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Land North of Hook Lane (P/6/17/OUT) - Water Vole Objections – Further Surveys

The surveys were undertaken in the late morning of 10th April, after a period of approximately three days of dry weather, therefore making it ideally weather for field signs to be identified. The surveys were undertaken by myself an Associate Ecologist and an Assistant Ecologist under my supervision. I have had extensive experience with water voles which includes the trapping, translocation and maintenance of a captive population prior to release, with a project that took place over two years to complete. The majority of my training has come from working closely on the above project with Derek Gow, who is one of the water vole experts in the country, who also leads a number of training courses for this species. I have subsequently undertaken a number of surveys throughout the south east during my 11 years as an ecologist for water voles.

Ditch D1 which ran through the site, was surveyed and the main difference within this water features, to that recorded in 2016, was the presence of water along the entire stretch; however this was deeper in the eastern section where approximately 15-20cm of water was recorded. The ditch profile remained unchanged; the vegetation had not changed in content but coverage. Hemlock water dropwort *Oenanthe crocata* was again the only aquatic vegetation present, however grass species had established down to the water's edge, along with willowherb species. There was evidence of some historic ditch and bankside vegetation clearance, as some plant remains were left on the banks and areas of bare ground had just started to become colonised. The bank also contained common ivy *Hedera helix*, bramble *Rubus fruticosus*, hedge bindweed *Calystegia sepium* and common nettle *Urtica dioica*.

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In the eastern sections of the ditch water was at its deepest, with almost vertical banks, approximately 80/90 degrees, these had no ledges or shelves which could provide water edge runs. During the survey of this area a number of burrows were seen at the water's edge, these were small and would not be classified as water voles; there were also a number of small feeding stations which consisted small fragments of grass species, these had a 45 degree gnawing marks, but these were likely to be a small mammal such as bank vole *Myodes glareolus*. Additional feeding was recorded along the entire ditch, consisted of grass remains with small droppings which were identified as bank vole.

There were some larger excavations near the water edge that were larger than the burrows identified as smaller mammals such as bank voles, however during further assessment these were only holes that had not be excavated into a tunnel. There was some larger holes on the bank face, however these were covered with vegetation and some were partially collapsed or had material around the entrances indicating that there was no recent activity. These holes could not be conclusively identified as water voles, regardless they were now unused.

There were a few feeding stations that consisted of larger grass segments, however during the entire survey there was no evidence of any foraging on the hemlock, which is the most abundant species recorded in this ditch. If water voles were present it would have been expected that these plants would have been used for foraging, or larger segments of other vegetation. There was also no associated evidence of water vole, included prints or latrines.

During the previous surveys in 2016 there were a number of burrows recorded in this ditch, some of which had characteristics of water voles. The survey this year did not find as many holes, this is mainly due to the vegetation coverage, if water voles were present 'lawns' would have been expected on the holes along the upper bank, or at least some runs/erosion leading into the hole, neither were found.

There were some small rocks/bank out crops that would form the ideal locations for territorially latrines to be located, which would be expected if water voles were present. Judging by the previous survey data, the ditch would only likely to be used by one or two individuals, but such evidence should have been easily seen with the survey effort undertaken.

A survey was also undertaken on ditch D2 in the north west, these found no evidence of any mammal species. This was a wider shallower ditch with fast flowing water with no aquatic plants and only small patches of marginal vegetation such as hemlock present. Bankside vegetation was covered with shade tolerate species such as ivy.

The conclusion of the survey undertaken in April 2017, was that there was no confirmed evidence of water voles currently utilising the any of the ditches within the site. All the evidence seen would indicate that there are smaller mammals utilising the ditch, such as bank voles, as feeding remains were small and associated dropping were seen.

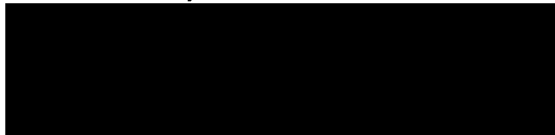
The ditches within the site have matured to a suitable standard, although there is a lack of foraging diversity there is a coverage of hemlock and willowherb, that would provide foraging opportunities for water voles. These habitats would appear to be more established than that recorded in 2016, this could be due to the ditch holding more water and/or the management regime that was undertaken along the ditch at the latter end of last year. The ditch has a suitable substrate within which burrows can be excavated, as they have a clay content which would support tunnel and chamber construction.

The absence of any water vole evidence would support that conclusions made in the FPCR letter dated 29th March 2017; where it was thought, a single individual (or maximum two) may had migrated into the site in May 2016, where foraging, latrines and burrows were seen. This individual/s later may have dispersed out into the wider area, as conditions become unsuitable possible due to the loss of suitable foraging or even is search of a mate. Surveys in August and September 2016 found no evidence of water vole. The continuation of water voles being absent in 2017, would strengthen our hypothesis that the site does not form an important foraging and resting habitat for water voles. The current absence of this species would suggest that there currently is not a constraint to the proposed

works within this ditch or the surrounding waterbodies; however as previously mentioned, surveys should be undertaken prior to the construction phase to ensure absence.

If you require any more information about the surveys or if there are any questions concerning the other issues then please do not hesitate in contacting me.

Yours sincerely



Dave Harper

Associate Ecologist

FPCR Environment and Design Ltd

