St David's Church, Rhosllanerchrugog

Preliminary Roost Assessment and Emergence Survey

Date	Ecologist	Approved	Version	Comments
22/04/2024	Lucy Boyett	Keymar Wake	V1	
30/05/2024	Lucy Boyett	Keymar Wake	V2	Addition of emergence survey
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Executive Summary

Site	St David's Church, Rhosllanerchrugog, LL14 1RD
Surveyors	Preliminary Roost Assessment (PRA) led by Lucy Boyett (accredited agent on NRW bat licence number S090407/1) and an assistant and an emergence survey led by Lucy Boyett and three assistants.
Proposed work	Full demolition of the St David's Church building, with a proposed change of use to car sales.
Type of survey	Preliminary Roost Assessment for bats on 20th March 2024 and a dusk emergence survey on 29th May 2024.
Main results of survey	• The immediate surrounding area had low suitability habitat for bats, with limited trees and vegetation for foraging and commuting. • The building was generally in good condition and was well sealed, however there were a small number of Potential Roosting Features (PRFs) identified. • No droppings or signs of bats were found internally or externally. • No birds' nests were seen during the survey. • No bats were seen to emerge from the church and activity levels were low with only one brief pass by a common pipistrelle.
Survey conclusions	• The building is considered to have **low potential** for bats. • No bats or evidence of bats was identified. • Potential to be used by nesting birds. • The building is not considered be in use by bats for roosting and no further surveys are required.
Reasonable Avoidance Measures	• Reasonable Avoidance Measures and enhancements for the site are detailed in Sections 9 and 10.

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1.0 Introduction

1.1 Enfys Ecology Limited were commissioned by Mr F Setta, to carry out a Preliminary Roost Assessment (PRA) and emergence survey for bats, at St David's Church, Rhosllanerchrugog.

1.2 The proposed works are for the full demolition of the church and clearance of the site. Loose gravel will be laid over the whole area and a steel office cabin installed, to create a site for car sales.

1.3 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 on 20th March 2024 (PRA) and 29th May 2024 (emergence). This report is valid for a period of eighteen months in accordance with best practice.

1.4 All British bats (and roost sites) are protected under the Wildlife and Countryside Act 1981 (as amended). In addition, all bats are classified as European Protected species by The Conservation of Habitats and Species Regulations 2017 (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.

1.5 All birds (and their nests) are legally protected under the Wildlife and Countryside Act 1981 (as amended) 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).

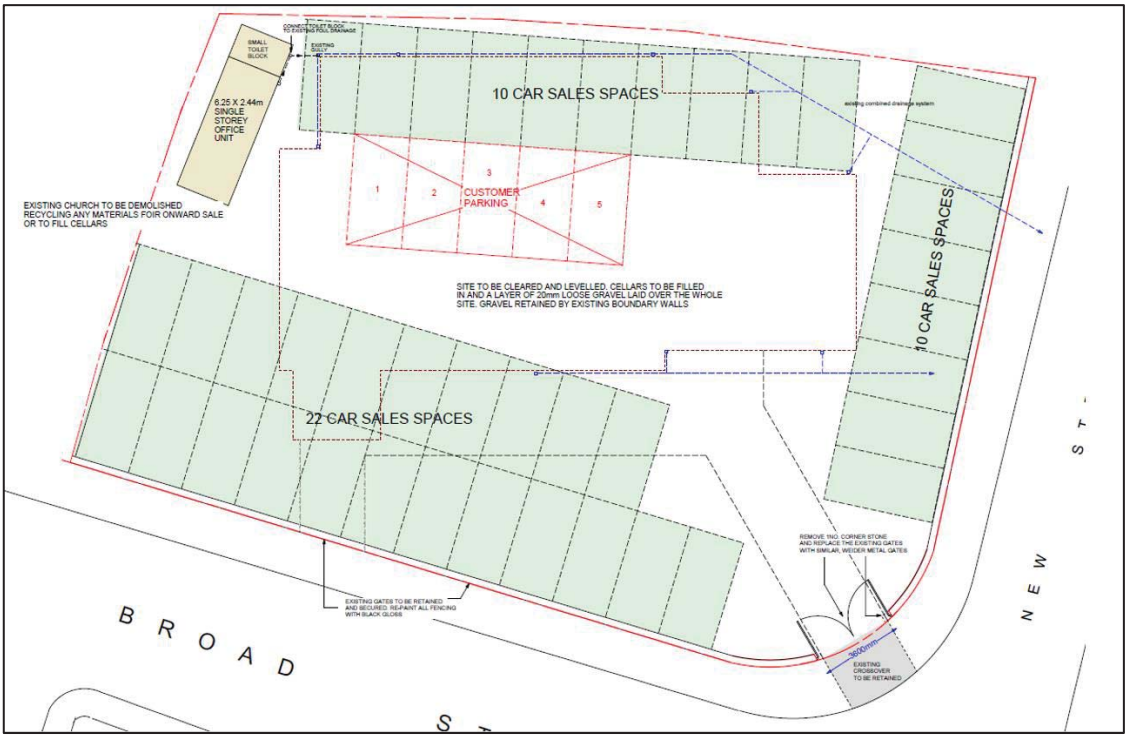


FIGURE 1.1. PROPOSED PLANS

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2.0 Site Description

2.1 *Survey Area*

2.1.1 The site comprised St David's Church within the large village of Rhosllanerchrugog, Wrexham (Figure 2.1).

2.1.2 The building stood within a small area of improved grassland, with some shrubs at the rear. The site was near the centre of Rhosllanerchrugog, with residential areas on all sides. There was limited vegetation in the immediate vicinity with some trees and shrubs within small gardens of the surrounding properties and in the grounds of the health centre to the south. The nearest area of green open space was Ponciau Banks Park and playing fields, approximately 150m to the east, with amenity grassland and scattered trees.



FIGURE 2.1. THE SURVEYED BUILDING (RED). BASE IMAGE ©GOOGLE 2024

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FIGURE 2.2. THE WIDER LANDSCAPE - THE SURVEYED BUILDING IS SHOWN IN RED.
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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 building was examined.

3.2 *Daytime Bat Walkover*

3.2.1 A daytime bat walkover (DBW) was also carried out following the Bat Surveys for Professional Ecologists: Good Practice Guidelines (4*th* Edition) (Collins, 2023). The DBW intended to observe and record any habitat features suitable for bats to roost, commute, and forage both on site and in the surrounding area.

3.3 *Survey Details*

3.3.1 The external and internal building inspections were carried out on 20th March 2024 by Lucy Boyett (accredited agent on bat Licence No. S090407/1) and an assistant. Potential roost assessments were carried out following the guidelines set by the Bat Conservation Trust, 'Bat Surveys – Good Practice Guidelines' (Collins, 2023). Photographic evidence was taken where necessary.

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3.4 *Dusk Emergence Surveys*

3.4.1 One emergence survey was carried out on 29th May 2024; led by Lucy Boyett (accredited agent on bat survey licence S087351/1) and three other surveyors. Surveyors were positioned to be able to observe and monitor all elevations of the building, using Anabat scout detectors.

3.4.2 Night vision aids (NVAs) were used to support the emergence survey, as per current guidance from the Bat Conservation Trust (2022); these NVAs can allow bats to be observed which may otherwise not be visible to the surveyors when the light levels drop. Canon XA60 video cameras in infrared (IR) mode were used to record footage throughout the survey, with a combination of IR floodlights and spotlights used to illuminate the building. These IR lights do not produce visible light and cause no disturbance to emerging bats.

3.4.3 Records were taken of any bats observed emerging from the building, and of any other bat activity taking place in the area during the survey. The survey began approximately half an hour before sunset and continued for 90 minutes after sunset.

3.4.4 The bat call data was analysed using Anabat Insight Software with the BatClassify plugin set at 70% confidence to auto analyse the bat calls; all of the calls were then reviewed and re-assessed as required.

3.5 *Nesting Birds*

3.4.1 All visible areas of the building were surveyed for bird nests, remains of nests or evidence of current or historic bird use (eg droppings).

3.6 *Desk Study*

3.6.1 A desk study was carried out following a data search by Cofnod, the Local Environmental Records Centre for north Wales, to assess bat and bird records within 1km of the site.

3.7 *Limitations*

3.7.1 Bats are highly mobile animals and it is possible that they may move into a building after the survey has occurred. Therefore, absence of bats cannot be absolutely guaranteed. The surveys were carried out in March, which is within the appropriate survey window for a PRA as per bat survey guidelines (Collins, 2023).

3.7.2 It is possible that birds can nest on or within a building at any point during the nesting bird season (March – September inclusive). Therefore, absence of nesting birds cannot be absolutely guaranteed.

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4.0 Survey Results: Desk Study

4.1 *Designated and notable sites*

4.1.1 There were two statutory designated sites within a 1km search radius of the site, Stryt Las a'r Hafod Site of Special Scientific Interest (SSSI) and Johnstown Newt Sites Special Area of Conservation, both 651m to the south east and designated for their population of great crested newts.

4.2 *Species Records - Bats*

4.2.1 No records of bats returned from the site itself.

4.2.2 Number of records within the 1km search radius including common pipistrelle, soprano pipistrelle, brown long-eared, *Myotis* sp. Natterer's, Noctule and whiskered/Brandts. The nearest roost records are a common pipistrelle roost and brown long-eared roost approximately 470m to the north.

4.3 *Species Records – Birds*

4.3.1 There were no records of birds within the site itself.

4.3.2 Schedule 1 birds recorded within 1km include barn owl, brambling, fieldfare, peregrine and redwing.

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5.0 Building Descriptions

5.1 The basic layout of the building is shown in Figure 5.1, and the details of the external and internal areas are described in Table 5.1.

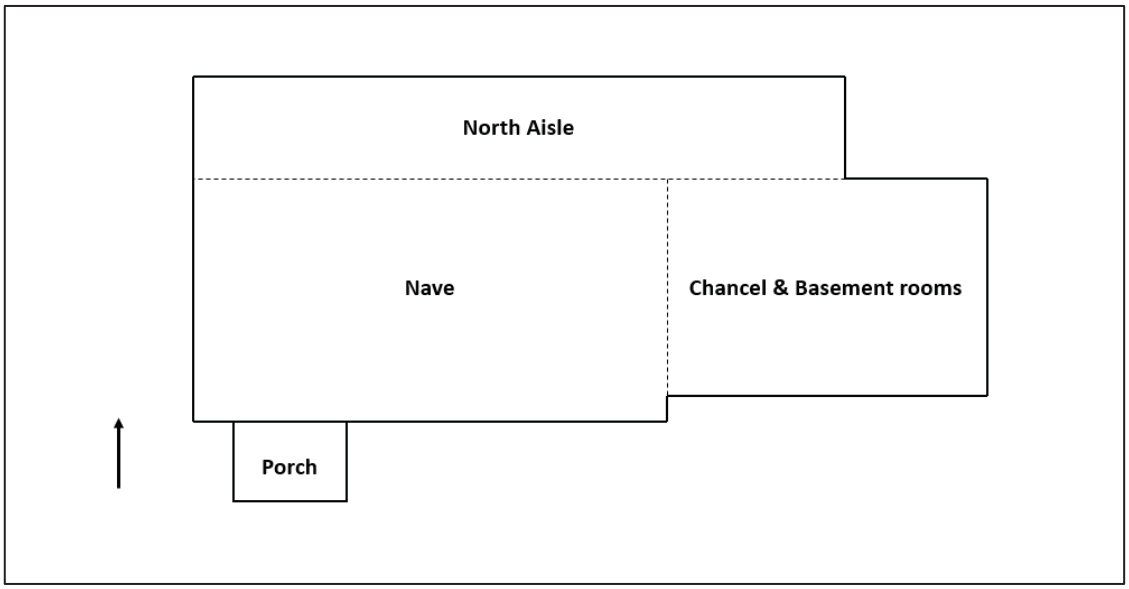


FIGURE 5.1: BASIC PLAN OF SITE (NOT TO SCALE).

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TABLE 5.1. BUILDING DESCRIPTION

Description	Photo
External	
• The church was brick built and had a tiled roof with no fascias, soffits or bargeboards. • There was the main nave section, with a slightly smaller chancel section on the eastern side. • The chancel had two basement rooms below, which were accessed from the outside. • On the northern side of the nave, was an aisle, where the roof was lower and there was a porch on the southern elevation.	   

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Description	Photo
Internal	
• The nave, chancel and aisle formed one large continuous space, which was open to the full height of the roof. • The roof was open with the wooden structure exposed. • Large intact windows on all sides of the building meant the space was light with limited dark corners. • Structural subsidence was evident from numerous large cracks within the brickwork. • Two basement rooms accessed from outside. One of the rooms had a window, which was boarded up. Rooms were well sealed with no access points identified.	   

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6.0 Preliminary Roost Assessment: Results

6.1 *Daytime Bat Walkover*

6.1.1 The walkover of the site showed the immediate area to have low suitability for bats, with limited trees and vegetation for foraging and commuting. The nearest areas with suitable habitat was Ponciau Banks Park and playing fields, approximately 150m to the east, with amenity grassland and scattered trees and Stryt Las Park, with broadleaved woodland and a large pond, approximately 700m to the east.

6.2 *Preliminary Roost Assessment*

6.2.1 The building was generally in good condition and was well sealed, however there were a small number of Potential Roosting Features (PRFs) identified, including lifted roof tiles, cracks in the walls and missing mortar from under the end tiles at the gable ends.

6.2.2 As the roof space was open, it was possible to view the whole space from the ground. No droppings or signs of bats were found internally or externally.

6.2.3 No birds' nests were seen during the survey.

6.2.4 Table 6.1 provides details of the Potential Roosting Features identified.

TABLE 6.1. POTENTIAL FEATURES FOR BATS AND BIRDS

Description	Example Photos
There was evidence of structural subsidence, with a number of large cracks within the walls, which were visible both internally and externally.	

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Description	Example Photos
Gaps were formed where mortar had fallen out from under the end tiles at the gable ends.	
Small number of gaps under raised tiles, however due to the small size of the tiles, these gaps offered fairly limited roosting potential.	
The porch on the southern elevation was open with an exposed timber roof structure. This could be a suitable area for a night roost, however no droppings or feeding evidence was identified.	

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7.0 Survey Results: Dusk Emergence Survey: 29th May 2024

7.1 Table 7.1 provides details of the dusk survey, including timing and weather conditions and Table 7.2 provides details of any emergences and general bat activity during the survey.

TABLE 7.1: SUMMARY OF SURVEY DETAILS

Date	Start time	Sunset time	End time	Temp. at start	Weather
29/05/24	21:09	21:24	22:54	12°C	Dry with a light breeze Light rain from 22:30 – 22:54

TABLE 7.2: SUMMARY OF EMERGENCES AND DUSK SURVEY ACTIVITY

Emergences
• No emergences were recorded during the survey.
General Activity
• A brief pass by a common pipistrelle was heard at 22:15. • No other activity was recorded.

8.0 Discussion and Evaluation

8.1 *Proposed Works*

8.1.1 The proposed works are for the full demolition of the church and clearance of the site. Loose gravel will be laid over the whole area and a steel office cabin installed, to create a site for car sales.

8.2 *Designated Sites*

8.2.1 The proposed works will not impact any designated sites as there were no sites within 1km of the survey area.

8.3 *Habitats*

8.3.1 The proposed works will result in the loss of an area of improved grassland which surrounds the church building. Floral diversity was low and species were those typically associated with the habitats on site. None of the species recorded during the survey are protected by the Wildlife and Countryside Act 1981 (as amended), or listed under Section 7 of the Environment (Wales) Act, 2016. In addition, no nationally or locally rare species were recorded.

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8.3.2 No invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 were recorded during the survey.

8.4 *Bats*

8.4.1 The building had a small number of external PRFs for bats with some raised tiles, cracks within the walls and missing mortar. Internally the whole space was light with limited dark corners or gaps and the two basement rooms looked to be very well sealed, with no droppings or evidence of bats found.

8.4.2 The surrounding habitat had low suitability for roosting, foraging and commuting bats with limited vegetation in the immediate vicinity, however there was suitable habitat in the wider surrounding area.

8.4.3 Under the Bat Conservation Trust Good Practice Guidelines (Collins, 2023), the building is regarded as having a **low potential suitability** for roosting bats. This is defined as "*A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year..".*

8.4.4 During the emergence survey, no bats were seen to emerge and there was very limited activity recorded. Therefore, the building is not considered be in use by bats for roosting and no further surveys are recommended.

8.5 *Nesting Birds*

8.5.1 No birds were observed using the buildings during the surveys, however the building and the shrubs along the northern elevation, provided suitable nesting bird habitat. There were potential areas for nesting both internally and externally within the cracks in the walls and various crevices.

9.0 Reasonable Avoidance Measures (RAMs) and Mitigation

9.1 *Bats*

9.1.1 As the building is not used by bats to roost, no further surveys are required; a licence will not be required for the works and the proposed works can be carried out at any time of year (subject to nesting bird restrictions, see Section 9.3).

9.1.2 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.

9.2 *Mitigation – Lighting*

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9.2.1 As the site is in an area that has low suitability habitat for bats with no apparent connectivity to suitable habitat, which was shown by the low activity (one pass) during the emergence survey, specific mitigation with regards to lighting is not required at this site.

9.3 *Birds*

9.3.1 As birds may nest within the building or vegetation, works should take place outside the bird breeding season (March to September inclusive). If it proves necessary to work during the breeding season then a check must be carried out immediately prior to works starting (no more than 48 hours beforehand) to ensure that no active nests will be affected. If active nests are found then work must be delayed until all chicks have fledged.

10.0 Enhancements

10.1 *Planning Policy*

10.1.1 Planning Policy Wales (PPW) and the Welsh Government state that "*development should not cause any significant loss of habitats or populations of species, locally or nationally and* ***must*** *provide a net benefit for biodiversity*" in accordance with Section 6 Duty of the Environment (Wales) Act 2016* (see below).

> ***Section 6 – Biodiversity and resilience of ecosystems duty**
> Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales.
>
> *6. 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.*

10.1.2 In order to meet these requirements enhancement measures must be put in place in order to provide a net benefit for biodiversity as a result of the works.

10.2 *Native Tree and Hedges*

10.2.1 A mixed native species hedge will be planted along the northern boundary of the site (Figure 10.1), which will improve connectivity across the site for a wide variety of species. Table 10.1, includes some suggested species to use in this hedgerow.

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TABLE 10.1 SUGGESTED HEDGEROW SPECIES

Latin name	Common name
Crataegus monogyna	Hawthorn
Corylus avellana	Hazel
Acer campestre	Field maple
Rosa canina	Dog rose
Cornaceae	Dogwood
Euonymus europaea	Spindle
Viburnum opulus	Guelder rose
Viburnum lantana	Wayfaring tree
Sorbus torminalis	Wild service tree
Sorbus aucuparia	Mountain ash/rowan
Sorbus aria	Whitebeam
Prunus avium	Wild Cherry
Prunus padus	Bird Cherry
Pyrus pyraster	Wild Pear
Prunus domesticus	Denbigh Plum
Prunus domesticus	Damson
Ilex aquifolium	Holly

10.2.2 At least seven native trees will be planted in the north western corner of the site or in other areas of the site, where they would not restrict access. The table below includes a list of suitable species.

TABLE 10.2 SUGGESTED TREE AND SHRUB SPECIES

Type	Plant Name *Latin*	Plant Name Common	Maintenance (condensed)
Small trees	*Sorbus aucuparia* *Sorbus aria* *Prunus avium* *Prunus padus* *Pyrus communis* Ilex aquifolium	Mountain ash whitebeam wild cherry bird cherry wild pear *Holly* (male and female)	Thinning out after 5 yrs Annual pruning thereafter Planting with guards, canes and mulch mats
Shrubs	*Cornus sanguinea* *Euonymus europaeus* *Salix caprea* *Sambucus nigra* *Viburnum lantana* *Viburnum opulus*	dogwood spindle tree goat willow elder wayfaring tree guelder rose	Thinning out after 5 yrs Annual pruning thereafter
Fruit trees	*Malus* fruiting species: *Pyrus pyraster* *Pyrus* 'Conference' *Prunus* 'Stella' *Prunus* 'Taihaku' *Morus nigra* *Prunus domesticus*	(native Welsh spp) early-late season pear sweet cherry great white cherry mulberry Denbigh Plum damson	Replacement of failed plants & annual pruning thereafter Planting with guards, canes and mulch mats

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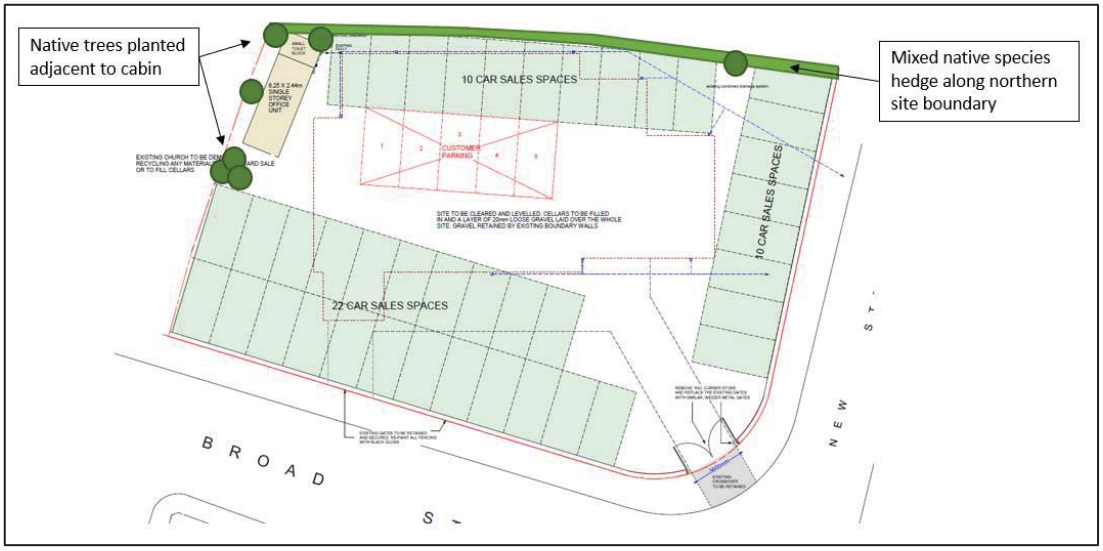


FIGURE 10.1 PLAN SHOWING LOCATION OF NATIVE TREE AND HEDGEROW PLANTING.

11.0 Legislation

11.1 *Bats*

11.1.1 All species of bat, their breeding sites and their resting places in England and Wales are protected through a 'dual' system of protection, under the England and Wales Habitats Regulations and W&CA. Because two regimes give legal protection to bats, the implications of both regimes must be fully understood (Reason & Wray, 2023).

11.1.2 Regulation (Reg.) 43 of the England and Wales Habitats Regulations makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats (which includes any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong);
- damage or destroy a breeding site or resting place of a bat; or
- possess, control, transport, sell or exchange, or offer for sale or exchange, any live or dead bat or part of a bat or anything derived from a bat or any part of a bat.

11.1.3 Under Section 9 of the W&CA (s.9(4)(b), 9(4)(c) and 9(5) only), it is an offence (in relation to bats) to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place of shelter or protection;

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- intentionally or recklessly obstruct access to any structure or place used by a bat for shelter or protection;
  or
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead bat or any part of, or anything derived from a bat (or be responsible for adverts suggesting the intention to do this).

11.2 *Birds*

In addition, under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 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.

11.3 *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—

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(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

12.0 References and Information Sources

Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines, (4th Edition). Bat Conservation Trust, London.

Mitchell-Jones, A. J. & McLeish, A. P. (1999). *The Bat Workers' Manual (2nd Ed.).* JNCC, Peterborough.

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

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