Date: 26th May 2015

Mr John Retchless
By email: john@parsonswhittley.co.uk

Ref: TE/TD/2015_309

Dear John,

Phase 2 precautionary surveys: Land adjacent Magellan Way, Spalding (the 'site')

Summary of findings

- Although habitats on site were noted as offering potential for great crested newts *Triturus cristatus*, environmental DNA (eDNA) analysis of water samples taken from the borrow pit on site did not find any evidence of great crested newt presence. Given that there are no further water bodies with connectivity to the site it is also unlikely that the site forms part of a wider great crested newt populations range. Therefore the development is not considered likely to impact upon this species.
- A further survey of the site for the presence of water vole *Arvicola amphibius* and Japanese knotweed *Fallopia japonica* during more optimal activity and growing seasons, respectively, did not find any evidence of the presence of either of these species. Therefore the development is not considered likely to impact upon water vole or spread Japanese knotweed off site, as nether species was present on site.
- Following the receipt of the arboricultural reports it was determined that two trees previously assessed as having potential for roosting bats would require remedial works. A further assessment of the proposed works detailed in the arboricultural report on these trees determined that tree works could be undertaken without disturbing features of potential use to bats.

Note: This report should be read in conjunction with the Preliminary Ecological Appraisal report of Land adjacent Magellan Way, Spalding (Torc Ecology Ltd, 2015).

Background information

The site consisted of a borrow pit flanked by ruderal and scrub vegetation, with mature trees on the boundaries. The site was situated within the south of the town of Spalding, Lincolnshire and was immediately surrounded by residences and busy roads. Further from site the wider environment was dominated by residential housing, however green corridors were present

through the urban environment of Spalding; most notably the Local Wildlife Site (LWS) Disused March Line (LWS220), of which the site formed the southernmost part.

The proposed development scheme for the site will involve the clearance of the vegetation in the north of the site to facilitate the construction of a new residence raised on stilts over the northern part of the borrow pit.

A Preliminary Ecological Appraisal (PEA) of the site did not identify the presence of any protected or notable species; however several mature trees on site were noted as having potential for roosting bats. It was also noted that the site had the potential to support great crested newts, possibly breeding within the borrow pit, although the site was isolated from other potential breeding sites i.e. water bodies. No evidence of water vole or Japanese knotweed was found on site, however the desktop study identified that there were previous records for both species in proximity to the site. The surveys documented in the PEA were undertaken at a time of year when evidence of the presence of water vole and Japanese knotweed may not have been apparent.

It was determined therefore that further surveys were required to identify the presence or confirm likely absence of great crested newts, water vole and Japanese knotweed; these surveys are discussed within this report. In addition, following receipt of an arboricultural report[1] and the subsequent tree maintenance works proposal report[2] post completion of the PEA report, it has been determined that arboricultural works would affect two trees previously identified as having potential for roosting bats in the PEA. These were a mature ash *Fraxinus excelsior* tree and a mature willow *Salix* sp. tree in the northeast corner of the site, referred to as tree numbers 6 & 7, respectively in the arboricultural report[1] and tree numbers 1 & 2 respectively in the tree maintenance works proposal report[2]. Therefore, as recommended in the PEA report, the likely impact of these works on features of potential use by roosting bats was assessed and is also discussed in this report..

All of the surveys/assessments were undertaken on the 17th April 2015 by Tom Deaney (Ecologist, Torc Ecology Ltd), an Associate member of the Chartered Institute of Ecology and Environmental Management (ACIEEM) and holder of a Natural England Class 2 great crested newt survey licence (licence number: 2015-8693-CLS-CLS) and a Natural England Class 2 bat licence (licence number 2014-4321-CLS-CLS).

Great crested newt eDNA assessment

Great crested newts, and their resting places, are strictly protected by domestic and European legislation, therefore detailed species specific surveys i.e. environmental DNA (eDNA) analysis of water samples taken from the onsite borrow pit was recommended to appropriately determine development impacts upon this species. Natural England have approved the use of this technique to determine great crested newt presence/absence[3]. The survey methodology followed is outlined within the technical advice note for this survey technique[4].

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[1] Plandescil Ltd (2015) *Arboricultural Implications assessment & tree protection plan: Magellan Way, Spalding*. Plandescil Ltd, Attleborough.

[2] Plandescil Ltd (2015) Application to seek consent for works on two trees at Magellan Way, Spalding. Plandescil Ltd, Attleborough.

[3] Natural England, (2014). *EPS Mitigation Licensing newsletter (April 2014)*. Natural England, Bristol.

[4] Biggs J *et al.* (2014). *Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5: Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA*. Freshwater Habitats Trust, Oxford.

In summary, this technique is based on the fact that, should great crested newts be present within a water body then the DNA from this species will also be present within the water. The technique therefore involves collecting a representative number of water samples from the water body which are then dispatched to a laboratory where they are tested for the presence of great crested newt eDNA.

Analysis of the water samples by SureScreen Scientifics did not identify great crested newt eDNA in any of the water samples i.e. none of the 12 replicates qPCR replicates were positive for great crested newt eDNA in the borrow pit[5].

Water vole survey

Water voles, and their resting places, are also protected by domestic legislation; therefore specific searches were made looking for evidence of water vole activity referencing that outlined in the Water Vole Conservation Handbook (Strachen *et al.*, 2011). Evidence searched for included actual water vole sightings, latrines, feeding signs (e.g. feeding lawns), burrows and runs.

No evidence of water vole activity was recorded on site during the survey.

Japanese knotweed survey

It is an offence under section 14 of the Wildlife and Countryside Act (1981) (as amended) legislation to plant or otherwise cause Japanese knotweed to grow in the wild. There is no obligation to remove or treat Japanese knotweed however, landowners must not allow Japanese knotweed to spread onto adjacent land or encourage the spread of the species beyond the site boundary. This can include moving contaminated soil from one place to another or incorrectly handling or transporting contaminated material and plant cuttings.

Therefore, a precautionary search for the presence of this species on site was carried out at a time of year when evidence of this species would be most apparent i.e. April-October.

No evidence of the presence of Japanese knotweed was recorded on site during the survey.

Impact of arboricultural works on bats

All bat species, and their roosts, are strictly protected by domestic and European legislation. Therefore bat roost potential inspections were undertaken of the ash and willow tree in the northeast corner of the site subject to the proposed arboricultural works outlined in the tree maintenance works proposals[2] to determine the potential impacts of these works on roosting bats.

The ash tree was located on the north boundary of the site. No specific features suitable for roosting bats were identified; however dense ivy cover was noted on the lower trunk which could conceal features suitable for roosting bats. However, the proposed works on this tree involve the removal of the thin branches which overhang Magellan Way; none of these branches were considered suitable for roosting bats.

The willow tree was located just south of the ash tree and was a large multi-stem tree which had been previously pollarded. Long crevices were noted in several of the stems below the pollarding cuts. Upon close inspection with a torch and endoscope (where possible), these crevices were found to be generally cobwebby/filled with detritus and not indicative of use by roosting bats,

[5] SureScreen Scientifics (2015). *Technical report: examination of environmental DNA in pond water for the detection of great crested newts.* Surescreen Scientifics, Morely.

[2] Plandescil Ltd (2015) Application to seek consent for works on two trees at Magellan Way, Spalding. Plandescil Ltd, Attleborough.

although small clear areas were noted which could provide opportunities for individual/small numbers of bats. However, the proposed works to this tree involve the removal of the thin new growth above the pollard cuts and would therefore not impact upon these features.

Limitations to the surveys
There were no significant limitations to the survey.

Discussion

Great crested newts
As no evidence of great crested newt presence was identified within the borrow pit it is reasonable to presume that this species is absent from site. Given that there are no further water bodies with connectivity to the site it is also unlikely that the site forms part of a wider great crested newt populations range.

It is therefore considered that the proposed development works are unlikely to impact upon great crested newts.

Water vole and Japanese knotweed
As no evidence of the presence of these species was identified at a time of year when signs of both species would be apparent, it is reasonable to presume that these species are absent from the site.

It is therefore considered that the proposed development works are unlikely to impact upon water vole or spread Japanese knotweed off site, as both species are not present on site.

Impact of arboricultural works on bats/bat roosts
As the proposed arboricultural works will not involve working on the features considered suitable for use by roosting bats these works are therefore considered unlikely to significantly impact upon bat roosts (if present), provided suitable precautions are followed during works (see 'Conclusion' section below).

Conclusion

No further surveys for great crested newts, water vole, Japanese knotweed or bats are considered necessary.

It is recommended that any fly-tipping on site (an activity previously observed) be removed promptly as this could be contaminated with invasive species e.g. Japanese knotweed.

It is recommended that the contractor undertaking the arboricultural works be made aware of the potential for the presence of bat roost(s) concealed behind the ivy of the ash tree and/or within crevices on the lower stem of the willow tree. The contractor should take appropriate precautions to limit disturbing these areas e.g. removal of identified branches quickly using a Manual Elevated Working Platform (MEWP), preventing any contact from these removed branches with potential bat roost features identified.

The above assessment is considered to address the ecological issues relating to great crested newts, water vole, Japanese knotweed and the proposed arboricultural works in relation to roosting bats, concerning the current known development proposals to construct a residential property on site.

Yours sincerely



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