

**ADDENDUM REPORT - EXTENDED PHASE ONE SURVEY AND ECOLOGICAL IMPACT ASSESSMENT**

**LAND TO THE SOUTH OF TUPA, PENLEY, WREXHAM.**

**Site:** Land to the south of Tupa  
Penley Hall Drive  
Penley  
Wrexham

**Clients:** Mr K Barker and Mrs T Wilson  
Tupa  
Penley Hall Drive  
Penley  
Wrexham  
LL13 0LU

**Job Ref.:** 0968-Tupa Eco Addendum Report-V2a

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**1.0 INTRODUCTION**

EDC has been instructed to undertake extended ecological survey assessments with regards to the outline planning application for the proposed development of land to the south of Tupa, Penley. This survey and report will address the requirements as set out within the Welsh Assembly Government Technical Advice Note 5, 'Nature Conservation and Planning' and Local Planning Guidance Note No.32 in respect to the proposal, to enable an assessment of impacts and mitigation to negate impact as a consideration, material to the determination of planning consent.

Following LA Ecology and NRW consultation to the application further supporting information has been requested, our response is as follows:-

*LA Ecology*

Prior to submission of the report ref:- 0968-Tupa LDP Report-V1b, EDC consulted by phone with Mr. Matt Ellis, Senior Conservation Officer, NRW and an attempt was made to make contact by phone to the LA authority Ecologist, however no contact was attained.

Following our consultations with NRW it was stated that sufficient data was already available for the site with regards to the protected species Great Crested Newt. The data sets were a result of the Morris Homes Development located within part of the former hospital/camp brownfield site. It was agreed that sufficient historical data was available to enabled an informed impact assessment of the proposed development area. This is confirmed within their consultation response ref: CAS-68826-B6S5 as:-

*'The application site has been subject to assessment in respect of the great crested newt. The assessment confirms the likely presence of the species. In our view the assessment has been carried out to a satisfactory standard.'*

It is stated within the report that the findings of the survey identified impacts of protected species and therefore EPS Derogation license would be required to be applied for in respect of Bat and GCN to enable any development to proceed lawfully.

NRW have requested that specific planning conditions should be attached to any approvals, specifically

*Condition 1: Protected Species (GCN): The submission and implementation of long term, compensatory proposals, to the satisfaction of the LPA.*

*Condition 2: Protected Species (GCN): The submission of proposals concerning long term surveillance and wardening, to the satisfaction of the LPA.*

*Condition 3: Protected Species (Bats): All avoidance and mitigation measures described in the bat report to be set out in a method statement, to the satisfaction of the LPA.*

*Condition 4: INNS: Submission and implementation of a Biosecurity Risk Assessment, to the satisfaction of the LPA.*

*Condition 5: ECA: Submission and implementation of an approved ecological compliance audit (ECA) scheme, to the satisfaction of the LPA.*

All of the above conditions are a mandatory response within an EPS license application.

#### *LA Response*

*Amphibian* - Torch Count surveys have been undertaken to the immediate ponds to the proposed development area.

*Bat* - A transect survey and a static monitoring survey has been undertaken across the proposed development area.

A proposed layout of the mitigation is provided in the separate Landscape Strategy Proposals ref AZ023.010 D (figure 6.1) and added Mitigation Site Plan is also attached to the report ref: 0986A Mitigation Site Plan – 0986A MIT-01. The proposed level of mitigation being offered is as agreed with NRW pre application. As discussed, the mitigation offered also takes into account, as a good will gesture, the lack of appropriate mitigation put forward by the previous adjoining speculative development.

## **2.0 SUMMARY**

The following main ecological points have been identified on site and are addressed fully in the main texts of the reports:-

- Several adjacent waterbodies recording a presence for the protected species Great Crested Newt.

- A transitional/night roost for individual Lesser Horseshoe bats. No other roosts identified following the transect surveys.
- On site habitats to support foraging amphibians, foraging bats and nesting birds. The torch count surveys confirmed the historical data, that a presence for the protected species GCN is recorded within the adjacent ponds and habitats.
- Historic trees of merit (to be retained, see separate tree reports)
- Woodland fauna, specifically Blue Bell *Hyacinthoides non-scripta*, protected under section 13(2) of the Wildlife and Countryside Act 1981 and its amendments. (within the area which has recently received a Tree Protection Order)
- Evidence of foraging in adjacent land by the protected species Badger *Meles meles*, no setts have been identified within 50 m of the site boundaries
- Any features lost need to be negated and mitigated for through the development landscape biodiversity enhancement
- The boundary features should be retained and managed to improve their diversity
- Biodiversity enhancement to include the development of mitigating habitats, to include two small ponds and alternative roost for the recorded bat roost.
- Biodiversity enhancement by including bird/bat boxes and bird soffit boxes and bat bricks to be considered where feasible.
- Mammal friendly fencing to the rear gardens to allow the passage of hedgehog, small mammal etc.
- No major adverse impacts on species or habitats have been identified

### 3.0 SITE

The area to be allocated lies to the south/south west of Tupa and to the northern edge of the village of Penley. The land is part of the former gardens and park land of Penley Hall circa 1770's to its demolition 1987. The later use of the site was a hospital using huts and lightweight buildings erected during the Second World War for Polish refugees.

Several of the huts are still evident on site but vary in condition from structurally intact, to part frame work, foundation and slab and associated road ways and hard standings. Also remnants of the former Hall facilities are recorded on and adjacent to the site i.e. tennis court. The flora is a mix of mature tree stock left over from the hall park land and the self-seeded tree stock and scrub that has developed during the hospital ownership and latterly in its unmanaged condition.

The adjacent habitats consist of an improved pasture located to the east of the development area, of which the northern end of the field, an area of the original parkland grassland remains below the small areas of trees and is semi-improved. A wooded stream and valley forms the eastern boundary of the field.

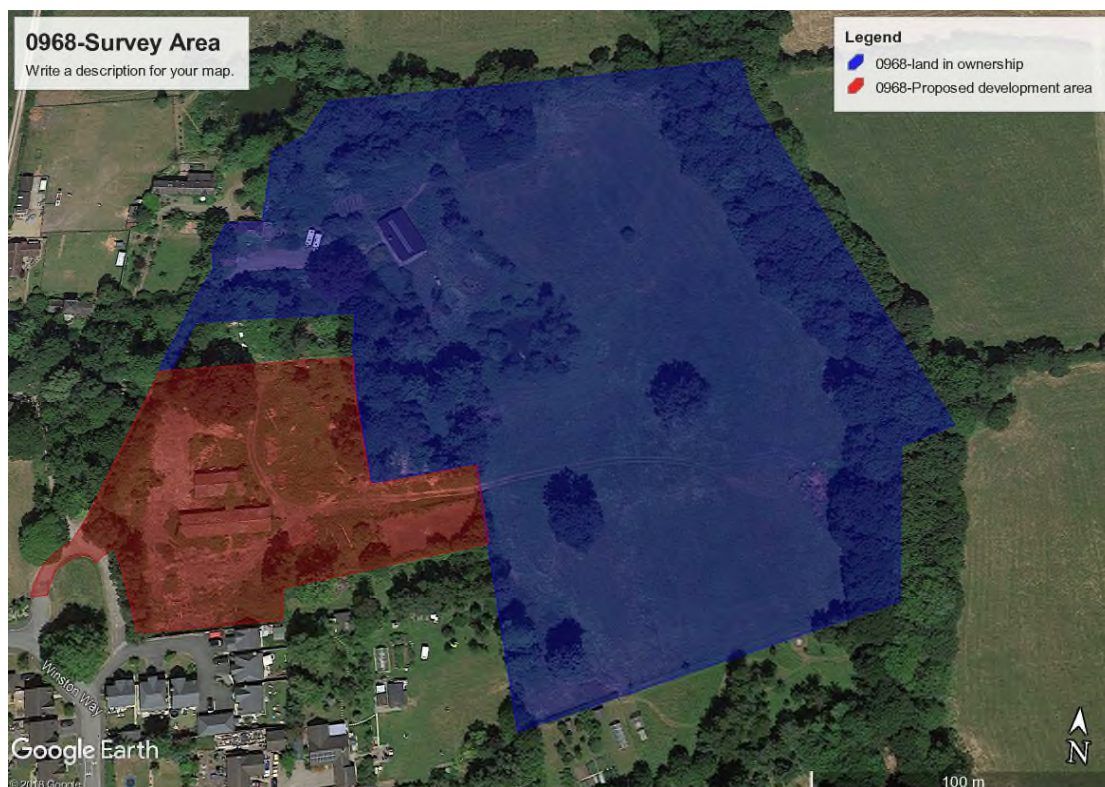


Fig 1: Aerial Photograph of the survey area

The northern habitat is similar to the development area, including the formal gardens of Tupa and the remaining section of the Hall to the north of this. To the east is where the nearest ponds are recorded. The southern and western boundaries are onto housing developments with formal gardens.

No designated sites are located within the development area or abut the development area.

#### 4.0 EXISTING DATA

Data search from the NBN Atlas and local records.

**AMPHIBIAN:** - No data is available for the immediate site. The nearest records for the protected species The Great Crested Newt, are the garden ponds to the north east of the site, the larger field pond, (part of the original Hall garden layout) and the ponds to the north west of the site. All of the records lie within 160 m of the site boundary, the nearest record being within 35 m.

**MAMMAL:** - No data was available at the time of survey for the immediate site area for either, Badger, Bat, Otter or Water Vole. However the following species are to be found within the locality:-

Otter *Lutra lutra* – nearest records are beyond a 1000 m from the site along the stream system to the east

Water Vole *Arvicola amphibious (terrestris)* – no local records for this species

Badger *Mele mele* – nearest records are 750 m to the south west of the site

Bat *Chiroptera* – no records within 1 km of the site.

*The following species have been recorded locally and at a county level*

Pipistrelle *Pipistrellus pipistrellus/pygmaeus*

Brown Long-eared *Plecotus auritus*

Lesser Horseshoe *Rhinolophus hipposideros*

Daubenton's *Myotis daubentonii*

Whiskered/Brandt's *Myotis mystacinus/brandtii*

Natterer's *Myotis nattereri*

Noctule *Nyctalus noctule*

## **5.0 SURVEY AREAS**

As outlined in Fig 1 and the attached phase 1 plan ref: 0968A-Phase One Plan PH-01C

## **6.0 LEGAL PROTECTION**

Under the 1981 Wildlife & Countryside, and the 2000 Countryside Rights Of Way (CROW) Act, it is an offence to “intentionally” or “recklessly” kill, injure or take any legally protected species. In some cases, even the species' habitat and places of shelter are protected.

### **6.1 GREAT CRESTED NEWT/BAT:**

Both British and European laws protect the species and its habitat. In Britain it is protected under Section 9 (Schedule 5) of the Wildlife & Countryside Act 1981 (as amended), and by The European Union's “Habitats Directive” (Council Directive 92/43/EEC (a) on the Conservation Of Natural Habitats and of Wild Fauna and Flora. The Habitats Directive is implemented in Britain by the Conservation Regulations 1994. Under this legal protection (and with the minor amendments of the CROW Act 2000 in England & Wales), to be superseded by the introduction of “The Conservation of Habitats and Species Regulations 2010” which came into force on the 1 April 2010, it is an offence to:

- Intentionally or deliberately capture, kill or injure.
- Intentionally or recklessly disturb them in a place used for shelter or protection.
- Damage or destroy a breeding site or resting place.
- Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.
- Possess an animal, or any part of it, unless acquired legally.
- Sell, barter, exchange or transport or offer for sale or parts of them.

### **6.2 BIRDS:**

All British birds, their nests and eggs are protected in law. It is an offence under Part 1 of The Wildlife & Countryside Act 1981 *as amended* (and with the minor amendments of the CROW Act 2000 in England & Wales) to intentionally or recklessly kill or injure any wild bird or to take, damage, or destroy any nest or egg of any wild bird. However, Schedule 1 of the Act provides an additional tier of protection so that rare species (e.g. barn owl) are specially protected by increased penalties and cannot be intentionally or recklessly disturbed when nesting.

### 6.3 MAMMALS:

All of the British species of bat are protected under the W&C Act 1981 (as amended). This protection is also extended to the otter (*Lutra lutra*), and the water vole (*Arvicola terrestris*). The badger (*Meles meles*) is protected under the Protection of Badgers Act 1992. Included in the Act it is an offence to damage any part of a sett or destroy it; obstruct access to any entrance of a sett; or to disturb a badger when it is in its sett.

## 7.0 LIMITATIONS

7.1 None recorded other than seasonal variation

## 8.0 METHODOLOGIES

### 8.1 GREAT CRESTED NEWT:

A walkover survey to identify any potential breeding pools and refugia sites within the survey area was undertaken on the 8 May 2019. This was followed up by a desktop survey to identify any local records for this species within 500m of the site.

A secondary torch count survey at the bequest of the LA was undertaken to the adjacent ponds

### 8.2 BADGER:

Search for field signs (paths, latrines, foraging) indicating the presence of this species and if discovered an extended search up to 30m beyond the survey boundary for the presence of a sett(s).

### 8.3 BATS:

Walkover to identify any potential roost or foraging habitat within the survey area

A secondary transect survey at the bequest of the LA was undertaken to the development area.

### 8.4 WATER VOLE:

A walkover survey to identify any potential water bodies, search for field signs (paths, latrines, foraging) indicating the presence of this species

### 8.5 BIRDS:

An assessment of habitat suitability for nesting sites.

### 8.6 HABITATS/FLORA:

Walkover survey to record floral species and classify and map the habitats in accordance with the JNCC Phase 1 Habitat Survey methodologies

## 9.0 RESULTS

### 9.1 GREAT CRESTED NEWT:

The surveys identified 4 water bodies within 500 m of the site boundaries, of which 2 record a positive for the protected species Great Crested Newt. The site has good connectivity to the ponds and offers suitable foraging and refugia for this species. The ponds record good levels of aquatic vegetation and clear areas of water body. It is recorded that the water bodies record good water levels throughout the season, sufficient to support breeding populations of amphibians.

Torch count surveys were undertaken on the evenings of 30 April 2019 and the 03 May 2019. Access was gained to Ponds P1, P2 and P3 on the evening of 30 April, following the results of the first survey only ponds P2 and P3 were surveyed on the 03 May.

#### 9.1.1 Pond Descriptions

Pond 1 – Former ornamental pond in association with Penley Hall. Clear open water retaining water throughout the year.

*Historic record for GCN*



*Fig 2: Pond Locations*

*Pond 1 - Torch Count Survey –*

**30 April 2019**

Weather conditions – Cloud cover, dry, calm conditions, slight breeze, (1 Beaufort scale)

Air Temp – 11° C

Water Temp - 13° C

Sunset – 20:38

Twilight - 21:18

Start Time – 21:30 pm

Results:

Perimeter surveyed - 75%

1 Adult Smooth Newt

1 Adult Male Frog

Turbid water due to high duck presence, little marginal vegetation recorded. Low potential for GCN due to levels of duck activity.

**03 May 2019**

Not resurveyed due to findings and assessment from survey 1

Pond 2 – Two small ornamental garden ponds located within the garden area of Tupa. Both ponds record aquatic vegetation and retain water throughout the year.

*Anecdotal record for GCN*

*Pond 2 - Torch Count Survey –*

**30 April 2019**

Weather conditions – Cloud cover, dry, calm conditions, slight breeze, (1 Beaufort scale)

Air Temp – 11° C

Water Temp – 13.5° C

Sunset – 20:38

Twilight - 21:18

Start Time – 22:35 pm

Results: Pond 2A

Perimeter surveyed - 100%

2 Adult GCN (sex unable to record)

20 Adult Female Smooth Newt

Clear water, shallow ponds, some marginal and submerged vegetation recorded.

Results: Pond 2B

Start Time – 22:50 pm

Perimeter surveyed - 100%

1 Adult Male Smooth Newt

Clear water, shallow ponds, some marginal and submerged vegetation recorded.

### **03 May 2019**

Weather conditions – Cloud cover, showers, slight breeze, (1 Beaufort scale)

Air Temp – 10° C

Water Temp – 12.5° C

Sunset – 20:43

Twilight - 21:24

Start Time – 22:10 pm

Results: Pond 2A

Perimeter surveyed - 100%

1 Adult Male GCN

10 Adult Female Smooth Newt

Clear water, shallow ponds, some marginal and submerged vegetation recorded.

Results: Pond 2B

Start Time – 22:15 pm

Perimeter surveyed - 100%

Negative result

Clear water, shallow ponds, some marginal and submerged vegetation recorded.

Pond 3 – Is a manmade pre sauna plunge pool formed at the time of the construction of Tupa. Presently the pond records marginal aquatic vegetation and retains water throughout the year. Historically two other field ponds stood within the field to the east of the pond, recorded circa OS survey 1900's, no evidence of these ponds exists today.

*No records for this pond – however considered to have a high potential for breeding amphibians.*

*Pond 3 - Torch Count Survey –*

### **30 April 2019**

Weather conditions – Cloud cover, dry, calm conditions, slight breeze, (1 Beaufort scale)

Air Temp – 11° C

Water Temp – 13.5° C

Sunset – 20:38

Twilight - 21:18

Start Time – 22:35 pm

Perimeter surveyed – approx. 15% - 4 survey access points due to dense willow growth to perimeter of pond, and mares' tail and Typha cover.

Results: Pond 3

3 Adult female GCN

4 Adult male GCN

Only a small sample survey was undertaken to this pond, the results show that this pond is likely to support a medium population.

### **03 May 2019**

Weather conditions – Cloud cover, showers, slight breeze, (1 Beaufort scale)

Air Temp – 10° C

Water Temp – 12.5° C

Sunset – 20:43

Twilight - 21:24

Start Time – 22:25 pm

Results: Pond 3

Perimeter surveyed – approx. 15% - 4 survey access points due to dense willow growth to perimeter of pond, and mares' tail and Typha cover.

#### 1 Adult male GCN

Only a small sample survey was undertaken to this pond, the results show that this pond is likely to support a medium population. The results are reflective of the prevailing weather conditions at the time of survey.

Ponds 4 – Historic field pond recorded circa 1800's, the pond records marginal aquatic vegetation and retains water throughout the year.

#### *Historic record for GCN*

*Pond 4 - Torch Count Survey – No access gained for survey.*

### 9.2 BADGER:

No evidence of use by this species within the development area at the time of survey. The adjacent field to the east of the site records large mammal tracks, snuffle holes etc. within the field and a sett id located to the north east of the field area. The sett is located beyond 50 m from the site boundaries.

### 9.3 BATS:

The site records a mix of habitats open ground, self-seeded tree stock, mature former parkland trees, and former huts/wards.

The self-seeded tree stock recorded little to no potential for use by roosting bats due to the age of the stock and the species of tree recorded, i.e. Silver Birch, Sycamore, which have a low potential for use as roosts.

The mature oaks which are recorded in the north western corner of the site record potential for roosting bats, however these trees are to be retained on site.

The huts are constructed from a mix of concrete post and truss roofs, with either brick panelling or concrete planks with a corrugated asbestos cementation sheet finish. The walls are solid with a plasterboard/fibre board finish to the underside of the roof finish in some areas. A transitional/night roost was recorded within the largest remaining building, (noted on the phase one plan). It has been assessed by the quantity, position and shape of the droppings recorded that the sight is used by individual Lesser Horseshoe bats. It is estimated that the site is used by between 1 to 3 bats maximum. No breeding sites or hibernation sites are recorded within this part of Wrexham Borough for this species, so no assumptions on connectivity can be given, similarly transect surveys are unlikely to define this any further due to the species concerned. The site does link to several woodland areas, which are considered prime foraging habitats for this species, to the north and to the south of the site.

It is considered that the remaining structures on site have limited potential for use by crevice dwelling species due to the construction materials and construction methods used.

### *Transect and Static Detector Surveys.*

A transect survey was undertaken on the evening of the 30 April 2019 and 03 May 2019.

The surveys started just prior to sunset and were carried out over a two-hour period. As part of the transect survey two Anabat Express detector loggers were deployed prior to survey on the evening of 30 April and recovered on the evening of the 03 May.

The transect surveys were carried out using a Wildlife Acoustics Echo Meter Touch and Bat Box Duets.

The transect surveys recorded passes for both 45 and 55 kHz Pipistrelle, *Pipistrellus pipistrellus/pygmaeus*, 1 pass by Myotis species, *Myotis sp.*, several over flights by Big Bat, suggested to be *Nyctalus noctule*, and a single pass for Long-eared, *Plecotus sp.*

On analysis of the sonograms (zero crossing) files recorded on the two Anabat Expresses, the results were as per the transect survey. The analysis of the Myotis records would suggest passes by Whiskered bat *Myotis mystacinus*.

The Anabat Expresses were set to run continuously for the night periods from the 30 April 2019 to the evening of the 03 May 2019. The location of the static detectors and the transects walked are recorded on fig 3 below.



*Fig 3: Detector Surveys*

### **9.4 WATER VOLE:**

The development site records no water bodies suitable for use by this species.

## 9.5 BIRDS:

There are potential nesting sites for many species within the remaining buildings, scrub and trees. The survey recorded nesting within the buildings for Blackbird, Jackdaw and Sparrow. The site also recorded the following bird species:- Song Thrush, Wren, Robin, Magpie, Chiffchaff, Blackcap, Wood Pigeon and Grey Wagtail.

Song Thrush and Grey Wagtail are recorded on the Birds of Conservation Concern red data list.

## 9.6 HABITATS/FLORA:

### 9.6.1 A1.1.1 Semi-natural broad-leaved woodland.

An area recently receiving a TPO (tree protection order) stands to the north east of the proposed development area. The area consists of self-seeded woodland stock, resulting from lack of management of the area following the closure of the hospital. The stock is comprised of Horse Chestnut, Birch, Sycamore etc. (see tree report for comprehensive species lists). The stock is leggy due to the lack of management and several species are diseased. The under store is dominated by ground elder, with areas of tall ruderal herb, nettle, rosebay etc. The area also records a small area of bluebell, and ornamental species such as rhododendron. The original trackways and building foundations are still present under this area, some of the buildings are intact but most are remnants with only partial framing or foundations being retained.

Two mature oaks stand in the north western corner of the site, from the age and size it is suggested that these were planted pre the hospital development and as part of the original hall landscaping. These mature trees are to be retained as part of the development.

### 9.6.2 A2.1 Dense/Continuous Scrub

Large areas of the site have become overgrown with dense banks of scrub, ash, willow, birch, hawthorn, rhododendron with ivy and bramble etc.

### 9.6.3 C3.1 Tall Ruderal Herb

Around the perimeters of the buildings, scrub areas and old materials, pockets of tall ruderal herb has developed, mainly nettle.

### 9.6.4 J2 Amenity Grassland.

The open areas are formed by areas of amenity grassland which have been unmanaged following the closure of the hospital site. The grassland records, Yorkshire Fog, Soft Meadow grass, silverweed, dandelion, creeping buttercup, dock etc. None of the species recorded are considered to be species of local or national importance.

### 9.6.5 J3.6 Buildings and J4 Bare Ground

The site records several buildings all dating back to the 2<sup>nd</sup> world war. The buildings are former hospital accommodations, constructed from either solid 9" walling or concrete planks, with either a concrete portal roof frame or a steel roof frame supporting the roofing purlins, finished with profiled concrete asbestos type sheet roofing. The roofing was underclad with a mix of fibre panel or plaster boarding in some cases. Not all of the buildings remain intact with several

with just either part frames or slab and foundations remaining. Most of the pathways and roadways have become overgrown with vegetation with some areas of bare ground being visible. The only section of the site that retains remnants of the previous Penley Hall gardens/park land is the tennis court and the mature oaks in the north western corner of the site, predominantly the site can be classed as brownfield development

## **10.0 RECOMMENDATIONS**

### **10.1 GREAT CRESTED NEWT:**

- 10.1.1 The development site does not record any water bodies; however the site is within the terrestrial range of water bodies recording a presence for the protected species GCN.
- 10.1.2 The habitat recorded on site is considered to be suitable to support foraging amphibians and provide refugia
- 10.1.3 The loss of the habitat through development is considered to have a potential negative impact on the protected species the Great Crested Newt and the loss should be mitigated for accordingly.

### **10.2 Mitigation**

- 10.2.1 Following consultations with NRW it has been agreed that as part of the development scheme, part of the adjacent field to the east of the site is to be enhanced to equate in quality and area to compensate for the loss of the habitat due to any development proposals. The land proposed for compensation is classed as species poor in its present condition. The land is an area of predominantly improved grassland to the south of the site, where the land has been reclaimed and reseeded over the former area of camp huts and infrastructure. Ref: Landscape Strategy Proposals ref AZ023.010 D and 0986A Mitigation Site Plan – 0986A MIT-01
- 10.2.2 The scheme is to include two waterbodies suitable to support breeding amphibians, the ponds are to be so designed to retain water throughout the breeding season and if required supplemented by taking roof water from the development via a filtration swale, using reeds and aquatics to filter the water. The ponds are to be planted with marginal and sub aquatic vegetation to provide refuge and egg laying substrates.
- 10.2.3 The scheme is also to provide 4 hibernacula across the mitigation area, the hibernacula could be formed from remnant materials from the development site. The hibernacula are to be formed partially below existing ground level and partially above ground level to provide varying temperature and moisture gradients for both refuge and hibernation by amphibians.
- 10.2.4 The site is to be planted to provide varying cover from managed grassland, rank grassland, tall ruderal herb through to scrub and woodland edges. The perimeter of the mitigation areas will connect to the existing adjacent habitats to retain and enhance connectivity.
- 10.2.5 It may be considered that a permitted fenced out footpath around the mitigation area could be developed to negate any potential impact by amenity activity from any proposed development i.e. dog walking etc. The amenity area is to be kept separate from the wildlife areas, with only managed access being permitted to the wildlife areas.

10.2.6 Any mitigation scheme should be supported by funding for management in perpetuity to ensure the long-term site safe guard of the wildlife mitigation areas, the mechanics on how to fund management and monitoring is to be provided on developing European Protected Species Derogation License or equivalent active legislation.

10.2.7 A draft layout of the mitigation is provided in the separate Landscape Strategy Proposals ref AZ023.010 D (figure 6.1) and 0986A Mitigation Site Plan – 0986A MIT-01

### 10.3 *Reasonable Avoidance Measures*

10.3.1 Prior to undertaking the development works, both the mitigation area and the development areas are to be fenced out with temporary amphibian fencing to the extent of the working areas, (to include any infrastructure connections).

10.3.2 The fenced out areas are to be trapped out and cleared of the protected species the Great Crested Newt. All caught amphibians are to be transferred to the previously constructed and established mitigation areas.

10.3.3 All works are to be covered by a European Protected Species Derogation License, (or equivalent at the time of development)

### 10.4 *BADGER:*

The walkover surveys identified foraging activity to the north and east of the development boundary, no evidence of use or presence was identified within the development area, however evidence of presence and use was identified within the proposed GCN mitigation area. Badgers are creatures of habit and are highly likely to continue utilising the site during the development process and post construction therefore continuous use of the site needs to be managed as part of the development process with the following recommendations being put forward:-

- a) The grassland to the north of the mitigation area is to be retained and a minimum of 20 % is to be maintained as short sward by either cutting or by grazing to provide variation for foraging by this species.
- b) The GCN mitigation is to be enhanced and managed to allow for worm foraging along the borders and similarly planted with seasonal fruit bearing stock, crab apple, blackberry etc., this is to reduce the need to forage further afield.
- c) During the construction period any trenches/excavations over 600 mm deep should either be guarded over night or left with an incline no greater than 40 degrees at one end of the excavation, this is to allow any trapped animal which has entered the system a means of escape.
- d) Any open drainage with an internal diameter greater than 150 mm should be blocked each evening at the finish of works; this is to prevent access to the drainage system by badgers and to ensure no Badgers are trapped within any piped system.
- e) Any stored materials which have voids which Badgers can gain access to should be visually checked before being transported around site.

- f) Bunded stock piles of sub soils, top soils etc. should be checked regularly, specifically each start of the working week to ensure no outlier setts have been opened up.

#### 10.5 BAT:

The surveys identified a transitional/night roost for individual Lesser Horseshoe bats within an existing building on site. It is not known whether the roost is used to extend the foraging range from a breeding site within the locality (up to approximately 2.4 km away) or used as a transitional roost between summer and winter roosts, however the loss of this building will impact on the natural range of this species locally and at county level and therefore a suitable alternative roost site is to be incorporated within the proposed mitigation strategy for the site.

- 10.5.1 Due to the species recorded and the type of roost identified, the proposed new housing developments do not offer the right design criteria required to provide equivalent mitigation for this species and therefore a specific building will have to be developed on site
- 10.5.2 The mitigation building is to be positioned adjacent to the eastern boundary of the development site within the mitigation area. The building is not to be completely shaded by tree stock similar to the existing building; this is to allow some solar gain to the structure.
- 10.5.3 The building is to be of a traditional construction with solid masonry walling, with a traditional roof finish, the roof can be finished internally with sarking but it must be of an F1 type bitumised slaters felt to BS 747.
- 10.5.4 The building is to be at least 3.5 m wide and 4.5 m long with a pitched roof finish and loft area. The building is to be divided into areas with soffit flight access to the loft area. The outer finish is to be either brick or stone; no painted render finishes are acceptable, as they reflect natural light and reduce solar gain.
- 10.5.5 A European Protected Species Derogation license will have to be applied for to cover the demolition of the existing roost and the development, management and monitoring of any mitigation roost.

#### 10.6 BIRDS:

The areas of trees, scrub and tall ruderal herb within the survey area have a high potential for use by nesting birds. It is therefore recommended that any scrub/hedge clearance or tree works are undertaken outside of the nesting season. If works are undertaken within this period then it is recommended that advice from a suitably qualified ecologist must first be sought and check surveys undertaken. Undertaking surveys may facilitate the removal of sections of vegetation that are free from nests and also highlight areas that have a greater potential for nesting birds, specifically ground nesting birds within ruderal herbs, rank grassland etc.

It is recommended that the boundary features are managed and retained on site and enhanced where required. As part of the landscape strategy, where it is feasible, hedges of native species should be planted and any standard trees planted should be selected to provide foraging opportunities for insects (blossom) and birds (berries), and year-round cover and nesting sites for birds.

The landscaping strategy should aid the development of a landscape plan that offers greater biodiversity within the green spaces which will provide cover and additional nesting sites for

birds, and flower borders to provide foraging opportunities for insects. Open grasslands are also important for ground feeding birds like Blackbird.

#### **10.7 HABITATS AND BIODIVERSITY:**

The site has developed from a managed former hospital site, with huts and an ancillary buildings and access roads and paths, to an unmanaged area which has developed areas of self-seeded tree and scrub stock, areas of rank grass, with areas of ruderal tall herb. The majority of the species recorded during the surveys are considered to be species which are not of local or national importance, other than a small area of Bluebell which has limited protection under the Wildlife and Countryside Act and the mature oaks which were part of the original formal gardens and park land of Penley Hall. The mature oaks are being retained on site however it is recommended that the Bluebells are translocated and replanted in the mitigation area.

The landscape plan should encompass the landscape strategy plan for the amphibians, and the biodiversity enhancement recommendations for Badger, Bat and Birds as set out above, this will greatly enhance and increase the species diversity of the site post development.

To allow active use of the rear gardens of the properties by small mammal, the type and method of boundary separation is to be considered. Fencing should be erected without the use of concrete gravel boards, and be of an open fence type to the rear field boundaries/green space, this will allow access for locally threatened biodiversity species like Hedgehog which are impacted heavily by closed gardens.

As part of the landscape plan, a post development open space management plan will be required to include management to ensure the retention of the biodiversity value of the wildlife enhancement features. The plan should consider rotational hedgerow management, development of varying swards within the grassland management, variation of seasonal cutting to develop seasonal variation of flowering species and seed development with some areas allowed to develop tussocky grassland for the likes of voles and shrews.

#### **10.8 BIOSECURITY:**

As part of the development plan a biosecurity risk assessment will be undertaken to establish any specific threats. This plan will form part of the EPS license application. The site surveys did not record any biosecurity threats within the proposed development area. The ponds that are adjacent to the site are outside of the development zone but would be included within the mitigation boundary. On full agreement with NRW on the mitigation scheme at license stage a biodiversity risk assessment will be undertaken and an avoidance and risk management plan will be developed for inclusion and implementation during the formation of the mitigation area.

Only the INNS species Rhododendron has been recorded on site, however this is presently only recorded within the recently notified TPO area and not within the development zone. As part of the landscape plan and implementation specification, the choice of species to be planted is to take into consideration the extensive INNS species lists, so as to ensure only native species or species of no threat are introduced as part of the landscape scheme.

#### **11.0 CONCLUSION**

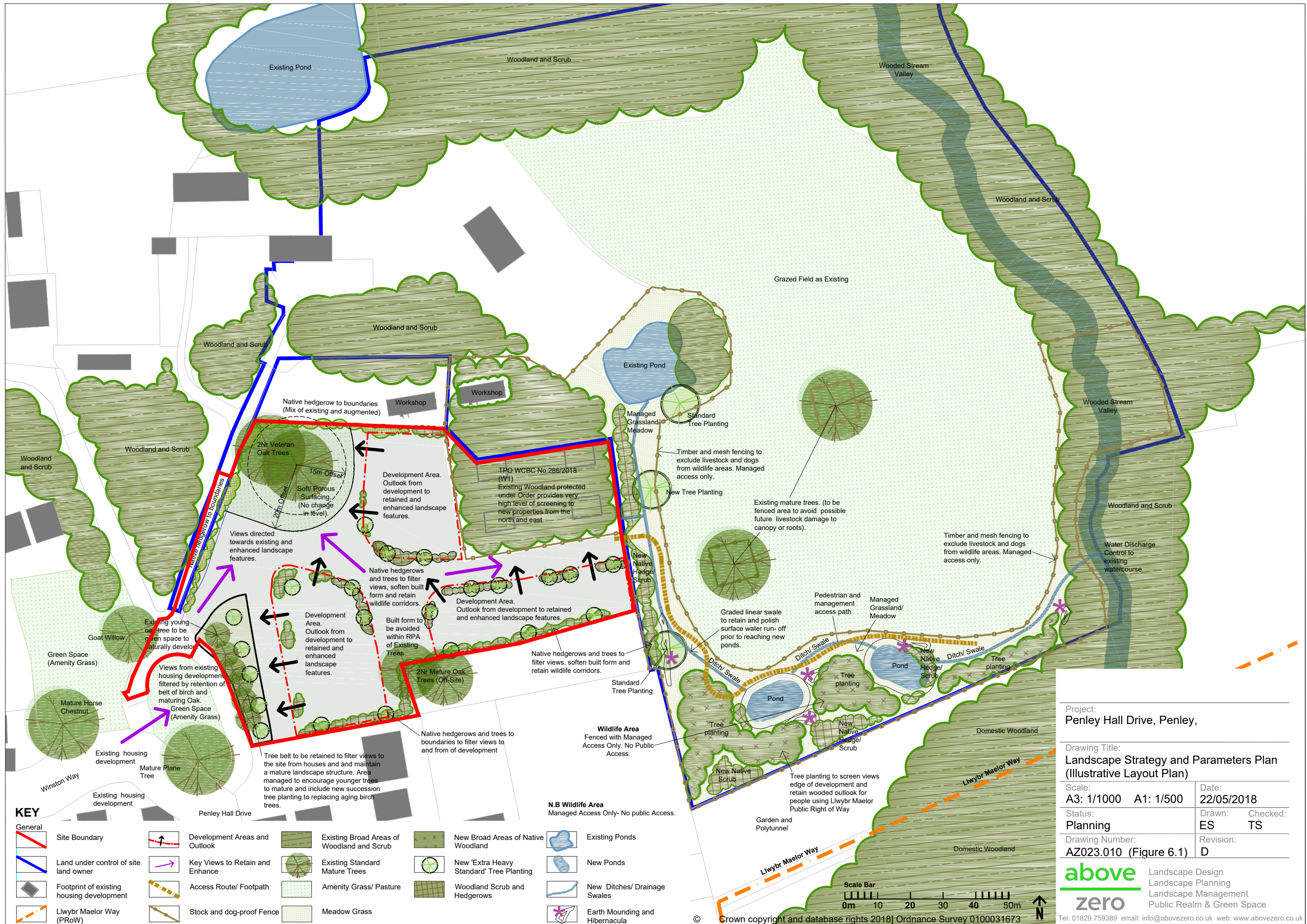
No major adverse impacts have been identified from the proposed development of the site. In the case of the great Crested Newt, the development site is considered of importance however through the implementation of a mitigation scheme the impacts identified can be negated.

Similarly the formation of an alternative roost on site will negate the loss of the existing bat roost, which presently has a limited life span due the material construction and that the roofing materials are considered to be a major health and safety hazard publicly.

The development of a long term management strategy will ensure that the long term site safeguard of the proposed wildlife mitigation area is secured in the long term, as opposed to the existing habitats which are no longer managed, and that the existing buildings are degrading with no secure future presently.

It is therefore the surveyor's opinion that the identified impacts by any proposed allocation of the site for development can be negated and that the habitat mitigation proposals would be considered to be beneficial with increased species diversity, negating any identified impacts and are unlikely to have no long term impact on the favorable conservation status of locally recorded protected species, or their ecological functionality if the works are carried out in accordance with the recommendations given within this report and the landscape strategy.

Tim Hodnett  
July 2019





## Habitat Key

- Survey Boundary — Ownership Boundary
- A 1.1.1 semi-natural broad - leaved woodland (self seeded)
- A 2.1 dense/continuous scrub
- C 3.1 tall ruderal
- J \*2 amenity grassland (un-managed) (A)
- Hard standing/Buildings
- trees
- T1 target notes

### Target Notes

T1- area of self-seeded, Birch, Sycamore, horse chestnut, with pockets of underlying scrub, tall ruderal, dominant woodland floor species ground elder. Area also records pockets of Rhododendron and Blue Bell.

T2 - intact buildings with corrugated roof finishes, records nesting birds to roof voids and ivy within passage way. Area records transitional/night roost for individual Lesser Horseshoe Bats.

REV:C - application boundary amended  
REV:B - notes/hatch amended  
REV:A - notes/hatch amended  
client

Mr K. Barker and Mrs T Wilson

project title

Land at Tupa, Penley Hall Drive, Penley,  
Wrexham, LL13 0LU

drw. title

Phase One - Outline Application Site

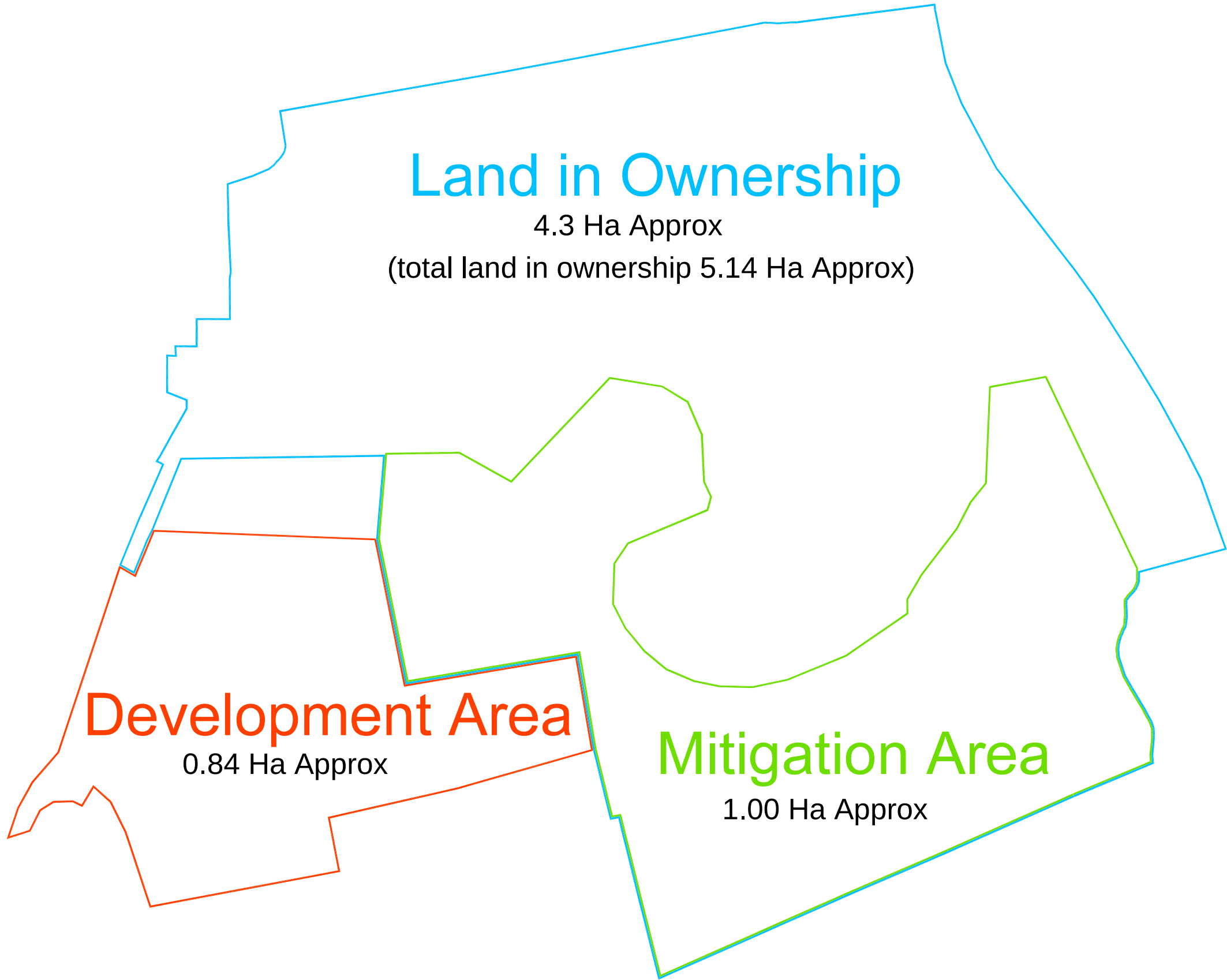
|              |             |       |
|--------------|-------------|-------|
| scale        | date        | drawn |
| NTS @ A3     | MAY '18     | TJH   |
| rev.         | chkd.       |       |
| C            |             |       |
| project ref. | drawing no. |       |
| 0968A        | PH-01       |       |

edc

the cottage boddyhydhen hall rhuddlan denbighshire t118 5sb tel01745 591208 mcs07778 134830 e-mail:tm@edcuk.co.uk

ecological design consultants

NOTES:  
To be read in conjunction with Engineers, Services drawings etc. All dimensions to be checked prior to construction on site. All works to be carried out to the satisfaction of LA and relevant B.S. All discrepancies to be reported immediately.



Notes

Mitigation area to consist of a single storey mitigation bat roost approx. 4 x 6 m with multiple rooms and loft area specifically designed for Lesser Horseshoe bats, two ponds interconnected with swails, ponds to be approximately 10 m2. Swails/ponds to have surface water overflow feed from the development area (rainwater catchment). The habitats are to be developed to attain woodland block, scrub and boundary hedging and rank grassland areas of native species to increase bio-diversity. A grassland walkway around the the area is to be provided, however the wildlife mitigation areas are to fenced out, access to the areas to be a managed access only. Management works to the existing GCN pond will include the removal of the dense willow growth to the pond to create more open water areas.

client

Mr K. Barker and Mrs T Wilson

project title

Land at Tupa, Penley Hall Drive, Penley, Wrexham, LL13 0LU

drw. title

Mitigation Location Plan

to be read in conjunction with the Penley Hall, Landscape Strategy Plan

scale  
NTS @ A3

date  
JUNE '19

drawn  
TJH

rev.

chkd.

project ref.

0968B

drawing no.

MIT-01



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