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Via email: Adrian.rowlands@mhpa.co.uk

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Our Ref: 856531 Pembroke Dock Marine – Bat Hibernation survey and Winter Bat Transect survey combined report – Rev0

Dear Adrian,

BAT HIBERNATION AND WINTER TRANSECT SURVEYS COMBINED REPORT

This document presents the findings of a bat hibernation survey and a winter bat transect survey undertaken in connection with the proposed redevelopment of Pembroke Port, Pembroke Dock, Pembrokeshire (centred on Grid Reference SM959 037). Both surveys were undertaken on 22 January 2018 by Anna Sutcliffe a bat licensed ecologist, assisted by Chloe Stephenson. The location of the site is illustrated in *Figure 1*.

Bat Hibernation Survey

Roosts

A preliminary roost assessment of buildings which are likely to be affected by the works was undertaken by RSK In June 2017. This identified that the southern elevation of Building B39 could be used by bats as a hibernation roost, due to the size and construction of the external wall (stonework) and presence of large internal cavities. RSK were instructed by the Port of Milford Haven to undertake a hibernation survey of the building to determine the presence or likely-absence of hibernating bats. The location of Building B39 is illustrated in *Figure 2*.

Methods

In line with current guidelines (Collins 2016) one survey visit was undertaken within the accepted optimal hibernation period for bats in the United Kingdom. A number of holes, identified as suitable for use by hibernating bats, were surveyed on 22 January 2018. The temperature during the survey was 7°C. Internal cavities, holes and the adjacent wall surface were subject to an inspection with a high powered torch and an endoscope to identify whether bats were present or if there was evidence of occupation, such as droppings.



Furthermore, a Wildlife Acoustics Song Meter 2 Bat+ (SM2) static bat detector was installed in building B39 with the aim of recording the calls of bats that may have been active during the night of 22 January 2018. The weather was dry, with a light wind and the overnight temperature was a minimum of 7°C. The night time weather during the remainder of January comprised extremely strong winds and heavy rain (the survey had been postponed three times). Based on this it is assumed that, if bats were flying at this time of year, they would have been active on the survey date and would have been recorded if present.

Results

All features suitable for use by hibernating bats were inspected and no bats were found to be present and no evidence of occupation by bats was found during the inspection. The data recorded by the static detector was analysed and contained no bat calls.

Winter Transect Survey

Winter activity

The winter transect survey was requested by Lara Lawrie, the Planning Ecologist at Pembrokeshire County Council. The request was informed by the results of recent survey work (not associated with this project or undertaken by RSK) at nearby Milford Haven, where local ecologists have reported higher than expected levels of winter activity by Greater Horseshoe bats. The objective of the survey was to help identify whether Greater Horseshoe bats were using the site in the winter and, if so, the nature of their activity.

Methods

A background data search previously requested for the site was reviewed for the presence of known hibernation roosts.

The transect covered the footprint of the site and ensured that the surveyors were in the vicinity of habitat that was most likely to be used by the species (the vegetated southern portion of the site). Surveys were timed so that suitable habitats were sampled approximately an hour after sunset, when the species emerge from their roosts in the summer *i.e.* it is assumed that bats exit their roosts at the same in winter as in summer. The survey was undertaken on the evening of 22 January 2018, surveyors had hand-held bat detectors (Elekon Batlogger M), and observed and recorded any bats present along the transect. Bat detectors were used to identify bat echolocation calls (which are often assignable to species; calls were either confirmed in the field or were analysed using computer software in the office). The weather was dry, with a light wind and the temperature was 7°C. Furthermore, prior to the transect survey, a Wildlife Acoustics Song Meter 2 Bat+ (SM2) static bat detector was installed adjacent to The Old Commodore Hotel, a known summer Greater Horseshoe Bat roost c. 20 m from the southern site boundary (there is no evidence that this building supports a hibernation roost). The detector recorded the calls of any bats that were active in the vicinity during the night of 22 January 2018.

Results

No significant hibernation roosts were identified in the Background Data Search (BDS), which included a 2km buffer around the site. The BDS included three records of single hibernating Lesser Horseshoe bats in tunnels and bunkers near the site, no other winter records of bats were present in the area.

No bats were observed during the transect survey and no calls were identified when the data recorded on the static bat detector was analysed.

Evaluation and Conclusions

Roost

The results of the hibernation survey show there were no hibernating bats in building B39 and no further action is required.

Winter activity

No bats were recorded using the site under suitable night-time conditions during the winter transect. In the winter months Greater Horseshoe bats fly on an irregular basis, to forage and drink (Ransome 1990). The site itself is not ideal for foraging and commuting bats, as it comprises mostly well lit hard-standing. This further reduces the likelihood that the site is important to bats during winter. Greater Horseshoes tend to forage on invertebrates found in woodland and pasture in the winter (Park, 1999). Surveys indicate that the site does not act as a commuting habitat for Greater Horseshoe bats during the winter. It does not lie between winter hibernation roosts and their preferred winter foraging habitat (woodlands and pasture) (Park, 1999). As such, it has been concluded that the site is not important for bats during the winter.

Summer surveys undertaken during the spring and summer of 2017 identified areas of the site that are used by foraging and commuting bats, in particular the vegetated southern portion of the site. A mitigation strategy taking into account the needs of foraging and commuting bats in the summer months will be included in a subsequent report and will be sufficient to mitigate the potential effects of the proposed development on bats using the site at any time of year.

If you have any questions please contact us on 0117 300 4288 or at pparker@rsk.co.uk.

Yours sincerely



Paul Parker
Ecological Consultant

Reviewed by



Simon Boulter
Director
For and on behalf of RSK

References

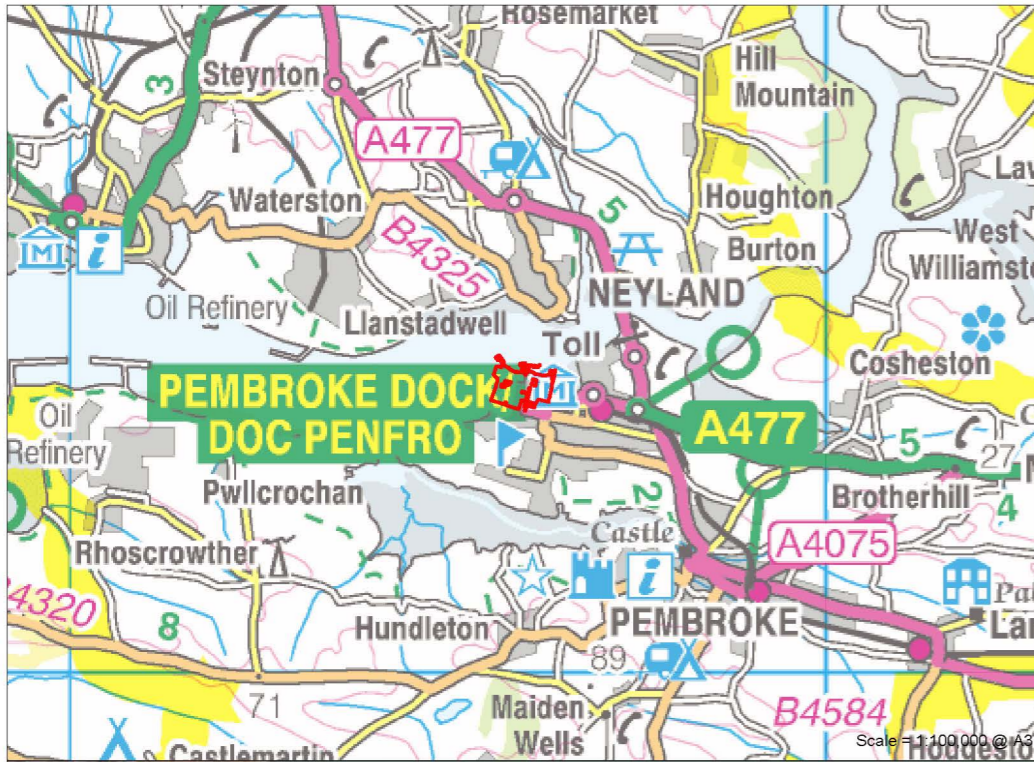
Park K, Jones G & Ransome RD (1999). *Winter activity of a population of greater horseshoe bats (Rhinolophus ferrumequinum)*, Journal of Zoology, 248 (4), pp. 419-427.

Ransome (1990). *The Natural History of Hibernating Bats (Christopher Helm mammal series)*. Thomson Learning

FIGURES

Figure 1; Site Location Plan

Figure 2; Preliminary Bat Roost Inspection



Site boundary

Rev	Date	Description	Drn	Chk	App
00	18.04.17	856531	RG	SP	PP

Pembroke Docks

Figure 1
Site Location Plan

0 300 metres
Scale = 1:10,000 @ A3

0 100 200 300 metres
Scale = 1:10,000 @ A3

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