

Appendix 11.3: Phase 1 Habitat Survey Technical Appendix



THE
ENVIRONMENT
PARTNERSHIP



LAND NORTH OF BRYN LANE WREXHAM PHASE 1 HABITAT SURVEY TECHNICAL REPORT

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Executive Summary

1. TEP was commissioned by Net World Sports in October 2021 to carry out an Extended Phase 1 habitat survey of land to the north of Bryn Lane, near Wrexham in North Wales, hereafter referred to as 'the site'. Ecological surveys are required to support an Environmental Statement that will inform proposals for a commercial development.
2. The Proposed Scheme is in the form of a hybrid planning application. The detailed component of the proposed development comprises:
 - *Demolition of all existing buildings, site clearance and preparation works, including removal of vegetation and reprofiling of topsoil, where necessary;*
 - *Construction of a new warehouse unit (53.95 m above ordnance datum (AOD)), providing 33,595 sqm gross external area (GEA) of floorspace for B1c (light industry appropriate in a residential area), B2 (general industrial) and/or B8 (storage & distribution) uses (referred to as Unit 2);*
 - *Construction of eight new smaller to medium size industrial units (ranging between up to 45.20 m AOD and 52.98 m AOD; referred to as Units 3-7; and 12-16), providing a total of 29,659 sqm GEA of floorspace for B1c (light industry appropriate in a residential area), B2 (general industrial) and/or B8 (storage & distribution) uses;*
 - *Access and parking provision, including new access junctions, internal roads, service yards and car and HGV parking. Two new junctions are proposed providing vehicular access, as well as cycle and pedestrian access, from Bryn Lane/Industrial Estate Road with an additional access road for a substation. 592 car parking spaces (32 accessible spaces) and 138 HGV spaces are proposed within the detailed component;*
 - *Retention and enhancements of some existing on-site green spaces and provision of landscaping around the detailed component of the application site; and*
 - *Implementation of drainage/attenuation measures and ancillary infrastructure, including substation and pumping station.*
3. The outline component of the proposed development comprises:
 - *Construction of new buildings, up to 59.80 m AOD (28.5 m above ground level) in height, collectively providing up to 72,635 sqm GEA of floorspace for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses, as well as potential ancillary retail/drive thru facilities, a hotel and a petrol filling station (A1, A3, C1 or sui generis). The overall quantum of A1, A3, C1 and/or sui generis use floorspace would not exceed 16,150sqm GEA;*
 - *Access and parking provision, including internal roads, service yards and car and HGV parking. Up to 908 car parking spaces and up to 138 HGV trailer spaces and HGV lorry spaces are proposed across the application site;*
 - *Retention and enhancements of some existing on-site green spaces and provision of landscaping around the application site; and*

- *Implementation of drainage/attenuation measures.*
4. Habitat surveys of the site were carried out by TEP ecologist Alun Evans in December 2021, with additional survey, following amendments to the red line boundary, undertaken by Lee Greenhough in March 2023. The Phase 1 habitat assessment surveys were carried out in accordance with the Phase 1 habitat assessment methods and Guidelines for Preliminary Ecological Appraisal.
 5. The Phase 1 habitat survey identified that the following habitats are present at the site:
 - Arable;
 - Semi-improved neutral grassland;
 - Poor semi-improved grassland;
 - Modified neutral grassland;
 - Amenity grassland
 - Semi-natural broad-leaved woodland;
 - Scattered broad-leaved trees;
 - Scattered coniferous trees;
 - Scattered and dense continuous scrub;
 - Tall ruderal;
 - Scattered introduced shrub;
 - Standing water/ponds, swamp and ephemeral pools;
 - Ditches and dry ditches;
 - Hedgerows;
 - Fences and walls;
 - Bare ground with ephemeral / short perennial vegetation; and
 - Hardstanding and buildings.
 6. No protected plant species listed under Schedule 8 of the Wildlife and Countryside Act 1981 or invasive plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 or the Invasive Alien Species (Enforcement and Permitting) Order 2019 were identified on site.

1.0 Introduction

1.1 TEP was commissioned by Net World Sports in October 2021 to carry out a Phase 1 habitat survey of land to the north of Bryn Lane, near Wrexham in North Wales, hereafter referred to as 'the site'. Ecological surveys are required to support an Environmental Statement that will inform proposals for a commercial development.

1.2 The Proposed Scheme is in the form of a hybrid planning application. The detailed component of the proposed development comprises:

- *Demolition of all existing buildings, site clearance and preparation works, including removal of vegetation and reprofiling of topsoil, where necessary;*
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- *Access and parking provision, including new access junctions, internal roads, service yards and car and HGV parking. Two new junctions are proposed providing vehicular access, as well as cycle and pedestrian access, from Bryn Lane/Industrial Estate Road with an additional access road for a substation. 592 car parking spaces (32 accessible spaces) and 138 HGV spaces are proposed within the detailed component;*
- *Retention and enhancements of some existing on-site green spaces and provision of landscaping around the detailed component of the application site; and*
- *Implementation of drainage/attenuation measures and ancillary infrastructure, including substation and pumping station.*

1.3 The outline component of the proposed development comprises:

- *Construction of new buildings, up to 59.80 m AOD (28.5 m above ground level) in height, collectively providing up to 72,635 sqm GEA of floorspace for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses, as well as potential ancillary retail/drive thru facilities, a hotel and a petrol filling station (A1, A3, C1 or sui generis). The overall quantum of A1, A3, C1 and/or sui generis use floorspace would not exceed 16,150sqm GEA;*
- *Access and parking provision, including internal roads, service yards and car and HGV parking. Up to 908 car parking spaces and up to 138 HGV trailer spaces and HGV lorry spaces are proposed across the application site;*
- *Retention and enhancements of some existing on-site green spaces and provision of landscaping around the application site; and*
- *Implementation of drainage/attenuation measures.*

Site Description

- 1.4 The site (central grid reference SJ 38614 51101) is approximately 37.21 ha in size and is located to the east of Wrexham in North Wales.
- 1.5 The site is bounded to the south by Bryn Lane and Wrexham Industrial Estate, to the north by Francis Lane, to the west by both Industrial Estate Road and Hugmore Lane (with associated residential properties), and to the east by open agricultural fields. The wider area predominantly comprises urban development to the west associated with Wrexham town centre, with open countryside present to the north and east and the industrial estate to the south.
- 1.6 The site location within the context of the wider landscape is illustrated in Figure 1 below.

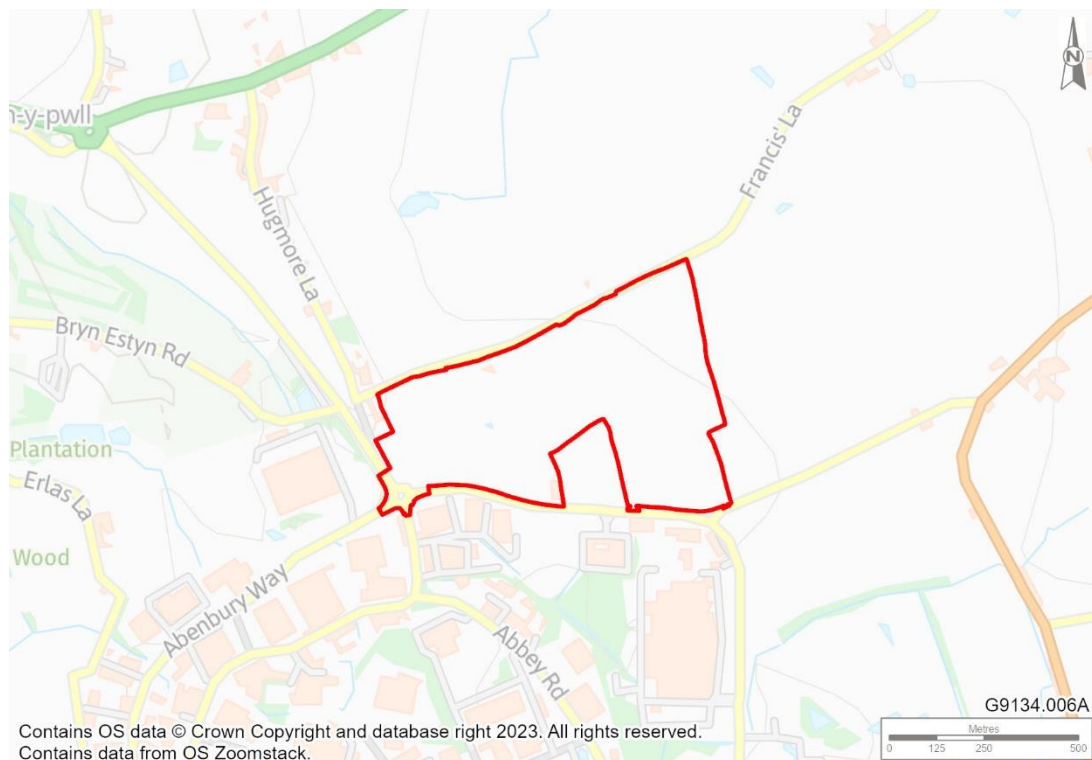


Figure 1: Site location within the context of the wider landscape

Extended Phase 1 Habitat Survey

- 1.7 An extended Phase 1 habitat survey was undertaken by TEP principal ecologist Alun Evans (MCIEEM) on 3rd and 7th December 2021. Additional surveys were undertaken by Lee Greenhough on the 29th March 2023, following amendments to the red line boundary.

- 1.8 The Phase 1 habitat assessment surveys were carried out in accordance with the Phase 1 habitat assessment methods¹ and Guidelines for Preliminary Ecological Appraisal².
- 1.9 This survey provides an overview of key habitats within the site and identifies any features of ecological value, as well as the presence, or potential presence, of any protected or notable species. Particular note was made of any statutorily protected species or habitats such as Section 7 (S7) species/habitats of principal importance, as listed under the Environment (Wales) Act 2016.

Limitations

- 1.10 The Phase 1 habitat surveys were undertaken in December and March, outside of the optimal Phase 1 habitat survey window of April to early October. Therefore there are seasonal limitations to the survey. However as the site was rewalked as part of hedgerow survey in August 2022, including a search for protected plant species, this is not considered a significant limitation. At the time of survey, access to an area of garden was not possible. However, this was subsequently included in the bat roost assessment and therefore was not a significant limitation.

Badgers

- 1.11 Signs of use of the site by badger *Meles meles* were also searched for during the Phase 1 habitat survey. The standard methodology as recommended by Harris, Cresswell and Jefferies (1989) was followed to complete a thorough search for evidence, which would indicate the presence of badgers both on the site and locally. Evidence of badger occupation and activity includes:
- Setts: including earth mounds, evidence of bedding and runways between setts;
 - Latrines: often located close to setts, at territory boundaries or adjacent to favoured feeding areas;
 - Prints and paths or trackways;
 - Hairs caught on rough wood or fencing;
 - Other evidence: including snuffle holes, feeding and playing areas and scratching posts.
- 1.12 Badgers are active all year round, so a survey can be carried out at any time of year. However, depending upon the level of vegetation cover, this species is often best surveyed over the winter months when the vegetation has died back.

Limitations

- 1.13 Access to the whole site was possible, however no access was granted to all land within 30 m of the site. Therefore there is the possibility that badger setts within this radius could have been missed.

¹ JNCC 2010. Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

² CIEEM 2013. Guidelines for Preliminary Ecological Appraisal.

2.0 Habitat Survey Results

2.1 The results of the Phase 1 Habitat Survey are illustrated on Drawing G9134.007B. The following paragraphs provide details of the extended Phase 1 habitat survey including species lists (Target Notes).

2.2 The following habitats are present within the site:

- Arable;
- Semi-improved neutral grassland;
- Poor semi-improved grassland;
- Modified neutral grassland³;
- Amenity grassland;
- Semi-natural broad-leaved woodland;
- Scattered broad-leaved trees;
- Scattered coniferous trees;
- Scattered and dense continuous scrub;
- Tall ruderal;
- Scattered introduced shrub;
- Standing water/ponds, swamp and ephemeral pools;
- Ditches and dry ditches;
- Hedgerows;
- Fences and walls;
- Bare ground with ephemeral / short perennial vegetation; and
- Hardstanding and buildings.

Grassland habitats

Arable

2.3 The site predominantly comprises a series of large arable fields, which are currently planted with ley crops. Perennial ryegrass *Lolium perenne* is abundant, with rare creeping buttercup *Ranunculus repens*, white clover *Trifolium repens* and broad-leaved dock *Rumex obtusifolius* (**TN1**). The southeastern-most field on site was grazed by sheep at the time of the first survey.

Semi-improved neutral grassland

2.4 In the north-east of the site is a semi-improved neutral grassland field, comprising abundant creeping buttercup and frequent Yorkshire fog *Holcus lanatus* and common sorrel *Rumex acetosa* (**TN2**). Ridge and furrow is present within this field.

³ The neutral grassland categories detailed within the Phase 1 Habitat Survey Handbook are concentrated on grassland associated with rural situations (pastures and meadows), as such it was agreed with JNCC in 2005 (P. Gateley, pers.comm.) that neutral grassland habitats that don't easily fit within these categories, usually within urban or industrial areas, can be referred to as modified neutral grassland.

Modified neutral grassland is not derived from agricultural grassland and the terms semi-improved and improved do not apply. Some modified neutral grassland may be species-rich but many swards are dense, coarse and species-poor. Modified neutral grassland naturally regenerates on disturbed ground and is unmanaged. It most commonly occurs in urban areas and on post-industrial land.

Poor semi-improved grassland

- 2.5 In the south of the site are a series of horse-grazed poor semi-improved grassland fields, separated by fences. The largest of these comprises frequent creeping bent *Agrostis stolonifera* and creeping buttercup, with occasional cock's foot *Dactylis glomerata*, timothy *Phelum pratense*, greater plantain *Plantago major* and white clover (**TN3**) Patches of marginally higher species diversity were identified in the west of this field.

Modified neutral grassland

- 2.6 A small stretch of modified neutral grassland is present on the verge of the roundabout, between the Industrial Estate Road and Bryn Lane (**TN18**). This area is dominated by Yorkshire-fog *Holcus lanatus*, with abundant cock's-foot *Dactylis glomerata*, red fescue *Festuca rubra*, creeping buttercup *Ranunculus repens* and broad-leaved dock *Rumex obtusifolius*. Other recorded species include frequent cow parsley *Anthriscus sylvestris*, hogweed *Heracleum sphondylium* and dandelion *Taraxacum officinale* agg., and occasional knapweed *Centaurea nigra* and ribwort plantain *Plantago lanceolata*.

Amenity grassland

- 2.7 A small area of amenity grassland is present within the centre of the roundabout in the south west of the site.

Woodland and scattered trees

Semi-natural broad-leaved woodland

- 2.8 In the east of the site is a small area of semi-natural broad-leaved woodland surrounding two small waterbodies. The canopy of the woodland is dominated by willow *Salix* sp., with the understorey comprising occasional bramble, nettle *Urtica dioica* and ivy *Hedera helix* (**TN10**).

Scattered broad-leaved and coniferous trees

- 2.9 Several scattered broad-leaved trees are present across the site, including oak and willow. The trees are predominantly semi-mature to mature in age.
- 2.10 Three scattered maple species trees *Acer* sp. have been planted within the amenity grassland in the centre of the roundabout in the south west of the site.
- 2.11 A line of scattered Leyland cypress *Cupressus* × *leylandii* trees are also present along the southern boundary of the site adjacent to Bryn Lane, near the entrance to the yard at The Acorns.

Scattered and dense continuous scrub

Dense/continuous scrub

- 2.12 In the centre of the site is a large patch of dense scrub surrounding two small waterbodies, comprising frequent goat willow *Salix caprea* and rare bramble *Rubus fruticosus* agg (**TN11**).

- 2.13 In the north-east of the site is a small area of dense willow scrub in the centre of a small waterbody (TN8).

Tall ruderal

- 2.14 In the north-west of the site there is a large area of tall ruderal surrounding a small pond. The tall ruderal vegetation comprises occasional rosebay willowherb *Chamaenerion angustifolium* and nettle (TN9). To the south-west of this area is another area of tall ruderal growing along a fence line, with a similar species mix.

Introduced shrub

- 2.15 A small area of introduced shrub is located in the south of the site, within the yard area adjacent to Bryn Lane.

Standing water/ ponds, swamp and ephemeral pools

Standing water, including ponds and swamp

- 2.16 Several small waterbodies are present across the site. In the south-east of the site there is an unfenced pond (P1) with a large area of open water, with frequent greater reedmace *Typha latifolia* forming swamp surrounding this waterbody (TN7). Small numbers of common duckweed *Lemna minor* and fool's watercress *Helosciadium nodiflorus* are present on the surface of the pond.
- 2.17 In the north-east of the site, there is an unfenced waterbody (P2) with abundant common duckweed on the surface and willow scrub present in the centre of the pond (TN8). Abundant hard rush *Juncus inflexus*, sedges *Carex* sp., and common sorrel *Rumex acetosa* are present around the edge of the pond.
- 2.18 The waterbody in the north-west of the site (P3) is also unfenced, and was holding a limited amount of open water at the time of survey. The vegetation around the edge of the pond includes occasional Yorkshire fog *Holcus lanatus*, hard rush, greater reedmace and nettle (TN9).
- 2.19 In the west of the site are two small, shallow waterbodies which appear to dry out at times throughout the year (P4a and P4b) (TN10). The remnants of a third pond was also visible adjacent to these waterbodies but this is permanently dry and no longer functions as a pond. No in-channel vegetation is present within these waterbodies.
- 2.20 In the centre of the site there are two further shallow ponds (P5a and P5b), which are likely to only hold water following prolonged rainfall (TN11). Rare branched bur-reed *Sparganium erectum* were observed within these waterbodies. Further information on the water bodies is presented in the eDNA report (TEP 9134.007).

Ephemeral Pool

- 2.21 Several ephemeral pools were also identified across the site during the survey, which are likely to have formed during recent rainfall. Two of these are located within an arable field in the south-east of the site (TN1), whilst the other is located within the furrows in the north-east of the site (TN2).

Ditches and dry ditches

- 2.22 Along the north-west boundary of the site, beyond a hedgerow, is a short section of ditch holding a small volume of shallow water which is flowing east. Beyond the ditch is an area of tall ruderal and grass verge associated with Francis' Lane.
- 2.23 In the south-east of the site there is another short section of ditch between two arable fields holding water which flows north.
- 2.24 Several dry ditches are present across the site. These are predominantly located along hedgerows in the centre and west of the site, to the north of the horse-grazed fields at The Acorns.

Hedgerows

- 2.25 In the east of the site there is a species-rich hedgerow with trees (**TN4**). Hawthorn *Crateagus monogyna* and blackthorn are frequent, with occasional dog-rose, ivy *Hedera helix* and nettle *Urtica dioica*.
- 2.26 The fields in the south-east of the site are bordered by species-poor hedgerows with trees (**TN5**). Species-poor hedgerows with trees are also present along the eastern edge of the semi-improved neutral grassland field in the north-east of the site and along the northern edge of the poor semi-improved grassland field in the south of the site. Blackthorn is abundant within the hedgerows, with frequent hawthorn and ivy. Oak *Quercus robur* and willow *Salix sp.* are also present within the hedgerow. The ground flora comprises occasional bramble and cleavers, with rare white dead nettle *Lamium album* and cow parsley *Anthriscus sylvestris*.
- 2.27 Along the south-west boundary of the site is a defunct species-poor hedgerow (**TN6**). This hedge is young and appears to have been planted as part of the adjacent road realignment scheme. Hawthorn is abundant, with occasional hazel *Corylus avellana*, blackthorn, dog rose and holly *Ilex aquifolium*. Nettle and cock's foot are occasionally present amongst the ground flora.
- 2.28 Another species-poor defunct hedgerow is present along the north-east boundary of the site, around the south-western most arable field, and around the edge of P5a and P5b (**TN11**). These hedgerows comprise frequent blackthorn and hawthorn.
- 2.29 Species-poor intact hedgerows are present across the wider site, along the northern site boundary, southern boundary of the semi-improved neutral grassland field and between some of the arable fields on site. These hedgerows also comprise frequent blackthorn and hawthorn.
- 2.30 A full assessment of each hedgerow on site has been undertaken within the Hedgerow Regulations Assessment report (TEP Ref: 9134.008).

Bare ground with ephemeral/short perennial vegetation

- 2.31 In the south of the site is a large yard associated with the buildings at The Acorns, comprising bare ground with ephemeral/short perennial vegetation. Mosses *Moss sp.* are frequent, with occasional creeping bent *Agrostis capillaris*, annual meadow-grass *Poa annua* and creeping buttercup (**TN12**).

Hardstanding and buildings

Buildings

- 2.32 Buildings (no.14) are present within the site, located in two complexes in the north and south of the site. These consist of a residential property in the north of the site and a residential property and equine unit in the south. Further details are provided in the Bat Roost Surveys Technical Report (TEP 9134.005).

Hardstanding

- 2.33 Hardstanding consists of the Bryn Lane and Industrial Estate Road in the south west of the site. A small hardstanding access track also links Bryn Lane to the buildings in the south of the site.

Protected and Non-native Invasive Species

- 2.34 No protected plant species listed under Schedule 8 of the Wildlife and Countryside Act 1981 were identified on site during the Phase 1 habitat survey
- 2.35 No invasive non-native plant species (listed under Schedule 9 of the Wildlife and Countryside Act 1981 and/or the Invasive Alien Species (Enforcement and Permitting) Order 2019) were identified on site.

Badger

- 2.36 Evidence of mammal activity, including the feeding remains of a wasp nest and a mammal pathway crossing a ditch, were identified on site during the site survey in December 2021 (**TN13**). The Hedgerow Regulations Assessment survey in August 2022 identified badger activity within the site and its immediate environs. This consisted of a latrine at the base of a hedgerow (**TN14**) with mammal pathway through the hedgerow, snuffle holes with badger guard hair present (**TN15**) and a pathway through a hedgerow with guard hairs caught present on barbed wire (**TN16**). A recently excavated wasp nest (**TN17**) was also noted on the roadside verge immediately to the north of the site boundary, indicative of badger activity.
- 2.37 The habitats on site, including the areas of dense scrub, hedgerows and arable and grass field margins provide suitable sett-building habitat for badger. The semi-natural broad-leaved woodland on site also provides suitable opportunities for badger setts where there are areas of higher ground within the woodland where setts could be established without the risk of flooding from the adjacent ponds. The arable, semi-improved neutral grassland and poor semi-improved grassland fields on site additionally provide suitable foraging and commuting opportunities for badger. There is good connectivity between the site and other habitats that badger may utilise to the north and east.

3.0 Summary

- 3.1 The majority of habitats on site comprises arable fields, with areas of semi-improved neutral grassland, poor semi-improved grassland, modified neutral grassland, amenity grassland, semi-natural broad-leaved woodland, dense/continuous scrub, tall ruderal, standing water, ditches, hedgerows, trees, introduced shrub, bare ground with ephemeral/short perennial vegetation, hardstanding and buildings.
- 3.2 The areas of arable, semi-improved grassland, species poor semi-improved grassland, modified grassland, and tall ruderal vegetation will offer both foraging and commuting potential to local invertebrates, birds, amphibians and small mammals. The semi-improved grasslands and bracken could also provide nesting opportunities for local bird species.
- 3.3 The woodland and scattered scrub present across the site will offer foraging and commuting potential for local invertebrates, birds and small mammals. The woodland and scattered scrub will also offer nesting potential for local bird species and hibernation potential for both hedgehog and invertebrates.
- 3.4 The pond and ditch network across the site will offer foraging and commuting potential to local bats and invertebrates. The ponds across the site offer foraging and breeding potential for local amphibians.
- 3.5 The woodland offers foraging opportunities for bats, birds, invertebrates and mammals. The woodland blocks and scattered trees will also offer nesting and roosting potential for local birds and bats.
- 3.6 The hedgerow network and lines of trees will offer foraging and commuting opportunities to bats, birds and small mammals as well as invertebrates. The hedgerows will also offer bird nesting opportunities and hibernation opportunities for amphibians and small mammals.
- 3.7 Detailed reports on the presence of each protected species are presented in separate protected species appendices.
- 3.8 The semi-natural broad-woodland in the centre of the site is considered to not to meet the definition of S7 Lowland Mixed Deciduous Woodland due to its limited woodland structure.
- 3.9 All hedgerows with over 80% cover of at least one UK Native woody species qualify as habitats of principal importance under S7 of the Environment Wales Act (2016). A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide and the majority of hedgerows within the site meet these specifications. A Hedgerow Regulations (1997) assessment has been undertaken separately to determine whether the hedgerows qualify as 'Important' under the Hedgerow Regulations 1997 with the results in the Assessment Report (TEP Ref: 9134.). Common toad *Bufo bufo* and great crested newt (GCN) *Triturus cristatus* are S7 species of principal importance, as such, ponds supporting these species qualify as habitats of principal importance.
- 3.10 No protected plant species or invasive non-native plant species were identified on or immediately adjacent to the site.

Badger

- 3.11 Badgers and their setts are protected under the Protection of Badgers Act 1992. Badgers are additionally listed as a locally important species under the Wrexham Local Biodiversity Action Plan (2002)
- 3.12 Badgers have historically been recorded in the local area and badger activity was recorded within the site and immediate environs.
- 3.13 There are currently no implications for future development of the site with regard to badger setts. However, if any badger setts establish on site and construction works are undertaken within 30 m of suitable sett-building habitat, there will be implications for the proposals with regard to badger.
- 3.14 The likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road casualties amongst badger population is capable of being a material consideration in planning decisions. The impacts of the proposed development and proposed mitigation are assessed in the accompanying ES Chapter (TEP Report Ref: 9134.011).

APPENDIX A: Phase 1 Target Note Report

Target Notes Report

Survey 9134-1

Target Note TN1

Sheep grazed grass ley. Similar vegetation found in other fields across the site.

<i>Lolium perenne</i>	Perennial Ryegrass	A
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Moss sp.</i>	Moss species	R
<i>Plantago major</i>	Greater Plantain	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Taraxacum officinale agg.</i>	Dandelion	R
<i>Trifolium repens</i>	White Clover	R

Target Note TN2

Grazed semi-improved neutral grassland. Ridge and Furrow present. Shallow ephemeral standing water in south-east side and in some of the furrows.

<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Rumex acetosa</i>	Common Sorrel	F
<i>Cardamine pratensis</i>	Cuckooflower	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Cynosurus cristatus</i>	Crested Dog's-tail	O
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Juncus inflexus</i>	Hard Rush	O
<i>Agrostis stolonifera</i>	Creeping Bent	R
<i>Bellis perennis</i>	Daisy	R
<i>Carex nigra</i>	Common Sedge	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Moss sp.</i>	Moss species	R
<i>Taraxacum officinale agg.</i>	Dandelion	R
<i>Trifolium repens</i>	White Clover	R

Target Note TN03

Poor semi-improved grassland grazed by horses. Very localised patches of more species diversity in the west of the field.

<i>Agrostis stolonifera</i>	Creeping Bent	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Phleum pratense</i>	Timothy	O
<i>Plantago major</i>	Greater Plantain	O
<i>Trifolium repens</i>	White Clover	O
<i>Bellis perennis</i>	Daisy	R
<i>Centaurea nigra</i>	Knapweed	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Cynosurus cristatus</i>	Crested Dog's-tail	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Lolium perenne</i>	Perennial Ryegrass	R
<i>Plantago lanceolata</i>	Ribwort Plantain	R
<i>Prunella vulgaris</i>	Selfheal	R
<i>Rubus fruticosus agg.</i>	Bramble	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Taraxacum officinale agg.</i>	Dandelion	R
<i>Trifolium pratense</i>	Red Clover	R

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note TN4

Native species rich hedgerow with trees. Brown Hare flushed from hedgerow base.

<i>Crataegus monogyna</i>	Hawthorn	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Hedera helix</i>	Ivy	O
<i>Rosa canina</i> agg.	Dog Rose	O
<i>Urtica dioica</i>	Nettle	O
<i>Acer campestre</i>	Field Maple	R
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Prunus</i> sp.	Cherry species	R
<i>Quercus robur</i>	English Oak	R
<i>Salix caprea</i>	Goat Willow	R
<i>Sambucus nigra</i>	Elder	R

Target Note TN5

Example of native species-poor hedgerow with trees.

<i>Prunus spinosa</i>	Blackthorn	A
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Hedera helix</i>	Ivy	F
<i>Galium aparine</i>	Cleavers	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Quercus robur</i>	English Oak	R
<i>Rosa canina</i> agg.	Dog Rose	R
<i>Salix</i> species	Willow species	R

Target Note TN6

Native young species rich hedgerow, most likely planted as part of landscaping scheme for road realignment. Mapped as defunct due to gaps present. Fenced off from adjoining field.

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	O
<i>Corylus avellana</i>	Hazel	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Ilex aquifolium</i>	Holly	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Rosa canina</i> agg.	Dog Rose	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Urtica dioica</i>	Nettle	O
<i>Acer campestre</i>	Field Maple	R

Target Note TN7

In-field pond surrounded by swamp vegetation (Greater reedmace). Significant amount of open water. Goat willow present on east side. Unfenced from surrounding field.

<i>Typha latifolia</i>	Greater Reedmace	F
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	O
<i>Helosciadium nodiflorus</i>	Fool's Watercress	R
<i>Helosciadium nodiflorus</i>	Fool's Watercress	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Juncus inflexus</i>	Hard Rush	R
<i>Lemna minor</i>	Common Duckweed	R
<i>Salix caprea</i>	Goat Willow	R
<i>Solanum dulcamara</i>	Bittersweet	R

Target Note TN8

In-field pond within semi-improved neutral grassland. Willow scrub present in the centre of the pond surrounded by open water. Pond edge dominated by hard rush. Unfenced from surrounding field.

<i>Juncus inflexus</i>	Hard Rush	A
<i>Carex sp.</i>	Sedge species	R
<i>Epilobium sp.</i>	Willowherb species	R
<i>Lemna minor</i>	Common Duckweed	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Salix species</i>	Willow species	R
<i>Typha latifolia</i>	Greater Reedmace	R

Target Note TN9

In-field pond within grass ley. Willow scrub present on the west side of the pond. Limited open water, pond edge dominated by grasses beyond which is tall ruderal vegetation. Unfenced from surrounding field.

<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Juncus inflexus</i>	Hard Rush	O
<i>Typha latifolia</i>	Greater Reedmace	O
<i>Urtica dioica</i>	Nettle	O
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Lemna minor</i>	Common Duckweed	R
<i>Salix species</i>	Willow species	R

Target Note TN10

Two very shallow ponds (<10cm in depth) located in broadleaved woodland dominated by mature willow species. The base of the ponds consist of leaf litter and both ponds are likely to be ephemeral features which fill up after prolonged rainfall. A third former pond is now dry.

Rabbit holes present but significantly filled with leaf litter. Remains of a dug out wasp nest noted at the base of one of the willow trees, indicative of badger foraging activity. Some rubble piles also present which have the potential to provide hibernacula for amphibians.

<i>Salix species</i>	Willow species	F
<i>Hedera helix</i>	Ivy	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Urtica dioica</i>	Nettle	O
<i>Dryopteris filix-mas</i>	Male-fern	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Moss sp.</i>	Moss species	R
<i>Prunus spinosa</i>	Blackthorn	R
<i>Quercus robur</i>	English Oak	R
<i>Rosa canina agg.</i>	Dog Rose	R

Target Note TN11

Two very shallow ponds (<10cm in depth) located in willow species. The base of the ponds consist of leaf litter and both ponds are likely to be ephemeral features which fill up after prolonged rainfall.

Some rubble piles also present which have the potential to provide hibernacula for amphibians.

<i>Salix caprea</i>	Goat Willow	F
<i>Centaurea nigra</i>	Knapweed	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Juncus inflexus</i>	Hard Rush	R
<i>Quercus robur</i>	English Oak	R
<i>Rubus fruticosus agg.</i>	Bramble	R
<i>Sparganium erectum</i>	Branched Bur-reed	R

Target Note TN12

Area of bare ground/ephemeral vegetation between stables and horse manege.

<i>Moss sp.</i>	Moss species	F
<i>Poa annua</i>	Annual Meadow-grass	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Agrostis stolonifera</i>	Creeping Bent	R
<i>Epilobium sp.</i>	Willowherb species	R
<i>Matricaria discoidea</i>	Pineapple-weed	R
<i>Plantago lanceolata</i>	Ribwort Plantain	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R

Target Note TN13

Mammal pathways but no other field signs such as paw prints, guard hairs or latrines present.

Target Note TN14

Badger latrine at base of hedgerow with mammal pathway through the hedgerow.

Target Note TN15

Snuffle holes with badger guard hair present.

Target Note TN16

Mammal pathway through hedgerow with badger guard hairs present on barbed wire.

Target Note TN17

Recently excavated wasp nest on roadside verge, indicative of badger activity.

Target Note TN18

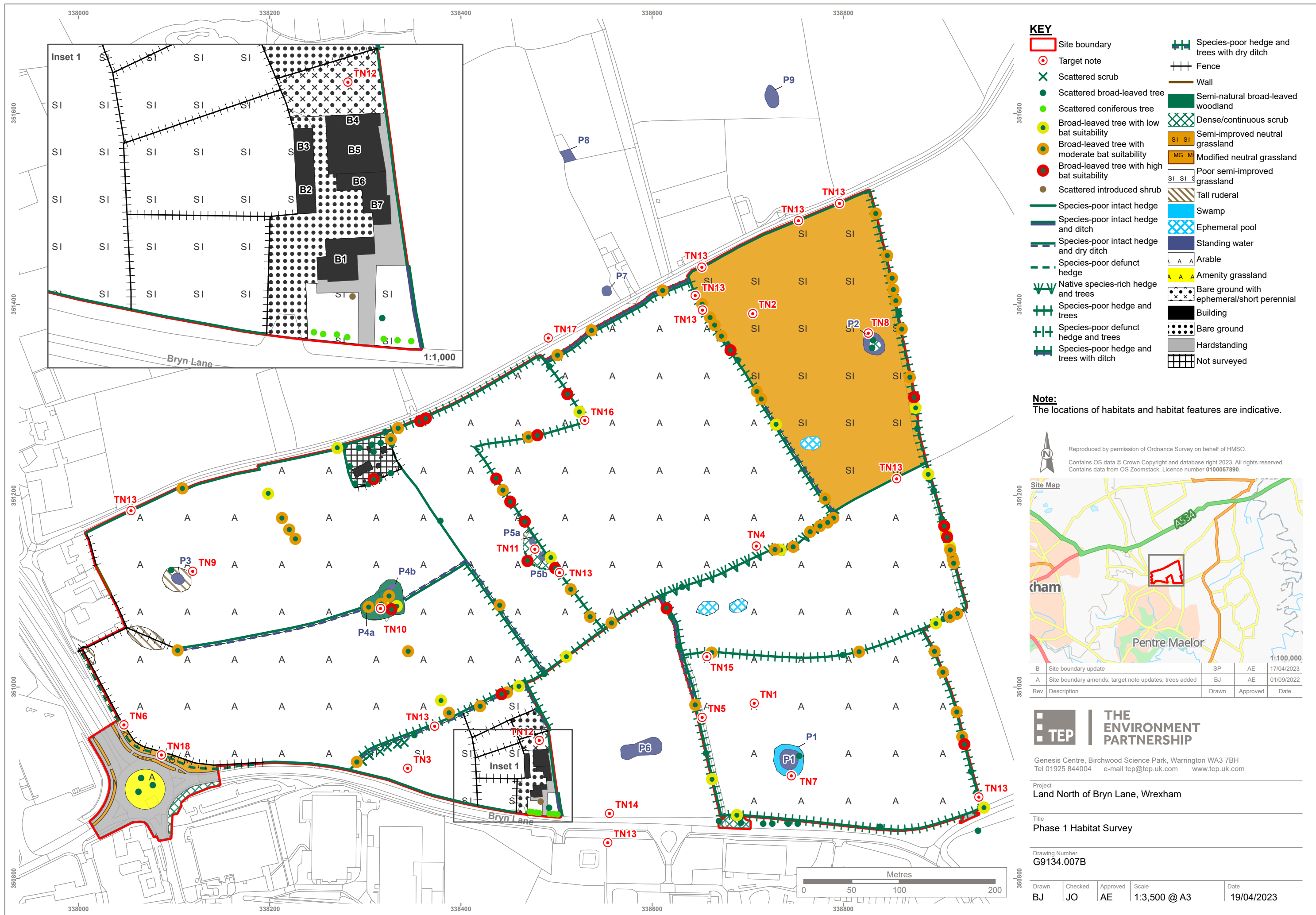
A stretch of modified neutral grassland on the roundabout grass verge, between the Industrial Estate Road and Bryn Lane.

<i>Holcus lanatus</i>	Yorkshire-fog	D
<i>Dactylis glomerata</i>	Cock's-foot	A
<i>Festuca rubra</i>	Red Fescue	A
<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Rumex obtusifolius</i>	Broad-leaved Dock	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Galium aparine</i>	Cleavers	F
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Leucanthemum vulgare</i>	Oxeye daisy	F
<i>Potentilla reptans</i>	Creeping Cinquefoil	F
<i>Taraxacum officinale agg.</i>	Dandelion	F
<i>Trifolium repens</i>	White Clover	F
<i>Urtica dioica</i>	Nettle	F
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Centaurea nigra</i>	Knapweed	O
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Lolium perenne</i>	Perennial Ryegrass	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Elymus repens</i>	Common Couch	R

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DRAWINGS

G9134.007B Phase 1 Habitat Survey - Inset





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