



STEPHEN CUTMORE BSc(Hons), MICFor, MArborA

Arboricultural & Ecological Services



PRO3755

SURVEYS, INSPECTIONS, REPORTS

**TAN Y BRYN
BRYN ROAD
FLINT
FLINTSHIRE
CH6 5HU**

BUILDING DEVELOPMENT

PRELIMINARY ECOLOGICAL APPRAISAL



Tan y Bryn, Bryn Road, Flint.

Client	Niall Wallace
Planning Authority	Flintshire County Council
Grid Reference	SJ24057225
Date of Survey	3 April 2019
Reference	042019/PEA/NW



TABLE OF CONTENTS

1.0 Summary	4
2.0 Introduction	6
2.1 Site Location	
2.2 Site Description	
2.3 Proposed Development	
3.0 Methodology	6
3.1 Preliminary Ecological Appraisal	
3.2 Data Search	7
4.0 Survey Limitations	7
5.0 Survey Results	7
5.1 Desk study	
5.2 Habitats	8
6.0 Species	9
6.1 Bats	
6.2 Great Crested Newts and other amphibians	10
6.3 Reptiles	
6.4 Badgers	
6.5 Hazel Dormice	
6.6 Otters	11
6.7 Other mammal species	
6.8 Nesting birds	
6.9 EPS plant species	
6.10 Invasive non-native species	
6.11 Survey Constraints	
6.12 Data Search Results	
7.0 Evaluation	12
7.1 Conclusions	
7.1.1 Habitats	
7.1.2 Bats	13
7.1.3 Great Crested Newts	
7.1.4 Reptiles	
7.1.5 Badgers	14
7.1.6 Hazel Dormice	
7.1.7 Otters	
7.1.8 Other mammal species	
7.1.9 Nesting Birds	
7.1.10 EPS plant species	15
7.1.11 Invasive non-native species	
7.1.12 Summary of Further Survey	



TABLE OF CONTENTS (continued)

8.0 Impact Assessment	16
8.1 Short-term impact	
8.2 Long-term impact – roost losses	
8.3 Long-term impact – fragmentation and isolation	17
8.4 Post-development interference impacts	
8.5 Predicted scale of impact	
9.0 Mitigation	17
10.0 Wildlife and the Law	18
10.1 European Protected Species	
10.1.1 Bats	
10.1.2 Amphibians	
10.1.3 Reptiles	
10.1.4 Hazel Dormice	19
10.1.5 Otters	
10.1.6 Legislation relating to European Protected Species	
10.1.7 European Protected Species Licences	20
10.1.8 Recent Changes in Licences	
10.1.9 Important EPSL Information	
10.2 Other Protected Species	21
10.2.1 Nesting Birds	
10.2.2 Reptiles	
10.2.3 Badgers	
10.3 Environment (Wales) Act 2016	22
10.4 National Planning Policy Framework	
10.5 Key principles of NPPF 2012	
11.0 References	24
Appendices	
Appendix 1 – Site Map	25
Appendix 2 – Photographs	26
Appendix 3 – Plant species abundance rating (DAFOR)	28
Appendix 4 – Data Search Results	30
Appendix 5 – Hedgerow Regulations 1997	33



1.0 SUMMARY

The site is located at Grid Reference SJ24057225. The site is located in a residential area some 0.5km to the South of Flint town centre. The A5119 Northop Road is approximately 100m to the West of the site and the A548 Chester Road is 0.9km to the Northeast.

It is proposed to demolish the existing property, lodge and outbuildings and site 18 No. dwellings on the existing plot, with associated access road, car parking spaces, and soft landscaping.

The Cofnod Data Request [E07251] provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of mammals (badger, bats), reptiles (common lizard, slow worm) and amphibians (great crested newt) within 1km radius of the site. There are records of other small mammals within 1km radius of the site (hare, hedgehog, water vole). There were records of invasive non-native plant species within a 1km radius of the site (Himalayan Balsam, Himalayan Cotoneaster, Japanese Knotweed, Wall Cotoneaster).

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat.

The hedgerows, scrub and scattered trees have high potential for nesting birds and provide valuable flight-lines for foraging/commuting bats. Some mature trees have potential for roosting bats. The hedgerows and taller vegetation also have some potential to be used by GCN and reptiles [but limited due to no associated ditch and the shade] for foraging and emigration corridors. The log pile has some potential to be used by GCN and reptiles as a hibernacula site.

Evidence of badgers was observed on site (tracks, grubbing for worms). By using mitigation and Reasonable Avoidance Methods, the proposed development should have no detrimental effect on the favourable conservation status of badgers.

The area of amenity grass [A3] is regularly maintained by mowing to a close swathe and has little potential for wildlife, apart from foraging badgers. The hardstanding areas have no potential for wildlife.

The hedges on site do not qualify as 'important' with regards to the Hedgerow Regulations 1997, made under Section 97 of the Environment Act 1995 which came into effect 1 June 1997.

If any trees require removing that have Potential Roost Features, further surveys will be required, to check if bat roosts are present. Further surveys will be required to determine if any bats are roosting within the roof of the existing dwelling and also to determine important bat flight lines. Appropriate compensation and mitigation measures and Reasonable Avoidance Measures (RAMs) will minimise the impact on locally recorded bats.

If the log pile requires removal, a new hibernacula site for GCN and reptiles should be constructed in a suitable location on site as mitigation.



1.0 SUMMARY (continued)

A post-construction landscaping scheme including new tree and hedge planting, should be prepared for the proposed development, to compensate for any loss of habitat and to enhance the site. Installing bat boxes and bird nesting boxes in some of the mature trees and/or incorporating bat-friendly features into the proposed dwellings, would also provide suitable alternative roosting sites. Maintaining areas of amenity grass between the track on the West boundary to the track on the North boundary would help to retain a corridor for foraging badgers.

If mitigation and RAMs are implemented (see separate documents), the predicted impact on bats, nesting birds, badgers, amphibians and reptiles is low.



2.0 INTRODUCTION

Stephen Cutmore, a licensed bat worker (NRW[78542: OTH: CSAB: 2018], NE[2015-16936-CLS-CLS]), and licenced Amphibian Worker (NRW[78772a: OTH: SA: 2018], NE[2016-19908-CLS-CLS]), was instructed by Chris Roberts, JIG Architects Ltd, on behalf of the client, Niall Wallace, to carry out a Preliminary Ecological Appraisal (Habitat Survey) of the site at Tan y Bryn, Bryn Road, Flint, Flintshire, CH6 5HU. The purpose of the survey was to identify habitats present, assess the conservation value of the survey area, the likely presence of rare or protected species, to identify any features, habitats or species which would constitute potential constraints to any development which might take place and to make recommendations for mitigation and/or further survey work as appropriate.

2.1 Site Location

The site is located at Grid Reference SJ24057225. The site is located in a residential area some 0.5km to the South of Flint town centre. The A5119 Northop Road is approximately 100m to the West of the site and the A548 Chester Road is 0.9km to the Northeast.

2.2 Site Description

The site currently has a residential dwelling set in a large landscaped plot. A gravel access drive leads from the council road adjacent to the West boundary, to the dwelling and outbuildings. From the council road the site slopes gently up to the East. The Swinchiard Brook lies just to the West of the site.

2.3 Proposed development

It is proposed to demolish the existing property, lodge and outbuildings and site 18 No. dwellings on the existing plot, with associated access road, car parking spaces, and soft landscaping.

3.0 METHODOLOGY

3.1 Preliminary Ecological Appraisal

The site was surveyed on the morning of 21 February 2019, in accordance with the JNCC methodology (2010) in order to produce a Phase 1 habitat map. Target notes with supplementary information or identifying the potential for protected species are also given.

The value of the site for foraging bats, great crested newts and other protected species and habitat features was also assessed. A search was made for signs of badgers and badger setts. A search was also made for signs of invasive plant species such as Japanese Knotweed.

Any hedgerows present were surveyed to determine if any of the hedges meet the requirements of important hedgerows under the 1997 Hedgerows Regulations.



3.2 Desk study

The 1: 25000 Ordnance Survey map covering the site and aerial photos accessed from the internet, were scrutinised to initially assess the wildlife value of the proposed development site and surrounding habitat at a basic level. This involved looking for any semi-natural habitat that may be of value to wildlife (e.g. woodland, parkland, hedges, ponds, rivers, wetland, with interconnecting habitat links. The Cofnod (Local Ecological Records Centre) website was accessed (www.cofnod.org.uk) and a Cofnod Data Request [E07251] was made for a data search for Priority Species and designated wildlife sites within a 1km radius of the site.

4.0 SURVEY LIMITATIONS

This is solely an ecological survey report and cannot comment on topics outside this discipline. If additional advice is required, it is strongly recommended that other professionals are consulted.

- 1) information contained in this report covers only the site that was examined:
- 2) the inspection is limited to visual examination of the site.
- 3) there is no warranty or guarantee, expressed or implied, that Protected Species may not utilise the site after the survey has been completed, that are not discovered utilising the site during the inspection. This report gives an assessment of the suitability of the habitats on the site to support Protected Species, to determine if there is a the need for further surveys.
- 4) this report has been prepared for the sole use and benefit of the client. Any liability of Stephen Cutmore Arboricultural & Ecological Services shall not be extended to any third party.

5.0 SURVEY RESULTS

5.1 Desk Study

The Cofnod Data Request [E07251] provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of mammals (badger, bats), reptiles (common lizard, slow worm) and amphibians (great crested newt) within 1km radius of the site. There are records of other small mammals within 1km radius of the site (hare, hedgehog, water vole). There were records of invasive non-native plant species within a 1km radius of the site (Himalayan Balsam, Himalayan Cotoneaster, Japanese Knotweed, Wall Cotoneaster).

Sites of nature conservation interest within 10km radius of the site are:

- 2 Special Protection Areas (SPA) – Dee Estuary; Liverpool Bay (Wales)
- 4 Sites of Special Areas of Conservation (SAC) – Dee Estuary; Halkyn Mountain; Deeside and Buckley Newt Sites; River Dee and Bala Lake
- 1 RAMSAR site – Dee Estuary

Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 7 of 34



5.0 SURVEY RESULTS (continued)

5.1 Desk Study

16 Sites of Special Scientific Interest (SSSI) – Alyn Valley Woods and Alyn Gorge Caves; Buckley Claypits and Common; Cambrian Quarry, Gwernymynydd; Cefn Meadow; Connah’s Quay Ponds and Woodland; Ddol Uchaf; Flint Mountain; Halkyn Common and Holywell Grasslands; Herward Smithy; Inner Marsh Farm; Maes y Grug; Parc Bodlondeb and Gwenallt-parc, Lixwm; Parc Linden, Lixwm; Pen y Cefn Pasture; Shotton Lagoons and Reedbeds; Tyddyn y Barcut.

Within 1km radius of the site:

2 Wildlife Sites (WS) – Coed Stanley, Cornist Wood.

5.2 Habitats

For the purposes of accurate habitat survey, the site can be divided into six distinct habitat areas (marked and target noted A1, A2 etc. on the plans).

Target Notes

A1: Hard standing access road (some sections gravel, other sections concrete/paving slabs/block paving) has no value for wildlife.

A2: Native species-poor intact hedge provides potential habitat for nesting birds and foraging/commuting bats. Some limited potential to be used by GCN and reptiles for foraging and emigration corridors.

A3: Amenity grass is regularly maintained by mowing to a short swathe and has little potential for wildlife, apart from foraging badgers.

A4: Scattered trees provide potential habitat for nesting birds and commuting/foraging bats. Some limited potential to be used by GCN and reptiles for foraging, emigration corridors and hibernation under tree stumps. Provides some potential habitat for foraging badgers.

A5: Scrub provides potential habitat for nesting birds and foraging bats.

A6: Buildings. Moderate potential for roosting bats in roof area of dwelling. Negligible potential for roosting bats in the other wooden buildings on site. Potential for nesting birds under eaves of dwelling house.



5.0 SURVEY RESULTS (continued)

5.2 Habitats

The wild plant list for Area A comprises:

A2: Native species-poor intact hedge:

Bramble (*Rubus fruticosus*), Broadleaved Dock (*Rumex obtusifolius*), Cherry Laurel (*Prunus laurocerasus*), Chickweed (*Stellaria media*), Cleavers (*Galium aparine*), Couch-grass (*Agropyron repens*), Cow Parsley (*Anthriscus sylvestris*), Cuckoo-pint (*Arum maculatum*), Elder (*Sambucus nigra*), Hawthorn (*Crataegus monogypa*), Hazel (*Corylus avellana*), Hedge Bindweed (*Calystegia sepium*), Ivy (*Hedera helix*), Stinging Nettle (*Urtica dioica*), Wild Cherry (*Prunus avium*).

A3: Amenity grass:

Broadleaved Dock (*Rumex obtusifolius*), Common Bent grass (*Agrostis gigantea*), Common Speedwell (*Veronica officinalis*), Cow Parsley, Creeping Buttercup (*Ranunculus repens*), Daffodil (*Narcissus pseudonarcissus*), Dandelion (*Taraxacum officinale*), Daisy (*Bellis perennis*), Hoary Plantain (*Plantago media*), Hyacinth (*Hyacinthus orientalis*), Miniature Daffodil (*Narcissus* spp.), Moss (*Brachythecium rutabulum*), Spear Thistle (*Cirsium vulgare*), White Clover (*Trifolium repens*).

A4: Scattered trees:

Apple (*Malus domestica*), Ash (*Fraxinus excelsior*), Beech (*Fagus sylvatica*), Birch (*Betula pendula*), Black Mulberry (*Morus nigra*), Blackthorn (*Prunus spinosa*), Bramble, Cleavers, Common Alder (*Alnus glutinosa*), Common Oak (*Quercus robur*), Common Yew (*Taxus baccata*), Cornelian Cherry (*Cornus mas*), Couch-grass (*Agropyron repens*), Cuckoo-pint, Damson (*Prunus domestica* subsp. *insititia*), Dog-rose (*Rosa canina*), European Larch (*Larix decidua*), Hawthorn, Hazel, Holly (*Ilex aquifolium*), Horse Chestnut (*Aesculus hippocastanum*), Hybrid Poplar (*Populus deltoids* x *Populus nigra*), Ivy, Lesser Celandine (*Ficaria verna*), Lawson Cypress (*Chamaecyparis lawsoniana*), Leyland Cypress (*Cupressus* x *leylandii*), Lombardy Poplar (*Populus nigra* 'Italica'), Magnolia (*Magnolia grandiflora*), Norway Maple (*Acer platanoides*), Pear (*Pyrus communis*), Plum (*Prunus domestica*), Rowan (*Sorbus aucuparia*), Scots Pine (*Pinus sylvestris*), Sitka Spruce (*Picea sitchensis*), Stinging Nettle, Sycamore (*Acer pseudoplatanus*), Weeping Willow (*Salix babylonica*), Whitebeam (*Sorbus aria*), White Willow (*Salix alba*), Wild Cherry.

A5: Scrub:

Bramble, Ivy, Stinging Nettle.

See map in Appendix 1 and photographs in Appendix 2. For ranking of abundance (DAFOR scale) of the habitats, please see Appendix 3.



6.0 SPECIES

6.1 Bats

Bats often roost in trees in holes/cavities in the trunk, cracks/splits in branches, beneath dead loose bark and behind dense Ivy growth. Some mature trees have Potential Roost Features (PRF) for bats. Linear features such as hedgerows and mature tree lines on the site provide valuable flight-lines used by bats whilst foraging and commuting. The scattered trees, hedges and areas of longer vegetation/scrub provide good foraging habitats for bat species due to the invertebrate species associated with them.

There are records of bats (Common Pipistrelle, Soprano Pipistrelle) within 1km of the survey site according to the data search. There are records of Brown Long-eared, Noctule and Whiskered/Brandt's bats within 5km radius of the site.

If any trees that require removing, have Potential Roost Features, further surveys will be required to determine possible roosting sites. Further surveys will be required to determine bat activity on site and important flight lines.

6.2 Great Crested Newts and other amphibians

No signs of great crested newts (GCN) were observed during the survey; however the native hedges [A2] and scattered trees [A4] have some potential to be used by GCN for foraging, emigration corridors and hibernation. The log pile has some potential to be used by GCN as a hibernacula site.

There are 2 records of great crested newt (1992-1995) within 1km radius of the survey site, according to the Data Search. According to the OS map there are 9 ponds identified within 1km radius of the site, with the nearest pond approximately 470m from the site. Other ponds are located at approximately 560m, 655m, 875m and 970m.

6.3 Reptiles

No signs of reptiles were noted during the survey; however, the log pile has some limited potential to be used by basking reptiles and as a hibernacula site. The hedgerows [A2] and scattered trees [A4] have some potential to be used by reptiles for foraging and emigration corridors, but limited due to the heavy shade. There is 1 record of common lizard (2012) and 2 records of slow worm (1997) within 1km radius of the site according to the data search.

6.4 Badgers

Evidence of badgers was observed during the survey. A track was observed passing beneath the hedge on the West boundary and another track was observed passing beneath a palisade security fence on the North boundary. Evidence of grubbing (digging for worms in grassed areas), was observed near the timber workshop building near the centre of the site. The areas of amenity grass [A3] and scattered trees [A4] have some potential for foraging badgers. There are 17 records of badgers (1985-2018) within 1km radius of the survey site, according to the data search.

6.5 Hazel Dormice

No signs of hazel dormice were noted during the survey and there is no potential habitat for this species on site. There are no records of hazel dormice within 1km of the survey site, according to the data search.



6.0 SPECIES (continued)

6.6 Otters

No signs of otters were observed during the survey and no potential habitat for this species on site. There are no records of otters within 1km radius of the survey site, according to the data search.

6.7 Other mammal species

There are records of hare (1985), hedgehog (2002-2012) and water vole (2017) within 1km radius of the survey site, according to the data search. The hedgerows [A2], amenity grass [A3], scattered trees [A4] and scrub [A5] have potential for hedgehogs.

6.8 Nesting birds

The data search had numerous records of birds within 1km radius of the site. The hedgerows, trees, and scrub all have potential for nesting birds.

6.9 EPS plant species

There are no records of EPS plant species within 1km radius of the site according to the data search. No EPS plant species were observed on the site.

6.10 Invasive non-native species

There are records of invasive non-native species (Himalayan Balsam, Himalayan Cotoneaster, Japanese Knotweed and Wall Cotoneaster) within 1km radius of the site according to the data search. No INNS plant species were observed on the site.

6.11 Survey Constraints

There were no particular constraints to surveys, apart, perhaps from the time of year making it difficult to account for the full range of some species of flowering plants.

6.12 Data Search Results

A summary of the data search results are included in Appendix 3. Sites of nature conservation interest within 10km radius of the site are:

2 Special Protection Areas (SPA) – Dee Estuary; Liverpool Bay (Wales)

4 Sites of Special Areas of Conservation (SAC) – Dee Estuary; Halkyn Mountain; Deeside and Buckley Newt Sites; River Dee and Bala Lake

1 RAMSAR site – Dee Estuary

16 Sites of Special Scientific Interest (SSSI) – Alyn Valley Woods and Alyn Gorge Caves; Buckley Claypits and Common; Cambrian Quarry, Gwernymynydd; Cefn Meadow; Connah's Quay Ponds and Woodland; Ddol Uchaf; Flint Mountain; Halkyn Common and Holywell Grasslands; Herward Smithy; Inner Marsh Farm; Maes y Grug; Parc Bodlondeb and Gwenallt-parc, Lixwm; Parc Linden, Lixwm; Pen y Cefn Pasture; Shotton Lagoons and Reedbeds; Tyddyn y Barcut.

Within 1km radius of the site:

2 Wildlife Sites (WS) – Coed Stanley, Cornist Wood.



6.0 SPECIES (continued)

6.12 Data Search Results

The Cofnod Data Request [E07251] provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of mammals (badger, bats), reptiles (common lizard, slow worm) and amphibians (great crested newt) within 1km radius of the site. There are records of other small mammals within 1km radius of the site (hare, hedgehog, water vole). There were records of invasive non-native plant species within a 1km radius of the site (Himalayan Balsam, Himalayan Cotoneaster, Japanese Knotweed, Wall Cotoneaster). The absence of recent records for certain species in this area is in part likely due to a lack of survey effort or the non-submission of records, rather than the absence of these species.

7.0 EVALUATION

Please note that all conclusions and recommendations are based upon the current survey findings and on the proposal outlined in 1.3 above. If the site management changes then the potential for protected species to use the site may change accordingly. Many protected species are highly mobile and re-survey of the site may be necessary in the future.

7.1 Conclusions

7.1.1 Habitats

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat.

The hedges, scrub and trees have high potential for nesting birds and provide valuable flight-lines for foraging/commuting bats. Some mature trees have Potential Roost Features for bats. The existing dwelling has a moderate potential for roosting bats between the cementation roof tiles and bitumastic underfelt and in gaps in the eaves/bargeboards. The timber lodge has a tight slate roof, with few gaps beneath the slates and was assessed as having a low potential for roosting bats. The other wooden outbuildings (corrugated roof sheets or felt covered flat roofs with no insulation), have negligible potential for roosting bats. The disused air-raid shelter in the Southeast corner has been previously blocked up. There are a few gaps where bats may gain access, but this building was assessed as having low potential for roosting bats. The hedgerows and scattered trees and longer vegetation, have some potential to be used by GCN and reptiles [but limited due to the shade] for foraging and emigration corridors. The log pile has some potential to be used by GCN and reptiles as a hibernacula site.

The amenity grassland has some potential for badgers. Evidence of badgers was observed on site (tracks, grubbing/digging for worms).

The area of amenity grass [A3] is regularly maintained by mowing to a close swathe and has little potential for other wildlife. The hardstanding areas have no potential for wildlife.

The hedges on site do not qualify as 'important' with regards to the Hedgerow Regulations 1997, made under Section 97 of the Environment Act 1995 which came into effect 1 June 1997.

Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 12 of 34



7.0 EVALUATION (continued)

7.1 Conclusions

7.1.2 Bats

Bats often roost in trees in holes/cavities in the trunk, cracks/splits in branches, beneath dead loose bark and behind dense Ivy growth. The existing dwelling has a moderate potential for roosting bats. Linear features such as hedgerows and mature tree lines on the site provide valuable flight-lines used by bats whilst foraging and commuting. Numerous trees and small sections of hedge will require removing, to facilitate the proposed development, which may have a moderate impact on foraging bats. New hedgerow and tree planting will mitigate for any loss of habitat, to minimise the effect on foraging/commuting bats.

There are records of bats (Common Pipistrelle, Soprano Pipistrelle) within 1km of the survey site according to the data search. There are records of Brown Long-eared, Noctule and Whiskered/Brandt's bats within 5km radius of the site.

All British species of bat are protected under the Wildlife and Countryside Act, 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations, 2010.

Further bat surveys are required to determine bat activity and important flight lines on site.

7.1.3 Great Crested Newts and other amphibians

The native hedges [A2] and scattered trees [A4] have some potential to be used by GCN for foraging, emigration corridors and hibernation. The log pile has some potential to be used by GCN as a hibernacula site. If the log pile is to be removed, an ecologist will need to carry out a soft demolition by hand, to ensure no amphibians are injured.

There are 2 records of great crested newt (1992-1995) within 1km radius of the survey site, according to the Data Search. According to the OS map there are 9 ponds identified within 1km radius of the site, with the nearest pond approximately 470m from the site. Other ponds are located at approximately 560m, 655m, 875m and 970m. If the log pile is to be removed, an ecologist will need to carry out a soft demolition by hand, to ensure no GCN are injured.

By using Reasonable Avoidance Methods, the proposed development should have no detrimental effect on the favourable conservation status of great crested newts and other amphibians.

7.1.4 Reptiles

The log pile has some limited potential to be used by basking reptiles and as a hibernacula site. The hedgerows [A2] and scattered trees [A4] have some potential to be used by reptiles for foraging and emigration corridors, but limited due to the heavy shade. There is 1 record of common lizard (2012) and 2 records of slow worm (1997) within 1km radius of the site according to the data search. If the log pile is to be removed, an ecologist will need to carry out a soft demolition by hand, to ensure no reptiles are injured.

By using Reasonable Avoidance Methods, the proposed development should have no detrimental effect on the favourable conservation status of reptiles.



7.0 EVALUATION (continued)

7.1 Conclusions

7.1.5 Badgers

Evidence of badgers was observed during the survey. A track was observed passing beneath the hedge on the West boundary and another track was observed passing beneath a palisade security fence on the North boundary. Evidence of grubbing (digging for worms in grassed areas), was observed near the timber workshop building near the centre of the site. The areas of amenity grass [A3] and scattered trees [A4] have some potential for foraging badgers. There are 17 records of badgers (1985-2018) within 1km radius of the survey site, according to the data search.

Maintaining areas of amenity grass between the track on the West boundary to the track on the North boundary would help to retain a corridor for foraging badgers. By using mitigation and Reasonable Avoidance Methods, the proposed development should have no detrimental effect on the favourable conservation status of badgers.

7.1.6 Hazel Dormice

There is no suitable habitat on site for Hazel Dormice. There are no records of Hazel Dormice within 1km radius of the survey site, according to the data search. The proposed development should have no detrimental effect on the favourable conservation status of Hazel Dormice.

7.1.7 Otters

No signs of otters were observed during the survey and no potential habitat for this species on site. There are no records of otters within 1km radius of the survey site, according to the data search. The proposed development should have no detrimental effect on the favourable conservation status of Otters.

7.1.8 Other mammal species

There are records of hare (1985), hedgehog (2002-2012) and water vole (2017) within 1km radius of the survey site, according to the data search. The hedgerows [A2], amenity grass [A3], scattered trees [A4] and scrub [A5] have potential for hedgehogs. New tree and hedge planting to compensate for loss of habitat will mitigate for any effect on hedgehogs. The proposed development should have no detrimental effect on the favourable conservation status of these other small mammal species.

7.1.9 Nesting Birds

Hedgerows, trees, woodland areas, Ivy and scrub have potential to be used by a variety of bird species for nesting. Under the Wildlife and Countryside Act, 1981 (as amended), it is illegal to take, damage or destroy the nests of wild birds whilst being built or in use (with exceptions). However it is not an offence to carry out works in areas that they use, outside of the nesting period. Therefore it is recommended that works, particularly clearance of vegetation, are carried out between the period between 1st October and end of February to avoid the breeding season. If works to clear potential nesting habitat need to be carried out during the nesting period (1st March – 30th September) a check should be made by an ecologist for nesting birds, the day before the works are due to commence. Any birds nesting should be left to complete their breeding (i.e. until the young have fully fledged) before any works that will disturb the birds can take place.



7.0 EVALUATION (continued)

7.1 Conclusions (continued)

7.1.10 EPS plant species

There are no records of EPS plant species within 1km radius of the site, according to the data search. The proposed development should have no detrimental effect on EPS plant species.

7.1.11 Invasive non-native species

There are records of invasive non-native species (Himalayan Balsam, Himalayan Cotoneaster, Japanese Knotweed and Wall Cotoneaster) within 1km radius of the site according to the data search. No INNS plant species were observed on the site. The site entrance will be locked at night, so there is no foreseen potential of access by fly-tippers dumping material containing invasive non-native plant species. Biosecurity control measures will be implemented, to minimise risk of spreading invasive non-native species.

7.1.12 Summary of further survey

Survey type	Timing	Where	Notes
Bat activity	May - September	A2, A3, A4, A5, A6 Trees to be removed that have PRF present [A4].	Bat surveys to determine bat activity and identify important flight lines. Climbing inspection with torch & endoscope to assess potential for bats. Emergence surveys to determine if roosting bats are present.
Nesting birds	March - September	Hedgerows and scattered trees [A5].	Only if scrub/trees/hedges are being removed in these months
GCN/reptiles	April - October	Log pile in Southwest of site.	Soft destructive search, only if log pile to be removed.



8.0 IMPACT ASSESSMENT

8.1 Short-term impact

Disturbance through increased human presence, noise and changes in site layout may have a detrimental effect on bats and nesting birds.

Bats

Further emergence surveys (May-September) will need to be carried out to determine if there are any bats roosting in the roof area of the existing dwelling. If bats are roosting in any of the trees to be removed, they could be killed or injured if works start when present between spring and summer. Timing of operation will minimise disturbance. Any trees to be removed should be visually inspected to identify Potential Roosting Features (cracks/splits, cavities, loose bark etc.). Any PRF identified should be further inspected utilising an endoscope, to check for bats and evidence of recent use and to assess the potential for bats. This may require a climbing survey. If any PRFs have high potential for bats, further emergence surveys (May-September) should be carried out to determine if any bat roosts are present.

Nesting birds

Nesting birds would be affected if hedges/trees were removed during March-September in the nesting season. Timing of operation will minimise disturbance.

8.2 Long-term impact – roost losses

Bats

If the existing dwelling has roosting bats or if any of the trees to be removed have bat roosts, this could have an impact on the locally recorded population. The scale of impact would depend on the type of roost affected (e.g. day roost, maternity roost etc.). Providing a replacement roost(s) as compensation [e.g. in the form of bat boxes] and incorporating additional new roost opportunities into the proposed development will likely have a positive impact on locally recorded bats.

Nesting birds

Any loss of hedges and trees could have an impact on nesting birds. Post-construction landscape scheme will include new tree/shrub/hedge planting, to mitigate for any loss of habitat. Providing bird nesting boxes in the mature trees on site will likely have a positive impact on locally recorded birds.

GCN/Reptiles

The log pile has potential for use as a hibernacula site for GCN/reptiles. If it needs to be removed, this could have an impact on the locally recorded population. Providing a new hibernacula site, by re-locating the log pile to a suitable location, or constructing an artificial hibernacula somewhere on site would mitigate for the loss of habitat.



8.0 IMPACT ASSESSMENT (continued)

8.3 Long-term impact – fragmentation and isolation

Further bat surveys will need to be carried out to determine important bat flight lines on the site. Any loss of linear features (hedges, treelines), which provide important flightlines for bats would be negative and have an impact on locally recorded bats. Hedgerows also have potential for commuting GCN and reptiles, so any loss of habitat would be negative. Post-construction landscape scheme will include new tree/shrub planting, to mitigate for any loss of habitat.

8.4 Post-development interference impacts

Bats and other species can be disturbed by bright, artificial lighting. Where lighting is essential in the vicinity of the proposed development, subdued lighting should be used and the illumination should be directed downwards (upward light ratio 0%). LED luminaires should be used where possible, with a warm white spectrum (<2700Kelvin) to minimise blue light component. Luminaires should have peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. The use of motion sensor-triggered security lighting with short (1 min) timers, is preferable to permanent lighting. It is essential that bat flightlines used for foraging/commuting (e.g. hedgerows, lines of trees) are not illuminated. The use of soft landscaping and fencing [supported by concrete posts to ensure long-term contribution] can be used to screen light spill. The latest Guide Note 08/18 can be downloaded at www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

8.5 Predicted scale of impact

If there are bats roosting in the roof area of the existing dwelling, or if any of the trees to be removed have bat roosts, the individual bats of all species concerned would be affected. The scale of impact [low, moderate, high] on locally recorded bats would depend on the type of roost affected (e.g. day roost, maternity roost etc.). It is essential that further bat surveys are carried out, to determine bat activity on site and identify important flight lines, in order to better assess the predicted impact on bats. The results of these further surveys would enable appropriate compensation and mitigation and Reasonable Avoidance Measures to be prescribed, in order to minimise the impact on locally recorded bats. The predicted impact on nesting birds, amphibians and reptiles is low. The proposed development could affect badgers, so it is essential that mitigation measures are implemented and RAMs are followed, to minimise the impact.

9.0 MITIGATION

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat. Trees, scrub and hedges have potential for nesting birds and provide valuable flight lines for foraging bats. A post-construction landscaping scheme including new tree and hedge planting, should be prepared for the proposed development, to compensate for any loss of habitat and to enhanced the site. Installing bat boxes and bird nesting boxes in some of the mature trees and/or incorporating bat-friendly features into the proposed dwellings, would also provide suitable alternative roosting sites. Maintaining areas of amenity grass between the track on the West boundary to the track on the North boundary would help to retain a corridor for foraging badgers. Reasonable Avoidance Measures (RAM) should be used to protect protected species (see separate documents).



10.0 WILDLIFE AND THE LAW

10.1 European Protected Species

The Bern Convention (The convention on the conservation of European Wildlife and Natural Habitats) was adopted in 1979 and came into force in 1982. To implement this agreement, the European Community adopted the EC Habitats Directive.

The EC Habitats Directive has been transposed into UK legislation by the Wildlife and Countryside Act, 1981 (as amended) and the Conservation of Habitats and Species Regulations, 2010. The Countryside and Rights of Way Act (CroW), 2000 strengthened the existing wildlife legislation in the UK.

The UK has also signed the Bonn Convention (The Convention on the Conservation of Migratory Species of Wild Animals) and is therefore party to various agreements.

10.1.1 Bats

All 17 bat species found in the UK and their roosts are protected in the UK under Schedules 5 and 6 of the Wildlife & Countryside Act 1981 (as amended) and are therefore afforded protection under Section 9 of this Act. The Countryside Rights of Way Act (CroW) 2000 strengthened the existing wildlife legislation in the UK.

In addition, five British bat species are also listed on Annex II [and all bats are listed on Annex IV] of the EC Habitats Directive, which is transposed into national law by means of The Conservation of Habitats and Species Regulations (2017).

These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*);
- Lesser horseshoe bat (*Rhinolophus hipposideros*);
- Bechstein's bat (*Myotis bechsteinii*);
- Barbastelle (*Barbastella barbastellus*) and
- Greater mouse-eared bat (*Myotis myotis*).

Bats are listed under Appendix III of the Bern Convention. Bats and their habitats are also listed under Appendix II of the Bonn Convention and therefore the UK has an obligation to protect their habitat, including links to important feeding areas. The UK had designated maternity and hibernacula areas as Special Areas of Conservation (SACs) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

10.1.2 Amphibians

Great crested newts, natterjack toads and pool frogs are protected under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended). Great crested newts, natterjack toads and pool frogs are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

10.1.3 Reptiles

Sand lizard and smooth snake are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 18 of 34



10.0 WILDLIFE AND THE LAW (continued)

10.1.4 Hazel Dormice

Hazel Dormice are protected under Schedules 5 and 6 of the Wildlife and Countryside Act, 1981 (as amended) and they are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010.

10.1.5 Otters

Otters are protected under Schedules 5 and 6 of the Wildlife and Countryside Act, 1981 (as amended) and they are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

10.1.6 Legislation relating to European Protected Species

In relation to a development a person commits an offence if they –

- Deliberately captures, injures or kills a European Protected Species
- Deliberately or recklessly disturbs wild animals of any such species in such a way as to be likely significant to affect:
 - (i) the ability of any significant group of animals to survive, breed, or rear or nurture their young; or
 - (ii) the local distribution or abundance of that species;
- Damages or destroys a breeding site or resting place (even if unintentional or when the animal is not present)
- Intentionally or recklessly obstructs access to a structure or place used for protection or shelter
- This legislation applies, regardless of the life stage (including eggs).

A European Protected Species Licence is required to carry out any activity that would otherwise involve committing an offence.

To avoid disturbance during habitat management, a written strategy is required following guidance provided by Natural Resources Wales and the Forestry Commission. If the guidance is followed and major disturbance can be avoided, then a licence is not required.



10.0 WILDLIFE AND THE LAW (continued)

10.1.7 European Protected Species Licences

At the present time, Natural Resources Wales requires the following three ‘tests’ to be met, in order that a licence may be granted.

Test 1. Regulation 53 (2) (e) states that licences granted to ‘preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment’.

Test 2. Regulation 53 (9) (a) states that a licence may not be granted unless the licensing authority is satisfied ‘that there is no reasonable alternative’.

Test 3. Regulation 53 (9) (b) states that a licence cannot be issued unless the licensing authority is satisfied that the action proposed ‘will not be detrimental to the maintenance of the species concerned at a favourable conservation status in its natural range’.

10.1.8 Recent changes in Licences

Following a recent intervention from the European Court, there have been significant changes in the interpretation of the way licences are issued. In considering a licence request, Natural Resources Wales will seek information relating to the size and importance of the population/colony and will require evidence to demonstrate that the species will be maintained ‘at a favourable conservation status in their natural range’. In effect, this means that to obtain a licence, Natural Resources Wales must be satisfied that the applicant will implement mitigation to safeguard (and ideally enhance) the population concerned. Natural Resources Wales will need to see evidence that the development work which will disturb/destroy a roost site will be undertaken using current best practice, also that the bats can be provided with an alternative roost site on or in the immediate area.

10.1.9 Important EPSL Information

Please note that a European Protected Species Licence can only be obtained once planning permission has been granted. When assessing planning applications where a European Protected Species could be affected by proposed works, the local Planning Authority must take into account the potential impacts on the species concerned. In practice this could make further survey work (such as emergence surveys in the case of bats) essential prior to planning permission being granted. The local Planning Authority must also have regard for the three ‘tests’ as outlined above – Regulations 53 (2) (e), 53 (9) (a) and 53 (9) (b).

Once planning permission has been granted a European Protected Species Licence application can be submitted to Natural Resources Wales. The application requires detailed Method Statements to be produced by a qualified bat ecologist to demonstrate how Regulation 53 (9) (b) can be satisfied.

The applicant will also need to complete a Reasoned Statement form demonstrating (with evidence) that Regulations 53 (2) (e) and 53 (9) (a) are satisfied. This involves producing evidence to show that no reasonable alternative to the proposed action is available and that the action must take place to either ‘preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.



10.0 WILDLIFE AND THE LAW (continued)

10.2 Other Protected Species

10.2.1 Nesting Birds

All wild birds are protected under Part 1 of the Wildlife and Countryside Act, 1981 (as amended). Therefore in the UK it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is being built or in use.
- Kill, injure or take any wild bird.
- Take or destroy the eggs of any wild bird.

To avoid committing an offence no works should be carried out on a structure/feature that is being used by nesting birds. Nesting is deemed to be over when the young have fully fledged. Certain species which are listed in Schedule 1 of the Wildlife and Countryside Act receive special protection. In these cases any form of intentional or reckless disturbance when they are nesting or rearing dependent young, constitutes an offence.

10.2.2 Reptiles

Common lizard, slow worm, adder and grass snake are all protected under Schedule 5 of the Wildlife and Countryside Act, 1981 against intentional injuring, killing or selling.

For development sites in **England, Wales or Scotland**, to avoid prosecution under the *Wildlife and Countryside Act 1981 (as amended)*, wherever works will impact on slow worms, common lizards, adders and/or grass snakes there must be evidence that every reasonable effort was made to avoid breaking the law – including proof of adequate surveys and mitigation plans. Mitigation measures should, ideally, be agreed with the relevant SNCO (in this case Natural Resources Wales).

Only the sand lizard and smooth snake are fully protected under the Wildlife and Countryside Act, 1981 (Section 9) and Regulation 9 of the Conservation of Habitats and Species Regulations 2010 against killing, injuring, capture, damaging or destroying a breeding or resting site, intentionally obstructing access to a place used for shelter, keeping, transporting or selling. This means that not only are the animals themselves protected but so are their habitats.

10.2.3 Badgers

Badgers are protected under Schedule 6 of the Wildlife and Countryside Act, 1981 (as amended). They are also protected in the UK by the Protection of Badgers Act, 1992. Under this legislation it is an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so).
- Cruelly ill-treat a badger.
- Dig for a badger.
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it.
- Cause a dog to enter a badger sett.
- Disturb a badger when it is occupying a sett.



10.0 WILDLIFE AND THE LAW (continued)

10.3 Environment (Wales) Act 2016

This Act sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act.

The Environment (Wales) Act introduces a new, enhanced Biodiversity and Resilience of Ecosystem Duty on public bodies to ensure that biodiversity is an integral part of decision making. The Duty will replace the existing Natural Environment and Rural Communities (NERC) Act 2006 Duty. Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience. Section 6 of the Act places a duty on public authorities to seek to maintain and enhance biological diversity (referred to as biodiversity). All public bodies, statutory undertakers, Ministers of the Crown and other public office holders are required to apply the duty when they are carrying on any functions in Wales, or in relation to Wales. Section 7 of the Act is similar to the duty in *section 42 of the NERC Act 2006* which it replaces. It places a duty on the Welsh Ministers to publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

10.4 Planning Policy Wales Framework

Planning Policy Wales (Edition 9, Nov 2016) sets out the Welsh Government's planning policies and how these are expected to be applied. The planning system manages the development and use of land in the public interest, contributing to improving the economic, social, environmental and cultural well-being of Wales, as required by the Well-being of Future Generations (Wales) Act 2015. It should reconcile the needs of development and conservation, securing economy, efficiency and amenity in the use of land, and protecting natural resources and the historic environment. A well-functioning planning system is fundamental for sustainable development.

10.5 Key Principles of PWW (2016)

Chapter 5 'Conserving and Improving Natural Heritage and the Coast' provides policies for protection of biodiversity and geological conservation.

Para.5.2.3 The Welsh Government will ensure that its policies contribute to the conservation of the abundance and diversity of native wildlife and its habitats and will minimise the adverse effects on wildlife where conflict of interest is unavoidable.

Para 5.5.11 The presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat. Local planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site concerned, and should consult Natural Resources Wales before granting permission. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the planning decision.

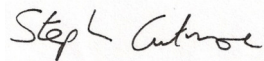


10.0 WILDLIFE AND THE LAW (continued)

10.5 Key Principles of PWW (2016)

Para 5.5.12 Developments are always subject to the legislation covering European protected species regardless of whether or not they are within a designated site. New developments for which development works would contravene the protection afforded to European protected species require derogations from the provisions of the Habitats Directive. A derogation may only be authorised if there is no satisfactory alternative and if the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range. The development works to be authorised must be for the purposes of preserving 'public health or safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'. Derogations are granted by a licence issued by Natural Resources Wales. Local planning authorities are under a duty to have regard to the requirements of the Habitats Directive in exercising their functions. To avoid developments with planning permission subsequently not being granted derogations in relation to European protected species, planning authorities should take the above three requirements for derogation into account when considering development proposals where a European protected species is present.

Report written and compiled by



Stephen Cutmore BSc (Hons), MICFor

Licensed bat worker (NRW[78542: OTH: CSAB: 2018], NE[2015-16936-CLS-CLS]),

Licensed Amphibian Worker (NRW[78772a: OTH: SA: 2018], NE[2016-19908-CLS-CLS])



11.0 REFERENCES

British Standards Institution (2013). *BS42020 'Biodiversity. Code of Practice for planning and development'*. BSI Standards Limited, London.

Collins, J (ed.) (2016) *Bat Surveys for Professional Ecologists- Good Practice Guidelines (3rd edn)* Bat Conservation Trust, London.

Edgar, P., Foster, J. and Baker, J. (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

English Nature (2002). '*Badgers and Development*'. English Nature, Peterborough.

Environment (Wales) Act 2016. National Assembly for Wales.

Great Crested Newt Mitigation Guidelines (2001) English Nature, Peterborough.

Handbook for Phase 1 Habitat Survey (1990). Joint Nature Conservation Committee, Peterborough.

Herpetofauna Workers Manual (2003). Joint Nature Conservation Committee, Peterborough.

Mitchell-Jones, A.J. and McLeish, A.P. (2004) *Bat Workers Manual*. Joint Nature Conservation Committee, Peterborough.

National Planning Policy Framework (2016). Department for Communities and Local Government.

Natural England (2011). '*Badgers and Development. A Guide to Best Practice and Licencing*'. Interim Guidance Document Revised 12/11. Natural England, Bristol.

Natural Resources Wales. '*Guidance on undertaking work close to badger setts that cannot be licenced under the Protection of Badgers Act 1992*'.

Newton J, Thackray C and Nicholson B (2005) *Working with Wildlife Site Guide* CIRIA/Ecology Consultancy Ltd.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143-155.



APPENDIX 1 – Site map

Please see accompanying pdf file ‘Tan y Bryn, Flint PEA survey map’, in order to view details more clearly.



Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 25 of 34



APPENDIX 2 – Photographs



Photo 1: Hedge [A2], amenity grass [A3], scattered trees [A4], scrub [A5] in Southwest section of site.



Photo 2: Existing dwelling and lodge [A6].



Photo 3: Log pile at edge of amenity grass [A3].

Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 26 of 34



APPENDIX 2 – Photographs



Photo 4: Amenity grass [A3] and scattered trees [A4] in Southeast section of site.



Photo 5: Amenity grass [A3] and scattered trees [A4] in Northeast section of site.



Photo 6: Orchard in amenity grass [A3] to East of dwelling.

Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 27 of 34



APPENDIX 3 – Plant species abundance rating (DAFOR)

A2: Native species-poor intact hedge

Species	Dominant	Abundant	Frequent	Occasional	Rare
Bramble			✓		
Broadleaved Dock					✓
Cherry Laurel		✓			
Chickweed					✓
Cleavers				✓	
Couch-grass				✓	
Cow Parsley					✓
Cuckoo-pint				✓	
Elder				✓	
Hawthorn		✓			
Hazel			✓		
Hedge Bindweed				✓	
Ivy			✓		
Stinging Nettle				✓	
Wild Cherry				✓	

A3: Amenity grass

Species	Dominant	Abundant	Frequent	Occasional	Rare
Broadleaved Dock				✓	
Common Bent-grass		✓			
Common Speedwell					✓
Cow Parsley				✓	
Creeping Buttercup			✓		
Daffodil				✓	
Dandelion				✓	
Daisy			✓		
Hoary Plantain				✓	
Hyacinth					✓
Miniature Daffodil					✓
Moss			✓		
Spear Thistle				✓	
White Clover				✓	

A4: Scattered trees

Species	Dominant	Abundant	Frequent	Occasional	Rare
Apple			✓		
Ash			✓		
Beech				✓	
Birch			✓		
Black Mulberry					✓
Blackthorn				✓	
Bramble			✓		
Cleavers				✓	
Common Alder				✓	
Common Oak				✓	
Common Yew					✓
Cornelian Cherry					✓
Couch grass				✓	
Cuckoo-pint				✓	
Damson				✓	
Dog-rose				✓	
European Larch				✓	
Hawthorn				✓	
Hazel				✓	
Holly				✓	
Horse Chestnut				✓	
Hybrid Poplar					✓
Ivy			✓		
Lesser Celandine				✓	
Lawson Cypress			✓		
Leyland Cypress			✓		
Lombardy Poplar					✓

Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 28 of 34



APPENDIX 3 – Plant species abundance rating (DAFOR)

A4: Scattered trees (continued)

Species	Dominant	Abundant	Frequent	Occasional	Rare
Magnolia					✓
Norway Maple				✓	
Pear				✓	
Plum				✓	
Rowan				✓	
Scots Pine				✓	
Sitka Spruce				✓	
Stinging Nettle			✓		
Sycamore			✓		
Weeping Willow					✓
Whitebeam					✓
White Willow					✓
Wild Cherry			✓		

A5: Scrub

Species	Dominant	Abundant	Frequent	Occasional	Rare
Bramble		✓			
Ivy				✓	
Stinging Nettle				✓	

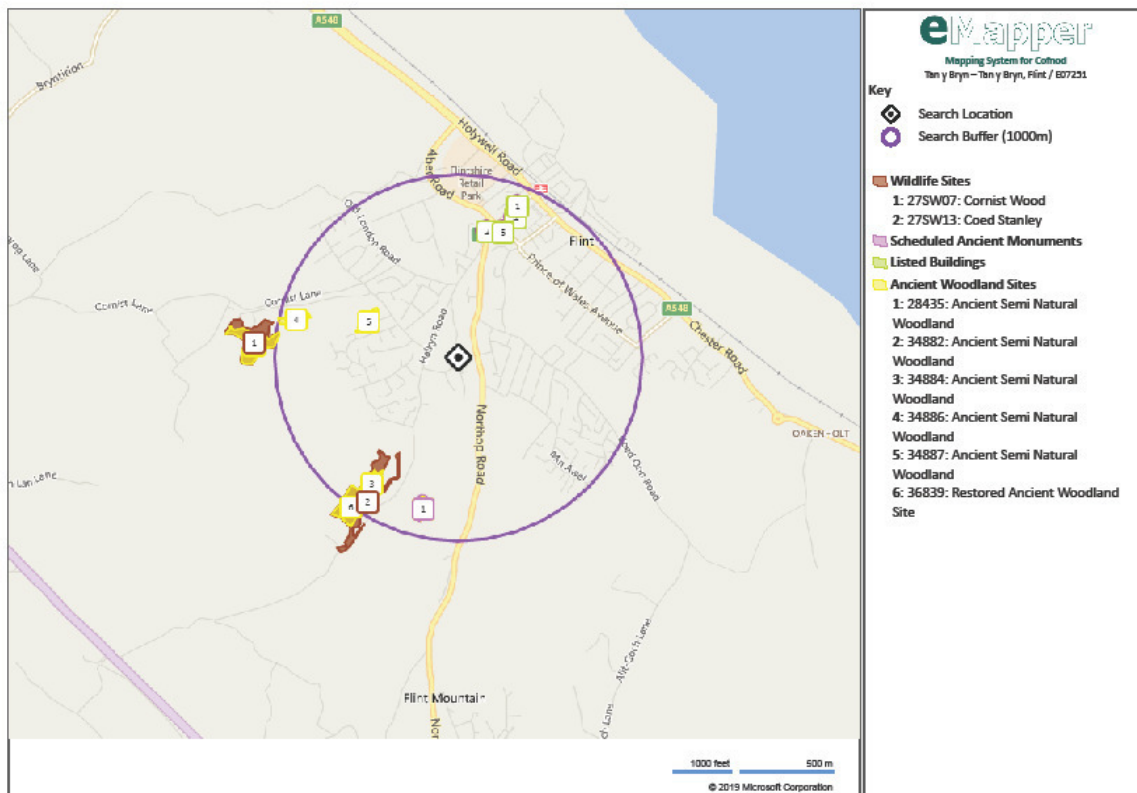


APPENDIX 4 – Data search results

Summary

Statutory and non-statutory sites within 1km of SJ24057225

Site Name	Status
Coed Stanley	WS
Cornist Wood	WS



Client: Niall Wallace
Ref: 042019/PEA/NW

PEA Survey
Tan y Bryn, Bryn Road, Flint

11 April 2019
page 30 of 34



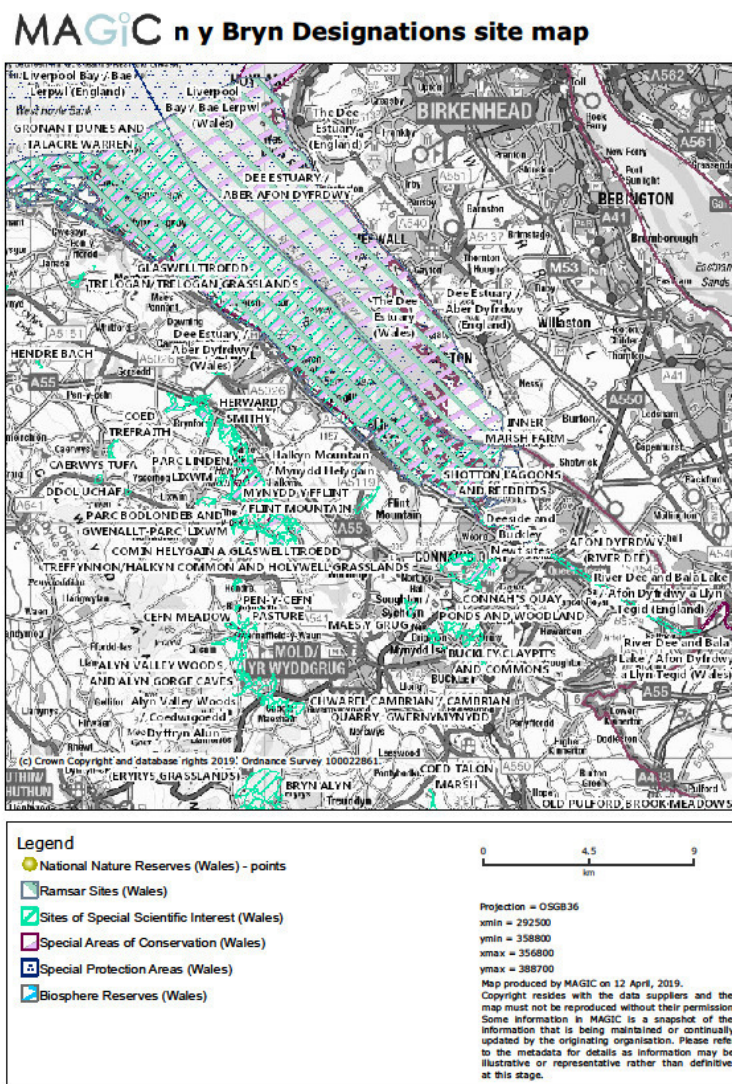
APPENDIX 4 – Data search results (continued)

Statutory Designated sites within 10km radius of SJ24057225

Site Name	Status
Dee Estuary	RAMSAR; SAC; SPA; SSSI
Deeside and Buckley	SAC
Newt Sites	
Halkyn Mountain	SAC
Liverpool Bay (Wales)	SPA
River Dee and Bala Lake	SAC

SSSI sites within 10km radius of the site:

Alyn Valley Woods and Alyn Gorge Caves; Buckley Claypits and Common; Cambrian Quarry, Gwernymynydd; Cefn Meadow; Connah's Quay Ponds and Woodland; Ddol Uchaf; Flint Mountain; Halkyn Common and Holywell Grasslands; Herward Smithy; Inner Marsh Farm; Maes y Grug; Parc Bodlondeb and Gwenallt-parc, Lixwm; Parc Linden, Lixwm; Pen y Cefn Pasture; Shotton Lagoons and Reedbeds; Tyddyn y Barcut.



Client: Niall Wallace
 Ref: 042019/PEA/NW

PEA Survey
 Tan y Bryn, Bryn Road, Flint

11 April 2019
 page 31 of 34



APPENDIX 4 – Data search results (continued)

Mammals

Species	Earliest Year	Latest Year	Records
Badger	1985	2018	17
Common Pipistrelle	1986	2014	10
Hare	1985	1985	1
Hedgehog	2002	2012	5
Pipistrelle agg.	1987	2012	4
Pipistrelle bat species	2014	2014	1
Soprano Pipistrelle	2012	2012	2
Unknown bat	1995	2001	6
Water Vole	2017	2017	1

Reptiles and amphibians

Species	Earliest Year	Latest Year	Records
Common Lizard	2012	2012	1
Great Crested Newt	1992	1995	2
Slow worm	1997	1997	2

Invasive non-native plant species

Species	Earliest Year	Latest Year	Records
Himalayan Balsam	2015	2015	1
Himalayan Cotoneaster	2015	2015	1
Japanese Knotweed	2015	2015	1
Wall Cotoneaster	2015	2015	2



APPENDIX 5 – Hedgerow Regulations 1997

The Hedgerow Regulations 1997 were made under Section 97 of the Environment Act 1995 and came into effect 1 June 1997.

It is against the law to remove most hedges without permission. Removal is uprooting or otherwise destroying a hedgerow. Serious damage to the root system or over-maintenance resulting in the death of the hedgerow counts as removal. The regulations only cover hedgerows that are at least 20m long or, if shorter, connected to other hedgerows at both ends, or part of a longer hedgerow. They must be in or adjacent to common land, village greens, SSSIs, LNRs, or land used for agriculture, forestry or breeding or keeping of horses, ponies or donkeys. Garden hedges and former hedgerows that have grown to a line of trees are not covered by the regulations. Trees within a hedgerow are considered to be a part of the hedge.

What is an important hedgerow?

To qualify as ‘important’, a hedgerow must be at least 30 years old and meet at least one of the following eight criteria, which identify hedgerows of particular archaeological, historical, wildlife and landscape value.

- The hedgerow marks the boundary of a historic parish or township existing before 1850.
- The hedgerow incorporates an archaeological feature.
- The hedgerow is a part of or associated with an archaeological site.
- The hedgerow marks the boundary of or is associated with a pre-1600 AD estate or manor.
- The hedgerow forms an integral part of or is associated with a field system pre-dating the Enclosures Act.
- The hedgerow contains a listed species. These have to be listed the Wildlife and Countryside Act 1981 either in Part I of Schedule 1 (birds protected by special penalties), or Schedule 5 (other animals) or Schedule 8 (plants). In addition, species listed in certain red data books qualify. Unfortunately, the list of birds was published in 1990, and does not include species such as song thrush and linnet, whose numbers have declined more recently.
- The hedgerow includes, on average, in a 30 metre length one of:
 - a) at least 7 woody shrub and tree species listed in the regulations (see the list below).
 - b) at least 6 woody species and has at least 3 associated features.
 - c) at least 6 woody species including a black-poplar tree, large-leaved lime, small-leaved lime or wild service tree.In northern England, the number of woody species is reduced by one.
- The hedgerow runs alongside a bridleway, footpath, road used as a public path or a byway open to all traffic, and includes at least four woody species, on average, in a 30 metre length and has at least two associated features.



APPENDIX 5 – Hedgerow Regulations 1997 (continued)

The associated features are:

1. A bank or wall supporting the hedgerow along at least half of its length.
2. Less than 10% gaps.
3. On average, at least one tree per 50 metres of hedge
4. At least three species from a list of 57 herbaceous woodland plants, including bluebell, primrose, wild strawberry and assorted ferns and violets (see list below).
5. A ditch along at least a half of the length of the hedge.
6. A number of connections with other hedgerows, ponds or woodland.
7. A parallel hedge within 15 metres of the hedgerow.

Schedule 2 Woodland plant species

Barren strawberry, bluebell, broad buckler fern, broad-leaved helleborine, bugle, common cow-wheat, common dog violet, common polypody, dog's mercury, early dog violet, early purple orchid, enchanter's nightshade, giant fescue, goldilocks buttercup, great bell-flower, greater wood-rush, hairy brome, hairy woodrush, hard fern, hard shield fern, hart's tongue, heath bedstraw, herb paris, herb-robert, lady fern, lords-and-ladies, male fern, moschatel, narrow buckler-fern, nettle-leaved bell-flower, oxslip, pignut, primrose, ramsons, sanicle, scaly male-fern, small cow-wheat, soft shield fern, sweet violet, toothwort, tormentil, wild strawberry, wood anemone, wood avens/herb bennet, wood false-brome, wood horsetail, wood meadow-grass, wood melick, wood millet, wood sage, wood sedge, wood sorrel, wood speedwell, wood spurge, woodruff, yellow archangel, yellow pimpernel.

Schedule 3 Woody shrub and trees species

Alder, crab apple, ash, aspen, beech, downy birch, silver birch, black-poplar, blackthorn, box, broom, buckthorn, alder buckthorn, butcher's broom, bird cherry, wild cherry, wild cotoneaster, downy currant, mountain currant, dogwood, elder, elm, gooseberry, gorse, dwarf gorse, western gorse, guelder rose, hawthorn, midland hawthorn, hazel, holly, hornbeam, common juniper, large-leaved lime, small-leaved lime, field maple, mezereon, pedunculate oak, sessile oak, osier, Plymouth pear, wild pear, grey poplar, white poplar, wild privet, rose, rowan, sea-buckthorn, wild service-tree, spindle, spurge-laurel, walnut, wayfaring-tree, whitebeam, willow, yew.

