

**PHASE 1 HABITAT SURVEY AND
PROTECTED SPECIES
ASSESSMENT REPORT FOR
LAND AT
ELLESMERE LANE (EAST)
PENLEY
WREXHAM**

Report No: 2014(15)/VC/24

Compiled by: Val Cooper

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Prepared for: J. & B. Ritchie The Grange Penley Wrexham LL13 0LS	Author: Val Cooper MSc MIEEM Tel: 07947808853 Member of EVR ecology, an informal co-operative of consultant ecologists with over 75 year's collective experience in surveying and conservation work.
Date of Issue: 8 th August 2014	val.rose54@btinternet.com

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1 INTRODUCTION

1.1 BACKGROUND AND SCOPE

EVR Ecology was commissioned to undertake a protected species assessment and Phase One habitat survey on land on Ellesmere Lane, Penley in Wrexham. The site is approximately 0.6 hectares in size. There are no structures on site.

An inspection survey of the site was carried out on 10th July 2014. It was inspected for evidence of the presence of and potential to support protected species. The site habitat was recorded as per the Handbook for Phase One Habitat Survey (JNCC, 1990).

1.2 SITE LOCATION AND DESCRIPTION

The site is a plot of land (approximately 0.6 hectare) at the east side of Ellesmere Lane, Penley, Wrexham. The site plot is to the south of the main village. The landscape is predominantly rural, with open fields to the south, west and east. There is a ribbon of houses at the west side along Ellesmere Lane with open agricultural fields behind. The village lies to the north. The Ordnance Survey reference is SJ418396.

Site habitat

Site habitat is described briefly below in **Table 1**. A habitat map, target notes and list of plant species identified are found in **Section 4.1: Results**.

Table 1: Plates of land areas

Plates (Target notes described in Figure 1 and Table 2, pages 8 & 9)	
TN1: Species rich hedge at east side, with single taller stock (maple spp) present. The understorey is poor, with the field area cut to the hedge base 	TN4: Patch of longer grasses at the NE corner. Grasses dominant, with some blackthorn saplings, a few nettles and occasional buttercup 
TN5: East section of hedge section at north side. This was cut to 1.2m height. Species rich with good understorey and margin 	TN6: north corner of hedge, which was uncut and 4m+ high. 4 woody species present and good understorey 

TN7: Margin of ruderals and grasses at north corner. Ryegrass is dominant



TN9: Species rich hedge, uncut with no understorey. Heavily overgrown with cleavers and bindweed



TN11: Grass with some ruderals - patch in south corner near ditch



TN12: Ruderal patch lining edge of ditch. Nettle dominant, woody nightshade present



TN14: Field area. Grass dominant.



South boundary of site, which has no defined feature. The boundary runs through the open field



1.3 PROPOSED WORKS

The land area is to be cleared and a number (>10) house are to be built. The proposed access is via the hedge (TN9, Figure 1).on Ellesmere Lane.

1.4 AIMS OF STUDY

The surveys were conducted to find the status of the site in respect to protected species and to complete a Phase One habitat survey on the land area. It was to:

- establish the presence / absence of protected species on the site
- gather information to make an informed assessment as to the use of the site by protected species
- collect data to assess potential impacts on any species found on site and establish whether there may be a requirement for mitigation and compensation measures to be implemented to reduce the identified impacts of the development
- assess whether there may be a requirement for a licence for European protected species (EPSL) to be obtained to allow the development to proceed.

1.5 PERSONNEL

Val Cooper is a professional consultant and bat specialist. She has over 15 years experience in surveying and conservation work on mammals and amphibians, and holds licences for surveying bats and great crested newts. She is experienced in preparing and delivering protected species licences. She has a BSc in Zoology/Psychology (Joint Honours) and MSc (with distinction) in Restoration Ecology. She has been a licensed bat worker and member of the Cheshire Bat Group since 1994. She works as a Voluntary Bat Warden for Natural England and participates in the annual National Bat Monitoring Programme of the Bat Conservation Trust. She is a full member of the Chartered Institute of Ecology and Environmental Management. She holds a bat class NE licence, number CLS998 and a NRW licence number 54706:OTH:CSAB:2014, and GCN licence from NRW 46878:OTH:SA:2013.

2 METHODOLOGY

2.1 DESK STUDY

A search for planning applications was made for the Penley area to find whether any other planning proposals were pending or consents extant.

It was noted that temporary great crested newt fencing was present to the south of the site and on the main road. This was for the installation of the United Utilities Vyrnwy pipeline. A report was obtained from United Utilities in respect of the ecology surveys undertaken on ponds in the area in 2010 (NLG Ecology, 2010).

Information was also requested from the Clwyd badger Group.

2.2 FIELD SURVEY

3.1.1 Habitat on site/trees

A site walkover was carried out. Habitat areas were mapped and dominant species were recorded. Any unusual or rare species were noted. No trees are to be felled but the east tree line (off site) was checked for bat potential.

3.1.2 Bats

Any trees and structures were examined for signs of bats and potential to support roosting bats.

3.1.3 Great crested newts

Pond survey

No ponds were surveyed.

Pond location, habitat and connectivity

Ponds had been located using an Ordnance Survey map and aerial photographs. Surrounding habitat was examined and the suitability and potential for use by great crested newts assessed. Distance and connectivity between proposed sites, ponds and to other ponds outside the 500m radius were assessed by maps and aerial photographs during the desk survey, and during the site visit. Potential dispersal routes were identified.

Identification of potential refuges, foraging areas on site

The areas of the proposed development plot were inspected for potential usage by great crested newts. The immediate areas around the proposed development sites were assessed for their suitability as GCN habitat and potential use of the whole site for commuting, foraging and land refuges.

3.1.4 Badgers

The land area was walked over and inspected for signs of badger use and occupation. These include:

- Presence of badger setts: evidence of holes at least 250mm diameter
- Activity in around any identified setts in the form of fresh dung piles, discarded bedding materials, badger hairs
- Evidence of commuting and foraging activity on the land: badger pathways, hair on any fences over potential paths, scrapes, uprooted areas of vegetation and so forth
- Areas of potential use by badgers, such as vegetated embankments.

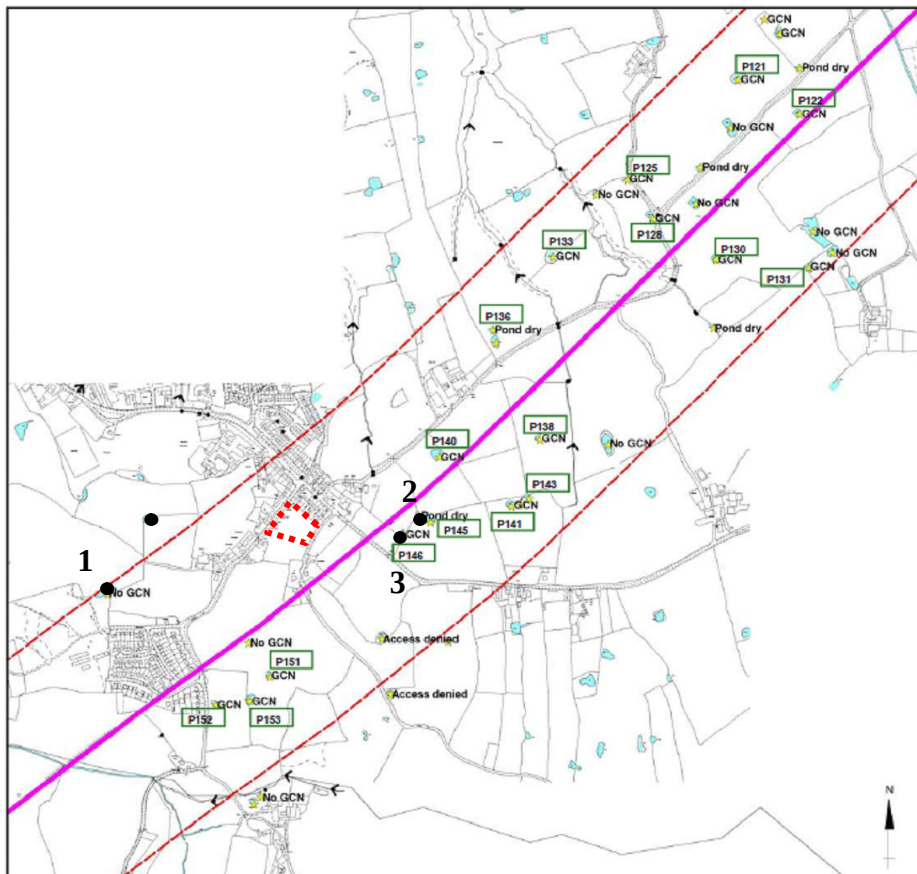
3.1.5 Nesting birds/bats

During the site walk over an inspection for signs of presence and potential for use by nesting birds and bats was assessed.

3 RESULTS

3.1 DESK STUDY

Ten ponds were located at less than 500m from the site. Four of these (Section 4.1.2) were considered to be of potential interest. They are highlighted on the map by black dots. The site is shown in red dotted line. Three of the 4 ponds had been surveyed in 2010. Results are in **Table 1** below.



Source: Reproduced by kind permission of United Utilities (NLG Ecology, 2010)

Table 1: Pond results for 2010

POND	Distance from site	Result 2010
SW of site (1)	299m	No number: No GCN found
East (2)	289m	145: 22 GCN and eggs
East (3)	220m	146: No GCN, eggs present

Three ponds to the south of the site (321-420m from the target site) all had small breeding populations (5, 4 and 5 maximum counts).

No other applications or consents provided data on GCN surveys and populations.

Clwyd badger group have no records of a badger sett in 100m of the site.

3.2 FIELD SURVEY

3.1.1 Habitat on site/trees

The site habitat and species are mapped and tabulated in **Figure 1** and **Table 2** below. The plot was predominantly improved grassland. It had been in agricultural use and recently subjected to low-level grazing/ cutting.

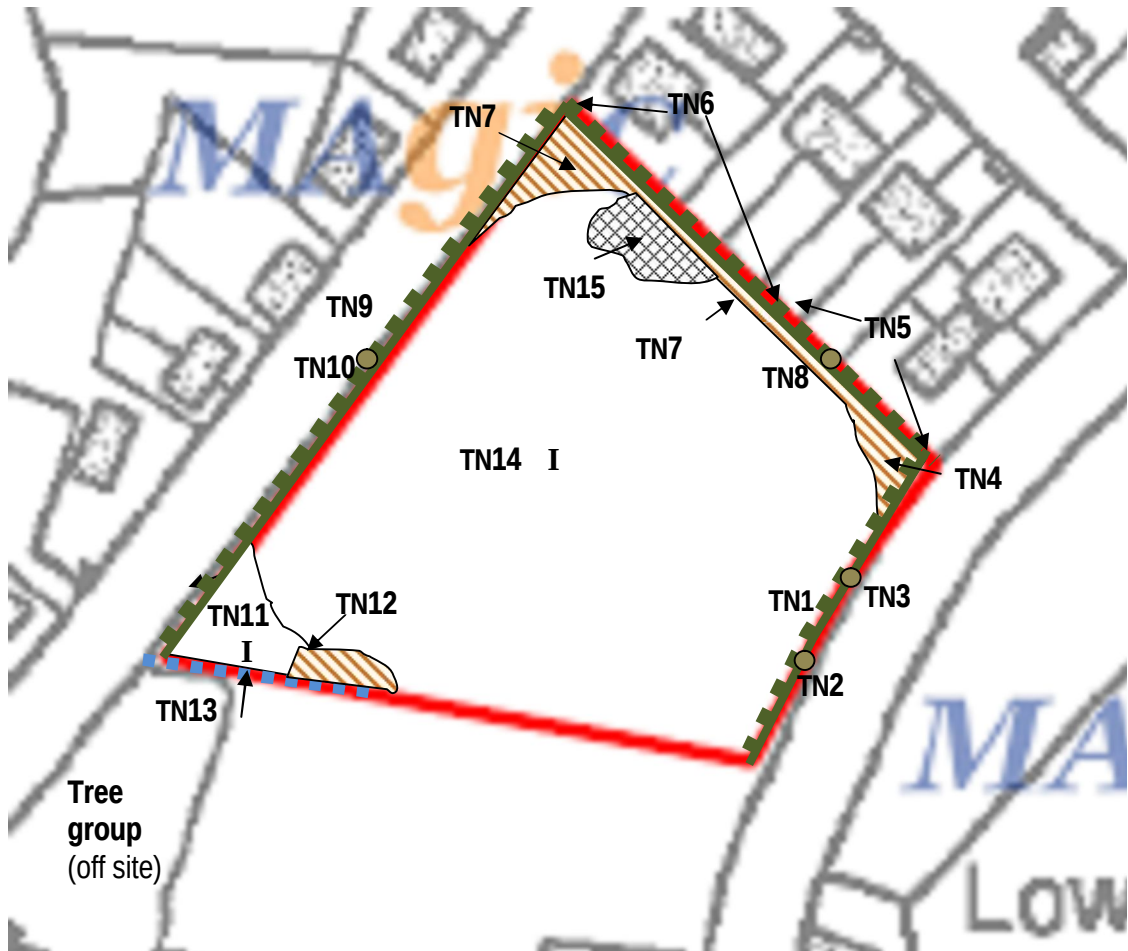


Figure 1: Existing site plan with Target Notes for Phase One Habitat survey 2014 (for species see Appendix 1)

There were patches of buttercup, a mixture of predominantly creeping and a few meadow buttercups, were found in isolated patches at the north side. There were ruderal patches at the north and SW corners, with nettle (*Urtica dioica*) dominant.

Table 2: Species list with Target Notes (TN) and Phase 1 habitat codes

TN	Phase 1 code/description	Description
TN1	J2.1.1: intact species rich hedge	8 woody species. Species rich and qualifies as important under the Hedgerow Regulations 1997
TN2	No code	Single tree – maple species
TN3	No code	Push through hedge – no signs of hair on fence and fox lay-up was found close to the gap
TN4	B4: improved grassland	Grasses are long here, with common rye and couch grass dominant / abundant, indicating classification as improved grassland. Some nettle, buttercup and occasional blackthorn whip
TN5	J2.1.1: intact species rich hedge	These had 5 and 4 woody species respectively, and 6 woody species collectively. The management of the 2 ends is different but the hedge is considered as a whole. It has a diversity of species but does not qualify as an important hedge under the Hedgerow Regs.
TN6	J2.1.1: intact species rich hedge	
TN7	C3.1/B4	Margin with grasses dominant and ruderals frequent
TN8		Single tall hawthorn tree in NE hedge
TN9	J2.1.1: intact species rich hedge	6 woody species and link to 2 hedges and dry ditch. There is no understorey. This does not qualify as of importance under Hedgerow Regulations, but is classed as species rich
TN10	-----	Fox lay-up
TN12	C3.1 Ruderals	Nettle dominant along edge of the ditch
TN13	J2.6 Dry ditch	
TN14	B4: improved grassland	Grasses dominant; cut and not identified. It may be assumed from the variety of greens and leaf shapes that while rye grass appears to dominate, other grasses listed (Appendix 1) are present
TN15	B4:	Patch of meadow buttercup

For a full species list, see **Appendix 1, Table 1.1**.

4.1.2 Protected species

Bats

There are no trees or features on site that would be suitable for roosting bats. The trees in the group at the accessible edge were all relatively immature and no signs of potential roosting places were seen. The trees form a well-covered canopy and link to hedges and other trees to the south of the site. The hedges at the north corner and west side are uncut and have some potential as foraging and commuting lines.



Figure 2: southern tree group



Figure 3: tree line heading south from site

Great crested newts (GCN)*Pond location, habitat and connectivity*

There are 10 ponds in 500m of the site. The closest are illustrated in **Figure 4**. These are

220m east	291m SE	282m west	327m S
289m east	300m WSW	299m west	
375m NE	398m WSW	456m west	



Figure 4: Ponds closest to Ellesmere Lane site with pipeline route

The east and NE ponds are separated by main road (A539) and a lot of suitable habitat. They also have better connections to other ponds to the east and north of them. The west ponds were assessed by EVR Ecology in March 2014 (EVR Ecology 2014). The closest pond at 282m was classified as poor for GCN (HSI score 0.45). West ponds are poorly connected to the site. They are separated from it by a road, which, although not insurmountable, constitutes a deterrent to movements in the direction of the site. This is especially so in consideration of the fact that good habitat was identified around the other ponds (EVR Ecology, 2014) and that the best connectivity is to other western ponds and not towards the site.

Connectivity to the south pond is poor over an open agricultural field. There are other ponds to the south that have better connectivity and movements are far more likely in that direction and not towards the site.

A further barrier between the site and the ponds to the east and south is the presence of temporary GCN fencing along the pipeline. This was still in place for sections WA76 and WA78 (**Figure 5**). To the north it had been removed. The clearance took place in 2012 and in the WA76 section as shown in **Figure 5**, no GCN were caught (email, Neil Lee-Gallon, 5th August 2014).

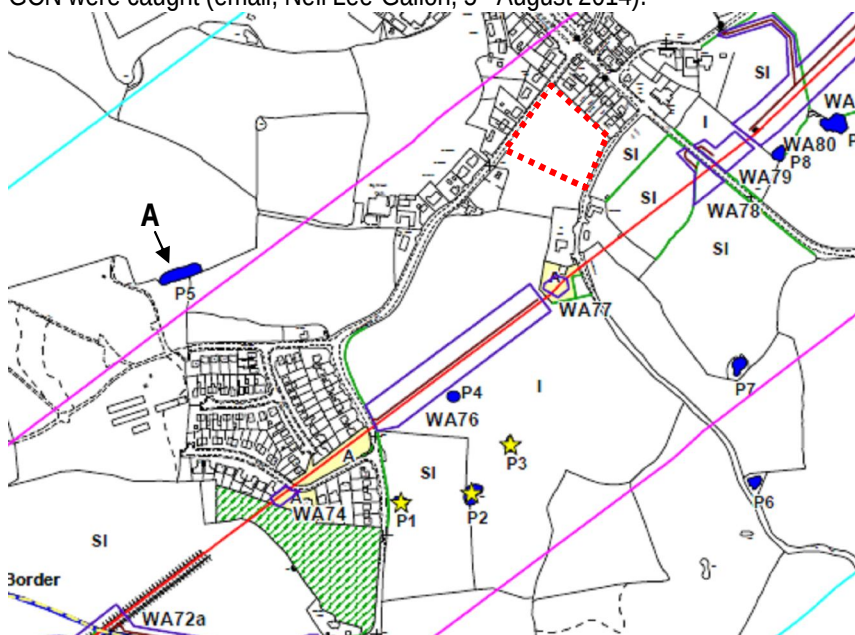


Figure 5: Trapping regime near Penley

Identification of potential refuges, foraging areas on site

The main field area has no litter layer formed as growth has been removed yearly through grazing and cutting. There are no identified refuge areas.

North hedge line and at the SW corner by the ditch provide good cover and some foraging and refuge habitat for amphibians and for small mammals and the hedges provide a source of invertebrate food. Hedges are to be left intact apart from some removal (<10m) at the west side for access to the site.

Badgers: There is no evidence badgers are using the site and there are no setts present. The surrounding land to all sides is flat and generally featureless. There are roads to 3 sides. The woodland to the SW is divided from the site by the ditch and no signs of digging, sett holes, latrines or other features associated with badgers were found. This is subject to the constraint in **Section 4.1**.

Nesting birds: The hedges are dense and provide good cover for nesting birds. No signs of nesting were observed, but a full survey was not carried out. The hedges are generally to be retained.

Other protected species: There was no evidence indicating that other protected species present or potential for them to be present.

4 ASSESSMENT

4.1 CONSTRAINTS OF SURVEY

- 4.1.1 The plot was in grazing and reduced to a short sward, apart from some edge areas. The assessment was therefore done on the basis of vegetation available for identification. All grasses, apart from those in the longer grass areas, were too short to identify individual species.
- 4.1.2 The SW corner was not fully accessible and only the first 5-6m into the wooded bit could be examined. However the tree area was separated by a ditch and **no signs of disturbance**, which would indicate badger digging across into the field, were found.

4.2 CONCLUSIONS

4.2.1 Site habitat

The field plot, on the basis of the evidence available, was assessed as improved grassland. It was species poor, with what appeared a poor diversity of grasses and plants. Ruderals such as dock and nettle dominated at the edges. Grasses were common to disturb areas and the diversity of forbs was very low and indicative of an enriched and highly disturbed ground. The land has poor conservation value.

Hedges and tree lines: The hedges are all intact and species diverse. The east hedge qualifies as an important hedgerow under the parameters of the Hedgerow Regulations 1997. Any removal of specified lengths of hedges must be preceded by an application to the local authority for a Hedge Removal Notice.

There are hedges to 3 sides are all intact and dense. These features and the under-storey and longer marginal vegetation does provide some value for cover and foraging for small mammals and birds, as well as some potential for diversity of invertebrate fauna. There is potential for them to be retained and enhanced for wildlife.

4.2.2 Bats

There is no potential for it to support roosting bats. However the trees at the SW corner have potential for foraging bats and as a commuting feature to the site from the south. The potential for bat activity in this area will be considered in respect of proposed lighting of the development area, during and after the works on site.

The site location is rural and there are good connective lines to the south around the arable land and along the road margin to the SW side. The woodland group at the south side may provide good foraging habitat for bats.

4.2.3 GCN

The conclusions below are given on the basis of the:

- evaluation of the ponds, the surrounding habitat around the ponds, habitat on the intended development site and HSI scoring (from EVR Ecology, 2014)
- connectivity of the proposed development plot to the ponds/water bodies
- assessment of the potential impacts on GCN if present in the closest ponds at 220m to the east and 282m to the west
- information from previous surveys and GCN licence for Vyrnwy pipeline

It is concluded that:

- The potential for the development to have short-term impacts on GCN is extremely low
- The area to be lost has poor refuge and limited habitat potential for GCN and will constitute a minor loss
- The only suitable refuge found was in the hedges where there is good understorey areas

- The identified migration routes, refuge areas and foraging habitat indicates that **if** GCN are present in the closest ponds (**Figure 4**) the most likely migration and dispersal routes would be away from the proposed development site and via more suitable habitat in the opposite directions and in the direction of other, closer ponds, and not towards the site
- The lack of GCN in the trapping area WA76 indicates that it is unlikely there are dispersal routes from ponds in the south and from the ponds in the NE towards the site
- Movements would also be restricted due to the presence of the fencing over the last few years
- No GCN were found in Pond A (**Figure 5**) and this was found in 2014 to be good for GCN (EVR Ecology 2014), again indicating there was no dispersal towards the west from GCN ponds to the east and south
- **It is therefore concluded that the likelihood of GCN being on the plot area, using it as a refuge or crossing it as a commuting pathway is extremely low**
- Long term impacts of development are assessed as zero. No ponds will be removed and the **potential** habitat lost to development is minimal and of limited value. Therefore there would not be a significant loss of GCN habitat
- The proposed structures will not create an insurmountable barrier to movements
- Short-term impacts are assessed as potentially low to zero. Any potential for GCN to be using the target site to commute across may be addressed by reasonable avoidance measures (RAMs).

4.2.4 Nesting birds

There is potential for use of the hedges. Birds were active in the boundaries. No nests were found.

4.2.5 Other protected species

There is no evidence for the presence of protected species on the site. Badgers are not crossing the site and there is no sett on the site area and none found in 30m radius.

4.3 POTENTIAL IMPACTS

4.3.1 Habitat

The habitat is of low biodiversity value and species poor. It will not constitute a significant loss.

The hedges are all diverse and species rich. The hedge at the east side is classified as important under the Hedgerow Regulations 1997 and must not be removed without consultation with the local authority.

The site edges have good diversity and are of conservation value. Any loss will result in a reduction in the limited conservation value of the site and removal of features that provide floral diversity and shelter, foraging and commuting routes for a variety of fauna. It is recommended that the development includes the provision of a buffer area at south west side to provide some protection for these habitats. This will be developed as a low management wildlife area, with some wildflower planting and limited cutting regime (see mitigation).

4.3.2 Bats

The trees and hedges around the boundary are likely to be used by bats. Removal of hedges will result in reduction in the conservation value of the site in respect of bats. It is noted that there are no proposals for removal of these features.

The new development has potential to impact on the SW side, where the trees close to the boundary. These are not part of the development, but any new lighting may impinge on the use of this area by bat species. This should be a consideration during the design of a lighting plan for the development site.

4.3.3 GCN

GCN: short-term impacts:

Potential impact for disturbance, injury or death through the possibility of amphibians crossing the plot cannot be fully discounted. The plot is in on the east Welsh border with Cheshire, where GCN are widespread. This must be accounted for in the mitigation.

The potential for short-term impacts is assessed as very low because:

- It is very unlikely that GCN are crossing the plot. The most likely routes do not come close to the plot area
- There is no identified refuge potential on the impact area of the plot (central field). It is limited to the edge habitats which will be retained as far as possible
- Even if GCN are present in the water bodies it is considered that the low risk may be addressed by the use of reasonable avoidance measures (RAMs) during the development
- Construction activities will be designed to minimise any risk of finding GCN present on the site.

The potential for impact is assessed as small and it will be addressed by mitigation measures. It is concluded that any potential impacts can be mitigated by using reasonable avoidance measures, (RAMs), during the development work.

GCN: Habitat loss

There is no impact identified in respect of habitat loss. The areas of the development have been identified as poor GCN habitat. There is to be no denigration of water bodies and no loss of prime habitat or potential refuge areas.

GCN: Habitat modification

Habitat modification is insignificant and has no impact on the pond or potential refuge habitat for GCN.

GCN: Fragmentation and isolation

The proposed construction will not cause any potential for the fragmentation or isolation of populations or metapopulation of newts. The present connectivity of the habitat is to be maintained and the proposed structures will not present insurmountable obstacles.

4.3.4 **Nesting birds**

There is potential to impact on nesting birds through

- Removal of features such as hedges that provide shelter for birds to nest
- Work beginning and ongoing through the nesting season of March to September, when removal may destroy nests and disturb birds
- Ongoing work through the nesting season within 4-10m of retained boundaries may result in disturbance of nesting birds

4.3.5 **Other species**

There are no impacts in respect to other protected species.

5 RECOMMENDATIONS AND MITIGATION

5.1 FURTHER SURVEY

5.1.1 Habitat

No survey is recommended at this time.

5.1.2 Nesting birds

If any work close to boundaries is to be undertaken in the nesting season of March to September then the site will be checked for nests prior to start of work. If nesting birds are present then work will be delayed in an area 4m from the nest until the young have fledged. A watching brief should be kept throughout the nesting period while work is ongoing.

5.1.3 Other species

There are no further survey requirements for other protected species identified at this time.

The conclusions and recommendations in this report in respect to surveys for protected species are based upon results from surveys in summer 2014. These data will only be of use for 2-4 years after which further survey to establish the position and possible changes in status will be necessary to ensure all activities are informed and guided by recent data on site status.

5.2 REQUIREMENTS FOR EPS LICENSING

5.2.1 Protected species

It is considered that there is no requirement for licensing for other species at this point in time.

6.2.2 Caveat: If any protected species are discovered during works then work must stop and the licensing position reviewed. Legislation for the protected species is given in Appendix 2.

5.3 MITIGATION MEASURES

5.3.1 Habitat mitigation

It is recommended that margins at the east and NW boundaries of the field are retained as wildlife areas, enhanced by planting with a native grass and wildflower mixtures to provide a buffer between the new development and the hedge habitats. The surface will be top-stripped along with the rest of the site during the autumn/winter to remove excessive nutrients in the soil. Management would involve topping the vegetation in the first year if necessary in early spring to remove and grasses that are dominating, then again in late summer/autumn once flower and seeding are completed. If the soil enrichment is sufficiently reduced the arisings may be left. After the first year a single autumn cut after seeding will be sufficient.

Further enhancement can be achieved by the planting of a species rich hedge at the south boundary (presently open) to provide additional habitat and to provide a barrier between the new development and the remaining field area to the south. Another margin may be added along this hedge line.

5.3.2 Bats

There are no proposals to remove any of the hedges bordering the plot, apart from a small area for the access into the development. There is potential impact will be on the use of by bats of the foraging areas along the hedges if these areas are lit by direct night access and security lighting from the new development. Therefore all lighting will be minimised and directed as far as possible away from the potential commuting lines along site boundaries. The lighting plan must account for this.

All lighting will follow the Bat Conservation Trust Lighting Guidelines and given in **Appendix 3**.

5.3.3 Great crested newts

The development will not result in the loss of any aquatic habitat and no net loss of potential terrestrial habitat of great crested newts, nor on the basis of present evidence will it result in significant disturbance of the species or interrupt its migration between habitats. The development on the plot will not result in the destruction of a significant amount of potential habitat areas and connective links around the site. The long-term and post-activity impacts are assessed as no impact on GCN. There is some potential impact in the short-term, which may be addressed by the following mitigation proposals.

Reasonable Avoidance Measures (RAMS)

It is recommended that reasonable avoidance measures (RAMs) are implemented to prevent any harm to great crested newts and other amphibians during the development. The storage of materials on the site (for example) could provide amphibians with potential shelter places. The following RAM's should therefore be implemented:

- **The central area of the field will be kept at a low cut from now until the start of the development. This will maintain the present condition and prevent the development of any litter layer and hence potential for refuges for amphibians**
- Top stripping of the land will avoid the times of year when newts are moving around on the land. The best period is from March to July when most are in ponds, or from November to February when they are hibernating, providing there is no identified potential for hibernation on clearance areas (none identified at this site).
- Removal of the hedge stocks at the entrance will be done outside the winter period, preferably in March to July, when GCN are in ponds
- Removal of any stored materials will avoid the times of year when newts are moving around on the land. The best period is from March to July when most are in ponds, or from November to February when they are hibernating, providing there is no identified potential for hibernation on clearance areas.
- Piles of materials on the construction site must be retained in enclosed bags or on pallets
- All building materials (bricks, tiles, concrete blocks etc) etc should be stored off the ground on pallets or timber baulks
- All loose materials should be delivered to and stored on site in bulk bags, and not be loose tipped on site
- Excavations should, wherever possible, be back-filled at the end of each working day. Where trenches are excavated for services, the trench should be excavated in the morning, the services laid and the trenches back-filled in the afternoon. Where this is not possible, the trenches should be covered over with sheet plywood and the edges sealed with topsoil to prevent amphibians falling into the trenches. Any trenches that have been left in overnight, whether or not they have been covered, must be examined for the presence of amphibians prior to filling.

It is considered very unlikely that great crested newts will be found during work. If any GCN are discovered then all work must stop and a qualified consultant, licensed for great crested newts, must be contacted and their advice followed. Failure to do so may result in an offence under the legislation detailed in Appendix 2.

5.3.4 Nesting birds

The potential for nesting birds has been identified at the site in the site boundaries. The edge habitat is very good for birds and there is potential for them to be nesting in the vegetation.

All bird species and their nests are protected from destruction and disturbance in the breeding season. It is recommended that

- Where possible removal of vegetation, especially hedges, close to the hedges and site borders, will be done outside the breeding season of March to September
- Site work to be done within 4m of a hedge line during the breeding season will be preceded by a check to ensure there are no active nests.
- If this cannot be done then a pre-start check for nesting birds is made on all areas of the site

- If birds are found to be nesting then work will be stopped in that area and anywhere in 10m of the nest until the young have fledged
- All storage of materials and work areas will be situated preferably on the SW side away from hedge lines to reduce potential disturbance.

There is no loss of habitat for birds from the development of the plot.

6.3.3 Protected species

There are no mitigation measures required for any protected species at this time.

However if during any work being undertaken during the clearance and construction on the site then all work must stop and a qualified ecologist or natural England contacted for advice as to how to proceed. Failure to do so may result in an offence under the legislation detailed in Appendix 2.

5.4 SITE ENHANCEMENT MEASURES

Conservation and enhancement measures

A redevelopment provides opportunities to enhance a site for wildlife and is recommended on sites where there is potential for wildlife and site features that may be used as foraging areas and/or commuting pathways for bats and other species. It is therefore recommended:

- A buffer strip is maintained at the sides of the site as described above in Section 5.3.1. The top layer of soil and plant growth in the strip will be removed and the open ground sown with wildflower seed mix. This will allow development of the wildflowers by removing some of the soil enrichment and dominance of the grasses and ruderals
- No hedges will be removed other than the section of the hedge required for the entrance to the site
- **Removal of any large, mature trees should only be done following an inspection for potential roost holes for bats.**
- It is also recommended that insect attracting shrubs be incorporated into any future planting scheme to encourage the presence of insects and thereby provide suitable foraging sites for local bats which have been observed to use the site for foraging (see **Appendix 4**).
- The surrounding land should be managed where possible to maintain the small mammal populations and the insect population that is attracting bats. Shrub and less well-managed areas will create habitats to attract small mammals, birds and invertebrates.

6 REFERENCES

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7 APPENDICES

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| Appendix 1: | Species list (flora) and habitat map |
| Appendix 2: | Protected species legislation and policy guidance |
| Appendix 3: | BCT Lighting guidance |
| Appendix 4: | Habitat enhancement |