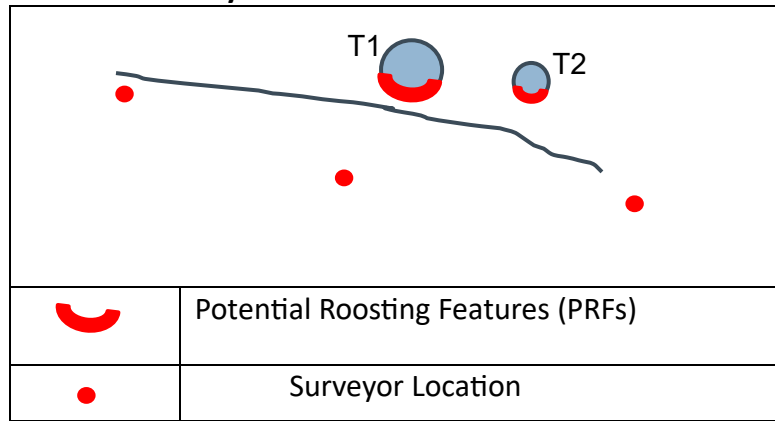
- 3.4.1 A large willow (T1) and unidentified tree pole (T2) were identified as having suitability for bats given the willow supports a long vertical crack in its trunk and the unidentified tree supports three woodpecker holes. It is not possible to physically inspect the potential roosting features due to proximity to the Swinchiard Brook and the security fencing in front of the trees. A series of bat surveys were undertaken to identify presence/likely absence of bat roosts.
- 3.4.2 The activity surveys were undertaken during appropriate weather conditions. The dusk survey commenced 15 minutes before sunset until 1.5 hours after. The dawn survey commenced at least 1.5 hours before sunrise until 15 minutes after.
- 3.4.3 The surveys were conducted by three surveyors; Rebecca Sambrook (Lead), Mark Benson and Olivia Forde who were positioned strategically so that good coverage of the tree was achieved (see Table 3.1 and Figure 3.2 below).
- 3.4.4 The surveyors each used a Wildlife Acoustics' EM Touch Pro detectors. The data was analysed by the surveyors and reviewed by Rebecca Sambrook.
- 3.4.5 The following table provides details of the surveys.

**Table 3.1: Survey Data**

Variable	Date	Date
	15/06/2023	14/07/2023
Survey type	Dusk	Dawn
Sunrise/Sunset	21:42	05:03
Time started	21:17	03:30
Time completed	23:12	05:18
Start weather	Dry, warm	Dry, mild
Start Temperature	20°	15°
Start rain	0	0
Start cloud	1	8
Start wind	0	1
End weather	Dry, mild	Dry, mild
End temp	19°	15°
End rain	0	0
End cloud	1	8
End wind	1	1



**Plate 3.1: Surveyor Locations**



### 3.5 Limitations

3.5.1 No limitations were encountered during the surveys, although access outside of the site was restricted in some areas, most areas could be viewed from the site.

## 4 RESULTS

### 4.1 Introduction

4.1.1 This section provides a commentary on the data collected during the desk-top study and site surveys. Photographs depicting the Site can be found in the Photographs section at the back of this document.

### 4.2 Desk-top Study

4.2.1 As discussed above, a number of available online resources were reviewed as part of the desk-top study.

4.2.2 There are four statutory designated sites within the 1km search area. These are: Dee Estuary Ramsar, Dee Estuary / Aber Afon Dyfrdwy Site of Special Scientific Interest (SSSI), Dee Estuary / Aber Dyfrdwy (Wales) Special Area of Conservation (SAC) and The Dee Estuary (Wales) Special Protection Area (SPA), all of which are 116m north-east of the site.

4.2.3 The Dee Estuary RSPB Reserve, which is a non-statutory designated site, is located 537m east of the site.

4.2.4 These designations collectively provide protection for the vast biodiversity supported within the Dee Estuary including populations of internationally important wintering wildfowl and waders, nationally important numbers of individual avian species, extensive areas of saltmarsh, nationally scarce higher plants, Red Data Book species and marine mammals.

4.2.5 The Swinchiard Brook runs along the eastern and southern boundary of the site and forms part of the River Dee catchment; a description of the brook is provided below. There are four waterbodies on the other side of Aber Road. These waterbodies were not visited due to access restrictions.

4.2.6 Flintshire County Council planning portal did not reveal any imminent plans for further expansion of the adjacent developments and hence there will unlikely be in-combination effects with the application Site.

### 4.3 Walk-over Survey

4.3.1 The walk-over survey comprised an extended Phase 1 habitat survey.

#### Habitats

4.3.2 The application site is a triangular shape, bound by Aber Road and chain link fencing on its western edge and the Swinchiard Brook and associated vegetation on its eastern and southern edges. The site comprised almost entirely hardstanding (concrete) with areas where there was a shallow soil/dirt/woodchip covering. In some of these areas, grass (unknown species), nettles *Urtica dioica* and willowherb *Epilobium sp.* had started to colonise. There were a pile of tyres that have been fly tipped. There was no habitat of ecological interest within the main body of the site; there are no ponds, trees, watercourses or areas of dense or diverse vegetation.

- 4.3.3 There is a single storey detached building within the site which comprised a storage container with a timber and corrugated sheet extension. The building is in a poor condition.
- 4.3.4 The main ecological interest was limited to the eastern and southern site boundaries where the Swinchiard Brook runs. The brook comprised steep sides of approximately 0.5-1m in height, water was clear with a moderate flow and a depth varying from 0.2-0.75m. It was deeper at the southern end of the site. The brook was flanked on its eastern side by trees including willow *Salix sp.*, sycamore *Acer pseudoplatanus*, ash *Fraxinus excelsior* and Scot's pine *Pinus sylvestris*. An understory typical of a semi-urban/industrial watercourse was present including willowherbs *Epilobium sp.*, nettles *Urtica dioica*, brambles *Rubus fruticosus*, alder *Alnus glutinosa*, willow, mallow *Malva sp.*, ferns, ash saplings, hawthorn *Crataegus monogyna* and ivy *Hedera helix*. On the site side of the brook banks, in parts there is fencing preventing access to the brook edges and in other parts the brook can be clearly seen. There were two trees of particular interest for bats since they exhibited potential roosting features.
- 4.3.5 There was no evidence of the presence of invasive species such as Japanese knotweed *Reynoutria japonica* or Himalayan balsam *Impatiens glandulifera*. But it is highly likely that Himalayan balsam will colonise at some point in the future due to its presence further upstream.

### Species

- 4.3.6 **Birds:** nesting opportunities are not present within the site but the vegetation on the other side of the brook on the eastern and southern boundaries does offer nesting bird habitat. The single storey building did not exhibit evidence of historic or current nesting and given it is highly disturbed 7 days per week, birds are highly unlikely to nest there. Similarly, despite the short distance from the SPA/SSSI/SAC/Ramsar, birds associated with these designations are highly unlikely to be found within the site due to lack of suitable habitat and the highly disturbed nature of the site.
- 4.3.7 **Great Crested Newts:** there are four waterbodies within 250m of the site. These are on the opposite side of Aber Road at distances of 17m north, 203m north-west, 148m west and 159m west. These ponds were not surveyed due to access restrictions. A distant view from the road of the closest pond suggests it is of low suitability for great crested newts. The other three ponds may be suitable for great crested newts.
- 4.3.8 **Bats:** one willow tree flanking the site boundary exhibited suitable potential roosting features for bats in the form of a long split in the trunk at a height of 2 metres. The split was considered to be of moderate roosting potential in accordance with the criteria set out in the BCT guidelines. A second dead and unidentified species 'pole' tree also supported potential roosting features in the form of three woodpecker holes which were assessed as being moderate suitability. Due to the potential for both trees to support bats, two night-time activity surveys were carried out, one at dusk and the other at dawn. During the surveys, it was identified that light pollution from the adjacent Aber Road highway lighting, and the adjacent retail complex (very bright) lighting was impacting the site and the trees significantly enough to potentially reduce the value of the site and trees for roosting, commuting and foraging of bats that are sensitive to light pollution. The dusk and dawn surveys produced similar results – very low activity comprising brief passes of soprano *Pipistrellus pygmaeus* and

common pipistrelle *Pipistrellus pipistrellus* with occasional noctule *Nyctalus noctula* passing overhead from west to east. No emergences or re-entries were recorded and therefore, at the time of the surveys, no roosts were identified. The single storey building comprising metal container timber and corrugated metal 'extension' is of Negligible suitability for bats. The site offers limited foraging opportunities but the brook provides excellent commuting and foraging habitat since it is well connected to the wider area.

- 4.3.9 **Otter:** there was no evidence of otter along the length of the watercourse where it bordered the site. It is possible otter use this watercourse throughout the year; there were lying up opportunities and the brook is well connected to the wider basin of the River Dee, where otter are known to frequent.
- 4.3.10 **European eel *Anguilla Anguilla*:** the eel is known to be present within the River Dee Basin and it is possible the Swinchiard Brook is used by this species to migrate between foraging and breeding grounds.
- 4.3.11 **Badger:** no evidence of badger was identified and given the built up, industrial nature of the site and surrounds, badger are unlikely to be present or use the site even on a transient basis. Badgers are not considered further in this report.
- 4.3.12 **Water vole:** the watercourse was considered unsuitable for this species due to the lack of habitat structure and foraging opportunities preferred by this species; no evidence of water vole was identified. This species is not considered further.
- 4.3.13 No suitable habitat exists for **reptiles** and these are not considered further.

#### 4.4 Appraisal of Potential Effects

- 4.4.1 Overall, the main body of the Site offers limited potential for protected or notable species. The main ecological interest is the brook and associated habitats which, although outside of the site, it forms a physical feature of the eastern and southern boundaries. There was no evidence that protected species are using this brook where it bounds the site but in the wider landscape, it provides a valuable corridor for many aquatic and terrestrial species.
- 4.4.2 The planning application comprises the construction of six industrial units with associated hard and soft landscaping. Short (construction) and long term (occupancy) effects of the proposed development on biodiversity have been reviewed and assessed. Three key components have been reviewed; the potential for short and long-term effects on:
- Nearby statutory sites (Ramsar, SSSI, SAC and SPA);
  - Boundary and local habitats (aquatic habitats of Swinchiard Brook, trees);
  - Protected species (bats and birds).
- 4.4.3 **Designated sites:** given the site is located 116m distance from the SPA, SAC, Ramsar and SSSI, the potential for impact pathways including terrestrial, airborne and aquatic have been assessed. There will be no direct impacts on the designated sites given the buffer between the application site and designated sites but in the absence of mitigation and good site management, there is potential for indirect impacts such as noise and dust, and also

sedimentation and pollution of the Swinchiard Brook which runs into the estuary, to impact upon the designated sites.

- 4.4.4 In terms of noise; the site is buffered by the A548 – a busy main road which runs between the site and the designated sites. There are also tree lines along the northern end of the site which will further buffer noise. Therefore the construction of the site is unlikely to disturb birds and other species whilst present within the designated sites.
- 4.4.5 To prevent terrestrial, aquatic and airborne impacts, particularly via the brook, as a minimum, good site management will be implemented in line with the Considerate Constructors Scheme, Code of Considerate Practice. Key principals of good management to protect ecological receptors include:
- Being organised, clean and tidy; always net skips to prevent materials and rubbish from blowing around the site and onto adjacent habitats.
  - Identifying, managing and promoting environmental issues.
  - Seeking sustainable solutions, and minimising waste, carbon footprint and resources.
  - Minimising the impact of vibration, air, light and noise pollution.
  - Protecting the ecology, the landscape, wildlife, vegetation and watercourses; this includes using dust dampening, wheel washing stations and bunded fueling areas with a key focus on protection of the brook.
- 4.4.6 The lack of suitable habitats on site means that species associated with the designated sites are highly unlikely to use the application site and hence no direct harm is anticipated.
- 4.4.7 The potential for in-direct harm through impact pathways is minimised by the existing infrastructure that buffers the application site from the designated site, and the additional protection measures to be put in place throughout construction. No effects are anticipated.
- 4.4.8 Long term effects have also been assessed; due to the existing industrial nature of the application site, the presence of new industrial units is of no consequence.
- 4.4.9 **Habitats:** The site comprises entirely hard standing with some shallow accumulations of dirt, wood chippings and soil atop. The loss of this is of no significant ecological consequence. Off-site but flanking the boundary of the site are trees and the Swinchiard Brook which will be retained and protected throughout construction.
- 4.4.10 A tool box talk is to be provided to contractors and site personnel on Day 1. The talk would include the importance of good site management and the avoidance of impacts on boundary features.
- 4.4.11 All boundary features are to remain intact and protected by robust barrier fencing such as 6ft high Heras fencing. Tree root protection zones are to be established to BS5837:2012 and all retained vegetation is to be fenced off with Heras fencing (or similar fencing) to act as a robust physical barrier to plant machinery.

- 4.4.12 The Tidal Dee Catchment Action Plan (March 2022) lists the pressures that Swinchiard Brook is currently undergoing including physio-chemical quality elements, specific pollutants, agriculture, rural land management and hydromorphology. It is pertinent that this proposed development does not contribute to these pressures and that a scheme of mitigation is implemented to protect the integrity of this brook. The Considerate Constructors Scheme, Code of Considerate Practice discussed above combined with a 5m stand-off will protect the brook and associated habitats from direct damage of habitats and in-direct pollution incidences.
- 4.4.13 During the occupancy phase, the key consideration is pollution of boundary features through surface water/effluent and foul drainage; both will be dealt with via local existing means, negating the potential for long-term issues.
- 4.4.14 New native planting within the site will be of benefit by increasing species diversity across the site. Tree planting is proposed around the entire site boundary, comprising wild cherry *Prunus avium* and crab apple *Malus sylvestris* with shrub planting including hazel *Corylus avellana*, blackthorn *Prunus spinosa* and hawthorn *Crataegus monogyna*.
- 4.4.15 On the basis both construction and occupancy phase matters are concluded sufficiently, as outlined above, effects on habitats are not anticipated.
- 4.4.16 **Species: Birds** may nest and forage within the boundary features around the site. If any vegetation removal is required, this should be done outside of the bird nesting season i.e. not between the months of March to August inclusive to prevent disturbance and destruction of active nests, unless an appropriately experienced ecologist can confirm no nests or active nest building is taking place at the time. New native planting will be of benefit to foraging birds, particularly during the colder months.
- 4.4.17 **Great crested newts:** Given the absence of data for the four ponds, the likelihood of great crested newts being present on the site is considered on the basis of suitability of habitat within the site and boundaries, and the need for GCN (if present) to travel from nearby ponds to find suitable terrestrial habitat. The site itself comprises hardstanding with very little substantial or suitable soft landscape. There is no valuable habitat for GCN within the site for foraging or sheltering and the lack of vegetative cover leaves commuting GCN vulnerable to predation. The pile of tyres, albeit large in area, does not provide substantial cover for hibernation.
- 4.4.18 Furthermore, the habitat surrounding the ponds on the opposite side of the road offers valuable terrestrial opportunities comprising woodland, scrub and grassland, with excellent connectivity and therefore there would be no 'need' for great crested newts to travel to use the site. On this basis, it is considered highly unlikely that the site would support great crested newts. However, since the possibility of the occasional stray great crested newt traversing the site on a transient basis cannot be excluded, as a highly precautionary approach, standard Reasonable Avoidance Measures are to be implemented throughout construction. These are:
- Any minor excavations will be backfilled overnight, capped at the ends (in the case of ducts) or if left open overnight, the surfaces are to be smoothed and a means of escape (a ramp) provided.

- Any excavated materials requiring storage should be stored on pallets raised off the ground, or otherwise compacted/modified to prevent plant growth and cracks that could be exploited by GCN. Any materials stored on the ground should be checked for GCN presence by an ecologist prior to re-use elsewhere on site.
- All on-site debris and stored materials should be dismantled and removed carefully as amphibians may be present, if a suspected great crested newt is found, a photograph is to be taken and sent to the retained ecologist for advice.
- Any materials arising from the development should be removed from site as soon as possible and should not be stored on site to prevent amphibians from using the materials for shelter.
- If a GCN is discovered at any point, works must stop immediately, and the ecologist is to be contacted for further advice.

4.4.19 No further survey work for great crested newts is required and effects on great crested newts are not anticipated.

4.4.20 **Otter** may use Swinchiard Brook to commute and forage. There was no evidence of laying up areas or holts along the stretch of the brook that borders the site but they are present in the wider catchment and therefore may well use the brook. It is important not to impede their routes and this development does not include any element that would do this. A stand-off of 5m from the brook and the implementation of watercourse protection measures described above will ensure that otters are not disturbed throughout construction. No short or long-term effects on otters are anticipated.

4.4.21 **Bats**: no roosts were identified in the two trees to the site boundaries that support potential roosting features. During the surveys it was also found that the light spillage from both the highway and retail park impacts the site and creates pockets of brighter areas which does affect the trees. This somewhat reduces the potential of these trees to support bats but not necessarily preclude their use by more light tolerant species such as pipistrelle. Likely for the same reason, foraging and commuting bats were recorded very occasionally; the site was quiet in terms of general bat activity. Since bats can move into roosting features at any time of the year, a pre-cautionary approach should be undertaken during construction and operation phases of developments.

4.4.22 To avoid impacts on bats and their habitats during the construction phase the following measures will be implemented:

- The tool box talk provided to contractors and site personnel on Day 1 would include the importance of avoidance of impacts on boundary features that may be used by bats as a commuting and foraging corridor.
- All boundary features are to remain intact and protected by robust barrier fencing such as 6ft high Heras fencing.
- Any lighting is to be directed away from boundary features so that they remain in darkness between dusk and dawn.

4.4.23 During the occupancy phase the key consideration is light spillage into boundary habitats which would detract bats from commuting and foraging. This could cause fragmentation and isolation of foraging grounds and trigger the failure of the local bat population.

4.4.24 To avoid impacts on bats and their habitats during the occupancy phase the following measure will be implemented:

- a lighting scheme will be designed that is sensitive to the requirements of bats, in accordance with the current guidance jointly issued by the Institution of Lighting Professionals and Bat Conservation Trust; Guidance Note 08/18: Bats and Artificial Lighting in the UK.

4.4.25 In consideration of the above measures, impacts on bats are not anticipated.

**Enhancement:**

4.4.26 The proposed scheme includes the new native planting within the site. Tree and shrub planting is proposed around the entire site boundary, comprising:

- **Trees:** wild cherry *Prunus avium*, and crab apple *Malus sylvestris*.
- **Shrubs:** hazel *Corylus avellana*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*

4.4.27 The proposed scheme includes the installation of bird and bat boxes which will provide a net gain in roosting and nesting opportunities. The following boxes are proposed:

- 3no. Vivara Pro Woodstone House Sparrow Nest boxes (double chamber) or similar;
- 3no. Vivara Pro Seville 32mm Woodstone Nest Box 32mm or similar;
- 3no. Vivara Pro Woodstone Nest Box 28mm or similar;
- 2no. Improved Crevice Bat Box or similar;
- 1no. 1FF Schwegler Bat Box or similar.

4.4.28 Bird boxes are to be installed on the northern elevation of Unit 1, southern elevation of Unit 2 and the southern elevation of Unit 6, at least two metres off the ground to reduce risk of predators and human interference.

4.4.29 Bat boxes are to be installed on the rear of Units 1 and 2, facing the brook at a height of between 3 to 6 metres, in an uncluttered environment and out of direct sunlight.

4.4.30 **Site contractors, directors, owners, other personnel and their agents are reminded that many species and habitats are protected by law, and to kill, injure or harm such species and their habitats is a criminal offence. Custodial sentences and/or large financial penalties are expected if you break the law. Protected species and habitats commonly found on development sites include (but not limited to):**

- **watercourses, particularly when they act as an impact pathway to designated sites;**



- **bats including their roosts in trees;**
- **birds including their nests;**
- **great crested newts including terrestrial and aquatic habitat.**

## 5 CONCLUSIONS AND RECOMMENDATIONS

5.1.1 The Site has been subject to assessment in 2022/3, it is concluded that the proposed development is unlikely to result in significant effects on nearby designated sites, habitats or species if the mitigation and enhancement strategy as outlined in Section 4 is implemented.

5.1.2 The following recommendations are made.

5.1.3 The likelihood of effects on boundary habitats and in-direct impacts on the designated sites is possible in the absence of mitigation.

- **Recommendation:** good site management is implemented in line with the Considerate Constructors Scheme, Code of Considerate Practice; prevention of watercourse pollution being a key factor.
- **Recommendation:** barrier fencing is installed at the outset of site works, as a minimum 5m distance from features. Note root protection zones of trees are to be protected in line with BS 5837:2012 – Trees in Relation to Design, Demolition and Construction.
- **Recommendation:** a tool box talk is provided to all contractors and site personnel on Day 1 to inform of environmental protection measures to be employed across the site.

**Reason:** to avoid impacts on the designated sites and localised impacts on habitats and the species that use them.

5.1.4 The likelihood of effects on nesting birds is low, however, as a precaution one recommendation is made.

- **Recommendation:** any trimming/removal of vegetation should be undertaken outside of the bird nesting season (i.e. not between March-August inclusive) to prevent disturbance and destruction of active nests unless an appropriately experienced ecologist can confirm no nests or active nest building is taking place at the time. If nests are present, they are to be left undisturbed until the young have fledged.

**Reason:** to avoid impacts on nesting birds, under the Wildlife and Countryside Act 1981 (as amended).

5.1.5 The likelihood of construction effects on bats is low since tree works are not currently proposed and the site overall at night is not highly favourable for bats. However, one recommendation is made.

- **Recommendation:** lighting during the construction phase is to be directed away from woodland edges so as to maintain dark commuting routes along the woodland edge.

**Reason:** to avoid impacts on bats, under the Habitats Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

5.1.6 The likelihood of occupancy phase effects on bats is low, however, one recommendation is made.

- **Recommendation:** a lighting scheme will be designed that is sensitive to the requirements of bats, in accordance with the current guidance jointly issued by the Institution of Lighting Professionals and Bat Conservation Trust; Guidance Note 08/18: Bats and Artificial Lighting in the UK.

**Reason:** to avoid impacts on bats, under the Habitats Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

5.1.7 The enhancement scheme comprises the following measures:

- **Recommendation:** install bat and bird boxes as per the specification detailed above in Section 4.
- **Recommendation:** the soft landscaping scheme is to include species of native, and preferably, local provenance and include fruit bearing trees such as cherry and apple, and hedgerow plants including blackthorn, as detailed in Section 4 above.

5.1.8 If the above recommendations are implemented, the development would not result in negative effects on biodiversity. No further surveys to inform this application are required.

## 6 REFERENCES

- BSI (2013). *BS 42020 Biodiversity. Code of practice for planning and development*.
- CIEEM (2013). *Guidelines for Preliminary Ecological Appraisal*. Winchester. CIEEM.
- Collins, J (ed.). 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edn)*. The Bat Conservation Trust. London.
- Department for Communities and Local Government (2012). *National Planning Policy Framework*.
- English Nature (2001). *Great Crested Newt Mitigation Guidelines*. Peterborough.
- Harris, S., Cresswell, P. and Jefferies, D.J., (1998). *Surveying for Badgers*. Mammal Society Occasional Publication 9.
- Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. IEA. London.
- JNCC, (2010). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit (reprint)*. Joint Nature Conservation Committee, Peterborough.
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. 2001. *Great Crested Newt Conservation Handbook*, Froglife, Halesworth.
- Mitchell-Jones, A.J. 2004. *Bat Mitigation Guidelines*. English Nature, Peterborough Natural England (2010). *European Protected Species and the Planning Process*.
- Royal Society for the Protection of Birds (2009). *Birds of Conservation Concern (3)*.
- Stace, C. (2010). *New Flora of the British Isles*. Third Edition. Cambridge University Press.
- The Bat Conservation Trust, 2012. *Bats and Buildings – Bats and the Built Environment Series*. BCT, London

# PHOTOGRAPHS

Plate A: Western boundary



Plate B: Western boundary



Plate C: Western boundary



Plate D: Southern boundary



Plate E: Southern boundary



Plate F: Southern boundary



Plate G: Eastern Boundary



Plate H: Eastern Boundary



Plate I: Eastern Boundary



Plate J: building on site



Plate K: Willow exhibiting bat potential



Plate L: The Swinchiard Brook



