Rockfield Farm
The Elms
Undy
Monmouthshire
NP26 3EL

A Preliminary Ecological Appraisal By:

Just MAMMALS Consultancy
Limited Liability Partnership

On Behalf Of:

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December 2018

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Status	Signed	Name	Position	Date
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1 Executive Summary

1.1 Agricultural activity has ceased at Rockfield farm, on the edge of the community of Undy, and the land is to be developed for housing. The empty farmhouse, and the redundant farm outbuildings are due for demolition in early 2019. A bat survey of the ten structures was carried out in the summer of 2014 which found no evidence for the presence of bat roosts within the buildings. As that survey was now out of date, and beyond its recognised validity period of two years, a reappraisal of the farm buildings was undertaken in December 2018.

1.2 With the exception of the farmhouse, no evidence of bats was found internally, or on the exterior of the nine outbuildings (Barns 1 – 4, machine shed, Dutch barn, hen house, stables and garage). Of these nine structures, eight are assessed to have negligible potential to be used by bats for day roosting or hibernation purposes. The outbuildings remain in the same condition as when surveyed in 2014, when only light bat foraging activity was occurring: the presence of bat roosts is still assessed to be unlikely. One outbuilding, the garage, is assessed to have low to moderate hibernation potential and special recommendations are made concerning the timing of the removal of this structure, to avoid the bat hibernation period and the potential for bats to be killed.

1.3 A small number of old bat droppings (4) were found in the loft space of the house. This building remains intact although recent new gaps have been created whilst testing the dwelling for the presence of asbestos. The evidence of the bat droppings was not conclusive as they were old and found scattered within the central part of the loft: they are possibly a consequence of an occasional bat presence, but the loft is swathed in great curtains of cobwebs. This building retains moderate potential to be a bat roost, and to comply with national guidelines, it will need to be assessed in the summer active period of May to September with a minimum of two dusk bat emergence/activity observations. Recommendations are made in this report to this effect.

1.4 All bats are protected under the provisions of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), whilst their roosting places are also protected under the provisions of the Conservation of Habitats and Species Regulations 2017. Bats are highly mobile and opportunistic animals: if a bat is found, then all work must stop and advice must be sought from Natural Resources Wales, or failing this, a licenced bat ecologist. If work continues without seeking advice, then this may constitute an offence under the Wildlife and Countryside Act 1981 (as amended).

2 Introduction

2.1 The site of Rockfield farmstead is to be cleared and re-developed for residential housing. Plans are being prepared for the site clearance work under demolition order DM/2018/01606 dated the 19th of October 2018.

2.2 Previous assessment for bats had been undertaken at the property in 2014, including day time appraisal and dusk emergence/activity observations, carried out by staff from the Just Mammals Consultancy LLP. No bats were found at that time, but because of the passage of time between that survey and the intention to demolish the structures, it was deemed appropriate to carry out another day time visual assessment of the property. The Just Mammals Consultancy LLP were again engaged to undertake the latest survey. Details of the site location are given in Table 1 below.

Table 1: Survey Site Details

Address	Grid Reference	Altitude
Rockfield Farm, The Elms, Undy NP26 3EL	ST 4376 8770	13m Above Ordnance Datum

2.3 Objectives of the assessment effort were to:

- determine if bats are present in, or have the potential to roost in the building;
- consider if there will be impacts on bats from the proposed demolition works;
- gather sufficient information to be able to make appropriate recommendations.

3 Surveyor Experience

3.1 The surveyor and author of this report, is Diane Morgan, an experienced, Natural Resources Wales (NRW) licenced, bat ecologist (78057:OTH:CSAB:2018 expiry 31st January 2020). Diane is a Senior Ecologist with the Just Mammals Consultancy LLP. Assisting with the survey was Phoebe Williams, a Trainee Ecologist with the Just Mammals Consultancy LLP.

4 Survey Methodology

4.1 Assessment involved a day time visual assessment of the ten structures, both externally and internally, seeking signs of the presence of bats. External survey involved examining outer surfaces from the ground and looking for signs of bat presence, including bat faeces (droppings). A high-powered lamp and close focusing monocular were used to examine potential access and roosting areas. Any gaps or crevices were inspected as closely as possible. The context of the buildings within the surrounding landscape was also assessed.

4.2 Internal survey searched for bats or the remains of dead bats (including dead juveniles and babies, which might indicate the presence of a maternity site), and signs of bats including bat faeces (droppings) on floors, ledges, walls, stored items and other surfaces. The roof structures and loft voids were inspected. The ridge areas, which are a favoured roost location, were checked for live bats. Beneath this line, a careful search for droppings and insect parts was conducted. Urine staining, both on paintwork and window glass or staining on timbers caused by oil from bat fur were also searched for, as well as discarded fragments of insects such as moth wings.

5 Site Description

5.1 A full site description is provided in the survey report of 2014. A summary of key features of the ten structures is shown below in Table 2. A site layout plan is provided in Figure 2 (see Appendix II), which shows the position of the farm buildings in relation to each other.

Table 2: Description of Site Buildings

Building	Description
Farmhouse	Brick building with walls covered with cement render painted cream. A pitched timber frame roof covered with concrete tiles and lined with a bitumen lining membrane. Two brick chimneys
Barn 1	Modern, metal framed livestock shed with walls of concrete block and upright timber planking and corrugated iron panels. Asymmetrical pitched roof covered with corrugated cement fibre sheeting. Ivy at north-west corner
Barn 2	Former milking parlour: brick and concrete block walls with metal framed pitched roof covered with corrugated cement fibre sheeting. It contains a series of ground floor stables and a small mezzanine area. Internal links to Barn 3
Barn 3	Storage barn with walls of concrete block and corrugated iron sheeting with a pitched roof covered with corrugated cement fibre sheeting. Internally one large open space with internal links to Barn 2
Barn 4	A modern livestock shed very similar to Barn 1
Machine shed	Attached to the east wall of Barn 4, this open-fronted structure has a timber frame and a mono pitch roof. End walls and the roof covering are corrugated tin
Dutch barn	Open fronted barn with layer of old hay across the floor
Hen house	Small timber structure
Stables	Built in timber with a pitched roof covered with bitumen sheeting, containing two stable compartments
Garage	Partially collapsed: open fronted at north-east end, a timber framed structure with wall and roof of corrugated iron sheeting. South-west end wall set into a bank of earth is made of stone with two arched recess areas

6 Desktop Study and 2014 Survey Review

6.1 The bat survey in 2014 found no evidence for the presence of bat roosts. A small number of gaps were noted around the house roof with gaps below lead flashing around the base of the chimney, and two missing roof tiles; but no emergence activity was noted in the dusk observations in July and August 2014. Elsewhere in the farm buildings, *circa* five bat droppings were found scattered inside Barn 2, which were attributed to bat foraging behaviour which was recorded during the two observations. A small number of moth and butterfly remains were also found scattered inside Barn 2, but there was no sign of a bat feeding perch. This building has numerous open doorways and windows and an internal link to Barn 3. Bats were also seen to fly into and forage inside Barns 1 and 3. No emergence behaviour was noted from Barn 4, the Dutch barn, machine shed, hen house, stable or garage.

6.2 No part of the site is within a statutory designated site of conservation value (e.g. a Site of Special Scientific Interest (SSSI); Special Area of Conservation (SAC); Special Protection Area (SPA); or National Nature Reserve (NNR)). A search within a buffer zone of 2km around the site revealed four SSSI's to be in the surrounding area: Gwent Levels – Magor and Undy, Gwent Levels – Redwick and Llandevenny, Magor Marsh are to the south of the site forming part of the Gwent Levels, a small sliver of Penhow Woodlands SSSI is within the 2km radius to the north-east of the site.

7 Survey Constraints

7.1 There were no particular constraints encountered during the internal/external survey of December 2018. Full access was provided and achieved.

8 Survey Results

8.1 A single day time visit was made to the site on Tuesday the 11th of December 2018. Table 3 below summarises the details of the conditions under which the survey was undertaken. Wind speeds shown employ the Beaufort scale.

Table 3: Summary of Survey Activity and Weather Conditions

Survey Type	Date	Timing	Weather Conditions
Day time visual inspection (DM, PW)	11/12/2018	09.50 – 12.30 hours Greenwich Mean Time (GMT)	Air temperature: 7°C Cloud cover: 8/8 oktas Wind speed: F2, light breeze Conditions: Dry
Surveyors	Diane Morgan (DM), Phoebe Williams (PW)		

8.2 Survey commenced with an inspection of the house loft, which found no live bats but four old bat droppings were found on the floor of the roof space. They were small and pipistrelle sized and dispersed within the central part of the loft. All the bat droppings were crumbled to check they were indeed bat droppings, as mouse droppings were widespread on the floor of the loft. A large wasp nest (*Vespula vulgaris*) was noted inside the loft against the southern eaves close to the porch. The external inspection of the house revealed no evidence of bats, no bat droppings or staining – nothing to indicate the presence of a bat roost. However, as noted in 2014, features of the structure offer potential for bat access and roost locations. These include:

- gaps under lead flashing at the base of the western chimney;
- gaps around the ridge area of the roof;
- raised and missing roof tiles.

8.3 Holes created in the house wall for the recent asbestos survey now add a series of additional access points and roost opportunities for bats and other creatures. The house is assessed to offer a moderate level of potential for bats, and the four bat droppings indicate some presence but it is not clear what they might signify.

8.4 Internal and external inspections of the remaining nine outbuildings found live bats and no evidence for the presence of bats. With the exception of the garage, all the buildings were assessed to offer negligible potential to be bat roosts. The eight structures (Barns 1 – 4, the machine shed, Dutch barn, hen house and stables), do not contain the features which bats typically exploit for roosting purposes. The survey in summer 2014 noted that bats were flying into the open internal spaces of the barns for early evening foraging and this usage is likely to continue. Roosting behaviour in these eight outbuildings is considered unlikely.

8.5 A feature of the semi-derelict garage structure is considered to have low to moderate hibernation potential for bats. The south-west end stone wall of the garage which is set against an earth bank contains two arched recesses partially hidden behind a panel of corrugated iron. It is the sort of feature that lesser horseshoe bats will utilise during mild winter weather. Cavities in the stone work could also be used by other bat species as a hibernation location. A summary of the survey findings are presented in Table 4 below.

Table 4: Summary of Survey Findings

Building	Survey Results	Recommendations
Farmhouse	Four old bat droppings in loft	Postpone demolition until additional ecological assessment can be completed. Two summer dusk observations for bats required in 2019
Barn 1	No evidence or features of interest	Demolish as planned in early 2019
Barn 2	No evidence or features of interest	Demolish as planned in early 2019
Barn 3	No evidence or features of interest	Demolish as planned in early 2019
Barn 4	No evidence or features of interest	Demolish as planned in early 2019
Machine shed	No evidence or features of interest	Demolish as planned in early 2019
Dutch barn	No evidence or features of interest	Demolish as planned in early 2019
Hen house	No evidence or features of interest	Demolish as planned in early 2019
Stables	No evidence or features of interest	Demolish as planned in early 2019
Garage	End wall built in stone against an earth bank: recessed arches and crevices in the stonework are features of hibernation potential	Low - moderate hibernation potential. Delay demolition to the active summer period of May 2019 onwards. Dismantle structure following a visual check of stone wall and arched recesses

9 Discussion and Conclusions

9.1 With regard to eight of the outbuildings at Rockfield farm referred to in this report as Barns 1 – 4, the machine shed, Dutch barn, hen house, and stables, the outcome of the December 2018 ecological assessment concludes that the proposed demolition of these structures can proceed as planned in early 2019. No evidence for the presence of bats was found and these buildings do not contain the sort of features which bats typically seek for their summer roosts or hibernation locations. These buildings offer negligible potential and are unchanged from 2014 when they were previously examined.

9.2 The house has features that are often used by bats for summer day roosts, in particular pipistrelle and brown long-eared (*Plecotus auritus*) species. This building is assessed to offer a moderate level of potential, due to gaps around the roof structure and the features and materials of the roof. In accordance with national guidelines, additional assessment is recommended for this building. Demolition will need to be postponed until summer activity observations can determine with a greater degree of certainty whether the building is a bat roost or not. The presence of the four old bat droppings is puzzling as these do not signify any distinctive presence by bats.

9.3 Presence of bats at all times of year was considered for this assessment and the partially collapsed garage is assessed to have low to moderate potential to be used by hibernating bats. The stone wall against the earth bank at the south-west end contains two arched recesses. These sorts of features are used by hibernating lesser horseshoe bats and crevices in the stone work have the potential to conceal other bat species. Without dismantling this feature, it is impossible to know if bats are present, and therefore a precautionary approach is recommended below so that this feature is opened up and dismantled in May 2019 at a time when bats are unlikely to make use of such a structure.

10 Recommendations

10.1 All bats are protected under the provisions of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), whilst their roosting places are also protected under the provisions of the Conservation of Habitats and Species Regulations 2017. With the exception of the house, the absence of any evidence for the presence of bats means it is not expected that bats will be encountered during the proposed demolition of eight of the structures identified above in section 9.1. However, being highly mobile and opportunistic animals, if a bat is found, then all work must stop and advice must be sought from NRW, or failing this, a licenced bat ecologist. If work continues without seeking advice, then this may constitute an offence under the Wildlife and Countryside Act 1981 (as amended).

10.2 Features of the house result in the need for additional targeted assessment to be conducted. Two bat activity observations (at dawn or dusk) must be carried out a time of year when bats are active and have returned to their regular, favoured roost sites. The two observations can be undertaken in May but must be a few weeks apart for the survey results to be robust and not provide a single snapshot of the bat activity at the house.

10.3 Removing the corrugated iron sheeting from the walls and roof of the partially collapsed garage and destroying/dismantling the stone wall feature at the south-west end must be done at a time of year avoiding the bat hibernation period of November to March inclusive. This work can be done once stable warm weather arrives such as would be typical of May. Prior to the removal of the stone wall, the wall and the two arched recesses must be visually checked closely to ensure bats or other wildlife are not present. This work must be completed in the summer and before the end of September to avoid potential transitional bat usage in the months of October and April.

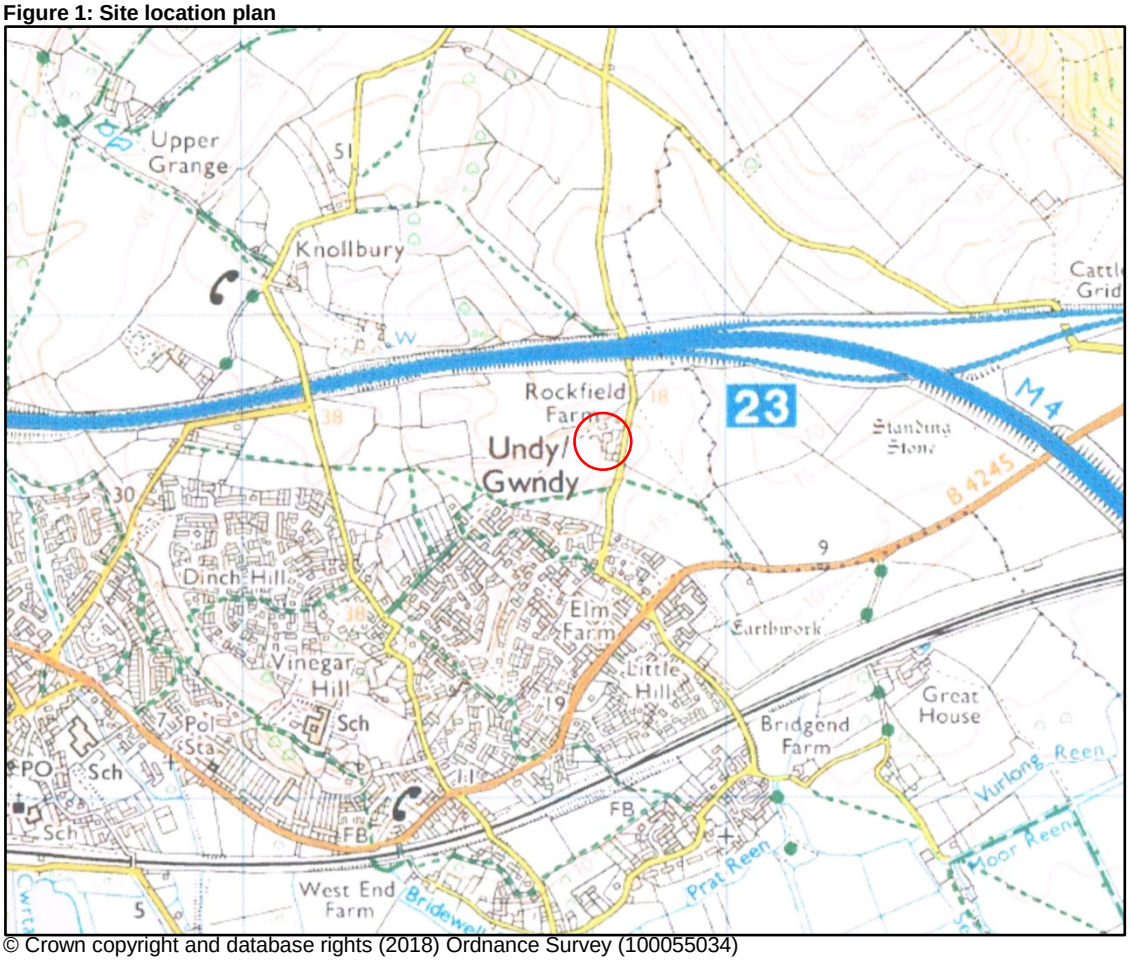
11 References

Collins, J. (Ed.) (2016). '*Bat Surveys for Professional Ecologists – Good Practice Guidelines, 3rd Edition.*' Bat Conservation Trust, London

Ninnes, R. (2015). '*NRW Approach to Bats and Planning*', Natural Resources Wales, Bangor

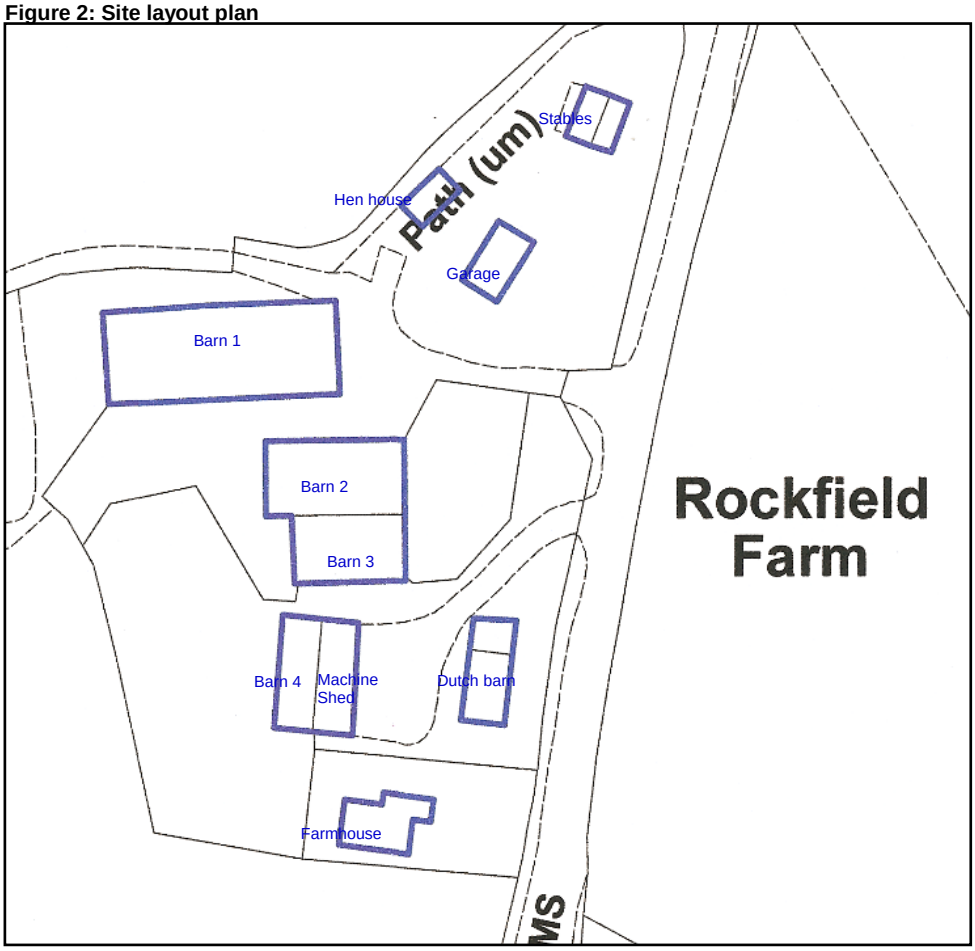
Appendix I: Site Location Plan

Figure 1: Site location plan



Appendix II: Site Layout Plan

Figure 2: Site layout plan



Appendix III: Site Photographs 2018

Plate 1: Farmhouse (south elevation)

Plate 2: Gaps around farmhouse roof

Plate 3: Farmhouse loft looking west

Plate 4: Farmhouse loft looking east

Plate 5: Barn 1

Plate 6: Interior of Barn 1

Plate 7: East end of Barns 2 and 3

Plate 8: North elevation of Barn 2

Plate 9: Interior of Barn 2

Plate 10: Interior of Barn 3

Plate 11: Barn 4

Plate 12: Interior of Barn 4

Plate 13: East side of machine shed (Barn 4 behind)

Plate 14: Dutch barn

Plate 15: Stables

Plate 16: Hen house

Plate 17: Garage

Plate 18: South-west end wall of the garage

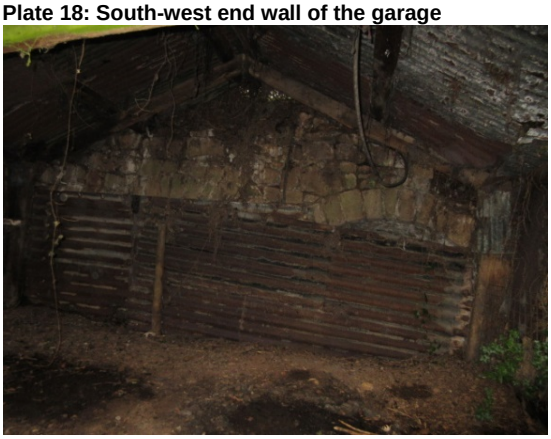


Plate 19: Arched recesses in south-west wall of garage

Appendix IV: Relevant Legislation

All species of bat in Britain, and their places of rest are protected under the provisions of the Wildlife and Countryside Act 1981 (WCA), Section 9(1), 9(4)(a) and 9(4)(b) as amended by Schedule 12 of the Countryside and Rights of Way Act 2000. Further protection is afforded by the Conservation of Habitats and Species Regulations 2017. In relation to structures used by bats for shelter or protection (i.e. roosts), this legislation makes it an offence to either intentionally or recklessly damage, destroy or obstruct access to any site used by bats, whether bats are present at the time or not, or to intentionally or recklessly disturb bats within a roost.

Infringements under this legislation include building demolition, removal of hollow trees, blocking, filling or installing grills over old mines or tunnels, building alteration or maintenance work, re-pointing of stone walls, getting rid of unwanted bat colonies, re-roofing, remedial timber treatment, re-wiring or plumbing in roofs, treatment of wasps, bees or cluster flies (Mitchell-Jones, 1992; Childs, 2001). Greater horseshoe bat, lesser horseshoe bat, Bechstein's bat, greater mouse eared bat and barbastelle are included in Annex II of the Conservation of Habitats and Species Regulations 2017 and hence require special protection.

Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/1991 (i.e. £5000 in April 2001) per roost or bat disturbed or killed, or to both. Bodies corporate and their directors/secretaries are liable for offences under the 2017 Regulations and the WCA. Additionally, where such an offence results in the offender benefitting in a monetary form from the illegal action, confiscation or civil recovery of the proceeds can occur under the Proceeds of Crime Act 2002.

It is sensible to assess as soon as possible if bats are present at potential sites for development – preferable before the land is acquired. In some cases, the period required for adequate survey work may span more than one calendar year. If a development, including demolition or change of use, is likely to impact on bats and their roosts then a licence will usually be required. Adequate survey results are a necessary input to any licence application. If bats are not found until late in the development stage this may result in delays while a licence is sought and even in offences being committed.

The law with respect to dwellings and other structures is applied equally. Where disturbance is deemed likely to have a significant effect on bats to survive, breed and rear their young or will affect the local distribution and abundance of the species, a European Protected Species licence issued by Natural Resources Wales. A licence application must demonstrate that the development will not be detrimental to the maintenance and conservation status of the species concerned.

This explanation must be regarded only as a guide to the law. For further details, reference must be made to the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017, and the Countryside and Rights of Way Act 2000.

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This preliminary ecological appraisal report is valid for a period of two years from the front cover date.

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