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29th August 2018

Dear David,

Badger monitoring Survey – Land at Plot 1, The Spires

Thank you for instructing The Ecology Partnership to carry out a badger monitoring survey at the above site to ascertain the use of the site by badgers. The results are as follows.

Background

On the 18th May 2017, Lizard Landscape Design and Ecology undertook a preliminary ecological appraisal for 'The Spires' site which included plot 1 (see Figure 1 for original site boundary). The surveyor identified 3 holes in the north-western corner of the original red line boundary. Under current proposals, these holes will not be directly affected by the development. However, due to the proximity of the site to the sett it was considered necessary that further badger monitoring surveys are conducted to meet Condition 5 of the planning permission and to accurately assess the activity levels of these holes.

The proposal has been granted full planning permission in June 2018 under **R/91/17/PL** subject to a number of planning conditions. Condition 5 of the planning permission relates to badgers and it states that:

Condition 5

"Prior to development commencing a badger survey must be undertaken and submitted to the Local Planning Authority. This survey should be undertaken by a suitable qualified ecologist and should include monitoring the sett over a four-week period to see if it is active. If the sett is active a mitigation strategy will also be required and submitted for consideration. The applicant should also be aware that a NE licence will be required before any disturbance can take place. The development must proceed in accordance with the approved mitigation.

Reason: It is necessary for this to be a pre-commencement decision to safeguard the ecology of the area, and in the interests of animals to ensure that a habitat remains for them during and after development in accordance with policy GEN7 of Arun District Local Plan."

This report has been developed to fulfil Condition 5 of the planning permission.

Site Context and Status

The site is located in the south-western portion of East Preston, West Sussex (central grid reference TQ 0624 0205). This plot is located adjacent to a dwelling called 'The Spires' and contains sections of the associated gardens, swimming pool and pool house. The site is approximately c. 0.2 Ha in size and it is bordered along all aspects by the gardens of residential properties. There are no Sites of Special Scientific Interest (SSSI) or Local Nature Reserves (LNRs) within 2km of the site.

The aerial photograph (Figure 2) shows the site and its immediate surroundings. The red line depicts the approximate site boundary and survey area.



Figure 1: The original red line boundary for the initial preliminary ecological appraisal completed by Lizard Landscape Design and Ecology (May 2017)

Current plans for the site involve the demolition of the buildings and the clearance of habitats within the red line boundary to allow for the construction of a single residential dwelling and a garage within the red line boundary in Figure 2.

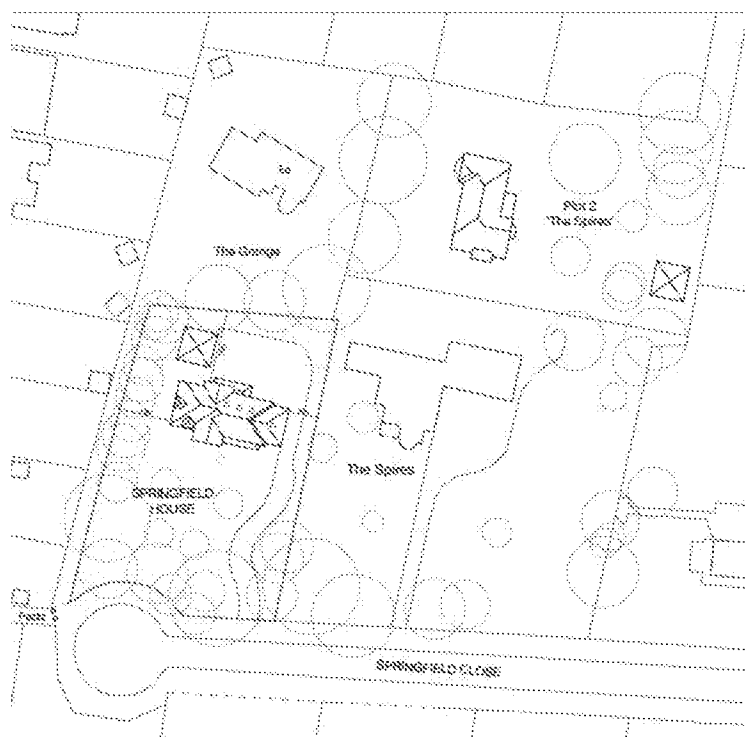


Figure 2: Approximate location of the red line boundary and the latest plans for the development

Legislation

Badgers receive protection under The Protection of Badgers Act 1992, which consolidates the previous Badger Acts of 1973 and 1991. The Act makes it an offence to:

- Willfully kill, injure, take or attempt to kill, injure or take a badger;
- Cruelly ill-treat a badger, including use of tongs and digging;
- Possess or control a dead badger or any part thereof;
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof;
- Intentionally or recklessly disturb a badger when it is occupying a badger sett;
- Intentionally or recklessly cause a dog to enter a badger sett;
- Sell or offer for sale, possess or have under his control, a live badger

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. Natural England (2009) 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’”*.

It must be noted that badger foraging habitat and corridors are not legally protected, although should be considered within any development. A Development Licence would be required from Natural England for any development works that are likely to affect an active badger sett or disturb badgers whilst in a sett. However, Natural England states that *“badgers are relatively tolerant to moderate levels of noise and activity around their setts and that low to moderate levels of apparent disturbance at or near to badger setts do not necessarily disturb the badgers occupying those setts”* and therefore such disturbance around setts does not always require a licence (Natural England 2009).

Methodology

During the preliminary ecological appraisal undertaken by Lizard Landscape, three potential badger holes were identified in the north-western portion of the original red line boundary (see Figure 1). At the time of the survey, these were considered to form an outlier badger sett. These mammal holes were located over 50metres from the site boundary of plot 1 and are not considered to be affected by works within plot 1.



Figure 3: A 50m buffer around the approximate location of the mammal holes discovered in 2017 PEA by Lizard Landscapes compared to the development area of plot 1.

During a walkover of plot 1 by The Ecology Partnership ecologist Chris Jennings BSc (Hons) MSc MCIEEM on 23rd July 2018, eight mammal holes were recorded within the north west corner of the plot 1 site. Four of the holes were under a half collapsed shed, the northern most of the two sheds situated within the northern corner of the site.

Four other holes were present to the west of the shed, in groups of two burrowed into the bare earth under the western boundary tree line. It was not considered that the holes were likely to be

constructed by badgers due to the size and shape of the holes, particularly the holes away from the shed. The holes seemed to show signs of inactivity with leaf litter in the entrances and cobwebs present over some of the entrances. No signs of fresh excavation or of frequent use were present. No other holes were noted within the confines of Plot 1. It was recommended that the holes be monitored to gauge levels of use and by which species.

Mammal hole monitoring was undertaken over an extended period of time, in this case four weeks 26th July – 24th August 2018 in order to accurately assess activity levels. During the monitoring period searching for signs of ‘current use’, which include recent digging, paw prints, latrines, new hairs and bedding material was undertaken. Sticks were loosely placed across the hole entrances. The sticks would still allow access for a burrowing mammal but if moved would also detect likely activity. Sticks were also wrapped with gaffer tape to trap hairs of any mammal entering or existing a hole to aid identification.

Mammal hole entrances were also monitored using Bushnell Trophy cameras, which are motion sensitive, infra-red cameras. A camera was set up at each mammal hole, with adjustments made at weekly intervals. Each week the footage was collected and analysed and cameras were moved where necessary. Cameras were set up on the holes which were considered to be potentially the most recently used in the past, with the clearest entrances, a camera was set up covering holes 3 and 4 (with 6 and 7 visible in the background) and also 7 and 8, these remained in place for the course of the monitoring. All monitoring was undertaken by was undertaken by Chris Jennings BSc (Hons) MSc MCIEEM.

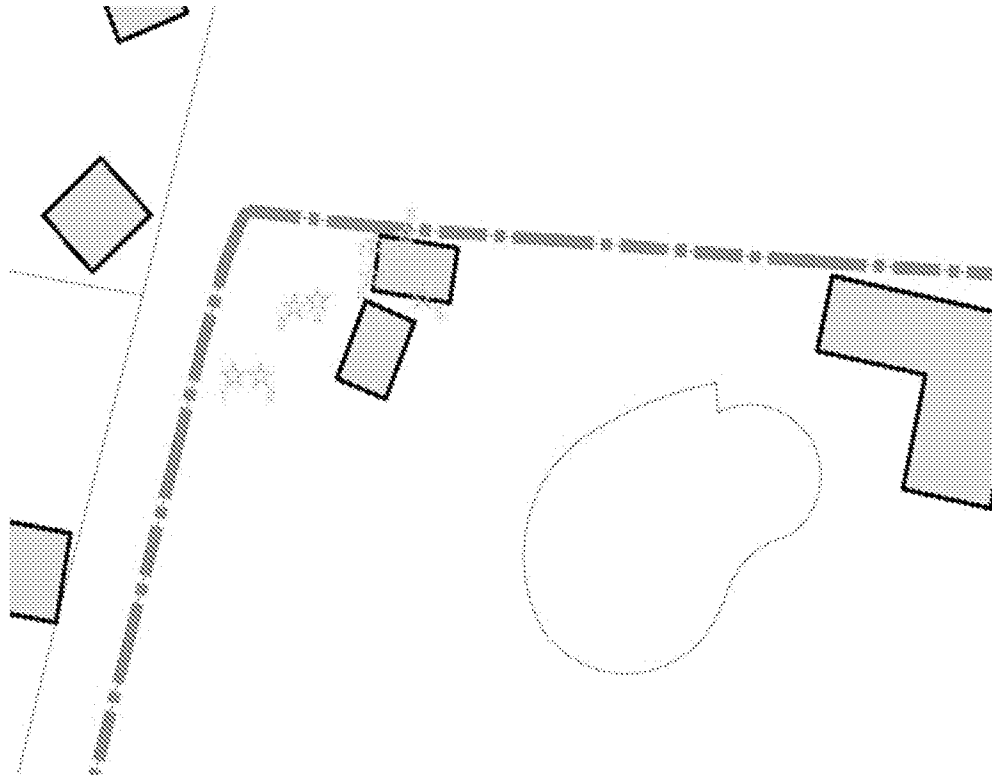


Figure 4: Location of mammal holes within the north west corner of plot 1.



Figure 5: Entrances to holes 1 and 2

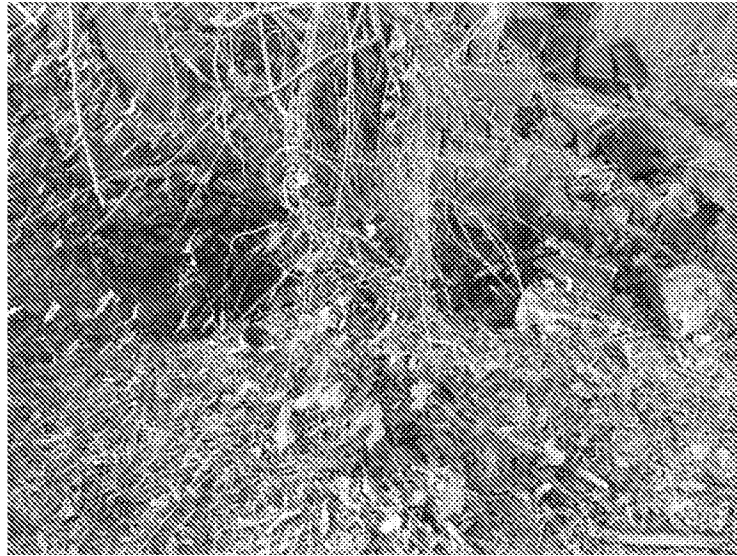


Figure 6: Entrances to holes 3 and 4



Figure 7: Entrance to hole 5 was blocked with debris prior to the start of monitoring



Figure 8: Entrance to hole 6 with sticks in place



Figure 9 Entrance to hole 7 with sticks in place



Figure 10: Entrance to hole 8 was already partially blocked with wood from the collapsed shed prior to the start of monitoring

Results

The sticks remained in place throughout the four week monitoring process. No evidence of the mammal holes being in use was recorded. A fox was recorded using the vicinity and sniffing some of the hole entrances on site during the video monitoring.

No badgers were recorded during the four week monitoring process.

The results of the video monitoring are displayed in the table overleaf.

Table 1: Results from the camera monitoring

Camera 1 (Covering holes 3 and 4 with hole 7 in background)			Camera 2 (Covering holes 7 and 8)		
Date	Time	Activity Recorded	Date	Time	Activity Recorded
6 th August	05:10	Fox passing through and briefly investigating hole entrance of hole 4	26 th July	22:10	Fox seen walking past
9 th August	04:51	Fox passing through and briefly sniffing hole entrance of hole 4	10 th August	05:55	Fox briefly investigated hole 7
10 th August	05:53	Fox walking through survey area		06:08	Fox seen passing through
	05:54	Fox sniffing ground and walking though			
	05:57	Fox walks away out of shot			
	06:04	Fox investigates entrance to hole 4			
23 rd August	05:55	Fox sniffing and investigating general area around the hole entrances			

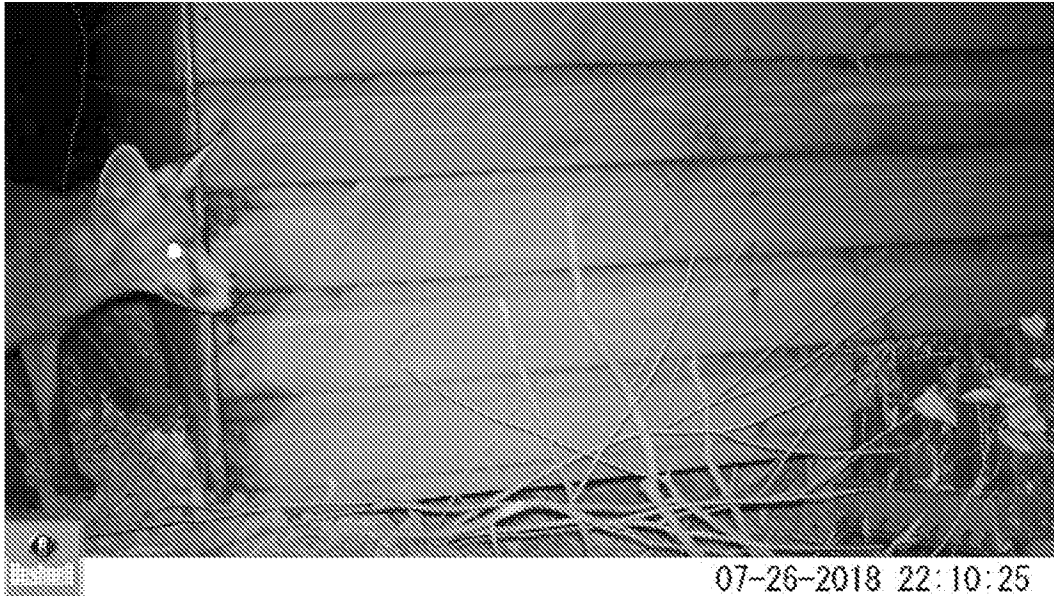


Figure 11: Fox seen briefly passing through on 26th July 2018 on camera 2 between holes 7 and 8



Figure 12: Fox seen briefly investigating the entrance to hole 7 on 10th August 2018, the fox did not enter the excavation on camera 2



08-10-2018 05:54:12

Figure 13: Fox seen investigating the general area in front of camera 1 on 10th August 2018



08-10-2018 06:04:20

Figure 14: Fox seen investigating the entrance to hole 4 on 10th August 2018, the fox did not enter the excavation



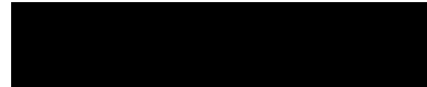
Discussion

The mammal holes present within the north west corner of plot 1 are not an active badger sett. The holes showed no signs of activity during the monitoring process. It is considered that the 8 holes within the north west corner of the site are an inactive fox earth. The shape and dimension of the hole entrances themselves appear to be typical of fox rather than badger. It is noted from previous monitoring projects that foxes also regularly utilise garden sheds to construct earths. No badgers were recorded during the monitoring period, although sporadic activity by fox was recorded around the monitoring area although no foxes were recorded using the holes. The sticks at the hole entrances remained in place for the entirety of the monitoring period which ran from 26th July – 24th August 2018. No further evidence of the use of the site by badgers was recorded such as snuffle holes, latrines and no regularly used mammal paths were visible across the site.

The Wild Mammals Protection Act 1996 states that it is an offence to crush or cause asphyxiation to mammals. Should these holes need to be removed, then these should be excavated by hand rather than using mechanical equipment. It is recommended that the shed above the disused holes is removed sensitively by hand and the excavation of the disused fox holes on site should be done under ecological watching brief.

It is considered that the development of plot 1 at The Spires will not affect the mammal holes identified within the Lizard Landscape preliminary ecological appraisal, which was submitted as part of the planning permission. These holes are over 50metres from the site boundary of plot 1 and are not considered to be affected directly or indirectly by the proposals within plot 1.

There are a number of best practice guidelines, which should be followed when working in the vicinity or potential vicinity of badgers:



- Any trenches or excavations on site should be either covered over at night or constructed so there is a slope so as to allow any mammals to escape if the badgers were to accidentally fall in.
- Any open pipes or conduits laid should be blocked off each night to prevent badgers 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 as they emerge to forage and also reduce the risk of traffic casualties from late working site traffic.

It is considered as long as the above recommendations are followed that neither badgers or their setts will not be harmed during the construction process at plot 1.

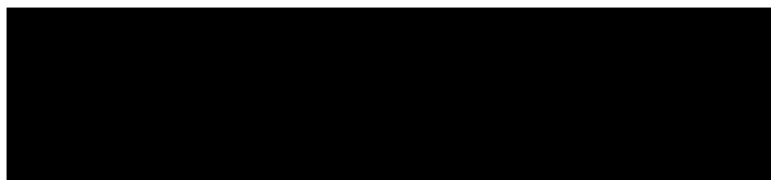
Conclusions

It is not considered that badgers are using plot 1 at the Spires. Recommendations have been made to sensitively dismantle the collapsed shed at site and removed the inactive fox holes on site if they are to be affected by works.

It is considered that this letter should satisfy Condition 5 with regards to the development of plot 1 at the Spires.

If you have any queries, then please do not hesitate to contact me.

Yours sincerely,



Alexia Tamblyn MA (Oxon) MSc CEnv MCIEEM FRGS
Principal Ecologist and Managing Director