



Greater Cambridge Partnership

CAMBOURNE TO CAMBRIDGE

Environmental Statement

Technical Report 5: Ecology, Appendix 5.2: Public
Badger Survey Report (Draft)





Greater Cambridge Partnership

Cambourne to Cambridge

Public Badger Survey Report (Draft)

Type of document (version) Public

Project no. 70086660

Our Ref. No. 70086660-BADGE-01

Date: February 2023

WSP UK Ltd

62-64 Hills Road

Cambridge

CB2 1LA

Phone: +44 1223 558 050

Fax: +44 1223 558 051

WSP.com

Contents

1	Introduction	1
2	Relevant Legislation	3
3	Methodology	4
3.1	Desk Study	4
3.2	Field Survey	4
3.3	Dates of Survey and Personnel	5
3.4	Notes and Limitations	6
4	Results	7
4.1	Desk Study	7
4.2	Field Survey	13
	Incidental Badger Sightings	23
5	Conclusion	24
6	References	25
6.1	Project References	25
6.2	Technical References	25

Tables

Table 4-1 – Desk study sett references and summary description	7
Table 4-2 – Sett information	15
Table 4-3 – Incidental Badger records	23

Annexes

Annex 5.2.1

Annex 5.2.2

Annex 5.2.3

Full Details of Badger Setts Across the Scheme

Annex 5.2.4

Annex 5.2.5

DRAFT

1 Introduction

1.1 Project Background

- 1.1.1. The Cambourne to Cambridge project (C2C) is a proposed new 13.6km public transport route linking Cambourne and Cambridge. It will include a dedicated busway serving communities in Cambourne and the proposed Bourn Airfield development, as well as in Hardwick, Coton and the West Cambridge campus. A service road, to be used as a path for active travel, particularly by cyclists and pedestrians, will run alongside the busway. A new travel hub will be provided at Scotland Farm.
- 1.1.2. Scheme details are provided in the main report to the Environmental Statement (ES).

1.2 Ecological Background

- 1.2.1. The requirement for a Badger *Meles meles* survey followed the identification of suitable habitats with the potential to support Badger populations, that may be impacted by the Scheme. These habitats were identified within the Ecology Constraints Report (Cambridge Ecology, 2017), in addition to the discovery of Badger field signs and animal excavations. It was therefore recommended that a Badger survey be conducted to establish a sufficient baseline and subsequently inform an impact assessment and the requirement for avoidance, mitigation, and compensation measures.
- 1.2.2. Baseline Badger surveys were previously undertaken by Thomson Environmental Consultants and Cambridge Ecology between 2014-2021. The most recent Badger survey undertaken by Thomson Environmental Consultants was completed in 2021 (Thomson Environmental Consultants, 2022) and the most recent Badger survey undertaken by Cambridge Ecology was completed in 2018 (Cambridge Ecology, 2018).
- 1.2.3. Additional surveys were undertaken by WSP in 2022 where access constraints were previously encountered, previous surveys had lapsed, or the Survey Area had been updated following changes to the proposed boundaries of the Scheme.

1.3 Brief and Objectives

- 1.3.1. WSP UK Ltd was commissioned by the GCP to undertake an update of existing Badger surveys, with the following objectives:
 - Complete updated field surveys to search for signs of Badger activity; to include recording the presence of setts and their activity status and field signs such as latrines or dung pits, pathways or tracks, prints and snuffle holes where present;
 - Present the findings of the historic surveys undertaken by Cambridge Ecology and Thomson Environmental Consultants within the Study Area; and
 - Present the findings of the surveys in a baseline report.

- 1.3.2. The outcome of these objectives will inform the impact assessment and proposed mitigation for Badger within the Scheme. Details of the impact assessment and mitigation will be included within the Biodiversity Chapter of the Environmental Statement for the Scheme.

DRAFT

2 Relevant Legislation

- 2.1.1. The Protection of Badgers Act 1992 makes it an offence to wilfully take, kill, injure, possess or ill-treat a Badger. Under the Act Badger setts are protected against intentional or reckless interference. Settt interference includes damaging or destroying a sett, obstructing access to any part of the sett, or disturbance of a Badger whilst it is occupying a sett.
- 2.1.2. The Act defines a Badger sett as ‘any structure or place, which displays signs indicating the current use by a Badger’ and Natural England takes this definition to include seasonally used setts that are not occupied but that show sign of recent use by Badgers (Natural England, 2009).
- 2.1.3. If impacts to Badgers or their setts are unavoidable, then activities that would otherwise constitute an offence under this legislation may be licensed by NE.

DRAFT

3 Methodology

3.1 Desk Study

3.1.1. An updated ecological desk study was completed in 2022. As part of this study, records of any notable or legally protected species, including Badger, from within the Study Area were requested from Cambridgeshire & Peterborough Environmental Records Centre (CPERC). Records from the last 10 years were included in this report. Records of Badger from the most recent Badger surveys undertaken by Cambridge Ecology (Cambridge Ecology, 2018) and Thomson Environmental Consultants (Thomson Environmental Consultants, 2022) within the Study Area were also included within the desk study. The Study Area for the desk study was defined as a 2km radius of the Scheme, as shown in **Annex 5.2.1**.

3.2 Field Survey

- 3.2.1. The Survey Area for the Badger field survey consisted of all suitable habitat within and up to 250m beyond the Scheme, apart from areas geographically isolated from the Scheme where a significant barrier, such as the A428, acts as a potential barrier to dispersal of Badger into the Scheme. This was informed by guidance in Surveying Badgers (Harris, Cresswell, & Jefferies, 1989) and the Design Manual for Roads and Bridges (DMRB) *LD 118 Biodiversity design* (formerly LA 118). Additionally, this was the buffer previously used by Cambridge Ecology and was agreed with the local authority ecologist.
- 3.2.2. The Survey Area extents are shown in **Annex 5.2.2**. As there were in depth Badger surveys by Thomson Environmental Consultants of Bourn Airfield an updated survey of this area was not undertaken. A review of the survey information gathered for this scheme will be reviewed to inform the impact assessment.
- 3.2.3. The Survey Areas were searched for evidence of Badger with reference to the standard methodology as outlined by Harris, Cresswell and Jefferies (Harris, Cresswell, & Jefferies, 1989) with regard to recent reviews and comment on these methods by Roper (Roper, 2010) and Andrews (Andrews, 2013).
- 3.2.4. Where present, evidence indicative of Badger was recorded, including:
- Setts;
 - Dung pits and latrines;
 - Prints;
 - Mammal paths;
 - Hairs;
 - Snuffle holes;
 - Feeding remains;
 - Bedding; and,
 - Scratching posts.

- 3.2.5. Where setts were recorded, their status and level of activity was noted. Following guidance from Natural England (Badgers and Development A Guide to Best Practice and Licensing: Interim Guidance Document, 2011) sett status was categorised as follows:
- *Main setts*: these usually have a large number of holes with large spoil heaps and look well used. They usually have well used paths to and from the sett and between sett entrances. Although normally the breeding sett, and in continual use all year round, it is possible to find a main sett that has become disused because of excessive disturbance or some other reason;
 - *Annexe setts*: these are always close to a main sett and are usually connected to the main sett by one or more obvious, well-worn paths. They usually consist of several holes, but are not necessarily in use all the time, even if the main sett is very active. It may not be occupied throughout the year, but can be used for breeding if there is more than one breeding sow within the social group;
 - *Subsidiary setts*: often these have only a few holes, are usually at least 50m from a main sett, and do not have an obvious path connecting them with another sett. They are not continuously active; and
 - *Outlying setts*: these usually only have one or two holes, often have little spoil outside the entrance(s), have no obvious path connecting them with another sett, and are only used sporadically.
- 3.2.6. Sett entrances or holes were broadly categorised based on use or level of activity as follows:
- *Well used hole*: shows evidence of 'current use' (as defined by Natural England (Natural England, 2009)), such as fresh spoil or bedding, well-worn pathways between entrances and the presence of Badger hair;
 - *Partially used hole*: the sett may be occupied intermittently and cannot be categorically described as disused. It may contain some leaves or sticks in tunnel entrances, but entrances are not blocked and it would take little effort for a Badger to reoccupy it. Badger field signs have not decayed to the extent they can be categorically considered to no longer indicate current use; and
 - *Disused hole*: a Badger sett that appears to have been abandoned by a Badger social group. Disused setts are often completely blocked with vegetation or have collapsed and would require considerable re-excavation before use. Badger field signs are no longer present or have decayed to the extent they do not indicate current use.
- 3.2.7. Where encountered, other mammal excavations were recorded during the survey. Information including the location, a description of the type of evidence (i.e. pathway or burrow) and where applicable any signs of current use were recorded.

3.3 Dates of Survey and Personnel

- 3.3.1. The Badger survey was completed by competent surveyors with previous experience of Badger surveys, including survey of woodland sites. The Badger field surveys were

completed by suitably experienced ecologists meeting the CIEEM minimum competency standards for Badger surveys (CIEEM, 2013).

3.3.2. Surveys were completed on the following dates:

- 15 February 2022
- 16 February 2022
- 23 February 2022
- 25 February 2022
- 22 March 2022
- 7 April 2022
- 21 April 2022
- 26 May 2022
- 23 June 2022
- 15 July 2022

3.3.3. Incidental records of Badger signs recorded during other survey work have also been included in this report.

3.4 Notes and Limitations

- 3.4.1. Badger sett status can change quickly. New setts can be excavated, or for example outlier or subsidiary setts can quickly be re-occupied after a long period of disuse. The data within this report represents an accurate assessment of Badger activity within the Survey Areas at the time of survey, but there is potential for sett locations, status or level of activity to change prior to the commencement of works. Pre-construction surveys for Badgers will be required and this is outlined within Technical Report 5: Ecology of the Environmental Statement (ES).
- 3.4.2. In several areas within the Survey Area scrub was too dense for the surveyors to enter. In these situations, the perimeter of the scrub was surveyed to identify, where possible, any evidence of Badger use of these areas. Whilst it is possible setts are concealed in these areas, it is considered unlikely as an entrance pathway leading beneath the scrub would be anticipated. The location of sett CE 25 could not be accessed due to dense vegetation; therefore, the most recent Badger survey results from Cambridge Ecology were used in this report.
- 3.4.3. Several areas could not be accessed during the Badger surveys due to access restrictions, as shown in **Annex 5.2.2**. This is not expected to place limitations on the subsequent impact assessment as this represented only a small proportion of the total Survey Area and therefore this land is unlikely to make up a significant part of Badger territory. Where possible, these areas were surveyed from accessible land parcels to detect setts and field signs near to the Scheme boundary.
- 3.4.4. The location of CE 21 could not be accessed due to access restrictions; therefore, the most recent Badger survey results from Cambridge Ecology were used in this report.

4 Results

4.1 Desk Study

- 4.1.1. CPERC returned 48 records of Badger within the 2km Study Area. Previous surveys undertaken by Cambridge Ecology and Thomson Environmental Consultants also identified 93 Badger setts within the 2km Study Area. A summary of the Badger setts identified by Cambridge Ecology and Thomson Environmental Consultants are shown in **Table 4-1** below.
- 4.1.2. Full detail of the Scheme Boundary, Desk Study Area and Desk Study Results are shown within **Annex 5.2.1**.

Table 4-1 – Desk study sett references and summary description

Sett ID	Sett category	Date	Consultancy	Within Field Survey Area (see section 3.2.1)
CE1	Outlier	2017/18	Cambridge Ecology	Yes
CE2	Outlier	2017/18	Cambridge Ecology	Yes
CE3	Main	2017/18	Cambridge Ecology	Yes
CE4	Outlier	2017/18	Cambridge Ecology	Yes
CE5	Outlier	2017/18	Cambridge Ecology	Yes
CE6	Outlier	2017/18	Cambridge Ecology	No
CE7	Outlier	2017/18	Cambridge Ecology	No
CE8	Outlier	2017/18	Cambridge Ecology	No
CE9	Outlier	2017/18	Cambridge Ecology	No
CE10	Outlier	2017/18	Cambridge Ecology	No
CE11	Annexe	2017/18	Cambridge Ecology	No
CE12	Annexe	2017/18	Cambridge Ecology	No
CE13	Outlier	2017/18	Cambridge Ecology	Yes
CE14	Outlier	2017/18	Cambridge Ecology	Yes
CE15	Outlier	2017/18	Cambridge Ecology	Yes
CE16	Outlier	2017/18	Cambridge Ecology	Yes
CE17	Outlier	2017/18	Cambridge Ecology	Yes
CE18	Annexe	2017/18	Cambridge Ecology	Yes
CE19	Main	2017/18	Cambridge Ecology	Yes

Sett ID	Sett category	Date	Consultancy	Within Field Survey Area (see section 3.2.1)
CE20	Main	2017/18	Cambridge Ecology	Yes
CE21	Annexe	2017/18	Cambridge Ecology	Yes
CE22	Outlier	2017/18	Cambridge Ecology	Yes
CE23	Outlier	2017/18	Cambridge Ecology	Yes
CE24	Main	2017/18	Cambridge Ecology	Yes
CE25	Annexe	2017/18	Cambridge Ecology	Yes
TE3	Subsidiary	2021	Thomson Environmental Consultants	No
TE4	Subsidiary	2021	Thomson Environmental Consultants	No
TE5	Subsidiary	2021	Thomson Environmental Consultants	No
TE6	Main	2021	Thomson Environmental Consultants	No
TE7	Subsidiary	2021	Thomson Environmental Consultants	No
TE8	Subsidiary	2021	Thomson Environmental Consultants	No
TE10	Main	2021	Thomson Environmental Consultants	No
TE11	Annexe	2021	Thomson Environmental Consultants	No
TE12	Subsidiary	2021	Thomson Environmental Consultants	No
TE13	Outlier	2021	Thomson Environmental Consultants	No

Sett ID	Sett category	Date	Consultancy	Within Field Survey Area (see section 3.2.1)
TE14	Main	2021	Thomson Environmental Consultants	No
TE16	Subsidiary	2021	Thomson Environmental Consultants	No
TE17	Main	2021	Thomson Environmental Consultants	No
TE18	Annexe	2021	Thomson Environmental Consultants	No
TE22	Subsidiary	2021	Thomson Environmental Consultants	No
TE23	Outlier	2021	Thomson Environmental Consultants	No
TE27	Outlier	2021	Thomson Environmental Consultants	No
TE28	Outlier	2021	Thomson Environmental Consultants	Yes
TE31	Main	2021	Thomson Environmental Consultants	No
TE33	Annexe	2021	Thomson Environmental Consultants	No
TE37	Subsidiary	2021	Thomson Environmental Consultants	No
TE45	Subsidiary	2021	Thomson Environmental Consultants	No

Sett ID	Sett category	Date	Consultancy	Within Field Survey Area (see section 3.2.1)
TE46	Subsidiary	2021	Thomson Environmental Consultants	No
TE47	Subsidiary	2021	Thomson Environmental Consultants	No
TE48	Subsidiary	2021	Thomson Environmental Consultants	No
TE49	Subsidiary	2021	Thomson Environmental Consultants	No
TE50	Subsidiary	2021	Thomson Environmental Consultants	No
TE55	Outlier	2021	Thomson Environmental Consultants	No
TE58	Outlier	2021	Thomson Environmental Consultants	Yes
TE59	Outlier	2021	Thomson Environmental Consultants	Yes
TE64	Main	2021	Thomson Environmental Consultants	No
TE65	Subsidiary	2021	Thomson Environmental Consultants	No
TE68	Outlier	2021	Thomson Environmental Consultants	No
TE69	Outlier	2021	Thomson Environmental Consultants	No

Sett ID	Sett category	Date	Consultancy	Within Field Survey Area (see section 3.2.1)
TE70	Outlier	2021	Thomson Environmental Consultants	No
TE71	Subsidiary	2021	Thomson Environmental Consultants	No
TE72	Outlier	2021	Thomson Environmental Consultants	Yes
TE73	Outlier	2021	Thomson Environmental Consultants	Yes
TE74	Subsidiary	2021	Thomson Environmental Consultants	No
TE75	Main	2021	Thomson Environmental Consultants	Yes
TE76	Main	2021	Thomson Environmental Consultants	No
TE77	Annexe	2021	Thomson Environmental Consultants	No
TE78	Main	2021	Thomson Environmental Consultants	No
TE79	Annexe	2021	Thomson Environmental Consultants	No
TE81	Main	2021	Thomson Environmental Consultants	No
TE82	Main	2021	Thomson Environmental Consultants	No

Sett ID	Sett category	Date	Consultancy	Within Field Survey Area (see section 3.2.1)
TE83	Outlier	2021	Thomson Environmental Consultants	Yes
TE84	Subsidiary	2021	Thomson Environmental Consultants	No
TE85	Subsidiary	2021	Thomson Environmental Consultants	No
TE86	Subsidiary	2021	Thomson Environmental Consultants	No
TE88	Outlier	2021	Thomson Environmental Consultants	No
TE89	Subsidiary	2021	Thomson Environmental Consultants	No
TE90	Subsidiary	2021	Thomson Environmental Consultants	No
TE91	Subsidiary	2021	Thomson Environmental Consultants	No
TE92 (B)	Outlier	2021	Thomson Environmental Consultants	No
TE93 (A)	Main	2021	Thomson Environmental Consultants	No
TE94 (C)	Main	2021	Thomson Environmental Consultants	No
TE95 (D)	Annexe	2021	Thomson Environmental Consultants	No

Sett ID	Sett category	Date	Consultancy	Within Field Survey Area (see section 3.2.1)
TE96 (E)	Annexe	2021	Thomson Environmental Consultants	Yes
TE97 (F)	Outlier	2021	Thomson Environmental Consultants	No
TE98 (G)	Unknown	2021	Thomson Environmental Consultants	No
TE99 (H)	Outlier	2021	Thomson Environmental Consultants	No
TE100 (I)	Outlier	2021	Thomson Environmental Consultants	No
TE101 (J)	Outlier	2021	Thomson Environmental Consultants	No
TE102 (K)	Subsidiary	2021	Thomson Environmental Consultants	No
TE103 (L)	Outlier	2021	Thomson Environmental Consultants	Yes
TE104 (M)	Outlier	2021	Thomson Environmental Consultants	Yes
TE105 (N)	Subsidiary	2021	Thomson Environmental Consultants	Yes

4.2 Field Survey

- 4.2.1. A total of 33 setts were identified within the Survey Area from the 2022 field surveys, Thomson Environmental Consultants surveys and Cambridge Ecology surveys. These comprised six main setts, two annex setts, seven subsidiary and 18 outlier setts. The location of these setts in relation to the Scheme boundary are presented **Annex 5.2.4**.

4.2.2. Badger setts identified during the field survey are summarised in **Table 4-2** below. The activity level(s) are described for each sett based on the most recent activity status observed. Further details of the setts identified during the field survey are presented in **Annex 5.2.3**. Field signs associated with the Badger setts including bedding, Badger hair, dung pits, latrines, snuffle holes, mammal paths, Badger paths and Badger prints were also recorded, as shown in **Annex 5.2.5**. The location of these field signs in relation to each sett is also included in **Table 4-2**.

DRAFT

Table 4-2 – Sett information

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
CE 2	Outlier	1	One partially active entrance.	None.	[REDACTED]
CE 3	Main	16	12 partially active entrances and four partially active entrances (natural and artificial).	Badger paths between entrances with Badger prints also present.	[REDACTED]
CE 18	Subsidiary	2	Two active entrances.	Mammal paths present.	[REDACTED]
CE 20	Main	22	Approximately 22 active and partially active entrances.	None.	[REDACTED]

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
					[REDACTED]
CE 21	Outlier	Undetermined due to access restraints.	Undetermined due to access restraints.	None.	[REDACTED]
CE 25	Outlier	4	Approximately four disused entrances.	None.	[REDACTED]
TE 96 (F)	Outlier	Surveyed by Thomson Environmental Consultants – number of entrances not specified.	Disused.	None.	[REDACTED]
TE 58	Subsidiary	12	One active entrance and 11 partially active entrances.	None.	[REDACTED]
TE 72	Outlier	Surveyed by Thomson Environmental Consultants –	Partially active.	None.	[REDACTED]

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
		number of entrances not specified.			[REDACTED]
TE 73	Outlier	Surveyed by Thomson Environmental Consultants – number of entrances not specified.	Partially active.	None.	[REDACTED]
TE 75	Subsidiary	6	One active entrance and five partially active entrances.	None.	[REDACTED]
TE 104 (M)	Outlier	Surveyed by Thomson Environmental Consultants – number of entrances not specified.	Partially active.	None.	[REDACTED]
TE 105 (N)	Subsidiary	Surveyed by Thomson	Partially active.	None.	[REDACTED]

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
		Environmental Consultants – number of entrances not specified.			[REDACTED]
WSP 1	Outlier	3	Three active entrances.	Badger path heading towards fence with Badger hair.	[REDACTED]
WSP 2	Outlier	1	One partially active entrance.	None.	[REDACTED]
WSP 3	Outlier	2	Two active entrances.	Mammal path.	[REDACTED]
WSP 4	Main	6	Six active entrances.	None.	[REDACTED]
WSP 5	Subsidiary	8	Four active entrances, two	Badger paths	[REDACTED]

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
			partially active entrances and two disused entrances.	connecting entrances, with Badger hairs found outside active entrances and dung pits present.	[REDACTED]
WSP 6	Outlier	2	One active entrance and one disused entrance.	Bedding present.	[REDACTED]
WSP 7	Outlier	1	One partially active entrance.	Badger hair present.	[REDACTED]
WSP 8	Outlier	1	One active entrance	Bedding, Badger prints and Badger hair present.	[REDACTED]
WSP 9	Main	26	A total of 20 active entrances, 3 partially active entrances and 3	Bedding, Badger prints and Badger hair present.	[REDACTED]

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
			disused entrances.		[REDACTED]
WSP 10	Outlier	2	Two partially active entrances.	None.	[REDACTED]
WSP 11	Outlier	1	One partially used entrance.	None.	[REDACTED]
WSP 12	Outlier	5	Two partially active entrances and three disused entrances.	None.	[REDACTED]
WSP 13	Outlier	1	One active entrance.	Badger hair present.	[REDACTED]
WSP 14	Outlier	1	One active entrance.	Badger path from entrance, with Badger hair and	[REDACTED]

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
				snuffle holes also present.	
WSP 15	Outlier	2	Two partially active entrances.	None.	[REDACTED]
WSP 16	Main	25	A total of 16 active entrances, seven partially active entrances and two disused.	Mammal paths crossing the field to the north and west.	[REDACTED]
WSP 17	Subsidiary	3	Three active entrances.	Mammal paths connecting two of the entrances from the south and the north, with snuffle holes also present.	[REDACTED]
WSP 18	Subsidiary	7	Seven partially active entrances.	Mammal paths connecting	[REDACTED]

Sett ID	Type of sett	No. of entrances	Most recent observed activity level(s)	Field signs associated with sett	Sett location
				the setts to the east.	
WSP 19	Subsidiary	6	Four active entrances and two disused entrances.	None.	[REDACTED]
nine	Outlier	3	Two active entrances and one partially active entrance.	None.	[REDACTED]

DRAFT

Incidental Badger Sightings

4.2.4. A total of six incidental Badger sightings were recorded during other survey work on site, which are summarised in **Table 4-3** below. The Badger sightings were concentrated in three areas across the Survey Area, as shown in **Annex 5.2.5**. Three of the six Badger sightings were recorded within Coton Orchard commuting along hedgerows.

Table 4-3 – Incidental Badger records

Badger ID	Date	Location	Description of activity
B1	14/07/2022	[REDACTED]	Two Badgers separately commuted south along the hedge.
B2	26/07/2022	[REDACTED]	Commuted south along the hedge.
B3	26/07/2022	[REDACTED]	[REDACTED]
B4	04/08/2022	[REDACTED]	Two Badgers recorded. Observed commuting north along hedge separately.
B5	18/08/2022	[REDACTED]	Walked along track, then north into vegetation.
B6	05/07/2022	[REDACTED]	Crossed the track, briefly walking along it, then continued north into vegetation.

5 Conclusion

- 5.1.1. The desk study from CPERC returned 48 records of Badger within the 2km Study Area. Previous surveys undertaken for the scheme between 2018 and 2021 also identified 93 Badger setts within the 2km Study Area.
- 5.1.2. The field surveys identified a total of 33 setts within the Survey Area from the updated 2022 field surveys and those undertaken for the Scheme by Thomson Environmental Consultants and Cambridge Ecology. These comprised six main setts, two annex setts, seven subsidiary and 18 outlier setts.
- 5.1.3. Field signs, including mammal paths, Badger paths, bedding, Badger hair, dung pits, latrines, snuffle holes and Badger prints were also recorded throughout the Survey Area. Although mammal and badger paths were recorded throughout the Survey Area, there was a higher concentration in certain areas, these include:

■ [REDACTED]

■ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6 References

6.1 Project References

Cambridge Ecology. (2017). Cambourne to Cambridge Better Public Transport: Protected Species Constraints Survey 2017 FINAL REPORT. Cambridge

Cambridge Ecology. (2018). Cambourne to Cambridge Better Public Transport: Badger Survey 2018 FINAL REPORT. Cambridge

Thomson Environmental Consultants. (2022). Ecology Survey Technical Reports 2021 (DRAFT) Bourn Airfield. Cambridge

6.2 Technical References

Andrews, R. (2013, December 82). The classification of badger *Meles meles* setts in the UK: A review and guidance for surveyors. *In Practice Magazine*, pp. 27-31.

CIEEM. (2013). *Competencies for Species Survey: Badger*. Retrieved from CIEEM: <https://cieem.net/wp-content/uploads/2019/02/CSS-BADGER-April-2013.pdf>

English Nature. (2002). *Badgers and Development*. Peterborough: English Nature.

Harris, S., Cresswell, P., & Jefferies, D. (1989). *Surveying Badgers*. Bristol: The Mammal Society.

Natural England. (2009). *Guidance on 'Current Use' in the definition of a Badger Sett*. Peterborough: Natural England.

Natural England. (2009). *Guidance on 'Current Use' in the definition of a Badger Sett*. Peterborough: Natural England.

Natural England. (2011). *Badgers and Development A Guide to Best Practice and Licensing: Interim Guidance Document*. Peterborough: Natural England.

Roper, T. J. (2010). *Badger* (First ed.). London: Harper Collins.

Annex 5.2.1

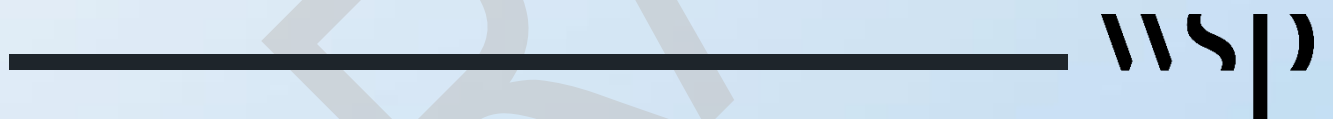
WSP



Annex 5.2.1 has been redacted due to containing confidential information.

DRAFT

Annex 5.2.2





Annex 5.2.2 has been redacted due to containing confidential information.

DRAFT

Annex 5.2.3

Full Details of Badger Setts Across the Scheme



Sett ID	Original sett category as assigned by Thomson and Cambridge Ecology (if applicable)	Updated sett category following survey in 2022
CE 1	Outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 2	Outlier sett with one entrance.	Active outlier sett with one partially used entrance.
CE 3	Active main sett with ten+ entrances (natural and artificial).	Active main sett with 12 well used entrances and four partially used entrances (natural and artificial).
CE 4	Active outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 5	Active outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 13	Active outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.

CE 14	Active outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 15	Active outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 16	Active outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 17	Active outlier sett with single entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 18	Active annexe sett with four entrances.	Active subsidiary sett with two well used entrances.
CE 19	Active main sett with 12+ entrances.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 20	Active main sett with ten+ entrances.	Active main sett with approximately 22 well used and partially used entrances.
CE 21	Active annexe sett with an undetermined number of entrances due to restricted site access.	Unable to complete field survey due to restricted site access.

CE 22	Active outlier sett with an undetermined number of entrances due to restricted site access.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 23	Active outlier sett with one entrance.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 24	Disused main sett with approximately ten entrances.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
CE 25	Disused annexe sett with approximately four entrances.	The location of CE 25 could not be accessed due to dense vegetation.
TE 96 (F)	Disused outlier sett.	Not surveyed by WSP in 2022 survey - no change.
TE 28	Disused outlier sett.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
TE 58	Disused outlier sett.	Active subsidiary sett with one well used entrance and 11 partially used entrances.
TE 59	Disused outlier sett.	Detailed search did not identify this sett and it was therefore considered to no longer exist.
TE 83	Disused outlier sett.	Detailed search did not identify this sett and it was therefore considered to no longer exist.



TE 72	Partially used outlier sett.	Not surveyed by WSP in 2022 survey - no change.
TE 73	Partially used outlier sett.	Not surveyed by WSP in 2022 survey - no change.
TE 75	Active main sett.	Active subsidiary sett with one well used entrance and five partially used entrances.
TE 103 (L)	Partially used outlier sett.	Detailed search did not identify this sett and it was therefore considered to no longer exist
TE 104 (M)	Partially used outlier sett.	Not surveyed by WSP in 2022 survey - no change.
TE 105 (N)	Partially used subsidiary sett.	Not surveyed by WSP in 2022 survey - no change.
WSP 1	N/A.	Active outlier sett with three well used entrances.
WSP 2	N/A.	Active outlier sett with one partially used entrance.
WSP 3	N/A.	Active outlier sett with two well used entrances.
WSP 4	N/A.	Active main sett with six well used entrances.



WSP 5	N/A.	Active subsidiary sett with four well used entrances, two partially used entrances and two disused entrances.
WSP 6	N/A.	Active outlier sett with one partially used entrance and one disused entrance.
WSP 7	N/A.	Active outlier with one partially used entrance.
WSP 8	N/A.	Active outlier sett with one well used entrance.
WSP 9	N/A.	Active main sett with 20 well used entrances, three partially used entrances and three disused entrances.
WSP 10	N/A.	Active outlier sett with two partially used entrances.
WSP 11	N/A.	Active outlier sett with one partially used entrance.
WSP 12	N/A.	Active outlier sett with two partially used entrances and three disused entrances.
WSP 13	N/A.	Active outlier sett with one partially used entrance.
WSP 14	N/A.	Active outlier sett with one well used entrance.



WSP 15	N/A.	Active outlier sett with two partially used entrances.
WSP 16	N/A.	Active main sett with 16 well used entrances, seven partially used entrances and two disused entrances.
WSP 17	N/A.	Active subsidiary sett with three well used entrances.
WSP 18	N/A.	Active subsidiary sett with seven partially used entrances.
WSP 19	N/A.	Active subsidiary sett with four well used entrances and two disused entrances.
WSP 20	N/A.	Outlier sett with two well used entrances and one partially used entrance.

Annex 5.2.4

WSP



Annex 5.2.4 has been redacted due to containing confidential information.

DRAFT

Annex 5.2.5

WSP



Annex 5.2.5 has been redacted due to containing confidential information.

DRAFT



62-64 Hills Road
Cambridge
CB2 1LA

wsp.com

WSP UK Limited makes no warranties or guarantees, actual or implied, in relation to this report, or the ultimate commercial, technical, economic, or financial effect on the project to which it relates, and bears no responsibility or liability related to its use other than as set out in the contract under which it was supplied.