

## **Appendix 9.5**

# **BADGER SURVEY - REDACTED**

# FORT HALSTEAD, KENT

## BADGER SURVEY

A Report to: CBRE Ltd

Report No: RT-MME-127947-05 Rev A [REDACTED]

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## REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked by:	Approved by:
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The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

### DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

### VALIDITY OF DATA

The findings of this study are valid for a period of 18 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

### REPORT CONFIDENTIALITY

For reasons of animal welfare and in accordance with best ecological practice, the contents of this report are confidential and should not be made available to the public.

## NON-TECHNICAL SUMMARY

Middlemarch Environmental Ltd was commissioned by CBRE Ltd to undertake a survey for badger *Meles meles* at Fort Halstead in Kent. The purpose of this survey was to determine the presence/absence of evidence of badgers on and adjacent to the site and to monitor the activity levels at any setts recorded. This assessment is required to inform a hybrid planning application associated with the proposed redevelopment of the site, which will involve the demolition of the majority of existing industrial buildings and the construction of a new employment-led mixed-use village. It is understood that the new village will comprise business areas (Use Classes B1a/b/c with energetic testing operations), development of up to 750 residential dwellings, a village centre (Use Classes A1/A3/A4/A5/B1a/D1/D2), a one form entry primary school, use of the Fort Area and bunkers as an Historic Interpretation Centre (Use Class D1), together with amenity space, landscape and ecological enhancements both on the site and on the adjacent land within the Applicants ownership.

Badgers are a protected species and are capable of being a material consideration in the planning process. A summary of the legislation protecting badgers is included within Appendix 1. Please note that the location of badger setts should remain confidential, and the findings of this survey should not be disclosed outside of the intended purpose of this report.

The main site and wider survey area both provided excellent foraging and sett building habitat for badgers due to the presence of extensive areas of woodland and grassland habitats. Furthermore, the vast majority of the site was subject to limited human disturbance, with the exception of explosives testing and experimentations in controlled environments within the main site, and as such badgers on site were largely undisturbed.

The badger presence/absence survey undertaken on site identified one main sett, one annex sett, three subsidiary setts and six outlier setts within the survey area.

Sett monitoring over a two-week period indicated that setts 1, 5 and 6 were in current use by badgers.

Middlemarch Environmental Ltd has been informed by the client that the main sett lies [REDACTED], although it is understood that the sett is to be retained. However, suitable tunnels will need to be provided [REDACTED], to ensure that badgers can continue to move through the site. Therefore, further survey work will be required to establish the badger territory boundaries and key commuting routes and identify suitable locations for tunnels.

Sett 6 is located [REDACTED], and will not be impacted as a result of the proposals.

It is understood that Sett 5 is likely to require temporary closure to accommodate reprofiling activities [REDACTED]. Prior to any work commencing that could breach legislation regarding this sett, a Natural England development licence will be required.

Current understanding of the development proposals indicate that the majority of woodland and grassland habitat on site is to be retained and/or ecologically enhanced post development. Despite this the increase in general human activity and the implementation of features that will fragment existing commuting and foraging habitat will adversely impact badgers on site.

A series of recommendations based on Middlemarch Environmental Ltd's current understanding of site proposals have been made in Chapter 6 in order to ensure compliance with associated environmental legislation and to maintain the favourable conservation status of badgers on site.

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## 1. INTRODUCTION

### 1.1 PROJECT BACKGROUND

Middlemarch Environmental Ltd was commissioned by CBRE Ltd to undertake a survey for badger *Meles meles* at Fort Halstead in Kent. The purpose of this survey was to determine the presence/absence of evidence of badgers on and adjacent to the site and to monitor the activity levels at any setts recorded. This assessment is required to inform a hybrid planning application associated with the proposed redevelopment of the site, which will involve the demolition of the majority of existing industrial buildings and the construction of a new employment-led mixed-use village. It is understood that the new village will comprise business areas (Use Classes B1a/b/c with energetic testing operations), development of up to 750 residential dwellings, a village centre (Use Classes A1/A3/A4/A5/B1a/D1/D2), a one form entry primary school, use of the Fort Area and bunkers as an Historic Interpretation Centre (Use Class D1), together with amenity space, landscape and ecological enhancements both on the site and on the adjacent land within the Applicants ownership.

A suite of baseline surveys have been completed by Waterman Group between 2006 and 2013, the results of which are provided in an Ecological Appraisal (Report EED12715-102.R.2.3.7.LM) and Protected Species and Habitat Survey (Report EED12715-102.R.3.3.6.LM), and summarised in the ecology chapter of an EIA associated with a previous application, for which outline planning consent was granted.

Due to the amount of time that has elapsed since the previous surveys were completed, updated ecological surveys were required for the current planning application.

In addition, Middlemarch Environmental Ltd has been commissioned to undertake the following assessments:

- Preliminary Ecological Appraisal (Report RT-MME-127947-01);
- Preliminary Bat Roost Assessment (Report RT-MME-127947-02);
- Nocturnal Emergence and Dawn Re-entry Bat Surveys (Report RT-MME-127947-03);
- Bat Activity Surveys (Report RT-MME-127947-04);
- Breeding Bird Survey (Report RT-MME-127947-06);
- Botanical Survey (Report RT-MME-127947-07);
- Terrestrial Invertebrate Survey (Report RT-MME-127947-08);
- Reptile Survey (Report RT-MME-127947-09);
- Dormouse Survey (Report RT-MME-127947-10);
- Winter Bird Survey (Report RT-MME-127947-11);
- Pre-development Arboricultural Survey (Report RT-MME-128206-01); and,
- Arboricultural Impact Assessment (Report RT-MME-128206-02).

Badgers are a protected species and are capable of being a material consideration in the planning process. A summary of the legislation protecting badgers is included within Appendix 1. Please note that the location of badger setts should remain confidential, and the findings of this survey should not be disclosed outside of the intended purpose of this report.

### 1.2 SITE DESCRIPTION AND CONTEXT

The site is located off Star Hill Road in Halstead, Kent, centred at National Grid Reference TQ 4970 5922. It is an irregular shaped parcel of land that measures 131.89 ha in size.

At the time of the survey, the site comprised a defence research facility which contained a number of buildings with associated areas of hardstanding, surrounded by parcels of semi-natural and plantation woodland. Areas of neutral grassland, calcareous grassland and amenity grassland were also present, as well as patches of scrub and tall ruderal vegetation.

The site was bordered by the A224 Polhill to the north-east and Star Hill Road to the south-west. A mixture of arable and pastoral fields, pockets of woodland and farm buildings surround the site. The wider landscape was dominated by a rural setting, consisting of agricultural land interspersed with pockets of woodland and small settlements.

### 1.3 DOCUMENTATION PROVIDED

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Fort Halstead – Design and Access Statement: 00556I	John Thompson and Partners
Site Location Plan: 00556I_S01 Rev D5	John Thompson and Partners
Land Use and Green Infrastructure Plan: 00556I_PP01 Rev D10	John Thompson and Partners
Building Heights Plan: 00556I_PP02 Rev D10	John Thompson and Partners
Access and Movement: 00556I_PP03 Rev D9	John Thompson and Partners
Demolition Plan: 00556I_PP04 Rev D8	John Thompson and Partners
Ecological Appraisal: EED12715-102.R.2.3.7.LM	Waterman Group
Protected Species and Habitats Survey: EED12715-102.R.3.3.6.LM	Waterman Group
Environmental Statement - Ecology and Nature Conservation	Waterman Group
Decision Notice (planning application number SE/15/00628/OUT)	Sevenoaks District Council

**Table 1.1: Documentation Provided by Client**

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## **2. METHODOLOGY**

### **2.1 DESK STUDY**

As part of the Preliminary Ecological Appraisal (Report RT-MME-127947-01) an ecological desk study was undertaken. The consultees for the desk study were:

- Natural England - *MAGIC* website for statutory conservation sites; and,
- Kent and Medway Biological Records Centre.

Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided by these organisations. Relevant badger data are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report.

### **2.2 HABITAT ASSESSMENT**

A habitat assessment was undertaken to identify the suitability of the site for use by foraging and sett building badgers. This takes the nature of the surrounding landscape and connectivity with other areas of suitable habitat into account.

### **2.3 PRESENCE/ABSENCE SURVEY**

The survey site was subject to a comprehensive walkover assessment for the presence of badger field signs. Such signs include badger setts, footprints, pathways, hairs, snuffle holes and latrine sites. Any signs recorded were plotted on an appropriately scaled map. Where possible, the survey included a 30 m radius around the proposed development site.

### **2.4 SETT MONITORING SURVEY**

Where a badger sett was identified, a monitoring survey was completed to assess the whether any setts were in 'current use', as defined by Natural England (2009b). This involved the placement and monitoring of adhesive hair traps across potential sett entrances. The monitoring consisted of 4 visits to the site over a period of approximately 2 weeks to monitor badger activity.

### 3. DESK STUDY RESULTS

#### 3.1 BIOLOGICAL RECORDS

As part of the Preliminary Ecological Appraisal completed by Middlemarch Environmental Ltd, a desk study for records of protected species was completed. This study identified 19 badger records within a 2 km radius of the site, summarised in Table 3.1. The location of badger setts is confidential; therefore, precise grid references of records are not provided in this report.

Date	Proximity of Record to Site
1992	Potentially within 1 km*
1992	Potentially within 1 km*
1994	Potentially within 1 km*
1997	1,170 m north
2000	Potentially within 1 km*
2000	Potentially within 1 km*
2002	Potentially within 1 km*
2002	Potentially within 1 km*
2003	1,700 m north
2003	1,610 m west
2003	1,380 m south
2004	1,460 m north
2008	970 m south-east
2010	1,370 m north
2011	1,490 m north-west
2011	1,490 m north-west
2012	120 m west
2017	Potentially within 1 km*
2017	Potentially within 1 km*

**Table 3.1: Badger Records Within 2 km of the Development Boundary**

#### 3.2 PREVIOUS BADGER SURVEYS

Waterman Group undertook a badger survey on site in 2014, with the main site and the wider ownership boundary forming the extent of the survey area.

A total of ten badger setts were recorded [REDACTED] and consisted of one active main sett with a potentially active annex sett covered in dense vegetation, one active subsidiary sett, two active outlier setts and six inactive outlier setts.

Eleven badger setts were also recorded [REDACTED] and consisted of one inactive subsidiary sett, two active outlier setts and eight inactive outlier setts.

Waterman Group considered it likely that the badger population observed [REDACTED] formed a single badger territory due to its isolation from the badger population recorded [REDACTED].

## 4. RESULTS

### 4.1 INTRODUCTION

The results of the Badger Survey are presented in Sections 4.3-4.5. Drawing C127947-05-01 details the location of any badger evidence recorded during the survey, and is provided in Chapter 7. Photographs taken during the field survey are presented in Chapter 8.

The Badger Survey was undertaken on the 23<sup>rd</sup> May 2018 by Jamie Fletcher (Ecological Consultant). Table 4.1 details the weather conditions at the time of the survey.

Parameter	Condition
Temperature (°C)	17
Cloud (%)	25
Wind (Beaufort)	F2
Precipitation	Nil

**Table 4.1: Weather Conditions During Survey**

### 4.2 SURVEY CONSTRAINTS

Due to the extremely steep gradient of the wooded bank located within the north-eastern and eastern parts of the broadleaved semi-natural woodland forming part of the wider ownership boundary it was not possible to fully survey these areas. Parts of the aforementioned areas abutted Polhill/A224 to the east and were surveyed in all areas that were accessible and/or deemed safe, with the lower eastern boundaries and inaccessible steep wooded banks being the only areas that could not be surveyed.

### 4.3 HABITAT SUITABILITY ASSESSMENT

The main site and wider survey area both provided excellent foraging and sett building habitat for badgers due to the presence of extensive areas of woodland and grassland habitats. Furthermore, the vast majority of the site was subject to limited human disturbance, with the exception of explosives testing and experimentations in controlled environments within the main site, and as such badgers on site were largely undisturbed.

Due to the site's location within the North Downs a significant level of topographical variation occurred on site, with the eastern part of the site existing on a steep downward sloping gradient extending from the sites wooded eastern boundary to Polhill/A224 and beyond to the east. Further less significant topographical features were also present throughout the site including bunds, hills, earth covered magazines and bunkers and a dry moat. All such features provided attractive sett building conditions for badgers, with many of the aforementioned topographical features existing in areas of woodland, grassland or areas subject to limited human disturbance.

### 4.4 PRESENCE/ABSENCE SURVEY RESULTS

The results of the badger presence/absence survey are detailed below in Table 4.2.

Sett No.	No. of Entrances	Sett Type	Location	Notes
1	7	Main	[REDACTED]	Well-worn paths leading to/from the sett. Well-worn bare ground outside of the sett. Badger hairs found in abundance among vegetation and on the bare ground around and outside of the sett. Seven holes all extending in a northward direction. Fresh latrine consisting of three dung pits close to the sett in adjoining woodland to the east.

**Table 4.2: Badger Sett Details (cont)**

Sett No.	No. of Entrances	Sett Type	Location	Notes
2	2	Annex	[REDACTED]	Covered in dense bramble. Holes extend in a northward direction. No obvious well-worn badger paths leading to/from the sett.
3	1	Outlier	[REDACTED]	Covered in dense bramble and nettles. Hole extends in a northward direction. Hole partially collapsed. Cobwebs and leaf litter in/over entrance.
4	3	Subsidiary	[REDACTED]	Three holes all extending in an eastward direction. Cobwebs and leaf litter in/over all three holes. No obvious well-worn badger paths leading to/from the sett. Old latrine in woodland surrounding sett.
5	5	Subsidiary	[REDACTED]	Five holes all extending in a north or north-easterly direction. Leaf litter in all five holes. No obvious well-worn badger paths leading to/from the sett.
6	4	Subsidiary	[REDACTED]	Four holes all extending westwards. Well-worn bare ground outside of the sett. Well-worn badger paths leading to/from the sett. Fresh digging outside of the sett. Claw marks visible in bare ground outside of the sett. Fresh latrine close to the sett in adjoining woodland to the west.
7	3	Outlier	[REDACTED]	Three holes all extending eastwards. All three holes partially collapsed and filled with soil reducing the size significantly. Cobwebs and leaf litter in/over all three holes. No obvious well-worn badger paths leading/to from the sett.
8	1	Outlier	[REDACTED]	One hole extending westwards. Filled with leaf litter and cobwebs also present. No obvious well-worn badger paths leading to/from the sett.
9	1	Outlier	[REDACTED]	One hole extending westwards. Hole clear of leaf litter and cobwebs. Area of bare ground immediately outside of sett entrance.
10	1	Outlier	[REDACTED]	One hole extending north-westwards. Hole filled with leaf litter and cobwebs also present. No obvious well-worn badger paths leading to/from the sett.

Table 4.2 (cont'd): Badger Sett Details (cont)

Sett No.	No. of Entrances	Sett Type	Location	Notes
11	1	Outlier	[REDACTED]	One hole extending north-westwards. Hole filled with leaf litter and cobwebs also present. No obvious well-worn badger paths leading to/from the sett.
-	4	Unidentified mammal holes (probable fox earths)	[REDACTED]	Four holes in relatively close proximity to each other. All four holes considered to be too small for badgers and inconsistent in overall appearance with typical badger holes. Strong smell of fox urine coming from within one hole and outside. Rabbit remains found in close proximity to holes and were considered likely to be fox feeding remains. Holes likely to be a mix of active and inactive fox earths.
-	5	Rabbit warren	[REDACTED]	Five holes located within a shallow wooded depression. Rabbits observed entering holes and also recorded outside of warren. Rabbit droppings present outside of warren.
-	-	Latrine and snuffle holes	[REDACTED]	Old latrine in wooded ditch. Snuffle holes in leaf litter in wooded ditch.
-	-	Latrine and snuffle holes	[REDACTED]	Old latrine. Snuffle holes in leaf litter.
-	-	Latrine	[REDACTED]	Fresh latrine with four dung pits.

Table 4.2 (cont'd): Badger Sett Details

Drawing C127947-05-01 in Chapter 7 illustrates the location of all evidence of badger activity recorded on site. Photographs taken during the field survey are presented in Chapter 8.

#### 4.5 SETT MONITORING RESULTS

Adhesive hair traps were placed across the sett entrance during the initial survey visit and monitored on four subsequent occasions. The results of the monitoring visits are provided in Table 4.3.

Sett No.	Entrance No.	Date of Monitoring Visit			
		03/07/18	05/07/18	16/07/18	18/07/18
1	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	2	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	3	No disturbance.	Sticks moved and badger hair present.	No disturbance.	Sticks moved, badger hair present outside of entrance.
	4	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	5	Sticks moved and badger hair present.			

Table 4.3: Badger Sett Monitoring Details (cont)

Sett No.	Entrance No.	Date of Monitoring Visit			
		03/07/18	05/07/18	16/07/18	18/07/18
1	6	Sticks moved and badger hair present.			
	7	Sticks moved and badger hair present.			
2	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	2	No disturbance.	No disturbance.	No disturbance.	No disturbance.
3	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
4	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	2	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	3	No disturbance.	No disturbance.	No disturbance.	No disturbance.
5	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	2	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	3	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	4	No disturbance.	No disturbance.	No disturbance.	Sticks moved and badger hair present.
	5	No disturbance.	No disturbance.	No disturbance.	Sticks moved and badger hair present.
6	1	Sticks moved and badger hair present.	Sticks moved and badger hair present.	Sticks moved and badger hair present.	No disturbance.
	2	Sticks moved and badger hair present.	Sticks moved and badger hair present.	Sticks moved and badger hair present.	No disturbance.
	3	Sticks moved and badger hair present.	Sticks moved and badger hair present.	Sticks moved and badger hair present.	No disturbance.
	4	Sticks moved and badger hair present.	Sticks moved and badger hair present.	Sticks moved and badger hair present.	No disturbance.
7	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	2	No disturbance.	No disturbance.	No disturbance.	No disturbance.
	3	No disturbance.	No disturbance.	No disturbance.	No disturbance.
8	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
9	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
10	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.
11	1	No disturbance.	No disturbance.	No disturbance.	No disturbance.

**Table 4.3 (cont'd): Badger Sett Monitoring Details**

Sett monitoring over a two week period indicated that setts 1, 5 and 6 were in current use by badgers.

## 5. DISCUSSION AND CONCLUSIONS

### 5.1 SUMMARY OF SITE PROPOSALS

The proposals for the site are as follows:

*Hybrid planning permission comprising:*

*In detail:*

- *Demolition of existing buildings;*
- *Change of use and works to buildings Q13 and Q14 (including landscaping and public realm);*
- *Primary and secondary accesses.*

*In outline:*

- *Development of business space (use classes B1a/b/c) of up to 27,659 sq m GEA;*
- *Works within the 'X' enclave relating to energetic testing operations, including fencing, access, car parking;*
- *Development of up to 750 residential dwellings;*
- *Development of a mixed-use village centre (use classes A1/A3/A4/A5/B1a/D1/D2);*
- *Development of a one form entry primary school;*
- *Change of use of Fort Area and bunkers to Historic Interpretation Centre (use class D1) with workshop space;*
- *Roads, pedestrian and cycle routes, public transport infrastructure, car parking, utilities infrastructure, drainage;*
- *Landscaping, landforming and ecological mitigation works.*

### 5.2 STATUS OF BADGERS ON SITE

The main site and wider survey area both provide an abundance of high-quality foraging and sett building habitat for badgers, with extensive areas of largely undisturbed woodland and grassland habitat dominating large sections of the site.

Furthermore, the varied topography on site provides further opportunities for badgers to access high quality sett building habitats and features, notably in the eastern part of the site which is located upon a primarily wooded steep downward slope, whilst many other features in the form of ditches, banks, bunds, hills and a dry moat are also present and easily accessible throughout the site.

The survey work undertaken on site has identified three active setts, namely setts 1, 5 and 6, with all three located [REDACTED]. Sett 1, which has been identified as a main sett, was subject to high levels of badger activity, as determined during the sett monitoring. The sett was identified [REDACTED] in an area subject to minimal human disturbance.

Sett 5, which was identified as a subsidiary sett, was located [REDACTED]. Badger activity was only recorded at Sett 5 during the final sett monitoring visit.

Sett 6, which was also identified as a subsidiary sett, was located [REDACTED] and was subject to high levels of badger activity.

A further eight badger setts were recorded [REDACTED], with all such activity demonstrating the sites high value to badgers locally. It is considered that the badger activity recorded [REDACTED] is all associated with one badger territory/family group due to the isolation from the wider area as a consequence of the continuous security fence located around the site perimeter.

### 5.3 CONCLUSIONS AND SUMMARY OF POTENTIAL IMPACTS

Middlemarch Environmental Ltd has been informed by the client that the main sett lies [REDACTED], although it is understood that the sett is to be retained. However, suitable tunnels will need to be provided [REDACTED], to ensure that badgers can continue to move through the site. Therefore, further survey work will be required to establish the badger territory boundaries and key commuting routes and identify suitable locations for tunnels. A recommendation is made in Chapter 6.

Sett 6 is located [REDACTED], and will not be impacted as a result of the proposals.

It is understood that Sett 5 is likely to require temporary closure to accommodate reprofiling activities [REDACTED]. Prior to any work commencing that could breach legislation regarding this sett, a Natural England development licence will be required. Should development designs change and impacts on Sett 1 and/or Sett 6 are anticipated as a result of the proposed works, the licensing requirements should be re-assessed. A recommendation regarding the Natural England licence is made in Chapter 6.

Current understanding of the development proposals on site indicate that the majority of woodland and grassland habitat on site is to be retained and/or ecologically enhanced post development. Despite this the increase in general human activity and the implementation of features that will fragment existing commuting and foraging habitat will adversely impact badgers on site.

A key feature that is likely to negatively impact badgers on site is the significant increase in vehicular usage of Crow Drive/Crow Road, with this road cutting through an existing badger territory. Current vehicular usage of Crow Road, particularly at night, is minimal, although this will change significantly post development due to the roads future use as the primary vehicular route in and out of the proposed development. Therefore, it is recommended that badger tunnels are installed under main routes throughout the site, along with associated guide fencing. The locations of these tunnels should also be informed by a badger bait marking survey, to ensure that well-used badger foraging and commuting routes are maintained within the site in the long-term. A recommendation to this effect is made in Chapter 6.

Further impacts in the form of machinery usage, open excavations and increased noise, light and vibration levels during the demolition and construction phase of the project all have the potential to adversely impact badgers on site. A recommendation relating to the production of a badger protection strategy is made in Chapter 6 which would detail measures that would aim to mitigate for any demolition and construction phase impacts.

## 6. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

- R1** A Badger Bait Marking Survey will be carried out according to the methodology of Harris et al. (1994). The survey will include a site visit to assess current use, number and type of setts and evidence of activity, which will be checked against the existing survey results. Once all main setts have been located, bait will be laid at each active main sett. Each main sett will be bait marked daily for a minimum of five consecutive days, and subsequent visits will be made to the latrine sites to check for the appearance of coloured pellets in the badger faeces. The patterns of badger territory marking will thus be assessed from the appearance of the pellets in the various latrine sites. The best months to undertake bait marking are February, March and April, since badgers actively mark their territorial boundaries at this time. It is not appropriate to carry out bait marking surveys during mid-summer or mid-winter (Harris et al, 1994). The results of the survey will be used to inform suitable locations for tunnels [REDACTED] and under Crow Drive/Crow Road, to ensure that badgers can continue to move safely between setts and associated foraging areas.
- R2** Prior to any work commencing that could breach legislation regarding Sett 5, a Natural England development licence will be required. Badger development licences are only issued for the period 1<sup>st</sup> July to 30<sup>th</sup> November in order to avoid disturbing badgers during their breeding season. A development licence will usually only be granted once planning consent has been awarded and relevant conditions relating to ecology and habitat issues have been discharged. The licence application process will require the development of a suitable method statement to be approved by Natural England, outlining how the favourable conservation status of the badger population will be maintained. At present, it is understood that Setts 1 and 6 will not be directly impacted by the proposals. Should the development designs change and impacts on Sett 1 and/or Sett 6 are anticipated as a result of the proposed works, the licensing requirements should be re-assessed.
- R3** Any excavations which are necessary on site should either be covered at night or fitted with suitable mammal ramps in order to prevent badgers or any other mammals from becoming trapped. Any open pipework with an outside diameter of greater than 150mm must be covered at the end of each work day to prevent badgers entering/becoming trapped.
- R4** Prior to the start of any works on site, a 30 m exclusion zone should be implemented around any badger holes. This exclusion zone should be marked out with easily visible markers, and any site operatives should be made aware that no works are to be undertaken in this zone. In order to avoid disrupting existing badger foraging habitat, the exclusion zone should not be fenced in a manner that would hinder badger movements. The site should be subject to regular checks by an experienced ecologist throughout the course of works, in order to ensure that the exclusion zone is adhered to and that no works are being undertaken which may cause disturbance to the badger sett.
- R5** Existing mammal pathways should not be obstructed by site fencing or parked machinery etc. Two-way badger gates should be installed in any fences or other features that are likely to fragment potential or known badger commuting or foraging habitat.
- R6** A badger protection strategy should be compiled detailing control measures that will be implemented to ensure that works do not breach legislation and the favourable conservation status of the badger population is maintained.
- R7** Should no work have commenced within 18 months, this survey should be updated.

## 7. DRAWINGS

Drawing C127947-05-01 – Badger Survey

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REDACTED VERSION – DRAWING NOT PROVIDED

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## 8. PHOTOGRAPHS



Plate A1: Set 1 Hole 1



Plate A2: Set 1 Hole 2



Plate A3: Set 1 Hole 3



Plate A4: Set 1 Hole 4



Plate A5: Set 1 Hole 5



Plate A6: Fresh Latrine Outside of Set 1



Plate A7: Set 2. Holes Beneath Vegetation



Plate A8: Set 4 Hole 1



Plate A9: Sett 4 Hole 2



Plate A10: Sett 4 Hole 3



Plate A11: Sett 5 Hole 1



Plate A12: Sett 5 Hole 2



Plate A13: Sett 5 Hole 3



Plate A14: Sett 5 Hole 4



Plate A15: Sett 5 Hole 5



Plate A16: Fresh Latrine Outside of Sett 5



Plate A17: Sett 6 Hole 1



Plate A18: Sett 6 Hole 2



Plate A19: Sett 6 Hole 3



Plate A20: Sett 6 Hole 4



Plate A21: Overview of Sett 6



Plate A22: Fresh Latrine Outside of Sett 6

## REFERENCES AND BIBLIOGRAPHY

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## APPENDIX 1

### LEGISLATION

Badgers and their setts are protected under the Protection of Badgers Act 1992. The Protection of Badgers Act 1992 is based primarily on the need to protect badgers from baiting and deliberate harm or injury, badgers are not protected for conservation reasons. The following are criminal offences:

- To intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.
- To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so.

A badger sett is defined in the legislation as:

- *'Any structure or place that displays signs indicating current use by a badger'*.

'Current use' is not synonymous with current occupation and a sett is defined as such (and thus protected) as long as signs of current usage are present. Therefore, a sett is protected until such a time as the field signs deteriorate to such an extent that they no longer indicate 'current usage'.

Badger sett interference can result from a multitude of operations including excavation and coring, even if there is no direct damage to the sett, such as through the disturbance of badgers whilst occupying the sett. Any intentional or reckless work that results in the interference of badger setts is illegal without a licence from Natural England. In England a licence must be obtained from Natural England before any interference with a badger sett occurs.

Previous guidance from English Nature, Badgers and Development (English Nature, 2002) considered that the following types of activity may require licensing within certain distances of the sett entrances (these distances are not included within the Protection of Badgers Act, 1992):

- using very heavy machinery (generally tracked vehicles) within 30 m of any entrance to an active sett;
- using lighter machinery (generally wheeled vehicles), particularly any digging operation, within 20 m of any entrance to the active sett;
- light work such as hand digging or scrub clearance within 10 m of any entrance to the active sett.

However, some activities may cause disturbance at greater distances, including pile driving and the use of explosives. These activities require individual consideration to ensure that best ecological practice is followed, however, it is generally considered that a licence is more likely to be required if these works are undertaken within 50m of an active badger sett.

New guidance was issued by NE in 2009 which states that disturbance is something less than what might otherwise be considered damage to a sett, but it is also something more than limited noise or activity near a sett at levels which badgers commonly tolerate, without apparently being disturbed. NE therefore believes that badgers are relatively tolerant of moderate levels of disturbance at or near to badger setts, but such disturbance does not necessarily disturb the badgers occupying the setts. The disturbance, which different activities may or may not cause to a badger sett, should therefore be assessed on a case by case basis.

Although the above prescriptive distances are no longer referred to by NE, they can be used as an aid to assess where works would constitute a disturbance to each sett.

The reader should refer to the original legislation for the definitive interpretation.