

P2018/0229

Bryn Land, Knolton

Ecological Appraisal
June 2016

Amended September 2016



Produced by **Wildbanks
Conservation** 

www.wildbanksconservation.com

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1.0 INTRODUCTION

- 1.1 Mr David Owens commissioned Wildbanks Conservation to undertake an ecological appraisal of a parcel of land at Knolton, near Overton on Dee to support a planning application to develop the site.
- 1.2 The application site is located within agricultural land 4.5km to the North West of Ellesmere town centre at Grid Reference: SJ 37622 38797. The surrounding land is predominantly grazed pasture with hedgerows and a number of small woodlands. There is a touring caravan site roughly 200m East of the proposed site.
- 1.3 The development proposals include the creation of a new detached home with associated access, parking and landscaping. No current dwelling or building exist within the application site however; one large and one small agricultural shed are present to the North-west of the development area.
- 1.4 This report details the findings of an initial site survey conducted on the 22nd April 2016 and associated protected species surveys undertaken in association with planning requirements. The initial site survey was undertaken by Mick Smith, partner of Wildbanks Conservation. Further surveys were undertaken by Mick Smith, Clare Christian, Chris Gosset, Emma Hankinson and Lauren Atkins; employees of the company and suitably qualified ecologists holding associated Natural England protected Species licences. The aim of the initial site survey was to identify potential ecological constraints to the proposed development, in particular to assess the likelihood of legally protected species or other ecological features that may present a material consideration in terms of planning constraints. Further protected species surveys undertaken have provided information on the need for a European Protected Species Licence (EPS) for great crested newts and mitigation methods needed in regard to bat species, to prevent any negative impacts on the local populations.
- 1.5 A data search for the area has been carried out for this development proposal and is included within this report (Appendix 3 & 4).
- 1.6 This report includes details of great crested newt surveys conducted on seven ponds within 250m of the development site and bat surveys undertaken within the development area.

2.0 SURVEY METHODOLOGY

Desktop Study

- 2.1 The Multi-Agency Governmental Information for the Countryside (MAGIC) website was reviewed for any existing designated sites present within 1km of the development site boundary. Cofnod Environmental Information Centre (Local Biological Records Centre) was contacted to provide information on any existing ecologically important sites/area and species records within a 1km radius of the site.

Walkover Habitat Assessment

- 2.2 The site was surveyed on 22nd April 2016 using the standard Phase 1 Habitat Survey methodology (Joint Nature Conservation Committee, 2010). This involved a systematic walk over of the site to classify the habitat types present, marking them on a base map. If required target notes were used to record features or habitats of particular interest, as well as any sightings or evidence of protected or notable species including the need for further surveys.

Preliminary Protected Species Survey

- 2.3 Consideration was also given to the potential presence of species protected under the Wildlife and Countryside Act 1981 (as amended), the Protection of Badgers Act 1992 and The Conservation of Habitats and Species Regulations 2010 (as amended). Such species included, but was not limited to badger, bats, reptiles, amphibians and bird species. Evidence of any invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was also recorded where present.

Identification of Suitable Water Bodies

- 2.4 The relevant 1:25000 scale OS sheet and aerial photographs were searched to identify any water bodies present within 250m of the site boundary. Only ponds within 250m of the development site were surveyed.

Habitat Suitability Assessment

- 2.5 All identified ponds were assessed utilising the modified Great Crested Newt Habitat Suitability Index (Oldham *et al*, 2000). The habitat suitability index provides a means of evaluating habitat quality of any given pond for amphibians. The Habitat Suitability Index (HSI) is a numerical index between 0 and 1, where 0 indicates unsuitable habitat and 1 represents optimal habitat. The HSI score is then used to score the suitability of the pond on a categorical scale (Table 1). The system

is not precise enough to allow the conclusion that a pond with a high score will support Great Crested Newts whilst those with a low score will not. See Appendix 2 for the HSI calculations for each pond.

HSI Score	Pond Suitability
< 0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

Table 1. Habitat Suitability Index Scoring

2.6 Further Surveys

The initial walkover/phase 1 habitat Survey and preliminary protected species survey highlighted the need for further surveys to be conducted. These included; great crested newt presence/absence surveys and bat surveys.

2.7 Great Crested Newt Presence/ Absence Survey

Surveys were conducted between April and mid June 2016 and in accordance with the Newt Mitigation Guidelines (English Nature, 2001). Each survey comprised a minimum of three survey techniques including an evening visit in which bottle traps were set and left overnight before being checked and removed the following morning. Additionally, searches were made of aquatic vegetation for amphibian eggs and spawn and night-time torch searches for adult amphibians, tadpoles/ef's or larvae. Terrestrial refuge mats were placed around one half of pond 7 as this was the only access available. The methods employed for each visit on each pond are summarised below in Table 2. Only four visits were made on ponds 2 & 8 as no great crested newts were seen during any visit. Six visits were made to all other ponds where great crested newts were present to identify population size. Table 2 below shows sampling techniques undertaken on each pond.

	Bottle trapping								Torch Count								Egg Search										
	Pond								Pond								Pond										
	1	2	3	4	5	6a	6b	7	8	1	2	3	4	5	6a	6b	7	8	1	2	3	4	5	6a	6b	7	8
11/5/16	*				*	*	*			*				*	*	*			*				*	*	*		
16/5/16		*	*						*		*	*						*		*	*						*
18/5/16	*				*	*	*			*				*	*	*			*								
19/5/16		*	*						*		*	*						*		*							*
25/5/16						*	*								*	*											
29/5/16	*	*	*		*	*	*		*	*	*	*		*	*	*		*	*	*							*
01/6/16	*	*	*		*				*	*	*	*		*				*	*	*							*
02/6/16					*	*	*							*	*	*											
08/6/16	*		*		*				*		*			*				*									
09/6/16	*		*			*	*		*		*				*	*			*								

Table 2. Survey methods for great crested newts deployed at each pond.

Buildings – Bats - Visual Assessment

- 2.8 The exterior and interior of all buildings that could potentially be impacted by the development was visually assessed for potential access points and evidence of bat activity. Features such as small gaps under barge/soffit/fascia boards, raised or missing roof/ridge tiles or gaps at gable ends, which have the potential for use as access points, were sought. Evidence that bats actively used these potential access points would include staining within the gaps, or bat droppings or urine staining under gaps; a note being made wherever these were present. The presence of cobwebs and/or general detritus within and around potential access points was used as an indicator that bats had not recently used the area to access the building.

Trees - Bats

- 2.9 An assessment of the potential of trees within the proposed development area of the site to support bat roosts was undertaken to enable recommendations with respect to the proposed works. Trees were examined for potential roost features such as cracks, fissures and rot holes that could provide suitable roost sites. Evidence of bat roosting activity in potential roost sites was sought and included staining and/the presence of bat droppings or the presence of an actual bat. The initial survey was undertaken from ground level, with the aid of binoculars.
- 2.10 From this survey an assessment was made on the likelihood of trees to support roosting bats. In line with the Bat Conservation Trust (BCT) Good Practice Guidelines (2012), trees can be classified into one of five categories which range between a known roost (Category 1*, Category 1 and Category 2) and Category 3

which no potential for roosting bats. The basis of this criterion is subjective and based upon the surveyor's experience and judgement at the time of survey.

Nocturnal Survey

- 2.11 Emergence and dawn/return to roost surveys were undertaken on trees identified to have Moderate or high potential to support roosting bats. Surveys were undertaken on the 29th July 2016, 23rd August 2016 and 6th September 2016. To complete this assessment four ecologists were positioned around the trees to ensure all aspects of the trees could be fully observed. The surveys were conducted following BCT guidelines (2012).
- 2.12 The emergence and dawn/return to roost surveys were undertaken when weather conditions were suitable i.e. mild, calm and dry. Batbox Duet bat detectors were used during this survey to aid species identification and digital WAV recorders connected to record calls to confirm species through the programme 'Batsound'.
- 2.13 July and August is within the main activity season for bats and the survey carried out in September is within the activity season for bats. Consequently, the nocturnal surveys have been undertaken on the trees during the optimal survey period to confirm the presence or likely absence of a bat roost.

3.0 RESULTS

Desktop Study

- 3.1 There are no statutory protected sites present within 1km of the development site. Cofnod Environment Information Centre provided two records of Great Crested Newts within 1km of the site dating between 2005-2008, and one record of common frog in 2011. There were two badger sets recorded within 1km of the site in 2003.

Walk-over Habitat Assessment

- 3.2 The proposed development site (outlined in red on Figure 1) comprised a small paddock of improved grassland and corner of a larger improved grassland field. There are hawthorn and blackthorn hedgerows along the Northern boundaries. No buildings exist on site (plates 10-11).

Habitats present on site

- 3.2.1 *B6. Improved grassland* Plates 10-11

The most abundant habitat type on site comprised improved grassland. Dominant species comprised perennial rye grass *Lolium perenne*, creeping buttercup *Ranunculus repens*, broadleaved dock *Rumex obtusifolius* and common nettle *Urtica dioica*.

- 3.2.2 *Boundaries and hedgerows* Plate 16

On the North-western boundary of the site a line of hawthorn *crataegus monogyna*, and blackthorn *Prunus spinosa*, form an area of scrub and hedgerow. The North-East boundary consists of a mature blackthorn and hawthorn hedgerow. These hedgerows provide good habitat for nesting birds and suitable refuge areas for amphibians. A barbed wire fence runs close to the centre of the site from the North-east to the South-west alongside a sparse, gappy hawthorn hedgerow (Plate 15). The southern boundary comprises a barbed wire fence which runs from North-west to join the barbed wire fence close to the centre of the site. The remainder of the site has no boundary and is part of the surrounding field.

- 3.2.3 *Trees* Plate 15

Ten mature sessile oak *Quercus petraea* trees are present within the site boundary. Additional mature *Q. petraea* are found outside but adjacent to the application area.

- 3.3 *Trees- Bats*

Trees present within the proposed development site were assessed for their potential to support roosting bats (plate 15). Results of this assessment are provided in Table 3 below.

Tree	Bat Roost Potential	Features of note
T1	Moderate	Mature oak tree with some dead limbs
T2	Low	Mature oak tree with unobservable areas.
T3	Low	Mature oak tree with unobservable areas
T4	Low	Mature oak with unobservable areas
T5	Low	Mature oak with unobservable areas
T6	Moderate	Mature oak tree with many large limbs and some covering of ivy. Some dead limbs.
T7	Moderate	Mature oak with some dead limbs and cracks
T8	Low	Mature oak with some unobservable areas
T9	Low	Mature oak with some unobservable areas
T10	Moderate	Mature oak with some dead limbs

Table 3. Bat potential of trees within the development site

3.4 *Invasive Species*

No invasive plants as listed under Schedule 9 of the Wildlife and Countryside Act (1981) were observed at the time of survey.

Habitat Suitability Index

3.5 Eight ponds were identified within 250m of the development site. These ponds were assessed using the Habitat Suitability Index scoring system and the results are presented in Table 4 below. It shows the ponds range from 'poor' to 'Excellent' habitat suitability for Great Crested Newt. The Habitat Suitability Index calculations are shown in Appendix 2.

Factor	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6a	Pond 6b	Pond 7	Pond 8
HSI Score	0.61 Average	0.44 Poor	0.67 Average	0.87 Excellent	0.69 Average	0.64 Average	0.60 Average	0.63 Average	0.64 Average

Proximity to development	5m NW	130m SW	250m S	300m SW	100m NE	220m N	190m N	330m N	200m SW
Connectivity to proposed development	No barriers to dispersal	No significant barriers to dispersal	No barriers to dispersal	No significant barriers to dispersal	No barriers to dispersal	No barriers to dispersal	No barriers to dispersal	No significant barriers to dispersal	

Table 4. HIS results for all waterbodies within 250m of the development area

Great Crested Newt - Presence/ Absence Survey

- 3.6 Surveys were conducted by Wildbanks Conservation partners and ecologists Mick Smith and Clare Smith (licence numbers 2016-23932-CLS-CLS-1 and CLS-00394). Ponds 4 and 7 are located on land not owned by the developer. Access was denied for these ponds therefore were not surveyed. All surveys were conducted under suitable weather conditions and in line with Natural England Guidelines.

	PM- Air Temp °C	AM - Air Temp °C	Water Temp °C	Wind (Beaufort scale)	Rain
11/5/16	16	12	14	2	1
16/5/16	12	12	14	3	1
18/5/16	9	9	9	2	0
19/5/16	12	12	13	4	0
25/5/16	14	14	15	1	1
29/5/16	12	15	14	0	0
1/6/16	12	11	12	1	0
2/6/16	17	15	15	0	0
8/6/16	18	16	16	0	0
9/6/16	18	17	16	0	4

Table 5. Weather conditions for GCN presence/absence surveys

- 3.7 Results for great crested newt presence/absence survey are shown in tables 6-12 below.

KEY

SM - Smooth Newt

GCN - Great Crested Newt

♀ - Female

♂ - Male

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
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11/05/16	1x ♀ GCN Juvenile 3x ♂ SM	2x ♂ SM	None found
18/5/16	1x ♂ SM 1x ♀ SM	1x ♂ SM	None found
29/5/16	1x ♂ GCN Juvenile	None found	None found
1/6/16	1x ♂ GCN 1x ♂ SM	1x ♀ SM	None found
8/6/16	1x ♂ SM	1x ♀ SM	None found
9/6/16	None found	None found	None found

Table 6. Pond 1 survey results

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
16/05/16	1x ♀ SM	1x ♀ SM 1x ♂ SM	None found
19/5/16	1x ♂ SM 1x ♀ SM	1x ♂ SM	None found
29/5/16	None found	1x ♀ SM	None found
1/6/16	None found	None found	None found

Table 7. Pond 2 survey results

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
16/5/16	4x ♂ GCN 2x ♀ GCN 1x ♂ SM	2x ♂ SM	7+ GCN 1x SM
19/5/16	4x ♂ GCN 1x ♀ GCN	2x ♂ GCN 3x ♂ SM	Not conducted
29/5/16	3x ♀ GCN 2x ♂ SM 1x ♀ SM	1x ♀ SM	Not conducted

1/6/16	2x♂GCN 1x♀GCN 1x♂SM	1x♀SM	Not conducted
8/6/16	1x♂GCN 1x♀GCN 1x♀SM	1x♀GCN 1x♀SM	Not conducted
9/6/16	1x♂GCN 1x♀GCN	None found	Not conducted

Table 8. Pond 3 survey results

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
11/5/16	20x♂GCN 5x♀GCN 5x♂SM	2x♂GCN 5x♀GCN 10x♂SM 5x♀SM	15+GCN
18/5/16	17x♂GCN 6x♀GCN 2x♀SM	2x♂SM 2x♀SM	Not conducted
29/5/16	3x♀GCN 1x♂SM 1x♀SM	1x♀SM	Not conducted
1/6/16	2x♂GCN 1x♀GCN 2x♂SM	1x♀SM	Not conducted
2/6/16	3x♂GCN 3x♀GCN 2x♂SM 4x♀SM	1x♀GCN 2x♀SM	Not conducted
8/6/16	4x♂GCN 10x♀GCN	1x♀GCN 4x♀SM	Not conducted

	3x ♂SM		
	2x ♀ SM		

Table 9. Pond 5 survey results

	Bottle Trapping	Torch Survey	Egg Search
11/05/16	None found	1x ♀ GCN 1x ♀ SM	GCN found
18/05/16	None found	1x ♂GCN 1x ♀GCN 1x ♂SM 1x ♀ SM	Not conducted
25/5/16	1x ♂GCN 2x ♀GCN 1x ♂SM	None found	Not conducted
29/5/16	None found	None found	Not conducted
2/6/16	None found	None found	Not conducted
9/6/16	2x ♀GCN	1x ♂SM	Not conducted

Table 10. Pond 6a survey results

	Bottle Trapping	Torch Survey	Egg Search
11/5/16	1x ♂GCN 1x ♀GCN	None found	GCN found
18/5/16	None found	None found	Not conducted
25/5/16	1x ♂GCN	None found	Not conducted

	1x ♂ SM		
29/5/16	None found	None found	Not conducted
2/6/16	1x ♂ GCN 1x ♀ GCN	1x ♀ GCN	Not conducted
9/6/16	1x ♂ GCN	1x ♀ SM	Not conducted

Table 11. Pond 6b survey results

	Bottle Trapping	Torch Survey	Egg Search
16/5/16	None found	None found	None found
19/5/16	None found	None found	None found
29/5/16	None found	None found	None found
1/6/16	None found	None found	None found

Table 12. Pond 8 survey results

Summary of Results - GCN

- 3.8 Adult Great Crested Newts were recorded in ponds 1, 3, 5, 6a, and 6b with GCN eggs also being found in ponds 3, 5, 6a and 6b. The largest count of GCN in one night was 25 adults (20 male and 5 female) in pond 5 on the 11/05/16. The largest counts of GCN on ponds 1 was 1M on 1/6/16; pond 3 was 2F + 4M on 16/5/16; pond 6a was 2F + 1M on 25/5/16 and in pond 6b were 1F + 1M on 11/5/16 and 2/6/16. Results confirm that the ponds surrounding the development site support a small to moderate breeding population of Great Crested Newts.

- 3.9 Good foraging and hibernation habitat exists within the development site and throughout the wider area in the form of rough grassland and pasture, hedgerows, areas of scrub and large areas of rubble and piles of stone. These habitats provide ideal terrestrial refuge for amphibian species.

Bats - Buildings

- 3.10 No buildings exist within the development plot. However, two large open agricultural sheds are present adjacent to the development plot (Plates 12-13). Nocturnal surveys undertaken included these buildings to identify potential use by bat species.

Bats – Trees

Nocturnal assessment – 29th July 2016

- 3.11 Weather conditions during the dusk survey undertaken on 29th July 2016 were optimal with a no wind and no rain, cloud cover 2 Oktas and an ambient air temperature of 19°C. The survey started at 20:40 and concluded at 22:40. Sunset was at 21:10.
- 3.12 The first bat detected was a Common Pipistrelle *Pipistrellus pipistrellus* at 21:34 flying eastwards from pond 1 and the agricultural sheds. Two further bats arrived on site from the same location at 21:38 and 21:40. Common Pipistrelles were recorded foraging within the development site throughout the survey until 22:18. Up to 3 bats were seen at any one time. The level of bat activity recorded during the survey was unremarkable and in line with what would have been expected due to the habitats present on site.
- 3.13 No bats were seen emerging from the trees around the development site. All bats recorded were seen to arrive from off site.

Nocturnal Surveys

- 2.12 Emergence and dawn/return to roost surveys were undertaken on those trees deemed to have Moderate or high potential to support roosting bats. Surveys were undertaken on the 29th July 2016, 23rd August 2016 and 6th September 2016. To complete this assessment four ecologists were positioned around the trees to ensure all aspects of the trees could be fully observed. The surveys were conducted following BCT guidelines, 2012.
- 2.13 The emergence and dawn/return to roost surveys were undertaken when weather conditions were suitable i.e. mild, calm and dry. Batbox Duet bat detectors connected to digital WAV recorders were used during this survey to aid species identification.
- 2.14 July and August is within the main activity season for bats and the survey carried out in September is within the activity season for bats. Consequently, the nocturnal surveys have been undertaken on the trees during the optimal survey period to confirm the presence or likely absence of a bat roost.

3.0 RESULTS

Desktop Study

- 3.1 There are no statutory protected sites within 1km of the application site. Cofnod provided two records of Great Crested Newts within 1km of the site dating between 2005-2008 and one record of common frog in 2011. There were two badger sets recorded within 1km of the site recorded in 2003.

Walk-over Habitat Assessment

- 3.2 The proposed development site (outlined in red on Figure 1) comprised a small paddock of improved grassland and corner of a larger improved grassland field. There are hawthorn and blackthorn hedgerows along the Northern boundaries. No buildings exist on site (plates 10-11).

Habitats present on site

- 3.2.1 *B6. Improved grassland* Plates 10-11
The most abundant habitat type on site comprised of improved grassland. Dominant species included; perennial rye grass *Lolium perenne*, creeping buttercup *Ranunculus repens*, broadleaved dock *Rumex obtusifolius* and common nettle *Urtica dioica*.
- 3.2.2 *Boundaries and hedgerows* Plate 16
On the North-western boundary of the site a line of hawthorn *Crataegus monogyna*, and blackthorn *Prunus spinosa*, form an area of scrub and hedgerow. The North-East boundary is a blackthorn and hawthorn hedgerow. These hedgerows provide good habitat for nesting birds and refuge areas for amphibians. A barbed wire fence runs close to the centre of the site from North-east to South-west alongside a sparse hawthorn hedgerow (Plate 15). The southern boundary comprises a barbed wire fence which runs from North-west to join the barbed wire fence close to the centre of the site. The rest of the site has no boundary and is part of the surrounding field.
- 3.2.3 *Trees* Plate 15
Ten mature sessile oak *Quercus petraea* trees are found within the site. Additional mature *Q. petraea* are found adjacent to the development site to the south, west and East

- 3.3 *Trees- Bats*
Trees present within the proposed development site were assessed for their potential to support roosting bats (plate 15)

Table 3: Tree description and bat roost potential

Tree	Bat Roost Potential	Features of note
T1	Moderate	Mature oak tree with some dead limbs
T2	Low	Mature oak tree with unobservable areas.

T3	Low	Mature oak tree with unobservable areas
T4	Low	Mature oak with unobservable areas
T5	Low	Mature oak with unobservable areas
T6	Moderate	Mature oak tree with many large limbs and some covering of ivy. Some dead limbs.
T7	Moderate	Mature oak with some dead limbs and cracks
T8	Low	Mature oak with some unobservable areas
T9	Low	Mature oak with some unobservable areas
T10	Moderate	Mature oak with some dead limbs

3.4 *Invasive Species*

No invasive plants as listed under Schedule 9 of the Wildlife and Countryside Act 1981 were observed at the time of survey.

Habitat Suitability Index

3.5 Eight ponds were identified within 250m of the development site. These ponds were assessed using the Habitat Suitability Index scoring system and the results are presented in Table 4 below. Ponds ranged from 'poor' to 'Excellent' habitat suitability for Great Crested Newt. The Habitat Suitability Index calculations are shown in Appendix 2.

3.6 Table 4: Habitat Suitability Score and pond details

Factor	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6a	Pond 6b	Pond 7	Pond 8
HSI Score	0.61 Average	0.44 Poor	0.67 Average	0.87 Excellent	0.69 Average	0.64 Average	0.60 Average	0.63 Average	0.64 Average
Proximity to development	5m NW	130m SW	250m S	300m SW	100m NE	220m N	190m N	330m N	200m SW
Connectivity to proposed development	No barriers to dispersal	No significant barriers to dispersal	No barriers to dispersal	No significant barriers to dispersal	No barriers to dispersal	No barriers to dispersal	No barriers to dispersal	No significant barriers to dispersal	

Great Crested Newt - Presence/ Absence Survey

3.7 Surveys were conducted by Wildbanks Conservation partners and ecologists Mick Smith and Clare Smith (licence numbers 2016-23932-CLS-CLS-1 and CLS-00394). Ponds 4 and 7 are located on land not owned by the developer and access denied.

All other ponds were surveyed with no limitations. Weather conditions were suitable on all survey occasions (Table 5).

Table 5: Weather conditions

	PM- Air Temp °C	AM - Air Temp °C	Water Temp °C	Wind (Beaufort scale)	Rain
11/5/16	16	12	14	2	1
16/5/16	12	12	14	3	1
18/5/16	9	9	9	2	0
19/5/16	12	12	13	4	0
25/5/16	14	14	15	1	1
29/5/16	12	15	14	0	0
1/6/16	12	11	12	1	0
2/6/16	17	15	15	0	0
8/6/16	18	16	16	0	0
9/6/16	18	17	16	0	4

3.8 The results for the presence/absence survey are presented in Tables 6-12. Six surveys were only conducted on water bodies containing great crested newts.

KEY

SM - Smooth Newt

GCN - Great Crested Newt

♀ - Female

♂ - Male

Table 6: Pond 1

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
11/05/16	1x ♀ GCN Juvenile 3x ♂ SM	2x ♂ SM	None found
18/5/16	1x ♂ SM 1x ♀ SM	1x ♂ SM	None found
29/5/16	1x ♂ GCN Juvenile	None found	None found
1/6/16	1x ♂ GCN 1x ♂ SM	1x ♀ SM	None found
8/6/16	1x ♂ SM	1x ♀ SM	None found
9/6/16	None found	None found	None found

Table 7: Pond 2

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
16/05/16	1x ♀ SM	1x ♀ SM 1x ♂ SM	None found
19/5/16	1x ♂ SM 1x ♀ SM	1x ♂ SM	None found
29/5/16	None found	1x ♀ SM	None found
1/6/16	None found	None found	None found

Table 8: Pond 3

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
16/5/16	4x ♂ GCN 2x ♀ GCN 1x ♂ SM	2x ♂ SM	7+GCN 1x SM
19/5/16	4x ♂ GCN 1x ♀ GCN	2x ♂ GCN 3x ♂ SM	Not conducted
29/5/16	3x ♀ GCN 2x ♂ SM 1x ♀ SM	1x ♀ SM	Not conducted
1/6/16	2x ♂ GCN 1x ♀ GCN 1x ♂ SM	1x ♀ SM	Not conducted
8/6/16	1x ♂ GCN 1x ♀ GCN 1x ♀ SM	1x ♀ GCN 1x ♀ SM	Not conducted
9/6/16	1x ♂ GCN 1x ♀ GCN	None found	Not conducted

Table 9: Pond 5

Survey Occasion	Bottle Trapping	Torch Survey	Egg Search
11/5/16	20x ♂ GCN 5x ♀ GCN 5x ♂ SM	2x ♂ GCN 5x ♀ GCN 10x ♂ SM 5x ♀ SM	15+ GCN
18/5/16	17x ♂ GCN 6x ♀ GCN 2x ♀ SM	2x ♂ SM 2x ♀ SM	Not conducted
29/5/16	3x ♀ GCN 1x ♂ SM 1x ♀ SM	1x ♀ SM	Not conducted
1/6/16	2x ♂ GCN 1x ♀ GCN 2x ♂ SM	1x ♀ SM	Not conducted
2/6/16	3x ♂ GCN 3x ♀ GCN 2x ♂ SM 4x ♀ SM	1x ♀ GCN 2x ♀ SM	Not conducted
8/6/16	4x ♂ GCN 10x ♀ GCN 3x ♂ SM 2x ♀ SM	1x ♀ GCN 4x ♀ SM	Not conducted

Table 10: Pond 6a

	Bottle Trapping	Torch Survey	Egg Search
11/05/16	None found	1x ♀ GCN 1x ♀ SM	GCN found
18/05/16	None found	1x ♂ GCN 1x ♀ GCN 1x ♂ SM 1x ♀ SM	Not conducted
25/5/16	1x ♂ GCN 2x ♀ GCN 1x ♂ SM	None found	Not conducted
29/5/16	None found	None found	Not conducted
2/6/16	None found	None found	Not conducted
9/6/16	2x ♀ GCN	1x ♂ SM	Not conducted

Table 11: Pond 6b

	Bottle Trapping	Torch Survey	Egg Search
11/5/16	1x ♂ GCN 1x ♀ GCN	None found	GCN found
18/5/16	None found	None found	Not conducted
25/5/16	1x ♂ GCN 1x ♂ SM	None found	Not conducted
29/5/16	None found	None found	Not conducted
2/6/16	1x ♂ GCN 1x ♀ GCN	1x ♀ GCN	Not conducted
9/6/16	1x ♂ GCN	1x ♀ SM	Not conducted

Table 12: Pond 8

	Bottle Trapping	Torch Survey	Egg Search
16/5/16	None found	None found	None found
19/5/16	None found	None found	None found
29/5/16	None found	None found	None found
1/6/16	None found	None found	None found

Summary of Results - GCN

- 3.9 Adult Great Crested Newts were recorded in ponds 1, 3, 5, 6a, and 6b with GCN eggs also being found in ponds 3, 5, 6a and 6b. The largest count of GCN in one night was 25 adults (20 male and 5 female) in pond 5 on the 11/05/16. The largest counts of GCN on ponds 1 was 1M on 1/6/16; pond 3 was 2F + 4M on 16/5/16; pond 6a was 2F + 1M on 25/5/16 and in pond 6b were 1F + 1M on 11/5/16 and 2/6/16. Results indicate that the ponds surrounding the development site support a small to moderate breeding population of Great Crested Newts.
- 3.10 Good foraging and hibernation habitat exists throughout the development site and wider area in the form of rough grassland and pasture, hedgerows, areas of scrub and large areas of rubble and piles of stone.

Bats - Buildings

- 3.11 No buildings exist within the development plot. Two large open agricultural sheds are present adjacent to the development plot (Plates 12-13) which may have low potential for a small number of bats.

Bats – Trees

Nocturnal assessment – 29th July 2016

- 3.12 Weather conditions during the dusk survey undertaken on 29th July 2016 were optimal with no wind or rain, cloud cover 2 Oktas and an ambient air temperature of 19°C. The survey started at 20:40 and concluded at 22:40. Sunset was at 21:10.
- 3.13 The first bat detected was a Common Pipistrelle *Pipistrellus pipistrellus* at 21:34 flying eastwards from pond 1 and the agricultural sheds (route R1). Two further bats arrived on site from the same location at 21:38 and 21:40. Common Pipistrelles were recorded foraging within the development site throughout the survey until 22:18. Up to 3 bats were seen at any one time. The level of bat activity recorded during the survey was unremarkable and in line with what would have been expected due to the habitats present on site.
- 3.14 No bats were seen emerging from the trees around the development site. All bats recorded were seen to arrive from off site.

Nocturnal assessment –23rd August 2016

3.15 The weather conditions during the dusk survey undertaken on the 23rd August 2016 were mild with a light breeze and no rain. The dusk survey started at 20:18 and concluded at 22:50, sunset was at 20:20.

3.16 The first bats to be recorded during the survey was a common pipistrelle at 20:38 flying around the agricultural sheds to the North West of the proposed site. Occasional Common Pipistrelle's and Soprano Pipistrelle's *Pipistrellus pygmaeus* were recorded foraging along the hedgerows and oak trees around the proposed site throughout the survey until 21:48 (route R2). Several Noctule *Nyctalus noctula* passes were recorded at 21:36 and 21:41 around the agricultural sheds to the North West. Many of the Common pipistrelle's heard were foraging and commuting along the hedgerows on site. Up to two bats were seen at any one time. The level of bat activity recorded during the survey was unremarkable and less than what would have been expected based on the habitats present, including a large number of mature oak trees and ponds.

3.17 No bats were recorded emerging from the trees during the emergence survey.

Nocturnal assessment –6th September 2016

3.18 The weather conditions during the dawn survey undertaken on the 6th September 2016 were warm with a light breeze and no rain. The dawn survey started at 05:00 and concluded at 06:30, sunset was at 06:30.

3.19 The first bats to be recorded during the survey was a common pipistrelle at 05:05 within the proposed development site. Common Pipistrelle's were recorded foraging around pond 1 and agricultural buildings to the North West of the proposed development site throughout the survey (route R3). Six common pipistrelle's entered a gap within one of the agricultural sheds (building B2) to the northwest of the proposed development site after foraging around the trees and the buildings confirming a small roost present within this building. The majority of bat activity throughout the survey was heard and seen around the farm buildings and trees to the North West of the proposed development site.

Badger

3.20 No setts or evidence of badger crossing the site or using the site for foraging was recorded within the development site.

Birds

- 3.21 During the survey a number of bird species were recorded. Species included; robin *Erithacus rubecula*, dunnoek *Prunella modularis*, black bird *Turdus merula* and wren *Troglodytes troglodytes*. The hedgerow existing on the Northern boundary offers opportunities for nesting birds as do all the mature oak trees and the scrub area surrounding pond 1 to the west of the development site. A rookery was present within the area of scrub and oak trees around pond 1 and within trees adjacent to the development site. In addition, the steel agricultural buildings also offer some nesting opportunities for birds.
- 3.22 The development site offers no potential for barn owls *Tyto alba* in the form of nesting and limited hunting/foraging opportunities due to the small area of land being developed. The fields surrounding the development site could be potentially used by barn owls for both foraging and nesting.

Reptiles

- 3.23 Much of the habitats on site consisted of short grazed pasture and offered little potentially suitable habitat for reptile species.

Survey Constraints

- 3.24 It is considered that there are no significant constraints to the GCN surveys conducted on ponds 1, 2, 3, 5, 6a, 6b and 8. No access was given for ponds 4 and 7. The bat surveys were also conducted without constraints.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Great Crested Newts

- 4.1 The data search provided by Cofnod had two records of Great Crested Newts within 1km of the development site. The amphibian survey of the seven ponds that lie within 250m of the development site identified a small to moderate breeding population of Great Crested Newts within 4 of the seven ponds and a fifth pond that had low numbers of GCN recorded but no evidence of it being used for breeding.
- 4.2 Pond 1 is immediately adjacent to the proposed development site. A single male GCN and 2 juvenile GCN were recorded. Pond 5 had the largest population of GCN recorded of the seven ponds surveyed. The maximum count was 25 individuals on one night and a large number of GCN eggs were recorded on marginal vegetation throughout the surveys. Pond 5 is located within 100m of the development site.
- 4.3 There are no significant constraints to the results of this survey. Great Crested Newts are however highly mobile in nature and may colonise a site at any time. Natural environments may change and the survey results reported here will therefore become less reliable as time progresses.
- 4.4 The habitat to be impacted by the proposed development is predominantly grazed fields and improved grassland that comprises moderate foraging habitat for newts. Also present within the site boundary and the route of the new access road is a pile of large stone (plate 14) and extensive areas of rubble and crushed concrete/tarmac. This provides excellent hibernation and refuge habitat for the species. The development site is located roughly 8 metres from pond 1 and 100m from pond 5. No barriers to dispersal occur between the ponds and the proposed development. Great Crested Newts are known to travel up to 500m between breeding ponds. It is therefore considered that it is highly likely that great crested newts will be utilising the proposed development site in their terrestrial phase. This development therefore has potential to adversely impact upon great crested newts.
- 4.5 A Natural England European Protected Species licence is required in regards of great crested newts to allow development works to proceed. This will encompass a Mitigation Strategy to ensure that the development is designed to protect newts during the construction phase and to minimise long term impacts upon the local great crested newt population.

Bats

- 4.6 During the Visual Assessment on the 22nd April 2016 ten large mature oak trees were identified within the site boundary. Of those 5 had features present that had the potential to support roosting bats. Current legislation states it is an offence to intentionally kill, injure or capture or intentionally (or recklessly in England and Wales) disturb bats or obstruct access to, damage or destroy bat roosts.
- 4.7 Two dusk emergence surveys were undertaken on the 29/07/16 and 23/08/16 and a dawn return to roost survey was carried out on the 06/09/16 to establish if bats were roosting within these trees or adjacent buildings and to provide information as to how bats are using the site and wider area.
- 4.8 No roosts were found within the trees surrounding the development site during any of the nocturnal surveys. Surveyors were positioned so that all aspects of the trees could be assessed throughout the surveys.
- 4.9 A small common pipistrelle roost was identified within building B2. Six bats were seen returning to the roost on the dawn survey on the 6th of September 2016. Plate 12 shows the access point to the roost, which is located behind timbers and steel work in the Eastern corner of the building.
- 4.10 Building B2 is a moderate sized (30m x 30m) breeze block and steel framed agricultural shed that is open on the north-east aspect. The sides are slatted timber boards and the roof is corrugated cement fibreboard. No works are planned to take place on building with regards to this development and it is to be left 'as is'. However, construction traffic will pass along the access route created in front of the building on the NE aspect (see figure 3).
- 4.11 Although a bat roost has been identified near the development, it is considered that a European Protected Species licence will not be required as the roost will not be lost. In addition, the identified roost is of a small size (6 individuals) and of a common bat species (common pipistrelle). The roost will also not be altered during the development and with the inclusion of mitigation methods any disturbance to the roost can be minimised.

Trees and their protection

- 4.12 Ten mature oak trees exist within the boundaries of the development site. The British Standard **BS 5837 Trees in relation to design, demolition and construction - Recommendations** was reviewed and updated in April 2012 and is the benchmark document for how to successfully take account of and retain

suitable trees in proximity to development. Trees must be recognised as an integral part of the design and site planning process. Trees make a significant contribution to the wider environment and are important to the ecological and amenity value of an area. Suitable protection of trees and their root system that are to be retained on a development site is essential to the future health of a tree.

- 4.13 The part of the tree most susceptible to damage is the root system because it cannot be seen and there is limited understanding of the root function and its importance to the health of the tree by developers and builders. Roots have 3 main functions: - Absorption of water, oxygen and nutrients; storage of tree 'food' in the form of starch and structural support. All roots are therefore deemed extremely important.
- 4.14 A 'Minimum Protected Area' (MPA) should be created around the existing trees along Far Lane (as shown on Figure 1 - Landscape Scheme). The location of the MPA of each tree must be either equal to the branch spread plus 1m or half the height of the tree plus 1m, whichever is greater.
- 4.15 Erection of protective fencing must be undertaken before any site works start, and remain in place and be maintained in good condition for the duration of the site works. It must not be breached. Type of fencing should be chestnut paling or similar, at least 1.2 metres high (preferably 1.5 metres high) on a post and rail framework, and suitably braced to resist impact and in accordance with BS 5837 section 8.2. Fencing supports must be firmly located into the soil so that the fencing cannot be breached or moved. Durable signs should be attached to the fencing, warning site personnel that the area is protected and to 'Keep Out'.
- 4.16 If work within a protected zone is unavoidable, a 'tree-friendly' method of working must be agreed in writing with the Planning Authority in advance. This may mean careful hand digging or the use of geotextiles, sand and temporary boarding to enable vehicles to cross the site without causing significant compaction to the tree root zone.
- 4.17 The hedges and areas around pond 1 on the proposed development site are likely to provide nesting opportunities for birds. All bird species are protected whilst on the nest under the Wildlife & Countryside Act 1981 (as amended). As such it is recommended that any hedge removal/pruning works and or site clearance is undertaken outside the bird breeding season (March – September inclusive). Where this is not possible any area to be affected should be checked by a suitably

trained ecologist to confirm absence of any breeding birds at least 3 days prior to any removal works being undertaken. Any confirmed nests must be left until the young have fledged.

EXECUTIVE SUMMARY

- 5.1 An Ecological Assessment comprising a desktop study, Phase 1 Habitat assessment and preliminary protected species survey was undertaken at the proposed development site in April 2016 by Mick Smith, Partner Wildbanks Conservation.
- 5.2 Possible constraints to the development and further surveys needed were identified during the initial Ecological Assessment in the form of the possible presence of protected species. Further surveys included a great crested newt presence/absence survey undertaken on 7 ponds within 250m of the development site, and 3 nocturnal bat surveys on the 10 mature trees and adjacent building located in close proximity to the development site.
- 5.2 No statutorily or non-statutory designated sites will be impacted upon as a result of the proposed development.
- 5.3 Statutory constraints to the development have been noted on site with respect to the presence of protected species. Great crested newts are present on and surrounding the development site and as such the development should not proceed without a European Protected Species licence being sought with respect to great crested newts.
- 5.4 A small bat roost was identified within the agricultural building to the North-West of pond 1. Six common pipistrelle bats were seen entering a roost between two timbers on the western corner. This building is outside of the development area and no works are planned and the roost will not be lost. However, construction traffic will pass by the roost and as such protective measures must be installed to protect the roost from undue disturbance. It is considered that a European Protected Species Licence with regards to bats is not required due to the small numbers of bats recorded and the roost will not be lost. Preventative disturbance methods by the installation of a simple screen can be installed and the creation of a method statement to further reduce any impact on the roost through passing construction traffic.
- 5.5 No bat roosts were found within the mature oak trees surrounding the site during the nocturnal surveys. Therefore, there are no constraints on these trees in regards to bats. Foraging activity was recorded throughout the surveys within the development site and bats are likely to rely on these mature trees and hedgerows for feeding requirements.

5.4 Due to the presence of protected species above, the following surveys, mitigation and enhancement measures are recommended to facilitate the proposed development:

GCN

- Once planning permission has been granted an application to Natural Resources Wales for a European Protected species licence should be submitted. A Method Statement and detailed mitigation measures would be included in any application. This will include the construction of a newt fence around the development area and a trapping exercise to ensure no great crested newts are present within the development area prior to works.

Bats

- A European Protected species licence is not required with regards to bats as the small roost identified on site is not to be modified or lost. However, the following precautionary methods should be installed to minimise any disturbance to the roost.
 1. Installation of a 6m x 2m fence, consisting of 3 mesh site fence panels covered in a fine debris/dust barrier material. The fence is to be located 2m to the East of the roost and is to be in place 4 weeks prior to any works taking place and remain until all works have been completed. Any alteration to its location should be approved by a suitably experienced ecologist.
 2. Any clearance or creation of the access track should be carried between October and March when bats are hibernating and should not be in the roost in building B1 as it is unsuitable for hibernating bats.
 3. Installation of new bat roost opportunities should be added into the proposed development scheme to ensure no adverse impact is subjected to the local bat population (see below).
 4. As much as possible, mature hedgerows and trees should be left on site to allow bat foraging opportunities within the area.

Other

- Creation of root protection zones around all trees - A1 to A10
- Installation of bird boxes suitable for tit species, flycatchers and wrens within the development to positively enhance the area for nature.

1. Four Schwegler bird box with a range of entrance hole diameters/openings.
- Installation of a variety of permanent bat boxes within the new house and on mature trees within the site boundary.
 1. Two integral bat boxes such as Schweglar 'bat tube' or Ibstock enclosed bat box C
 2. Four Schwegler Bat Box 1FD
 2. Two Schwegler Bat Box 1FF

5.5 The hedges and areas around pond 1 on the proposed development site are likely to provide nesting opportunities for birds. All bird species are protected whilst on the nest under the Wildlife & Countryside Act 1981 (as amended). As such it is recommended that any hedge removal/pruning works and or site clearance is undertaken outside the bird breeding season (March – September inclusive). Where this is not possible any area to be affected should be checked by a suitably trained ecologist to confirm absence of any breeding birds. Any confirmed nests must be left until the young have fledged.

5.6 No evidence of invasive plant species was found during the survey, however if these should become apparent within the site then it is recommended that advice should be sought immediately from an appropriately qualified and experience ecologist or contractor, as it is an offence to plant or otherwise allow species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) to grow in the wild.

6.0 REFERENCES

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

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Jehle, R. (2000). The terrestrial summer habitat of radio-tracked great crested newts (*Triturus cristatus*) and marbled newts (*T. marmoratus*). *Herpetological Journal* 10 pp. 137-142.

Natural England (undated). WML-A14-2 method statement. Online licence application form.

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, p143-155.

Oldham, R.S. & Nicholson, M. (1986). Status and ecology of the warty newt *Triturus cristatus*.

Report to the Nature Conservancy Council (Contract HF 3/05/123), Peterborough.

A1 APPENDIX – SITE PHOTOGRAPHS – PLATES 1 - 8



A1.1 Plate 1 – Pond 1



A1.2 Plate 2 – Pond 2



A1.3 Plate 3 – Pond 3



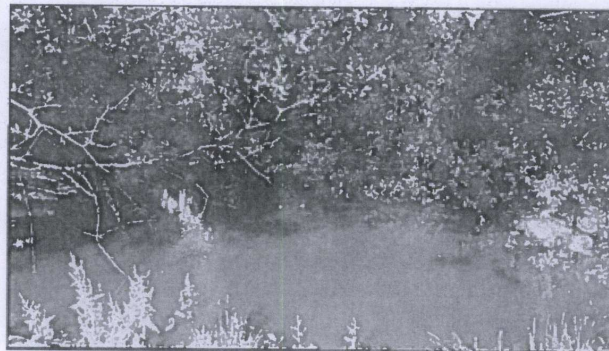
A1.4

Plate 4 – Pond 4



A1.5

Plate 5 – Pond 5



A1.6

Plate 6 – Pond 6a



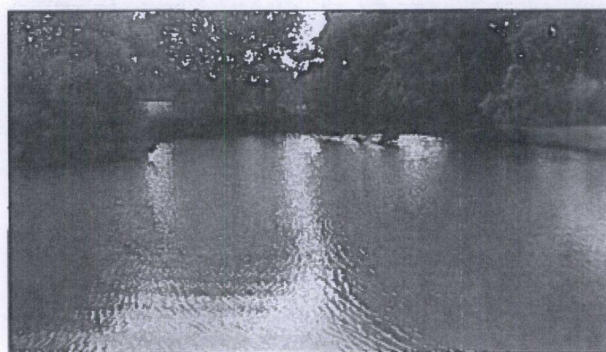
A1.7

Plate 7- Pond 6b



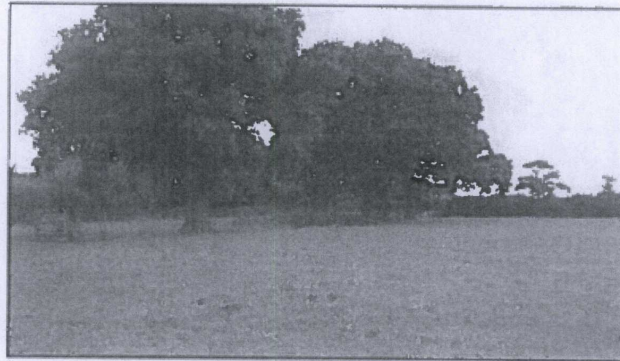
A1.8

Plate 8- Pond 7



A1.9

Plate 9 – Pond 8



A1.10

Plate 10 – The development site looking North



A1.11

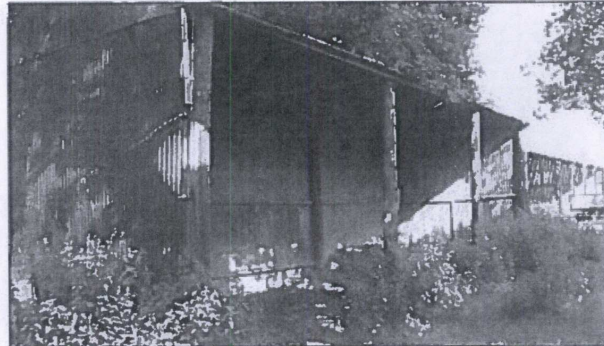
Plate 11 – The development site looking South-west



Bat Roost
Location

A1.12

Plate 12- Agricultural Building North-West of pond 1 with bat roost location



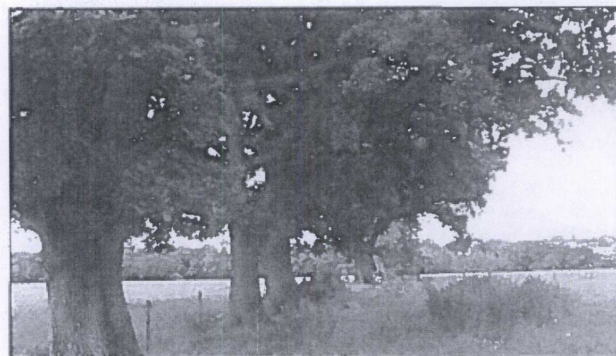
A1.13

Plate 13- Agricultural Building North-East of pond 1



A1.14

Plate 14 – Rubble pile North of pond 1



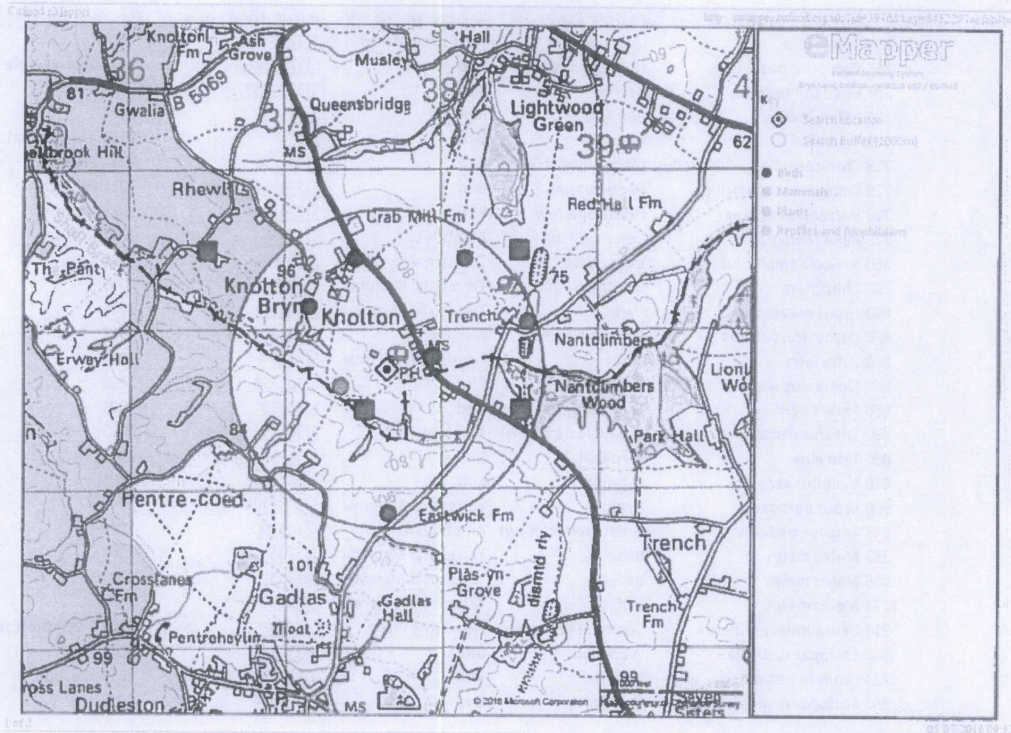
A1.15

Plate 15 – Mature Oak trees on the development site



A1.16 **Plate 16 – Hawthorn thicket on the North-West boundary of the development site**

Factor	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6a	Pond 6b	Pond 7	Pond 8
Geographic Location	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0	Optimal geographic location HI 1.0
Pond Area	500m ² HI 1	650 m ² HI 1	320 m ² HI 0.65	500 m ² HI 1	1000 m ² HI 0.955	250 m ² HI 0.5	300 m ² HI 0.6	400 m ² HI 0.8	400 m ² HI 0.8
Pond Permanence	Never dries HI 0.9	Never dries HI 0.9	Never dries HI 0.9	Never dries HI 0.9	Never dries HI 0.9	Never dries HI 0.9	Never dries HI 0.9	Never dries HI 0.9	Never dries HI 0.9
Water Quality	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67
Pond Shading	95% HI 0.3	40% HI 0.3	60% HI 0.3	50% HI 0.3	15% HI 0.3	80% HI 0.3	90% HI 0.3	90% HI 0.3	80% HI 0.3
Water fowl presence	Minor HI 0.67	Minor HI 0.67	Minor HI 0.67	Minor HI 0.67	Minor HI 0.67	Absent HI 0.67	Minor HI 0.67	Minor HI 0.67	Minor HI 0.67
Occurrence of fish	Minor HI 0.3	Minor HI 0.3	Possible HI 0.3	Absent HI 0.3	Minor HI 0.3	Absent HI 0.3	Possible HI 0.3	Possible HI 0.3	Minor HI 0.3
Pond density	8 HI 0.89	8 HI 0.89	8 HI 0.89	8 HI 0.89	8 HI 0.89	8 HI 0.89	8 HI 0.89	8 HI 0.89	8 HI 0.89
Terrestrial Habitat	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67	Moderate HI 0.67
Macrophyte cover	5% HI 0.35	10% HI 0.4	10% HI 1	80% HI 0.8	5% HI 0.35	5% HI 0.35	<5% HI 0.35	<5% HI 0.35	<5% HI 0.35
HSI Score	0.61 Average	0.4 Poor	0.67 Average	0.87 Excellent	0.69 Average	0.64 Average	0.6 Average	0.63 Average	0.64 Average



A4 APPENDIX 4 - DATA SEARCH

Distant	Scientific Name	English Name	Species Group (NB)	Public Grid Reference	Year	Abundance
283	Chiroptera	Unknown Bat	Terrestrial Mammal	SJ3738	1993	
297	Passer domesticus	House Sparrow	Bird	SJ37933883	2009	1 Adult Male
307	Falco tinnunculus	Kestrel	Bird	SJ37943883	2010	1
307	Milvus milvus	Red Kite	Bird	SJ33	2010	1
671	Tyto alba	Barn Owl	Bird	SJ33	2012	4 eggs, 0 hatched
728	Chroicocephalus ridibundus	Black-headed Gull	Bird	SJ374394	2011	Present
728	Emberiza schoeniclus	Reed Bunting	Bird	SJ374394	2011	Present
728	Passer domesticus	House Sparrow	Bird	SJ374394	2011	Present
728	Rana temporaria	Common Frog	Amphibian	SJ374394	2011	Present
860	Arvicola amphibius	Water Vole	Terrestrial Mammal	SJ381394	2005	
860	Chiroptera	Unknown Bat	Terrestrial Mammal	SJ3839	2005	
860	Lepus europaeus	Hare	Terrestrial Mammal	SJ381394	2005	
860	Lissotriton vulgaris	Smooth Newt	Amphibian	SJ381394	2005	
860	Lutra lutra	Otter	Terrestrial Mammal	SJ3839	2005	
860	Numenius arquata	Curlew	Bird	SJ381394	2005	
860	Perdix perdix	Grey Partridge	Bird	SJ381394	2005	
860	Triturus cristatus	Great Crested Newt	Amphibian	SJ381394	2005	
860	Tyto alba	Barn Owl	Bird	SJ33	2005	
860	Vanellus vanellus	Lapwing	Bird	SJ381394	2005	
900	Lepus europaeus	Hare	Terrestrial Mammal	SJ376378	2005	1
949	Triturus cristatus	Great Crested Newt	Amphibian	SJ385390	2008	14
292	Meles meles	Badger	Terrestrial Mammal	SJ3738	2003	
886	Meles meles	Badger	Terrestrial Mammal	SJ3838	2003	
1373	Meles meles	Badger	Terrestrial Mammal	SJ3639	2004	
316	Centaurium erythraea	Common Centaury	Flowering Plant	SJ373386	1992	1 DOMIN (Estimate)
640	Scolopax rusticola	Woodcock	Bird	SJ371391	2005	
728	Hirundo rustica	Swallow	Bird	SJ374394	2011	Present
860	Scolopax rusticola	Woodcock	Bird	SJ381394	2005	

**A5 APPENDIX 5 – RELEVANT LEGISLATION & PLANNING POLICY IN
RELATION TO BAT SPECIES**

Relevant Legislation

- A5.1 Due to recent declines in bat species' populations within the United Kingdom, all bat species and their roost sites in Britain are protected under the Wildlife and Countryside Act 1981 (as amended). They are also included on Annex IV of Council Directive 92/43/EEC of 21st May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the United Kingdom ratifying this directive, all British bats are protected under The Conservation of Habitats and Species Regulations 2010. Under this legislation it is an offence to intentionally kill, injure or capture or intentionally (or recklessly in England and Wales) disturb bats or obstruct access to, damage or destroy bat roosts.
- A5.2 Under the law, a bat roost is any structure or place used for shelter or protection e.g. a building, bridge or tree. Bats use many roost sites and feeding areas throughout the year and since they tend to re-use the same roosts for generations these sites are protected whether bats are present or not.
- A5.3 Any activity resulting in a contravention of the legislation described above would require a licence from Natural Resources Wales (NRW) to avoid committing an offence. NRW issue licences for the purposes of:
- “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial”.
- A5.5 The National Planning Policy Framework sets out how the planning system should contribute to and enhance nature conservation and the local environment. This is to be achieved through a combination of local planning policies as well as through the determination of planning applications with the aim of minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- A5.6 As such it is essential that the presence or otherwise of protected species, and the extent to which they are affected by proposals is established prior to

planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions for example.

Natural Environment and Rural Communities Act 2006 (NERC Act)

A5.7 *Biodiversity: Section 40*

Under this legislation all local authorities have a legal duty to have regard to the purpose of conserving biodiversity (as defined in the Town and Country Planning Act (1990), Part 11). It also further refines the definition of biodiversity conservation, stating that it includes restoring or enhancing a population or habitat.

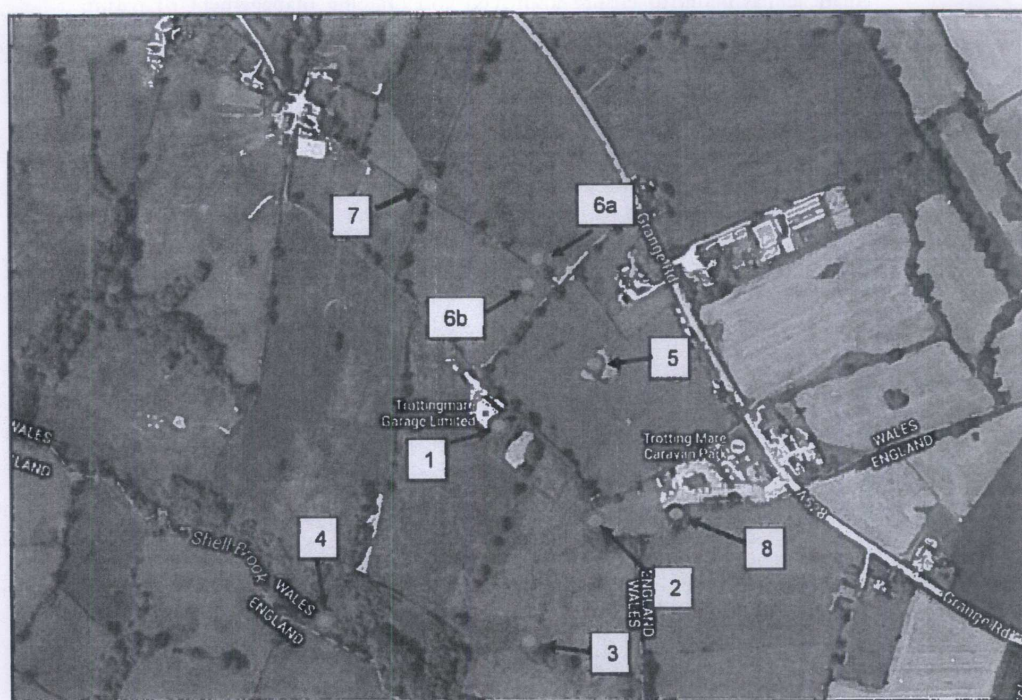
A5.8 Out of the eighteen bat species known to occur in the UK, seven of those species are listed as Species of Principal Importance, these include; Barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum*, and lesser horseshoe bat *R. hipposideros*.

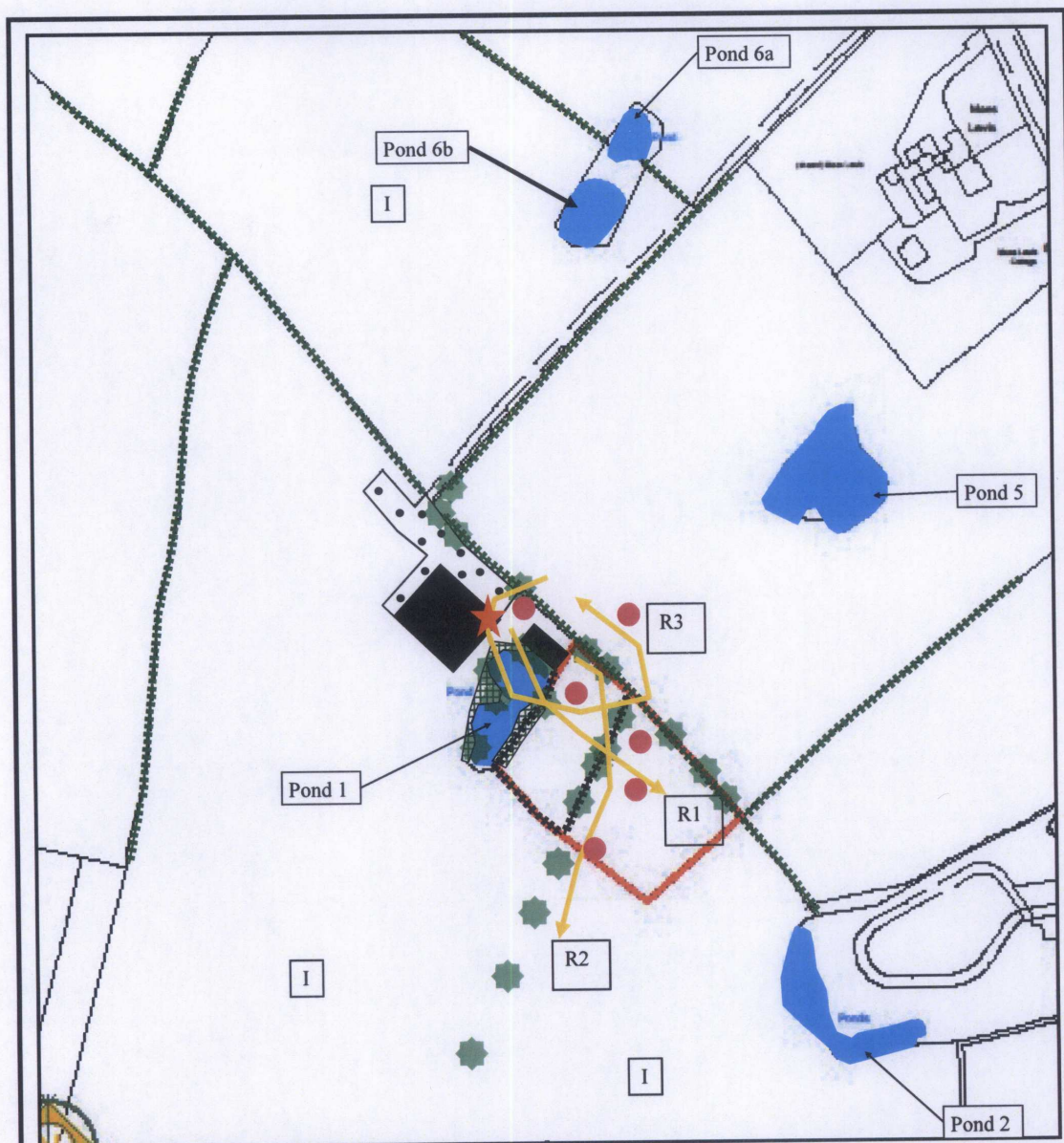
A5.9 Defra has produce guidance for local authorities on the implementation of biodiversity duty. This document echoes policies set out in Planning Policy Statement 9, the accompanying good practice guide and PAS2010. Of relevance to developers is that it encourages local planning authorities to:

- (i) provide screening advice to developers prior to the submission of a planning application;
- (ii) require relevant biodiversity information to be submitted with a planning application in order for the application to be considered valid;
- (iii) use of planning conditions and obligations to impose mitigation and enhancement measures if such measures are not included at an appropriate level in the development proposal;
- (iv) monitor the implementation of planning conditions and obligations relating to biodiversity conservation and to take action if these conditions are not met;
- (v) actively seek opportunities to enhance biodiversity, in addition to statutory requirements to protect designated sites, habitats and species.

A5.10 The guidance also suggests that planning obligations could be used to secure financial payments to ensure improved and ongoing management of nature conservation sites as mitigation for habitat loss within the development site.

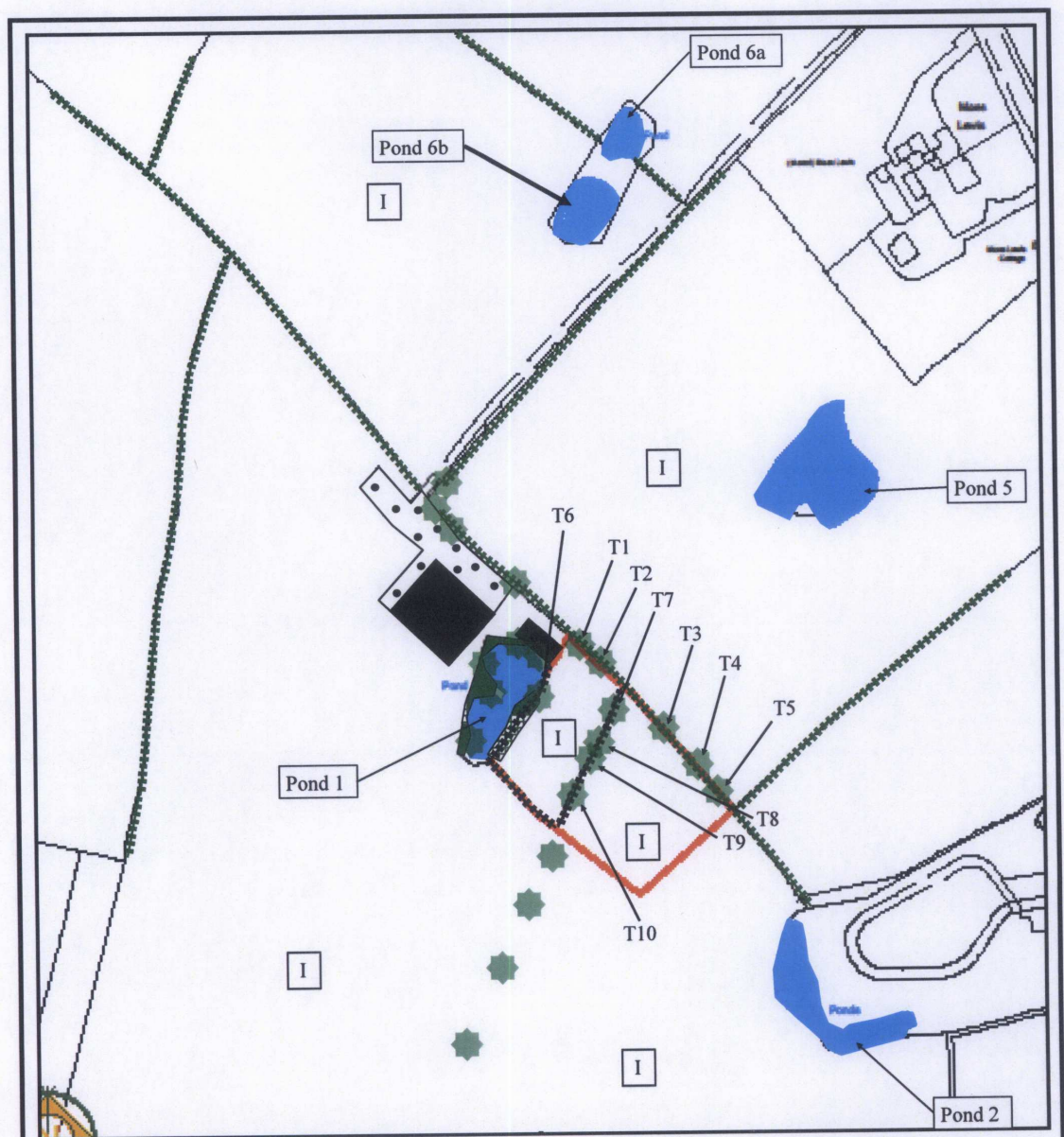
Figure 1 – Pond location plan





Legend

Wildbanks Conservation  The Old Smithy, 3 Wrexham Road, Overton-on-Dec, Wrexham, LL13 0DY info@wildbanksconservation.com www.wildbanksconservation.com	Project	Ecological Assessment Bryn Land		Site Boundary
	Title	Fig 3 - Bat survey summary plan		Species poor intact hedge
	Client	Mr D. Owens		Standard tree
	Date	September 2016		Fence
	Ref.	WBQ15-046		Surveyor Location
				Bat flight route
				Bat roost location



Legend

Wildbanks Conservation  The Old Smithy, 3 Wrexham Road, Overton-on-Dee, Wrexham, LL13 0DY info@wildbanksconservation.com www.wildbanksconservation.com	Project	Ecological Assessment Bryn Land		Site Boundary
	Title	Fig 2- Phase 1 plan		Species poor intact hedge
	Client	Mr D. Owens		Standard tree
	Date	June 2016		Fence
	Ref.	WBQ15-046		Bare ground
				Tree location and number