

Badger Monitoring Survey 2018

Pump and Bloors Farm,
Lower Rainham,
Kent

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living creatures are capable of migration and whilst protected species may not have been located during the survey duration, their presence may be found on a site at a later date.

The views and opinions contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

- 1.1 The Ecology Partnership was commissioned to undertake badger monitoring surveys on land around Pump and Bloors Farm, Lower Rainham, Kent, following the results of a Preliminary Ecological Appraisal conducted in June 2017 by EPR.
- 1.2 Several holes were identified by EPR in 2017, scattered along the boundaries of the site at various points. The holes appeared to be indicative of badger activity. On-going monitoring was recommended to be undertaken to establish if an active badger sett is present on site.
- 1.3 Section 2 of this report sets out the methodologies of the Ecology Partnership's surveys. In section 3 the results of the surveys are presented. Discussions and implications for development are found in section 4, including general site enhancements. Conclusions drawn from the report are presented in section 5.

Site Context and Status

- 1.4 The site comprises two parcels on either side of Pump Lane, in Lower Rainham, Kent (TQ809674). The land is just less than 250m south of the Medway Estuary and Marshes Special Protection Area. A railway line borders the land to the southwest with the dense suburban area of Twydall just beyond. Further agricultural land is situated to the northwest, and Bloors Lane Community Woodland, allotments and low-density buildings to the southeast.
- 1.5 The approximate red line boundary of the site is shown below in figure 1 overleaf.



Figure 1: Redline boundary of the site. Yellow dots indicate potential setts identified by EPR in 2017; the orange dot indicates a potential fox earth identified in 2017, the blue dots show new areas of activity identified in May and September 2018

1.6 This report and monitoring was required to be undertaken to identify the various course of action with regards to development in the vicinity of the identified setts. The recommended actions include:

- Monitoring of the badger setts to understand their level of use and whether any of the setts are breeding setts;
- If any of the holes are inactive then works in this area may proceed without further constraints by badgers;
- If any of the setts are active the works may require a licence for the removal of the sett(s).

- 1.7 In order to inform the licence application, it is likely that additional sett surveys will be required to determine the present usage of the sett and the wider site. A detailed mitigation strategy will also be necessary. It should be noted that Natural England are unlikely to issue a sett closure licence for when badgers are breeding (December to June).

2.0 Methodology

- 2.1 Setts are monitored through placement of several short lengths of bamboo cane wrapped with sticky tape at the entrances to the sett. Any moved canes may indicate whether badgers have exited or entered the sett and the sticky tape may provide further evidence of badger use if hairs are caught as the badger passes through. Sand may be spread at the entrance to the sett to provide a medium for footprints and motion sensitive cameras may be set up to capture any footage of badgers in and around the sett.
- 2.2 Ecologist Emma Bagguley BSc (Hons) MSc MCIEEM undertook monitoring of the mammal holes within the site commencing on the 17th May 2018. The holes and areas of activity monitored are detailed in Figure 1. Monitoring was supervised by Alexia Tamblyn MA (Oxon) MSc CEnv MCIEEM FRGS.
- 2.3 ‘Bushnell Trophy Cameras’, motion sensitive cameras, were also set up periodically at some of the more active holes to record animal activity. Each entrance was checked for any additional evidence of badger use, such as footprints and hairs in the vegetation at the entrances.
- 2.4 A badger sett is defined in the legislation as “any structure or place which displays signs indicating current use by a badger”. This includes seasonally used setts.
- 2.5 Latest guidance from Natural England a sett is defined as such (and thus is protected) as long as signs indicate “current use”. Additionally, Natural England state that “the maximum lapse of time between last occupation by badgers and the inspection of a sett for it to be considered in “current use” is how long it takes the signs to disappear, or

more precisely, to appear so old as to not indicate “current use” (Natural England, June 2009).

Limitations

- 2.6 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment.

3.0 Results

- 3.1 The exact dates and results of each survey visit are detailed in Table 1 below. The emboldened text indicates either conclusive badger evidence recorded.

Table 1: Survey Timeline

Date	Survey method	Results from survey method
17 th May 2018 – 24 th May 2018	Cameras placed on holes 1 and 2	Rabbits using both sets of holes in areas 1 and 2.
6 th June 2018	All areas checked for activity and evidence of badgers.	Activity areas photographed and detailed in Appendix 1. No new evidence of badger activity found on site.
21 st June 2018	All areas checked for activity and evidence of badgers.	Fox seen using the holes in area 1. No evidence of badger activity found on site.
23 rd July- 30 th July 2018	Cameras placed on hole 7	No animal activity recorded using the holes.
3 rd – 10 th September 2018	All areas 1-7 checked for activity. New area of activity (8) identified with three fresh holes and areas of spoil located on the site boundary. Badger faeces found near holes 7. Cameras placed on areas 1, 7 and 8.	1- Rabbits filmed using the holes, foxes seen in several shots around this area. 7- Rabbits filmed at the hole entrance. One brief glance of badger legs by the camera but not filmed entering the hole. 8- Rabbits filmed using the fresh hole. Fox also seen on the footage.

3.2 All holes across the site have been periodically checked throughout May - September 2018 during other species specific surveys. Conclusions for each area identified in Figure 1 are detailed below:

- Area 1: Rabbit warren with fox activity around.
- Area 2: Used by rabbits. Overgrown.
- Area 3: No holes identified in 2018. Overgrown. Not in use.
- Area 4: Well vegetated, overgrown over the season. Rabbit use only and not in use by September.
- Area 5: No holes identified. Overgrown. Not in use.
- Area 6: Overgrown but spoil identified in September 2018.
- Area 7: No animals recorded using the holes in July however rabbits use found in September 2018 with a brief view of a badger in the area. Badger faeces nearby suggests they are present in this area of the site (but the sett may be off-site).
- Area 8: New in September 2018.: Rabbit warren with fox activity around.

3.3 Badger evidence was found in September around area 7. Several areas of droppings were identified and footage caught one glimpse of badger legs over a week's filming.

3.4 In September there are large amounts of fallen fruit throughout the site and much of these appear to be eaten by mammals. This food source will attract badgers to the site to forage but does not necessarily mean they reside on site.

3.5 No holes identified on site have been confirmed to be in use by badgers. All holes identified by EPR in 2017 and by The Ecology Partnership in 2018 are considered to be in use by rabbits, foxes or no longer in use by any species.

4.0 Discussion

- 4.1 Several areas of potential badger activity were identified on site by EPR in 2017 and additional holes were found by The Ecology Partnership in 2018.
- 4.2 All areas of mammal activity have been periodically monitored throughout May, June, July and September 2018.
- 4.3 All holes identified on Figure 1 are considered to be in active use by rabbits only or are completely inactive.
- 4.4 Evidence of badger activity was only found on site in September 2018. This was in the form of several latrines in the north eastern area of the site, around hole 7. Video footage revealed no activity in July, however in September, a single glimpse of a badger was caught in this area on the 5th September. This was not definitive evidence of the badgers using hole 7 however with rabbits also filmed around the hole entrance.
- 4.5 In September, the quantity of food sources on site increased dramatically with large quantities of fallen apples available. This will be attractive to not only badgers but also other mammals. Evidence of badger activity on site was only sighted once the food availability increased. This suggest the badgers are not permanent residents on site but use the site to forage.
- 4.6 At this stage in September 2018, no confirmed badger setts were found on site. However there are several areas of mammal holes around the edges that may suggest that badgers do use the site and may use holes sporadically.
- 4.7 If a badger sett is identified within the site, it is always recommended this be retained within the design, along with habitat connectivity. The treelines will be recommended to be maintained in-situ so the sett does not become isolated. A buffer zone of at least 20m will need to be incorporated into the design, around the sett. If it is not possible to

- maintain the sett on site, a licence will need to be sought from Natural England and suitable mitigation will need to be put in place, dependent on the type of sett found.
- 4.8 The exact plans for the site are yet to be finalised. As all holes are on the boundaries of the site, it is considered the plans are unlikely to impact the holes directly. Update surveys are recommended to be carried out across the site to monitor all areas of known activity and to identify if any further areas have become active prior to site works, or as a pre-commencement condition. Badgers are considered to be able to move onto the site at any time however, as are foxes.
- 4.9 Most holes have been identified as in use by rabbits, which are transient mammals and can move into new areas of habitat at any time. If warrens are to be lost this must be done in a sensitive manner. Rabbits are protected under the Wildlife and Countryside Act 1981 (as amended), and it must be carried out humanely. It is illegal to cause death by asphyxiation or crushing.
- 4.10 Foxes have been seen periodically on site during the other species-specific surveys. No earths have been identified on site however they have been noted in areas 1 and 8. If a fox earth is later required to be closed for the proposed development due to its position it is recommended that the holes be maintained until the cubs have dispersed if present. Forcing a family out of their den prior to this may cause conflict with other foxes whilst finding new territories or conflict with the badgers on site. Repellents can be used around the entrance to the holes to deter the foxes from the site. The holes can be gradually filled in in stage that allows the vixen to be able to dig out and remove any young present, and then filled in more securely once the foxes are known to have left the site. A licence from Natural England is not required to close a fox earth, however they are protected under the Wildlife and Countryside Act 1981 (as amended), and it must be carried out humanely.
- 4.11 As various mammals are known to be present on site and in the wider landscape there are a number of best practice guidelines, which should be followed:

- Any trenches or excavations on site should be either covered over at night or a plank of wood placed in so as to allow any mammals to escape if they were to accidentally fall in.
- Any open pipes or conduits laid should be blocked off each night to prevent mammals from entering them.
- Construction work should only take place between dawn and dusk with no late evening work. This will reduce possible disturbance to badgers or foxes as they emerge to forage and also reduce the risk of traffic casualties from late working site traffic.

5.0 Conclusions

- 5.1 Several mammals holes were identified around the edges of the site by EPR in 2017 and The Ecology Partnership in 2018. Monitoring of these holes has been on-going from May 2018 through to September 2018.
- 5.2 Monitoring revealed that almost all holes are in exclusive use by rabbits, or inactive. Foxes have been seen in the areas around holes 1 and 8.
- 5.3 A single piece of badger footage was filmed on the 5th September by hole 7 and fresh latrines were noted around that area on the 10th September. The footage did not reveal badgers using the holes however.
- 5.4 It is considered that badger forage on site and make use of the large quantities of fallen fruit in the late summer/autumn months. No confirmed sett use was found however badgers can move into a site at any time.
- 5.5 It is recommended that update badger monitoring is undertaken periodically across the site as the design plans are finalised. However, it is recommended that update surveys are either to be undertaken prior to any works starting on site or as a condition of planning.

- 5.6 If a badger sett is identified at a later stage, a buffer zone of 20m minimum is recommended to be retained around it, with habitat connectivity being retained so as to not isolate the sett. If a sett is identified and is required to be closed, a licence from Natural England will need to be sought alongside further monitoring.
- 5.7 It is recommended that where possible, the edges of the site be retained, with a buffer zone around the trees to protect this habitat and maintain green corridors around the edges of the site for commuting and foraging mammals. Recommendations have been made for sensitive method of works and construction practise.

6.0 References

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Natural England (2009) *Interpretation of 'Disturbance' in relation to badgers occupying a sett*. Guidance notes, June 2009.



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Neal, E. and Cheeseman, C. (1996) *Badgers*. T & A D Poyser Ltd. London.

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Appendix 1: Mammal Hole Photographs

Area	
<p>1</p> <p>Mammal holes present. In use by rabbits and foxes.</p>	   <p>09-04-2018 01:01:54</p> <p>09-06-2018 10:54:43</p>

<p>2</p> <p>Two fairly large mammal holes present. Rabbits found to be using the site.</p>	
<p>3</p> <p>No holes present</p>	
<p>4</p> <p>Over-grown rabbit holes</p> <p>1 – July</p> <p>2 - September</p>	

	
<p>5 No holes found.</p>	
<p>6 Inactive rabbit holes</p>	

<p>7</p> <p>Two mammal holes under leylandii treeline. Rabbits filmed at the entrance. One glimpse of badger legs on one occasion during the September filming period.</p>	 
<p>8</p> <p>New area set of holes found in September 2018. Rabbits found using the hole. Foxes also active in this area.</p>	



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