

United Environmental Services Ltd

1 Booths Park,
Chelford Road,
Knutsford,
Cheshire
WA16 8QZ

www.ues.org.uk

enquiries@ues.org.uk

01565 757788



PRELIMINARY ECOLOGICAL APPRAISAL

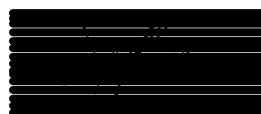
At

Bridgeway Centre

Bridge Road
Wrexham
LL13 9QS

NGR: SJ 37766 49382

Prepared for:	Dominic Ryan, FI Real Estate Management Ltd
Written by:	Tom Kenwright, UES Senior Ecologist
Approved by:	Toby Hart, UES Managing Director



Date:	9 th October 2024
Updated (V2):	8 th November 2024
UES reference:	UES03012/17



CONTENTS

EXECUTIVE SUMMARY	3
1 INTRODUCTION	6
1.1 Author, surveyors, qualifications and scope of study area	6
1.2 Survey objectives	6
1.3 Proposed development and previous survey information	6
1.4 Structure of the report.....	7
2 METHODOLOGY	8
2.1 Desk study.....	8
2.2 Field survey	8
2.3 Survey limitations	9
3 RESULTS.....	10
3.1 Desk study.....	10
3.2 Baseline conditions – Habitats.....	13
3.3 Baseline conditions – Protected species or resources	20
4 EVALUATION AND RECOMMENDATIONS	25
4.1 Habitats	25
4.2 Species.....	28
5 CONCLUSION.....	34
6 REFERENCES	35
APPENDICES.....	36
Appendix 1 – Desk study.....	36
Appendix 2 – Phase 1 habitat plan	37
Appendix 3 – Aerial photographs.....	38
Appendix 4 – Photographs	39
Appendix 5 – External lighting guidance	40
Appendix 6 – Planning and statutory context.....	41

EXECUTIVE SUMMARY

United Environmental Services Ltd (UES) was commissioned by FI Real Estate Management Ltd to carry out a baseline ecological survey of the Bridgeway Centre, Wrexham. A desk study and preliminary ecological appraisal (PEA) walkover survey were undertaken on the 4th October 2024, including searches using the Multi Agency Geographic Information Centre (MAGIC) and COFNOD.

The PEA provides an assessment of potential ecological impacts associated with the development of the land parcel and forms an update to a previous PEA undertaken by UES of the site in June 2020 (see report reference UES03012/01). This updated PEA was also extended to include an assessment of an additional area of woodland that will be used as an offsite ecological enhancement area.

The proposed development is to create a new contemporary styled employment / business park comprising a number of blocks split into smaller units, designed for occupation by a wide range of businesses and enterprises across Use Classes B1, B2 and B8. Existing retail, service, food and drink units fronting Coed Aben Road will be retained / refurbished as part of the proposals. A hybrid planning application has been made (P/2022/0065) to Wrexham Borough Council.

A suite of bat surveys has previously been undertaken of the buildings on site by UES across 2020-2024. Some of the buildings on site have already been demolished under consented building demolition and Buildings 1 and 2 are due to be removed shortly under approved demolition consent.

The proposed working area measures approximately 3.5ha and predominantly comprises buildings, amenity grassland and hardstanding. There are also small areas of introduced shrub, species-poor hedgerows, plantation woodland, dense scrub and semi-improved grassland. An unnamed watercourse and woodland are located offsite but immediately adjacent to the north-western site boundary.

The results of the survey combined with the results of the desk study have highlighted the requirement for further work in relation to the following habitats and species:

- **Amphibians** – The reasonable avoidance measures detailed in section 4.2.1 are to be implemented during demolition and construction works.

Any gully pots installed on site and should either be set back, covered with a mesh to prevent amphibians from falling in, or fitted with a means of escape such as an amphibian ladder.

- **Badgers and hedgehogs** – The reasonable avoidance measures detailed in section 4.2.2 are to be implemented during demolition and construction works.

To allow continued use of the site by hedgehogs *Erinaceus europaeus* and to ensure commuting routes aren't blocked, any fences installed at the north-western site boundary should be designed to allow passage of hedgehogs. This can either be through the choice of material e.g. choosing a fence style that naturally contains holes at the base or through the inclusion of hedgehog highways. Hedgehog highways are small 13cm x 13cm holes cut into the base of fences.

- **Bats** – The remaining sections of Buildings 1 and 2 are to be demolished in accordance with the bat non-licenced method statement that has been prepared specifically for these buildings by UES (report reference UES03012/14).

The two trees on site found to contain bat roosting features are currently due to be retained as part of the development proposals (see Appendix 2 – Target Notes 1 & 2). If the proposals change and the pedunculate oak *Quercus robur* tree containing the low quality / PRF-I bat roosting feature is due to be felled, soft-felling techniques should be implemented. The tree should be removed in sections, with the section containing the potential roosting feature lowered to the ground and left with the cavity entrance left facing upwards for a period of 24 hours before removing from site. Alternatively, the PRF can be subject to a pre-felling inspection with an endoscope.

If the proposals change and the field maple *Acer campestre* tree containing the moderate quality / PRF-M bat roosting feature is due to be felled, it must first be subject to three bat presence / absence surveys. These surveys can only be undertaken during the bat survey season of May to September inclusive, with at least two of the surveys undertaken during the peak survey period of May to August inclusive. The cavity extends too far into the tree and has too complex a structure to instead be subject to aerial tree inspections with an endoscope.

As detailed within the bat non-licenced method statement prepared for the demolition of Buildings 1 and 2, a Schwegler 2F (or similar) bat box should be installed on site to compensate for the loss of potential roosting features.

Any lighting installed on site should be designed to avoid overspill onto the offsite areas of woodland adjacent to north-western site boundary and any retained or newly created areas of higher quality habitat including woodland, scrub, mature trees, suds features, hedgerows and wildflower grassland. Further guidance on external lighting design is provided at Appendix 5.

- **Breeding birds** – Site clearance, tree felling, arboricultural works, vegetation removal and demolition works are to take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible, a targeted breeding bird nest check should be conducted immediately prior to the works and an ecological clerk of works appointed to oversee works if considered necessary.

Compensation for the loss of nesting habitat and the enhancement of the nesting opportunities on site can be provided through the provision of bird nest boxes.

- **Invasive species** – The giant hogweed *Heracleum mantegazzianum* and the small-leaved cotoneaster *Cotoneaster microphyllus* within the proposed working area will need to be subject to control measures prior to the start of works on site and eradicated as part of the development, in order to ensure that they do not spread across the site or onto adjacent areas. It is essential that a competent and qualified person carries out any herbicide treatment and any removed material or infected soil is disposed of appropriately.

Whilst there is no risk of the proposed works spreading the hollyberry cotoneaster *Cotoneaster bullatus* or Japanese knotweed *Reynoutria japonica* that lies offsite but within the ecological enhancement area, these invasive species should also be eradicated as part of the development, as an ecological enhancement and to prevent the potential for these species to spread in the future.



- **Trees and hedgerows** – To be retained where possible or replaced as part of a detailed landscaping scheme. Generic issues relating to root protection areas.
- **Watercourse** – An unnamed watercourse is present within the woodland that borders part of the north-western site boundary. At its closest point, the watercourse lies at least 10m from the proposed working area and so a natural buffer zone will automatically be implemented. Whilst the risk of adverse impacts is considered to be limited, industry standard pollution prevention measures should still be implemented to ensure that the risk of input into the watercourse is reduced to the lowest practicable level.
- **Woodland** – Retained areas of onsite woodland and offsite woodland to the north-west should be adequately protected during the construction activities on site. Areas of retained woodland should be fenced off to protect the root systems of the trees within, and no contractors should access the woodlands unless authorised to do so or for reasons related to working within the woodland (e.g. protecting it from construction activities). No materials should be stored adjacent to the woodland and no temporary or permanent external lighting should be directed onto the woodlands.

The small areas of onsite woodland due to be removed will be compensated for through replacement woodland planting, which will contain a mix of native tree and shrub species. Additionally, the area of woodland within the ecological enhancement area will be unaffected and the development provides the opportunity to secure the long-term retention, management and enhancement of this woodland.

Mitigation measures, as detailed in section 4, should be adhered to, which may in some cases negate the need for further survey work.

The development also presents an opportunity to improve the habitats on site for wildlife, such as bats and birds. The inclusion of nest boxes and bat boxes will provide suitable nesting and roosting features in the long term.

This report should be read with appendices 1 to 6, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

1 INTRODUCTION

1.1 Author, surveyors, qualifications and scope of study area

This report is written by Tom Kenwright BSc MSc ACIEEM, UES Senior Ecologist. Tom holds a level 5 Botanical Society of Britain & Ireland (BSBI) Field Identification Skills Certificate (FISC), which certifies him as competent to undertake UKHab, phase 1 habitat and national vegetation classification (NVC) surveys. Tom is licensed by Natural Resources Wales to disturb, take and handle all species other than greater horseshoe *Rhinolophus ferrumequinum* or lesser horseshoe *Rhinolophus hipposideros* under licence number S094176/1. Tom is licensed by Natural Resources Wales to disturb, take and handle great crested newts (GCNs) *Triturus cristatus* under licence number S092335/1.

The report provides an assessment of the potential ecological impacts associated with the proposed development at the Bridgeway Centre, Wrexham.

The zone of influence considered within the scope of the survey includes all land within the red line boundary. Where relevant, other ecological resources, receptors and important habitats which are spatially separate from the site are considered.

1.2 Survey objectives

UES was commissioned in 2024 to conduct a PEA of the proposed development site. This was completed in order to:

- Establish baseline conditions and determine the importance of ecological features present or potentially present within the survey area
- Identify key ecological constraints to the project
- Make recommendations for design options to avoid significant effects on important ecological resources at an early stage of development planning
- Identify potential requirement for further surveys for nationally or internationally protected species which may be present on site
- Identify potential requirement for mitigation or compensation, including measures that may be required based on further surveys

1.3 Proposed development and previous survey information

The proposed development is to create a new contemporary styled employment / business park comprising a number of blocks split into smaller units, designed for occupation by a wide range of businesses and enterprises across Use Classes B1, B2 and B8. Existing retail, service, food and drink units fronting Coed Aben Road will be retained / refurbished as part of the proposals. A hybrid planning application has been made (P/2022/0065) to Wrexham Borough Council.

This PEA provides an update to a previous PEA undertaken of the site by UES in June 2020 (see report reference UES03012/01). This updated PEA was extended to include an

assessment of an additional area of woodland that will be used as an offsite ecological enhancement area.

The following bat surveys have also been undertaken of the buildings on site by UES:

- 24/02/2020 - Bat scoping survey undertaken of all buildings (except Building 11) by UES (report reference: UES03012/02).
- 22/09/2020 - Bat presence / absence survey of Buildings 1, 2, 4 and 7 were undertaken by UES (Report reference: UES03012/03).
- 17/02/2023 – Updated bat scoping survey of Buildings 1, 2, 3 and 4 (UES03012/07).
- 13/05/2024 & 17/06/2024 - Bat presence / absence surveys of Buildings 1 and 2 were undertaken in May and June 2024 (report reference UES03012/13).

Following the initial bat scoping survey, most of the buildings on site were assessed as having negligible potential to support roosting bats or were assessed as having low potential and no roosting bats were observed during subsequent presence / absence surveys. As such, Buildings 3, 6, 8 and 9 have since been demolished under demolition consent. Buildings 3 and 4 were demolished under a bat non-licenced method statement (report reference UES03012/08)

Parts of Buildings 1 and 2 have also been demolished, however the parts that were previously found to contain bat roosts have been retained and are due to be demolished under recently approved demolition consent. Due to the presence of historic bat roosts, Buildings 1 and 2 are to be demolished under a non-licenced method statement (report reference UES03012/14).

1.4 Structure of the report

This report is a baseline appraisal that forms the basis for further ecological surveys and environmental impact assessments (EIA) if required. In the majority of cases the preliminary ecological assessment will not provide all the ecological data required by the Local Planning Authority to determine an application, especially in the event that protected habitat or species issues are present or likely.

This report should be read with appendices 1 to 6, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

2 METHODOLOGY

This PEA comprises a desk study and a field survey. The desk study is conducted in order to collate ecological information on species and / or habitats of interest that may be present. The field survey is conducted in order to assess the habitats and their importance, both on site and in the context of their wider surroundings.

2.1 Desk study

The following resources were used to inform the desk study:

- National – Using the UK government’s MAGIC website, statutorily protected sites were scoped to a distance of 10km from the application site.
- Local – A search for protected species or otherwise notable species and local designated sites within a 2km radius of the proposed development site was undertaken in October 2024 through COFNOD.

2.2 Field survey

An ecological walkover survey was carried out on 4th October 2024 by Tom Kenwright. The purpose of the survey was to identify, record and map dominant habitat types within the development area and highlight any further species surveys that may be required based on the quality of those habitats. When conducting the surveys particular focus was concentrated on the following species and habitat features:

- | | |
|------------------|-------------------------|
| • Amphibians | • Water vole |
| • Reptiles | • White-clawed crayfish |
| • Badger | • Birds |
| • Bats | • Trees |
| • Hazel dormouse | • Hedgerows |
| • Hedgehog | • Plant communities |
| • Otter | • Invasive species |

The habitats were assessed by using the phase 1 habitat survey technique, which is a system for environmental audit widely used within the environmental consultancy field. The survey was undertaken in accordance with the methodology in the ‘Handbook for phase 1 habitat survey - A technique for environmental audit’ (JNCC, 2010) as recommended by Natural England, and in the “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2017).

The survey area encompasses all of the land within the development footprint and the land to a distance of 30m outside it where accessible. In line with recognised guidelines, ponds were also scoped to a distance of 500m (250m radius from the survey area).

The phase 1 habitat survey methodology was extended to record any signs of habitats suitable to support protected / invasive species and any incidental observations of other noteworthy species.



2.3 Survey limitations

No limitations were encountered during this survey. Sufficient vegetative material was available to allow for a robust assessment of habitats.

3 RESULTS

3.1 Desk study

A desk study was conducted for the proposed development site and surrounding area. Statutorily protected sites were scoped to a distance of 10km. Further results of the desk study can be found at Appendix 1 – Desk study.

3.1.1 Protected sites

Non-statutory protected sites

There are three non-statutorily protected sites within 2km of the proposed development site:

- **Wrexham Industrial Estate Wildlife Site**

Located approximately 300m east of the proposed development site at its closest point, the designation covers three sites within the Wrexham Industrial Estate, which includes unmanaged grassland at Bryn Road and on Cefn Park / The Oaks and ancient broadleaved woodland at Erlas Black Wood.

Cefn Park / The Oaks comprises derelict land supporting a complex mosaic of scrub, grassland and tall herb. Species-rich grassland occurs where there is rabbit grazing with cowslip *Primula veris*, restharrow *Ononis repens*, yellow-wort *Blackstonia perfoliata*, common centaury *Centaureum erythraea* and common bird's-foot trefoil *Lotus corniculatus*. Other species of interest include dyer's greenweed *Genista tinctoria* in among scrub and grass vetchling *Lathyrus nissolia* in rank grassland.

A mosaic of woodland and damp grassland occurs adjacent to the River Clywedog. The woodland is dominated by mature hawthorn *Crataegus monogyna*, with alder *Alnus glutinosa* and crack willow *Salix fragilis* along the river. The ground flora is sparse but dogs mercury *Mercurialis perennis*, hart's-tongue fern *Asplenium scolopendrium* and common male fern *Dryopteris filix-mas* are present. Erlas Black Wood is dominated by mature oak *Quercus sp.*

A strip of species-rich grassland beside a ditch on Bryn Road has similar grassland species including the uncommon grass vetchling.

- **Peter's Dingle Wildlife Site**

Located approximately 1.5km south-east of the proposed development site, the designation supports ash *Fraxinus excelsior* / pedunculate oak woodland along a brook. The understorey is of wych elm *Ulmus glabra*, elder *Sambucus nigra*, hawthorn, wild privet *Ligustrum vulgare* and hazel *Corylus avellana*, the latter becoming abundant in areas where it has been coppiced. The field layer is often dominated by ivy *Hedera helix*, bramble *Rubus fruticosus agg.*, and stinging nettle *Urtica dioica*, however dogs mercury, yellow archangel *Lamium galeobdolon*, giant fescue *Festuca gigantea*, black bryony *Dioscorea communis* and hart's-tongue fern are also present.

- **Cefn Park Wildlife Site**

Located approximately 740m north-west of the proposed development site at its closest point, the designation supports a series of broadleaved woodlands within Cefn Park Estate. Big Wood is the largest (8.9ha) and is dominated by ash with oak, sycamore *Acer pseudoplatanus* and an occasional mature wych elm. The understorey is continuous with frequent holly *Ilex aquifolium*, young sycamore and wych elm. The

woodland has a rich ground flora including dogs mercury, English bluebell *Hyacinthoides non-scripta*, wood anemone *Anemone nemorosa* and ramsons *Allium ursinum*. Rhododendron Spinney is also dominated by ash but with beech *Fagus sylvatica* and sweet chestnut *Castanea sativa* and a locally dense understorey of rhododendron *Rhododendron ponticum*. Alder, crack willow and goat willow *Salix caprea* dominate the poorly drained eastern side where great horsetail *Equisetum telmateia* and greater pond sedge *Carex riparia* occur as well as a fen dominated by common reed *Phragmites australis*.

Statutory protected sites

There are no statutorily protected sites within 2km of the proposed development site.

There are seventeen statutorily protected sites (designated for ecological reasons) within 2 – 10km of site:

- Afon Dyfrdwy (River Dee) SSSI¹
- Chwarel Singret SSSI
- Cloy Brook Pastures SSSI
- Dee Cliffs, Farndon SSSI
- Gatewen Marsh SSSI
- Johnstown Newt Sites SAC²
- Llay Bog SSSI
- Marford Quarry SSSI
- Midland Meres and Mosses Phase 2 Ramsar
- Old Pulford Brook Meadows SSSI
- River Dee SSSI
- River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid SAC
- Shell Brook Pastures SSSI
- Sontley Marsh SSSI
- Stryt Las A'r Hafod SSSI
- Vicarage Moss SSSI
- Well Rough and Long Plantation SSSI

3.1.2 Protected species

The following records of protected or otherwise notable species were highlighted by the environmental records search:

- Amphibians: numerous records of GCNs were returned, however the closet record details 4 individuals recorded during bottle trapping of a pond approximately 300m north of the site in 2012. Records of common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *Lissotriton helveticus* were also returned. No records of any amphibian species were returned from within the proposed development site itself.
- Badgers: [REDACTED]
- Bats: records of Brandt's *Myotis brandti*, whiskered *Myotis mystacinus*, lesser horseshoe, Daubenton's *Myotis daubentonii*, noctule *Nyctalus noctula*, Natterer's *Myotis nattereri*, brown-long eared (BLE) *Plecotus auritus*, common pipistrelle

¹ SSSI – Site of Special Scientific Interest

² SAC – Special Area of Conservation

Pipistrellus pipistrellus and soprano pipistrelle *Pipistrellus pygmaeus* bats were returned from within 2km of the proposed development site. Records of a common pipistrelle and BLE day roosts were returned from the site itself, however these are the records submitted by UES following bat surveys undertaken of Buildings 1 and 2 in 2020. A record detailing 2 common pipistrelle bats in 2003 was returned from the offsite woodland within the ecological enhancement area, however no further details on the type of record have been provided. The closest bat record to the site details a single whiskered bat within Redwither Tower in 1998, located approximately 90m north-west of the site.

- Birds: records of various species were returned, including several NERC section 41 and Wildlife and Countryside Act 1981 Schedule 1 species. No records were returned from the proposed development site and the closest record is located approximately 30m north of the site, detailing a kestrel *Falco tinnunculus* recorded in 2016.
- Hazel dormouse: no records of hazel dormouse *Muscardinus avellanarius* were returned from within 2km of the proposed development site.
- Hedgehog: five records of hedgehog were returned from within 2km of the proposed development site. All records date from between 2012 and 2019 and the closest record is located approximately 60m north of the site, detailing a roadkill casualty in 2017.
- Invertebrates: no invertebrate records were returned from within the proposed development site, or from the immediate vicinity. Numerous records of dingy skipper *Erynnis tages* and grizzled skipper *Pyrgus malvae* butterflies were returned from all directions surrounding the site, however most records are grouped and isolated to specific locations. The closest dingy skipper record is located approximately 190m south of the site within HMP Berwyn site. The closest grizzled skipper record is located approximately 60m south-east. Both records date from 2013.
- Otter: numerous records of otter *Lutra lutra* were returned from within 2km of the proposed development site. All records detail either roadkill, trail camera footage or field signs (spraints and footprints). The closest records are located approximately 150m north of the site along Redwither Brook, dating from 2016-2019. With the exception of a historical record from 1945, all records detail otters within the immediate vicinity of Redwither Brook or the River Clywedog.
- Reptiles: records of common lizard *Zootoca vivipara*, slow worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix natrix* were returned, all of which are located within Wrexham Industrial Estate, between 150m-1km from the proposed development site. The common lizard and grass snake records date from 2020 and 2018 respectively, however the slow worm and adder records date from 'before 2009' and 'before 1999' respectively. The record located 150m from the site lies to the north and details a grass snake on Redwither Brook in 2018.
- Water vole: no records of water vole *Arvicola amphibius* were returned from within 2km of the proposed development site.
- White clawed-crayfish: no records of white-clawed crayfish *Austropotamobius pallipes* were returned from within 2km of the proposed development site.

3.2 Baseline conditions – Habitats

The results of the PEA are also shown on the accompanying map at Appendix 2 – Phase 1 habitat plan. Habitats are colour-coded in accordance with the phase 1 habitat mapping standard.

The site lies within the Wrexham Industrial Estate and is generally surrounded by urban areas, with woodland bordering part of the north-western site boundary. The following principle habitat types were characterised on site:

- A1.1.1 Broadleaved woodland – semi-natural
- A1.1.2 Broadleaved woodland - plantation
- A2.1 Scrub – dense / continuous
- A2.2 Scrub – scattered
- A3.1 Broadleaved scattered trees
- B2.2 Semi-improved neutral grassland
- B6 Poor semi-improved grassland
- C3.1 Tall ruderal
- G2 Running water
- J1.2 Amenity grassland
- J1.3 Ephemeral / short perennial vegetation
- J1.4 Introduced shrub
- J2.1.2 Intact hedge – species-poor
- J2.3.2 Hedge with trees – species-poor
- J2.4 Fence
- J3.6 Buildings
- J5 Hardstanding

3.2.1 A1.1.1 Broadleaved woodland – semi-natural

The walkover survey was extended to include an offsite area of woodland that is separated from the site by Bridge Road. This woodland will be used as an ecological enhancement area.

The woodland is dense and whilst some mature trees are present, these are generally sporadic throughout, with large sections lacking distinct understory and canopy layers. The edges of the woodland are dominated by understory / scrub species and younger trees. Canopy species include goat willow, pedunculate oak, silver birch *Betula pendula*, crack willow and ash.

The understory is generally dense, however there are more open areas, particularly in the south-eastern section of the woodland. Understory species include hawthorn, grey willow *Salix cinerea*, dog rose *Rosa canina* agg., ash saplings, pedunculate oak saplings, blackthorn *Prunus spinosa*, elder, field maple, sycamore saplings and crab apple. Small quantities of common lime *Tilia × europaea* and elm *Ulmus* sp. are present at the north-eastern boundary.

Ground flora is varied across the woodland with some areas dominated by bramble and ivy and others with a limited vegetation cover. Whilst a large number of species were recorded within the woodland, no species indicative of ancient woodland were observed. Species present include common hogweed *Heracleum sphondylium*, hart's-tongue fern, creeping thistle *Cirsium arvense*, stinging nettle, wood avens *Geum urbanum*, comfrey *Symphytum* sp., common male-fern, ground elder *Aegopodium podagraria*, herb robert *Geranium robertianum*, pendulous sedge *Carex pendula*, upright hedge-parsley *Torilis japonica*, red currant *Ribes*

rubrum, wood dock *Rumex sanguineus*, wild cherry *Prunus avium* seedlings, sycamore seedlings, ash seedlings, hedge woundwort *Stachys sylvatica*, cleavers *Galium aparine*, gooseberry *Ribes uva-crispa*, enchanter's nightshade *Circaea lutetiana*, bracken *Pteridium aquilinum*, creeping buttercup *Ranunculus repens*, meadow buttercup *Ranunculus acris*, broad buckler-fern *Dryopteris dilatata*, bush vetch *Vicia sepium*, self-heal *Prunella vulgaris*, broadleaved willowherb *Epilobium montanum*, hairy St John's-wort *Hypericum hirsutum*, false wood-brome *Brachypodium sylvaticum*, dandelion *Taraxacum officinale* agg., red campion *Silene dioica* and ground ivy *Glechoma hederacea*.

A single stand of the invasive species hollyberry cotoneaster was observed within the centre of the woodland (Target Note 5) and a single stand of the invasive species Japanese knotweed was observed at the north-eastern edge of the woodland (Target Note 6).

A small, flooded area with water arising from the ground and pooling in areas is present within the south-eastern section of the woodland (Target Note 10). This area has an increased abundance of willow species within the understory, in addition to marsh bedstraw *Galium palustre*, *Dactylorhiza* sp. orchid, wild angelica *Angelica sylvestris*, hard rush *Juncus inflexus* and water figwort *Scrophularia umbrosa*.

A small unnamed watercourse runs through the woodland, emerging from a culvert within the woodland, as discussed further in section 3.2.9 below.

There is an additional area of woodland offsite but immediately adjacent to the north-western boundary of the proposed working area. This woodland has a small unnamed watercourse running through it and has a high diversity of trees and shrub species, including, crack willow, silver, grey willow, goat willow, hawthorn, ash, pedunculate oak, hawthorn and sycamore.

3.2.2 A1.1.2 Broadleaved woodland - plantation

Small stands of plantation woodland are present within the south-western section of the site. Trees are semi-mature to mature and are spaced close together in dense stands resulting in high competition for light. Canopy species include field maple, ash, hawthorn, whitebeam *Sorbus aria* agg., silver birch and small quantities of scots pine *Pinus sylvestris*.

The understory is very dense in some areas and almost completely absent in others. Species present include blackthorn, dog rose, bramble, goat willow, dogwood *Cornus sanguinea*, hazel, rowan and hawthorn. A number of non-native shrubs are also present within the understory, including Darwin's barberry *Berberis darwinii*, Siberian dogwood *Cornus alba* and mock orange *Philadelphus* sp.

The ground flora is limited in diversity and cover, with large proportions lacking dense vegetation cover. Species present include stinging nettle, red campion, wood avens, ivy, bramble, cock's-foot *Dactylis glomerata*, Yorkshire fog *Holcus lanatus*, cleavers and sycamore saplings.

3.2.3 A2.1 Scrub – dense/continuous

A stand of dense scrub is present within the southern section of the site. Originally mapped as woodland in 2020, this area lacks the distinct layers and tree cover associated with woodland and has a somewhat open vegetation community dominated by bramble with scattered young shrubs including elder, hawthorn, dog rose, sycamore saplings, goat willow, blackthorn and silver birch saplings. Species from the adjacent semi-improved grassland (described within section 3.2.6 below) are present throughout.

A small area of blackthorn dominated scrub is present along the south-western boundary. Dog's mercury and enchanter's nightshade were the only notable species within the ground flora.

3.2.4 A2.2 Scrub – scattered

Small stands of scattered self-seeded scrub are present along a fence line at the site boundary within the western section of the site. Species present include elder, hawthorn, sycamore saplings, grey willow and goat willow.

3.2.5 A3.1 Broadleaved scattered trees

There are a number of trees scattered across the site. The majority are semi-mature to mature and appear to have originally been planted as part of a landscaping scheme. Species present include pedunculate oak, cherry *Prunus sp.*, silver birch, ash, sycamore, rowan, cypress *Cupressus sp.*, crack willow, hawthorn and an additional non-native *Prunus sp.*

Younger trees are present amongst areas of introduced shrub planting on site, including rowan, silver birch, silver maple *Acer saccharinum*, field maple and a non-native birch species *Betula sp.*

Two very large, mature pedunculate oak trees are present within the western section of the site (Target Note 7). It should be noted however these trees are lacking deadwood and other features usually associated with veteran trees.

3.2.6 B2.2 Semi-improved neutral grassland

There is a small section of grassland within the southern section of the site that has experienced lower intensity mowing and has a longer sward than the areas of amenity grassland on site. Part of the grassland is being encroached by bramble from the adjacent scrub and has a reduced diversity and abundance of notable species.

The grassland has a rough tussocky structure and lacks a notably dominant grass species. Grass species present include red fescue *Festuca rubra*, cock's-foot, crested dog's-tail *Cynosaurus cristatus*, rough meadow-grass *Poa trivialis*, false oat-grass *Arrhenatherum elatius*, perennial rye-grass *Lolium perenne*, Yorkshire fog and common bent *Agrostis capillaris*. Additional species are present throughout, although no species is abundant. Additional species include oxeye daisy *Leucanthemum vulgare*, common knapweed *Centaurea nigra*, yarrow *Achillea millefolium*, wild carrot *Daucus carota*, dandelion, common sorrel *Rumex acetosa*, hoary ragwort *Jacobaea erucifolia*, ribwort plantain *Plantago lanceolata*, common daisy *Bellis perennis*, creeping thistle, spear thistle *Cirsium vulgare*,

creeping cinquefoil *Potentilla reptans*, common hogweed, common ragwort *Jacobaea vulgaris*, meadow buttercup, creeping buttercup, glaucous sedge *Carex flacca*, common vetch *Vicia sativa* and meadow vetchling.

3.2.7 B6 Poor semi-improved grassland

A small area of amenity grassland within the eastern section of the site has somewhat recently been contained within a fenced compound and no longer receives regular management. This has resulted in an increase in the abundance and diversity of both grass and forb species. Whilst a number of different species were recorded within the grassland, similar to the semi-improved neutral grassland above, they were sporadic throughout and present in reduced abundances, with large areas dominated by a small number of species.

Species present include perennial rye-grass, red fescue, creeping bent *Agrostis stolonifera*, false oat-grass, meadow foxtail *Alopecurus pratensis*, timothy *Phleum pratensis*, cock's-foot, Yorkshire fog, common bent, yarrow, creeping cinquefoil, common knapweed, cut-leaved crane's-bill *Geranium dissectum*, dandelion, prickly lettuce *Lactuca serriola*, common ragwort, ribwort plantain, autumn hawkbit *Scorzoneroidea autumnalis*, hoary ragwort, creeping thistle, common bird's-foot trefoil, oxeye daisy and spear thistle.

3.2.8 C3.1 Tall ruderal

Thin strips of tall ruderal vegetation are present within the western section of the site, located on small bunds at the site boundaries and at the edge of a compound used to store vehicles. Some of these areas appear to be subject to somewhat frequent disturbance, whilst others are being encroached by bramble, tree saplings and other scrub species. This has resulted in a large diversity of species, however this habitat is generally dominated by a small number of species indicative of low quality and nutrient-rich habitats such as field horsetail *Equisetum arvense*, stinging nettle, hedge bindweed *Calystegia sepium* and creeping thistle.

Additional species present include marsh woundwort *Stachys palustris*, tufted vetch *Vicia cracca*, cleavers, broadleaved dock *Rumex obtusifolius*, creeping buttercup, common knapweed, oxeye daisy, common hogweed, common ragwort, nipplewort *Lapsana communis*, dog rose, pedunculate oak saplings, hawthorn saplings, spear thistle, cock's-foot, false oat-grass, common couch *Elymus repens*, mugwort *Artemisia vulgaris*, hoary ragwort, ash saplings, sycamore saplings, common fleabane *Pulicaria dysenterica*, ground elder, pendulous sedge, goat willow saplings, colt's-foot *Tussilago farfara*, hard rush, melilot *Melilotus sp.*, common male-fern, raspberry *Ribes ideaus*, horseradish *Armoracia rusticana*, bittersweet *Solanum dulcamara*, ribwort plantain, bristly ox-tongue *Helminthotheca echioides*, ground elder, garlic mustard *Alliaria petiolata*, rosebay willowherb *Chamaenerion angustifolium* and fox-and-cubs *Pilosella aurantiaca*.

The invasive species giant hogweed was observed in a number of locations within this habitat (Target Note 4).

3.2.9 G2 Running water

An offsite unnamed watercourse flows south to north immediately adjacent to parts of the north-western site boundary. The watercourse is shallow, approximately 10cm deep, with a

moderate flow rate. No submerged vegetation is present, and the banks are relatively shallow. The watercourse flows through the woodland, is heavily shaded and vegetation is sparse.

An additional unnamed watercourse flows through the offsite woodland within the ecological enhancement area. This watercourse emerges from a culvert and has a slow-moderate flow rate. The channel is approximately 1m wide, heavily shaded and filled with silt and accumulated leaf-litter. No aquatic or marginal vegetation is present and vegetation on the banks is limited to small quantities of species within the ground layer of the surrounding woodland, such as hart's-tongue fern.

3.2.10 J1.2 Amenity grassland

There are several areas of intensively managed amenity grassland across the site. These areas of generally species poor and species present are generally limited to perennial ryegrass, white clover *Trifolium repens*, creeping buttercup, annual meadow-grass *Poa annua*, yarrow, common chickweed *Stellaria media*, common groundsel *Senecio vulgaris*, common daisy and greater plantain *Plantago major*.

The large area of amenity grassland within the southern section of the site that fronts onto Bridge Road has an increased species diversity and supports a greater abundance and diversity of forb and grass species. Additional species present include common ragwort, bristly ox-tongue, common bent, sweet vernal-grass *Anthoxanthum odoratum*, creeping cinquefoil, self-heal, ribwort plantain, autumn hawkbit, common mouse-ear *Cerastium fontanum*, slender speedwell *Veronica filiformis* and very small quantities of common knapweed and common bird's-foot trefoil.

3.2.11 J1.3 Ephemeral/short perennial

There are numerous areas of ephemeral / short perennial vegetation that have colonised the edges of hardstanding and disturbed ground across the site. Species present include: prickly sow-thistle, common groundsel, herb robert, shining crane's-bill *Geranium lucidum*, field forget-me-not *Myosotis arvensis*, smooth sow-thistle *Sonchus oleraceus*, cut-leaved crane's-bill, spear thistle, bristly ox-tongue, yarrow, creeping bent, creeping cinquefoil, dandelion, spear-leaved orache *Atriplex prostrata*, nipplewort, perennial ryegrass, annual meadow-grass, Yorkshire fog, cock's-foot, common ragwort, knotgrass *Polygonum aviculare* agg., common mouse-ear, sticky mouse-ear *Cerastium glomeratum*, common chickweed, prickly lettuce, common orache *Atriplex patula*, purple toadflax *Linaria purpurea*, common fumitory *Fumaria officinalis*, broadleaved dock, weld *Reseda luteola*, common stork's-bill *Erodium cicutarium*, redshank *Persicaria maculosa*, field pansy *Viola arvensis*, scarlet pimpernel *Anagallis arvensis*, hedge mustard *Sisymbrium officinale*, common field speedwell *Veronica persica*, thyme-leaved sandwort *Arenaria serpyllifolia*, Canadian fleabane *Erigeron canadensis*, traveller's joy *Clematis vitalba*, willowherb *Epilobium* sp., American willowherb *Epilobium ciliatum*, hoary willowherb *Epilobium parviflorum*, greater willowherb *Epilobium hirsutum*, rosebay willowherb, black nightshade *Solanum nigrum*, common mallow *Malva sylvestris*, hedge bedstraw *Galium mollugo*, greater plantain, wall speedwell *Veronica arvensis*, thyme-leaved speedwell *Veronica serpyllifolia*, sticky groundsel *Senecio viscosus*, common groundsel, sun spurge *Euphorbia helioscopia*, petty spurge *Euphorbia peplus*, hedge woundwort, common daisy, white clover, field madder *Sherardia arvensis* and self-heal.

3.2.12 J1.4 Introduced shrub

Numerous small stands of introduced shrub are present across the site, some of which contain small quantities of native shrub and tree species. Species present include Darwin's barberry, elder, European smoke tree *Cotinus coggygria*, a non-native rose *Rosa sp.*, field maple, hawthorn saplings, rowan and *Viburnum davidii*.

Two of these areas of introduced shrub planting contain the invasive species small-leaved cotoneaster (Target Note 3).

3.2.13 J2.1.2 Intact hedge – species-poor

There are four hedges on site, including those that are located along the site boundaries.

Hedge 2 is an intensively managed hedge located along the south-eastern site boundary. It measures approximately 2m in height and 1m in width. The hedge is dominated by garden privet *Ligustrum ovalifolium*, with very small quantities of yew *Taxus baccata* and dog rose.

3.2.14 J2.3.2 Hedge with trees – species-poor

Hedge 1 is an intensively managed hedge with trees located on the northern site boundary. The hedge measures approximately 2m in height and 1m in width. The hedge is dominated by hawthorn but also includes small quantities of oak saplings, holly *Ilex aquifolium*, blackthorn and rose. There are trees scattered throughout and immediately adjacent to the hedge at intervals between 5m – 15m. All trees are young – semi-mature and well maintained, species present include cherry, rowan, silver birch, sycamore and hawthorn.

Hedge 3 and 4 are intensively managed hedges located adjacent to the road leading into the Bridgeway Centre, on the south-eastern site boundary. The hedges are almost identical and are approximately 0.75m in height and 1m wide. The hedges are dominated by yew and each contain four semi-mature field maple trees.

3.2.15 J2.4 Fence

Many of the site boundaries are demarcated by fences of varying construction.

3.2.16 J3.6 Buildings

Six buildings are currently present on site. Buildings, 1, 2, 5, 7 and 10 are described in detail within the bat scoping and presence / absence survey reports prepared for the site by UES and listed within section 1.3 of this report.

Building 11 is a small single-story garage type building located outside of the development boundary but within the area of woodland that will be used as an ecological enhancement area. This building has a flat roof that is constructed from concrete with a bitumen cover. The walls are constructed from redbrick and contain multiple potential roosting features (PRFs) for bats. This includes a crack within the wall on the eastern aspect of the building, gaps between the concrete roof and brickwork on the southern aspect of the building, and between the mortar and brickwork.



There is a wooden door on the northern aspect of the building, which was open at the time of the survey. A gap was identified between the wooden door frame and the brickwork on the northern aspect of the building; the feature contains cobwebs and there was no evidence of roosting bats, however, it does provide a suitable PRF. In addition, there are boarded windows on the eastern and western aspects of the building which contain gaps between the wooden boards, timber frames and the brick wall.

3.2.17 J5 Hardstanding

Numerous areas of bare ground are present across the site, including concrete, gravel, chippings and tarmacked areas.

3.3 Baseline conditions – Protected species or resources

As part of the PEA, specific observations of wildlife were also recorded. Wildlife observations focused on protected species, invasive species or species of conservation concern. Habitats with potential to support protected species were noted with a view to follow up surveys if required.

3.3.1 Amphibians

There are no aquatic habitats on site suitable to support breeding amphibians. During the previous PEA conducted in 2020, a single mapped pond was present within 250m of the proposed working area, located approximately 205m north-east. This pond could not be accessed during the walkover survey as it is on third party land, but from aerial photographs the ponds appears to have dried out and vegetated over. It is somewhat connected to the site with the exception of Coed Aben Road which would likely act as a barrier to amphibian movement in a limited capacity. Despite this, connectivity from the pond is generally limited to the north-eastern section of the site, which does not contain any habitats suitable to support breeding, commuting or foraging GCNs.

Since the initial PEA, an additional mapped pond has been created approximately 10m west of the proposed development site. The waterbody has recently been constructed in late 2023 as a SUDS feature for the adjacent industrial / commercial development, approved under planning permission reference P/2018/1086. The ecological assessments undertaken to inform the adjacent development also considered GCNs to be absent from the immediate area due to an absence of suitable breeding opportunities in close proximity. A subsequent site visit to inspect this pond was undertaken on the 8th October 2024, during which the pond was found to be almost completely dry, with only a small area of standing water present, approximately 2-5cm deep. As such, this pond is considered to be unsuitable to support breeding GCNs.

There is a small unnamed watercourse located immediately adjacent to the northern site boundary, within the offsite woodland. The watercourse is unsuitable for use by GCNs due to its moderate flow rate.

The habitats within the proposed development predominantly comprise areas of hardstanding and buildings, which offer no opportunities for GCNs, in addition to areas of intensively mown amenity grassland which offer some, albeit low quality foraging and commuting opportunities. The area of woodland, scrub and semi-improved grassland on site provide some higher-quality habitat, however these are generally limited in area across the site. Furthermore, the areas of suitable habitat are relatively isolated from higher quality habitat nearby.

Numerous records of GCNs were returned from within 2km of the proposed development site and the wider Wrexham Industrial Estate is known to support a nationally important population of GCNs. As such, ponds known to support GCNs are subject to annual monitoring surveys and all records are submitted to COFNOD. Given the lack of records of lack of suitable ponds within 250m of the proposed development, it is considered unlikely that GCNs are using the proposed development site. Use of the site by GCNs is less likely when the quality of habitats and proportion of hardstanding, buildings and intensively mown amenity grassland are taken into consideration.

3.3.2 Reptiles

The proposed working area contains relatively small areas of woodland edge, rough grassland and scrub habitats. Whilst these habitats are broadly suitable to support reptiles, the majority of site comprises poor-quality habitats including amenity grassland, hardstanding and buildings.

Furthermore, the small areas of suitable habitat are relatively isolated from nearby areas of suitable habitat due to the presence of hardstanding and roads. Therefore, reptiles are unlikely to be present on site and are therefore unlikely to be impacted by the development.

3.3.3 Badger

No field signs or evidence of badger activity was observed on site during the initial 2020 walkover survey, the updated 2024 walkover survey or the suite of bat surveys undertaken across 2020-2024.

The site contains areas of woodland edge and scrub habitats. Whilst these habitats are broadly suitable to support badgers, the majority of site comprises sub-optimal habitats of amenity grassland, hardstanding, and buildings.

Furthermore, habitats within the immediate vicinity are generally unsuitable for badgers, with large areas of hardstanding, amenity grassland and buildings present. The areas of woodland, that lie immediately adjacent to the western site boundary provide higher-quality foraging, commuting and sett building opportunities for badgers.

3.3.4 Bats

Prior to demolition works, ten buildings were previously present within the site boundary. All buildings were subject to a bat presence / absence survey by UES in 2020 (see report reference UES03012/02). The survey assessed buildings 1, 2, 4 and 7 as having low potential to support roosting bats, with buildings 3, 5, 6, 8, 9 and 10 assessed as having negligible bat roosting potential.

A subsequent bat presence / absence survey was conducted by UES of Buildings 1, 2, 4 and 7 in September 2020 (report reference UES03012/03). A single common pipistrelle day roost and a single BLE day roost were observed within Buildings 1 and 2, each used by a single individual.

An updated bat scoping survey was undertaken of Buildings 3 and 4 by UES in February 2023, which found no significant changes to the buildings potential to support roosting bats (report reference UES03012/07). Due to the low potential roosting features within Building 4, it was recommended that demolition should be undertaken in accordance with a non-licensed method statement prepared for the building by UES in February 2023 (report reference UES03012/08).

Buildings 3, 6, 8 and 9 have since been demolished under approved demolition consent. Buildings 1 and 2 and large and the historic bat roosts observed in 2020 were limited to single external roosting features. As such, parts of Buildings 1 and 2 that were located a sufficient distance from the historic roosting locations were also demolished.

The remaining sections of Buildings 1 and 2 were subject to updated building inspections and bat presence / absence surveys by UES in May and June 2024. No roosting bats were observed and as such, it was recommended that the buildings are demolished under a non-licensed method statement (report reference UES03012/13). These buildings are due to be demolished following recent demolition consent under the measured detailed within a non-licensed method statement prepared by UES in August 2024 (report reference UES03012/14).

Building 11 is located offsite within the ecological enhancement area. This building was subject to a bat scoping survey by UES in April 2023 and was subject to a bat presence / absence survey in August 2023. No evidence of roosting bats was observed within the building during the surveys. The surveys were undertaken to inform a previous development that is no longer proposed. As such, no report has been published to detail the full results of these surveys, however further details can be provided upon request.

Bat roosts in trees

There are numerous trees on site, including several large mature oak trees. All trees within the proposed working area were subject to a full ground level tree assessment as part of the walkover survey undertaken in 2020.

One oak tree on the northern site boundary (Target Note 2) was found to contain a small crack on a limb approximately 2m high which was assessed as having low potential for roosting bats (PRF-I feature according the 2023 Bat Conservation Trust (BCT) bat survey guidelines). All other trees on site were considered to offer negligible potential for roosting bats.

An updated ground level tree assessment of all trees within the development boundary was undertaken as part of the 2024 updated walkover survey. This updated assessment found the trees to be in a very similar condition and all trees are considered to have negligible potential to support roosting bats, with the exception of the low-quality (PRF-I) PRF previously identified, which remains broadly unchanged, and a newly formed PRF within a field maple tree (Target Note 2). The newly formed potential roosting feature is a cavity approximately 2m in height on a field maple tree at the edge of a stand of plantation woodland within the southern section of the site. The cavity was subject to a detailed endoscope inspection during the walkover survey and was found to extend approximately 1.2m up the hollow stem, comprising multiple small internal cavities. No evidence of roosting bats was present at the time of the inspection, however the features is considered to have moderate potential to support roosting bats (PRF-M feature according the 2023 BCT bat survey guidelines).

Foraging and commuting

The site is predominantly composed of hardstanding, buildings and intensively mown amenity grassland, which provide negligible to low quality habitat for foraging and commuting opportunities for bats. The areas of scrub, woodland, semi-improved grassland and the scattered trees and hedgerows on site provide small areas of moderate quality habitat. The offsite woodland within the ecological enhancement area and the offsite woodland to the north provide pockets of high-quality foraging and commuting habitat for bats.

3.3.5 Hazel dormouse

No records of hazel dormice were returned from within 2km of the proposed development site.

The habitats on site are relatively unsuitable for hazel dormice *Muscardinus avellanarius*. The hedgerows on site are species-poor and the hedgerows and areas of woodland lack sufficient quantities of key species such as hazel and honeysuckle *Lonicera periclymenum*. The woodland on site is small in size and relatively isolated, reducing its suitability for hazel dormice.

Hazel dormice have a limited distribution nationally and are not considered to be present within the local or wider surrounding area.

3.3.6 Birds

Although targeted bird surveys have not been conducted on site, the following bird species were recorded whilst on site the 2020 and 2024 walkover surveys, however many of the birds were not recorded using the site itself and were observed or heard using offsite habitats: blackbird *Turdus merula*, blue tit *Cyanistes caeruleus*, chaffinch *Fringilla coelebs*, chiffchaff *Phylloscopus collybita*, goldfinch *Carduelis carduelis*, magpie *Pica pica*, robin *Erithacus rubecula*, woodpigeon *Columba palumbus* and wren *Troglodytes Troglodytes*.

Buzzard *Buteo buteo* and herring gull *Larus argentatus* gull were also recorded flying over the site.

The trees and areas of woodland, scrub, introduced shrub and tall ruderal vegetation, in addition to the remaining buildings, provide suitable nesting opportunities for breeding birds in the spring and summer.

3.3.7 Trees

Trees on site may be protected by a Tree Preservation Order (TPO), for which a check has not been undertaken as part of this assessment.

3.3.8 Hedgerows

There are four species-poor hedgerows on site. It is considered highly unlikely that these hedgerows will qualify as “important” for ecological or historical reasons under the Hedgerow Regulations.

3.3.9 Plant communities

In addition to hedgerows, the areas of woodland on site likely meet the criteria to qualify as a habitat of principle importance.

3.3.10 Invasive species

The invasive species small-leaved cotoneaster was observed in two locations within the areas of planted introduced shrubbery on site (Target Note 3). Giant hogweed was also observed across a number of locations in the western section of the site (Target Note 4).

A single stand of hollyberry cotoneaster is present within the offsite enhancement area (Target Note 5) and a single small stand of Japanese knotweed is present at the northern boundary of this woodland, immediately adjacent to Redwither Road (Target Note 6).

These invasive species are all listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) or Schedule 2 of the Invasive Alien Species (Enforcement & Permitting) Order 2019.

3.3.11 Otter, water vole and white-clawed crayfish

The offsite unnamed watercourse located within the offsite woodland adjacent to the western site boundary and the offsite watercourse within the ecological enhancement area are generally unsuitable for otter, water vole and white-clawed crayfish. These watercourses are shallow in depth, lacks fish and vegetated banks. Furthermore, no evidence for otter, water vole or white-clawed crayfish was found during the survey and the habitats onsite are considered to be broadly unsuitable.

3.3.12 Hedgehog

Five records of hedgehog were returned from within 2km of the proposed development site.

Although the majority of the proposed development site comprises hardstanding and buildings, the areas of woodland, grassland, introduced shrub and scrub may provide suitable foraging, commuting and sheltering opportunities for hedgehogs.

3.3.13 Dingy and grizzled skipper butterflies

Numerous records of dingy skipper and grizzled skipper butterflies were returned from all directions surrounding the site, however most records are grouped and isolated to specific locations. The closest dingy skipper record is located approximately 190m south of the site within HMP Berwyn site. The closest grizzled skipper record is located approximately 60m south-east. Both records date from 2013.

Both dingy and grizzled skipper butterflies are reliant on their larval food plants, in addition to sufficient quantities of flowers for adults to take nectar from. As such, populations of these species are closely linked to areas of suitable habitat, usually areas of open mosaic habitat on previously developed land, or areas of species-rich grassland.

The only larval food plants of these species present on site are common bird's-foot trefoil and creeping cinquefoil. These species are only present in very low quantities within the grasslands on site. Furthermore, the amenity grassland containing the only area of common bird's-foot trefoil is subject to regular mowing, making any potential larval food plants present unusable. The site is somewhat isolated from areas of suitable habitat within the wider Wrexham Industrial Estate.

As such, the site is considered to be unsuitable to support dingy skipper and grizzled skippers and these species are not considered to be using the habitats on site.

4 EVALUATION AND RECOMMENDATIONS

This section provides a brief assessment of the likely impacts associated with the proposed development on the receptors identified during the walkover survey and desk study. It also includes any mitigation and compensation measures which may be required for the proposed development to proceed.

4.1 Habitats

4.1.1 Designated sites

The sites identified during the desk study were cross-referenced with the survey area relevant to this report. The closest non-statutory protected site is the Wrexham Industrial Estate Wildlife Site, which is located approximately 300m east of the site boundary. Given the scale and scope of the proposals it is considered highly unlikely that there will be any impacts on this or any other non-statutorily protected sites.

There are no statutorily protected sites within 2km of the site boundary. However, the unnamed watercourse adjacent to the western site boundary appears to be hydrologically linked to the River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid SAC, located 3.6km south-east of site.

Given the distances from site and the scale of development, it is considered unlikely that the proposed development will have any direct or indirect impact on the River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid SAC. Furthermore, the mitigation measures detailed in Section 4.1.5 below will avoid the risk of pollution impacts to the unnamed watercourse, which will remove the risk of any potential adverse impacts to hydrologically connected designated sites that lie downstream.

Therefore, it is considered unlikely that the proposed development will have any direct or indirect impact on these or any other local designated sites.

4.1.2 Hedgerows

There are four hedgerows on the site, all of which are all species-poor and are managed for amenity purposes.

Construction impacts

Construction activities too close to the root protection areas (RPAs) of the hedgerows could cause permanent damage. Site clearance and setting out may also involve the direct loss of hedgerows on site.

Mitigation

Any works close to retained hedgerows should be mindful of their RPAs.



Compensation

If any hedgerows are to be removed, they should be replaced accordingly as part of a detailed landscaping scheme, with native species planting.

Operational impacts

No operational impacts are envisaged.

4.1.3 Trees

There are a number of trees on the site, which vary in condition and maturity.

Construction impacts

Site clearance and setting out may involve the direct loss of trees on site as an ecological resource or may result in damage to any trees which are to be retained.

Mitigation

Trees, in particular those forming a linear feature across the site and the two large, very mature and ecologically valuable oak trees (Target Note 7), should be retained where possible. RPAs should be established and implemented around the trees which are to be retained. These areas should be adequately protected by appropriately designed protective barriers and ground protection throughout the entire development process.

Compensation

If any trees are to be removed, they should be replaced accordingly as part of a detailed landscaping scheme, with only native species planting.

Operational impacts

No operational impacts are envisaged.

4.1.4 Woodland

Small stands of plantation woodland are present within the southern section of the site, a very small area of which has recently been removed. An area of offsite woodland will be used as an ecological enhancement area.

Construction impacts

Additional small areas of the plantation woodland within the southern section of the site will be lost as part of the proposed development. Additionally, the offsite woodland to the north-west could be permanently damaged, altered and / or disturbed by the construction activities.



Mitigation

Retained areas of onsite woodland and offsite woodland to the north-west should be adequately protected during the construction activities on site. Areas of retained woodland should be fenced off to protect the root systems of the trees within, and no contractors should access the woodlands unless authorised to do so or for reasons related to working within the woodland (e.g. protecting it from construction activities). No materials should be stored adjacent to the woodland and no temporary or permanent external lighting should be directed onto the woodlands.

Compensation

The small areas of onsite woodland due to be removed will be compensated for through replacement woodland planting, which will contain a mix of native tree and shrub species. Additionally, the area of woodland within the ecological enhancement area will be unaffected and the development provides the opportunity to secure the long-term retention, management and enhancement of this woodland.

Operational impacts

The development will not provide any additional residential dwellings and hence the potential for increased recreational pressure is very limited to additional workers potentially using the adjacent areas of woodland during lunch break or immediately before or after work, which is likely to be very minimal. This risk is reduced as both of the areas of woodland are broadly inaccessible due to their density and the lack of existing and proposed footpaths. As such, no significant operational impacts are envisaged.

4.1.5 Watercourse

An unnamed watercourse is present within the offsite woodland that borders part of the north-western site boundary. At its closest point, the watercourse lies at least 10m from the proposed working area and so a natural buffer zone will automatically be implemented. As such, it is considered that the risk of adverse impacts through pollution are limited.

Construction impacts

Construction works adjacent to the unnamed watercourse could result in disturbance and / or pollution to the watercourse.

Mitigation

At its closest point, the watercourse lies at least 10m from the proposed working area and so a natural buffer zone will automatically be implemented. Whilst the risk of adverse impacts is considered to be limited, industry standard pollution prevention measures should still be implemented to ensure that the risk of input into the watercourse is reduced to the lowest practicable level.

Operational impacts

No operational impacts are envisaged.

4.2 Species

4.2.1 Amphibians

Although the presence of GCNs on site is considered unlikely, any works on site should still be completed under reasonable avoidance measures to ensure that other common amphibian species that may be present on site are not affected by the works.

Construction impacts

Potential impacts include direct harm, injury and / or death to individuals.

Mitigation

The following RAMs should be implemented on site during the construction phase of the development, to reduce the risk of harm to amphibians to negligible levels:

- Should any suspected GCNs be encountered at any point during the development, works on site are to stop immediately and ecological advice is to be sought. UES can be contacted directly on 01565 757788.
- Prior to any vehicle or plant access, or the commencement of any works on the site, a toolbox talk will be given to all staff and contractors. The talk will include species identification, ecology, legal protection of UK amphibians and what to do if a GCN or any other amphibian is observed during the works.
- Any areas of grassland within the working area will continue to be maintained through mowing to have a sward height of below 10cm. This will be maintained throughout the entire construction phase to reduce the suitability of the working area for amphibians to the lowest possible level.
- The log / brash pile present on site (Target Note 8) and any potential refugia that is temporarily created on site as part of the works will be removed by hand and subject to a check for sheltered amphibians prior to removal. If any potential refugia are too heavy and required mechanical removal, they will be lifted vertically opposed to being dragged horizontally, to reduce the risk of harm to any amphibians sheltering beneath. Potential refugia can include piles of rubble, brash, logs, bricks and other building materials and waste materials such as plastic or metal sheeting and fencing panels.
- During the construction phase, no excavations are to be left open overnight. If this is not feasible, a plank should be left within the excavation at a 45° angle as a precaution to allow amphibians (or any other trapped wildlife) to escape. Any open excavations should be checked for trapped amphibians (and any other wildlife) in the morning prior to the start of works on site.
- Any open excavations will be checked for trapped amphibians (and any other wildlife) prior to infilling.
- Where possible, materials will be stored on pallets off the ground in order to reduce the risk of amphibians sheltering underneath the

- If any amphibians, excluding GCNs, are found within the construction area during the works, they will be moved to a suitable area of cover around the edge of the site.

Compensation and enhancements

The landscaping scheme for the site has been designed to incorporate the retention and creation of terrestrial foraging and sheltered commuting habitat in the form of retained woodland, scrub and grassland, wildflower grassland creation, native species scrub and woodland planting and native species-rich hedgerow planting. In addition, a log pile and a purpose-built hibernaculum will be created to provide an enhancement in the availability of sheltering and hibernating opportunities. Full details of these habitats including their ongoing management is detailed below in the Landscape and Ecology Management Plan (LEMP) document being prepared for the site by UES.

Operational impacts

Amphibians using the site could fall into and become trapped within gully pots installed on site.

Mitigation

Any gully pots installed on site should either be set back, covered with a mesh to prevent amphibians from falling in, or will be fitted with a means of escape such as an amphibian ladder.

4.2.2 Badgers and hedgehogs

No evidence of hedgehog or badger activity has been observed on site during any of the ecological surveys undertaken of the site, [REDACTED]

Construction impacts

Vegetation clearance works and construction activities without mitigation could result in direct harm, injury and / or death to individuals.

Mitigation

The following RAMs should be implemented on site during the construction phase of the development:

- No trenches or excavations will be left open overnight. They will be backfilled or covered with board, or alternatively fitted with a means of escape for any animal which may become trapped within, such as a plank or slope leading out of the bottom of the excavation at an angle of 45°. All excavations left open overnight will be checked for trapped wildlife in the morning.
- The log / brash pile on site (Target Note 8) and any potential refugia created as part of the works should be removed by hand or checked for sheltering hedgehogs prior to their removal by mechanical means or burning. Potential refugia can include piles of leaf litter, log piles and brash piles.

- Any pipes will be stored with caps on to prevent entry by hedgehogs and other animals, and materials such as barbed wire will be stored so that animals cannot become entangled in them.
- Any chemicals or harmful materials will be stored so that they cannot be accessed by hedgehogs or other animals.
- Excavations will be checked immediately before they are backfilled to ensure that no animals have become trapped.

Operational impacts

To allow continued use of the site by hedgehog and to ensure commuting routes aren't blocked, any fences installed at the north-western site boundary should be designed to allow passage of hedgehogs. This can either be through the choice of material e.g. choosing a fence style that naturally contains holes at the base or through the inclusion of hedgehog highways. Hedgehog highways are small 13cm x 13cm holes at the base of fences.

4.2.3 Bats

The remaining, sections of Buildings 1 and 2 have previously contained historic bat day roosts.

An oak tree on the northern site boundary contains a single PRF-I / low quality bat roosting feature (Target Note 2) and a field maple tree within a small stand of plantation woodland in the southern section of the site contains a single PRF-M / moderate quality bat roosting feature (Target Note 1). All other trees have been assessed as having negligible potential to support roosting bats.

Construction impacts

If bats are roosting within trees or buildings during building demolition works, they are at risk of direct harm and disturbance and the roosts will be lost permanently. Inappropriate landscaping could also result in the severing of commuting corridors used by bats as well as the loss of foraging habitats.

Mitigation

The remaining sections of Buildings 1 and 2 are to be demolished in accordance with the bat non-licensed method statement that has been prepared specifically for these buildings by UES (report reference UES03012/14).

The two trees on site found to contain bat roosting features are currently due to be retained as part of the development proposals (Target Notes 1 & 2). If the proposals change and the pedunculate oak tree containing the low quality / PRF-I bat roosting feature is due to be felled, soft-felling techniques should be implemented. The tree should be removed in sections, with the section containing the potential roosting feature lowered to the ground and left with the cavity entrance left facing upwards for a period of 24 hours before removing from site. Alternatively, the PRF can be subject to a pre-felling inspection with an endoscope.

If the proposals change and the field maple tree containing the moderate quality / PRF-M bat roosting feature is due to be felled, it must first be subject to three bat presence / absence surveys. These surveys can only be undertaken during the bat survey season of May to



September inclusive, with at least two of the surveys undertaken during the peak survey period of May to August inclusive. The cavity extends too far into the tree as has too complex a structure to instead be subject to aerial tree inspections with an endoscope.

Compensation

As detailed within the bat non-licenced method statement prepared for the demolition of Buildings 1 and 2, a Schwegler 2F (or similar) bat box should be installed on site to compensate for the loss of potential roosting features.

Enhancements

The provision of additional bat boxes as part of the development proposals would increase the roosting opportunities for bats on site but would act as an ecological enhancement. Details of bat boxes are to be included within the LEMP document being prepared for the site by UES.

Operational impacts

Inappropriate external lighting in use during the operational phase of the development has the potential to degrade offsite foraging habitats and sever commuting corridors.

Mitigation

Any lighting installed on site should be designed to avoid overspill onto the offsite areas of woodland adjacent to site boundary and any retained or newly created areas of higher quality habitat including woodland, scrub, mature trees, suds features, hedgerows and wildflower grassland. Further guidance on external lighting design is provided at Appendix 5.

4.2.4 Birds

There are a number of habitats on site, such as buildings, woodland, hedgerows, dense scrub, and mature trees which could support breeding birds.

Construction impacts

Vegetation removal and building demolition works could result in the direct loss of nests, any individuals within the nests and of available nesting territories if conducted during the breeding season.

Mitigation

Site clearance, tree felling, arboricultural works, vegetation removal and demolition works are to take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible, a targeted breeding bird nest scoping survey should be conducted immediately prior to the start on site and an ecological clerk of works appointed to oversee works if considered necessary.

Compensation and enhancement

Consideration should be given to providing replacement habitat for foraging and nesting birds by incorporating tree, shrub or scrub planting as part of the landscaping proposals. Details of proposed habitat creation is detailed within the LEMP document being prepared for the site.



Compensation for the loss of nesting habitat and the enhancement of the nesting habitat on site can also be provided through the provision of bird nest boxes. Details of proposed bird boxes are to be included within the LEMP document being prepared for the site.

Operational impacts

Inappropriate management of the habitats on site could degrade them and render them unsuitable for wildlife.

Mitigation

It is important to implement good horticultural practice in any landscaping scheme, including the use of peat-free composts, mulches, and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides, and slug pellets) should be discouraged to prevent fatal effects on the food chain. Any pesticides used should be non-residual.

Excessive removal or pruning of trees and hedgerows should be avoided to maximise the growth and plant matter available to wildlife. Pruning should be left until late winter to leave seeds and berries for wintering wildlife and to ensure no impact on breeding and nesting birds.

4.2.5 Invasive species

Two stands of small-leaved cotoneaster are present within the introduced planting on site (Target Note 3) and numerous scattered plants of giant hogweed are present within the western section of the site (Target Note 4).

A single stand of hollyberry cotoneaster is present within the offsite ecological enhancement area (Target Note 5) and a single small stand of Japanese knotweed is present at the northern boundary of this woodland, immediately adjacent to Redwither Road (Target Note 6).

These invasive species are all listed under Schedule 9 of the Wildlife and Countryside Act 1981 or Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019, making it is an offence to plant or otherwise cause or allow these species to grow or spread in the wild, including as a result of development works.

Construction impacts

Site clearance and setting out could result in the disturbance and dispersal of small-leaved cotoneaster and giant hogweed on and off site.

The Japanese knotweed and hollyberry cotoneaster are located outside of the development boundary and a sufficient distance from the proposed working area. As such, there is no risk of them being spread as a result of the proposed development works.

Mitigation

The giant hogweed and the small-leaved cotoneaster will need to be subject to control measures prior to the start of works on site and eradicated as part of the development in order to ensure that they do not spread across the site or onto adjacent areas. It is essential that a competent and qualified person carries out any herbicide treatment and any removed material or infected soil is disposed of appropriately.



An invasive species method statement should be prepared to detail the control, eradication and biosecurity measures.

Enhancement

Whilst there is no risk of the proposed works spreading the hollyberry cotoneaster or Japanese knotweed, these invasive species should also be eradicated as part of the development, as an ecological enhancement and to prevent these species from spreading in the future.

Operational impacts

If the small-leaved cotoneaster and giant hogweed are subject to control measures prior to the start of works and are eradicated as part of the development site, no further operational impacts are envisaged. However, complete eradication is an ongoing process, and if it is not treated as such, it can return and continue to spread. This could become more acute with increased activity on site.



5 CONCLUSION

The proposed working area measures approximately 3.5ha and predominantly comprises buildings, amenity grassland and hardstanding. There are also small areas of introduced shrub, species-poor hedgerows, plantation woodland, dense scrub and semi-improved grassland. An unnamed watercourse and woodland are located offsite but immediately adjacent to the north-western site boundary.

The preliminary ecological appraisal has highlighted potential issues with the following ecological receptors on or adjacent to site: amphibians, bats, birds, badgers and hedgehogs, invasive species, trees, hedgerows, watercourses and woodland. Provided these issues are addressed in accordance with the recommendations detailed in this report, the development may proceed without adversely impacting the aforementioned ecological receptors.

The development also presents an opportunity to enhance the habitats available to wildlife on site. The provisioning of bat and bird nest boxes on site will provide improved roosting and nesting opportunities into the long-term future of the site.



6 REFERENCES

CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal* (Second Edition).

Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

DEFRA (2024). *MAGIC* [online]. Available at: <http://magic.defra.gov.uk/>.

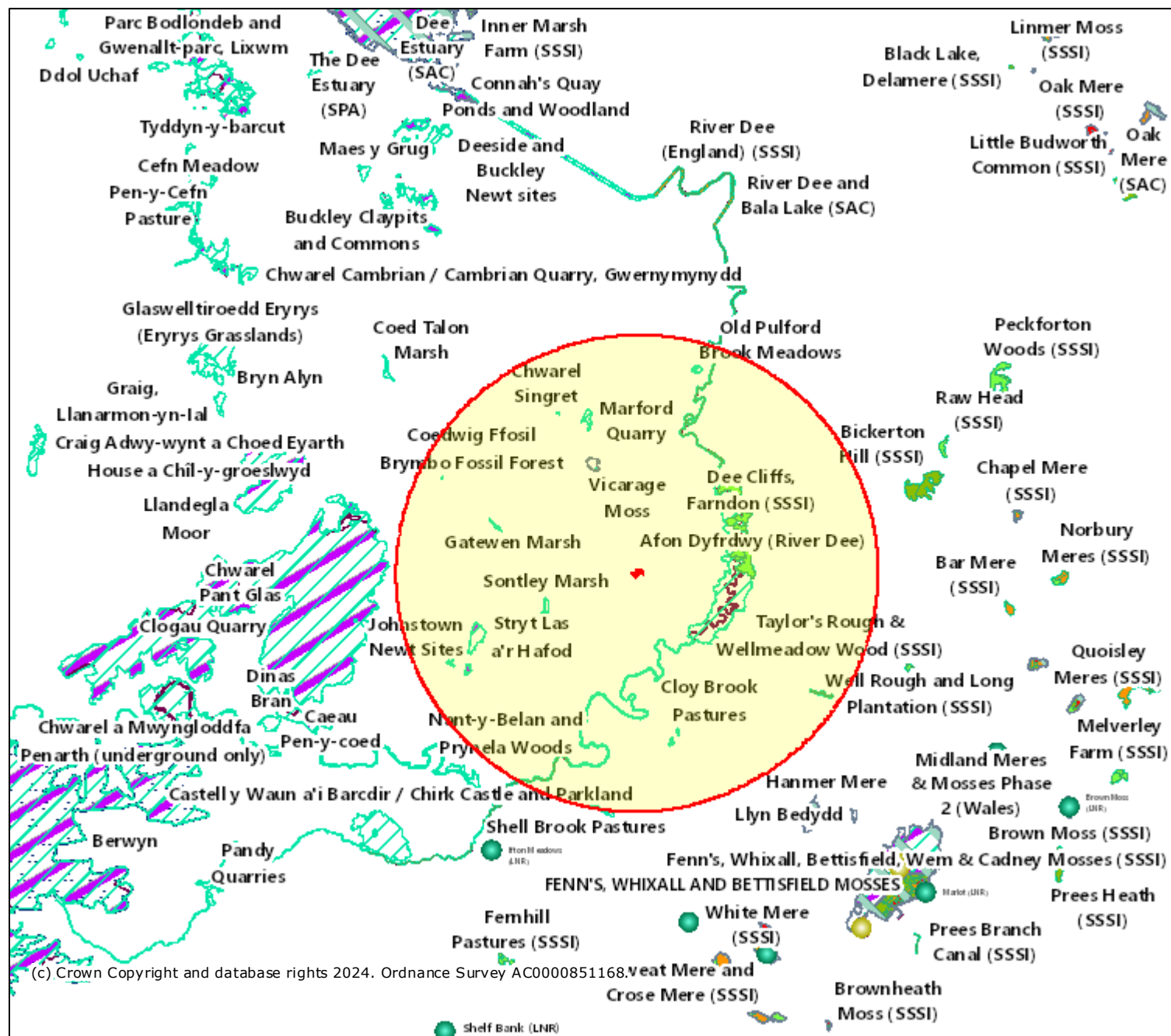
JNCC (2010). *Handbook for Phase 1 habitat survey: A technique for environmental audit*.

Welsh Government (2024). *Planning Policy Wales*, Edition 12



APPENDICES

Appendix 1 – Desk study



Legend

- Local Nature Reserves (England) - points
- National Nature Reserves (England) - points
- National Nature Reserves (Wales) - points
- Ramsar Sites (England)
- Ramsar Sites (Wales)
- Part Destroyed
- Destroyed
- Not Assessed
- Sites of Special Scientific Interest (England)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Special Areas of Conservation (Wales)
- Special Protection Areas (England)
- Special Protection Areas (Wales)
- Biosphere Reserves (Wales)
- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining

Projection = OSGB36

xmin = 294400

ymin = 331800

xmax = 377600

ymax = 371200



Map produced by MAGiC on 9 October, 2024.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



Appendix 2 – Phase 1 habitat plan

Target Note 1 – Field maple with bat roosting potential (PRF-M)

Target Note 2 – Oak tree with low bat roosting potential (PRF-I)

Target Note 3 – Small-leaved cotoneaster

Target Note 4 – Giant hogweed

Target Note 5 – Hollyberry cotoneaster

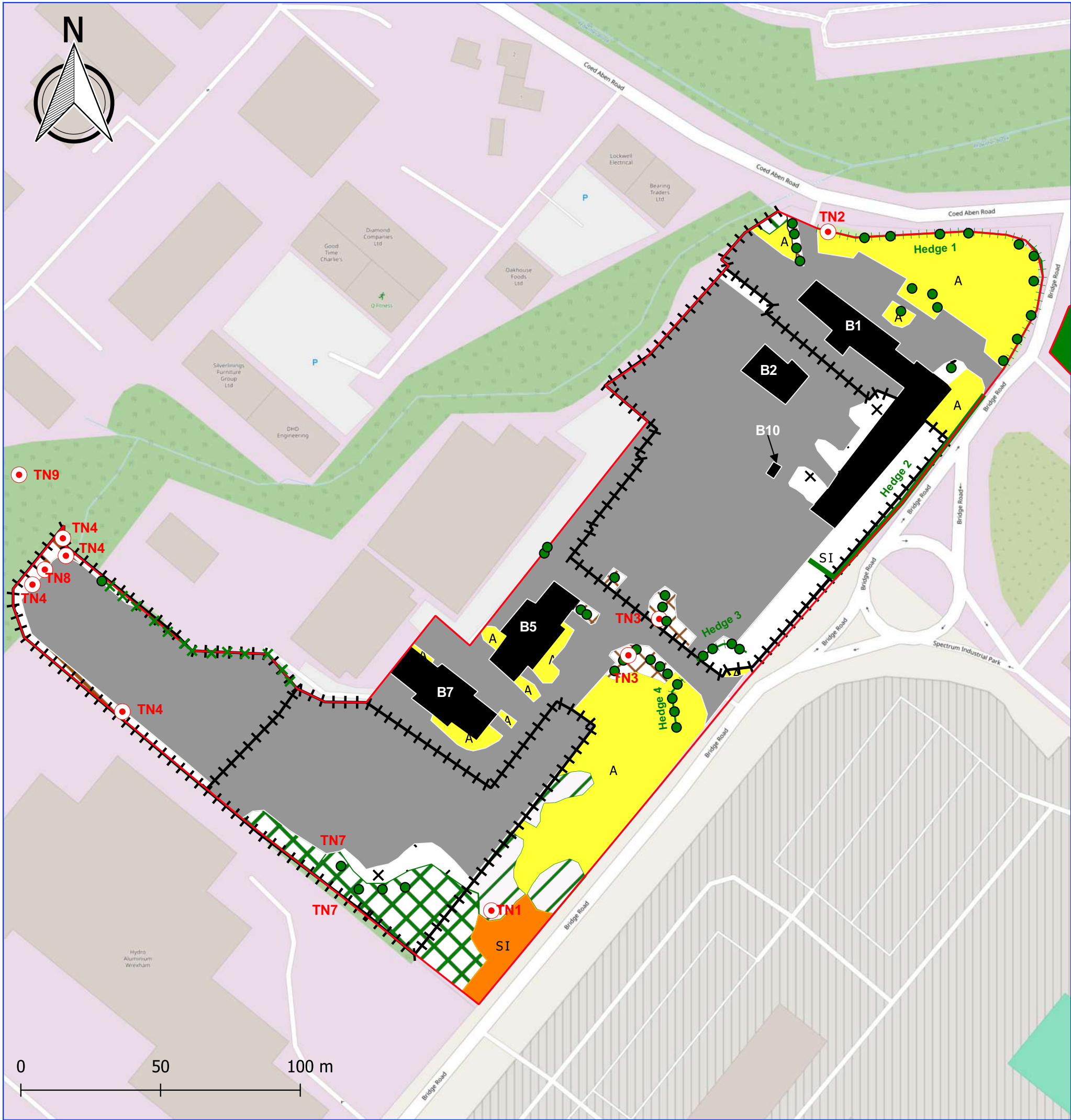
Target Note 6 – Japanese knotweed

Target Note 7 – Large, mature and ecologically valuable oak tree

Target Note 8 – Log / brash pile

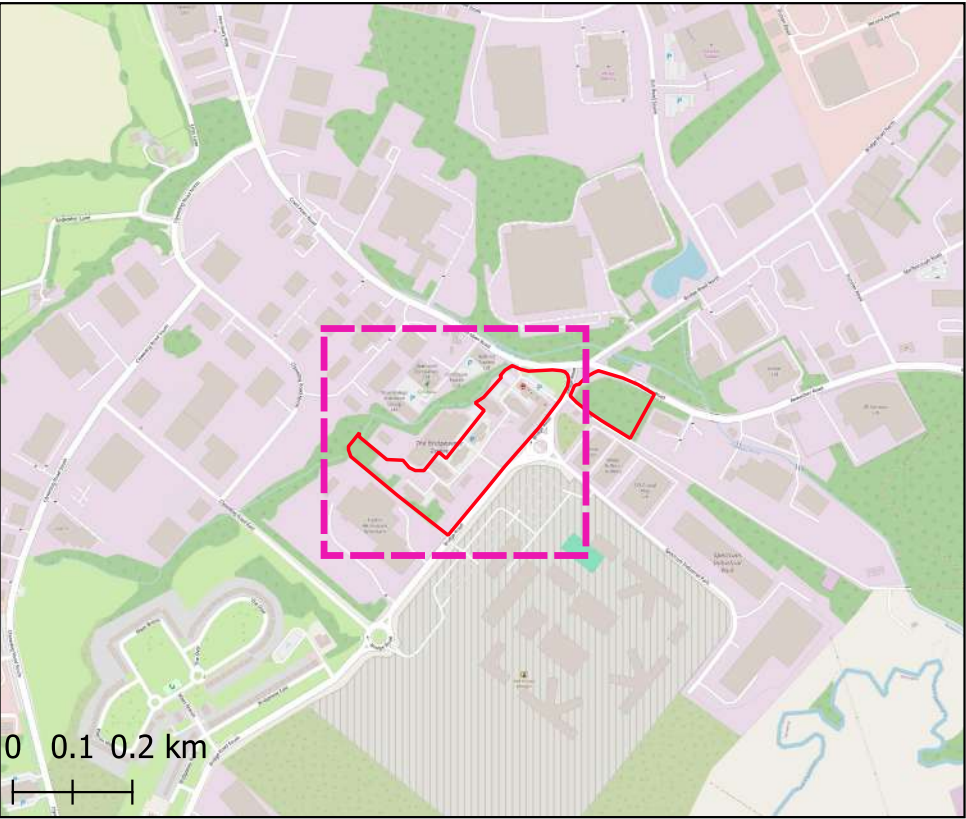
Target Note 9 – Offsite dry pond viewed as part of assessment

Target Note 10 – Spring and associated wet area within woodland



Phase 1 Habitat Plan

**Site: Bridgeway Centre,
Wrexham**
NGR: SJ 37766 49382
Author: Tom Kenwright
Date: 09/10/2024



KEY:

A1.1.1 - Broadleaved woodland - semi-natural	J1.2 - Amenity grassland
A1.1.2 - Broadleaved woodland - plantation	J1.3 - Ephemeral/short perennial
A2.1 - Scrub - dense/continuous	J1.4 - Introduced shrub
A2.2 - Scrub - scattered	J2.1.2 - Intact hedge - species-poor
A3.1 - Broadleaved scattered trees	J2.3.2 - Hedge with trees - species-poor
B2.2 - Semi-improved neutral grassland	J2.4 - Fence
B6 - Poor semi-improved grassland	J3.6 - Buildings
C3.1 - Ruderal tall herb and fern	J5 - Hardstanding
	Survey boundary
	Target Notes

THIS PLAN IS BASED UPON OpenStreetMap® AND IS OPEN DATA, LICENSED UNDER THE OPEN DATA COMMONS OPEN DATABASE LICENCE (ODbL) BY THE OpenStreetMap FOUNDATION.

THIS PLAN IS ISSUED BY UNITED ENVIRONMENTAL SERVICES LTD SUBJECT TO THE CONDITION THAT IT IS NOT COPIED EITHER IN WHOLE OR IN PART OR DISCLOSED TO THIRD PARTIES UNLESS PRIOR WRITTEN AUTHORISATION IS GIVEN.



Phase 1 Habitat Plan

Site: Bridgeway Centre,
Wrexham
NGR: SJ 37766 49382
Author: Tom Kenwright
Date: 09/10/2024



KEY:

- | | |
|--|--|
| A1.1.1 - Broadleaved woodland - semi-natural | J2.1.2 - Intact hedge - species-poor |
| A3.1 - Broadleaved scattered trees | J2.3.2 - Hedge with trees - species-poor |
| B6 - Poor semi-improved grassland | J2.4 - Fence |
| G2 - Running water | J3.6 - Buildings |
| A J1.2 - Amenity grassland | J5 - Hardstanding |
| J1.3 - Ephemeral/short perennial | Survey boundary |
| | Target Notes |

THIS PLAN IS BASED UPON OpenStreetMap® AND IS OPEN DATA, LICENSED UNDER THE OPEN DATA COMMONS OPEN DATABASE LICENCE (ODbL) BY THE OpenStreetMap FOUNDATION.

THIS PLAN IS ISSUED BY UNITED ENVIRONMENTAL SERVICES LTD SUBJECT TO THE CONDITION THAT IT IS NOT COPIED EITHER IN WHOLE OR IN PART OR DISCLOSED TO THIRD PARTIES UNLESS PRIOR WRITTEN AUTHORISATION IS GIVEN.



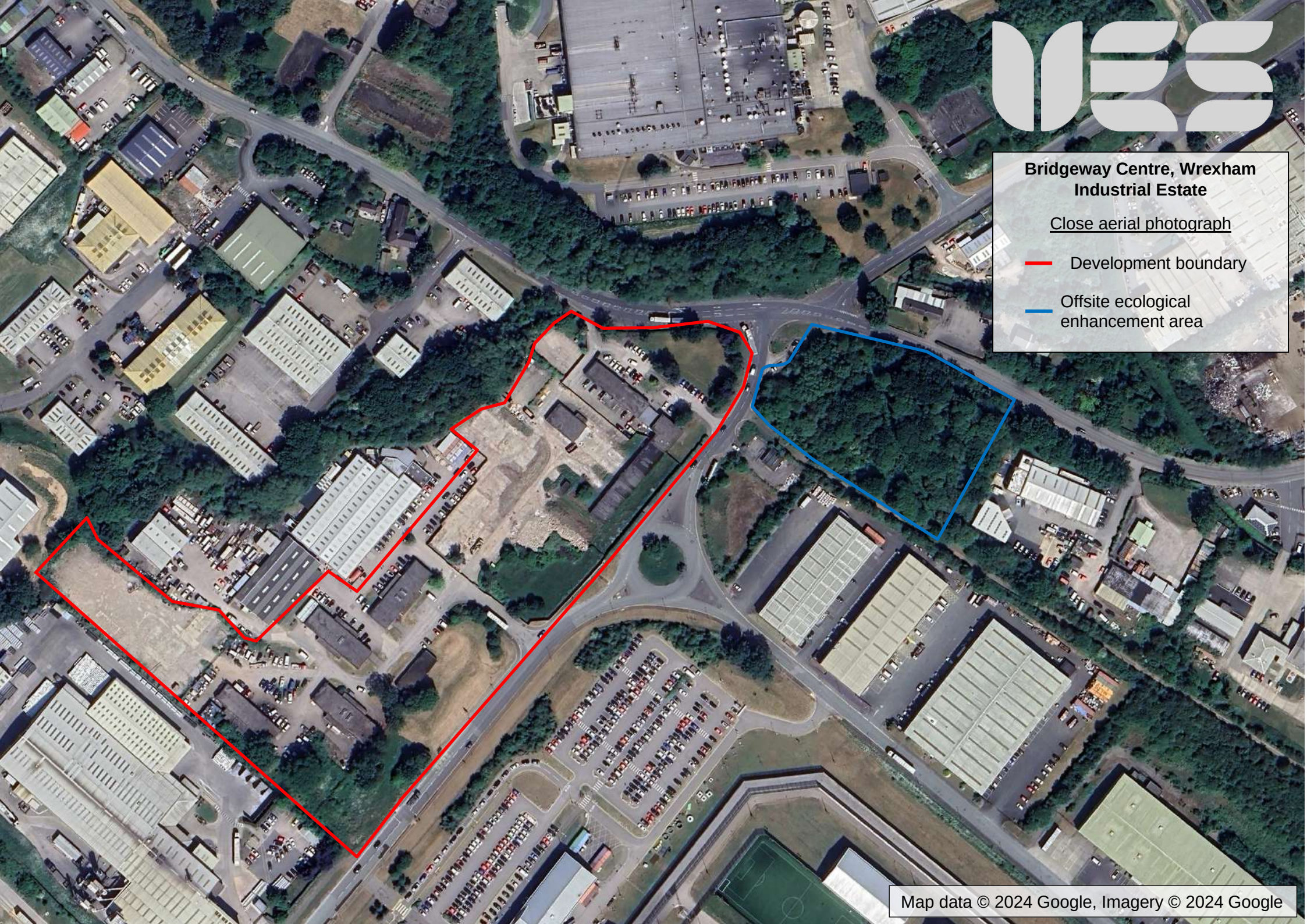
Appendix 3 – Aerial photographs



**Bridgeway Centre, Wrexham
Industrial Estate**

Close aerial photograph

- Development boundary
- Offsite ecological enhancement area





**Bridgeway Centre, Wrexham
Industrial Estate**

Wide aerial photograph

 Site location





Appendix 4 – Photographs



Photograph 1 – Woodland within the offsite ecological enhancement area.



Photograph 2 – Woodland within the offsite ecological enhancement area.



Photograph 3 – Woodland within the offsite ecological enhancement area.



Photograph 4 - Woodland within the offsite ecological enhancement area.



Photograph 5 – Dense stand of plantation woodland within the southern section of the site.



Photograph 6 – Plantation woodland within the southern section of the site, more closely resembling scattered trees or a line of trees.



Photograph 7 – Dense scrub within southern section of the site.



Photograph 8 – Dense blackthorn scrub within the south-western section of the site.



Photograph 9 – One of two ecologically valuable oak trees on site.



Photograph 10 – One of two ecologically valuable oak trees on site.



Photograph 11 – Semi-improved grassland within the southern section of the site.



Photograph 12 – Species-poor semi-improved grassland on site.



Photograph 13 – Tall ruderal vegetation within the south-western section of the site.



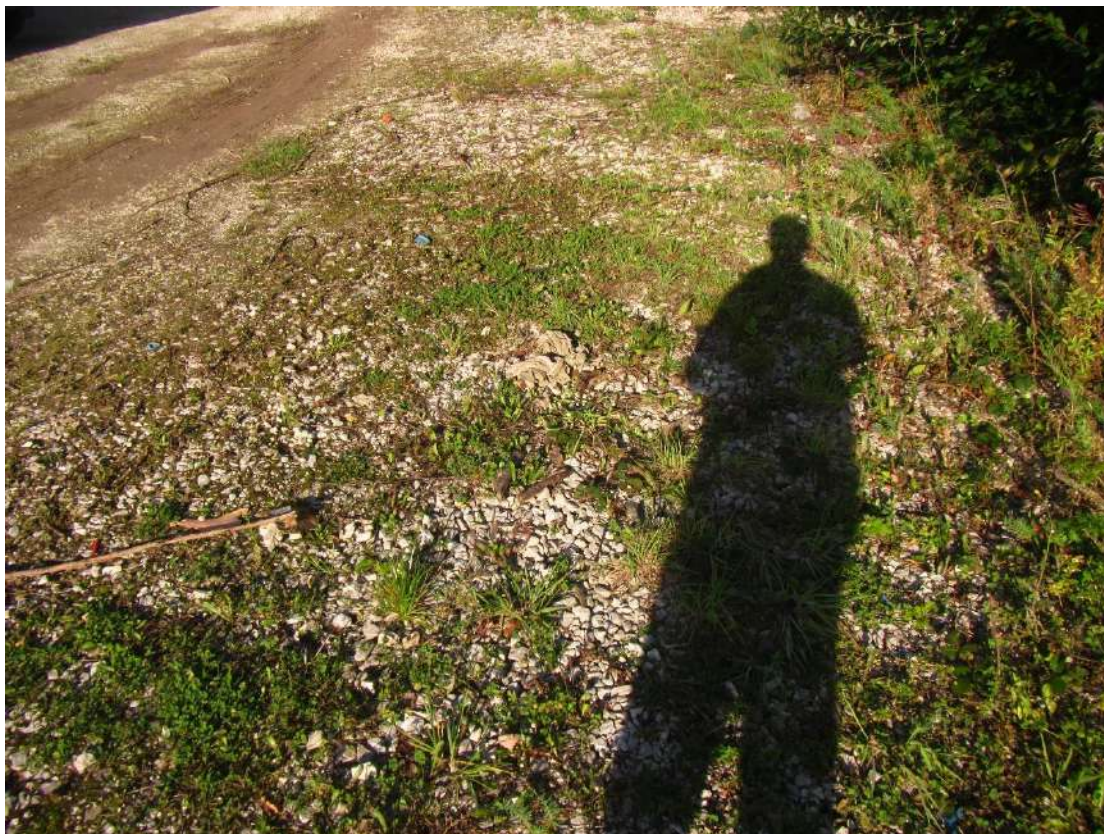
Photograph 14 – Amenity grassland within the northern section of the site.



Photograph 15 – Amenity grassland in the southern section of the site, with an increased botanical diversity.



Photograph 16 – Area of dense ephemeral / short perennial vegetation on site.



Photograph 17 – Example of ephemeral / short perennial vegetation on site.



Photograph 18 – Example of introduced shrubbery on site.



Photograph 19 – Hedgerow 1.



Photograph 20 – Hedgerow 2.



Photograph 21 – Hedgerow 3.



Photograph 22 – Hedgerow 4.



Photograph 23 – Building 11.



Photograph 24 – Example of hardstanding on site.



Photograph 25 – Watercourse in the offsite ecological enhancement area.



Photograph 26 – Flooded section of the offsite ecological enhancement area.



Photograph 27 – Log pile in the north-western section of the site.



Photograph 28 – Newly identified bat potential roosting feature within field maple tree in the southern section of the site.



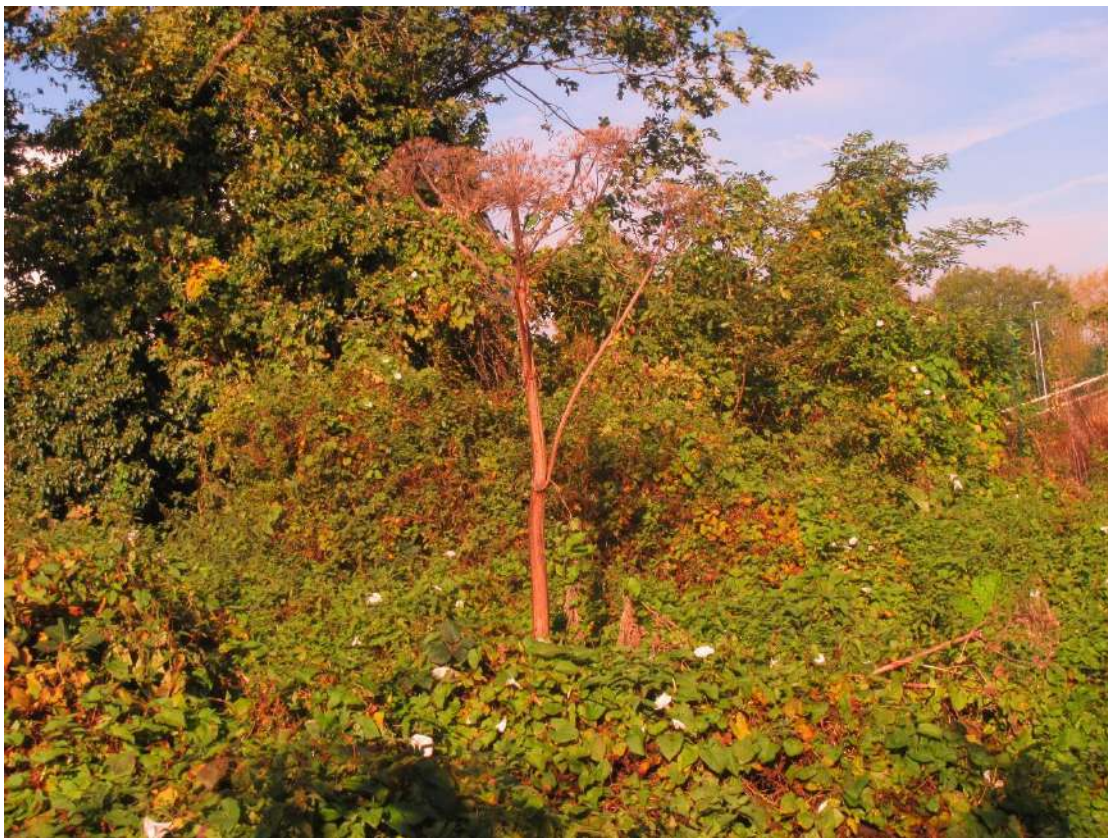
Photograph 29 – Hollyberry cotoneaster observed within the offsite ecological enhancement area.



Photograph 30 – Japanese knotweed observed at boundary of the offsite ecological enhancement area.



Photograph 31 – Young growth of giant hogweed observed within the north-western section of the site.



Photograph 32 – Old flowering stem of giant hogweed observed within the north-western section of the site.



Photograph 33 – Offsite pond located approximately 10m north-west of the site boundary.



Photograph 34 – Offsite pond located approximately 10m north-west of the site boundary.



Appendix 5 – External lighting guidance

Lighting scheme in relation to bats

The two most important features of street and security lighting with respect to bats are:

1. The UV component. Low or zero UV installations are preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.
2. Restriction of the area illuminated. Lighting must be shielded to maintain dark areas, particularly above lighting installations, and in many cases, land adjacent to the areas illuminated. The aim is to maintain dark commuting corridors for foraging and commuting bats. Bats avoid well lit areas, and these create barriers for flying bats between roosting and feeding areas.

UV characteristics:

Low

- Low pressure Sodium Lamps (SOX) emit a minimal UV component.
- High pressure Sodium Lamps (SON) emit a small UV component.
- White SON, though low in UV, emit more than regular SON.

High

- Metal Halide lamps emit more UV than SON lamps, but less than Mercury lamps
- Mercury lamps (MBF) emit a high UV component.
- Tungsten Halogen, if unfiltered, emit a high UV component
- Compact Fluorescent (CFL), if unfiltered, emit a high UV component.
- Variable
- Light Emitting Diodes (LEDs) have a range of UV outputs. Variants are available with low or minimal UV output.
- Glass glazing and UV filtering lenses are recommended to reduce UV output.

Street lighting

- Low-pressure sodium or high-pressure sodium must be used instead of mercury or metal halide lamps. LEDs must be specified as low UV. Tungsten halogen and CFL sources must have appropriate UV filtering to reduce UV to low levels.
- Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each lamp to direct light and contain spillage. Light leakage into hedgerows and trees must be avoided.
- If possible, the times during which the lighting is on overnight must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to reduce the amount of 'lit time' and provide dark periods.

Security and domestic external lighting

The above recommendations concerning UV output and direction apply. In addition:

- Lighting should illuminate only ground floor areas. Light should not leak upwards to illuminate first floor and higher levels.
- Lamps of greater than 2000 lumens (150 W) must not be used.
- Movement or similar sensors must be used. They must be carefully installed and aimed, to reduce the amount of time a light is on each night.
- Light must illuminate only the immediate area required, by using as sharp a downward angle as possible. Light must not be directed at or close to bat roost access points or flight paths from the roost. A shield or hood can be used to control or restrict the area to be lit.
- Wide angle illumination must be avoided as this will be more disturbing to foraging and commuting bats as well as people and other wildlife.
- Lighting must not illuminate any bat bricks and boxes placed on buildings, trees or other nearby locations.



Appendix 6 – Planning and statutory context

STATUTORY AND PLANNING CONTEXT

Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of the legislative protection that is relevant to the findings of this report.

Habitats

Section 7 of the Environment Act (Wales) places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists, and encourage others to take such steps.

Amphibians

Great crested newts

Great crested newts (GCN) *Triturus cristatus* and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture GCN
- Deliberately, intentionally or recklessly disturb GCN in such a way as to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of GCN
- Damage or destroy breeding sites or resting places of GCN
- Intentionally or recklessly disturb sheltering GCN, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead GCN, any part of GCN or anything derived from GCN

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

GCN are also protected by the Protection of Animals Act 1911, which prohibits cruelty and mistreatment. Releasing a GCN in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960.

In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare. GCN are also listed under Section 7 of the Environment (Wales) Act 2016.

It is important to identify the presence of GCN individuals and also to identify suitable habitat on sites so that legal obligations regarding this species can be observed. If a survey identifies the presence of GCN on the site, an assessment of the population size class is required. This can then inform a mitigation scheme, which would need to be developed in liaison with the local Natural Resources Wales (NRW) team, and which minimises direct threats to newts and compensates for any loss of habitat. A licence issued by NRW is required for the legal implementation of a mitigation scheme.

An NRW mitigation licence application requires a Mitigation Method Statement and a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

Other amphibians

More common British amphibians, such as common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *Triturus helveticus* are protected only by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

The above named species are also listed as UK Species of Conservation Concern. Due to general declines in most British amphibian species in recent years, many local authorities require amphibian surveys as a planning condition, or as part of environmental information submitted as part of a planning application, even where the presence of GCN is ruled out.

Natterjack toad *Bufo calamita* and pool frog *Pelophylax lessonae* are also offered the same level of protection as GCN, through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017.

Natterjack and common toad are also listed under Section 7 of the Environment (Wales) Act 2016.

Water bodies that support all five (more common) species of British amphibians in high numbers, may be afforded protection in local plans, as Sites of Importance for Nature Conservation (SINC), or a similar equivalent, for sites of local importance. A site may require statutory protection as a Site of Special Scientific Interest (SSSI).

Reptiles

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure any of the species listed above
- Sell, offer, advertise or transport for sale a live or dead animal of the species listed above

If a proposed development is likely to have an impact on these reptiles the local statutory nature conservation organisation must be consulted.

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* receive full protection under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017. Read together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture any sand lizards or smooth snakes
- Deliberately, intentionally or recklessly disturb sand lizards or smooth snakes in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of such an animal
- Damage or destroy breeding sites or resting places of such animals
- Intentionally or recklessly disturb sheltering sand lizards or smooth snakes, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead sand lizards or smooth snakes, any part of such an animal or anything derived from such an animal

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

All reptile species (except for smooth snake) are also listed under Section 7 of the Environment (Wales) Act 2016.

Badger

European badgers *Meles meles* and their habitat are protected under The Protection of Badgers Act 1992 and are also included on Schedule 6 of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention. The legislation affords badgers protection against deliberate harm or injury making it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger (or attempt to do so)
- To interfere with a sett by damaging or destroying it
- To obstruct access to, or entrance of, a badger sett
- To disturb a badger whilst it is occupying a sett

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Works that disturb badgers whilst they are occupying a sett are illegal without a licence. Disturbance can occur even without direct interference or damage to the sett in question. In general, the following activities are likely to require a licence:

- Use of heavy machinery or significant earth moving within 30m of a sett
- Use of lighter machinery (usually any wheeled vehicles) within 20m of a sett
- Any digging, chain saw use or scrub clearance within 10m of a sett

Hazel dormouse

Hazel dormice *Muscardinus avellanarius* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture dormice
- Deliberately, intentionally or recklessly disturb dormice in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of dormice
- Intentionally or recklessly disturb sheltering dormice, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead dormouse, any part of a dormouse or anything derived from a dormouse

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Dormice are also listed under Section 7 of the Environment (Wales) Act 2016.

Bats

In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (known as the “Habitats Regulations”). The Wildlife and Countryside Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] ... uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by NRW.

The Environment (Wales) Act 2016 also lists the following bat species as species of principle importance under Section 7:

- Barbastelle *Barbastella barbastellus*
- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*

Birds

All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The Environment (Wales) Act 2016 offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status' of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

Trees

Trees may be protected on an individual or group level through a Tree Preservation Order (TPO). In order to carry out works to trees with a TPO, prior written consent must be obtained from the Local Planning Authority. Trees may also be protected through a condition of planning consent or designated conservation areas.

Hedgerows

The Hedgerow Regulations are made under Section 97 of the Environment Act 1995 and came into operation on 1st of June 1997. They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to the Local Planning Authority.

A hedgerow can only be considered for classification as "important" if it, or the hedgerow of which the section belongs to is over 20m in length (or which meets a hedgerow at either end) and has existed for 30 years or more.

Plants

Schedule 8 of the Wildlife & Countryside Act 1981 (as amended) lists a number of plant species which are protected under Section 13 of the same legislation. As such, it is an offence to:

- Intentionally or recklessly pick, uproot or destroy a plant, or any seeds or spores attached to it, which is listed on Schedule 8
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead wild plant on Schedule 8, any part of the plant or anything derived from the plant

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

The Conservation of Habitats and Species Regulations 2017 extends European legislative protection to a further subset of plants. It is therefore an offence to pick, collect, cut, uproot, destroy or trade any plant listed in Schedule 4 of these Regulations, unless the appropriate licence is first obtained.

A large number of species of vascular plants, lichens, algae, fungi, mosses, stoneworts and liverworts are also protected through planning policy as species of principal importance, as required under Section 7 of the Environment Act (Wales) 2016.

Invasive Plant Species

A number of invasive, non-native plant species are listed under Schedule 9 (Part II) of the Wildlife and Countryside Act 1981 (as amended). The most commonly encountered listed species in ecological surveys are Japanese knotweed *Fallopia japonica*, Montbretia *Crocosmia x crocosmiiflora* and variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*. Section 14(2) of this Act makes it an offence to *plant or otherwise cause to grow in the wild* any plant listed on Schedule 9 (Part II). These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

A number of invasive, non-native plants species are listed under Schedule 2 (Part II) of the Invasive Alien Species (Enforcement and Permitting) Order 2019. The most commonly encountered listed species in ecological surveys are Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*. Section 3 of this Act make it an offence to *plant or otherwise causes to grow in the wild* any plant which is listed on Schedule 2 (Part II). These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

Soil or plant material contaminated with non-native and invasive plants can cause ecological damage and may be classified as controlled waste. It is an offence to keep, treat or dispose of waste that could harm the environment or human health. If there is any doubt, contact the local authority or Environment Agency.

Japanese knotweed has an extensive root system and new plants can regenerate rapidly from the smallest fragments of rhizomes. Material containing this species is classed as “controlled waste” under the Environmental Protection Act (Duty of Care) Regulations 1991. The disposal of such waste requires all involved parties to follow a strict code of practice and maintain adequate records regarding their conduct.

Otter

European otter *Lutra lutra* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture otters
- Deliberately, intentionally or recklessly disturb otters in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of otters
- Intentionally or recklessly disturb sheltering otters, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead otter, any part of an otter or anything derived from otter

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Otters are also listed under Section 7 of the Environment (Wales) Act 2016.

Water vole

Water voles *Arvicola amphibius* are protected by the provisions of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take water vole
- Possess or control live or dead water vole or any part of a water vole
- Intentionally or recklessly damage destroy or obstruct access to any structure or place which a water vole uses for shelter or protection, or disturb water vole using such a place
- Sell, offer, advertise or transport live or dead water voles for sale

Licences are available from NRW to allow activities that would otherwise be an offence, including:

- Scientific or educational purposes
- For the purposes of ringing or marking
- Conserving wild animals or introducing them into particular areas
- Preserving public health or public safety
- Preventing the spread of disease
- Preventing serious damage to any form of property or to fisheries

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Water voles are also listed under Section 7 of the Environment (Wales) Act 2016.

White-clawed crayfish

White-clawed crayfish *Austropotomobius pallipes* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure white-clawed crayfish
- Sell, offer, advertise or transport for sale a live or dead white-clawed crayfish

If a proposed development is likely to have an impact on white-clawed crayfish then the local statutory nature conservation organisation must be consulted.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Their inclusion on the EC Habitats Directive allows areas to be designated as Special Areas of Conservation (SAC) for the presence of white-clawed crayfish. Such a designation brings legal protection under the Conservation of Habitats Regulations 2017, this includes how the site is managed and what development can occur on and in proximity to these sites.

White-clawed crayfish are also listed under Section 7 of the Environment (Wales) Act 2016.

Planning Policy

National planning guidance is issued in the form of Planning Policy Wales (Edition 12 - 2024). The most relevant sections are included in Chapter 6: Distinctive and Natural Places. This chapter details the policies on issues such as the protection of trees, woodlands, species, and designated sites. The document is free and available to view online.