Great Yarmouth Third River Crossing

Application for Development Consent Order

Document 6.2: Environmental Statement Volume II: Technical Appendix 8G: Preliminary Bat Roost Report

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Bat Roost Assessment Report

Prepared by JDEcology
on behalf of WSP

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Great Yarmouth Third River Crossing – Preliminary Bat Roost Assessment Report

The contents of this report have been produced with due consideration of current best practice guidance, including the Charted Institute of Ecology and Environmental Management's Guidelines for Ecological Report Writing (CIEEM, 2017) and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).

Survey data within this report is valid for a maximum of 18 months from the date of the first survey. After this period an updated site visit will be required to determine a new ecological baseline.

This report has been compiled by Jonathan Durward, BSc (Hons) CEnv MCIEEM.

JDEcology
5 The Maltings,
41 High Street,
Chesterton, Cambridge
CB4 1NQ

Mobile: 077175 32825
Email: jonathan.durward@jdecology.co.uk

Client: WSP

Report Number: JDE00681

	Prepared By:	Checked By:	Date:
First Draft	Rachel Bates	Jonathan Durward BSc (Hons) CEnv MCIEEM	04/12/2018
Second Draft	Jonathan Durward	Rachel Bates BSc (Hons) ACIEEM	06/12/2018
Third Draft	Rachel Bates	Jonathan Durward BSc (Hons) CEnv MCIEEM	06/12/2018
Fourth Draft	Rachel Bates	Jonathan Durward BSc (Hons) CEnv MCIEEM	17/12/2018
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1. SUMMARY

1.1 JDEcology was commissioned by WSP in September 2018 to carry out a Bat Roost Assessment of buildings and structures in the vicinity of the River Yare, Great Yarmouth. The aim of the survey was to inform and support a Development Consent Order for the proposed Great Yarmouth Third River Crossing. The proposed development will result in the demolition of 33 buildings, including residential properties, industrial units and outbuildings (Appendix E).

1.2 This report details the methodologies used to assess and evaluate any likely ecological impacts on bats as a result of the proposed bridge crossing. The results of the ecological survey work are presented and discussed before recommendations are made for further surveys that may be required.

1.3 Of the 33 buildings surveyed, twenty-two properties have been classified as having *low potential* to support roosting bats, and three properties and eight outbuildings have been classified as having *negligible potential*, (Collins, 2016).

1.4 External areas of twenty-two of the buildings due to be demolished contain features with potential to support roosting bats, and any future destruction of those areas will adversely impact bat roosts if present. All bat roosts are protected by law whether they are in occupation or not.

1.5 Further species-specific survey (encompassing a single dusk emergence or dawn re-entry survey between May and August inclusive) is recommended to ascertain if bat roosts are present within the buildings, including identifying species that may be present, numbers, and the location of any roosts. This data has been captured in the Outline Code of Construction Practice (CoCP) (document reference 6.16).

2. INTRODUCTION

2.1 Background

2.1.1 JDEcology was commissioned by WSP in September 2018 to carry out a preliminary bat roost assessment of buildings and structures in the vicinity of the River Yare, Great Yarmouth. The aim of the survey was to inform and support a Development Consent Order for the proposed Great Yarmouth Third River Crossing.

2.1.2 This report details the survey methodologies used to determine the presence or likely absence of bats within the properties and structures. Results from the data search and findings of the survey work are then presented and discussed in order to evaluate likely ecological impacts on bats as a result of the proposed development. Recommendations are made for further surveys where required.

2.2 Site Location and Description

2.2.1 The Principal Application Site consists of a number of buildings and structures located in the centre of Great Yarmouth, Norfolk, between the A47 at Harfrey's roundabout on the western side of the River Yare and South Denes Road on the eastern side of the river. Figure 2.1 shows the locations of the areas surveyed; with details of the specific buildings surveyed set out in Section 5.

Figure 2.1: Location of Survey Areas

3. LEGISLATION

3.1 Environment and Biodiversity

3.1.1 Planning policy on transport network Nationally Significant Infrastructure Projects (NSIPs), specifically in relation to ecology and nature conservation, is contained in the Overarching National Policy Statement (NPS) for National Networks (Department for Transport, 2014). This is fully detailed in Chapter 8: Nature Conservation.

3.1.2 Under the National Planning Policy Framework (NPPF, 2018), local planning authorities should aim to conserve and enhance the natural environment when determining planning applications. Local planning authorities also have an obligation to seek opportunities to further enhance the conservation status of Species and Habitats of Principle Importance.

3.1.3 Species and Habitats of Principal Importance for the conservation of biodiversity in England (JNCC, 2009) are covered under Section 41 of the Natural Environmental and Rural Communities (NERC) Act (2006). Species and habitats listed within Section 41 need to be taken into consideration by a public body when performing any of its functions, such as assessing planning applications.

3.1.4 Bat species listed within Section 41 include Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared *Plecotus auritus*, Greater Horseshoe *Rhinolophus ferrumequinum*, and Lesser Horseshoe *Rhinolophus hipposideros*.

3.2 Wildlife

3.2.1 Bats within the UK (all species) are afforded protection under the EU Conservation of Habitats and Species Regulations 2017, as well as under the UK Wildlife and Countryside Act 1981 (as amended) and the Countryside Rights of Way Act 2000. It is an offence to:

- Deliberately or recklessly capture, injure or kill any wild animal of a European protected species;
- Deliberately or recklessly disturb any such animal;
- Damage or destroy their breeding site or resting place; and
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from these species.

3.2.2 Disturbance of European protected species constitutes any activity 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; and
- To significantly affect the local distribution or abundance of the species to which they belong.

4. SURVEY METHODOLOGY

4.1 Desk Study

4.1.1 A data search for bat records within a 5km radius of the Principal Application Site was requested from Norfolk Biodiversity Information Service in October 2016 by Mouchel, whom has shared the records for the purpose of this report. Only records within the last 15 years are considered to be relevant.

4.1.2 Multi-Agency Geographic Information for the Countryside (MAGIC) was accessed in November 2018 to locate any existing European Protected Species (EPS) mitigation licences within 5km of the Principal Application Site. MAGIC was also accessed to locate any statutory designated areas within the same search radius with bats as a qualifying feature.

4.2 Site Visit and Surveyor Qualifications

4.2.1 A site visit was carried out the week commencing 19th November 2018 by Mr Jonathan Durward BSc (Hons) CEnv MCIEEM, an ecologist with 18 years' experience within professional ecological consultancy, and Miss Rachel Bates BSc (Hons) ACIEEM, an ecologist with over seven years' professional experience. Both surveyors hold a Natural England Class 2 bat survey licence (2016-11967-CLS-CLS and 2016-23730-CLS-CLS respectively) as a minimum for the purpose of this survey.

4.2.2 Weather conditions at the time of the inspections were overcast and cold, with 100% cloud cover, extended periods of light to moderate rain, temperatures averaging 8°C, and a gentle to moderate breeze (8-18 mph).

4.3 Preliminary Bat Roost Assessment

4.3.1 Buildings were subject to an internal and external inspection to determine their potential to support roosting bats. The inspections were carried out in accordance with current best practice guidance (Collins, 2016). Ladders, close focusing binoculars, a high-powered torch, and an endoscope were used to identify and assess any potential roost features and to look for evidence of roosting bats.

4.3.2 Potential roost features on a building may include raised or missing roof tiles, ridge tiles, lead flashing or hanging tiles, and gaps under soffit boxing or within brickwork (this list is not conclusive). Evidence of bats and their roosts include the presence of droppings, stain or grease marks, feeding remains, or the bats themselves.

4.3.3 Buildings and the quality of on-site habitats were then categorised based on the classification criteria in 'Bat Surveys for Professional Ecologists' (Collins, 2016). Classification criteria is presented below:

- **Negligible:** structures with features unlikely to be used by roosting bats. Habitats on site unlikely to be used by foraging or commuting bats.
- **Low:** a structure with one or more potential roost sites that may be utilised by opportunistic bats but are not suitable for use on a regular basis or by a large number of bats. Habitat could be used by a small number of foraging or commuting bats.
- **Moderate:** a structure or tree with one or more potential roost sites that may be utilised on a regular basis but unlikely to support a roost of high conservation status. Continuous habitat that provides good connectivity within the wider landscape and offers foraging opportunities.

- **High:** a tree or structure with one or more potential roost sites suitable for use by a larger number of bats on a regular basis and for longer periods of time. Continuous high-quality habitat that is well connected within the wider landscape and offers high-quality foraging habitat. The site is close to and connected to known roosts.

4.4 Survey Limitations

4.4.1 The gap in the rendering between 150 Southtown Road and the adjacent property could not be inspected in close detail due to the presence of an additional single storey extension.

4.4.2 Voids above the two-storey extensions in 149, 150, 151, 152 Southtown Road could not be inspected as there was no access hatch. There was no access into the loft conversion of 149 Southtown Road.

4.4.3 The tenant of number 15 refused access, the roof void of number 18 could not be accessed as the latch key wasn't available, and the tenants of 17 and 19 were not at home, so no internal inspections were carried out at these properties.

4.4.4 There was no access to 13 and 14 Queen Anne's Road, and an internal inspection of the outbuildings at 11 Cromwell Road and 16 Queen Anne's Road could not be carried out as access could not be gained.

4.4.5 A dusk emergence or dawn re-entry survey of the above buildings will be undertaken to fill any gaps in the inspection survey data, to be captured in the Outline Code of Construction Practice.

4.4.6 Emergence surveys will not be undertaken of 13 and 14 Queen Anne's Road and the outbuildings at 11 Cromwell Road and 16 Queen Anne's Road, as there are no external access points or features present with bat roosting potential.

5. SURVEY RESULTS

5.1 Desk Study

Statutory Designated Areas

5.1.1 There are no statutory designated sites present within the 2 km of the Principal Application Site (defined as the Broad Study Area in Chapter 8: Nature Conservation) which have been designated with bats as a qualifying feature.

Bat Records

5.1.2 Seven species of bat have been recorded as present within 5km of the Principal Application Site, all recorded during 2015 as part of the Norfolk Bat Survey project. The species are; Serotine *Eptesicus serotinus*, Noctule *Nyctalus noctula*, Nathusius' Pipistrelle *Pipistrellus nathusii*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Common Pipistrelle *Pipistrellus pipistrellus*, Daubenton's *Myotis daubentonii*, and Brown Long-eared *Plecotus auritus*.

5.1.3 There are no records of any bat roosts within the 2km search radius.

5.1.4 No European Protected Species mitigation licences for bats have been granted within 5km of the survey area. It should be noted that MAGIC has limited records of granted licence applications post-2016.

5.2 Bat Roost Assessment

5.2.1 Full descriptions of the buildings inspected are presented in the Appendices as follows - Appendix A1: Southtown Road; Appendix B1: Queen Anne's Road; Appendix C1: Cromwell Road; and Appendix D1: Industrial Units on Suffolk Road and South Denes Car Centre. Photographs of the building inspections are provided in Appendices A2, B2, C2 and D2.

General Building Descriptions

Southtown Road

5.2.2 The terraced properties of Southtown Road are two-storey residential dwellings constructed of brick, with pitched roofs of cement-based roof tiles, and central brick chimneys. To the rear of each property is a two-storey extension with a sloping roof also of cement-based roof tiles. There is no soffit boxing or bargeboards on any of the main buildings or the extensions. The internal roof voids are approximately 6m wide by 8m long.

Cromwell Road

5.2.3 The two-storey detached property at Cromwell Road is of brick construction with pitched roofs constructed of cement-based roof tiles. There are two lofts that are lined with breathable membrane and single storey extensions to the front and the rear of the property.

Queen Anne's Road

5.2.4 The smaller terraced properties of Queen Anne's Road are two-storey residential dwellings constructed of brick, with pitched roofs of red clay roof tiles and central brick chimneys. There is no soffit boxing or bargeboards on any of the properties. The internal roof voids are approximately 4m wide by 6m long.

Suffolk Road

5.2.5 Four large brick-built industrial units with corrugated asbestos pitched roofs and plastic skylights. No soffit boxing is present. To the rear of two of the units are single-storey flat-roofed extensions in good condition.

South Denes Car Centre

5.2.6 Two-storey brick-built, flat-roofed industrial unit adjoined to a single-skin corrugated metal roofed car showroom. No fascia, bargeboards or soffit boxing present.

Footbridge

5.2.7 The footbridge running over William Adams Way is of a simple metal construction with no gaps between joints or cavities beneath or to the side of the footbridge. The footbridge has *negligible potential* to support roosting bats. No further survey or mitigation measures are required for this structure.

5.3 Summary of Building Inspections

5.3.1 Of the 33 buildings surveyed, twenty-two have been classified as having *low potential* to support roosting bats and eleven have been classified as having *negligible potential*, including eight outbuildings (Collins, 2016). Table 5.1 below provides a summary of the building inspections along with a classification of their roosting potential.

Table 5.1: Summary of Building Inspections

Property	Potential Roost Features	Bat Roost Potential
148 Southtown Road	Raised lead flashing around the chimney. No obvious access points into the roof void.	Low
149 Southtown Road	Crevices underneath fascia boarding. No obvious access points into the roof void.	Low
Shed at 149 Southtown Road	Tight-fitting clay roof tiles and well cemented gable ends.	Negligible
150 Southtown Road	Raised lead flashing and a gap in rendering between the extensions. No obvious access points into the roof void.	Low
151 Southtown Road	Raised roof tiles. No obvious access points into the roof void.	Low
Shed at 151 Southtown Road	Flat roof of bitumastic roofing felt. Internal walls and ceiling clad in soft boarding.	Negligible
152 Southtown Road	Raised roof tiles. No obvious access points into the roof void.	Low
153 Southtown Road	Raised roof tiles. No obvious access points into the roof void.	Low
Outbuilding at 153 Southtown Road	Shallow, sloping roof of tight-fitting cement-based roof tiles and tight-fitting fascia boarding.	Negligible
154 Southtown Road	Gaps between roof tiles and in the cement along the ridge. No obvious access points into the roof void.	Low
155 Southtown Road	Raised lead flashing. No obvious access points into the roof void.	Low

Property	Potential Roost Features	Bat Roost Potential
156 Southtown Road	Raised lead flashing around the chimney and loose lead flashing on the extension. No obvious access points into the roof void.	Low
Garage at 156 Southtown Road	Pitched roof and walls of corrugated sheet metal. Although there were multiple crevices underneath raised sheets, the roof and walls were single skin and so provided no cavities, and any crevices were exposed to the elements.	Negligible
11 Cromwell Road	Raised and missing roof tiles, and crevices underneath fascia boarding. No obvious access points into the roof void.	Low
Shed at 11 Cromwell Road	Breezeblock and brick construction with a timber-framed pitched roof of clay tiles. The roof and ridge tiles were tight fitting and there was no soffit boxing. Timber fascia boarding on two of the elevations was tight fitting and the gable ends were well sealed and rendered.	Negligible
Garage at 11 Cromwell Road	Garage constructed of brick and breezeblock. The pitched roof of a corrugated cement-based material was tight fitting with the roof ends well cemented at the gables.	Negligible
13 Queen Anne's Road	No external features and no obvious access points into the roof void.	Negligible
14 Queen Anne's Road	No external features and no obvious access points into the roof void.	Negligible
15 Queen Anne's Road	Air vents offer potential access into the roof void. No obvious access points into the roof void.	Low
16 Queen Anne's Road	Raised roof tiles and raised lead flashing around the chimney. No obvious access points into the roof void.	Low
Outbuilding at 16 Queen Anne's Road	Breezeblock construction, with a flat roof of lead-based material and tight-fitting plastic fascia boards.	Negligible
17 Queen Anne's Road	Air vents offer potential access into the roof void.	Low
18 Queen Anne's Road	Raised roof tiles and gaps in the cement at the ridge. No obvious access points into the roof void.	Low
19 Queen Anne's Road	Raised roof tiles beneath the skylight windows. No obvious access points into the roof void.	Low
20 Queen Anne's Road	Raised roof tiles. No obvious access points into the roof void.	Low

Property	Potential Roost Features	Bat Roost Potential
21 Queen Anne's Road	Raised roof tiles. No obvious access points into the roof void.	Low
22 Queen Anne's Road	Raised roof tiles, particularly below the ridge. No obvious access points into the roof void.	Low
Shed at 22 Queen Anne's Road	Wooden garden shed with a pitched roof of bitumastic roofing felt but no internal void and no features	Negligible
Units 10, 11, 12, and 13 Suffolk Road	Crevices and gaps between external cladding, the roof ends, and the brickwork. No internal roof voids.	Low
South Denes Car Centre	No external features and no suitable roof void.	Negligible

5.4 Habitat Assessment

5.4.1 Opposite the properties of Queen Anne's Road are a series of allotments and a nature area, with additional allotments and a tree line to the north separates the gardens from the adjacent industrial buildings. Southtown Common is just 125m to the south-west and Kingsgate Community Church is 120m to the west. Taking the urban setting into consideration, habitat suitability is considered to be of *moderate value* for foraging and commuting bats.

5.4.2 Although only approximately 130m further north of Southtown Common, habitat suitability within the vicinity of Southtown Road, Suffolk Road and Cromwell Road is considered to be of *low value* for foraging and commuting bats. Most of the gardens are vegetated but there is limited available habitat further north and connectivity is more fragmented, with tree cover only available for short distances along Cromwell Road and to the south-east of the properties on Southtown Road, and limited foraging opportunities.

5.4.3 South Denes Car Centre is situated in an industrial urban landscape with no habitat suitable for foraging or commuting bats. Habitat suitability is therefore considered to be of *negligible value*.

6. DISCUSSION and RECOMMENDATIONS

6.1 Development Proposals

6.1.1 The Scheme proposals are for a new bridge to link the A47 at Harfrey's roundabout on the western side of the River Yare with South Denes Road. The proposed development will result in the demolition of 33 buildings, including residential properties, industrial units and outbuildings.

6.2 Summary

6.2.1 Of the 33 buildings surveyed, twenty-two have been classified as having *low potential* to support roosting bats and eleven have been classified as having *negligible potential*, including eight outbuildings (Collins, 2016).

6.2.2 External areas of twenty-two of the buildings due for demolition, contain features with potential to support roosting bats, and any future destruction of those areas will adversely impact bat roosts if present. All bat roosts are protected by European and UK legislation whether they are in occupation or not, and demolition may result in the destruction of bats roosts.

6.2.3 Buildings classified as having negligible bat roost potential contain no potential roost features and so need no further survey. Buildings classified as having low bat roost potential offer limited potential to support roosts of opportunistic bats of the more common species associated with urban environments.

6.3 Recommendations for Further Survey

6.3.1 Further survey is recommended for all twenty-two buildings classified as having low potential to support roosting bats, in order to determine their presence or likely absence. The survey should consist of a minimum of one activity survey, comprising a dusk emergence or dawn re-entry survey, to be completed between the optimal survey months of May-August inclusive in line with good practice guidelines (Collins, 2016).

6.3.2 If the presence of roosting bats is confirmed, additional survey work will be required to provide further information to support an application for a European Protected Species mitigation licence from Natural England, which would allow works to be carried out that might otherwise be unlawful.

7. REFERENCES

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