AECOM **Environment**

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Queens Road Metrolink Stop Reptile Survey and Bat Habitat Assessment Report



Prepared by: ..... Checked by: .....

Francesca Tarry
Ecologist

Nicola Lewis
Principal Ecologist

Approved by: .....

Nicola Lewis
Principal Ecologist

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AECOM House, 179 Moss Lane , Altrincham, Cheshire, WA15 8FH
Telephone: 0161 927 8200 Website: http://www.aecom.com

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1 Introduction

1.1 Introduction

AECOM has been commissioned by TFGM to undertake a reptile presence/likely absence survey and a bat habitat assessment in connection with the proposed new Metrolink Stop at Queens Road, Manchester.

The requirement for a reptile survey was highlighted in a Feasibility Options Report for the Queens Road Stop, issued by CAPITA in August 2011. This report should be read injunction with the CAPITA Report.

1.2 Site Location

The site is situated on the existing Bury Line, adjacent to the Queens Road Depot, in Urmston, Manchester (central grid reference SD850005). The site includes a vegetated bank situated between two sets of rail tracks and land to the east of the tracks, south of the road bridge. The site is shown on Figure 1.

1.3 Legislation

1.3.1 Reptiles

Grass snake *Natrix natrix*, Common lizard *Zootoca vivipara*, slow worm *Anguis fragilis* and adder *Vipera berus* are included under Schedule 5 of the Wildlife & Countryside Act, 1981 (as amended) and are afforded protection under Section 9 against; intentional killing and injuring. They are also protected against sale.

Smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* are two further reptile species found within the UK. The smooth snake and sand lizard are listed in Annex IV of the EC Directive 92/94/EEC 'The Conservation of Natural Habitats and of Wild Fauna and Flora' as being in need of "strict protection". This is implemented in Britain under the Conservation of Habitats and Species Regulations 2010. They are also listed under Schedule 5 of the Wildlife & Countryside Act, 1981 (as amended) and are afforded *full* protection under Section 9. Due to the specialised habitat requirements of the smooth snake and sand lizard however, it is highly unlikely that these species would be recorded on site.

1.3.2 Bats

All European bats are listed in Annex IV of the EC Directive 92/94/EEC 'The Conservation of Natural Habitats and of Wild Fauna and Flora' as being in need of "strict protection". This is implemented in Britain under the Conservation of Habitats and Species Regulations 2010. British bats are included under Schedule 5 of the Wildlife & Countryside Act, 1981 (as amended), and the whole of Section 9 applies to European bat species. In summary, the above legislation prohibits the following:

- Deliberately, intentionally or recklessly kill, injure, disturb, catch, handle, possess or exchange a bat without a licence. A 'deliberate' offence may be committed by a person who did not intend to commit the offence; however they were sufficiently informed and aware of the most likely consequences of the action. The offence of deliberately disturbing a bat applies where the disturbance is likely to significantly influence: the ability of any significant population of bat to survive, breed or rear or nurture their young, or the local distribution or abundance of the species;
- Damage or destroy a breeding site/resting place or intentionally damaging a place used for shelter (this applies to sites that are not currently occupied, as bats can return to roosts year after year);
- Intentionally damage or obstruct access to any place that a bat uses for shelter or protection (i.e. a roost) without a licence;
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.
- Licences are issued by Natural England for any actions that may compromise the protection of a European protected species, including bats, under the Conservation of Habitats and Species Regulations 2010. This includes all developments and engineering schemes, regardless of whether or not they require planning permission.

1.3 Objectives

The objectives of this study are:

- To determine whether reptiles are using the site at Queens Road;

- To determine whether any of the trees on site offer habitat features suitable for roosting bats;
- To suggest any further survey requirements, with regards bats; and
- To make suggestions for mitigation and compensation where appropriate.

1.4 Quality Assurance

This project has been undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our accreditation to the international standards BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition our IMS requires careful selection and monitoring of the performance of all sub consultants and contractors.

All AECOM Ecologists are members of (at the appropriate level) the Institute of Ecology and Environmental Management (IEEM) or the Institute of Environmental Management and Assessment (IEMA) and follow their code of professional conduct when undertaking ecological work.

Capabilities on project:
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2 Methodology

2.1 Reptile Survey

A reptile presence/ likely absence survey was carried out on site, focussing on the west facing vegetated bank between two sets of tracks, east of the Queens Road Depot (shown on Figure 1). The west facing bank was dominated by tall ruderal vegetation, grassland, scattered scrub and patches of bare ground.

Artificial refugia, in the form of roofing felt 'tiles' were placed in appropriate locations along the top and the bottom of the bank, roughly in two rows. In total, 27 tiles were used, which were checked five times, during October 2012. Should any reptiles be detected, a population assessment is normally undertaken in accordance with methodology described in the Herpetofauna Workers Manual (Gent and Gibson, 2003).

2.2 Bat Habitat Assessment

A number of trees to the east of the rail tracks, outside of the rail land, were assessed for their potential to support roosting bats (See Figure 1).

This assessment was undertaken in accordance with the Bat Conservation Trust Good Practice Guidelines (2012) and the assessment criteria are set out in Table 1 below.

Table 1: Criteria used for tree assessment

Category	Criteria
Known or confirmed roost	Tree which has been identified as a known bat roost.
1*	Trees with multiple, highly suitable features capable of supporting larger roosts.
1	Trees with definite bat potential, supporting fewer suitable features that category 1* trees or with potential for use by single bats.
2	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.
3	Trees with no potential to support bats.

Features on trees suitable for roosting bats can include; split or broken limbs, cracks and crevices, woodpecker holes and dense ivy covering.

No further trees, buildings or other built structures were highlighted as requiring assessment by TFGM.

Further dusk emergence/ dawn re-entry surveys may be required on individual trees on site that are identified as known roosts, or category 1* or 1, should they be affected by the works. Any trees identified as category 2 which require removal should be soft-felled in the presence of an ecologist, at the appropriate time of year.

3 Results and Conclusion

2.3 Results

2.3.1 Reptile Survey

No reptiles were recorded on site during the reptile surveys; the results and weather conditions are shown in Table 2 below.

Table 2 Queens Road Reptile Survey Results

Date	Temperature (℃):	Wind speed (Beaufort scale)	Cloud Cover (Octars, scale 1 to 8)	Recent rain	Species found
4th October 2012	15	Average: 0	6	Possibly the previous day.	No reptile species found.
10th October 2012	12.5	Average: 1	8	Light rain prior to survey.	No reptile species found.
25th October 2012	11	Average: 1	7	No.	No reptile species found.
29th October 2012	12	Average: 0	5	Very light rain shower earlier in the day.	No reptile species found.
30th October 2012	8.8	Average: 0	8	Showers earlier in the day.	No reptile species found.

2.3.2 Bat Habitat Assessment

Tree species recorded on site included; lime *Tilia* sp, poplar *Populus* sp, ash *Fraxinus excelsior*, maple *Acer* sp and cherry *Prunus* sp. The trees, which were all either semi mature or mature, were likely planted for amenity purposes; providing a screen between the rail land and the adjacent housing estate. None of the trees were assessed as suitable for roosting bats and therefore have been assessed at category 3.

3.1 Conclusion

Reptiles

No reptiles were recorded on site, however, the conditions for survey were not optimal on the second and last survey visits. Reptiles are generally active between April and October. The surveys were carried out in October, which is within the appropriate survey period; however the most productive months for reptile surveys are generally April, May and September.

Reptile activity is heavily influenced by weather conditions and patterns. Reptile surveys should not be undertaken when the temperature is either below 9 ℃ or above 18 ℃, or during rainy or windy conditions unfavourable for basking. With the exception of the fifth survey visit, the temperature was within the appropriate limits, with little wind. Overcast conditions were however experienced, with rain showers prior to some of the survey visits.

The surveys were undertaken when the weather conditions were the most favourable during the month of October, which experienced high levels of rainfall in 2012. After the fifth survey visit, no further surveys could be undertaken due to a significant drop in temperature.

No reptiles were recorded; however a total absence of reptiles from the site cannot be concluded, due to some sub-optimal survey conditions. If reptiles do utilise the site, the number of individuals present is likely to be low as no reptiles were recorded, the size of the site is also relatively small, isolated and also shaded in places.

In terms of mitigation, a precautionary approach is suggested with regards to reptiles. Stage strimming of vegetation should be undertaken if possible, should the works affect the vegetated bank, to try and deter any reptiles from the site (if present) prior to site clearance. This requires strimming the vegetation to 10-15 cm in height prior to strimming to the ground, to encourage reptiles to vacate the area. An ecologist should also be present during site clearance, to check under any debris which could potentially be used by reptiles for refuge. Should large numbers of reptiles be encountered during site clearance, which is considered very unlikely, works would have to temporarily cease and the reptiles translocated to another suitable site.

This risk of reptiles on the site is very low.

Bats

The trees which were assessed for their potential to support roosting bats were considered unsuitable, with no obvious suitable features recorded. Should any further trees, buildings or other built structures be affected by the works, they too will require assessment.

The site does offer suitable commuting and foraging habitat for bats. Please refer to the Feasibility Options Report for the Queens Road Stop (CAPITA, 2011) for recommendations and mitigation requirements in relation to this and other species.

3.2 Enhancement Opportunities

Consideration should be given to enhancing the site, post construction, for native wildlife such as bats, birds and reptiles, where safe and appropriate to do so. This could include installing bird nest boxes and bat boxes, which could be secured to trees and buildings on site. Artificial refugia suitable for reptiles, such as log piles, could be created and positioned just off site, close to suitable semi natural habitats. An ecologist should be consulted on appropriate positions for such mitigation prior to installation.

Any new tree/shrub planting should include species of native and local provenance, such as hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, rowan *Sorbus aucuparia* elder *Sambucus nigra* and Pedunculate Oak *Quercus robur*. Wildflower planting should also be considered where possible.

4 References

Gent t, Gibson S (2003) Herpetofauna Workers Manual

Bat Conservation Trust (2012) Bat Surveys: Good Practice Guidelines, 2nd Edition

CAPITA (2011) TFGM Gateway 2- Feasibility Options Report for the Queens Road Stop

Figure 1

Site Location Map



Key

Reptile Survey Area

Bat Habitat Assessment Area