PRELIMINARY ECOLOGY APPRAISAL

FOR

ABBOTS LODGE THE STREET DRINKSTONE IP30 9SX

ON BEHALF OF

STEVE CRAWFORD
SOME BLOKE DESIGN [redacted]

FOR

CLIENTS

MR & MRS SIMON & ROSLYN POOLE

20 / 12 / 2023

TCW / FE / 9066023
(SBD reviewed/reformatted (not revised), Client e-mail amended on p1 - 29/12/23)

Report produced by
T C Watts FMD NE licence no 2017 28477
A Member of the Suffolk Bat Group
and C M Vickers BSc Hons

FRAMLINGHAM ENVIRONMENTAL
The Glebe, Framlingham Road, Dennington, Woodbridge, Suffolk IP13 8AD
[redacted]

CONTENTS

1. INSTRUCTION and INTRODUCTION

Steve Crawford
SOME BLOKE DESIGNS
16 Station Road
Isleham
Ely
Cambridgeshire
CB7 5QT

Tel :
Email : [redacted]

CLIENTS

Simon and Roslyn Poole
Email : [redacted]

REASON

Removal, renovation, and extension works at Abbots Lodge. Existing planning application DC/22/06196 approved for the site 12/6/2023.

LOCATION

Land area Central grid reference TL 959617

2. METHOD - SITE VISIT - FIELD SURVEY

A walk over to the site was on the 19th December 2023 by Tim Watts an independent, qualified and experienced ecologist for over forty years.

Weather 5 / 7 degrees Celsius over the course of the survey period. Poor visibility and light showers, with a light south westerly breeze.

Direct access was gained from the private car park and driveway from The Street, Drinkstone. The Street running to the west of the property.

The objective to establish the possible presence and habitat suitability of protected species within the area, demolition proposals and surrounding land that may be impacted by the proposals.

Consideration was given to the habitats of the surrounding land - park and water – pond adjacent to the proposed works.

To look at the area of impact within viable / relevant distance of particular protected species that may be affected by the proposals. This with particular reference to species / habitats of local data searches.

Weather conditions and season were sub-optimal but were not considered a barrier to provide preliminary appraisal of habitats of protected wildlife within the area.

All survey methods were carried out in accordance with the most up to date good practise guidance Guidelines for Preliminary Ecology Appraisal and broad methodology and principals of Joint Nature Conservation Committee for relevant protected species.

3. OBJECTIVE – LEGISLATION

The objective to investigate for species which have specific protection within the Wildlife and Countryside Act 1981, European Habitats Directive on Conservation of Natural Habitats of Wild fauna and Flora 1994 and subsequent amendments to Conservation of Habitats and species regulations 2010 Consideration of National Planning Policy Framework March 2012 Section 15 Conserving and enhancing the natural environment. Paragraphs 174 – 188 .

The Conservation of Habitats and Species regulation 2017 articles 1(b) and 1 (h) of the habitats directive 'Priority Natural Habitat Type' and 'Priority Species' – ENGLAND'S BIODIVERSITY 2020 : A Strategy for Wildlife and Ecosystem Services.

The threshold above which a person will commit the offence of deliberately disturbing a wild animal of European protected species has been raised – a person will commit an offence if he deliberately or unintentionally disturbs such animals in a way as to be likely significantly to affect (a) the ability of any significant groups of animals of that species to survive, breed or rear or nurture their young, or (b) the local distribution of that species. It is to be noted that the existing offences under the Wildlife and Countryside Act (1981) as amended which cover obstruction of places used for shelter or protection (for example bat roost-badger set - water vole burrow etc), disturbance and sale – still apply to European protected species.

The Survey was carried out with consideration to Natural Environment and Rural Communities Act (NERC 2006) and extending the biodiversity duty as set out in the Countryside and Rights of Way Act 2000 "Crow Act" and amendments to the species protection measures provided by the Wildlife and Countryside Act 1981.

- Bats
- Farmland / Garden birds and mammals
- Amphibian species - Great crested newts
- Reptiles

Principal importance (NERC 2006) Birds of Concern (Stanbury A *et al* 2012)

The Protection of Badgers Act 1992 consolidates previous badger legislation by providing comprehensive protection for badgers and their setts, with requirement that any authorised sett disturbance or destruction be carried out under NE licence.

The European Community Council Directive on the Conservation of Wild Birds (79/409/EEC) sets out general rules for the conservation of all naturally occurring wild birds, their eggs and habitats. It requires all member states to designate Special Protected areas (SPAs) for protection of certain species.

The Hedgerows Regulation 1997 aim to protect important hedgerows in the countryside. They make it illegal to remove most countryside hedges without first notifying the local planning authority, and provide protection for 'important hedgerows'.

Particular seasonal reference to bird nesting regarding hedgerow management works.

In addition to investigate local species listed in the UK Biodiversity action plan for Suffolk, Essex and Norfolk - 'Species of Conservation Concern' to build up a reliable and responsible picture of localised populations where present.

In consideration of the latter any requirement for future survey work.

4. SPECIES OF LEGAL PROTECTION

The species below have particular conservation status as mentioned within both local and European relevance, or 'rare' / 'vulnerable' / amber listed and covered by general protection within life cycle, migrant, or habitat that may be considered and surveyed within an ecology statement.

SPIE (formally UK Bap) protected species - a reduced list shown below regarding possible relevance to the survey site and surrounding area.

Species covered by Statutory Instrument – Schedule 2EHD
Great Crested Newt (*triturus cristatus*)
Otter (*lutra lutra*)
Bats (all species *rhinolophidea* and *vespertilionidae*)
Dormouse (*muscardinus avellanarius*)

SOME LOCAL SPECIES COVERED BY LOCAL ACTION PLANS AND THE WILDLIFE AND COUNTRYSIDE ACT 1981 -- CONSERVATION CONCERN (BoCC) / PRIORITY SPECIES ' RARE ' / 'VUNERABLE' – POSSIBLE SITE RELEVANT

Barn Owl (*tyto alba*)
Nightingale (*Luscinia megarhynchos*)
Swift (*apus apus*)
Skylark (*Alauda arvensis*)
Water vole (*arvicola terrestris*)
Hazel Dormouse (*muscardinus avellanarius*)
Hedgehog (*erinaceus europaeus*)
Badger (*meles meles*) covered by the Badgers Act 1992
Polecat (*mustela putoriua*)
Brown Hare (*lepus europaeus*)

All amphibians - Great Crested, Smooth, and Palmate Newts, Common and Natterjack Toad, and Common Frog.

All reptiles.

Bird species Include - with local relevance

Red Listed Bird Species
SongThrush, Linnet, Yellowhammer, Swift, Grey Partridge, Turtle Dove - in extreme decline, House Sparrow, Tree Sparrow and Starling.

Amber listed birds - Dunnock, Bullfinch and Reed Bunting.

WC1 Schedule 1 Birds Fieldfare and Redwing - migrants

Protected - all wild birds nests and eggs.

SPIE - Invertebrates - Lepidoptera species include White admiral and small heathland Butterflies

Specimen and specialist flora.

Note and record non-native / invasive alien species such as Japanese knotweed / Himalayan balsam.

5. IMPLICATIONS OF LEGISLATION AND POLICIES

With legal responsibilities and planning implications, it is essential that any ecological assessment of potential development site, including the area of this report, must determine the possible presence or absence of any protected species as part of any planning development consideration. Or make recommendations for further survey work to conclude presence of protected species.

Without this assessment the potential developer would be unable to demonstrate due diligence in his/her responsibilities. Further more the local planning authority would not have been provided with sufficient information for a planning decision to be made. This could result in the application being designated incomplete and not determined, or simply refused.

Paragraph 99 of the ODPM Circular 2005 highlights that " It is essential that the presence or otherwise of protected species,and the extent that they may be affected by the proposed development , is established before the planning permission is granted , otherwise all relevant material considerations may not have been addressed in making the decision"

Where mitigation or compensation measures are required to ensure that no significant impacts will result on biodiversity from the development , the proposed measures may be secured though planning conditions or by EPS Mitigation Licences from Natural England.

6. BIODIVERSITY DATA SEARCH

Consideration was given to the sites habitat suitability to EPS and LPS - local protected species and those of conservation concern with reference to the National Biodiversity Network / SBIS data / MAGIC mapping.

Species Recorded on sites within 2 km - with viable connectivity to the proposal area.

AMPHIBIANS
Great crested Newt - 4 recordings within 2 km - nearest 1km to the south.
Common Toad and Frog also record within 2km.

REPTILES
Grass Snake - one record 1.8 km NE

MAMMALS

Water vole - Two records 1.8 km NE and NW

Otter - Three records within 1/2 km

Brown Hare - Five records nearest 1.5 km SE

Hedgehog - Twelve records nearest 500m NE

[redacted]

BATS - Recordings - approximate distance from the site.

Common Pipistrelle - One record 500m SW
Soprano Pipistrelle - Two records 1.8 / 2 km NE

Nesting and foraging Protected Birds - SPIE species within 2 km with possible relevance to the site and /or neighbouring habitat.

Red listed species recorded - Turtle Dove, Yellowhammer, Starling, Greenfinch and Corn Bunting.

Seven recordings of Swift.

INVERTEBRATES - Woodland Butterflies - Purple Emperor and White Admiral.

DESIGNATED LOCAL AND REGIONAL SPECIAL PROTECTION AREAS

Moreton Hall Community Woods - Local Nature Reserve (LNR) approx 10 km West

Church Meadow - LNR 10 km SE

Norton Wood - National Nature Reserve (NNR) 4 km SW

The Black Bourn river valley TFT - Flagship pond site 1/2km West.

Combs Wood , Stowmarket - Site of Special Scientific Interest (SSSI) - 10 km SE

Bradfield Woods - NNR and SSSI approximately 5 km South. Designed for traditional coppiced woodland habitats for EPS /LPS Mammals - Red listed bird species and rare woodland butterflies.

7. SITE MAP

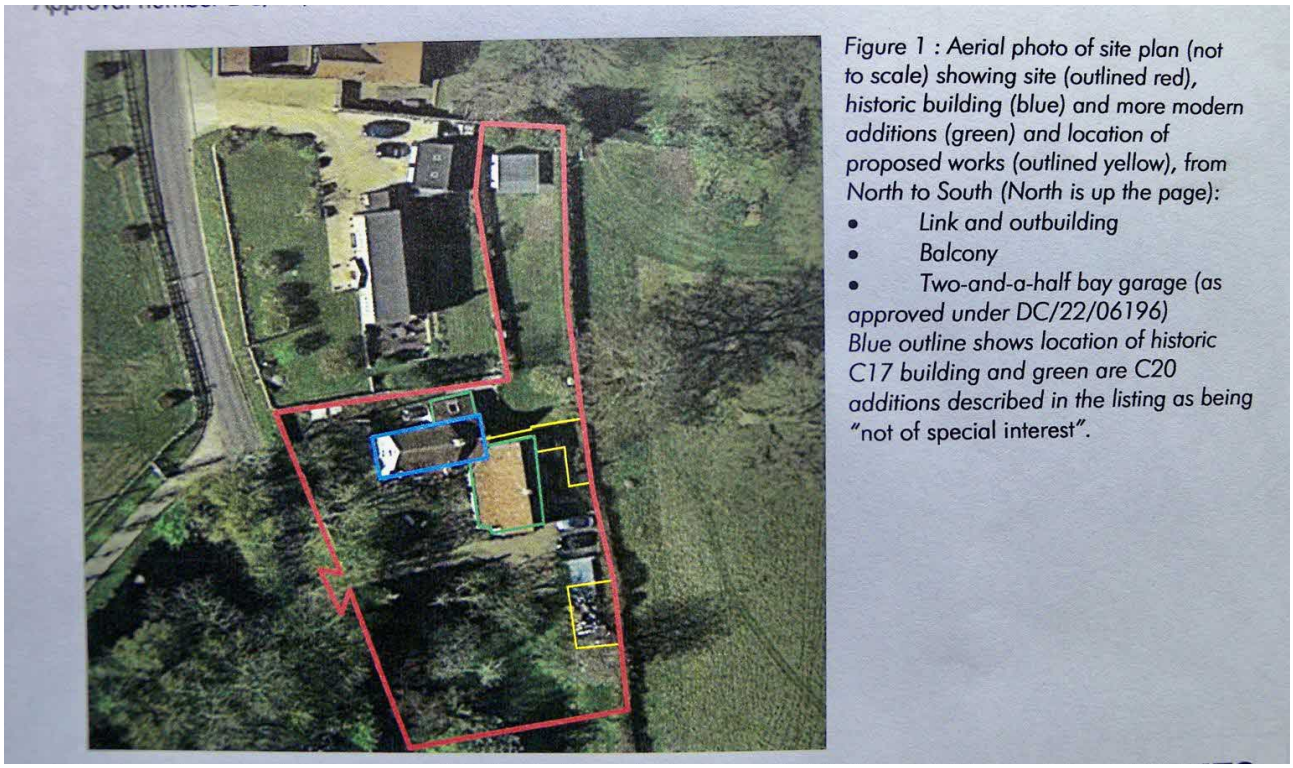


Figure 1 : Aerial photo of site plan (not to scale) showing site (outlined red), historic building (blue) and more modern additions (green) and location of proposed works (outlined yellow), from North to South (North is up the page):

- *Link and outbuilding*
- *Balcony*
- *Two-and-a-half bay garage (as approved under DC/22/06196)*

Blue outline shows location of historic C17 building and green are C20 additions described in the listing as being "not of special interest".

SITE MAP - showing proposals and site area in red.

8. SITE DESCRIPTION

The proposal area covers some 1,750 square metres of managed / mown lawns, mature ornamental garden trees/ shrubs, with hard access and parking areas.

The site incorporates four buildings, an historic farm house, a more recent 70's two story extension with glasshouse lean-to, an adjacent single story garden / storage shed and a Summer house.

The main farm house stands some fifteen metres east of The Street, Drinkstone.

Access is via a gravel drive expanding into hard standing car park area south and east of the main buildings complex.

Parkland / grazing pasture and specimen trees stretch to the east beyond the garden hedge and fencing.

Maintained residential gardens / mown lawns of Bridge farm and new housing form the northern and part of the western boundary, beyond close board fencing.

Beyond close board fencing, a road known as The Street forms the western boundary of the property.

Immediately opposite the site, west of the road there a is a large pond some 100 metres in size.

9. FIELD SURVEY

9.1 The sites southern boundary is marked by two metre heigh close board fencing incorporating gravel board, this extending north alongside the road, known as the Street, Drinkstone.

9.2 This fencing blocking wildlife access from South and western roadside roadside, other than Abbotts Lodge access drive.

9.3 The gardens are of regularly mown grass and drop by some two to four meters as road frontage before joining the roadside, beyond the close board timber fencing.

9.4 The eastern boundary of the gardens and site area is of a scrubby hedge of Dog rose – *rosa canina*, Elder – *sambucus nigra*, Bramble – *rubus fruiticosus* matted with Travellers Joy – *clematis vatalba*. The line is marked by a wire fence to the South.

9.5 To the north the garden/ site area is bounded by an eastern hedge line of Leyland – *cypressus leylandii* to a height of some 1.5m.

9.6 The northern boundary of the site is marked by mature leyland and Cherry laurel – *prunus laurocerasus*.

9.7 The northern mature hedging joins close board fencing which runs south as a division of the site's gardens and those of adjoining Bridge Farm. This complete fence and wildlife barrier then connecting to the roadside fencing structure.

9.8 Seven mature fruit trees inclusive of Apple – *malus domestica*, Damson / Cherry– *prunus domestica*, and a Locus Tree – *robina pseudoacacia* stand within regularly mown grass in Southern are of the property.

9.9 A managed mown bank of occasional Cherry Laurel – *prunus laurocerasus*, Snowberry – *symphoricarpos rivularis* and Holly – *ilex aquilfolium* fringe the western side of the property.

9.10 No understory growth has developed within the close board fenced perimeter.

9.11 A Well with raised protective red brick walling sinks some ten metres from the western end of the original building of Abbots Lodge.

9.12 Occasional mature Ash – *fraxinus excelsior*, Damson, Horse chestnut – *Carpinus betula*, Damson and Cherry fringe the roadside, beyond the close board fencing.

9.13 A single-storey storage shed stands on the eastern boundary of the site, opposite the Main house complex of Abbots Lodge. To the south of which is hard standing car parking, a concrete slab on which fire wood is stacked.

9.14 The single story shed is some 15 by 4 metres in ground foot print to a height 2.2 m. It consists of a mix of Fletton and stone walling with an open asbestos sheet roof set on metal rafters. The building is fully illuminated by open unglazed windows and gapping of roof sheet to walling.
The building is divided into three sections on concrete floors with various domestic storage items. Floors appeared largely free of wildlife debris apart from occasional mouse droppings attributed to Wood mouse - *apodemus sylvaticus* (due to lack of smell)

9.15 The building does not provide suitable dark areas or cavities for bat roost / refuge. A birds nest was present - identified as Wren – *troglodytes troglodytes*.

9.16 A mown grass / lawn area continues to the northern end of the site enclosed by leyland hedge and close board fencing.

9.17 A second outbuilding stands at the northern end of the property consisting of a well maintained and totally enclosed timber structure, Summer House / changing area for a hot tub. A close inspection of the building found no evidence of wildlife access.

9.18 The main property of Abbots Lodge consists of two sections (as seen explained on the mapping diagram and seen in the report photographs) The eastern section is of a 70's extension, rendered walling, timber soffits and eve areas, pan tile roof and brick leaded chimney. The building incorporates a lean – to glasshouse attached to the east facing wall.

The glasshouse has missing panes allowing wildlife access. The glass house does not contain suitable dark cavities or areas of refuge to wildlife. No birds' nests were present.

9.19 The main structure of the 70's eastern wing is in good condition. Regularly painted masonry / rendering and devoid of cracks or voids. Walls seal to the roofs soffit areas.

Timber soffits were all in good condition showing no cracks/ splits to allow wildlife access.

Pantile ends are cemented above the guttering areas and leading showed no lifting or access. Pan tiles were of matching quality / nibbing devoid gaps or lifting.

The chimney brickwork was illuminated and inspected via binoculars and showed no cracks/ loose mortar areas.

There were no signs of recent or historic wildlife access to the building.

9.20 The original, west facing gabled building is of good and well maintained render - regularly painted, with traditional peg tile roof, all in good condition. There appeared no signs to wildlife access on any areas of the building.

9.30 APPRAISAL OF SURROUNDING HABITATS TO THE SITE AND POSSIBLE RELEVANCE TO LPS / EPS CONNECTIVITY

9.31 To the east of the site / garden area of the proposals the landscape is of ancient parkland and mature specimen trees. The area is of semi managed grassland providing quality terrestrial habitats for small mammals, amphibians and reptiles. The specimen trees of English Oak – *quercus robur* and Beech – *fagus sylvatica* within the parkland show Bat roost features and provide surrounding foraging areas for both birds and bats.

9.32 Directly west of Abbots Lodge, beyond the road known as The Street is a large pond. The pond runs parallel to the access drive of Home Farm. The pond is some 1000 square metres in size and a habitat suitability appraisal was made, this however under sub optimal conditions.

10. APPRAISAL OF LOCAL AND EUROPEAN PROTECTED SPECIES OTHERS OF CONCERN AS MENTIONED IN SECTION 4 AND 5 METHODOLOGIES – HABITAT SUITABILITY PRESENT ON THE SITE / AND CONNECTIVITY, AS IDENTIFIED IN LOCAL DATA

10.1 BIRDS

Birds identified on the site.

Great Tit - *parus major*
Blue Tit - *parus caerulus*
Blackbird - *turdus merula*
Robin - *erithacus rubecula*
Wood Pigeon - *columba palumbus*

The proposed area contains nesting habitat within the hedge lines of the eastern boundary and open shed. The fruit and ornamental shrubs providing seasonal feeding areas

10.3 OTTERS

Species present within the area.

Otters may well visit the neighbouring pond, however the proposed site area of workings does not contain suitable habitat for 'layup' or 'holt'.

10.4 WATER VOLE

The site does not provide suitable habitat.

The sites neighbouring pond does not contain extensive areas of marginal aquatic plant habitat. The pond edges are dominated by shading woodland, bramble and mown grass, poor in both habitat and providing sustainable food supply for water voles.

10.5 BARN OWLS

None of the buildings offer habitats suitable for Barn Owls.

Mature parkland trees show no signs of Owl activity.

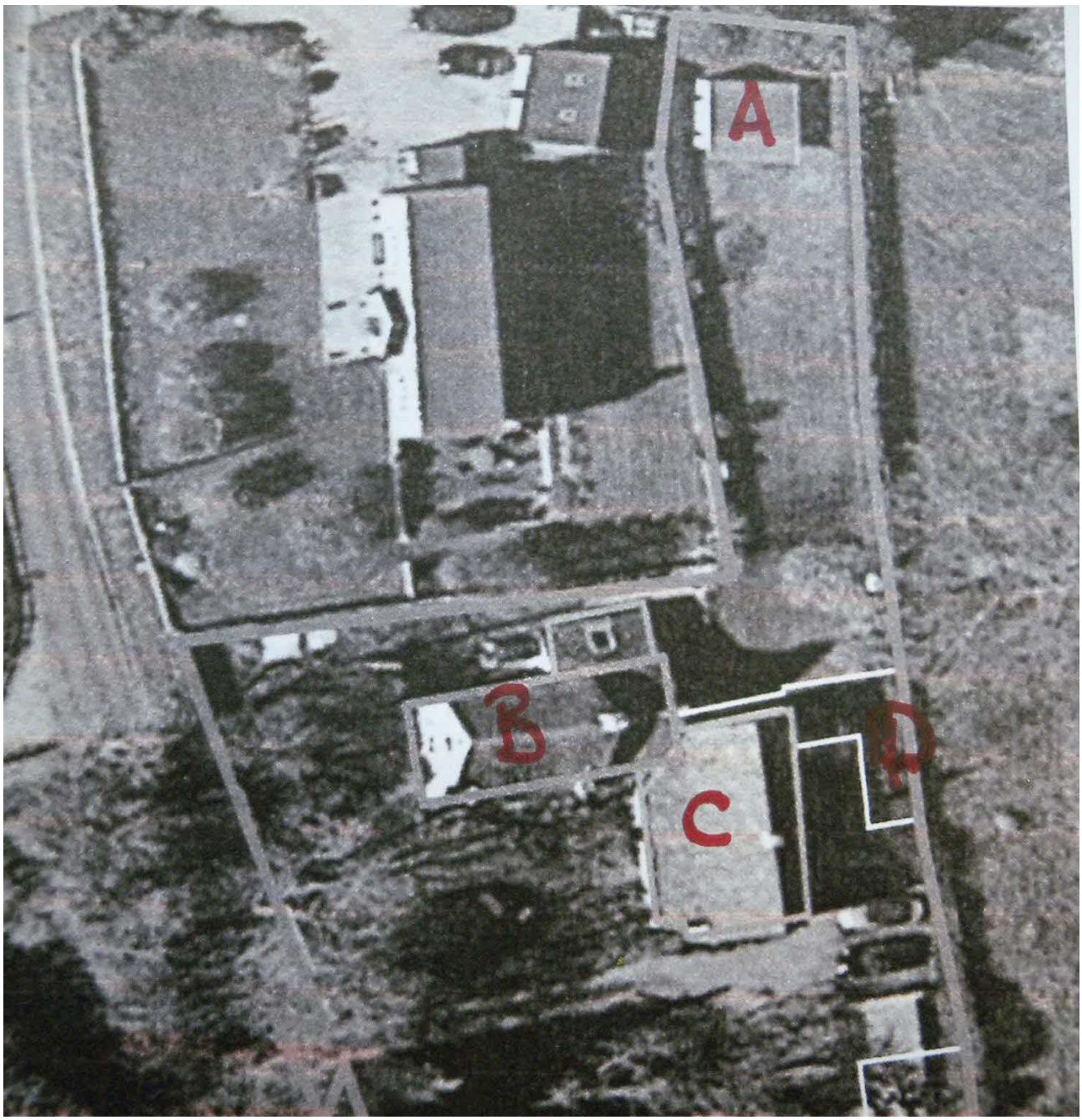
10.6 REPTILES

The sites / building surroundings/ gardens are dominated by regularly mown lawns/ grassland and provide little sheltered habitat for reptiles.
The close board fencing which surrounds much of the site provides a barrier to species colonisation and increases risk of predation.

10.7 BATS BUILDING PRA

The buildings were examined with regard to evidence bat roost / entry / exit points. Details / description of structures as in the field survey notes.
The buildings were investigated with reference to the Preliminary roost assessment (PRA) guidelines - and facts found.

Building marked A to D on site map below.



Buildings A – D at Abbots Lodge

Abbots Lodge - Building A

19/12/2023

Abbots Lodge - Building D

19/12/2023

Abbots Lodge - Building D interior

19/12/2023

Abbots Lodge - Building C Glass Lean-to

19/12/2023

Abbots Lodge - NE face of buildings B and C

19/12/2023

The buildings were categorised using the criteria below.

Assessment of Potential to Support Roosting Bats – Categories for Buildings	
Negligible Potential	Buildings with no features capable of supporting roosting Bats. Often these buildings are of a 'sound' well sealed nature, or have a single skin and no roof void . They tend to have high interior light levels, and little or no insulation. Buildings without any roof s fall into this category.
Low Potential	Buildings with limited features for roosting Bats (e.g shallow crevices where mortar is missing between bricks / blocks) They may have open locations which may be subject to large temperature fluctuations and bat access points may be constrained. No evidence of Bats found (e.g droppings/staining) Buildings may be surrounded by poor or sub-optimal bat foraging habitat. No evidence of Bats found.
Moderate Potential	Buildings with some features for roosting bats. Buildings usually of brick or stone construction with a small number of features of potential value to roosting bats e.g loose roof tiles / ridge tiles, gaps in brick work, gaps under fascia boards, and or warm sealed roof spaces with under felt. Evidence of bats found a small scattering of droppings or urine staining. Could be suitable for summer day roost.

High Potential	Buildings with a large number of features or extensive areas of obvious potential for roosting bats. Generally they have sheltered locations, with a stable temperature regime, and suitable bat access points.Evidence of bats found droppings urine staining . Could be suitable for a maternity roost or summer day roost.
Confirmed Roost	Bats discovered roosting within the building , or recorded emerging / entering the building at dusk/ dawn. A confirmed record (as supplied by an established bat group) would also apply to this category.

All buildings were classified within negligible to low potential to roosting bats.

10.8 BATS - TREES GLRA

A preliminary ground level roost assessment was made of mature trees on the sites boundaries and gardens.
Species as detailed within the field survey. These trees of girths of 55 - 90 cm to 15 / 25 m in height.

Some trees within the southern garden area showed potential bat roost features.

Determining / finding evidence of seasonal activity would be now difficult having been possibly eroded or washed away after heavy autumnal rains.

10.9 GREAT CRESTED NEWTS

The site / gardens and buildings area of proposals do not contain ponds/ wetland habitat to support amphibian breeding.

The garden area is largely devoid of sustainable terrestrial habitats and lacks viable connectivity to the neighbouring pond.
The neighbouring pond appears heavily shaded and silted from leaf deposits from the southern woodland fringe.
Water quality appears poor with low invertebrate population.

Abbots Lodge is largely bounded by close /gravel board to the west and roadside making connectivity poor for any amphibian population.

Abbots Lodge - western view to road and pond.

19/12/2023

An HSI (Habitat suitability Index for GCNs) was made on the neighbouring pond to judge the credible value of the pond with regard to its productivity to any amphibian population.
Should this show a high value assessment it is possible some individuals may survive the hazardous and poor connectivity to colonise the proposed area of proposed workings.

Home Farm Pond - Ref Abbots Lodge

19/12/2023

Abbots Lodge - Road frontage and
Home Farm pond bank - to the left of the picture.

19/12/2023

Conditions would be considered sub – optimal in terms of habitat appraisal however this was not considered a barrier to providing an HSI assessment.

Oldham R.S. 2000

HSI DATA SHEET
HABITAT SUITABILITY INDEX TABLE

HSI Criteria	Home Farm Pond TL9587061721		
SI1 Location Field Score	1		
SI2 Pond Area Field Score	0.95		
SI3 Pond Drying Field Score	0.9		
SI4 Water Quality Field Score	0.33		
SI5 Shade Field Score	0.6		
SI6 Fowl Field Score	0.67		
SI7 fish Category	0.67		
SI8 Ponds Field Score	1		
SI9Terrestrial habitat Field score	0.67		
SI10 Macrophytes Field score	0.3		
TOTAL	0.0152 = .65		

Scores to the 10^{th} root

Lee Brady evaluation to define suitability for GCN's on a categorical scale.

< 0.50	=	Poor
0.50 - 0.59	=	Below average
0.60 - 0.69	=	Average
0.70 - 0.79	=	Good
> 0.80	=	Excellent

The pond score is average and any population present would be unlikely to produce large numbers of young individuals to colonise the local area and that of the neighbouring site, which may have been a consideration if pond classified > 0.80.

No further survey recommended.

10.10 Hedgehog.

Suitable habitat for hedgehogs are confined to the boundary hedges of the east, from where animals may venture onto the neighbouring parkland and lawns.

Abbots Lodge - Parkland immediately joining to the East

19/12/2023

10.11 INVERTEBRATES

The proposal site and buildings do not contain particular features or habitat to provide specialist conditions for rare invertebrates.

11. RECOMMENDATIONS

11.1 A bird nest survey should be carried out prior to demolition of building D.

12. PRECAUTIONARY METHODS STATEMENT

12.1 Clearance of firewood from buildings and garden area should be done manually allowing any creatures to escape to the neighbouring hedge and parkland.

12.2 An amphibian / small mammal fence should be erected along the inside perimeter of the hedge, opposite the proposed building area connecting to the close board fence to the South, and continued thirty metres North.

This post initial site clearance work.

The fence erection to shield the parkland habitat from the work proposals.

12.3 Any tree felling required within the garden (to enable development proposals) will require specific surveys of those trees concerned, regarding possible bat roost or birds nest activity.

12.4 Requirement - To avoid illumination of possible bat and nocturnal bird activity reference foraging corridors and territorial dispersal routes within the neighbouring parkland.

Lighting for the development/ design proposals should feature :

(a) All luminaires should lack UV elements, and all fluorescent sources to be avoided.

(b) Only LED Warm white spectrum (ideally < 2700 kelvin) to be used.

(c) Internal luminaries to be recessed where installed near windows to reduce glare and light spill onto neighbouring parkland and trees.

(d) External luminaires to be mounted only above door entry points South or West.

(e) Luminaires to be mounted on the horizontal I.e no upward lift and cowled to avoid spill.

(f) Any additional security lighting to be mounted similarly and set on motion sensors and short (1 min) timers.

12.5 Over any of construction works / process inc. cable / pipe laying. Excavations and trenches should be firmly covered overnight with secure boarding, or materials put in place to provide escape. For example a scaffold board placed as a walk way exit.

12.6 Noise and lighting over the construction phase should not impact on the adjoining parkland.
No illumination of grassland or trees or excessive radio volume should take place.

14 MITIGATION - HABITAT ENHANCEMENT - SUGGESTION

14.1 A double row of native screen hedge - Hawthorn, Field Maple, Holly and Hornbeam planted along the eastern boundary against the original wire and existing failing hedge line.

14.2 Installation of Bat and Bird boxes, number and type dependant on the structure proposals.

14.3 Consideration given to the sites access for local wildlife via any future fencing proposals.

15 REFERENCES

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

British Bat
Altringham, John (2003) Harper Collins New Naturalist, London.

Bat Surveys for Professional Ecologists.
Bat Conservation Trust.

Birds and Conservation Concern 4 – Population Status in the UK, Channel Islands and Isle of Man. British Birds 108,708 -746
Eaton MA,Aebisher NJ,Brown AF, Hearn RD, Lock L, Muscrove AJ, Noble DG, Stroud DA and Gregory RD 9 (2015).

WildCare
NIBS 2020

BTO Nest Box Guide
Chris du Few

Herpetofauna Workers Manual
Gent T and Gibson S (2003), JNCC Peterborough.

HMSO (1981) Wildlife and Countryside Act .
HMSO London

Great Crested Newt Hand Book
Tom Langton, Catherine Becket, and Jim Foster

Frog Life (2001)
Halesworth, Suffolk

[redacted]

Water Vole Conservation Hand Book
(Strachan 2011)

Woodland Management for Butterflies and Moths
Clarke S A, Green DG, Bourn N A, Hoares JA (2011)