

EXTENDED PHASE ONE HABITAT SURVEY

Land at UPPER FFRYDD CAERSWS



Report for Roger Parry and Partners
July 2018



CONTENTS

	EXECUTIVE SUMMARY	3
1	Introduction	
1.1	Background	4
1.2	Details of proposed works	4
1.3	Scope of survey	4
2	Site Description	
2.1	Location and landscape	5
3	Survey Methodology	
3.1	Desk study	5
3.2	Field survey	5
3.3	Personnel	6
3.4	Constraints	6
4	Survey Results	
4.1	Desk study	7
4.2	Habitats on site	7
4.3	Habitats within ranging area	7
4.4	Adjacent habitats	8
4.5	Protected and priority species	8
5	Evaluation of results and potential ecological impact	
5.1	Habitats	9
5.2	Protected and priority species	9
6	Mitigation and enhancement	
6.1	Habitat mitigation	10
6.2	Mitigation for enhanced ammonia levels	10
6.3	Protected species mitigation	11
6.4	Ecological enhancement	11
7	Conclusion	11
Figure 1	Location	12
Figure 2	Site plan	13
Figure 3	Site layout	14
Figure 4	Ecological data	15
Appendix 1	Photographs	16



EXECUTIVE SUMMARY

Arbor Vitae were commissioned to carry out a Phase One Habitat Survey, including a Protected Species assessment, of land at Upper Ffrydd near Caersws. This land will be the subject of a planning application for the construction of a free-range poultry building and associated infrastructure. This report presents the results of a field survey carried out on 2nd July 2018.

The main habitat associated with the site and the ranging area is improved grassland. This is of negligible ecological interest and has little potential to support protected species. No other habitats are thought to be lost or negatively affected as a result of the development.

An assessment was carried out for badgers, bats, breeding birds and polecats (a species recorded locally). The survey concluded that no habitat of potential value to badgers, breeding birds or bats would be lost. Exterior lighting could impact bat foraging behaviour and needs to be avoided or restricted.

An area of ancient woodland is present approximately 230 metres north of the proposed site. The Ammonia Modelling Report indicated that a portion of this woodland will experience enhanced ammonia levels in exceedance of EA critical levels. Although having a semi-natural woodland canopy, other vegetation layers are severely restricted and 'weed' species are frequent.

In light of predicted increased ammonia levels, it is suggested that appropriate mitigation strategy would be the fencing of the woodland to prevent grazing. This will reduce the nutrient enrichment of the woodland and its watercourse and also allow the recovery of the woodland structural and floristic diversity.

Enhancement opportunities for protected species include new native hedgerow planting, fencing of existing hedgerows in the ranging area to prevent chicken grazing pressure and the erection of bird and bat boxes on the site to improve opportunities for these species.



1 INTRODUCTION

1.1 BACKGROUND

Arbor Vitae were commissioned to carry out a Phase One Habitat Survey, including a Protected Species assessment, of land at Upper Ffrydd near Caersws. This land will be the subject of a planning application for the construction of a free-range poultry building and associated infrastructure.

This report presents the results of a field survey carried out on 2nd July 2018.

1.2 DETAILS OF PROPOSED WORKS

The work will involve the construction of a new free-range poultry building west of and adjacent to two existing similar buildings which currently house 42,000 birds. The new building will house 16,000 free range chickens, resulting in a total 58,000 on the farm. A ranging area will be provided over adjacent grassland and fencing will be erected to both protect chickens from predators and protect natural features such as hedgerows from excessive grazing. Access is already in existence through the farm yard to the existing, adjacent building.

1.3 SCOPE OF SURVEY

This report sets out to establish the base-line ecological condition of the site and to identify and evaluate any potential impacts which the scheme may have, taking account of any mitigation and enhancement to the ecology which the scheme can offer.

Construction of the building inevitably involves a change of land use and therefore has the potential to remove existing habitat and to physically disturb protected species, if present. The operation of the ranging area could have implications for habitats and species.

The Ammonia Modelling Report indicated that a nearby area of Ancient Woodland would fall within the range of ammonia Critical Level of $1.0 \mu\text{g-NH}_3/\text{m}^3$. This woodland therefore was also assessed as part of this survey.

The nature of the immediate and surrounding habitat indicated that the following species could theoretically be affected by physical disturbance of habitats.

Protected or priority species potentially affected:

- Badgers
- Bats
- Breeding birds
- Polecats



This report sets out the results of the field surveys and desk study, along with an assessment of potential ecological impacts of the construction of the new building and the creation of a ranging area for poultry. The potential impact of the spreading of manure is not considered in this report.

2 SITE DESCRIPTION

2.1 LOCATION AND LANDSCAPE

The proposed construction site is located on a grass field adjacent to the existing poultry shed and farm buildings at Upper Ffrydd. This farm lies 3 kms due west of the village of Caersws (see Figure 1 Location plan). The site will occupy the flat, upper section of a gently sloping field. The area as a whole is typical of an upland stock farm. Fields are all in grass and are generally small in scale with wide, often tall, hedges separating them. Small patches of broad-leaved woodland are frequent, as also are patches of scrub and lines of trees along streams.

The land lies at approximately 160 metres AOD. The site lies within 20 metres of the existing poultry shed.

3 SURVEY METHODOLOGY

3.1 DESK STUDY

A number of data sets were investigated to ascertain the presence or otherwise of nearby land designations, scheduled sites or protected species. Sources which were used included MAGIC, BIS and Forestry Commission Land Information search.

3.2 FIELD SURVEY

One visit was made to the site on the 2nd July 2018 to survey the property. The site was surveyed to identify specific habitats and potential opportunities for protected species. Adjacent land was inspected for evidence of key habitats or key species.

The nearby ancient woodland was also surveyed in order to assess its ecological status.

An assessment of the available habitats both on and adjacent to the site led to consideration of the potential of the site for the following protected and priority species:

- Badger
- Bats
- Breeding birds
- polecats



The survey methodology was tailored to evaluate the area for these species.

Badgers

An area within 50 metres of the site was closely searched for the following signs of badger activity: setts, tracks and footprints, latrines and snuffle holes.

Bats

Any nearby habitat such as old trees containing cracks and crevices were inspected from the ground for any signs of use.

Breeding birds

The habitat was assessed in terms of suitability for breeding birds, including any nearby hedgerows or trees.

Polecat

The habitat was assessed for its suitability for this species and for signs of polecat activity including tracks and feeding signs.

3.3 PERSONNEL

The survey was carried out by Will Prestwood BSc Hons: an experienced ecologist and surveyor and Holly Jenkinson: a junior ecologist at Arbor Vitae Environment. The report was written by Holly Jenkinson and checked by Will Prestwood.

3.4 CONSTRAINTS

There were no constraints to the survey being carried out successfully.



4 SURVEY RESULTS

4.1 DESK STUDY

Nature conservation or other designations

There are no designated nature conservation sites within the 1 kilometre radius search area. There are several areas of Ancient Woodland (AW) within 2 kilometres of Upper Ffrydd, one site of Special Scientific Interest (SSSI) within 5km and one Special Area of Conservation (SAC) within 10 kilometres of the site. Details of these are below:

The nearest statutory site of ecological importance is:

Llyn Mawr SSSI: 4.9 kilometres from Upper Ffrydd

The nearest non-statutory site of ecological importance is:

An area of ancient woodland approximately 230 metres north of the proposed site.

No sites with statutory designations within the area would be directly affected by this development.

Protected species

Historical ecological data gathered from BIS found no records of protected species to be present within 1 kilometre of the site. However, one priority species, the polecat, has been recorded within 400m of the site and was therefore included within the visual inspection.

4.2 HABITATS ON SITE

Improved grassland

The new poultry building will occupy land which is currently improved grassland. The sward contains a very limited range of species.

4.3 HABITATS WITHIN RANGING AREA

Improved grassland

Several fields immediately adjacent to the new building will provide the main ranging area for the chickens. These fields are improved grassland with a limited range of species.

Running water

The nearest stream runs 130 metres to the north of the site and will remain unaffected by the proposed development.

4.4 ADJACENT HABITATS***Broad-leaved woodland***

An area of ancient woodland lies 250 metres north of the site on a steep south facing slope adjacent to a minor road. The canopy is dominated by sessile oak with approximately 5% beech and occasional birch. There is little understorey but where present consists of occasional mountain ash, wych elm, hawthorn and crab apple. The shrub layer is almost absent as a result of grazing pressure.

The wood is unfenced and has been heavily grazed by stock over the long term. This has resulted in a very sparse ground flora cover with up to 80% bare ground and leaf litter in places. A number of ancient woodland indicator species survive but are sporadic through the woodland. They include primrose, common violet, sanicle, wood sorrel, hard fern, enchanter's nightshade and bluebell. The ground flora in some parts of the woodland are dominated by 'agricultural' grassland species indicative of ground disturbance and nitrogen enrichment. These species include nettle, clustered dock, cocksfoot and creeping buttercup. There was very limited occurrence of ground flora bryophytes or epiphytic bryophytes and lichens.

4.5 PROTECTED AND PRIORITY SPECIES***Badgers***

No badger setts are located within 50 metres of the site and there is no evidence that badgers use the site for foraging or for access.

Bats

No potential bat roosts are present on or adjacent to the site. The fringes of nearby woodlands and lines of hedgerow may provide foraging habitat.

Breeding birds

The site provides no opportunities for breeding birds other than in nearby hedgerows. This may provide nest sites for common farmland birds.

Polecat

No evidence of polecat activity was noted and the habitat is sub-optimal for this species.



5 EVALUATION OF RESULTS AND POTENTIAL ECOLOGICAL IMPACT

5.1 HABITATS

Improved grassland

The main habitat associated with this site is improved grassland. This is of negligible ecological interest and has little potential to support protected species.

Hedgerows

Hedgerows are present adjacent to the site. All native hedgerows are regarded as BAP habitats reflecting their value to wildlife. There are no plans to remove any of this habitat and therefore should be largely unaffected by the proposed development.

Woodland

The Ammonia Modelling Report concludes that:

'...there would be exceedances of 100% (the Environment Agency's upper and lower threshold for non-statutory sites) of the Critical Level of $1.0 \mu\text{g-NH}_3/\text{m}^3$ over a small part of the area of the AW to the north of the farm. At all other non-statutory sites considered the process contribution to annual mean ammonia level and the annual nitrogen deposition rate is predicted to be at levels below the Environment Agency's lower threshold for non-statutory sites (100% of Critical Level or Load).'

The survey indicated that the nearby ancient woodland maintains a semi-natural canopy but, in other respects, is seriously impoverished ecologically as a result of long-term grazing pressure. The shrub layer and ground flora are very depleted and there is no recruitment of tree and shrub species. Agricultural species are locally frequent in the ground flora.

A small rise in ammonia levels may encourage further increase in nutrient levels in the future. However, the suggested cessation of grazing will result in a general lowering of nutrient input and will also allow the regeneration of tree, shrub and ground flora species.

5.2 PROTECTED AND PRIORITY SPECIES

Badgers

No active setts were recorded within 50 metres of the site. The development will have no impact on badgers.



Bats

It is likely that bats use the adjacent hedgerows and nearby woodland fringe along which to forage. Any increased illumination of the site may disrupt flight lines but this can be minimised by appropriate exterior lighting systems.

Breeding Birds

One of the bird species recorded during the survey, dunnoek, is listed as a UK BAP species. Dunnock is also listed on the amber list of Birds of Conservation Concern. No area of hedgerow is to be removed as part of the proposed development, and therefore will not be negatively affected by the development.

Polecat

No evidence of polecat activity was recorded during the survey. The development will have no impact on polecats.

6 MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The main habitat loss associated with this development is improved grassland. This is considered of negligible ecological impact and therefore does not require any mitigation.

The potential for increased grazing pressure by chickens to damage hedgerow ground flora can be readily mitigated through double-fencing of all adjacent hedgerows. The protection of hedgerows which are currently grazed and browsed by sheep and cattle will be a significant ecological gain.

6.2 MITIGATION FOR ENHANCED AMMONIA LEVELS

It is suggested that significant mitigation benefits would result from the exclusion of stock from the nearby associated AW to the north of the site. This semi-natural woodland, on an ancient woodland site, is currently subject to significant grazing and trampling pressure from cattle and sheep. There is a resultant increase in nutrients in the woodlands which is likely to affect ground flora including bryophytes and lichens. There is also a distinct lack of natural regeneration.

Erection of fencing to exclude stock will result in the long-term protection of this area of ancient woodland. The decrease in nutrient release from the presence of stock in these woodland areas is likely to far outweigh any increased nitrification from ammonia release.



6.3 PROTECTED SPECIES MITIGATION

Bats

Artificial external lighting should be largely unnecessary but, if needed, should be designed to minimise illumination of the adjacent habitats which may be used by bats for foraging.

6.4 ECOLOGICAL ENHANCEMENT

The following measures are recommended in order to create ecological enhancements:

- New native hedgerow planting to provide increased habitat connectivity and nesting sites.
- All perimeter hedgerows and other hedgerows within the ranging area to be fenced to prevent access by chickens.
- Erection of bird and bat boxes on or near the site to improve opportunities for these species.

7 CONCLUSION

The survey concluded that the site designated for the installation of the new shed has very limited ecological interest. The affected habitat of improved grassland is of low ecological value. The ranging area similarly affects areas of improved grassland.

Nearby hedgerows are of significant importance but will be unaffected by the proposals. Additional fencing to protect hedgerows from chickens will result in a recovery from long-term grazing and browsing pressure from cattle and sheep.

The site (including the ranging area) has little potential to support protected species other than breeding birds in nearby hedgerows. Bats may use hedgerows as flight lines but will be unaffected as long as no additional exterior lighting is installed.

An area of ancient woodland lies 250 metres north of the site. The Ammonia Modelling Report concludes that a small area of this woodland will experience enhanced ammonia levels in exceedance of EA critical levels. The survey found that, although the woodland was essentially semi-natural in the composition of its canopy, heavy grazing by sheep over a long period of time has severely compromised the ecological value of the woodland. The woodland already demonstrates the effects of long term increased nutrient levels which have resulted from livestock. These include a paucity of native ground flora and a prevalence in parts of the wood of agricultural weed and grass species.



FIGURE 1: LOCATION



Arbor Vitae Environment Ltd
Lower Betton Farm
Cross Houses
Shrewsbury
Shropshire
SY56JD

FIGURE 2: SITE PLAN



FIGURE 3 SITE LAYOUT

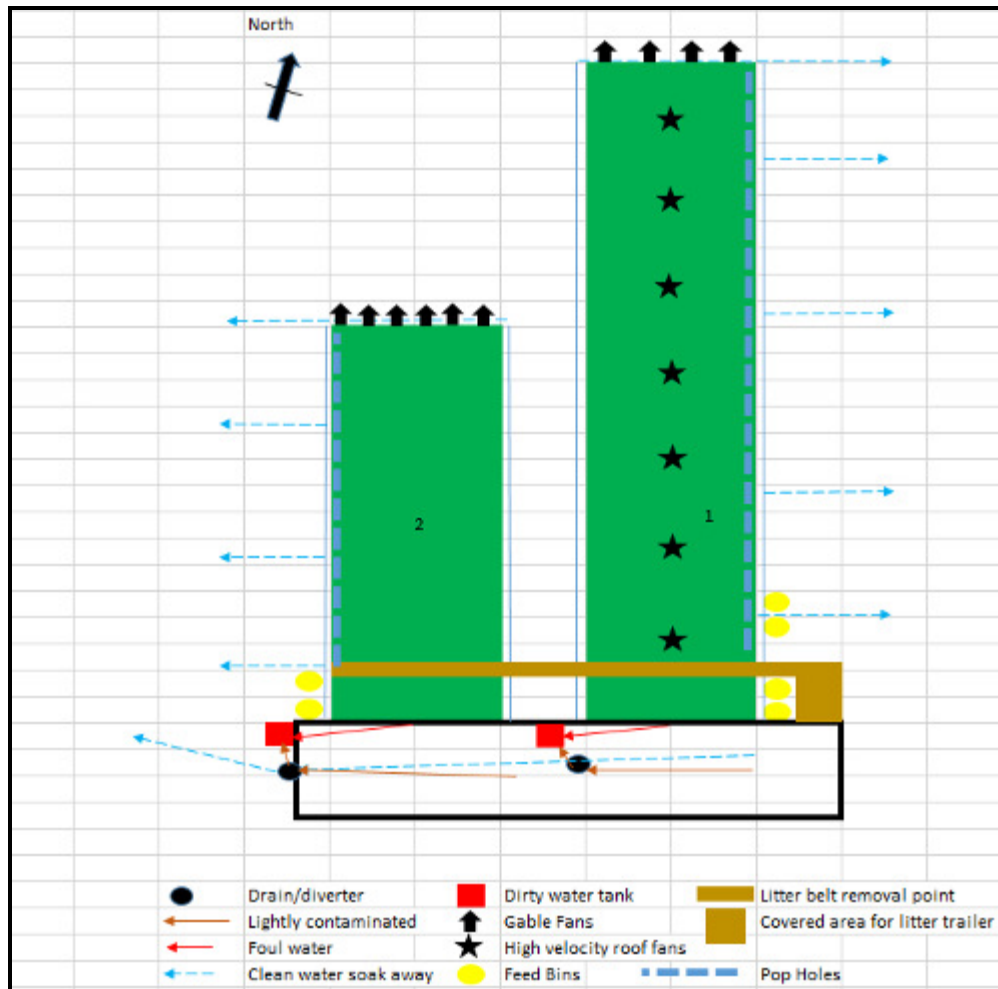
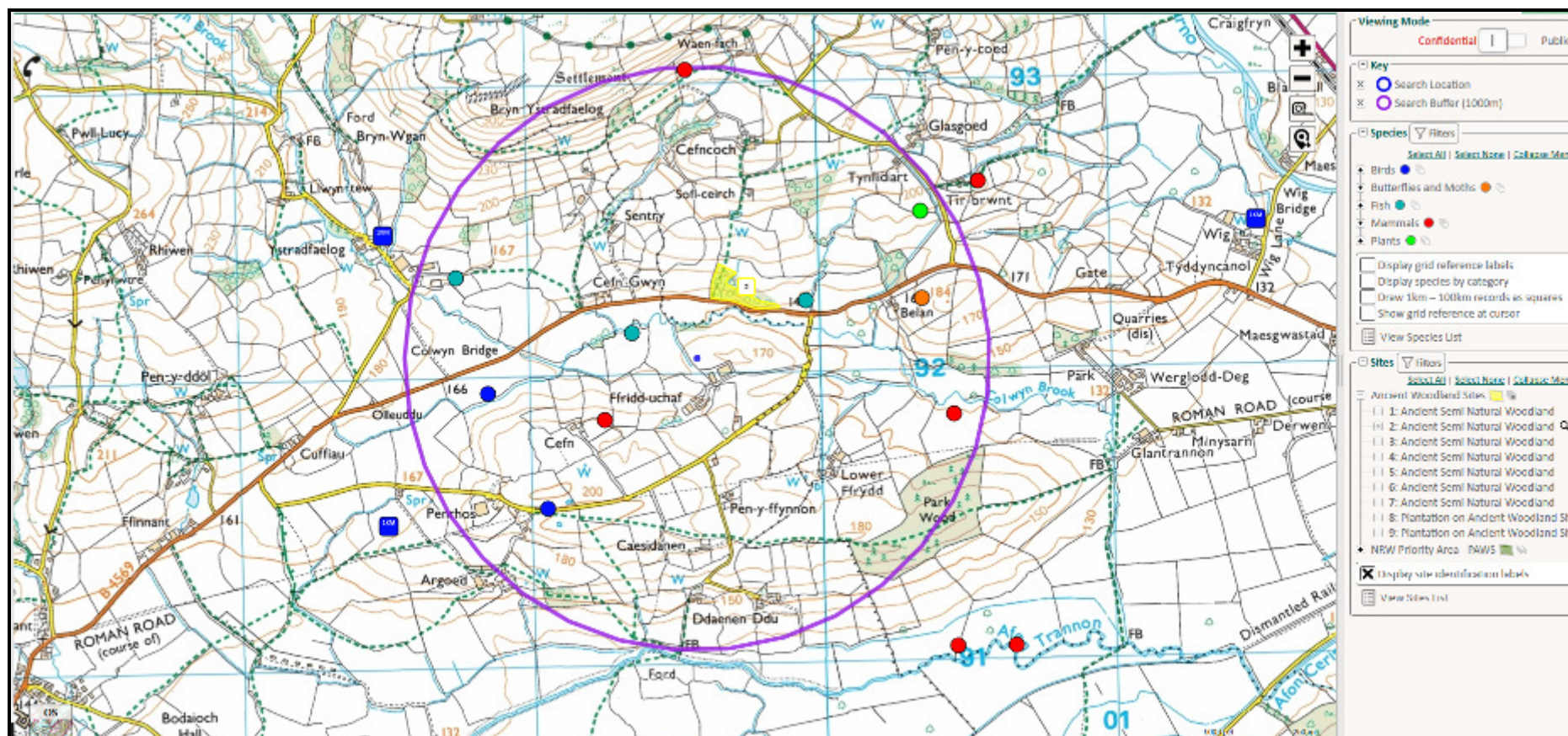








FIGURE 4 ECOLOGICAL DATA FOR SITE AND 1 KILOMETRE SURROUNDING AREA (BIS)



Arbor Vitae Environment Ltd
Lower Betton Farm
Cross Houses
Shrewsbury
Shropshire
SY56JD

APPENDIX 1: PHOTOGRAPHS

	<p>SITE OF PROPOSED SHED</p>
	<p>SITE OF EXISTING SHED ADJACENT TO PROPOSED SHED</p>
	<p>NEARBY SEMI NATURAL ANCIENT WOODLAND SHOWING DOMINANT SESSILE OAK WITH LACK OF SHRUB LAYER AND PREVALENCE OF BARE GROUND</p>
	<p>BARE GROUND RESULTING FROM HEAVY GRAZING AND TRAMPLING</p>

	<p>AREAS OF WOODLAND WHERE ARABLE 'WEEDS' ARE PRESENT AS A RESULT OF ENHANCED NITROGEN LEVELS</p>
	<p>DRT STREAM BED WITH BARE GROUND CONDITIONS RESULTING FROM STOCK</p>