THE ENVIRONMENT PARTNERSHIP



EDEN PROJECT NORTH

BAT SURVEYS 2021

TEP Technical Report August 2021

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1.0 General Details

Site Name	Eden North		
Job Number	7596	**Doc. Ref**	7596.011
Site Location	Morecambe	**Central NGR**	SJ 60874 94527
Survey Location	The proposed development site is located in Morecambe, Lancashire. The site is located on the central promenade of Morecambe adjacent to the A589 Marine Road Central, just to the north of the town centre. The site is located to the east of the Midland Hotel.		
Date(s)	**Daytime Building Assessment** • 12th July 2019 **Nocturnal Roost Surveys of Buildings** • 31st July 2019 • 29th August 2019		
Survey Constraints	No seasonal constraints encountered. Very brief drizzle on the 31st July 2019, this did not impact bat activity across the survey. Bats vary their calls dependent on the habitats they fly in and on their activity (commuting, foraging, social interaction, etc). It is not always possible to identify bat calls to species level owing to the overlap of call parameters between some species and/or poor quality recordings (e.g. brief and distant passes). In these cases, it is accepted that species are identified to genus level or group level (e.g. *Myotis, Myotis/Plecotus* and *Nyctalus/Eptesicus*) (Russ, 1999). Where call parameters are inconclusive the species has been labelled as 'unknown'. This ensures the dataset is interpreted accurately and transparently.		
Surveyors	**Daytime Building Assessment** • Bobby Smith (2015-11394-CLS-CLS). **Nocturnal Roost Surveys of Buildings** • Sue O Neill • Ben Meadows • Anna Cocker • Louise Redgrave • Craig Smith • Andrew Barnes		

2.0 Introduction

2.1 The bat surveys form part of a wider ecological appraisal to provide input into a proposed Eden Project North, Morecambe.

Site Description

2.2 The proposed development site is located in Morecambe, Lancashire at central grid reference SD 42905 64522. The site is located on the central promenade of Morecambe adjacent to the A589 Marine Road Central, just to the north of the town centre. The site is located to the east of the Midland Hotel.

Legislation

2.3 All bats, their breeding and resting places are internationally protected under The Conservation of Habitats and Species Regulations 2010 (as amended). In England and Wales, bats are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to:

- deliberately capture, injure or kill bats;
- damage or destroy a breeding or resting place;
- obstruct access to their resting or sheltering places;
- possess, sell, control or transport live or dead bats, or parts of them;
- intentionally or recklessly disturb a bat while it is in a structure or place of shelter or protection.

2.4 Works that that can affect bats include:

- renovating, converting or demolishing a building
- cutting down or removing branches from a mature tree
- repairing or replacing a roof
- repointing brickwork
- insulating or converting a loft
- installing lighting in a roost, or outside if it lights up the entrance to the roost
- removing ‘commuting habitats’ like hedgerows, watercourses or woodland
- changing or removing bats’ foraging areas
- using insecticides or treating timber

2.5 If disturbance of bats cannot be avoided during works, then a mitigation licence from Natural England may be required before works can commence.

3.0 Methods

Desktop Study

3.1 Desktop records were gathered in May 2019 from Lancashire Ecological Records Centre (LERN).

Preliminary Daytime Building Assessment

3.2 Daytime surveys of the buildings were undertaken in in 2019. The daytime assessment was undertaken in accordance with the 2016 Bat Conservation Trust (BCT) guidance by bat licenced surveyor Bobby Smith (Natural England Licence Ref: 2015-11394-CLS-CLS) on the 12th July 2019. The buildings were searched externally and internally for any evidence of use by bats and classified according to the suitability for roosting bats in line with the criteria set out at Table 1. The surrounding habitat was also assessed for its potential to support foraging and commuting bats.

Table 1: Evaluation of potential suitability of buildings, trees and habitats for bats

Roosting Habitats	Commuting/ Foraging Habitats
Negligible Suitability	
Negligible potential roost features are present that are likely to be used by bats.	Negligible features on site likely to be used by commuting or foraging bats. A general lack of linear features and low habitat, structural or floristic diversity.
Low Suitability	
A structure with one or more potential roost features that could be used by individual bats opportunistically, but which do not offer sufficient space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats. A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential	Habitat that could be used by small numbers of commuting bats (e.g. a gappy hedgerow or an un-vegetated stream) or foraging bats (e.g. a lone tree or small patch of scrub) but which is isolated from the surrounding countryside.
Moderate Suitability	
A structure or tree with one or more potential roost features that could be used by bats due to their size, shelter, protection, conditions and	Continuous habitat connected to the wider landscape that could be used by bats for commuting (e.g. lines of trees or scrub or

surrounding habitat, but which is unlikely to support a roost of high conservation status (maternity or hibernation).	linked back gardens), or foraging bats (e.g. trees, scrub, water, grassland).
High Suitability	
A structure or tree possessing one or more potential roost features that are suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time, due to their size, shelter, protection, conditions and surrounding habitat.	Continuous high quality habitat that is strongly connected with the wider landscape that is likely to be used regularly by commuting bats (e.g. river valley, vegetated stream, woodland edge, hedgerows with trees) or foraging bats (e.g. broadleaved woodland, grazed parkland, tree-lined watercourses or ponds).

Preliminary Daytime Tree Assessment

3.3 A ground-based inspection of trees within and around the site that could potentially be affected by the proposed development was carried out in conjunction with the Phase 1 habitat survey undertaken on 3rd May 2019 and updated on 28th June 2021. The Phase 1 habitat survey is detailed within TEP report ref 7596.019. The species, age, growth form and condition of trees were assessed for their suitability for bats to roost. Field signs such as droppings, characteristic staining and the smell of bats were also searched for. The assessment also takes into account the surrounding landscape, including the nature of vegetation, connectivity with suitable habitats in and around the site, and artificial lighting.

3.4 Trees were categorised in accordance with Bat Conservation Trust (BCT) Guidelines (2016) as a confirmed roost, or as having high, moderate, low or negligible roost suitability (see Table 1). Features that may support roosting bats include, for example, rot holes, splits, snags and flaking or lifted bark.

Nocturnal Roost Surveys of Buildings

3.5 A dusk emergence survey and a dawn re-entry survey was undertaken on one building (building B1) assessed as having **moderate** bat roosting suitability.

3.6 One dusk emergence survey was undertaken on building B3 assessed as having **low** bat roosting suitability.

3.7 The surveys were carried out in line with the 2016 BCT Guidance. Dusk emergence surveys commenced 15 minutes prior to sunset and finished 90 minutes after sunset. Dawn re-entry surveys commenced 90 minutes prior to sunrise and finished 15 minutes after sunrise. Surveyors used heterodyne detectors (Petterson) and frequency division (Anabat) detectors to record bat calls. Sonogram analysis was undertaken by John Crowder MSc Hons MCIEEM, trained to Advanced Level 3 Analook Analysis.

3.8 Details including weather conditions, times, etc. for the nocturnal surveys are provided in Table 2.

Table 2: Nocturnal Survey Details

Survey Details								
Date	**Buildings surveyed & survey visit**	**Sunset/ Sunrise**	**Start time**	**End Time**	**Temp**	**Rain**	**Cloud***	**Wind****
31/07/19	Visit 1 Building 1 & 3	21:13	20:43	22:43	17.5	Brief drizzle at start of survey	5	1
29/08/19	Visit 2 Building 1	06:13	04:43	06:28	13.5	N	8	1

4.0 Results

Desktop Study

4.1 Desktop records were gathered in May 2019 from Lancashire Environmental Record Network (LERN). Records of pipistrelle species, soprano pipistrelle *Pipistrellus pygmaeus* and brown long eared bats *Plecotus auritus* were recorded within 2km of the site. It is unknown if these records are of roosts or bat activity. These records are not within or adjacent to the site boundary.

Preliminary Daytime Building Assessment

4.2 Table 3 gives the results of the daytime building assessment for bat roost suitability.

Table 3: Results of Daytime Building Assessment

Building ID/ Name	Description	Photo	Roost Status/ Suitability
B1-	A breeze block built, curved building with large metal doors which have gaps where they meet the floor. There are also a number of gaps present between the breeze blocks which may offer internal access. There are also visible gaps under the roof felt which could be utilised by bats. Furthermore much of the front side of the building is heavily clad in ivy which could obscure other potential cracks and crevices. There is also an open vent on the west side of the structure which provides access to the internal structure.		Moderate

Building ID/ Name	Description	Photo	Roost Status/ Suitability
B2-	A small circular, breeze block building with a flat recessed roof. There were signs that people had gained access to the roof due to rubbish being found on the roof. There were small holes in the side of the building which used to offer access for cables. The building has a metal door which has open slots due to nature of slots they do not lend themselves to allowing access for bats into internal of building.		Negligible
B3-	An old bandstand, made of bricks with a flat, felt covered roof. There were a number of visible gaps in the brickwork and the roof felt was peeling away from the structure. Lastly there were holes in the boarded up window which could further offer access by bats to the internal structure.		Low

Preliminary Daytime Tree Assessment

4.3 All trees within the site were identified to hold negligible roost suitability under the BCT Guidelines (2016).

Nocturnal Roost Surveys of Buildings

4.4 Table 4 gives the results of the nocturnal surveys of buildings.

Table 4: Results of Nocturnal Surveys of Buildings

Ref	Survey Visit 1	Survey Visit 2
B1	No Roosting Behaviour Very low levels of foraging and commuting by common pipistrelle	No Roosting Behaviour No bat activity recorded
B3	No Roosting Behaviour Very low levels of foraging and commuting by common pipistrelle	n/a

5.0 Evaluation

Buildings

5.1 No bat roosting was confirmed in any of the buildings on site. There are no implications for demolition of these buildings and roosting bats.

Trees

5.2 All trees within the site were identified to hold negligible roost suitability and no further action is therefore required for these trees regarding bats under the BCT Guidelines (2016).

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