

EASTLEIGH BOROUGH COUNCIL

One Horton Heath

Appendix 10.9 - Badgers

1 NON-TECHNICAL SUMMARY

Johns Associates have carried out a series of badger surveys across the wider Horton Heath Site in 2018, 2019 and recently updated in 2020.

Historic surveys carried out by Ecologica Ltd showed a very low level of badger activity throughout the site. Results of the badger surveys carried out by Johns Associates between 2018 to 2020 suggest that overall there remains a very low level of badger activity on Site which has decreased over time. A single partially active outlier sett was present within the Site during the 2020 update surveys and a further partially active outlier sett was found offsite within Quobleigh woods.

No other active or partially active setts were observed. All previously recorded active and partially active setts from 2018 and 2019 were found disused, caved in or used by other mammal species such as fox or rabbits in the most recent update surveys in 2020.

2 INTRODUCTION

This report presents the result of badger (*Meles meles*) surveys undertaken in 2018, 2019 and updated in 2020 by Johns Associates Ltd in support of the development proposals and planning application of Horton Heath. It also provides a summary of historic badger surveys carried out at Horton Heath in 2014 and 2015 by Ecologica.

The potential Zone of Influence of the development associated with badgers is the whole planning application boundary including 30m in areas likely to be subject to plant movement/excavation, as appropriate. This reflects the mobility of the species and general guidance for potential future badger licencing (see <https://www.gov.uk/government/collections/badger-licences>).

The aim of the surveys was to update the historic baseline and to confirm the continuing presence or likely absence of badger within 30m of the site. These surveys were also used to identify possible constraints to development and opportunities that could be delivered through the development proposals.

3 METHODOLOGY

3.1 DESK STUDY

Information provided by the Hampshire Biodiversity Information Centre and from previous surveys undertaken by Ecologica Associates Ltd was reviewed for previous records of badger on the Site.

3.2 PREVIOUS SURVEYS

Badger surveys were conducted by Ecologica in March, May and June 2014, with additional visits to check on abandoned setts up to October 2014, and supplementary observations obtained during other surveys. Ecologica based their assessments on the Natural England Standing Advice Species Sheet for Badgers (Natural England. Standing Advice Species Sheet: Badgers. Undated).

3.3 ASSESSMENT OF HABITAT SUITABILITY

Habitats within the site boundary and immediately adjacent areas were assessed for its suitability to support badgers. Suitable badger habitats include woodland, scrub, hedgerows and open fields. Areas of woodland associated to the north of the site around Quobleigh pond and to the south west adjacent to the business park were identified as the most suitable areas to support badgers as they are the largest areas of broadleaved woodland and provide good feeding and sett building opportunities. The majority of the site does have some suitability to support badgers and therefore an extensive search of all field boundaries will be undertaken. This will also provide an indication of the location of any badger setts that may be off site.

3.4 FIELD SURVEYS

A survey of suitable areas of habitat within the site boundary and in immediately adjacent areas was carried out by suitably qualified ecologists from Johns Associates Ltd. The surveys involved a search for characteristic signs of badger activity including setts, latrines / dung pats, paths, fence push-ups, hairs caught on fences, vegetation or in spoil heaps, paw prints, scratching posts and feeding signs.

3.4.1 2018 Survey

A survey of the full Site boundary, and in adjacent habitats where possible, was carried out by suitably experienced ecologists Tom Johnston BSc (hons) Grad CIEEM and Katherine Newbert BSc (Hons) MSc of Johns Associates, in November 2018.

3.4.2 2019 Survey

An update badger survey was carried out in September 2019 by experienced badger surveyor Charlotte Mason of Johns Associates, for the outline planning applications in the south-east and north-west of the site (Ref: X/19/86475 and Ref: X/19/86303). These applications were for Phase 1A: Burnetts Lane Footpath Works and Phase 1B: Southern Access and Bubb Lane/Burnetts Lane Link Road in West Horton Heath and Phase A1: Firtree-Quobleigh Footpath and Phase A2: Road Infrastructure works in the North-West of the site. The survey area only extended to the land immediately surrounding the new access roads.

3.4.3 2020 Survey

Standard survey methods were followed, as detailed in <https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects> and Harris, Cresswell & Jeffries, 1989.

All badger setts were classified according to their status (e.g. as main, annex, subsidiary or outlier) and the level of activity at the sett also recorded (e.g. entrances in use, partially used, disused), as defined below. All

signs of badger recorded during the survey (e.g. setts, footprints, latrines, fence push-ups, scratched trees or soil, hairs in spoil or caught on fencing and obvious pathways through vegetation) were mapped.

- **Main setts.** These are permanently occupied; they are large, well-established, often extensive with multiple entrances which have large spoil heaps outside. There are likely to be well-worn paths leading to the sett. It is where the cubs are most likely to be born. There is only one main sett per social group of badgers.
- **Annex setts.** These occur in close association with the main sett (usually within 150m), and are linked to the main sett by clear, well-used paths. Annex setts consist of several holes, but they are not necessarily in use all the time, even if the main sett is very active. If a second litter of cubs are born, this may be where they are reared.
- **Subsidiary setts.** These usually comprise five holes or more, but are not in continuous use and are usually some distance from the main sett (50m or more). There is no obvious path connecting them to the main sett and their 'ownership' can often only be determined by bait-marking.
- **Outlying setts.** These consist of only one or two entrance holes. They can be found anywhere within the territory and usually have small spoil heaps, indicating that they are not very extensive underground. There are no obvious paths connecting them to other setts, they are only used sporadically and often used by foxes or rabbits when not occupied by badgers.

The size, status and level of activity of each sett was partly assessed by counting the number of entrance holes. The degree of use of each entrance hole was classified as follows:

- **Well-used holes.** These are clear of any debris or vegetation and are obviously in regular use. There may be evidence of recent excavation or fresh footprints.
- **Partially-used holes.** These are not in regular use and have debris such as twigs or leaves in the entrance and moss or other plants growing in or around the entrance. A minimal amount of clearance would be necessary for badgers to continue using the hole.
- **Disused holes.** These are holes which have not been in use for some time and would require a considerable amount of clearance before they could be used.
- **Long disused or collapsed.** These are holes that have not been in use for a considerable amount of time and may be completely blocked by debris. It may be just a depression in the ground with what remains of an old soil heap. These are not counted as an actual entrance.

3.5 LIMITATIONS AND CONSTRAINTS

The 2019 update badger surveys only covered the north-west and south-eastern areas of the Site. However as a full badger survey of the whole site was completed in 2018 and 2020 this isn't seen as a limitation to the survey results.

The results of the badger survey are valid at the time of survey (September 2020). Should there be any delays to the project timetable and/or implementation of the proposed works, an update survey may need to be completed. In this instance, advice should be sought as the validity of the data, recommendations and conclusions contained herein.

4 RESULTS

4.1 DESK STUDY

Data was provided by Hampshire Biodiversity Information Centre. 17 records for badger were returned from between 2008-2019. There were no badger records located within the Site boundary.

The nearest record is approximately 450m east of the Site, this record is from 2009. Due to the sensitivity of the sett locations, the exact location and type of record has not been revealed.

4.2 PREVIOUS SURVEYS

Surveys undertaken by Ecologica Associates Ltd in 2014 (Figure 1) found no occupied setts on site, however scattered signs of badger were discovered including, fresh latrines, badger hair and scratching posts. Three abandoned setts were recorded along a hedgerow along the north-west boundary of the site. One abandoned sett was also found along a watercourse in the middle of the site and two abandoned setts were found just outside the south western corner of the site. One occupied sett was recorded approximately 250m east of the site.

A repeat survey also undertaken by Ecologica Associates Ltd in 2015 (Figure 2) also found no occupied setts however scattered signs of badger were discovered including fresh footprints and badger hairs. Two abandoned setts were found, one in the area of wet woodland known as Quobleigh pond and the other along a hedgerow north of Fir Tree lane.

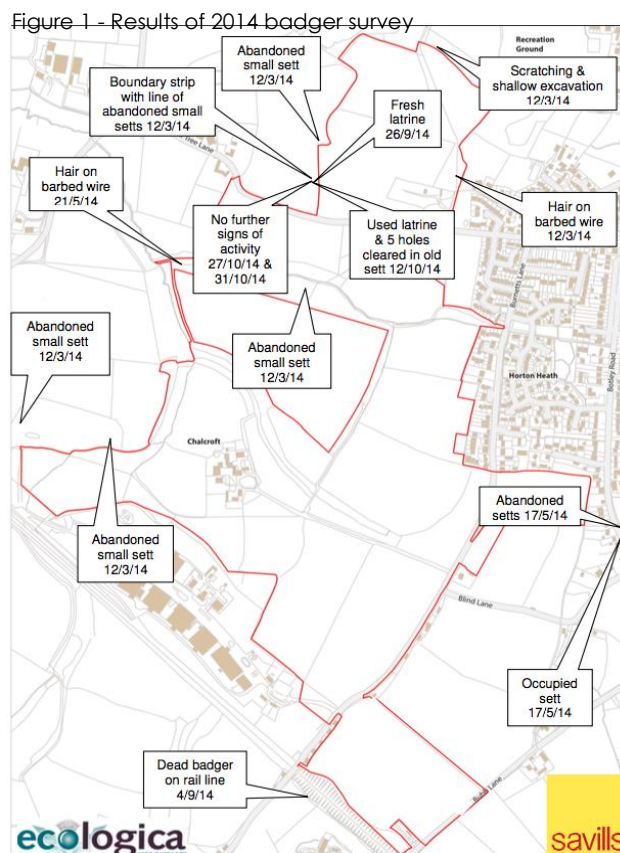
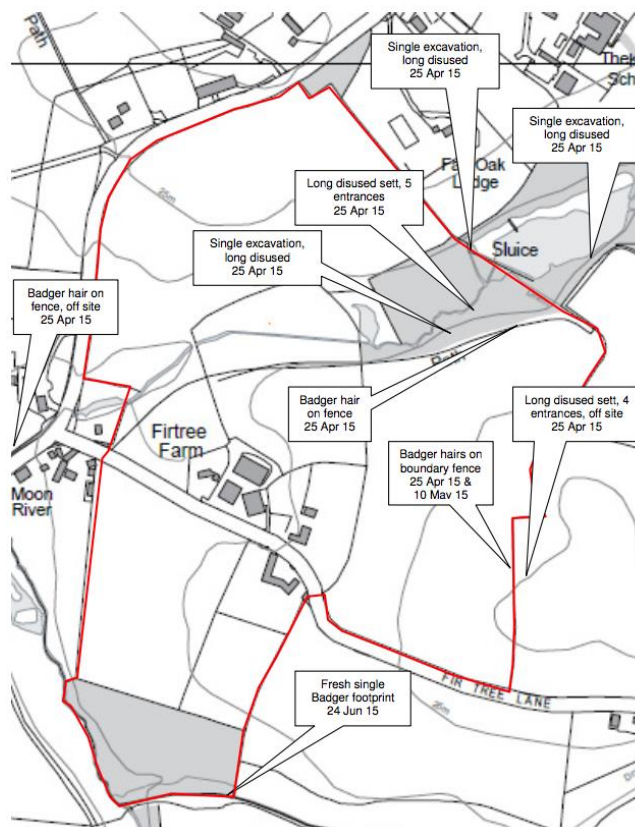


Figure 2 - Results of 2015 badger survey



4.3 FIELD EVIDENCE

4.3.1 2018 Field Evidence

Figure 3 provides an indicative confidential location plan for recorded badger setts and associated field signs at Horton Heath. Table 1 shows the exact location and status of the badger setts found.

Table 1 – Survey Results 2018 - Location and sett classification

Date	Grid reference	Type	Number of holes / Status	Additional signs	Habitat	Notes
20/11/2018	SU48674 16335	Outlier	1 - Partially active		Broadleaved Woodland	
20/11/2018	SU48655 16243	Subsidiary	5 - Disused	Hair	Broadleaved Woodland	
20/11/2018	SU48834 16200	Outlier	1 - Active	Hair	Field boundary hedgerow	

20/11/2018	SU48882 15760	Outlier	1 - Partially active		Scrub woodland edge	
20/11/2018	SU48949 16467	Outlier	1 - Disused		Hedgerow	
20/11/2018	SU47992 16559	Outlier	1 - Partially active 1 - Disused		Broadleaved Woodland	Holes in bank next to each other.
20/11/2018	SU48271 16781	Outlier	2 - Partially active		Broadleaved Woodland	In dense scrub
20/11/2018	SU48414 17021	Outlier	2 - Active		Semi-improved grassland	Under stand of Japanese Knotweed.
20/11/2018	SU48633 16785	Subsidiary	6 - Partially active	Fresh spoil heap	Hedgerow	Access difficult due to bank and stream
20/11/2018	SU48620 16745	Outlier	1 - Disused		Hedgerow	
20/11/2018	SU48781 17156	Outlier	1 - Disused		Field margin	Caved in tunnel
21/11/2018	SU48817 17422	Subsidiary	5 - Partially active	Hair	Field boundary hedgerow	
21/11/2018	SU48823 17515	Subsidiary	4- Disused		Field boundary hedgerow	
21/11/2018	SU 48715 17174	Outlier	3 - Disused		Broadleaved woodland	Holes spaced apart from each other.

No main setts or annex setts were identified on Site during the 2018 survey. Four subsidiary setts were found, out of which two were disused and two were partially active (Plate 1). 10 outlier setts of which four were disused, four were partially active and two were active were also found (Plate 2). Other, badger signs including latrines, hairs and foraging signs were also identified around the Site.

Plate 1 - Partially active subsidiary sett



Plate 2 - Partially used outlier with hair



4.3.2 2019 Field Evidence

Badger surveys were carried out in September 2019 in the south-east and north-western parcels of the Site, Figure 4 provides an indicative location plan for recorded badger setts and associated field signs at Horton Heath.

No signs of badger activity were recorded within Site boundary. A previously recorded outlier sett on Site in the south-east of the site had been found to be freshly excavated but the mammal responsible is considered unlikely to be badger (see Plate 3, below); though no signs of badgers were present (for example footprints in adjacent mud or at the fresh spoil, or any hairs or evidence of bedding). Rabbit droppings were recorded at the fresh spoil.

Mammal holes were recorded leading under an area of concrete to the south-east of the Site (see Target Notes 1 and 2, Figure 4, for location), though these were too small to be used by badgers (having a tunnel of no larger than 15 cm in width). A mammal path was also recorded at a hedgerow at the Sites west boundary (Target Note 3); though this was not well-worn and featured no signs of badger and therefore may be attributable to fox *Vulpes vulpes* (or other mammal species) activity.

In the north-west of the Site no evidence of badger activity was seen within the Site boundary, although a single active outlier sett was found within Quobleigh woods just outside of the site boundary.

Plate 3 - View of freshly excavated mammal hole (Sett 1)



4.3.3 2020 Field Evidence

An update badger survey was carried out in September and October 2020. Figure 5 provides an indicative confidential location plan for recorded badger setts and associated field signs at Horton Heath. Table 2 shows the exact location and status of the badger setts found.

No main setts, annex setts or subsidiary setts were identified on Site during the 2020 update survey. Only one outlier sett was identified within the site boundary which was located north of the solar farm, the sett was only partially active with evidence of old bedding in the tunnel entrance see Plate 4. The other setts were located outside of the site boundary within Quobleigh woods, one of which was disused (this sett was previously active in 2019) and the other had 3 disused holes with two partially active holes. Other badger signs around the site were absent. no latrines, hairs or foraging signs were identified during the Site survey.

A number of mammal paths were observed but there was no evidence to suggest these were used by badgers, no footprints, hair or latrines were visible adjacent to these features, these mammal paths are likely to be from deer and foxes.

All previously identified setts from the 2018 survey were revisited during the 2020 update survey and were found disused, starting to collapse or clearly occupied by other mammals (foxes or rabbits, droppings and other field evidence noted) with a reduced entrance size and no signs of badger activity.

Table 2: Survey Results 2020 - Location and sett classification

Date	Grid reference	Type	Number of holes / Status	Additional signs	Habitat	Notes
22/09/20	SU48757 17722	Outlier	5 - total 2 partially active 3 disused	Signs of foraging	Woodland - Quobleigh	
22/09/20	SU48740 17707	Outlier	2 disused	-	Woodland - Quobleigh	
22/09/20	SU48778 17148	Outlier	Partially active	Mammal paths in vicinity	Grassland – North of solar park	A single entrance with the tunnel splitting into two separate holes. Old bedding in the entry way.

Plate 4 – Partially Active Outlier



Figure 3: 2018 Survey Results

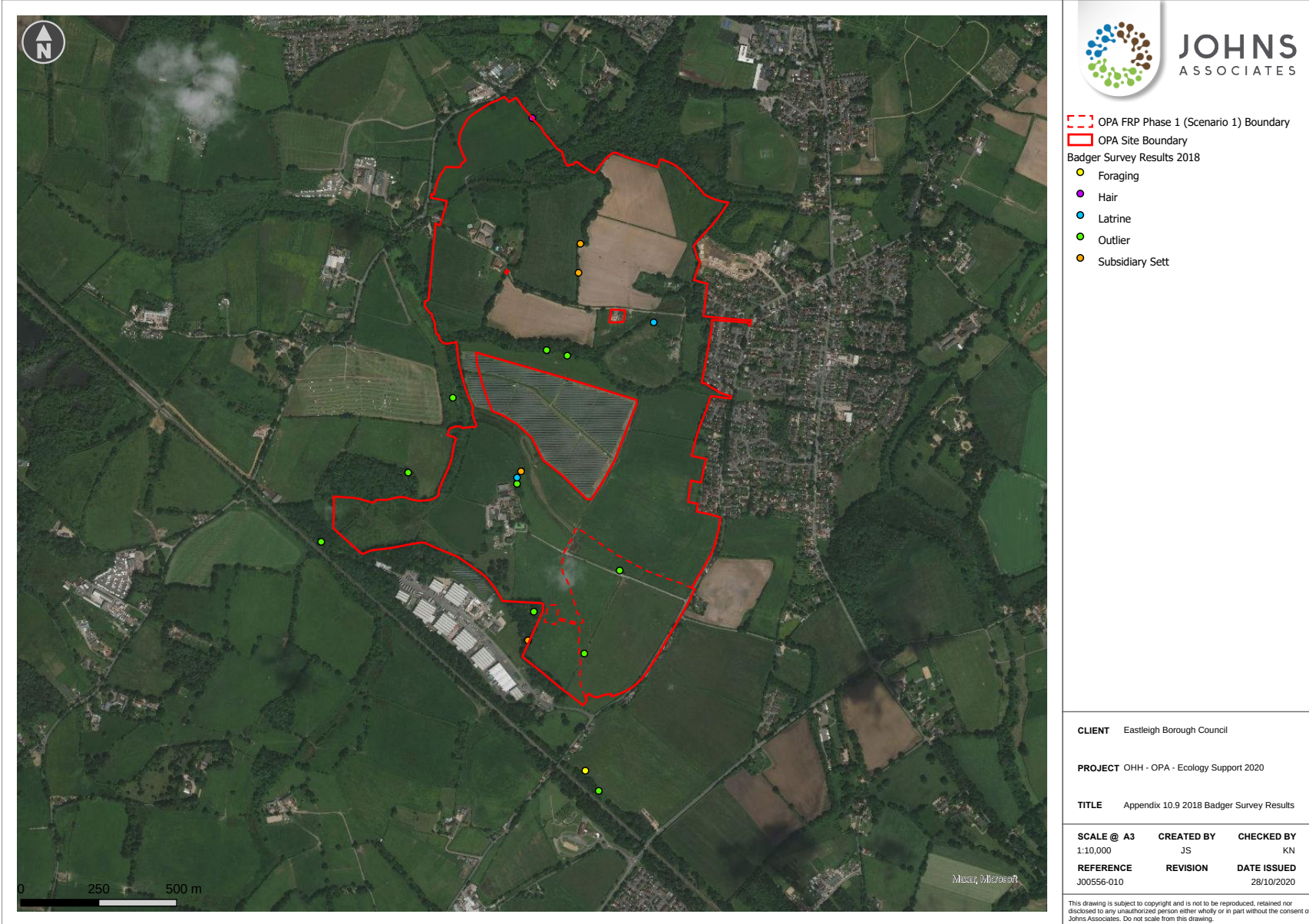


Figure 4: 2019 Survey Results

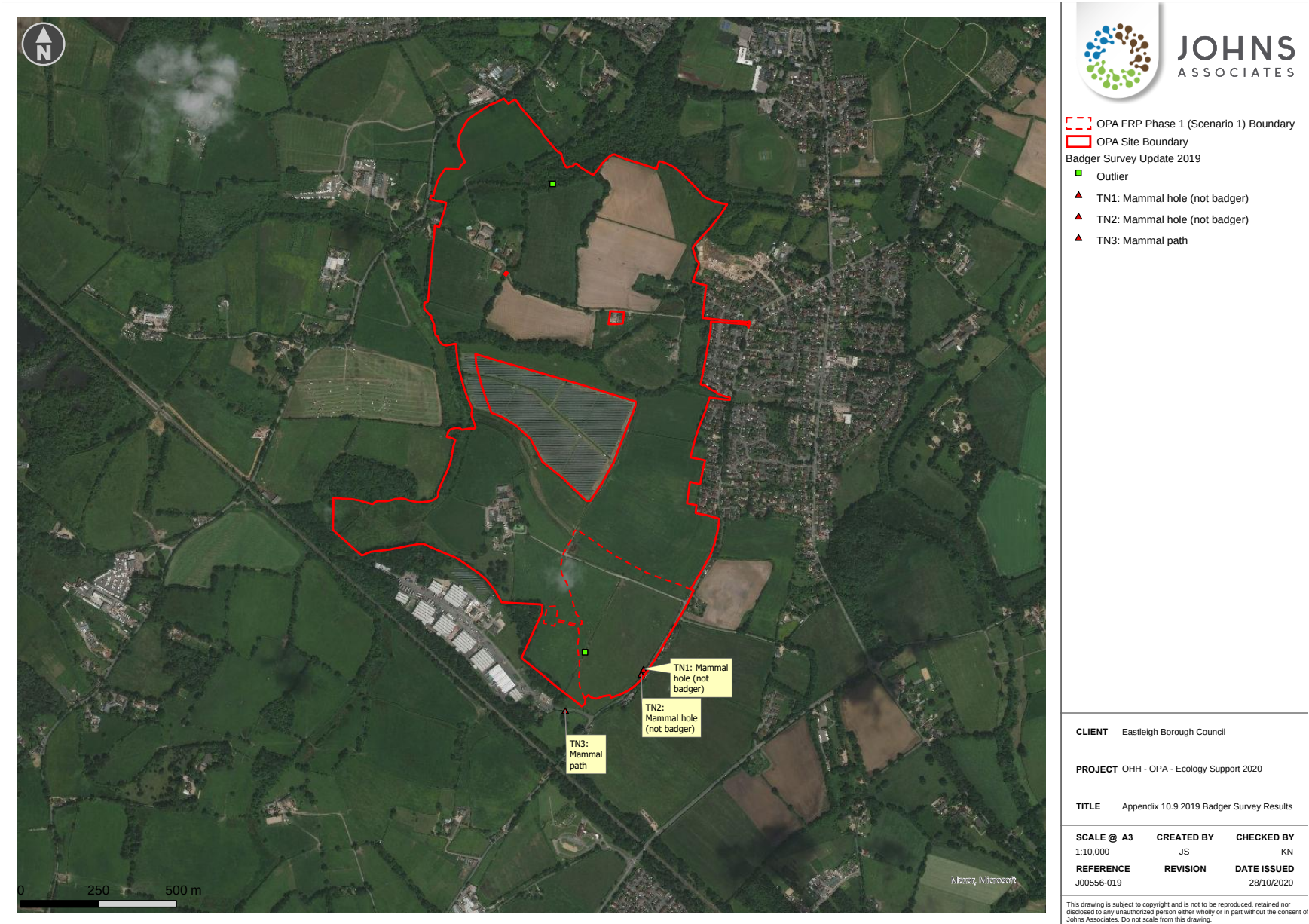


Figure 5: 2020 Survey Results



5 CONCLUSIONS

Historic surveys showed a very low level of badger activity throughout the site. The areas of past activity have mainly been associated with woodland edges and adjacent hedgerows. Evidence from the badger surveys carried out between 2018 to 2020 suggest that overall there is a very low level of badger activity on Site which has further decreased over time. Previously recorded active and partially active setts from 2018 and 2019 were found disused, caved in or used by other mammal species such as fox or rabbits in the most recent update surveys in 2020.

Currently the Site appears to support three partially active outlier setts. Given the consistent low levels of field signs of any kind (including territorial marking/dung pits and foraging signs or tracks) recorded throughout the recording period (2018-2020) the site has been assessed as exhibiting low value to the local badger population and the likelihood of a main set being present within the immediate vicinity of the site is considered to be very low.

Current badger activity is limited to the edges of mature woodland habitats adjacent to Quobleigh woods and the woodland belt to the north of the solar farm. Mammal paths were present across the Site but none of these could be attributed to badger, no hairs, footprints or latrines were noted and these were suspected to be deer and fox paths.