



WLYFA, BOWERS ROAD, ACREFAIR, LL14 3TF: BAT AND NESTING BIRD SURVEYS

DATE	ECOLOGIST	APPROVED	VERSION	COMMENTS
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Executive Summary

Site	Bowers Road, Acrefair, LL14 3TF GR: SJ 27680 43326
Surveyors	PRA conducted by Rhian Hughes and Joe Franklin Emergence survey conducted by Tony Medcalf and Joe Franklin
Proposed work	Total removal of the current bungalow and outbuilding. Replaced by 2 new build bungalows with parking facilities.
Area/structures affected	The entire plot and existing buildings.
Type of survey	Preliminary Roost Assessment and two emergence (28/06/2021 and 21/7/2021)
Main results of survey	• Several potential bat features including gaps between soffits and the exterior wall and gaps under dislodged tiles. • No bats were seen to have emerged from the building. • Foraging and commuting activity was observed. Species included: Common Pipistrelle, Soprano Pipistrelle, Noctule, and Long Eared. • Evidence of nesting birds was found.
Survey conclusions	• Bats were not seen emerging from the building at any point during the 2 surveys carried out. • The surrounding habitat is being used by bats to forage and commute. • Due to this, mitigation, and Reasonable Avoidance Measures (RAMs) have been provided and must be followed at all times. This is to reduce the potential for disturbing bats and other species using the habitat. • Some bird nesting habitat and potential bat roosting habitat will be lost in the works and will be compensated for, whilst also enhancing the site for these species. • No license will be needed, however, if bats are encountered all work must stop immediately.
RAMs and Mitigation	• As there was potential for bats within the building, at least one emergence survey will be required between May – August (Inclusive) • RAMs will always be followed during the works, including lighting and timing of works. • Mitigation will be in the form of bat boxes and dark zones. • Bird boxes will be erected on trees around the site. • Habitat enhancement will include tree/hedge planting.

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1.0 Introduction

- 1.1 Enfys Ecology Limited were commissioned by Mr James Taylor, Taylor Green Homes to carry out a Preliminary Roost Assessment (PRA), and bat emergence surveys of Wylfa, Bowers Road, Acrefair, Wrexham, LL14 3TF. The proposed works involve the demolition of the existing building and outbuilding.
- 1.2 The surveys were commissioned to determine whether the proposed works would affect protected species, specifically bats and nesting birds. The survey work to inform this report was carried out over June and July 2021. This report is valid for a period of one year from the last date (July 2021) in accordance with best practice.
- 1.3 All British bats (and roost sites) are protected under the Wildlife and Countryside Act (WCA) 1981 (as amended). In addition, all bats are classified as European Protected species by The Conservation of Habitats and Species Regulations 2010 (as amended). Under this legislation, it is an offence to kill, injure or disturb a bat, or to destroy any place used as a shelter by bats.
- 1.4 All birds (and their nests) are legally protected under the wildlife and countryside act 1981 and it is an offence to intentionally take, damage or destroy the nest of any wild bird while it is in use or being built (as well as kill or injure wild birds of their eggs).
- 1.5 Should evidence of bats be found and it is deemed likely that the proposed works will disturb them; a licence from Natural Resources Wales (NRW) must be obtained before any work may proceed.

2.0 Site Description

2.1 Survey area

2.1.1

The site contains a bungalow and small outbuilding in an urban environment in the village of Acrefair. The nearest town is Llangollen, which lies approximately 6.5km to the west. The property is set just off Cae Bedw, with the main parking area situated to the north of the property. The rest of the plot consists of concrete slabs to the south and red tiling to the west. The property is surrounded by other houses on each boundary, and there is a small group of trees to the west of the property. The next closest building is within 20 metres. The survey area is shown in Figure 2.1.



FIGURE 2.1. THE SITE AND SURVEYED BUILDING (RED). BASE IMAGE © GOOGLE 2021

2.1.2 The wider surrounding area consisted of pastoral farmland to the north, northeast, and west (185-260 metres away). The north-eastern farmland contains a small body of water (400 metres away). The rest of the farmland contain small areas of woodland. The woodlands are connected in most cases, however, there are sections of missing hedgerow in the northern pastures. This is shown in Figure 2.2 below.

To the east, the environment remains consistent with the immediate area shown above in Figure 2.1. The south is mainly built up with residential properties and gardens with woodlands to the southeast and southwest at approximately 120m and 205m away

respectively. This is shown in Figure 2.2 below. There are adequate features for bats to use for commuting to and from the site, such as the roads, sections of woodland, and hedges.



FIGURE 2.2. THE WIDER LANDSCAPE - THE SURVEY SITE IS SHOWN BY RED CIRCLE. BASE IMAGE © GOOGLE 2021

2.2 *Designated Sites*

- 2.2.1 The Llangollen canal, which is a World Heritage Site, is approximately 921 metres away from the property at its nearest point.

3.0 Methodology

3.1 *Preliminary Roost Assessment*

- 3.1.1 The building was assessed for any signs of bats; these include droppings, feeding remains, and other indicative marks, plus features of potential use to bats such as crevices, cracks and other holes, and any potential access points into the building. High powered torches were used to inspect any identified features, and an endoscope was used to investigate any gaps or crevices, where appropriate. Both the exterior and interior of the buildings were examined.

3.2 *Survey Details*

- 3.2.1 The external and internal building inspections were carried out on the 28th of June 2021 by Rhian Hughes (Bat Licence No. S087351-1), and Joe Franklin . Potential roost assessments were carried out following the guidelines set by the Bat Conservation Trust, 'Bat Surveys –

Good Practice Guidelines' (Collins, J. 2016). Photographic evidence was taken where necessary.

3.3 Dusk Emergence Survey

- 3.3.1 Two emergence surveys were carried out; the building was monitored by two surveyors on both of the survey; surveyors were positioned to be able to observe all sides of the building that showed potential for bats, using Anabat scout and express bat detectors. Records were taken of any bats observed emerging from the buildings, and of any other bat activity taking place in the area during the surveys. The bat call data was analysed using Anabat Insight Software with the BatClassify plugin set at 80% confidence to auto analyse the bat calls; all of the calls were then reviewed and re-assessed as required. The surveys began approximately half an hour before sunset and continued for 90 minutes after sunset. The emergence surveys took place on the 28th June 2021, and the 21st July 2021 and were carried out by Tony Medcalf and Joe Franklin.

3.5 *Limitations*

Bats are highly mobile animals, and it is possible that they may move into a building after the surveys had occurred. Therefore, absence of bats cannot be absolutely guaranteed. The surveys were carried out in June and July 2021, which is within the appropriate survey window for building survey as per the 2016 bat survey guidelines.

It did rain during the first survey, however the rain was intermittent and bat activity was still recorded so the survey is still considered to be valid.

4.0 Survey Results: Preliminary Roost Assessment, and Emergence Survey

4.1 *Building Description*

- 4.1.1 The building proposed for works is a bungalow (approx. 13m x 7.5m x 5m high with a small conservatory to the south (approx. 7.5m x 1.5m x 2m high) and a small outbuilding to the east (approx. 5m x 2.5m x 2m high). The outbuilding was constructed of galvanised metal sheeting for the roof, wooden doors, and an asbestos like material for the walls. The loft space of the bungalow was in two sections, separated by an internal wall with a small hole in (approx. 50cm x 50cm). The basic layout of the building is shown in Figure 4.1 and the details of the external and internal loft space features of the main house and extension are described in Table 4.1.

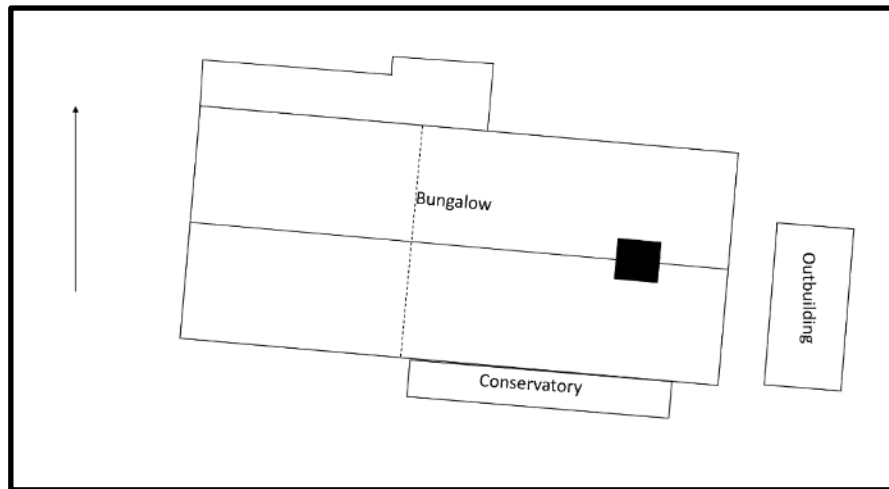


FIGURE 4.1: BASIC PLAN OF BUILDING – SHOWING BUNGALOW, CONSERVATORY, DIVIDING WALL IN THE LOFT AND OUTBUILDING (NOT TO SCALE)

TABLE 4.1: BUILDING DESCRIPTIONS

Main Bungalow			
External Description	External Photo	Loft space Description	Loft Space Photo
Walls were split faced concrete blocks, with gable ends rendered with pebble dash. Concrete block porch with bitumen roofing felt on northern elevation. Double pitched roof with slate tiles and ridge tiles; one red brick chimney. Plastic fascias, soffits and barge boards.	NORTHERN ELEVATION 	Entire loft space approx. 13m x 6.3m x 1.7m high. Gable walls clad in fibre cement board. Wooden roof frame and old insulation across floor.	
	SOUTHERN ELEVATION 		

Wylfa, Bowers Road; Bat and Nesting Bird Surveys

Main Bungalow	
Loft Space Description	Loft Space Photo
Thin dividing wall between loft spaces. Small approx. 50cm x 50cm access hole. Loft space through dividing wall approx. 5.5m x 6.3m x 1.7m high. Gable ends were exposed breeze block. Wooden frame and flooring, with a thin layer of insulation between joists. Slates lined with what appears to be a breathable membrane.	

Wylfa, Bowers Road; Bat and Nesting Bird Surveys

Outbuilding	
External Description	External Photo
Asbestos like material used for external walls Painted wooden doors Galvanised metal sheet roof	 The 'External Photo' column contains three photographs of an outbuilding. The top-left photo is a close-up of the wall, showing a grey, textured surface (asbestos-like material) and a green-painted wooden door. The bottom-left photo shows the full outbuilding, which has a green-painted wooden door and a galvanised metal sheet roof. The right photo is a side view of the outbuilding, showing the green-painted wooden door and the grey, textured wall.

4.2 PRA Results

4.2.1 The main house had several potential bat features including gaps under slate gaps under the barge boards on the northern, and southern elevations, and gaps between the soffits and exterior wall on the western gable. The locations of potential features and evidence of bats are shown in Figure 4.2 and are described in Table 4.2.

The outbuilding had negligible potential to provide roosting sites for bats.

4.2.2 There was no evidence that bats were using the loft space, or any other rooms in the building.

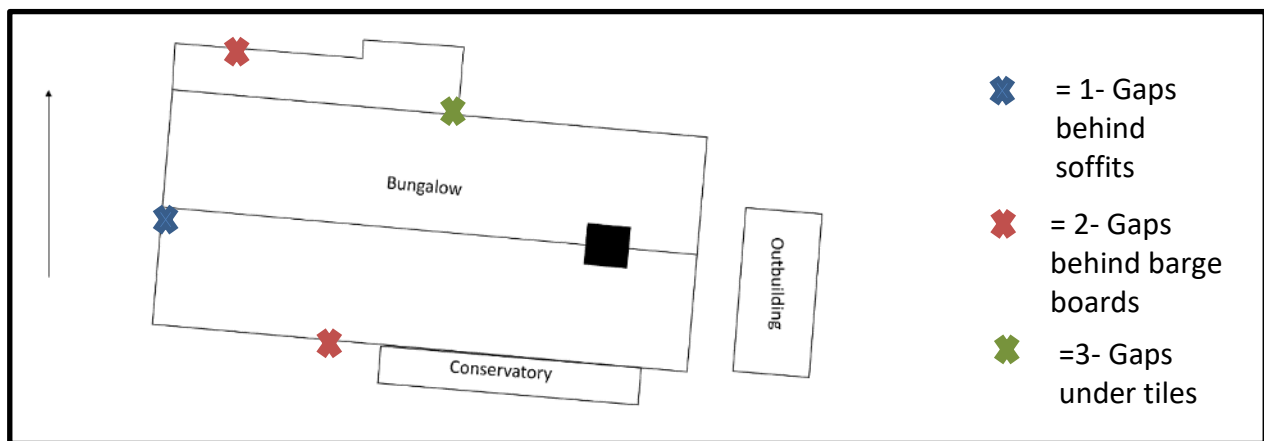


FIGURE 4.2 PLAN OF BUILDING (NOT TO SCALE) AND LOCATIONS OF POTENTIAL BAT FEATURES (NUMBERS RELATE TO FEATURES IN TABLE 4.2 BELOW)

TABLE 4.2 POTENTIAL FEATURES FOR BATS AND BIRDS (FEATURE NUMBERS REFER TO FIGURE 4.2)

Feature	Description	Example Photos
1	Gaps between soffits and western gable end wall	
2	Gaps behind barge boards	 
3	Gaps under slates	

Feature	Description	Example Photos
Internal Loft Space	Cavity behind the gable wall	

4.3 Emergence Survey Results

- 4.3.1 As there were potential roosting features found in the PRA survey; and the surrounding habitat could support bats; two emergence surveys were carried out to determine if, what species, and how, bats were using the site. Table 4.3 provides details of the emergence surveys with timings and weather conditions.

TABLE 4.3 – SUMMARY OF SURVEY DETAILS

Survey Type	Date	Start time	Sunset / sunrise time	End time	Temp. at start	Weather
First Dusk Emergence	28/06/2021	21:12	21:42	23:13	16°C	Dry spells and rain, no wind, >90% cloud cover, had rained prior to survey

Survey Type	Date	Start time	Sunset / sunrise time	End time	Temp. at start	Weather
Second Dusk Emergence	21/07/2021	20:54	21:24	22:54	24°C	Dry, warm, no wind, <20% cloud cover

4.3.2 First Emergence Survey

There was some bat activity throughout the survey. This included commuting and foraging behaviour. The first bat to be recorded was at 21:45, and the last to be recorded was at 23:08. **No bats were seen emerging from the property.** A summary of the results from the first dusk emergence survey are detailed in Table 4.4 below.

Time	Species	Comments
21:45 First Bat	Noctule	Heard not seen (HNS)]
21:50	Noctule	Commuting north to south
21:56	Common pipistrelle	Commuting and foraging
22:46	Long-eared	Seen not heard, commuting
General Activity No bats were seen emerging from the building during the survey. The first bat to be heard was a noctule, there were several noctule calls early in the survey (21:48, 21:5) – they were observed commuting north to south. Common pipistrelles were observed either commuting or foraging along the hedge on Cae Bedw.		

TABLE 4.4 – SUMMARY OF FIRST DUSK SURVEY

4.3.2 Second Emergence Survey

There was some bat activity throughout the survey. The first bat to be recorded was at 21:51, and the last at 22:50. **No bats were seen emerging from the property.** The results from the second dusk emergence survey are detailed in Table 4.5

TABLE 4.5 – SUMMARY OF SECOND DUSK SURVEY ACTIVITY

Time	Species	Comments
21:51 First bat	Common pipistrelle	Flew north towards the large trees behind houses
22:04	Noctule	Heard not seen
22:09	Soprano pipistrelle	
22:10-22:50	Common pipistrelle	Foraging and commuting along front of house
22:39	Brown long eared	Brief brown long eared bat heard
General activity No bats were seen emerging from the building during the survey. Common pipistrelles were recorded foraging and commuting along the front of the house periodically between 22:10 – 22:50, and soprano pipistrelles were also recorded at 22:09, 22:14 and 22:52. A brown long eared was heard to 22:39 Bats were seen along the southern elevation of the property, as well as using the northern hedgerows along Cae Bedw to forage.		

4.5 *Nesting birds*

The bungalow provided suitable habitat for nesting birds and a couple of access points were present. Nesting areas within the loft space were seen during the PRA, as well as sparrows using the soffit boxes. Surveyors were unable to get close to the nest due to awkward entry into the partitioned loft space. General bird chatter was heard during the PRA in both the soffit boxes and loft space. Some large wasp nests were also present.



FIGURE 4.3: NEST MATERIAL NEXT TO BEAM OF THE LOFT



FIGURE 4.4: SPARROW ENTRY POINT UNDERNEATH BARGEBOARD ON NORTHWESTERN CORNER



FIGURE 4.5: SPARROW ENTRY POINT BEHIND SOFFITS ON SOUTHWESTERN GABLE

5.0 Discussion and Evaluation

5.1 *Proposed works*

- 5.1.1 The most current plans at the time of this report propose the demolition of the existing bungalow and outbuilding. There are two new bungalows to be built, with parking facilities parallel to the road running along the southern boundary of the property. The current garden will be lost and re-landscaped – additional planting will take place (see figure 6.2) The trees to the west of the site are outside of the site boundary. The new bungalows will be constructed out of rendered blocks for the walls, reconstituted sandstone quoins for the corner stones, metal finish down pipes and guttering, and concrete roofing tiles. Both bungalows will have a hipped roof, with loft spaces below them. The floor of the loft space will be lined with 300mm of Rockwool insulation. A digital drawing of the finished bungalows is shown in Figure 5.1



FIGURE 5.1. THE PROPOSED PLANS SHOWING THE TWO NEW BUNGALOWS AND PARKING FACILITIES.
BASE IMAGE © NAMAR STUDIO

5.2 *Designated Sites*

- 5.2.1 The Llangollen Canal, which is a World Heritage Site, is within 1km of the site. It is 921 metres away at its closest point. There should be no impact on the designated site, as all proposed work is contained to the existing site boundary.

5.3 *Bats*

- 5.3.1 There was no evidence of bats found within the building. However, there were areas in the loft space; behind the western gable wall, and behind the wooden cladding that were not accessible and potentially useable, and several features around the exterior of the building that could be used by bats. The gaps behind the soffits, bargeboards, and slates could provide roosting areas for crevice dwelling bats.

- 5.3.2 The immediate surrounding habitat had a low suitability for bats. There were only small areas of woodland and hedgerows amongst the other properties. This environment provided some connectivity to the much more favourable wider landscape of pastoral farmland, small body of water, and larger wooded areas. Despite the low suitability of the immediate habitat, bats were observed using it for foraging and commuting.
- 5.3.3 Under the Good Practice Guidelines (Collins, J., 2016) the building is therefore regarded as having a **low potential** for roosting bats; this is defined as '*A structure with one or more potential roost sites that could be used by individual bats opportunistically...but do not provide conditions and/or suitable surrounding habitat to be used on a regular basis or by a larger number of bats (i.e unlikely to be suitable for maternity or hibernation*'; there were features around the exterior of the building that could be used by several individuals of crevice dwelling bats but the building is considered unlikely to be used as a maternity or hibernation roost. Therefore, at least one emergence survey needs to be carried out to determine if bats are using these features – two surveys of the site were carried out due to the unexpected rain during the first survey.
- 5.3.4 No bats were observed emerging from the building during the surveys. There was activity within the site, in the form of foraging around the buildings, by common and soprano pipistrelles throughout the survey; as well as a long-eared sighting and noctules commuting over the site. The emergence results: combined with the absence of bat droppings, feeding signs within the building; consider that the building is not being used by bats to roost.
- 5.3.5 The proposed works will not have a negative impact on the favourable conservation status bat populations within the area. Bats are not using the building for roosting and the intended removal of the existing buildings will not affect the neighbouring foraging grounds for the bats. While there will be potential bat features lost in the works process, these will be compensated for through bat boxes being erected on the new buildings. Furthermore, new hedges will be laid to increase foraging areas.
- 5.3.6 While the completed proposed works will not have a detrimental impact to bats within the area, the actual process of works has the potential to cause some disturbance to bats using the site, and immediately adjacent areas, without mitigation. It is recommended that some Reasonable Avoidance Measures (RAMs) are put in place to reduce any risk or disturbance to bats within the site (Section 6).
- 5.4 *Nesting birds*
- 5.4.1 Sparrows were observed nesting within the building during the PRA and emergence surveys. All birds (and their nests) are legally protected under the Wildlife and Countryside Act 1981 and it is an offence to intentionally take, damage or destroy the nest of any wild bird while it is in use or being built (as well as kill or injure wild birds or their eggs). Any destructive works to the building will be constrained by the bird nesting season or require checks by an ecologist immediately prior to works. Compensation for the loss of bird nesting areas will be

in the form a variety of bird boxes, as well as available space for sparrows, around the site. Full mitigation and compensation will be detailed in Section 6.

6.0 Reasonable Avoidance Measures (RAMs) and Recommendations

6.1 *Bats*

6.1.1 As bats were not found to be using the building **a licence will not be required** for the works. The proposed works can be carried out at any time of year (subject to nesting bird restrictions – section 6.2), but there is likely bat activity within and immediately adjacent to the site and lighting and noise levels could potentially disturb neighbouring bats; to avoid disturbance to bats during the works RAMs should be followed at all times during **all** works.

6.1.2 If, in the unlikely event, bats are encountered at **any point** during any works; all works **must immediately stop**, and a licenced ecologist must be called. A licence will then be required from Natural Resources Wales before works can continue.

6.1.3 *Lighting*

The surrounding habitats of the site are suitable for bats. Therefore, any lighting associated with the building during and after the works has the potential to impact bats and nocturnal birds. To reduce the potential impact of any light spillage on commuting bats during the construction and post construction phases of the development, lighting design for the site (both during the works and of the completed building) should seek to minimise the levels of light along any areas used by bats. The following recommendations should be used when forming the lighting plan for the proposed development (Bat Conservation Trust (2009) and Stone, E.L. (2013)):

General Lighting Guidance

- There must be no lights focussed on the trees and any hedgerows/trees planted as part of the scheme or the area of trees to the west during or after the works. There will be no illumination of the recommended bat and bird boxes (see below) once the works are complete (Figure 6.1)
- Construction should start at least one hour after dawn and finish at least hour before dusk during the summer months (May – August) to prevent light and noise levels disturbing the bats using the site.
- Any external or security lighting should be limited to provide some dark periods during the night. Ideally the lighting should be motion activated, and not stay on longer than one minute, to provide maximum darkness when not needed as well as providing safe lighting conditions of residents when required.

The following luminaire specifications are provided by Bat Conservation Trust and Institute of Lighting Professionals (2018) and must be incorporated into the lighting plan for the proposed development.

- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used.
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.



FIGURE 6.1. PROPOSED SITE WITH DARK BUFFER ZONE (RED AREA), BAT BOXES (BLUE), AND SPARROW TERRACES (YELLOW) BASE IMAGE © NAMAR STUDIO

- 6.1.4 In line with Planning Policy Wales, and following the Environment Wales Act (Section 6) and guidance provided in the recent letter by the Chief Planner in Wales, there is a requirement to ensure that a net benefit for biodiversity is provided in all application for planning in Wales.
- 6.1.5 In order to enhance the site for bats, at least one bat box suitable for crevice dwelling bats will be erected on each building. Inbuilt bat boxes such as the habibat bat box come in a variety of styles to match the exterior wall décor. The bat boxes will go on the southern elevations where possible, just under the eaves – as far away from windows as possible to prevent light spillage onto the entrance – indicative locations have been illustrated in figure 6.1.
- 6.1.6 The landscape plan illustrates planting to take place to the north of plot one and to the east of north and east of plot two (figure 6.2). To increase the overall biodiversity of the site, as well as enhance the site for bats and birds, native shrub and hedge species should be planted. Planting will not only attract invertebrates and provide a food source for birds, bats and other species, but it will increase the connectivity within the site.
- 6.1.7 Species planted within this hedgerow should increase biodiversity and species richness within the site, by including a combination of several different native species such as hazel, holly, black thorn, hawthorn, rowan and cherry.

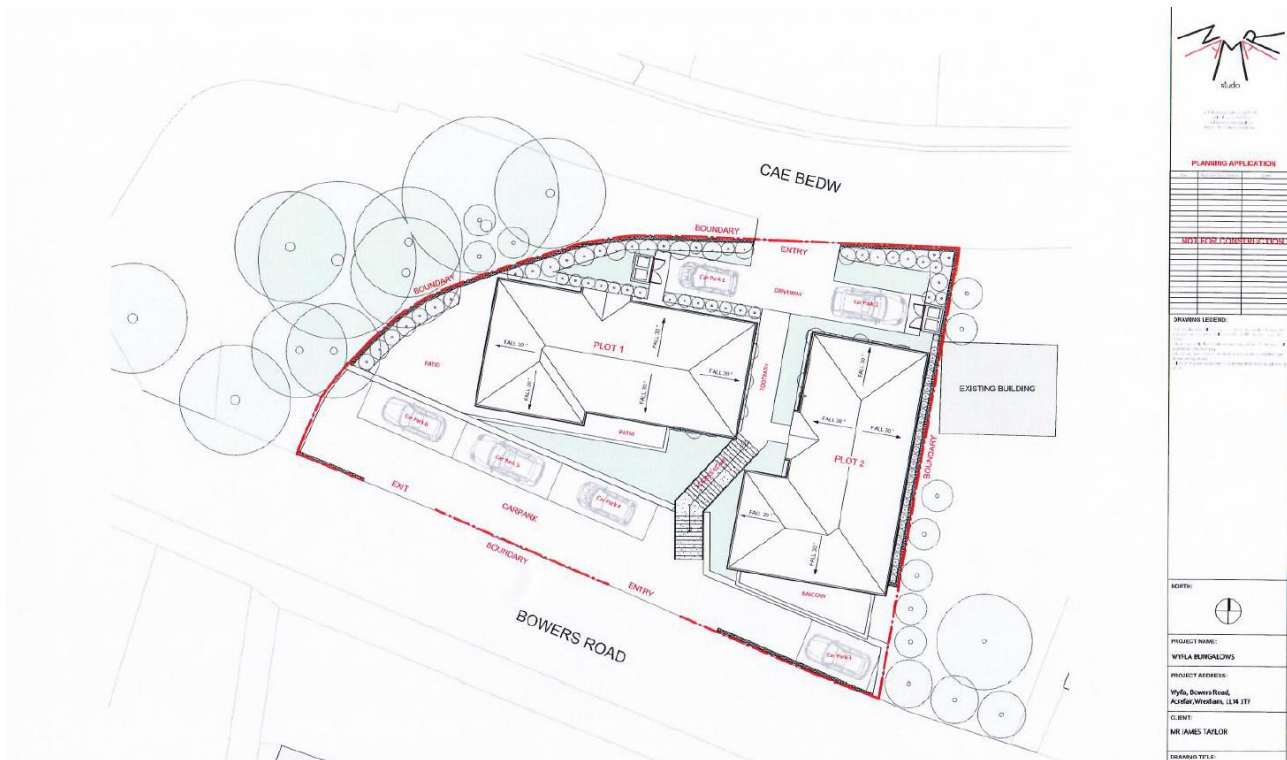


FIGURE 6.2. PROPOSED LANDSCAPE PLAN
IMAGE © NAMAR STUDIO

6.1.8 The aerial image of the site illustrates (Figure 6.1) a wall present surrounding the site, small gaps or holes (approx. 13cm x 13cm) must be made in the bottom of the proposed walls, (figure 6.3), to allow hedgehogs and other species to commute and forage across the area. The location of the gaps need to allow hedgehogs and small mammals access through the gardens as well as areas to exit the gardens but not directly on to the roads.



FIGURE 6.3: EXAMPLES OF HEDGEHOG/SMALL MAMMAL ACCESS HOLES THROUGH FENCING AND WALLS.

@WWW.HEDGEHOGSTREET.ORG

6.2 *Nesting birds*

- 6.2.1 Evidence was found that birds are nesting within the building, specifically sparrows. Where possible work to these areas within the buildings should be avoided during the bird nesting season (April to September inclusive). If this is not possible a bird nest check needs to be carried out by a qualified ecologist no less than 48 hours before works commence. If birds are found nesting in the building during any point in the works, all works to that area must **stop** and only continue once the chicks have fledged.
- 6.2.2 To compensate for the loss of bird nesting habitat and enhance the site for birds; bird nesting opportunities will be provided by erecting sparrow terraces/ bird boxes around the site. A minimum of 2 boxes suitable for small birds need to be erected on site, suitable for house sparrows with a 32mm entrance. These must not be placed on the southern elevations of the new buildings. Inbuilt habitat or woodstone boxes are recommended.

6.3 *General Reasonable Avoidance Measures*

- 6.3.1 Suitable Reasonable Avoidance Measures (RAMS) will be implemented to reduce the potential to impact to bats, nesting birds and other species that may be found on site.

The following measures should be implemented at all times during the works:

- Working areas should be kept to the minimum required.
- Works should be avoided within 1 hour of dawn and dusk where possible to avoid disturbance to nocturnal animals. If works outside this time are needed, all lighting should be directional and be directed away from the woodland areas, i.e. onto the site from the perimeter.
- If at any point in the works a reptile or amphibian is found all works in the vicinity of the sighting must immediately cease; if a common species is found it can be picked up (with gloves) and moved to a safe area off the site. If a great crested newt is found, all works must stop and an ecologist called. The ecologist will then review the situation and advise on further action.
- Any terrestrial mammals, for example badgers, seen must be allowed to leave the area on their own. If this is not possible e.g. the animal is injured or trapped then an ecologist must be called.

7.0 Legislation

7.1 *Bats*

The Wildlife and Countryside Act (WCA) 1981 (as amended) forms the key legislation protecting habitats and species in the UK. All UK bat species are fully protected under the 1981 Act through inclusion on Schedule 5. All bats are also listed under Schedule 2 of the Conservation of Habitats and Species Regulations (2017) which transcribes the EC Habitats Directive into UK law. In combination, this legislation makes it an offence to:

- Deliberately or recklessly take, injure or kill a bat;
- Deliberately or recklessly damage or destroy a place or structure used by bats for shelter or protection;
- Deliberately or recklessly obstruct access to a bat roost; or
- Deliberately or recklessly disturb bats while occupying a roost.

Bat roosts are protected under these laws whether the animals are present at the time of survey or not. Under both laws the Welsh Government and D.E.F.R.A. are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest. It is not illegal to tend to a disabled bat pending recovery.

7.2 *Birds*

In addition, under the Wildlife and Countryside Act, 1981 (as amended) and the Countryside and Rights of Way, 2000, all wild birds, their nests and eggs are protected during the breeding season (typically March to August inclusive). This makes it an offence to:

- Intentionally kill, injury or take any wild bird.
- Take, damage or destroy the nest of a wild bird included in Schedule ZA1.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

7.3 *Biodiversity Net Gain – Relevant sections of legislation*

- Section 6 of the Environment (Wales) Act 2016:

Biodiversity and resilience of ecosystems duty

(1) A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.

(2) In complying with subsection (1), a public authority must take account of the resilience of ecosystems, in particular the following aspects—

- (a) diversity between and within ecosystems;
- (b) the connections between and within ecosystems;
- (c) the scale of ecosystems;
- (d) the condition of ecosystems (including their structure and functioning);
- (e) the adaptability of ecosystems.

.... (5) In complying with subsection (1), a public authority other than a Minister of the Crown or government department must have regard to—

- (a) the list published under section 7;.....
- Section 7 of the Environment (Wales) Act 2016:

Biodiversity lists and duty to take steps to maintain and enhance biodiversity

(1) The Welsh Ministers must prepare and publish a list of the living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales.

(2) Before publishing a list under this section the Welsh Ministers must consult the Natural Resources Body for Wales (“NRW”) as to the living organisms or types of habitat to be included in the list.

(3) Without prejudice to section 6, the Welsh Ministers must—

- (a) take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and
- (b) encourage others to take such steps.

8.0 References and Information Sources

Bat Conservation Trust (2018) Bats and artificial lighting in the UK- bats and the built environment series www.bats.org.uk

Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, (3rd Edition). Bat Conservation Trust, London.

Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines (1st Ed.)*. JNCC, Peterborough. ISBN 1 85716 781 3

Mitchell-Jones, A. J. & McLeish, A. P. (1999). *The Bat Workers' Manual (2nd Ed.)*. JNCC, Peterborough. ISBN 1-86107-462-X. [3rd edition in 2004].

Stone, E.L. (2013) Bats and lighting: Overview of current evidence and mitigation guidance