

**Baseline Ecological Survey & Bat Survey
Hill Farmhouse – Hill Farm – Hockley Brook
Lane - Belbroughton
Worcestershire**

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BASELINE ECOLOGICAL SURVEY AND BAT SURVEY – HILL FARM – HOCKLEY BROOK LANE - BELBROUGHTON – WORCESTERSHIRE

1. INTRODUCTION

This report presents the results of a baseline ecological survey and bat survey of Hill Farm, Hockley Brook Lane, Belbroughton, DY9 0AD.

It is proposed that the property is re-roofed and renovated. It is currently delapidated and in a poor state or repair.

The objective of the survey was to carry out a detailed inspection of the building to assess its suitability for bats and to look for evidence of their presence. The baseline survey was undertaken on the 1st of August 2023.

Because the opportunities for crevice dwelling bat species were found to be evident on the exterior of the property and because of the very suitable rural location three evening emergence surveys were also undertaken as per recognised guidance to determine if roosting bats were present. The building was identified as having moderate to high potential.

These three evening emergence surveys were undertaken on the 15th of August, 30th of August and 13th of September 2023.

An assessment of the potential of the site to contain other protected species was also undertaken as a routine element of the survey including checks for evidence of nesting birds, badger activity and the potential for Great Crested Newts to be present in the area.

The results of the bat surveys are included in appendix 1.

Site photographs are also included in appendix 2.

2. LEGISLATION

The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2017 (as amended) provide protection for Bats and Great Crested Newts against killing, injury and disturbance. The legislation also protects their places of shelter, protection, breeding and resting sites.

Badgers are also protected under the Protection of Badgers Act 1992.

3. SITE DESCRIPTION

The property is located in a rural situation surrounded by pasture, arable land a network of hedgerows and some woodland. There are also ponds in the surrounding area.

The farmhouse itself is brick with a tiled roof and in a very delapidated condition having not been occupied for 14 years. It was not safe to survey the farmhouse internally due to collapsed roof and ceilings.

There is also an adjacent single storey outhouse also brick with a tiled roof. This also in a similarly delapidated condition, the roof having partially collapsed.

There is a small area of woodland a short distance to the west / north-west of the property. To the south-east are farmyard areas and a converted barn, also a new modern farmhouse.

The farmhouse is otherwise surrounded by ruderal habitat.

4. METHODOLOGY

Daytime Assessment

The inspection of the buildings and adjacent areas was undertaken by Elizabeth McKay a Consultant Ecologist with 30 years experience and licenced bat worker with 22 years' experience. Also a licenced Great Crested Newt surveyor with 22 years experience.

An external assessment of the buildings suitability for bats was carried out.

It was not possible to do an internal search of the property because of the safety issues detailed above.

Checks for evidence of nesting birds were also made as well as searches of the adjacent areas for evidence of badger activity.

An assessment of the nearby ponds for their potential to contain Great Crested Newts was also made.

5. RESULTS

Daylight Assessment

The buildings were assessed as being suitable for bats. Many gaps were noted under tiles externally where crevice dwelling bat species might gain entry and roost, given the rural location which provides good foraging habitat for bats, the building was assessed as having moderate to high potential in terms of its suitability for roosting bats.

Therefore three dusk emergence surveys for bats were undertaken as detailed below as per recognised guidance.

Evidence of nesting bird activity was noted behind the lintel above the front door and also at the eaves at the front of the property.

No evidence of badger activity was noted in the vicinity of the property.

Approximately 200m to the south of the farmhouse is a small shaded pond surrounded by Crack Willow. It is approximately 20m x 5m in dimensions and 0.5m in depth at the time of survey. There is no marginal or aquatic vegetation.

This was assessed for its suitability for Great Crested Newts by using the Habitat Suitability Index and scored as below average in terms of its suitability.

There are no other ponds within a 250m radius of the site according to studies of large scale ordnance survey maps and aerial photographs. But ponds do exist in the wider radius.

In these circumstances no further survey has been recommended but a simple precautionary method statement during the construction process should be applied as detailed below as GCN can be attracted to building materials and rubble and earth produced in the construction process for shelter and hibernation. This is because of the legal protection which Great Crested Newts receive.

6. CONCLUSIONS

It is proposed that Hill Farmhouse, Hockley Brook Lane, Belbroughton is renovated and re-roofed.

The property is located in a rural situation surrounded by pasture, arable land a network of hedgerows and some woodland. There are also ponds in the surrounding area.

The property is brick with a tiled roof and is delapidated and in a poor state of repair having not been lived in for 14 years. Internally floors and ceilings are starting to collapse, meaning that internal survey work could not be carried out.

Adjacent is a small brick outbuilding with a tiled roof partially collapsed.

Many opportunities were identified on the exterior of the building where bats might gain entry and roost, under tiles on the roof of the property.

Therefore given this and the rural location, the building was assessed as having moderate to high potential to contain roosting bats.

Three evening emergence bat surveys were undertaken as per recognised guidance on the 15th of August, 30th of August and 13th of September 2023, under good weather conditions by experienced licenced bat workers within the recognised bat survey season.

One surveyor was positioned to the front and one to the rear on all three occasions so that all angles could be viewed.

On the 15th of August 2023, 11 Soprano Pipistrelle bats were seen to emerge from under roof tiles in the locations shown on the photographs in appendix 2.

On the 30th of August 2023, 16 Soprano Pipistrelle bats emerged from under roof tiles and on the 13th of September 2023 16 Soprano Pipistrelle bats also emerged from under roof tiles in the locations shown on the photographs in appendix 2.

The full survey findings are also included in appendix 1.

It can be concluded therefore that a maternity roost of Soprano Pipistrelle bats are using the building.

Recommendations have been made accordingly below because of the legal protection which roosting bats receive.

A European protected species bat licence application will need to be made before works can be undertaken and works to the roof timed to avoid the maternity season.

Advice and supervision will be needed from a licenced bat worker when the works are undertaken as well as suitable mitigation and enhancement for roosting bats as detailed below.

However if works are undertaken as detailed below, there should be no long term impact on roosting bats and the measures detailed below should achieve small scale biodiversity net gain as required under local planning authority guidance.

Some evidence of nesting birds was noted using the eaves at the front of the building and the lintel above front door. The winter timing constraint for re-roofing will reduce risks to nesting birds.

For works undertaken between March and September – checks will need to be made for nesting birds because of the legal protection which nesting birds receive.

Mitigation and enhancement has been detailed below for nesting birds including nest boxes and hedgerow planting as required by local planning authority.

The hedgerow planting will also be beneficial to roosting bats, providing feeding and commuting opportunities as the majority of bat species do not like to fly over open ground but need nearby hedgerows, shrubs, woodland or water bodies for feeding and commuting.

It is also important to ensure that there is no strong lighting surrounding the property post renovation as roosting bats and nesting birds are deterred by bright lighting. Further details have been included below.

Otherwise no evidence of badger setts was found in the vicinity of the property. Though they may well of course pass through given the rural location.

Approximately 200m to the south of the farmhouse is a small shaded pond surrounded by Crack Willow.

This was assessed for its suitability for Great Crested Newts by using the Habitat Suitability Index and scored as below average in terms of its suitability.

There are no other ponds within a 250m radius of the site according to studies of large scale ordnance survey maps and aerial photographs. But ponds do exist in the wider radius.

In these circumstances no further survey has been recommended but a simple precautionary method statement during the construction process should be applied as detailed below as GCN can be attracted to building materials and rubble and earth produced in the construction process for shelter and hibernation. This is because of the legal protection which Great Crested Newts receive.

Given the nature of the areas affected by the proposals it is not considered likely that any other protected or notable species would be affected by the proposals. No further recommendations have been made.

7. RECOMMENDATIONS

It is important to ensure that the recommendations below are followed because of the legal protection which the following species receive and in order to comply with the legislation protecting them.

Bats

1. Because a maternity roost of Soprano Pipistrelle bats was found to be using the property a European protected species bat licence will need to be applied for in order to undertake any works affecting the roofs because of the legal protection which roosting bats receive and because of the disturbance the works will cause to roosting bats.
2. The above works will need to be undertaken between the 1st of October and the 1st of May in accordance with recognised guidance when bats are less likely to be present.

3. Stripping of the roof will need to be undertaken by hand and supervised by a licenced bat worker in case any bats are still present as a standard procedure.
4. When the roof is replaced a bat friendly internal roof lining will need used - either traditional bitumen felt or TLX bat safe membrane as other breathable roofing membranes are not bat safe – bats becoming entangled in the microfibres over time.
5. Any timber treatment should be undertaken using products recommended in Natural England's guidance note 2020 – Timber Treatment Products Suitable for Use in or Near Bat Roosts.
6. In order that bats will be able to continue to use the building in the longer term it is recommended that 30 purpose designed bat access tiles are added to the north and south facing aspects of the building, particularly in locations where bats were previously found to be roosting. Advice should be sought by a licenced bat worker with regard to placement of these purpose designed tiles.
7. It is recommended that any external lighting to be added to the property as a result of the proposals, is minimised. Should additional lighting be added for any reason subsequently lux levels should be no more than lux level 1, as bright lighting is very deterring to roosting and foraging bats as well as nesting birds.

Birds

8. Evidence of nesting birds was noted at the eaves on the south facing side of the property and above the lintel above the front door of the property. Works in these areas would also be best undertaken during the winter months. Should any works be undertaken between March and September – then checks for nesting birds would need to be undertaken because of the legal protection which nesting birds receive.
9. In order to provide compensatory mitigation for nesting birds it is recommended that two 28mm chillon woodstone nest boxes suitable for smaller nesting birds are added to the east facing gable of outbuilding, away from strong lighting.
10. It is also recommended that shrub / hedgerow planting is carried out to the north of the farmhouse to create foraging and commuting habitat for bats and nesting and feeding opportunities for birds. Recommended native species would be Hazel, Holly, Hawthorn, Blackthorn and Field Maple.

Great Crested Newts

As it is difficult to rule out that GCN may be present in the area a brief method statement is outlined below to ensure that they are not killed or injured during the construction process.

11. Any rubble, earth, tiles, bricks or waste materials associated with the building process will be cleared off site or stored off the ground and not left lying around as GCN will be potentially attracted to such materials for shelter and hibernation.
12. It should be ensured that during all works, building materials are stored off the ground on palettes including, bricks, wood, tiles, cement, sand etc. This is because building materials are attractive to GCN who may use them for shelter and hibernation.
13. Grass around the construction area should be kept cut short in order to avoid attracting GCN to the building area.

8. REFERENCES

English Nature (2004). *Bat Mitigation Guidelines, January 2004*. English Nature, Peterborough, UK.

APPENDIX 1 - BAT SURVEY

1. INTRODUCTION

Opportunities for crevice dwelling roosting bats were identified on the exterior of Hill Farmhouse, Hockley Brook Lane, Belbroughton. Therefore three evening emergence surveys were undertaken as per recognised guidance.

These surveys were undertaken on the 15th of August, 30th of August and 13th of September 2023 during the recognised bat activity season to observe bats emerging from the buildings around dusk.

The following presents the results of these surveys. A description of the buildings is provided within the baseline survey and photographs are included in appendix 2.

2. BAT BEHAVIOUR AND CONTEXT FOR PROTECTION

Bats may use a variety of buildings of modern and older construction, caves, mines, hollow trees *etcetera* as roosts.

Bat roosts serve different purposes and different conditions are required for hibernation, mating and breeding. Other roosts may be used as overnight stops during summer feeding. Female bats gather in maternity roosts in June and July to give birth and rear their young.

The seasonal changes in roost sites means that a roost may be unoccupied for a large part of the year; however it is still protected by law when unoccupied.

Bats are considered to be of conservation concern because of significant declines in numbers, with some species having become very rare. Reasons for this include loss or degradation of foraging habitats, loss of roost sites, poisoning from timber treatment, predation and persecution by man.

3. METHODOLOGY

Dusk Emergence Surveys

Ultrasonic bat detectors were used to detect bats around dusk on the 15th August, 30th of August and 13th of September 2023. Bat box Duet and Anabat Walkabout detectors were used for carrying out the surveys.

The surveys were undertaken by Elizabeth McKay, with the assistance of Karen Parker, Mike Glyde and Neil McLean – all experienced licenced bat workers of 22-25 years standing.

On all three occasions one surveyor was located on the northern side of the building and one to the southern side of building so that all aspects could be viewed.

Timing

The evening emergence survey was started approximately 15 minutes before sunset and continued for 1 hour and 30 minutes past sunset on each occasion.

Weather Conditions

The surveys were carried out under appropriate weather conditions during the recognised bat survey season.

15th August 2023 – 2/8 cloud. Dry, still. Temperature 17°C at sunset. Finish temperature 14°C.

30th August 2023 – 4/8 cloud. Dry, still. Temperature 13°C at sunset. Finish temperature 13°C.

13th September 2023 – 5/8 cloud. Dry, still. Temperature 14°C at sunset. Finish temperature 14°C.

4. RESULTS**Dusk Emergence Surveys***15th August 2023*

The survey commenced at 20.15 (sunset 20.35) and ended at 22:05.

Bat activity was recorded as follows:-

1. South of House

Time	Species	Details of Activity
20.17	Soprano Pipistrelle	Emerged from western gable end
20.45	Soprano Pipistrelle	Emerged from eaves at front of farmhouse and flew north-west to trees
20.55	Soprano Pipistrelle	Two bats emerged from south-west corner of farmhouse at eaves level and flew south-west
20.57	Common Pipistrelle	Foraging distantly – audio only
21.03	Soprano Pipistrelle	Emergence – south facing eaves – flew west
21.04	Soprano Pipistrelle	Two bats emerging from under tiles southern aspect of building - flew south-west
21.05	Common Pipistrelle	Foraging around trees to south-west
21.10	Soprano Pipistrelle	Emerged from eaves – southern side of farmhouse – nearest to western end – flew south-west

21.10	Soprano Pipistrelle	Emergence from under tile – western end of building – flew west
21.15	Common Pipistrelle	Foraging – audio only
21.17 –	Common Pipistrelle	Foraging around farmhouse
21.30		
21.33,	Common Pipistrelle	Foraging continuing
21.35,		
21.38		
21.46	Brown Long-eared	Audio only - foraging
21.50 –	Common Pipistrelle	Regular foraging continuing
22.05		

2. North of Building

Time	Species	Details of Activity
21.01	Soprano Pipistrelle	Emerged from tiles west facing gable end of farmhouse
21.14	Soprano Pipistrelle	Emerged from tiles west facing gable end of farmhouse
21.17	Common Pipistrelle	Foraging around farmhouse
21.19	Common Pipistrelle	Foraging around farmhouse
21.20	Common Pipistrelle	Foraging around farmhouse
21.23	Brown Long-eared	Audio only foraging
21.24	Brown Long-eared	Audio only foraging
21.29	Common Pipistrelle	Foraging
21.35	Common Pipistrelle	Foraging – audio only
21.40	Common Pipistrelle	Foraging – audio only
22.01	Common Pipistrelle	Foraging – audio only

30th August 2023

The survey commenced at 19.45 (sunset 20.04) and ended at 21.34.

Bat activity was recorded as follows:-

1. South of Property

Time	Species	Details of Activity
20.14	Soprano Pipistrelle	Emerged from eaves south facing side of building
20.14	Soprano Pipistrelle	Emergence from lower roof towards eastern end
20.19	Soprano Pipistrelle	Emerging from south-west corner of farmhouse and flying west – emerged from under tile
20.22	Soprano Pipistrelle	Emerged from under tile – south-west corner of farmhouse and flew west
20.23	Soprano Pipistrelle	Emerged from under tile – south-west corner of farmhouse and flew west

20.29	Soprano Pipistrelle	Emerged from eaves – south facing side of farmhouse and flew west
20.30	Soprano Pipistrelle	Emerged from eaves – south facing side of farmhouse and flew west
20.31	Common Pipistrelle	Foraging
20.33	Common Pipistrelle	Foraging
20.34	Soprano Pipistrelle	Emergence from eaves – south facing side of farmhouse and flew – south-west
20.36	Common Pipistrelle	Foraging
20.37	Soprano Pipistrelle	Brief pass
20.37	Common Pipistrelle	Regular foraging
20.38	Soprano Pipistrelle	Emerged from roofing tile – near south-west corner of building and flew south-west
20.40	Common Pipistrelle	Foraging x 2 bats
20.41	Soprano Pipistrelle	Heard distantly
20.43 – 21.05	Common Pipistrelle	Regular foraging activity
21.07	Soprano Pipistrelle	Heard distantly
21.07, 21.12	Common Pipistrelle	Foraging
21.12	Myotis species	Brief pass
21.14	Soprano Pipistrelle	Foraging passes
21.15	Common Pipistrelle	Foraging passes
21.27	Common Pipistrelle	Foraging passes continuing

2. North of Property

Time	Species	Details of Activity
20.13	Soprano Pipistrelle	Emerged from lower roofed section of farm-house – from under tile – flew west
20.26	Soprano Pipistrelle	Emerged from lower roofed section of farmhouse and flew north
20.28	Soprano Pipistrelle	Emerged from lower roofed section of farmhouse and flew east
20.30	Soprano Pipistrelle	Emerged from lower roofed section of farmhouse and flew south
20.34	Soprano Pipistrelle	Emerged from lower roofed section of farmhouse and flew north
20.35	Soprano Pipistrelle	Emergence from lower roofed section of farmhouse and flew north
20.40	Soprano Pipistrelle	Emergence from lower roofed section of farmhouse and flew - west
20.41	Common Pipistrelle	Audio only - foraging
20.43 – 21.02	Common Pipistrelle	Audio only - foraging
21.07	Noctule	Audio only - foraging
21.07	Soprano Pipistrelle	Audio only - foraging
21.08	Common Pipistrelle	Audio only - foraging
21.10	Common Pipistrelle	Audio only - foraging

21.13	Myotis species	Audio only - foraging
21.14	Common Pipistrelle	Foraging – feeding buzzes
21.15	Common Pipistrelle	Foraging – feeding buzzes
21.15 –	Common Pipistrelle	Regular feeding activity
21.30		

13th September 2023

The survey commenced at 19.15 (sunset 19.30) and ended at 21.00.

Bat activity was recorded as follows:-

1. South Side of House

Time	Species	Details of Activity
19.44	Soprano Pipistrelle	Emerged from eaves part way along southern elevation
19.47	Soprano Pipistrelle	Emerged from eaves – southern elevation – towards western end
19.52	Common Pipistrelle	Flying east to west across front of building
19.54	Soprano Pipistrelle	Emergence from eaves – southern elevation - flying west
19.57	Soprano Pipistrelle	Emergence from eaves – southern elevation – flying west
19.59	Common Pipistrelle	Foraging – brief pass
20.00	Common Pipistrelle	Foraging – brief pass
20.04	Common Pipistrelle	Foraging - briefly
20.07	Common Pipistrelle	Foraging briefly
20.08	Common Pipistrelle	Foraging passes
20.09	Soprano Pipistrelle	Emergence from eaves – south-west corner of building – flew south-west
20.10	Common Pipistrelle	Flying south-east to north-west
20.12	Soprano Pipistrelle	Emerged from eaves – south side of building – flying west
20.13	Common Pipistrelle	Foraging close to west side of building
20.15 – 21.00	Common Pipistrelle	Regular foraging activity – 1-2 bats

2. North of Property

Time	Species	Details of Activity
19.48	Soprano Pipistrelle	Emerged from north side of building – lower roofed section and flew north
19.51	Soprano Pipistrelle	Emerged from north side of building – lower roofed section and flew north
19.55	Soprano Pipistrelle	Emerged from north side of building at western end – and flew west
19.58	Soprano	Emerged from north side of building –

	Pipistrelle	lower roofed section and flew west
19.59	Soprano Pipistrelle	Emerged from lower roofed section and flew south
20.00	Soprano Pipistrelle	Emerged from lower roofed section and flew west
20.01	Soprano Pipistrelle	Pass – to west
20.01	Soprano Pipistrelle	Emergence from lower roofed section – flew west
20.02	Soprano Pipistrelle	Emergence from lower roofed section and flew west
20.03	Soprano Pipistrelle	Emergence from lower roofed section and flew west
20.04	Soprano Pipistrelle	Brief pass
20.06	Soprano Pipistrelle	Emergence from lower roofed section and flew east
20.07 – 21.00	Common Pipistrelle	Regular foraging passes
20.08 – 21.00	Soprano Pipistrelle	Regular foraging passes

APPENDIX 2 – SITE PHOTOGRAPHS

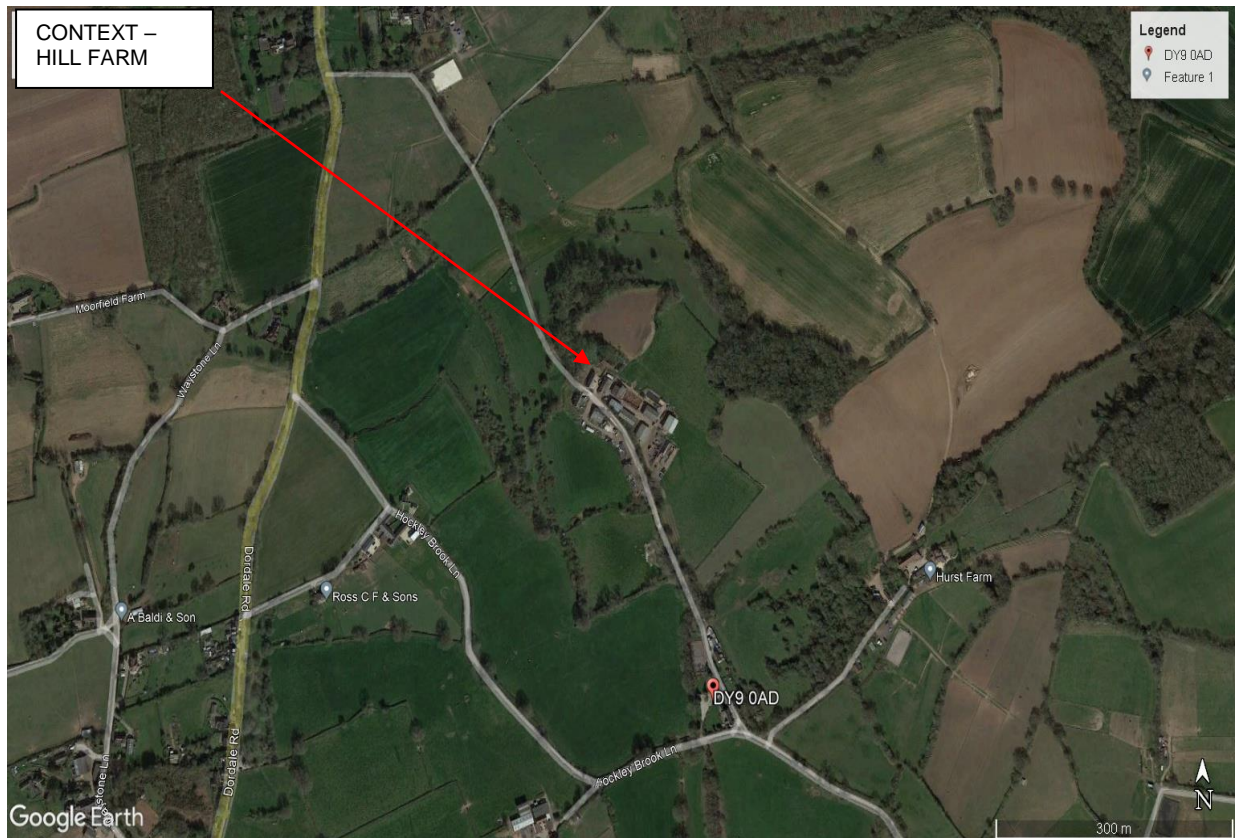




PHOTO 1 – HILL FARMHOUSE FROM SOUTH-EAST



PHOTO 2 – HILL FARMHOUSE FROM SOUTH-WEST – SHOWING BAT EMERGENCES



PHOTO 3 – FROM NORTH-WEST SHOWING BAT EMERGENCES



PHOTO 4 – FROM NORTH SHOWING BAT EMERGENCES



PHOTO 5 – FARMHOUSE FROM NORTH-WEST



PHOTO 6 – ADJACENT OUTBUILDING WITH COLLAPSED ROOF FROM NORTH

PHOTO 7 – ADJACENT OUTBUILDING WITH COLLAPSED ROOF FROM SOUTH



PHOTO 8 – FRONT GARDEN TO SOUTH OF PROPERTY

PHOTOS 9 & 10 – OUTBUILDING INTERNALLY



PHOTO 11 – KITCHEN / UTILITY – INSIDE FARMHOUSE



PHOTO 12 – OUTBUILDING INTERNALLY

PHOTO 13 – COLLAPSED CEILING AT TOP OF STAIRS – FARMHOUSE



PHOTO 14 – KITCHEN WITH COLLAPSING CEILING



PHOTO 15 – POND 1 – 200M TO SOUTH OF FARMHOUSE