

JON SLOAN
Ecological consultants



**GATE FARM,
CAERSWS,
POWYS**

PRELIMINARY ECOLOGICAL APPRAISAL

MAY 2021

**Wayside
Llandinam
Powys
SY17 5BY**

Office: 01686 688601

Mobile: 07768908048

E-mail: jonsloanecology@gmail.com

CONTENTS

	Page
Summary	2
1 Introduction	3
1.1 Background and site description	3
1.2 Summary of the proposed works	3
2 Methodology	4
2.1 Field survey	4
2.1.1 Site inspection	4
2.1.2 Bat survey	4
2.1.3 Hedgerow survey	4
2.2 Personnel	5
3 Results	5
3.1 Field survey	5
3.1.1 Site and site surrounds	5
3.2 Evaluation of site habitats	5
3.3 Protected species survey	6
3.3.1 Bats	6
4 Potential Impacts	6
4.1 Habitats in the surrounds	6
4.2 Site habitats	6
4.3 Protected species	7
4.3.1 Bats	7
4.3.2 Birds	8
5 Proposed Avoidance Measures, Mitigation, Compensation & Enhancement	8
5.1 Avoidance measures, mitigation & compensation	8
5.1.1 Habitats	8
5.1.2 Protected species	9
5.1.2.1 Bats	9
5.1.2.2 Birds	9
5.2 Habitat enhancement recommendations	9
5.2.1 Species	9
6 Conclusion	10
7 References	11

Appendix 1: Reasonable Avoidance Measures for tree felling

Appendix 2: Proposed Hedge Removal Sites

Appendix 3: Methodology for hedge translocation

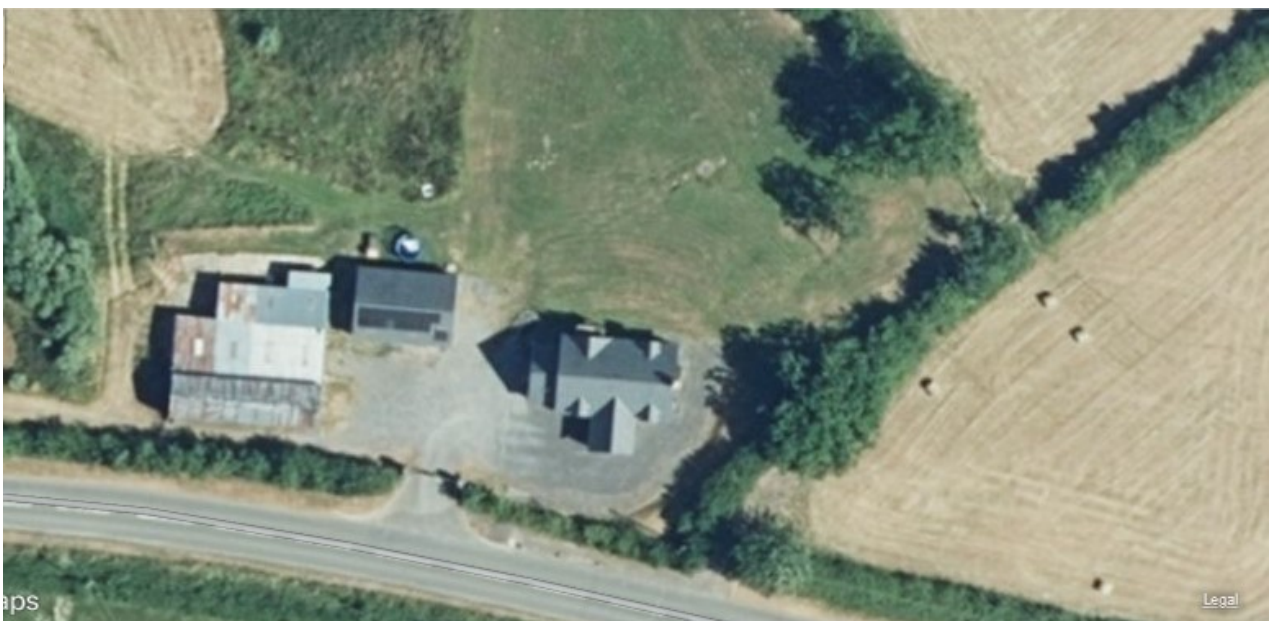
Appendix 4: Site Plans

SUMMARY

Based on recommendations from the planning officer in respect of 21/0043/PRE for the proposed construction of a single-storey entrance lobby extension to the south-eastern aspect of the dwelling, construction of a new detached garage to the east of the dwelling & creation of a new vehicular access & parking/turning areas at the property of Gate Farm, Caersws, it was deemed necessary for a Preliminary Ecological Appraisal (PEA) for the presence/potential for bats & a hedgerow survey to be undertaken.

Since the small proposed extension will impact upon the eaves of the existing dwelling & areas of hedgerow will need to be removed, further surveys and a mitigation strategy, suitable for compliance with UK wildlife legislation and national planning policy (TAN5), The Conservation of Habitats & Species Regulations 2017 (amended), Environment (Wales) Act 2016 & Species of Conservation Concern on the Powys LBAP were required to support a planning application for the development of the site. A preliminary bat survey was undertaken on the dwelling, in particular the area where proposed lobby is to be sited. Surveys of the hedgerows & oak tree were also undertaken in areas where hedgerows were to be removed/translocated/re-planted.

The site, referred to as Gate Farm, Caersws, is situated at Grid ref: SO 0102 9227 approximately 2km west of the village of Caersws. The property lies within the boundaries of the Afon Carno to the north & Afon Trannon to the south overlooking the Severn valley, & accessed directly off the B4569 Caersws – Trefeglwys road.



Site

Mitigation will involve the translocation of part of the existing eastern hedge to the northern boundary, felling of an oak tree, both under the watching brief of ecologist, new native planting in existing access points & providing bat & bird boxes on site.

1 INTRODUCTION

1.1 Background and site description

Gate Farm is located on the northern aspect of the B4569 Caersws – Trefeglwys road. The site proposed for the new lobby extension is on the south-eastern aspect of the dwelling with the proposed detached garage being positioned approximately 5 metres to the east of this. Given the poor visibility on accessing/exiting the property, the owners wish to create a new access to the property which entails removal of some areas of hedgerow & blocking up 3 existing entrances/gateways with new native hedgerow planting. The area of hedgerow to the east which is proposed to remove currently comprises mainly Hawthorn with some Holly, Ivy, Sycamore & Dog Rose with a small area of Douglas Fir at the southern end. It is proposed to translocate this area of hedge to the northern boundary which will connect 2 areas of existing hedgerow. The small area of hedgerow on the road which is to be removed to provide new access is again predominantly Hawthorn. The area where the new access road/parking/turning area is proposed is rough agricultural pasture which is mowed several times a year.

To the west of the dwelling are further agricultural buildings. Most of the land immediately surrounding the house is semi-improved agricultural land with a mown bank directly to the east.

An initial Ecological Appraisal carried out by Jon Sloan Ecology (on 14/5/2021) did not identify any bat use or potential within the dwelling, in particular the area proposed for the new lobby. The Oak tree within the eastern hedge which will be felled had little/negligible potential for roosting bats. Inspection of the hedgerow proposed for removal/translocation was undertaken & also the area of agricultural land for the new access/parking/turning area. The extent of the existing habitat, both on site and within the immediate surrounds, was ascertained and possible solutions in mitigation identified.

1.2 Summary of the proposed works

Proposals include the construction of a single storey lobby to the south-eastern aspect of the dwelling which will impact the eaves of the existing roof, creating a new detached garage to the east of the dwelling with a new access off the B4569 with a driveway/parking & turning area. 3 existing access points will be “stopped up” with new hedgerow planting & part of the existing hedgerow to the east of the dwelling will be removed/translocated to accommodate the new drive/parking area. The length of hedgerow at the eastern aspect to be removed will be approximately 25m & will be translocated to the northern boundary which will connect hedgerows at the eastern & northern aspects. It will be necessary to fell the Oak tree within this eastern hedgerow.

2 METHODOLOGY

2.1 Field survey

2.1.1 Site inspection

An inspection of the site was carried out on 14/5/21. This aimed to identify the potential presence or absence of protected species within the dwelling, land to be affected by development & hedgerows, key habitat features and the potential for the development to impact upon these.

The surrounding habitat was also assessed for its potential to support wildlife and to provide links to potentially suitable habitat in the wider surrounds.

2.1.2 Bat survey

A Preliminary survey of the dwelling was undertaken to inspect for evidence of or potential for bats to roost, in particular the area where the new lobby is proposed. Inspections were carried out with the aid of surveyor's ladders, endoscopes, binoculars & 1.5 million candle power lamps. The roof void was accessed via a loft hatch on the first floor landing, no evidence of bats or potential for bats to roost was found. The exterior of the dwelling was also inspected closely, with the area at the south-eastern aspect where the new lobby is proposed being inspected closely. No evidence of bats or potential for bats to roost was found. All gable end slating, soffits, fascias & roof slating was sealed/tight fitting.

The Oak tree within the hedgerow to the east of the dwelling was also assessed for its potential for bats, this was deemed to have low/ negligible potential for bats to roost but could be used for foraging.

No further survey work for bats was deemed necessary, however there are foraging & commuting opportunities along the hedgerows/tree-lines & connectivity to the river corridor & woodland in the wider landscape. A lighting scheme will have to be provided for the site (see 4.3.1 & 5.1.2.1).

2.1.3 Hedgerow survey

Inspections of the hedgerow to the east of the dwelling were undertaken given that approximately 25m of this hedge is proposed to be removed & translocated to the northern aspect of the site, thus connecting the eastern & northern hedgerows (see Appendix 1 "Proposed hedge removal sites"). This hedgerow is dominated predominantly by Hawthorn with some Holly, Ivy, Dog Rose & Sycamore with Douglas Fir to the far southern aspect. The understorey consists of Foxglove, Nettle, Greater Stitchwort, Celandine, Dandelion, Speedwell, Common Vetch, Primrose, Dock, Daffodil, Ladies Smock & Cleavers.

The Oak tree at the northern aspect of the section of this hedgerow which is to be removed will have to be felled to make way for new driveway. The ecologist will need to be on site when this is being undertaken (see Appendix 1 “Proposed Tree Felling”).

A further section of hedgerow will be removed on the roadside to create a new, safer access to the site. This will measure approximately 4.5m & is predominantly Hawthorn. The existing 3 access points within this boundary will be “stopped up” by new hedge planting (total length of new planting in these areas will be 17m), this will connect the existing hedgerows (see Appendix 2 “Proposed hedge removal”).

2.2 Personnel

Initial site assessment, survey planning, bat & hedgerow inspections and proposed mitigation were carried out by Jonathan Sloan & Janet Jones.

Both Jonathan Sloan and Janet Jones have a wealth of combined knowledge encompassing over 30 years of field experience & have undertaken several bat, hedgerow & Phase 1 surveys in the past.

3 RESULTS

3.1 Field survey

3.1.1 Site and site surrounds

Hedgerows run along most of the boundaries of the site, with occasional post & wire fencing & gaps for access. Species within the eastern hedgerow, part of which is proposed for removal/translocation is predominantly Hawthorn & includes some Holly, Ivy, Dog Rose & Sycamore with Douglas Fir to the far southern aspect. The understorey consists of Foxglove, Nettle, Greater Stitchwort, Celandine, Dandelion, Speedwell, Common Vetch, Primrose, Dock, Daffodil, Ladies Smock & Cleavers. The central area of the southern hedgerow on the road which is proposed to be removed for new access is predominantly Hawthorn & is trimmed annually.

The area where the new drive/parking/turning area is agricultural land, the proposed new access will be created to access both the dwelling & garage & the agricultural land beyond.

It is not thought necessary for further survey work to be undertaken, however a mitigation strategy will be suggested within this document.

3.2 Evaluation of site habitats

The habitats on the main body of the site are not considered to be priority habitat and are of negligible ecological value. The hedgerows, being largely native, qualify as a UK priority

habitat, but do not class as an 'important' ones under the Hedgerow Regulations; however only the minimum (for access) should be removed.

The agricultural land, where the new access/driveway is proposed, although not qualifying as a priority habitat, is considered to be an important ecological feature of the site, and any removal (for access) should be minimal & for access only.

3.3 Protected species survey (some are also Wales and/or local priority species)

3.3.1 Bats

3.3.1.1 There are records for *Brown Long eared, Natterers & Pipistrelle bats within 2km.*

3.3.1.2 The immediate site has little suitable bat habitat.

3.3.1.3 The site hedgerows/trees, potentially provide foraging habitat for bats; as linear features, which link to an extensive network of native hedgerows, woodland and river corridor, they may also be used by commuting bats.

3.3.2 Birds

Birds noted on and close to the site during the survey included Blue tit, Swallow, Great Tit, Crow, House Sparrow, Robin, Chaffinch, Blackbird.

The site lacks suitability for ground nesting birds, the surrounding hedgerows & trees have suitability for several species to breed.

4 POTENTIAL IMPACTS

This section considers the potential and predicted impacts which might arise from the development in the absence of avoidance measures and/or mitigation. Any residual impacts are further discussed with mitigation in place, and/or enhancements that have been agreed upon by the client.

4.1 Habitats in the surrounds

The development size and type is highly unlikely to have a negative impact on the ancient woodland & priority areas in the 1km surround. The loss of the small area of agricultural land, which is not considered to be an important ecological feature, will not have a significant effect on biodiversity.

4.2 Site Habitats

Pre-mitigation impacts

Direct loss of older hedgerows, which are an important ecological feature of the site, is not envisaged. Approximately 25m of the eastern hedgerow will be removed/translocated in

order to provide new vehicle access/parking/turning area to site & the 4.5m of roadside hedgerow will be removed for access & to provide adequate vision splay for vehicles.

Residual impacts after mitigation and enhancement

No mitigation is required. The 25m & 4.5m of hedge which has potential for nesting birds will be removed at a time outside the bird breeding season (March - End of August).

4.3 Protected species

Of the protected species considered as being possibly at risk from this development, the survey has shown that no development related impact on Great Crested Newt, Otter, Water Vole, Dormouse, Badger, Reptiles can be reasonably predicted.

4.3.1 Bats

Pre-mitigation Impacts

A lighting scheme will have to be formulated to prevent unnecessary illumination of the boundary hedgerows (potential flight corridors). Unsuitable lighting may result in the deterioration of foraging and/or commuting habitat in the operational phase; this, in turn, could result in deterioration of any nearby roosts. Any impact on bats can be fully mitigated by minimising light spill on boundary features, where required lighting should be fixed on low columns with light spread kept at or below the horizontal using cowls, hoods, screen or simply by downward directionality. Bulbs should be low intensity with a narrow or UV reduced spectrum (<150w high or low pressure sodium types or LED's). LED lighting may be most appropriate particularly if incorporating an orange filter. PIR systems (if applicable) should be set on a short timer and responsive only to larger moving objects. A low impact lighting system is proposed, this will consist of low wattage lighting posts where residents exit their cars & low wattage downlighters at the entrances to the garage/dwelling for residents to access during the hours of darkness, these will also be on motion sensors (see 5.1.2.1)

NOTE: Refer to bats and lighting (Bat Conservation Trust)

Residual impacts after mitigation and enhancement

With mitigation in place (see 5.1.2.1), there will be no residual impacts on bats. With enhancement in place (see 5.2), the provision of potential new flight corridors may have a positive impact of very minor significance (significant at a site/local level) on this species group.

4.3.2 Birds

Pre-mitigation Impacts

Any negative impact on birds, through habitat loss, is likely to be temporary and of negligible significance. However, development work (construction phase) that may remove, damage or destroy a nest of a wild bird whilst it is in use should be avoided as it may constitute an offence.

Residual impacts after mitigation and enhancement

With mitigation in place (see 5.1.2.2), there will be no residual impacts on birds. With enhancement in place (see 5.2), the provision of additional native planting habitat is likely to have a positive impact of very minor significance (significant at a site level) on hedgerow species.

5 PROPOSED AVOIDANCE MEASURES, MITIGATION, COMPENSATION AND ENHANCEMENT

5.1 Avoidance measures, mitigation and compensation

5.1.1 Habitats

The ecologist will inspect the areas of hedgerow which are being removed/translocated for nesting birds immediately prior to removing the 25m of eastern hedge & 4.5m of roadside hedge necessary for new access/driveway.

The eastern hedgerow which is being removed is to be translocated to the northern boundary which will connect the existing northern & remaining eastern hedge (see Appendix 3 "Methodology for hedge translocation"). The time for this would be between November – March.

The 25m section of hedgerow to be removed is at the eastern aspect of the dwelling and the 4.5m on the roadside within the centre of the southern hedgerow. Prior to any removal, the limit of hedgerow removal will be marked by coloured pegs. The hedges will only be removed at a suitable time of the year, usually between September and February inclusive.

The 3 existing access gaps within the hedgerow to the southern boundary/roadside of the site will have additional native planting to enhance the hedgerows for wildlife & to alleviate any fragmentation. A more sympathetic hedge cutting regime allowing the hedges to grow taller and thicker will be implemented. A 2m buffer zone will also be created on the field side of all new/translocated hedgerows.

5.1.2 Protected species

5.1.2.1 Bats

To mitigate lighting issues, lighting should be reduced to its most practical level and located in the least ecologically sensitive areas i.e. away from all trees & hedgerows (existing and proposed). Lighting should be fixed on low columns with light-spread kept at, or below, the horizontal using cowls, hoods, screens or simply by downward directionality. Bulbs should be low intensity with a narrow or UV reduced spectrum (<150W, high or low pressure sodium types or LEDs). LED lighting, preferably incorporating an orange filter, may be appropriate near all boundary features – LED lamps effectively reduce light spill and are highly directional. PIR systems [if applicable] should be set on a short timer and responsive only to larger moving objects. A low impact lighting system is proposed, this will consist of low wattage lighting posts where residents exit their cars & low wattage downlighters at the entrances to the dwelling for residents to access during the hours of darkness, these will also be on motion sensors. Note: refer to Bats and Lighting (Bat Conservation Trust).

A lighting plan must be submitted with the planning application.

5.1.2.2 Birds

Any clearance of hedgerow or scrub must be carried out either:-

- i) within the bird nesting season, after a negative inspection for nests has been undertaken
- ii) outside the bird nesting season between July 31st and March 1st
- iii) after access into the hedge has been suitably obstructed with netting prior to March 1st

5.2 Habitat enhancement recommendations

Enhancements will be undertaken with additional, locally sourced native species joining this to the existing hedgerow at the southern boundary of the site to compensate for the loss of 4.5m of southern hedge & translocation of 25m of eastern hedge. Species recommended are; Sorbus Aucuparia (Rowan), Prunus Padus (Bird Cherry) Acer campestre (Field Maple), Betula sp. (Birch) and Prunus spinosa (Blackthorn) at this site.

5.2.1 Species

Four bird boxes, with varying size access holes will be erected on existing trees on the site.

Note: bird boxes should be placed at a height of 1.5 – 3m on a north-easterly aspect: Bird boxes do not require a licensed ecologist to clean and maintain boxes but such work must be carried out outside the bird breeding season.

Four Double crevice bat boxes will be erected on suitable trees/and/or the dwelling/adjacent buildings. Note: bat boxes should be positioned at least 12' above ground level and facing south-east or south-west.

Further information for erecting and caring for bat & bird boxes can be obtained from the ecologist.

6 CONCLUSION

The ecological assessment has shown that the only potential ecological issue associated with the proposed development in the construction phase is the disturbance of nesting birds if removal of hedgerow or oak tree is carried out within the breeding season. The only potential ecological issue in the operational phase is the disturbance or loss of bat roosts and/or deterioration of bat foraging habitat caused by the illumination of the southern & eastern boundary treeline/hedgerows.

Mitigation for bats & birds is required in order to remove any potential negative impacts, as follows:

- Any clearance of hedgerow or scrub should, where possible, be carried out in the late summer or winter months to avoid the main bird-nesting season.
- In the operational phase, external lighting must not illuminate the southern or eastern boundary treeline/hedgerows; elsewhere lighting should be reduced to its most practical level. A lighting plan will be submitted.
- Indirect hedgerow loss will be avoided by protecting hedgerows during construction.
- A lighting plan will be drawn up and will avoid illumination of hedgerows.
- When work is in progress, ensure that no animal can become trapped e.g. in a trench or pipeline. Open trenches, steep excavations etc. should have wooden planks, resting at 45 degree angles, to allow trapped wildlife to escape. These should be left overnight and during periods when work has ceased. Planks should be at least wide enough for Badgers to use and with a rough grain (approx 15-20cm width). Any open service pipes must be capped off if left in situ to avoid animals seeking refuge inside (particularly Otter).
- Trenches and pipes should also be checked prior to daily works commencing.

Enhancement of the site to attain a net gain for biodiversity will include:

- ☐ Planting of native shrubs and trees in foraging areas & around boundaries
- ☐ Protection of both sides of the hedgerows at least within the overall foraging area, from other grazing animals.

The overall planting/relocation of hedges will be enhanced & improve the connectivity & 2m buffer zones will be left on the field side of all hedgerows. These areas will only be cut every 2 years or less if possible.

Given the small scale of this development it is not believed that it will cause an adverse impact on the surrounding landscape.

7 REFERENCES

Bat Conservation Trust (2016) *Bat Surveys for Professional Ecologists Good Practice Guidelines 3rd ed.* BCT

Bat Conservation Trust (2012) *Bat Surveys Good Practice Guidelines 2nd ed.* BCT

Mitchell-Jones A.J. and McLeish A. (2004) *Bat Worker's Manual* Joint Nature Conservation Committee

Mitchell-Jones A.J. (2004) *Bat Mitigation Guidelines* English Nature

JNCC (1993). *Handbook for Phase 1 Habitat Survey. A technique for environmental audit* (reprint). Joint Nature Conservation Committee, Peterborough.

Stace, C (2010). *New Flora of the British Isles 3rd edition*. Cambridge University Press

CIEEM (2016) *Guidelines for Ecological Impact Assessment in the UK, 2nd edition*

CIEEM (2015) *Guidelines for Ecological Report Writing*

jncc.defra.gov.uk/page-5705 (2015) UK BAP Priority species and habitats

Google Earth aerial photographs

www.powys.gov.uk/.../biodiversity...powys/local-biodiversity-action-plan Local biodiversity action plan - Powys County Council

www.biodiversitywales.org.uk Wales Biodiversity Partnership

Bright, P., Morris, P., Mitchell-Jones, T. (2006) *The Dormouse Conservation Handbook 2nd edition* English Nature

Appendix 1

Reasonable Avoidance Measures Method Statement for tree felling

The Oak tree within the eastern hedgerow will need to be felled to accommodate the new access drive/parking/turning area. The following is a Reasonable Avoidance Measures (RAM's) Method Statement for this work so that it doesn't have an adverse effect on any protected species, in particular roosting bats & nesting birds. Advice on the procedures is set out below.

Method statement using RAM's

The following Method Statement sets out the reasonable avoidance measures required to avoid:

- i) killing, injuring or disturbing bats or birds
- ii) destroying, damaging or causing deterioration of a resting place used by bats or birds

Legislative Background

All British bats are classed as European Protected Species under the Conservation of Habitats & Species Regulations 2010 (as amended) and are also listed under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). As such, both bats and their roosts (breeding sites & resting places) receive full protection under the legislation. If proposed development work is likely to result in an offence, a licence may need to be obtained from Natural Resources Wales which would be subject to appropriate measures to safeguard bats.

Birds are variously protected under European and UK law, with many also UK or local priority species. Priority status is largely based on the list of Red and Amber species, drawn up under The Birds of Conservation Concern Initiative (Eaton et al, 2009). Birds on the red list are of high conservation concern within the UK, while those on the Amber list are of medium conservation concern. With the exception of Schedule 1 listed bird species, which receive a higher level of protection against disturbance, all common species of bird are protected during their breeding activities under the Wildlife and Countryside Act 1981

Essentially, this makes it an offence to intentionally take, damage or destroy the nest of any wild bird whilst that nest is occupied or being built; intentionally take or destroy the egg of any wild bird.

Proposed Methodology

The Oak tree proposed to be felled will be subject to an inspection by the ecologist from the ground immediately prior to any works being undertaken. This will involve checking for any bat roost features & inspecting any crevices or foliage (i.e. ivy) with an endoscope where possible. Once the inspection surveys confirm the tree has a low suitability for bats or birds, the tree will be felled taking reasonable avoidance measures. In particular the following methodology will be employed:

- A toolbox talk by the ecologist should be undertaken with the contractors before the tree work begins.
- The erection of 4 Double crevice bat boxes on trees/buildings which are not part of the proposed works should be undertaken prior to any works as compensation and also in the unlikely event where any bats are disturbed, these can be placed within the boxes by the licensed ecologist. 4 Bird Boxes will also be erected prior to any works commencing.
- The tree will be felled during September/October to avoid maternity and hibernation seasons when bats are most vulnerable to disturbance & avoiding nesting birds.
- The ecologist will be present on site to advise on felling methods and what to do in the event of bats being encountered.
- Contractors undertaking work on the tree should undertake a climbing inspection and look for bats and their field signs such as black streaks below a hole, crack or split in the tree; droppings in the entrance of any hole or crack; urine stains; smooth edged entrance holes with dark fur oil staining as well as actual scratch marks on entrance holes.
- The contractors should avoid cutting through any cavities in a tree section or in a tree branch, and instead cut well above and below the cavity.
- Wherever possible, branches and trunk sections with any cavities or splits, as well as dense ivy covered trees should be lowered carefully to the ground, so as to avoid injuring or killing any hidden bats.
- Ideally these trees/branches should be left overnight so that any potential hidden bats can leave.
- Bark plates, especially large sized plates should be removed by hand where this is possible. This will allow for the inspection for any bats hiding behind these plates.

Conclusion

This report sets out a methodology for soft felling of the tree to ensure safeguarding of bats, in the unlikely event that any are present when works are undertaken September/October. It is considered that the methodology set out in this report represents a suitable precautionary approach in line with Good Practice Guidelines and Legislation, such that the bats will be adequately safeguarded during works.

Appendix 2

Proposed Hedge Removal Sites



Area of hedgerow to east to be translocated (red) Oak tree Site for translocation (blue)



Existing access points to be "stopped up" (red) New access site (blue)

Appendix 3

Methodology for hedge translocation

Generic advice

- When moving a hedgerow, all works must take place in the dormant season (late August to March). It is generally considered advisable to coppice and/or trim the shrubs prior to translocation (Anderson and Groutage 2003). This also avoids the bird nesting season and, where applicable, the active period of the Dormouse life cycle. A height of 30cm – 50cms is suggested (J.Box 2010).
- Periods of adverse weather conditions (most notably freezing temperatures) should be avoided.
- When moving a hedge, the shrubs should be lifted with the utmost care and placed immediately into a prepared trench, which is to be their final destination. They should not be stored for any length of time.
- Hedgerows should be surveyed by the ecologist prior to translocation and the hedgerow should be monitored after it is moved. Shrubs, which do not show any young growth by the second spring after translocation, should be replaced
- Note: more than one type and/or size of excavator bucket may be required.

Site specific

Existing hedgerow

The hedgerow removal immediately adjoins the eastern residential curtilage of Gate Farm. This hedgerow was surveyed on 14th May 2021 and the section to be removed is 25m in length. The hedge is trimmed to a height of around 2m but will need to be trimmed/coppiced in October 2021 to a height of 50cm or lower if possible (see generic advice). The period for moving the hedgerow is late August – March, this could be extended through March provided the hedge is checked for birds' nest immediately prior to works. After that it would need to wait until early August 2022.

Receptor Site (phase 1)

A trench will be dug at the receptor site approximately 1m deep and 1m wide in the middle, with side/s shallow tapered.

The trench should be dug immediately before translocation occurs to prevent drying out.

Soil in the bottom of the trench must be loosened and mixed with some top soil. Use of fertilisers in the trench base has been recommended in some studies.

Moving the hedge

A trench should be dug on the lifting side approximately 1m from the shrub stems i.e. 1m from the centre of the hedge, and to a depth of around 1m. The machine bucket should be “combed” gently down to expose, rather than break, root ends. When large roots are encountered, they should be cut using hand tools (includes chain saws) rather than broken. Some branches may also need trimming between sections.

The hedge shrubs, with associated ground vegetation, are then lifted from the field side with the machine bucket coming in down and behind the coppiced/trimmed stumps, removing 1m long sections at a time (depending on the bucket size).

If root systems penetrate under the road surface at the southern aspect, these will need to be severed at the road edge.

As much of the root ball as possible should be retained. Any large (>15mm) roots broken during lifting should be pruned to leave clean ends.

Receptor site (phase 2)

The sections of hedge should be placed in the receptor trench, maintaining the order of sections and the correct height and line of the shrubs. Only one section should be removed and translocated at a time.

The trench should be back-filled with top soil (ideally from original site position) sufficiently to stabilise the plant, with soil firmed in around the root ball by treading before proceeding to the next section.

Plants could subsequently be coppiced to 2-4cm from ground level to stimulate new growth to come from ground level.

Aftercare

The hedge will need to be protected by fencing on the field side if there are grazing animals. The hedgerow will be fenced on the field side and will be a minimum of 2m from the centre line of the translocated hedge.

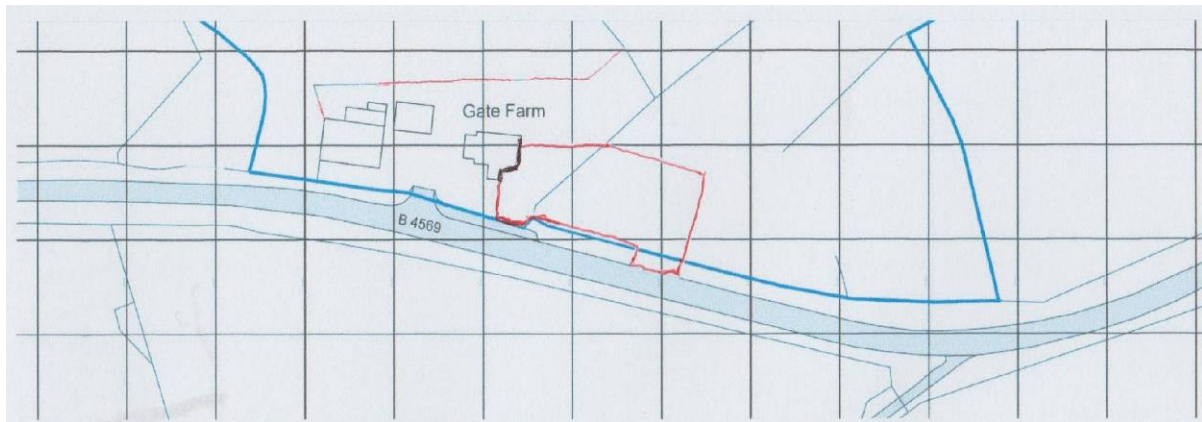
The relocated hedge will likely need watering in dry spells, particularly given that the work will be carried out near the end of the optimum period.

The hedge will be checked in May and July 2023 for new growth, and subsequently in May 2024; this can be carried out by the client.

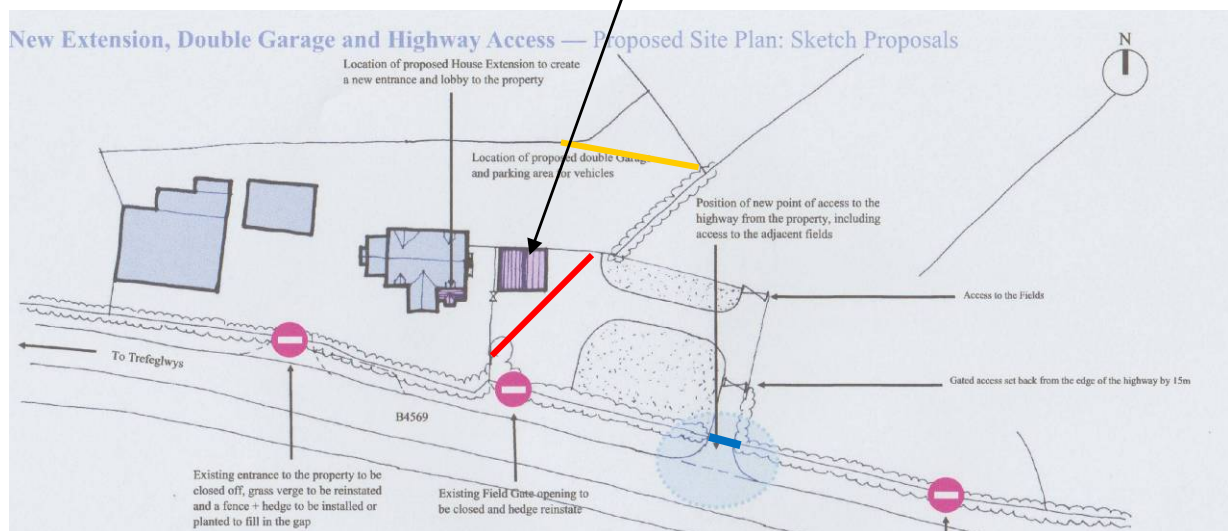
Any replacement of dead plants should be considered in the autumn of 2023 (or in the autumn after two springs); these in turn should be checked for new growth in 2025 and 2026.

Appendix 4

Site plans



Position of new garage



gateways to be blocked with new hedge planting

— Area of hedgerow to be removed/translocated

— Position of translocated hedge

— Proposed new access

Photographs



Eastern hedgerow looking south to north



Eastern hedgerow looking north to south



Location of site for translocated hedge



Existing access to be closed with new hedge



Existing gateways to be closed with new hedge



Oak tree



Site for proposed new garage



Proposed location of new lobby



Approximate location in field where new access drive is proposed

Jon Sloan Ecology

27.5.2021

