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## Preliminary Site Inspection for Bats - Hensingham House, Hensingham, Whitehaven, CA28 8QB

This report outlines the findings of a site inspection for bats at Hensingham House, Hensingham, Whitehaven, CA28 8QB (Nat Grid Ref. NX 98600 16740). Plans 'as existing' and 'as proposed' have been provided and it is understood that a proposal exists for conversion of the existing (redundant) flats at Hensingham House. This will involve intensive internal alterations and renovation in order to create five new houses; the building has previously been converted to provide 10 no. flats, with a remaining section of the original house retained. Extensive internal works are required to strip out the existing rooms; damp-coursing, plastering, replace ceilings, timbers, flooring, joists and remove stud walling and stairwells that were installed when the flats were created.

The proposed layout will retain the original walls and replace / reopen much of the original layout, with new stud walling to create new living spaces. New ceilings and joists are required, these will maintain the loft spaces to the main building. The original roofs are largely lined with sarking boards that are rotten and damaged in places, necessitating some roofing work in these areas.

The proposed works could present risk that bats could be harmed and bat roosts destroyed, with impact to local populations. Bats / bat roosts are legally protected. Population numbers have fallen, all bats and their roosts are protected under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. For this reason Hesketh Ecology were commissioned by David Shankland in November 2021, to complete a preliminary site inspection of the building proposed for works, identify any potential for (or evidence of) bats and to advise as to any requirement for further survey effort.

A site inspection was conducted on 5th November 2021. Some works to the site were in progress at the time of survey. This inspection was conducted just outside the optimal bat activity season but within the recommended time for a preliminary roost assessment on a structure (Table 2.2. 'Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)' - The Bat Conservation Trust. Any evidence of bats is recorded as encountered but the primary objective of this site inspection was to identify the level of bat roost potential.

See Figure 1 below for location and survey area.



Figure 1: Showing Hensingham House and the survey area, as outlined (above). Location; Hensingham House, Hensingham, Whitehaven CA28 8QB (Nat Grid Ref. NX 98600 16740).

See Figures 2 - 4 below for existing and proposed elevations and internal layout.







Figure 3: 'Internal Layout 'As Existing', Hensingham House (CDL Architecture and Design)



Figure 4: 'As Proposed' Internal Layout / New Houses, Hensingham House (CDL Architecture and Design)

#### Survey and Assessment - Site and Surrounding Habitat

Hensingham Hall is located 2km southeast of Whitehaven Town Centre, in Hensingham, the B5295 runs immediately adjacent the eastern boundary to the site, St. Johns Church is less than 100m south, and immediately to the west are gardens and semi-improved marshy pasture land, which appears not intensively used for agriculture. Immediately to the northwest are trees and scrub which connect to woodland around Snebra Beck and the scrub and hedgerows along the field boundaries towards the south; connecting to the church yard and well established gardens here.

Immediately north and east are streets with commercial and residential properties, however, 50-100m north, east and southeast there are mature trees and gardens, allotments and open habitat that offers connectivity for bats to the wider habitat. Although the area is essentially urban, the site is situated adjacent some good foraging and commuting habitat for bats (west / northwest). The surrounds to the site are on the fringe of the town, with hedges, trees and gardens offering opportunity for bats to disperse into the wider habitat. Street lighting, especially to the east of the site, may create a barrier to frequent / high bat activity at this aspect.

Hensingham House is of Georgian construction, with sandstone walls, some sections / chimneys are brick, and there is an annexe which extends along the eastern boundary of the property, adjacent the B5295. The building has a parapet wall along the majority of the southern elevation and the entire western elevation. The original roof sections comprise of valley roofs, sat within the stone parapet, these are mostly slate clad, with a section that is clad in profiled tiles in the centre.

The roof sections along the northern boundary and the eastern boundary have been re-roofed relatively recently, there are newer timbers/trusses and the cladding is a mix of slate, tiles and synthetic slates / tiles. At the interior to the northern roofs / roof voids there is an internal BRM (Breathable roof membrane) in place. To the eastern annexe there is a mix of BRM and bitumen felt. The loft spaces / internal floors / timbers were inspected throughly and there were no signs of previous occupation by bats, these smaller, altered roof spaces would not offer typical suitability for void dwelling species.

From the exterior the roof cladding was inspected from scaffold height, and from the ground, which provided a full external roof assessment of the potential for bats to access / gaps present. The synthetic slates / tiles along the eastern annexe provided no gaps at all, the cement beneath the ridges was intact and therefore these roofs provide nil opportunity for bats. The eastern elevations may offer small gaps along the wall top, but as there are streetlights along this elevation then this is considered negligible in terms of typical roost opportunity. The northern section of roof appears to present a small number of gaps along the ridge / slates that might offer very low / negligible potential for low no's or individual, crevice dwelling, bat species.

The valley roofs to the main part of Hensingham House were also thoroughly inspected from scaffold height, slates were tightly laid and ridges well cemented with no suitable gaps present, lead flashing around chimneys may offer very small gaps.

The parapet walls and coping stones create a barrier to the roof verges and wall tops which typically would offer access into crevices / roof spaces for bats. At the south elevation there were a few gaps along the stone wall top and below the coping stones, however these were draughty and appeared to have been created with the recent render removal.

At the west facing roof pitch (southern section) there is one gap beneath the ridge, which as it is facing the habitat at the west (not a valley roof) could theoretically offer opportunity for bats to access. This roof space was accessed and thoroughly inspected and there was no evidence of bat occupation at any time. The roof interior was lined with lime mortar at the eastern facing pitch and had sarking at the western pitch. The adjacent loft space (to the centre of the main building) was also accessed and inspected, with no evidence of bats present. This loft interior was lined with lime parging at the western pitch and felt on the eastern side. The roof light on the western pitch allowed light into the void making it unsuitable for void dwelling bats.

To the north and east (main building / central section) some upper ceilings had been removed with the roof interiors exposed; these sections had a mixed internal lining; sarking, lime parging and felt, the timbers were closely inspected and were thick with cobwebs in all areas.

See Figures below for Photos.

#### Personnel

The survey and assessment were undertaken by Victoria Griffin BSc MCIEEM NE Bat Licence CL 18 Survey Level 2 (32609-CLS-CLS). Victoria is an experienced and competent ecologist, with 20 years experience of study, training & work in the field of wildlife conservation and ecology, working with protected and native species, exotics and rare breed animals. She has 15 years experience in bat survey & mitigation, has held a bat survey licence and roost visitors licence since 2006 and has a NE roost visitor trainers licence. Victoria gained 'earned recognition' by NE in 2016 by qualifying and training as a Registered Consultant for the Bat low impact / mitigation Class Licence (WML-CL21). Victoria is a full member of CIEEM and has participated in numerous bat ecology, survey and mitigation courses.



**Figure 5:** Showing the south and west elevations. The external walls had no gaps for bats, and the parapet walls along the main elevations make the roof verges inaccessible; with no wall top gaps present. Scaffolding enabled access to external roof and thorough inspection for potential bat access.



**Figure 6:** The eastern elevation / annexe section and northern section - 1st gable as indicated. No gaps along the eastern roofline and wall tops gaps are generally unsuitable along the street lit roadside.



**Figure 7:** The eastern roof section (annexe) was clad in synthetic slates that offer no gaps for bats, adjacent roofs were also tightly clad, the northern roofline may offer very low potential for single bats as there appear a couple of small gaps along the ridge-line (indicated).



**Figure 8:** The western roof pitch surrounded by the parapet wall, no gaps along the wall tops / gables. There is a single gap (as shown) under the ridge tiles that may offer access, the parapet wall makes the roof / drop zone less suited to bats. Roof void was throughly inspected and no evidence of recent / historic use by bats was present.



**Figure 9:** The central roof section, valley roofs are not highly accessible for bats, they create a cluttered 'drop zone' and the slate cladding is very tight with no visible gaps. These roof voids were accessed and throughly inspected.



Figure 10: Roof interior (See Figure 8) apex was cobwebby with no evidence of bats and very little opportunity for access.



Figure 11: Roof interior (See Figure 9), light spill into void and tight cladding gives nil potential for bats.



**Figure 12:** Roof interior to eastern section (See Figure 6), no gaps in cladding and roof spaces were inspected with no evidence and no potential for bats to access, wall tops along the eastern elevation are unlikely to be used due to street lighting / unsuitable habitat at this aspect.

#### Conclusion

- Overall, the main roof sections offer negligible potential for bats, due to the lack of access / gaps beneath cladding and the valleys and parapet wall; making access to any potential small gaps very difficult / unlikely.
- The roof sections to the north and east (annexe) are generally tightly clad, the lack of gaps and street lights to the east offer negligible potential for crevice dwelling bats and the smaller voids here are not suited to void dwelling species.
- There may be small gaps along the northern ridge line which may offer very low opportunity for individual bats only.

# There is very low / negligible potential for roosting bats to utilise the building and no further surveys are required.

"If no suitable habitat for bats is found then further surveys are not likely to be necessary.....including evidence that an adequate assessment has been made by a suitably qualified ecologist and the conclusion is reasonable". (See Pg. 36 of Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London. ISBN - 13 978-1-872745-96-1).

#### Summary of Works and Impacts

There are no alterations to the structure of the roofs. Extent of the roofing work is in relation to required repairs, mainly to timbers, and to re-line, ensuring energy efficiency and weatherproofing. The roof areas currently provide negligible suitable conditions for roosting bats: no impacts on local populations are anticipated and no further survey is required.

There is a small risk that individual bats could opportunistically occupy gaps whilst works are underway and there is very low potential for single bats, beneath ridges along the northern roof section. As this roof has had recent work then roofing works to this area are not anticipated, but care should be taken if works here are required. Gaps along the ridge should be maintained (at least 20mm).

As there is good habitat for bats to the west of the site, and local populations may forage and commute through these grounds / trees then the following measures on lighting and good practice methods should be employed.

#### Lighting

All external lighting must be kept to a minimum / low impact to minimise the impact of any external lighting on site on foraging and commuting bats using the habitat at the west:

- 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 compon-ent of light most disturbing to bats.
- 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, ie no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1min) timers.
- Accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

#### Working Methods

The building is surrounded by some good habitat for bats and bats move roosts often.

There is a small risk that individual bats could opportunistically occupy gaps whilst works are underway. In the interests of good practice the following measures should be adhered during all roofing works:

- This report should be made available to any contractor working on site.
- If bats are seen or suspected at any time prior to or during works, all work must pause and advice from the acting consultant be sought.
- The work will be completed as quickly as possible once started. Any gaps created during the course of the works will be left open for the minimum possible period. Where possible gaps will not be left open over night to avoid the possibility of bats opportunistically roosting in gaps which will later be blocked.
- If works are required to the northern roof then gaps along the ridge should be maintained (at least 20mm).

### Enhancement

The proposed work presents opportunities to enhance the site for roosting bats. Two externally mounted bat boxes could be erected to both the west and south elevations, at least 4m in height or below wall tops (sited away from windows / doors).

The following are suitable choices for external walls:

- Vivara-pro build in woodstone bat box
- 1WI Schwegler Summer and Winter Bat Box
- 1FQ Schwegler Bat Roost (For External Walls)
- Interconnectable WoodStone Bat Box
- Beaumaris Woodstone Bat Box Maxi
- · Eco Bat Box
- · Eco Kent Bat Box
- · Large Multi-Chamber Wood Stone Bat Box

#### Summary

The daytime assessment for bats on Hensingham House was conducted as the repair and improvement works to the roof sections (as part of the proposal for conversion) could pose risk of impact to roosting bats. A thorough inspection of all roof areas, internally and externally concluded there is negligible potential for bats. As bats are opportunistic and may take advantage of any gaps created during works then the methods should be adhered to ensure there is no risk of harm. The building is adjacent good habitat at the west and all external lighting should be low level and adhere the design notes provided above.

The acting ecologist will be available for any query during works and can provide detailed advice on enhancement, bat box location and further roost provision for bats if desired.

Vic Griffin MCIEEM