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

Land off St George's Road
St George's Road
Abergele
Conwy

NGR: SH 95476 77181

Prepared for:	Castle Green Homes Ltd
Written by:	Osian Shirley, UES Graduate Ecologist
Approved by:	Tom Kenwright, UES Senior Ecologist

Tom Kenwright

Date:	9th January 2026
Date (V2):	23rd October 2026
UES reference:	UES05204/01

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 7
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 16
4 EVALUATION AND RECOMMENDATIONS **20**
4.1 Habitats 20
4.2 Species 22
5 CONCLUSION **29**
6 REFERENCES **30**
APPENDICES **31**
Appendix 1 – Desk study 31
Appendix 2 – UKHab plan 32
Appendix 3 – Aerial photographs 33
Appendix 4 – Photographs 34
Appendix 5 – Botanical species list 35
Appendix 6 – External lighting guidance 36
Appendix 7 – Landscape design for birds 37
Appendix 8 – Planning and statutory context 38

EXECUTIVE SUMMARY

United Environmental Services Ltd (UES) was commissioned by Castle Green Homes Ltd to carry out a baseline ecological survey of the land off St George's Road, Abergele. A desk study and preliminary ecological appraisal (PEA) survey were undertaken on 12th December 2025, including searches using the Multi Agency Geographic Information Centre (MAGIC) and Cofnod, the Local Environmental Record Centre for North Wales.

The PEA provides an assessment of potential ecological impacts associated with the development of the land parcel encompassing the southern field of the site. The proposed development includes construction of residential dwellings along with associated access roads, infrastructure and areas of greenspace.

The survey boundary has an area of approximately 15.1ha and is mainly comprised of modified grassland, with small areas of mixed scrub, species rich and other native hedgerows, a line of trees, and scattered trees across site.

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** – Due to the lack of accessible breeding ponds, poor quality of onsite habitat and lack of nearby records, Great Crested Newts (GCNs) *Triturus cristatus* are considered to be absent from site and its surroundings. However, common amphibians may still be present onsite at the time of works, as such reasonable avoidance measures (RAMs) should be implemented during the construction phase of the development, to protect common amphibian species.

- **Badgers and hedgehogs** – A large badger *Meles meles* sett was identified within [redacted]. Due to the signs of activity, size of the sett and presence of at least 33 entrances, the sett is considered to either have been or currently be a main sett. Without mitigation, construction could result in direct harm to badgers, disturbance, sett collapse, and loss of foraging or commuting habitat.

  If a 30 m buffer zone can be maintained around the main sett and connectivity across site is retained within the site landscaping, the development may proceed without requirements for further surveys or sett closure.

  However, if works are required within this buffer, a temporary or permanent sett closure will be required. To inform the licence application to Natural Resources Wales (NRW) a badger activity survey should be undertaken. This survey can be undertaken at any time and will monitor the sett to determine the level of activity, the number of badgers using the sett and confirm the type of sett (main, annexe, subsidiary or outlier). The survey will also monitor how badgers are using the wider site in order to inform any necessary mitigation or compensation measures. It should be noted that sett closures may only occur between July and November inclusive and NRW aims to process applications within 30 working days.

  The RAMs detailed in section 4 should be implemented throughout the construction phase of the development to protect badgers, and hedgehogs, should they be present at the time of works.

A wildlife friendly lighting plan should be implemented to avoid light spill which may degrade retained habitat and commuting corridors. Fences installed on site should be designed to allow passage of both hedgehogs *Erinaceus europaeus*, and badgers.

- **Bats in trees** – if any of the trees onsite are to be felled or subject to arboricultural works, then a ground level tree assessment will be required to determine the suitability of the trees to support roosting bats.

  This ground level assessment can be undertaken any time of year. If any trees due to be adversely impacted are found to have the potential to support roosting bats, further aerial tree inspections should be conducted to fully assess and classify the features. If any potential roosting features are found to still be suitable following the inspections, further aerial inspections may be required during the bat survey season (May to August inclusive).

  Any external lighting installed as part of the development should be designed to be wildlife friendly and avoid overspill onto retained habitat and linear commuting features.

- **Breeding birds** – site clearance, tree felling, arboricultural works and vegetation clearance 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 and works need to take place during this period, a targeted nesting bird check is to be undertaken immediately prior to the works by a suitably qualified ecologist or an ecological clerk of works appointed to oversee the works where necessary.

- **Designated sites** - The nearest designated site is Coed y Gopa a Site of Special Scientific Interest (SSSI), located approximately 1.5 km west and supporting a significant lesser horseshoe bat (LHS) *Rhinolophus hipposideros* colony. Although the development lies within the 2 km Core Sustenance Zone (CSZ), urban separation and the poor quality of onsite habitats make it unlikely that the colony uses the site in any significant capacity. In the unlikely event that LHS bats do use the site, they will be safeguarded by the mitigation measures outlined in Section 4.

  Liverpool Bay SPA lies offshore from site and is designated for its bird assemblage; while there is some limited potential for functional connectivity to site, the onsite grasslands provide poor foraging habitat when compared with the nearby higher-quality Abergele Grazing Marsh. To confirm usage, wintering bird surveys will be undertaken, the results of which will determine any further mitigation or compensation measures.

- **Hedgerows, trees and woodland** – Retained hedgerows, areas of woodland and scattered trees should be adequately protected during the construction activities on site. If any hedgerows, trees or areas of woodland on site are to be removed, they should be replaced as part of a detailed landscaping scheme, with native tree, hedge or woodland planting as an ecological enhancement.

- **Watercourse** – A 5m buffer should be retained along the off-site watercourse (where possible). Industry standard pollution prevention measures should be adhered to, and consideration should be given to avoid light pollution onto the stream within the lighting plan.

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

This report should be read with appendices 1 to 8, which include results of the desk study, GIS UKHab mapping, photographs of site, species list, lighting and landscaping recommendations and relevant statutory guidance.

1 INTRODUCTION

1.1 Author, surveyors, qualifications and scope of study area

This report is written by Osian Shirley MSci, UES Graduate Ecologist. Other surveyors include:

- Tom Kenwright BSc MSc ACIEEM, UES Senior Ecologist. Tom holds a level 6 Botanical Society for Britain and Ireland (BSBI) field identification skills certificate (FISC). Level 6 is only awarded in exceptional circumstances where the surveyor is a very competent professional field botanist and is of national status. Tom is licensed by Natural Resources Wales to disturb all species of bat and take or handle all species other than greater or lesser horseshoe under licence number S094176/1. Tom is licensed by Natural Resources Wales to disturb, take and handle great crested newts under licence number S095290/1.

- Harry Fox BSc MRes, UES Graduate Ecologist. Harry holds a level 4 BSBI FISC, which certifies him as competent to undertake phase 1 habitat surveys, UKHab and national vegetation classification (NVC) surveys.

This report was reviewed and approved by Tom Kenwright.

The report provides an assessment of the potential ecological impacts associated with the proposed development on the Land off St George's Road in Abergele.

The zone of influence considered within the scope of the survey includes all land within the survey boundary (blue line). 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 November 2025 to conduct a PEA of the land off St George's Road, Abergele. 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

The proposed development includes construction of residential dwellings with associated access roads, infrastructure and green space. Following the initial survey, the redline boundary was reduced to the southern field of the development. The survey findings within this report are based on the wider survey boundary which encompasses the whole site.

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 8, which include results of the desk study, GIS UKHab mapping, photographs of site, species list, lighting and landscaping recommendations 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 was undertaken within a 2km radius of the survey boundary by Cofnod.

2.2 Field survey

An ecological walkover survey was carried out on 12th December 2025 by Tom Kenwright, Harry Fox, and Osian Shirley. The purpose of the survey was to identify, record and map dominant habitat types within the survey 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
- Reptiles
- Badger
- Bats
- Hazel dormouse
- Hedgehog
- Otter
- Water vole
- White-clawed crayfish
- Birds
- Trees
- Hedgerows
- Plant communities
- Invasive species

The habitats were assessed by using the UKHab 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 UK Habitat Classification Version 2.0 (UKHab Ltd, 2023) 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 site boundary and the land to a distance of 30m outside it where accessible.

The UKHab 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.

3 RESULTS

3.1 Desk study

A desk study was conducted for the survey boundary 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

There are four non-statutorily protected wildlife sites within 500m of the survey boundary.

- Pwll Tan-y-Bryn SINC[1]

  Pwll Tan-y-Bryn is a small, designated pond located 75m south of the site.

- Abergele Grazing Marsh SINC

  Abergele Grazing Marsh is a large area of wet farmland approximately 150m northeast of the site.

- Berthglyd Pond SINC

  Berthglyd Pond is a natural pond approximately 250m to the north of the site, situated along the River Gele.

- Ffordd Las SINC

  Ffordd Las is an area of woodland forming a part of Coed Abergele approximately 475m south of the site.

There are twenty-two non-statutorily protected wildlife sites within 0.5 - 2km of the survey boundary.

- Abergele Golf Course 1 SINC
- Abergele Golf Course 3 SINC
- Abergele Hospital Grounds SINC
- Afon Gele SINC
- Bryn Plas Uchaf SINC
- Coed Bodtegwal SINC
- Coed Gors SINC
- Coed Parc y Meirch/Coed Ty Croes SINC
- Coed Nant Ddu SINC
- Coed y Geufron SINC
- Coed y Gopa Extension SINC
- Coed Ysgerirallt SINC
- Fferam Ffordd Las Bach SINC
- Hen Wrych Pond SINC
- North Wales Holiday Camp SINC
- Pensarn Reedbed SINC
- Pentre Mawr Park Pools and Reedbed SINC
- Pwll Fardre SINC
- Pwll Ffordd St Asaph SINC
- St George's Well SINC
- The Warren SINC

There are three statutorily protected sites within 2km of the survey boundary:

[1] Site of Importance for Nature Conservation

- Coed Y Gopa SSSI[2]

  Coed Y Gopa SSSI is located approximately 1.5km to the west of the proposed development site. It comprises two hills bearing broadleaf woodland and is designated for the lesser horseshoe bats hibernating within its historic mines.

- Traeth Pensarn SSSI

  Traeth Pensarn SSSI is located approximately 1.5km northwest of the proposed development site. It is designated for the rare habitat, vegetated shingle beach, of which it contains over 10% of the total area in Wales.

- Liverpool Bay SPA[3]

  Liverpool Bay SPA is located approximately 1.8km north of the proposed development site and is designated for its assemblage of waterbirds. All of the named qualifying species are largely pelagic including species such as common scoter Melanitta nigra, red-throated diver Gavia stellata, and little gull Hydrocoloeus minutus. However, its entire waterbird assemblage is protected.

There are ten statutorily protected sites (designated for ecological reasons) within 2 – 10km of the survey boundary.

- Brickfields Pond LNR[4]
- Coedydd ac Ogofau Elwy a Meirchion SSSI
- Coedydd Derw Elwy SSSI
- Elwy Valley Woods SAC[5]
- Fairy Glen LNR
- Kinmel Dunes LNR
- Llanddulas Limestone and Gwyrch Castle Wood SSSI
- Mynydd Marian LNR
- Mynydd Marian SSSI
- Rhuddlan Pond LNR

3.1.2 Protected species

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

- Amphibians: Seven records of great crested newts were returned within 2km of the site from within the last 25 years. The closest is located approximately 1.9km to the south in 2006. The record search also returned records of palmate newt *Lissotriton helveticus*, and smooth newt *Lissotriton vulgaris* the closest of which was a smooth newt approximately 660m west of the site in 2020.

[2] Site of Special Scientific Interest
[3] Special Protection Area
[4] Local Nature Reserve
[5] Special Area of Conservation

- Badgers: Numerous records of badgers were returned from the record search from within the last 25 years. These included records in close proximity to the site, however due to the sensitive nature of these records, their location has not been included within this report but is available upon request.

- Bats: 35 records of bats were returned from the record search. These included brown long-eared bats *Plecotus auritus*, common pipistrelles *Pipistrellus pipistrellus*, Daubenton's bats *Myotis daubentonii*, lesser horseshoe bats, Natterer's bats *Myotis nattereri*, noctules *Nyctalus noctula*, and soprano pipistrelles *Pipistrellus pygmaeus*. The closest record was of common pipistrelle and brown long-eared bat roosts identified approximately 100m to the south of the site in 2005.

- Birds: various species, including several NERC Section 41, Wildlife and Countryside Act 1981 Schedule 1, and the most recent Birds of Conservation Concern "red and amber" list species were recorded within 2km, however no records were returned from within the site boundary. The closest record of details 250 pink-footed geese *Anser brachyrhynchus* located approximately 50m north of the northern site boundary.

  However, this record only provides a 6-figure grid reference so the exact location of the record cannot be determined, however it is considered likely to be associated with the Abergele grazing marsh located to the north/northwest of the site. In addition to pink-footed geese, other records were returned across the grazing marsh include lapwing *Vanellus vanellus,* shelduck *Tadorna tadorna*, snipe *Gallinago gallinago* and oystercatcher *Haematopus ostralegus*.

- Hazel dormouse: Three records of hazel dormice *Muscardinus avellanarius* were returned from within 2km of the site. The closest was of five individuals predated by a cat in 2008. All of these records were located approximately 1.2km to the southwest of the site.

- Hedgehog: 60 records of hedgehog *Erinaceus europaeus* were returned from within 2km of the site with the closest being approximately 400m northwest of the site in 2020.

- Otter: Eight records of otter *Lutra lutra* were returned from within 2km of the site from within the last 25 years. The closest of which was a spraint identified 500m to the northwest in 2022 along the River Gele (Afon Gele).

- Reptiles: The record search returned six records of reptiles within 2km of the site, including slow worm *Anguis fragilis*, grass snake *Natrix helvetica*, adder *Vipera berus*, and common lizard *Zootoca vivipara*. The closest record was of a common lizard approximately 1.1km to the northeast of the site in 2008.

- Water vole: Nine records of water vole *Arvicola amphibius* were returned from within 2km of the site within the last 25 years. The closest record was approximately 300m to the northeast of the site in 2007. All records come from the areas to the northeast within the designated sites of Abergele Grazing Marsh, and River Gele (Afon Gele).

- White-clawed-crayfish: no records of white-clawed crayfish *Austropotamobius pallipes* were returned from within 2km of the site.

3.2 Baseline conditions – Habitats

The results of the PEA are also shown on the accompanying map at Appendix 2 – UKHab plan. Habitats are colour-coded in accordance with the UKHab standard. A full botanical species list for each habitat is provided at Appendix 5.

The local area predominantly consists of residential dwellings, woodland, and arable fields. The following principle habitat types were characterised on site:

- g4 Modified grassland
- h2a5 Species-rich native hedgerow
- h2a6 Other native hedgerow
- h3d Bramble scrub
- h3h Mixed scrub
- r2b Other rivers and streams
- w1g Other broadleaved woodland
- 32 Scattered trees
- 33 Line of trees

3.2.1 g4 Modified grassland

Secondary codes: 10 (scattered scrub), 16 (tall forbs), 32 (scattered trees)

There are three distinct types of modified grassland present on site, herein referred to as Grasslands 1-3.

Grassland 1 - covers the majority of the site, the sward is largely comprised of perennial rye grass *Lolium perenne* with frequent Yorkshire fog *Holcus lanatus*. Some areas of the grassland appear more recently established or disturbed, while in the southern field the grassland shows evidence of grazing by sheep and cows. Grassland 1 is species poor having a low coverage of forbs, species present included, common chickweed *Stellaria media*, white clover *Trifolium repens*, sticky mouse-ear Cerastium glomeratum creeping thistle *Cirsium arvense*, creeping buttercup *Ranunculus repens*, and broad-leaved dock *Rumex obtusifolius* with species richness concentrated at the unmanaged sward at the field margins where cock's-foot *Dactylis glomerata* and common couch *Elymus repens* were present.

Grassland 2 comprises three smaller areas on site, situated beneath scattered trees or at the site margins. These areas show signs of nutrient enrichment and are dominated by common nettle *Urtica dioica*, perennial rye, ivy *Hedera helix*, and smooth sow-thistle *Sonchus oleraceus* and Yorkshire fog with Scattered elder *Sambucus nigra* scrub.

Grassland 3 comprises the majority of the habitat in the northwestern land parcel forming part of a park or sports pitch. This grassland differs from Grassland 1 in that it has been managed by mowing and has a much denser sward. It is dominated by Yorkshire fog and has a low forbs coverage including slender speedwell *Veronica filiformis*, common mouse-ear *Cerastium fontanum*, prickly sow-thistle *Sonchus asper*, and smooth sow-thistle. The southern section of Grassland 3 near the woodland has a higher sward height than the section to the north.

3.2.2 h2a5 Species-rich native hedgerow

Secondary codes: 11 (hedgerow with trees)

There are two species rich hedgerows on site:

Hedge 5 runs east to west at the north of the southernmost field. It is approximately 2m wide by 4m in height and is comprised of the woody species: hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, grey willow *Salix cinerea*, rose *Rosa sp.*, elder, and contains three mature oak trees *Quercus robur* (T11-13). Its ground flora includes soft shield-fern *Polystichum setiferum*, common male-fern *Dryopteris filix-mas*, and hart's-tongue fern *Asplenium scolopendrium*.

Hedge 10 runs north to south, along the east side of the small stream, between the two northernmost fields. Woody species within the hedge include: hawthorn, blackthorn, rose, hazel *Corylus avellana*, holly *Ilex aquifolium*, grey willow, and contains a large number of trees including mature and semi-mature oak, semi-mature ash *Fraxinus excelsior*, and young and mature sycamore *Acer pseudoplatanus*. Its ground flora is similar to that of Hedge 5 with additional key species including wood dock *Rumex sanguineus*, dog's mercury *Mercurialis perennis*, and false wood-brome *Brachypodium sylvaticum*.

3.2.3 h2a6 Other native hedgerow

There are nine other native hedgerows on site:

Hedge 1 is a small, intensely managed blackthorn hedge approximately 1m wide by 1.5m in height.

Hedge 2 is at the southeast boundary of the eastern field. It is dominated by hawthorn, and contains rose, elder, holly, and sycamore, as well as ivy and bramble *Rubus fruticosus agg.*.

Hedge 3 runs southward along the southwest margin of the eastern field. It is dominated by hawthorn, and also consists of dogrose *Rosa canina*, blackthorn, and elder. Its ground flora includes encroaching species from Grassland 1 as well as garlic mustard *Alliaria petiolata*, ivy, and honeysuckle *Lonicera periclymenum*.

Hedge 4 runs north to south at the northwest of the eastern field. It consists of blackthorn hawthorn elder and rose and is approximately 1.5m wide by 2.5m in height.

Hedge 6 runs north to south at the northwest boundary of the southernmost field. It consists of hawthorn, blackthorn, holly, and contains a semi-mature oak tree (T14) and a semi-mature ash tree (T15). Its ground flora includes hart's-tongue and soft shield-fern, as well as wood dock, stinking iris *Iris foetidissima*, wood avens *Geum urbanum*, and black bryony *Dioscorea communis*.

Hedge 7 runs north to south at the southwest boundary of the southern most field. It is comprised of blackthorn, hawthorn, elder, wild privet *Ligustrum vulgare*, and contain a mature and a semi-mature sycamore tree (T16-17).

Hedge 8 is located at the southernmost point of the site and contains sycamore and rose, along with a mature oak tree (T18).

Hedge 9 is located at the east of the southernmost field (south of Hedge 3) and contains blackthorn, field elm *Ulmus minor*, and rose.

Hedge 11 runs adjacent to Hedge 10 on the western side of the brook. It is comprised of hawthorn, blackthorn, hazel, and contains a semi mature oak (T19) a short distance to the

north of where the hedge borders Grassland 2. Its ground flora includes, alexanders *Smyrnium olusatrum*, dog's mercury, wood dock, ivy, false wood-brome, stinking iris, herb-Robert *Geranium robertianum*, and soft shield-fern.

3.2.4 h3d Bramble scrub

A small patch of bramble scrub is present along the southern boundary of the easternmost field.

3.2.5 h3h Mixed scrub

There are three sections of mixed scrub on the site. A small section north of Hedge 4 widens into dense scrub comprised of hawthorn, ivy, elder, and bramble.

A larger section of scrub is located southwest of T1-3, running along the southern site boundary. This section of scrub continues a short distance beyond the site boundary and forms the boundary north of Hedge 9.

Another small section of mixed scrub is at the southern point of Hedge 7 and comprises hawthorn, blackthorn, bramble, and holly.

3.2.6 r2b Other rivers and streams

A small stream that runs south to north, adjacent to the site boundary, and between the western and central fields. The stream is small, shallow and fast flowing, with a gravel bed, it runs adjacent to and partially over the public footpath, and likely varies in depth significantly over the year. The majority of the stream was unvegetated, however to the north as it runs into the culvert, here it widens forming a wet depression in which fools watercress *Helosciadium nodiflorum* and hemlock water dropwort *Oenanthe crocata* was present.

3.2.7 w1g Other broadleaved woodland

Secondary codes: 33 (line of trees)

A small area of patchy woodland that has experienced heavy felling with the arisings having been left within the woodland. Canopy species include alder *Alnus glutinosa*, crack willow *Salix fragilis*, a species of poplar *Populus sp.*, silver birch *Betula pendula*, ash, and sycamore. The understorey is comprised of osier *Salix viminalis*, small alders, young crack willow, a willow hybrid, elder, hawthorn, and holly. The ground flora is dominated by bramble but also includes: hybrid bluebell *Hyacinthoides* × *massartiana*, cleavers *Galium aparine*, ground ivy *Glechoma hederacea*, herb-Robert, common nettle, black bryony, ivy, hart's-tongue fern, hedge bindweed *Calystegia sepium*, cock's-foot *Dactylis glomerata*, Yorkshire fog, common male-fern, stinking iris, and alexanders. The woodland was in a poor condition containing large piles of garden waste and litter across the ground.

3.2.8 32 Scattered trees

Numerous mature and semi mature scattered trees were identified across the site, mostly comprising oaks but also ash, and sycamore trees were present. Within the easternmost field, several of the mature oaks, were of significant size and showing veteran features, most notably Tree 2.

3.2.9 33 Line of trees

A small line of trees is present along the western boundary of the southern field, connecting Hedges 6 and 7. This includes hazel, goat willow, holly, sycamore, ash, hawthorn, blackthorn, and elder.

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

Seven records of great crested newts were returned within 2km of the site, the closest is located approximately 1.9km to the south. All of these records were located within the same area, and the connectivity between these records and site is restricted by roads, house and farm complexes and the considerable distance. Numerous other records of common amphibian species were returned.

The majority of the site comprises poor quality modified grassland which while it may provide some commuting and foraging opportunities for common amphibians, it is poor quality habitat. There are no suitable waterbodies onsite for breeding GCN. The closest aquatic habitat to site, is a small stream that runs along the western boundary and between the western and central field, before culverting beneath the A55. Due to its fast-flowing water, shallow depth and lack of marginal vegetation this watercourse is considered unsuitable for GCN.

There are numerous ponds and drainage ditches present within 500m, however the majority are located within the Abergele grazing marsh which is situated on the opposite side of the A55 which will act as an almost impermeable barrier to movement. The only other pond is located approximately 75m south of site, the pond is called Pwll Tan-y-Bryn and is designated as a SINC. However, it appears to have been removed as part of a nearby development and was not publicly accessible at the time of the survey, furthermore houses and several roads partially block connectivity to site. A large pile of dead wood was noted in the eastern field in the area between (Target Note 1), which may act as a hibernacula/refugia for amphibians.

Due to the considerable distance of nearby records, the limited connectivity to potential breeding ponds and poor habitat quality habitat, it is considered that GCN are not present on or in the immediate vicinity of the site. However, other common amphibian species may be present on site.

3.3.2 Badgers

During the initial walkover, a large badger sett was identified within [redacted]. This sett has at least 33 entrances with more likely obscured within the hedge. Numerous signs of activity were observed both around the sett (Fresh digging, bedding, hairs), and across site (mammal paths, latrines, snuffleholes) indicating the sett is in use in some capacity, and likely is or was an active main sett. The key commuting features onsite are considered to be hedgerows across site and at the margins.

3.3.3 Bats

Numerous records of various bat species were recorded within 2km. The closest record was of common pipistrelle and brown long-eared bat roosts identified approximately 100m to the south of the site.

There are no buildings on site, however, numerous semi-mature and mature trees are present across site within the woodland, treelines, hedgerows and grasslands. A ground level tree assessment was not undertaken during the walkover survey, however many of the trees especially the mature oaks within the eastern field certainly contain features with potential to support roosting bats.

The habitats onsite are generally of poor quality for bats, with the majority of the site comprising short sward, managed grasslands. The grasslands provide poor habitat, supporting minimal invertebrate communities for foraging bats. However, it is likely that in addition to roosting opportunities, the scattered trees, treelines, and hedgerows onsite provide dark linear commuting features across the local landscape.

3.3.4 Hazel dormouse

Three records of hazel dormice were returned from within 2km of the site. The closest record detailed five individuals in 2008. All of these records were located approximately 1.2km to the southwest of the site.

The habitats present on site are not suitable for hazel dormouse. Although hazel and honeysuckle occur within the stream-side hedgerows, they are present only at low abundance and do not provide the structural diversity or food resources typically required by this species. The desk study returned no records from the past 15 years, and the locations of the historic records are not well connected to the site by suitable habitat corridors and blocked by several roads and considerable distance. Consequently, the presence of hazel dormouse on site is considered highly unlikely.

3.3.5 Hedgehog

Much of the habitat on site including the woodland, mixed scrub, and hedgerows, likely provide suitable foraging and commuting opportunities for hedgehogs. Many of the records returned were in Abergele's urban area and separated from site by the Afon Gele. However, a small number were recorded in the nearby residential area. As such it is considered likely that hedgehogs use the site in a limited capacity.

3.3.6 Otter and water vole

Numerous records of otter and water vole were returned within 2km of site, the closest records were 500m and 300m respectively.

All local records are restricted to the Abergele grazing marshes, their associated drainage ditches, and the River Gele. Although a watercourse runs along the site boundary, it is not considered suitable for either species as it is shallow, fast-flowing, shaded, subject to disturbance from the adjacent public footpath, and largely lacks appropriate aquatic or marginal vegetation and suitable prey resources. In addition, the watercourse is functionally disconnected from the wider hydrological network, as it emerges from underground to the

south of the site, flows alongside the boundary, and then passes underground in several sections before entering a culvert at the northern boundary. Consequently, it is considered highly unlikely that either species would be present onsite or in the nearby watercourse.

3.3.7 Birds

Although a targeted bird survey was not conducted during the site visit, the following bird species were recorded whilst on site: wood pigeon *Columba palumbus*, robin *Erithacus rubecula,* blackbird *Turdus merula*, black-headed gull *Chroicocephalus ridibundus*, herring gull *Larus argentatus*, blue tit *Cyanistes caeruleus*, meadow pipit *Anthus pratensis*, ring-necked pheasant *Phasianus colchicus*, buzzard *Buteo buteo*, carrion crow *Corvus corone*, pied wagtail *Motacilla alba*, dunnock *Prunella modularis*, long-tailed tit *Aegithalos caudatus*, magpie *Pica pica*, great tit *Parus major*, mistle thrush *Turdus viscivorus*, and chaffinch *Fringilla coelebs.*

The areas of woodland, scrub, scattered trees and hedgerows on site provide suitable nesting opportunities for breeding birds. To the north-east, the Abergele grazing marshes likely offer high-quality habitat for wading and wintering birds; this is supported by the observation of a large flock of lapwings (30–40 individuals) and multiple local records of wading and wintering species. Although the onsite habitats are of relatively poor quality, they could potentially support some wintering birds; however, the availability of more extensive and higher-quality habitat nearby makes this unlikely.

3.3.8 Trees

Trees on site may be protected by a Tree Preservation Order (TPO), for which a check has not been undertaken. Additionally, several of the mature oaks onsite were of significant size and possessed veteran features.

3.3.9 Hedgerows

There are 11 hedgerows on site varying in size and condition and the majority include mature trees. Two of these (H5 and H10) are species-rich native hedgerows. Given the relatively low species diversity, it is considered that the remainder of the hedgerows will not qualify as important under the Hedgerow Regulations for ecological reasons, but they may qualify on historical grounds.

3.3.10 Plant communities

The hedgerows on site may qualify as habitats of principal importance. Habitats of principal importance are material planning considerations and are afforded protection under the Environment (Wales) Act 2016.

3.3.11 Invasive species

No invasive species were recorded onsite, however three-cornered garlic *Allium triquetum* (Target Note 2) was observed offsite next to the adjacent stream and public footpath.

3.3.12 Reptiles

Several records of native reptiles were returned from within 2km of the site including, slow worm, grass snake, adder, and common lizard. The closest record was of a common lizard approximately 1.1km to the northeast of the site.

The site is almost entirely comprised of short sward managed/grazed modified grassland providing no substantial foraging or sheltered commuting opportunities. While the hedgerows, small woodland and field margins may offer some limited opportunities the majority of site is poor quality habitat for reptiles.

Due to the distance of returned records, the poor suitability of onsite habitat and lack of connectivity to any suitable wider habitats, it is considered highly unlikely that reptiles are present onsite.

3.3.13 White-clawed crayfish

No records of white-clawed crayfish were returned from within 2km of the site and they are not considered to be present within nearby watercourses.

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.

Coed Y Gopa SSSI
Is the closest statutorily protected site at approximately 1.5km to the west of the site comprising an extensive mixed woodland, calcareous grassland and historical lead mines that supports a sizeable lesser horseshoe (LHS) roost of between 50 – 130 individuals. The BCT guidelines stipulate that the Core Sustenance Zones for LHS are 2km from the roost, as the site is approximately 1.5km away it falls within this zone (Bat Conservation Trust 2020).

However, it should be considered that this distance is direct, as the site is separated from the SSSI by the large urban area of Abergele, and LHS are a light sensitive species, the actual commuting distance from the roost is likely to be closer to 1.8 – 2 km or more. Additionally, the habitats onsite are of minimal quality for bats, the grasslands onsite comprise poor quality, short sward, managed modified grassland and will not support significant invertebrate communities. The treelines, hedgerows and scattered trees onsite may provide higher quality foraging opportunities, though their main value is as dark commuting corridors across the local landscape. Given the distance and the quality of onsite habitats, it is considered that the measures outlined below will be sufficient to ensure the proposed development has a negligible effect on Coed Y Gopa SSSI or its associated LHS colony.

Construction & operational impacts

Without appropriate mitigation, the use of inappropriate lighting or removal of linear features could potentially sever commuting routes across the local landscape and negatively impact the designated site and the LHS colony.

Mitigation

Where possible, trees, woodland, treelines and hedgerows should be retained within the landscaping proposals. Where removal is necessary, losses should be compensated for through native hedge or tree planting as part of a detailed landscaping scheme.

A wildlife friendly lighting plan should be designed and implemented to avoid light spill onto retained linear commuting features to ensure connectivity across site for light sensitive species.

Liverpool Bay SPA

Lying just offshore, the Liverpool Bay area is designated for its bird assemblage. The named qualifying species are predominantly pelagic birds not associated with the onsite habitats. However, the designation covers the entire assemblage, which doubtless includes a range of wading and wintering bird species. There remains some, albeit limited, potential for onsite habitats to be functionally linked to the SPA and used by this assemblage. However, the onsite grasslands provide poor-quality foraging habitat, and the Abergele Grazing Marsh to the northeast offers substantially higher-quality habitat for wintering birds, further reducing the likelihood that the site is used by the qualifying species. Therefore, a suite of wintering bird surveys will be undertaken to establish how the site is used by wintering birds (if at all).

The closest non-statutorily designated site is Pwll Tan-y-bryn, a pond located 75m south of the site. However, this pond is no longer visible on aerial imagery and appears to have been cleared as part of the nearby development. No issues are anticipated given the distance and nature of the development.

4.1.2 Trees, treelines and hedgerows

There are a number of trees, treelines and hedgerows on site which vary in condition, maturity, and diversity. Including several trees which are large and showing veteran features and may indeed fall under that classification.

Construction impacts

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

Mitigation

A BS5837 arboricultural survey should be undertaken to catalogue the location and species of the trees on site. Hedgerows and trees, in particular those forming a linear feature across the site or the older mature/veteran oaks, should be retained where possible. RPAs should be established and implemented around the trees and hedgerows which are to be retained. Where necessary, these areas should be adequately protected by appropriately designed protective barriers and ground protection throughout the entire development process.

Compensation

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

Operational impacts

Care should be taken to avoid light spill onto retained woodland, trees and hedgerows through the implementation of a wildlife friendly lighting plan.

4.1.3 Woodland

There is an area of broadleaved woodland along the southern boundary of the northwest field. The woodland is low quality having large sections recently cleared, and subject to regular disturbance.

Construction impacts

The woodland is proposed to be retained but could be permanently further damaged, altered and / or disturbed by the construction activities.

Mitigation

The woodland should be adequately protected during the construction activities on site. It should be fenced off to protect the root systems of the remaining trees within, and no contractors should access the woodland 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 in the woodland and no temporary or permanent external lighting should be directed onto the woodland.

Compensation

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

Operational impacts

As the woodland already experiences frequent disturbance due to its location adjacent to a park and houses, it is considered unlikely that additional recreational activity associated with the development would result in any further meaningful impact on this habitat.

4.1.4 Watercourse

A small off-site stream runs adjacent to the site boundary and bisects the northern fields before flowing into a culvert to the north.

Construction impacts

Nearby construction activities could result in pollution input into the watercourse. Additionally, inappropriate lighting could degrade the aquatic habitat.

Mitigation

A 5m buffer should be retained throughout the construction phase (where possible). Industry standard pollution prevention measures should be adhered to and consideration should be taken within the lighting plan to reduce light spill onto the stream and nearby habitats.

Operational impacts

No operational impacts are envisaged.

4.2 Species

4.2.1 Amphibians

Seven records of great crested newts were returned within 2km of the site, the closest is located approximately 1.9km to the south. Numerous other records of common amphibian species were returned. Given the distance of records, the lack of suitable breeding ponds and

quality of onsite habitat, it is considered that GCN are absent from site and the surrounding area.

The majority of the site comprises poor-quality modified grassland, offering limited foraging, sheltering, or commuting opportunities for amphibians. However, the hedgerows, woodland and field margins may provide some suitable habitat, and an off-site watercourse could potentially be used for breeding, although it is of poor quality for breeding amphibians.

Construction impacts

Potential impacts include direct harm, injury and / or death to individuals and the loss of suitable habitat.

Mitigation and compensation

The following RAMs should be implemented during the construction phase of the development. These measures will safeguard common amphibian species in the event they are present at the time of the proposed works.

- Prior to clearance, all areas of grassland within the working area are to be mown / to have a sward height of 5-10cm. This mowing is to be undertaken at least 24 hours prior to the start of clearance works in order to give any amphibians present time to move off site of their own accord. The mown / cleared areas will then be maintained with a short sward below 10cm until the works on site have been completed.

- Any potential hibernacula created on site during the construction works are to be removed by hand. If hibernacula cannot be removed by hand e.g., due to its weight, it will be lifted vertically opposed to being dragged horizontally and the area will be checked immediately afterwards for sheltering wildlife. Hibernacula could include piles of brash, deadwood, rubble, bricks, debris, brash piles etc.

- No steep-sided excavations are to be left open overnight. If this is not feasible a plank should be left within the excavation at a 45-degree angle to allow trapped wildlife to escape. Any open excavations should be checked for trapped wildlife in the morning prior to start of works on site.

- All open excavations are to be checked for trapped wildlife immediately prior to backfilling.

- If amphibians (excluding GCNs) are found on site during the construction phase of the development, they will be transported by hand to a suitable area of retained habitat outside of the working area. Suitable habitats include the base of dense scrub or other sheltered vegetated areas.

- In the unlikely event that GCNs are discovered within the working area, works must cease immediately and UES (or a suitably qualified ecologist) consulted for advice on how to proceed. This may include the requirement to secure a European Protected Species Licence from Natural Resources Wales.

The above measures will also safeguard reptiles in the highly unlikely event they are present on site at the time of works.

Operational impacts

No operational impacts are envisaged.

4.2.2 Badgers and hedgehogs

Evidence of badger activity observed on site include a sett that shows signs of current use and is considered likely to either have been or currently used as, a main sett. Additionally numerous other field sites were observed across site, mainly associated with the hedgerows and site boundaries.

Construction impacts

Construction activities without mitigation could result in direct harm to badgers and hedgehogs, disturbance, sett collapse, sett abandonment and loss of foraging and commuting habitats.

Mitigation

If the development proposals can retain a 30m buffer zone in which no heavy machinery or groundworks will take place around the potential main badger sett. As well as incorporate connectivity for badgers across site and incorporate the buffer into the landscaping proposals, the development may proceed without the requirement for further surveys or the need for temporarily or permanently sett closure.

However, should proposals necessitate works within this buffer zone it is likely that the sett will need to be either temporarily or permanently closed to facilitate the development. To inform the sett closure application, a badger activity survey should be undertaken to assess the usage of the sett; this survey can be undertaken at any time of year. The survey involves the monitoring of the sett to determine the level of activity, the number of badgers using the sett and classify the type of sett (main, annexe, subsidiary or outlier). The survey will also monitor how badgers are using the site in order to inform any necessary mitigation or compensation measures. Natural Resources Wales aims to process all applications within 30 working days. Sett closures can only be undertaken between July – November inclusive, to avoid periods in which cubs may be present within the sett.

Given the levels of activity and numbers of burrows observed within the sett, it is considered likely to be an active main sett, as such an artificial sett will likely need to be constructed to compensate for the closure of the main sett. A badger method statement will likely need to be prepared to detail the necessary mitigation, compensation and monitoring requirements and outline the procedures and specifications for the creation of an artificial sett (prior to any sett closure), licence compliance, sett closure procedures, and habitat enhancement for badgers.

Regardless of whether the sett is retained or closed, the following reasonable avoidance measures (RAMs) should be implemented to protect badgers in the event that they are present 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°.

- Any pipes will be stored with caps on to prevent entry by badgers, hedgehog 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 badgers, hedgehogs or other animals.

- Excavations will be checked before they are backfilled to ensure that no animals have become trapped.

- Any potential refugia on site or 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.

Operational impacts

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

Mitigation

Any lighting installed on site should be designed to avoid overspill onto the badger sett and retained or created areas of high-quality habitat, specifically the retained woodland, hedgerows and offsite habitats. Guidance on external lighting design is provided at Appendix 6.

To allow continued use of the site by badgers and to ensure commuting routes aren't blocked, fences installed on site should be designed to allow passage of both species. 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 creation of suitability sized holes.

The above measures will also protect hedgehogs should they be present on site at the time of works, as well as safeguard their key habitats and maintain connectivity across site.

4.2.3 Bats

Although a detailed GLTA was not undertaken during the preliminary ecological appraisal, the woodland and scattered trees have the potential to support roosting bats.

Construction impacts

If bats are roosting within trees during site clearance or arboricultural 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

If the development proposals change, and any trees are to be felled or subject to arboricultural works, then a ground level tree assessment will be required to determine the suitability of the trees to support roosting bats.

This ground level assessment can be undertaken any time of year. If any trees due to be adversely impacted are found to have the potential to support roosting bats, further aerial tree inspections should be conducted to fully assess and classify the features. If any potential roosting features are found to still be suitable following the inspections, further aerial inspections may be required during the bat survey season (May to August inclusive).

The survey results of the tree inspections will need to be submitted as part of the planning application, and will inform further mitigation or compensation measures, if required. It should be noted that if bats are found to be roosting in trees that are to be impacted by the proposals, these further measures may include an application for a European protected species (EPS) mitigation licence from Natural Resources Wales.

Operational impacts

Inappropriate external lighting in use during the construction or operational phases of the development has the potential to degrade foraging habitats, sever commuting corridors and reduce the suitability of roosting sites.

Mitigation

No detailed lighting proposals are as yet available to UES, however, any lighting installed on site should be designed to avoid overspill onto retained or created areas of higher quality habitat that could be used by foraging, commuting or roosting bats, specifically the retained woodland, hedgerows, and scattered trees. Guidance on external lighting design is provided at Appendix 6.

Enhancements

The provision of bat boxes as part of the development proposals would increase the roosting opportunities for bats on site but would also increase the ecological value of the site. Bat boxes that could be used on site include:

- Schwegler 1FF box (affixed to trees or buildings)
- Schwegler 2F box (affixed to trees or buildings)
- Schwegler 1FW hibernation box (affixed to trees)
- Schwegler 2FR bat tube (installed in connected pairs or threes into the external walls of buildings)

Bat boxes affixed to trees should be fitted at a height of between 5-6m metres on a southerly aspect.

No detailed lighting proposals are as yet available to UES, however care must be taken when installing any new lighting to ensure that light spillage onto the bat boxes is minimised. This may require the use of cowling or relocation of the bat box or lighting.

It should be noted that once bat inhabits a bat box, they may only be disturbed by a licensed bat worker.

4.2.4 Birds

The areas of woodland, hedgerows, mixed scrub, and scattered trees will provide opportunities for breeding birds.

Construction impacts

Tree felling, arboricultural works and vegetation removal 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 and vegetation removal (including enabling 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 and works need to take place between this period, a targeted breeding bird nest scoping survey should be conducted by a suitably qualified ecologist immediately prior to the works, or an ecological clerk of works appointed to oversee the works.

Compensation and enhancement

If extensive areas of vegetation are to be removed, 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.

Landscaping can also be used to promote biodiversity through the appropriate design of habitats and creating habitat mosaics, which promote natural linkages and hence the dispersal of target species. Principles and landscaping ideas beneficial to wildlife and relevant to this site include:

- Planting of berry and nut bearing shrub species to encourage winter birds
- Planting and management of shrubs which develop a mosaic of structures to support breeding birds
- Use of nectar bearing flowers to encourage invertebrates (such as bees, flies, beetles and butterflies)

Species are to be native, of local provenance or to have a proven benefit to biodiversity. Further information can be found at Appendix 7 – Landscape design for birds.

Compensation for the loss of nesting habitat and the enhancing of the nesting habitat on site can also be provided through the provision of bird nest boxes. Bird boxes that could be used on site include:

- Schwegler 1B nest box (affixed to trees)
- Schwegler 1SP sparrow terrace (affixed to building below the eaves)
- Schwegler 2H robin nest box (affixed to trees)
- Schwegler 3S starling nest box (affixed to trees or buildings)
- Schwegler 1MR Avianex box (affixed to trees or buildings)
- Manthorpe swift nest brick (incorporated into the external walls of buildings)

The bird boxes should be sited at a minimum height of three metres. Unless there are trees which shade the box during the day, the boxes should be oriented between north and east, thus avoiding strong sunlight and the wettest winds.

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.

5 CONCLUSION

The survey area has an area of approximately 15.1ha and mainly comprises poor quality modified grassland as well as species rich and other native hedgerows, broadleaved woodland, scattered trees and areas of mixed scrub and bramble scrub.

The preliminary ecological appraisal has highlighted potential issues with the following ecological receptors on or adjacent to site: designated sites, trees, woodland, watercourses, amphibians, badgers, bats, birds, and hedgehogs. 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).

DEFRA (2019). *MAGIC* [online]. Available at: http://magic.defra.gov.uk/.

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

BCT (2020) Core Sustenance Zones and habitats of importance for designing Biodiversity Net Gain for bats. Bat Conservation Trust, London.

Welsh Government (2021). Planning Policy Wales: Edition 11. Welsh Government, Cardiff

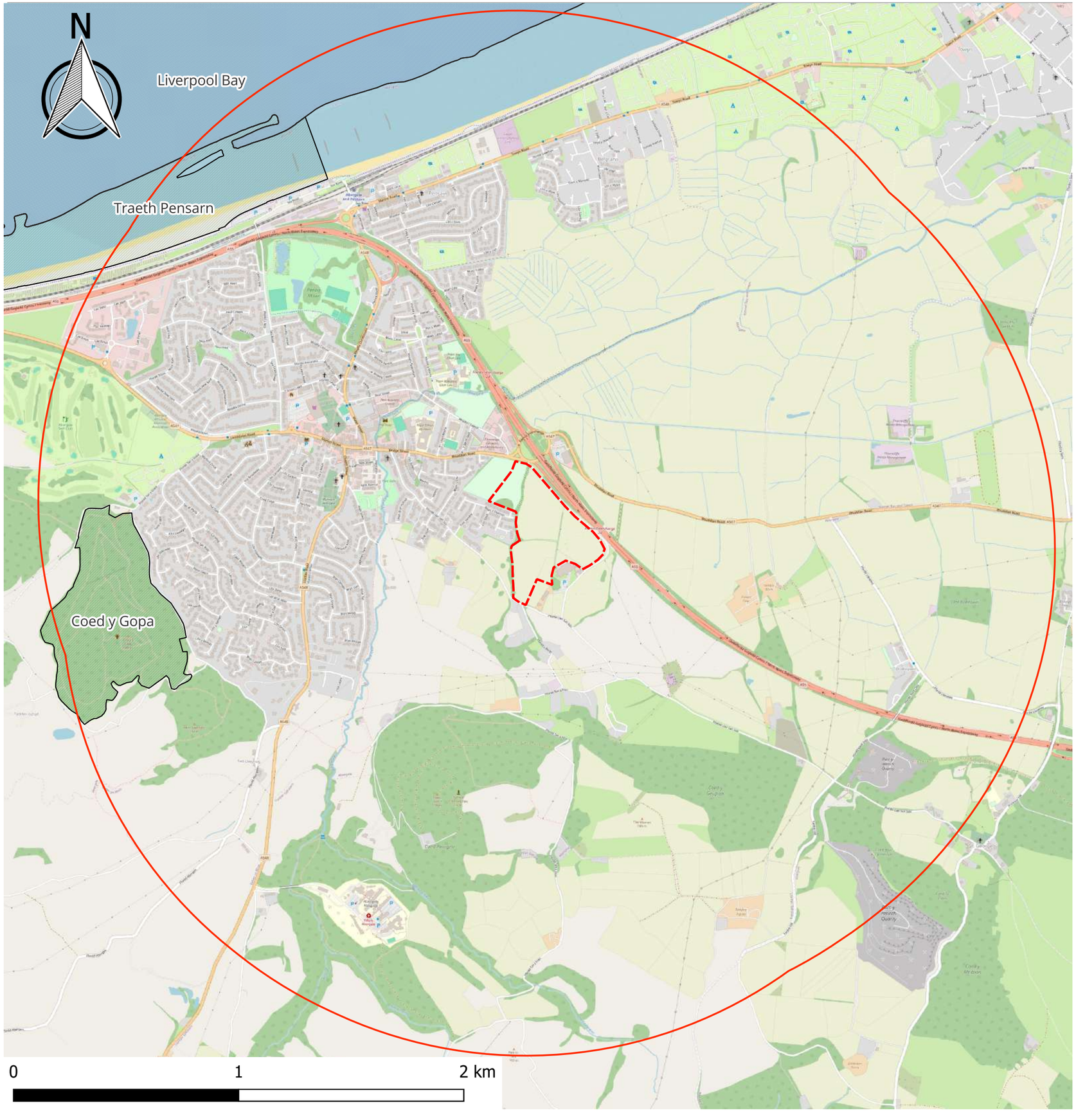
UKHab Ltd (2023). *UK Habitat Classification Version 2.0.* Available at: *https://www.ukhab.org.uk).*

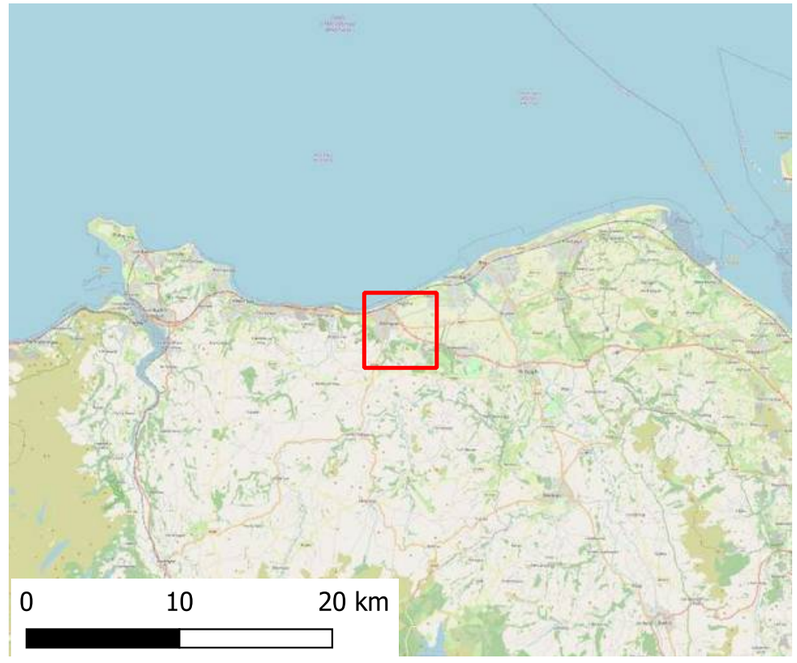
APPENDICES

Appendix 1 – Desk study

Statutory Designated Sites (2km)

Site: Land off St George's Road, Abergele
NGR: SH 95478 77127
Author: Osian Shirley
Date: 08/01/2026





Key

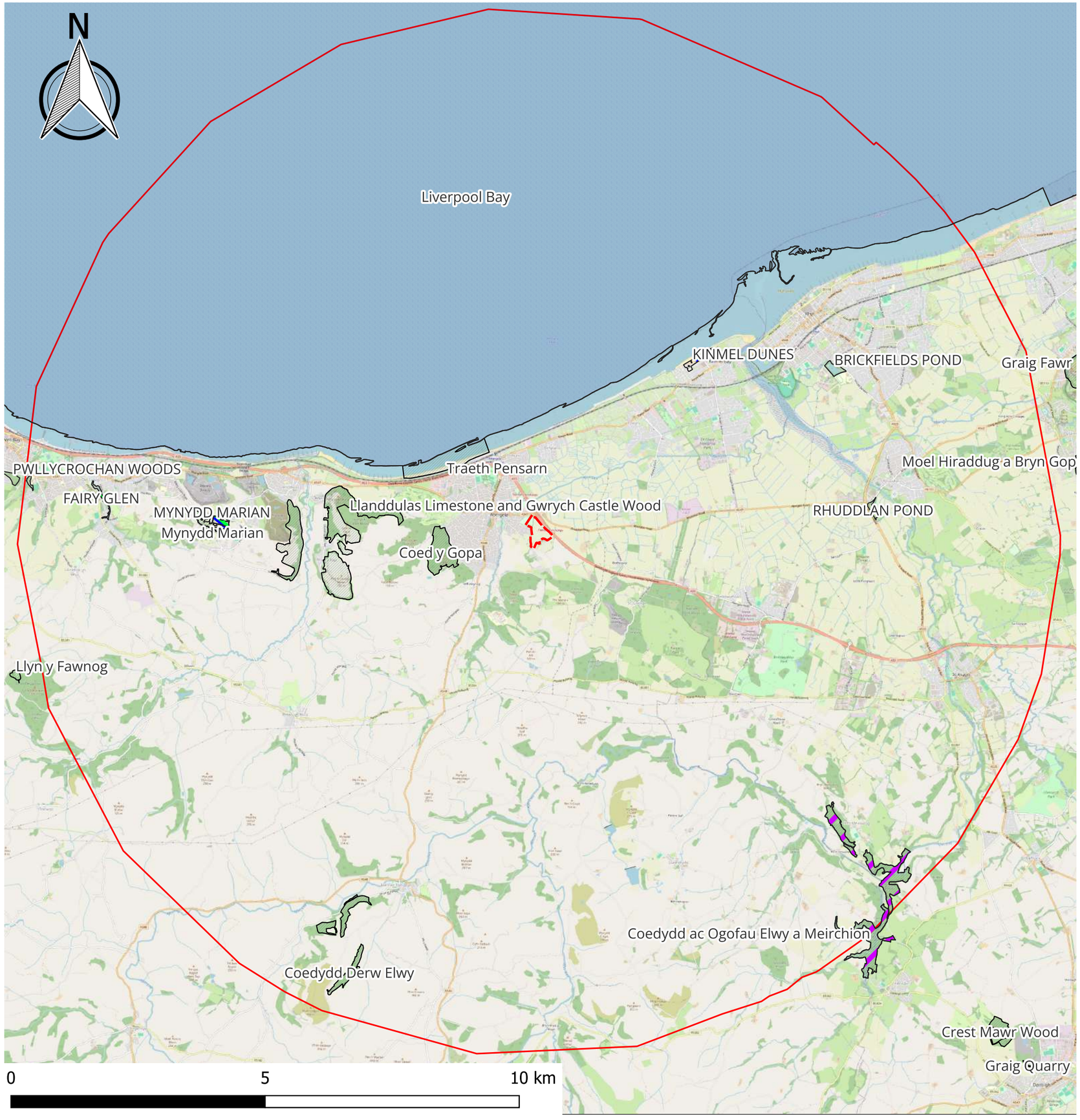
- Local Nature Reserve
- Site of Special Scientific Interest
- Special Area for Conservation
- Special Protection Area
- Ramsar Site
- National Nature Reserve
- Site Boundary
- 2km Buffer

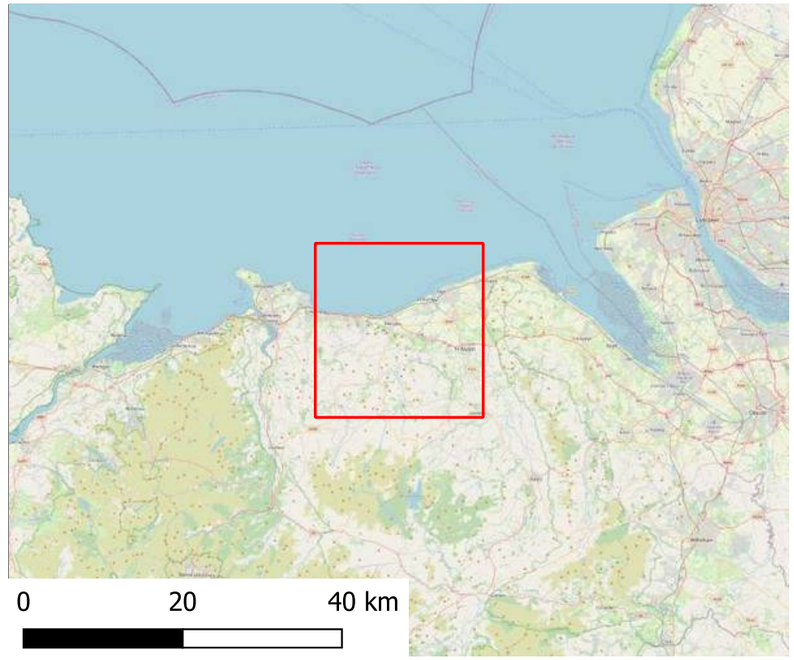
MAP DATA FROM ©2026 GOOGLE, IMAGERY FROM ©2026 GOOGLE

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.

Statutorily Designated Sites (10km)

Site: Land off St George's Road, Abergele
NGR: SH 95454 77204
Author: Osian Shirley
Date: 09/12/2025





Key

- Local Nature Reserves
- Sites of Special SCientific Interest
- Special Areas of Conservation
- Special Protection Areas
- Ramsar Sites
- National Nature Reserves
- Site boundary
- 10km buffer

MAP DATA FROM ©2025 GOOGLE, IMAGERY FROM ©2025 GOOGLE

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.

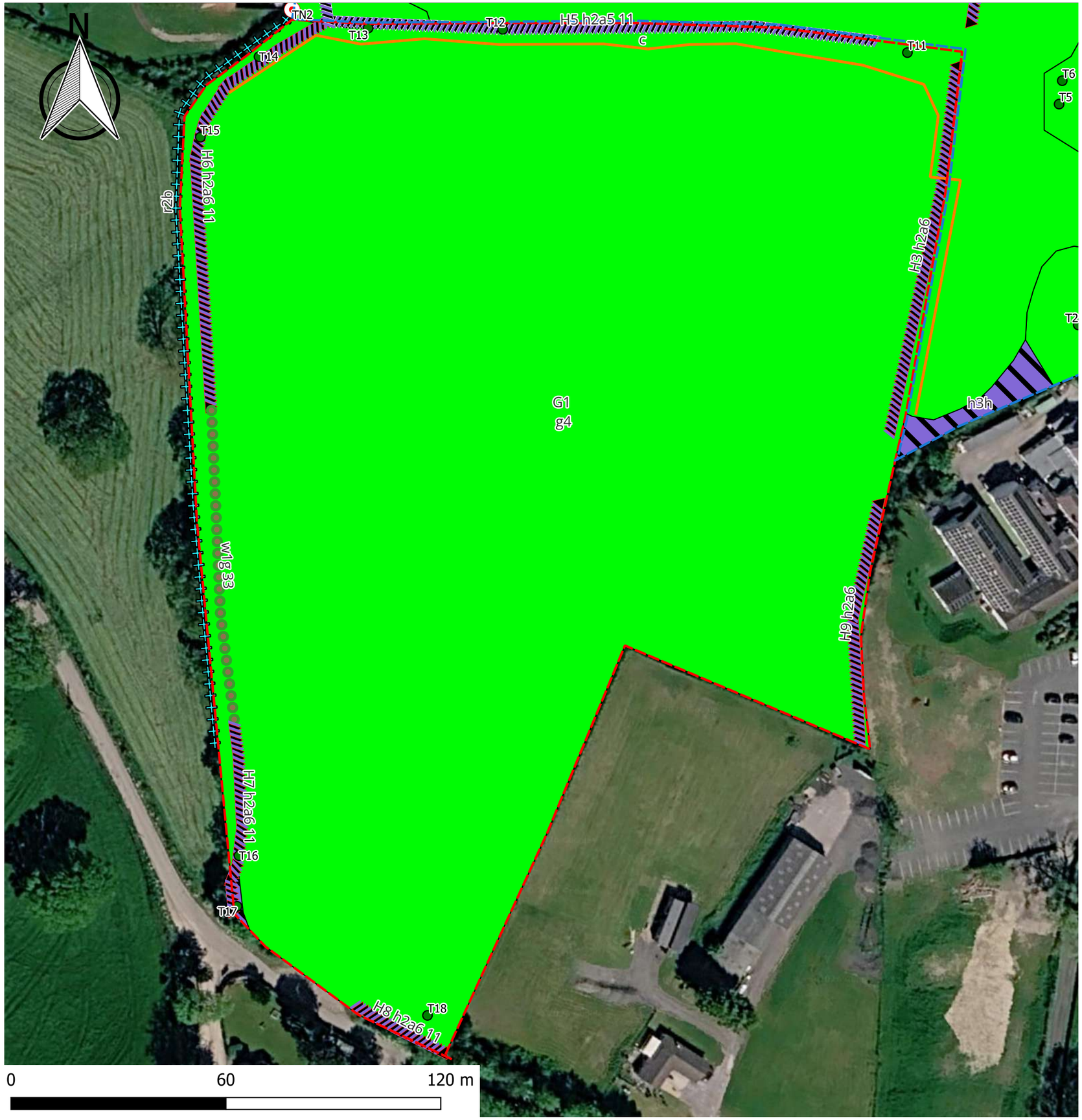
Appendix 2 – UK Habitat Classification Plan

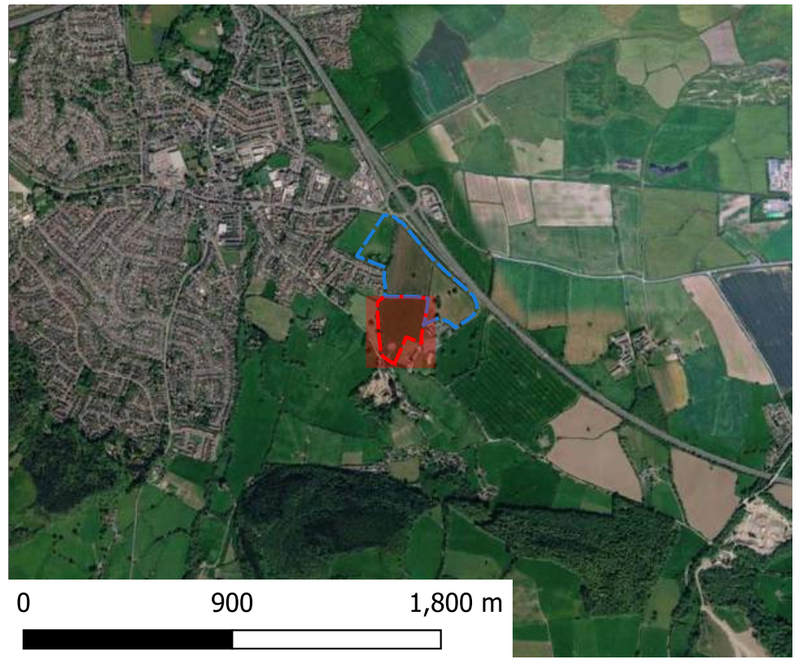
Target Note 1 – Large pile of dead wood

Target Note 2 – Three-cornered garlic

UK Habitat Classification Plan - Southern Field

Site: Land off St George's Road, Abergele
NGR: SH 95462 77125
Author: Marley Hazael
Date: 23/10/2026





Key

- g4 - modified grassland
- w1g - other broadleaved woodland
- h2a5 - species-rich native hedgerow
- h2a6 - other native hedgerow
- h3h - mixed scrub
- Mammal track
- r2b - other rivers and streams
- 32 - scattered trees
- Target Notes
- Development boundary
- Survey boundary

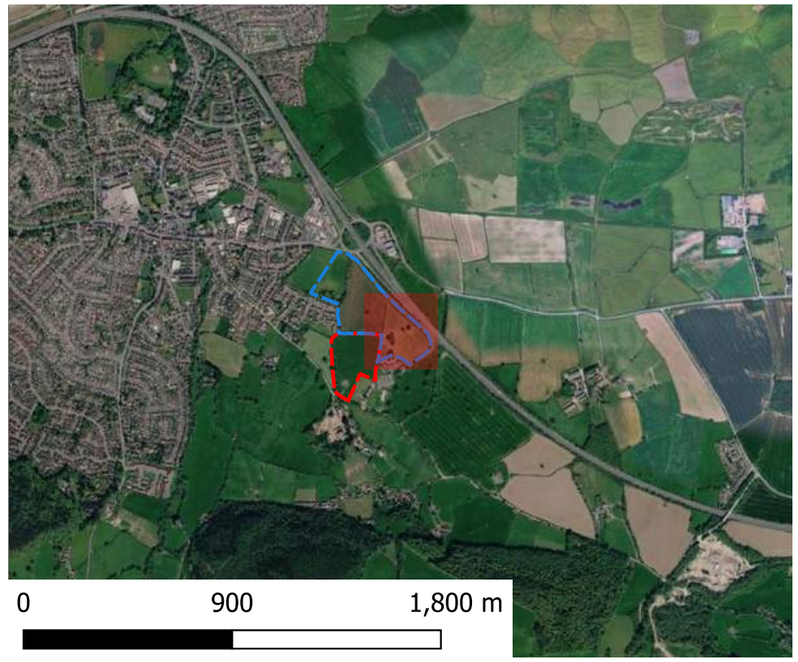
MAP DATA FROM ©2026 GOOGLE, IMAGERY FROM ©2026 GOOGLE

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.

UK Habitat Classification Plan - Eastern Field

Site: Land off St George's Road, Abergele
NGR: SH 95462 77125
Author: Marley Hazael
Date: 23/10/2026





Key

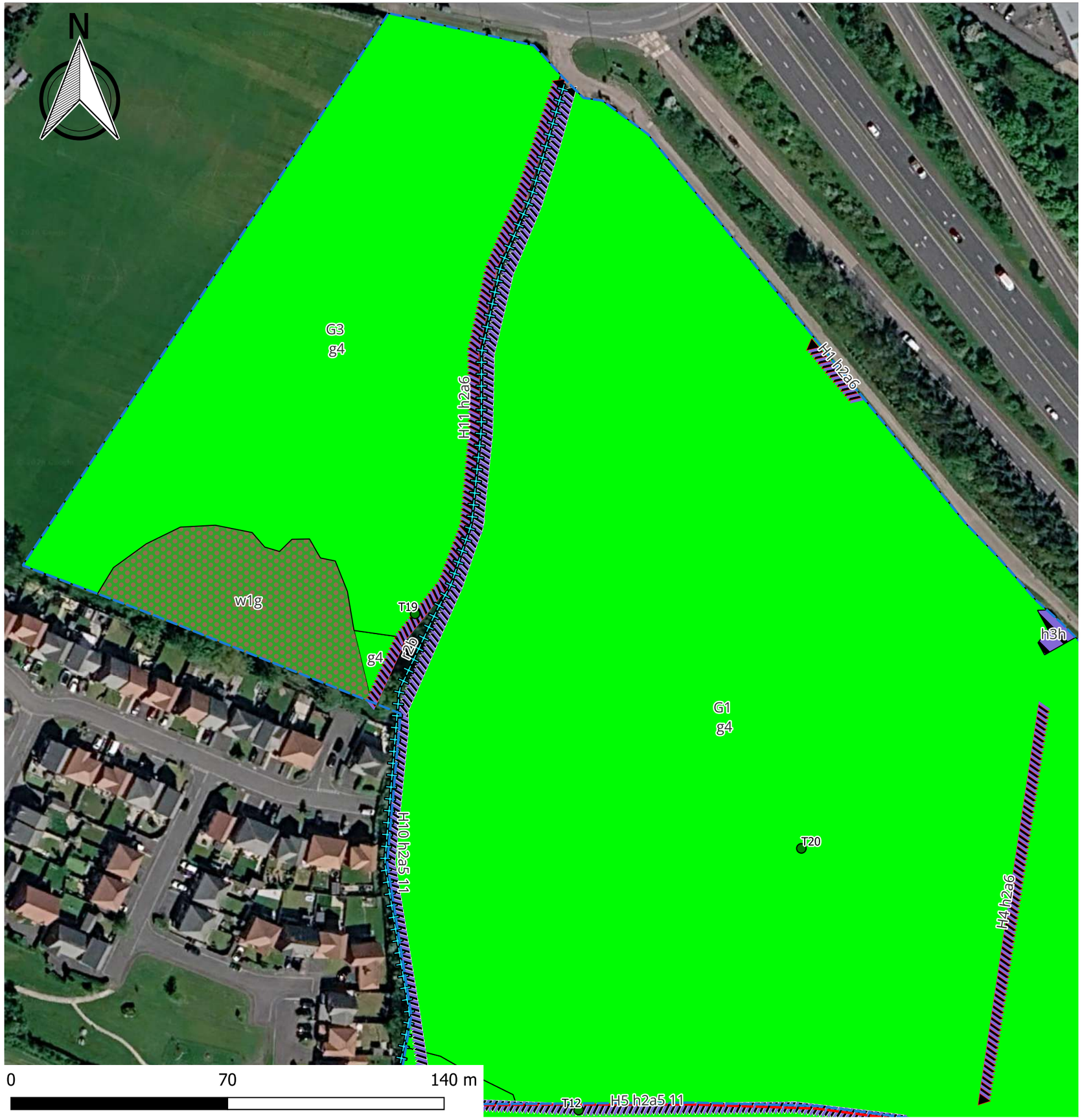
- g4 - modified grassland
- w1g - other broadleaved woodland
- h2a5 - species-rich native hedgerow
- h2a6 - other native hedgerow
- h3d - bramble scrub
- h3h - mixed scrub
- Mammal track
- 32 - scattered trees
- Target Notes
- Development boundary
- Survey boundary

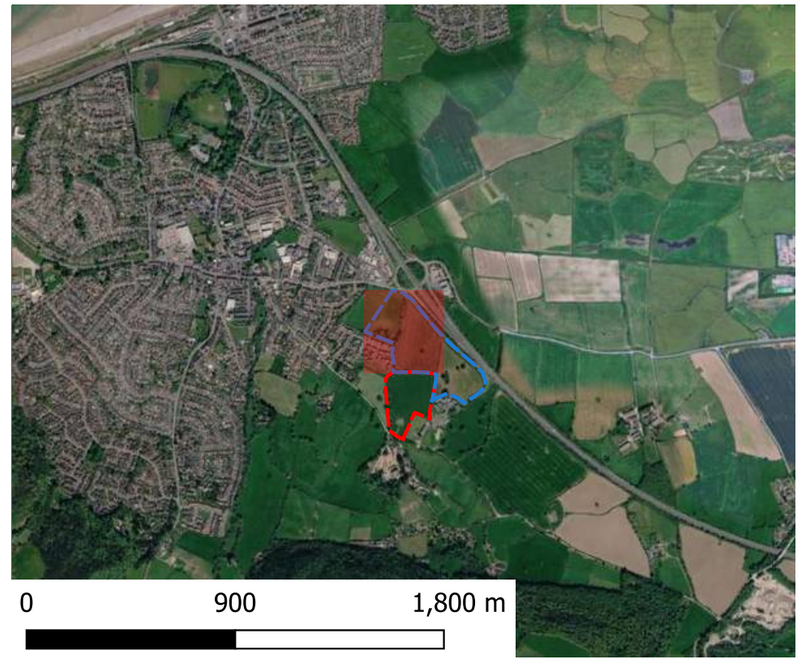
MAP DATA FROM ©2026 GOOGLE, IMAGERY FROM ©2026 GOOGLE

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.

UK Habitat Classification Plan - Northern Field

Site: Land off St George's Road, Abergele
NGR: SH 95462 77125
Author: Marley Hazael
Date: 23/10/2026





Key

- g4 - modified grassland
- w1g - other broadleaved woodland
- h2a5 - species-rich native hedgerow
- h2a6 - other native hedgerow
- h3h - mixed scrub
- Mammal track
- r2b - other rivers and streams
- 32 - scattered trees
- Target Notes
- Development boundary
- Survey boundary

MAP DATA FROM ©2026 GOOGLE, IMAGERY FROM ©2026 GOOGLE

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


Land off St George's Road, Abergele
Close Aerial Photograph
Site Boundary
Survey Boundary
Map data © 2025 Google, Imagery © 2025 Google


Land off St George's Road, Abergele
Wide Aerial Photograph
Site location
Map data © 2025 Google, Imagery © 2025 Google

Appendix 4 – Photographs



Photograph 1 – Grassland 1, as seen in the central northern field.



Photograph 2 – Hedge 1, a short length of intensely managed blackthorn hedgerow along the track road at the northwest boundary of the central northern field.



Photograph 3 – A small patch of mixed scrub at the northern point where the eastern field meets the central northern field.



Photograph 4 – Hedge 2, a stretch of hedgerow at the southeast boundary of the eastern field dominated by hawthorn.



Photograph 5 – A small section of bramble scrub at the southern boundary of the eastern field.



Photograph 6 – Tree 1 a semi-mature oak (left) and Tree 2 (right) a mature (possibly veteran) oak, located at the south of the eastern field.



Photograph 7 – Trees 2 (left) and 3 (right), a mature and semi-mature oak, respectively.



Photograph 8 – A section of Grassland 2 with scattered scrub.



Photograph 9 – Hedge 3, a native hedge dominated by hawthorn, separating the eastern and southern fields.



Photograph 10 – Mature and semi-mature oaks, Trees 7, 6, 5, and 4 (left to right).



Photograph 11 – A large pile of dead wood (Target Note 1).



Photograph 12 – Trees 8-10 (left to right), mature oaks.



Photograph 13 – Hedge 4, a native hedgerow comprised of blackthorn, hawthorn, elder, and rose, separating the eastern and central northern fields.



Photograph 14 – Tree 11, a mature oak at the east end of Hedge 5.



Photograph 15 – [redacted], a species rich native hedgerow with trees separating the southern and central northern fields. T12, a mature oak, pictured (left).



Photograph 16 – A badger latrine found on the northern side of [redacted].



Photograph 17 – An example of badger burrow found within [redacted].



Photograph 18 – A badger snuffle hole found on the northern side of [redacted].



Photograph 19 – A section of Grassland 2, at the southwest corner of the central field. T13, a mature oak (left).



Photograph 20 – The pathway that bisects the site, also pictured is the stream that runs adjacent to the path, Hedge 10 (right), and Hedge 11 (left), and three-cornered garlic seen in the foreground (left) (Target Note 2).



Photograph 21 – Hedge 6, a native hedge with trees containing T14 (a semi-mature oak) and T15 (a semi-mature ash). The main badger commuting route on site crosses this hedge through a disused metal gate.



Photograph 22 – A line of trees connecting Hedge 6 and Hedge 7 at the western boundary of the southern field.



Photograph 23 – Hedge 7, a native hedge with trees at the southwestern boundary of the southern field. T16, a mature sycamore, pictured (left).



Photograph 24 – A small area of mixed scrub at the southwest corner of the southern field. T17, a semi-mature sycamore, pictured (right).



Photograph 25 – Hedge 8, a short native hedge with trees containing T18, a mature oak, at the southern boundary of the southern field.



Photograph 26 – Hedge 9, a native hedge at the western boundary of the southern field.



Photograph 27 – An example of badger burrow found south of [redacted] within the field.



Photograph 28 – An area south of [redacted] containing a large number of badger burrows associated with the main sett. Mammal paths can also be seen.



Photograph 29 – Section of Grassland 2, adjacent to the small woodland.



Photograph 30 – A section of Grassland 3 at the south of the northwest field. Hedge 11, which contains T19, a semi-mature oak, pictured (right).



Photograph 31 – An area of broadleaf woodland south of Grassland 3.



Photograph 32 – The centre of the woodland, area of felling and piles arisings.



Photograph 33 – Arisings from felling works within the woodland, which may provide a refugia.



Photograph 34 – Northern area of Grassland 3.



Photograph 35 – The stream that runs between the two sections of the site is culverted at the northern end.



Photograph 36 – Tree 20, a semi-mature oak in the central northern field.



Photograph 37 – Conditions within the small stream.

Appendix 5 – Botanical species list

Scientific name	Common name
Alnus glutinosa	Alder
Smyrnium olusatrum	Alexanders
Fraxinus excelsior	Ash
Solanum dulcamara	Bittersweet
Dioscorea communis	Black bryony
Prunus spinosa	Blackthorn
Rubus fruticosus agg.	Bramble
Helminthotheca echioides	Bristly oxtongue
Rumex obtusifolius	Broad-leaved dock
Sinapis arvensis	Charlock
Galium aparine	Cleavers
Dactylis glomerata	Cock's-foot
Echinochloa crus-galli	Cockspur
Agrostis capillaris	Common bent
Stellaria media	Common chickweed
Elytrigia repens	Common couch
Dryopteris filix-mas	Common male-fern
Cerastium fontanum	Common mouse-ear
Urtica dioica	Common nettle
Rumex acetosa	Common sorrel
Anthriscus sylvestris	Cow parsley
Salix fragilis	Crack willow
Ranunculus repens	Creeping buttercup
Potentilla reptans	Creeping cinquefoil
Cirsium arvense	Creeping thistle
Rumex crispus	Curled dock
Geranium dissectum	Cut-leaved crane's-bill
Bellis perennis	Daisy
Taraxacum officinale agg.	Dandelion
Rosa canina	Dog rose
Mercurialis perennis	Dog's mercury
Sambucus nigra	Elder
Arrhenatherum elatius	False oat-grass
Brachypodium sylvaticum	False wood-brome
Ulmus minor	Field elm
Helosciadium nodiflorum	Fool's watercress
Fumaria sp.	Fumitory species
Alliaria petiolata	Garlic mustard
Salix caprea	Goat willow
Salix cinerea	Grey willow
Glechoma hederacea	Ground ivy
Senecio vulgaris	Groundsel
Asplenium scolopendrium	Hart's-tongue fern
Crataegus monogyna	Hawthorn
Corylus avellana	Hazel
Calystegia sepium	Hedge bindweed
Oenanthe crocata	Hemlock water dropwort
Geranium robertianum	Herb-Robert
Heracleum sphondylium	Hogweed
Ilex aquifolium	Holly
Lonicera periclymenum	Honeysuckle
Hyacinthoides × massartiana	Hybrid bluebell
Hedera helix	Ivy
Polygonum aviculare	Knotgrass
Ficaria verna	Lesser celandine
Ranunculus acris	Meadow buttercup
Lathyrus pratensis	Meadow vetchling
Salix viminalis	Osier willow
Quercus robur	Pedunculate oak
Lolium perenne	Perennial rye
Populus sp.	Poplar species
Sonchus asper	Prickly sow-thistle
Raphanus sativus	Radish
Festuca rubra	Red fescue
Plantago lanceolata	Ribwort plantain
Rosa sp.	Rose species
Quercus petraea	Sessile oak
Capsella bursa-pastoris	Shepherd's purse
Betula pendula	Silver birch
Veronica filiformis	Slender speedwell
Sonchus oleraceus	Smooth sow-thistle
Juncus effusus	Soft rush
Polystichum setiferum	Soft shield-fern
Cirsium vulgare	Spear thistle
Cerastium glomeratum	Sticky mouse-ear
Iris foetidissima	Stinking iris
Euphorbia helioscopia	Sun spurge
Acer pseudoplatanus	Sycamore
Trifolium repens	White clover
Ligustrum vulgare	Wild privet
Epilobium sp.	Willowherb species
Geum urbanum	Wood avens
Rumex sanguineus	Wood dock
Holcus lanatus	Yorkshire fog

Appendix 6 – 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.

Taken from the Bat Conservation Trust

Appendix 7 – Landscape design for birds

SPECIES	F	SIZE				LOCATION			SOIL MOISTURE	BENEFITS TO WILDLIFE
		T	S	M	L	H	W	Su/Sh		
TREES										
Alder*	D				Y			Su	M	Seed food for birds
Beech*	D			Y	Y	Y		Su	D	Seed food for birds
Birch*	D		Y	Y	Y			Su	D	Seed food for birds
Bird cherry *	D			Y	Y			Su	D	Food for birds, flowers attract insects
Crab apple*	D		Y	Y	Y			Su	D	Food for birds, flowers attract insects
English oak*	D				Y			Su	D	Food for birds, insects and mammals, nesting sites
European larch*	D				Y			Su	M	Seed food for birds
Holly*	E		Y	Y	Y	Y		Su	D	Fruits eaten by birds, food plant of holly blue butterfly
Juniper*	E							Su	D	Shelter and nest sites, fruits eaten by thrushes
Lime*	D				Y	Y		Su	D	Seed food for birds
Rowan*	D			Y	Y			Su	D	Fruits eaten by birds
Scot's pine*	E				Y			Su	D	Seed food for birds
Swedish whitebeam	D		Y	Y	Y			Su	D	Food for birds, flowers attract insects
Wild cherry*	D			Y	Y			Su	D	Food for birds, flowers attract insects
Yew*	E		Y	Y	Y	Y		Su	D	Food for birds, nesting sites
SHRUBS										
Barberry	B	Y	Y	Y	Y	Y		Su	D	Good shelter and nest cover for birds, berries may provide food
Blackthorn*	D			Y	Y	Y		Su	M	Attracts insects, food for birds, nesting sites
Buckthorn*	D			Y	Y	Y		Su/Sh	D	Food plant of brimstone butterfly, fruits eaten by birds
Butterfly bush	E	Y	Y	Y	Y	Y		Su	D	Attracts insects
Californian lilac	E			Y	Y	Y	Y	Su	D	Flowers attractive to various insects
Dogwood*	D			Y	Y	Y		Su	D	Food for birds, winter stem colour
Elder*	D		Y	Y	Y	Y		Su	D	Food for birds
Escallonia	E			Y	Y	Y		Su	M	Flowers attractive to various insects, tolerant of salt - good in coastal areas
Field maple*	D		Y	Y	Y	Y		Su	D	Good source of insect food for birds
Firethorn	E	Y	Y	Y	Y	Y	Y	Su	D	Berries popular with many bird species
Flowering current	D		Y	Y	Y			Su	D	Early flowers attractive to insects
Forsythia	D		Y	Y	Y	Y	Y	Su	D	Early flowers attractive to insects
Garria	E	Y	Y	Y	Y		Y	Su	D	Winter catkins, early cover for nesting birds
Goat willow*	D	Y	Y	Y	Y			Su	D	Catkins attractive to bees, good source of insect food for birds
Gorse*	E			Y	Y	Y		Su	D	Early flowers attractive to insects, good protection for birds
Rhytismatales	E			Y	Y	Y		Su	D	Good cover, tolerant of salt - good in coastal areas
Guelder-rose*	D			Y	Y	Y		Su	D	Food for birds & insects
Hawthorn*	D		Y	Y	Y	Y		Su	D	Flowers attractive to insects, fruits eaten by birds, good shelter and nesting site
Hazel*	D	Y		Y	Y	Y		Su	D	Food for birds, insects and mammals, nesting sites
Laurel-leaved vibumum	E		Y	Y	Y			Su	D	Early flowers good for insects, good cover for birds

Lavender	E	Y	Y	Y	Y	Y		Su	D	Flowers attract many insects, seeds popular with finches
Lilac	D		Y	Y	Y			Su	D	Flowers attractive to insects
Oregon grape	E		Y	Y	Y			Su/Sh	M	Early flowers good for insects
Pheasant berry	E			Y	Y			Su	D	Berries popular with many bird species
Privet*	E		Y	Y	Y	Y		Su	D	Flowers attract butterflies, produces berries
Rose	D	Y	Y	Y	Y	Y	Y	Su	D	Fruits of some varieties attractive to birds
Rosemary	E	Y	Y	Y	Y	Y		Su	D	Flower attract many insects
Shad bush	D		Y	Y				Su	M	Flowers attract insects, early forming berries good for thrushes
Snowberry	D			Y	Y	Y		Su/Sh	D	Flowers attractive to bees, fruits attractive to birds, dense stems provide cover
Spindle*	D		Y	Y	Y			Su	D	Berries eaten by birds, but poisonous to mammals
Tamarix	D			Y	Y	Y		Su	D	Flowers attractive to various insects, tolerant of salt - good in coastal areas
CLIMBERS & RAMBLERS										
Bramble*	D		Y	Y	Y	Y	Y	Su/Sh	D	Food for birds, insects and mammals, nesting sites
Clematis	D	Y	Y	Y	Y			Su	D	Nesting sites
Honeysuckle*	D	Y	Y	Y	Y	Y	Y	Su/Sh	D	Attractive to insects, good nesting site, food for birds
Ivy*	E	Y	Y	Y	Y	Y	Y	Su/Sh	D	Attractive to insects, good nesting site, food for birds
Rose	D	Y	Y	Y	Y	Y	Y	Su	D	Fruits of some varieties attractive to birds
Winter jasmin	E	Y	Y	Y	Y	Y	Y	Su	D	Early flowers attractive to insects
Wisteria	D	Y	Y	Y	Y		Y	Su	D	Attractive to insects, good nesting site

KEY			
*****	Native (NB: some varieties are cultivars or non-native)	**Location**	H = may be used as a hedge plant
F	D = Deciduous		W = may be used as a wall shrub
Foliage type	E = Evergreen		Su = Sunny borders
	B = Both		Sh = Shade tolerant
Size	T = Terraces & balconies		Su/Sh = Grows in partial shade
Suitable for garden sizes	S = Small garden (</= 6m x 4m)	**Soil mositure**	D = Well drained
	M = Medium gardens (</= 12m x 6m)		M = Moist
	L = Large gardens (> 12m x 6m)		W = Wet soil

Appendix 8 – 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

<u>Great crested newts</u>

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 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.