



Ashfield Land Management and Gazeley GLP Northampton s.à.r.l

Annex L: Badger Survey Report

Rail Central

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RSK GENERAL NOTES

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK.

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EXECUTIVE SUMMARY

1. This report presents the results of Badger (*Meles meles*) surveys carried out in 2017 in connection with a possible future rail development project on land south of Milton Malsor, Northamptonshire (Ordnance Survey Grid reference: SP 733 544) (the Main SRFI Site), at the Junction 15a Site, and Other Minor Junction Works.
2. A Preliminary Ecological Appraisal in March 2016 identified habitat suitable for badgers in various areas across the Main SRFI Site and Junction 15a site. Records indicate that badgers are present on or within 2km of the Potential Development Area (PDA).
3. A Badger walkover survey was carried out at the Main SRFI Site between 7 and 10 August 2017, during which occasional field signs were found. There is a sett located in land adjacent to the site but this could not be accessed during the survey.
4. A Badger walkover survey was carried out at the Junction 15a Site on 24 October 2017, during which occasional field signs were found. There were signs of digging in the road verge but this area was fenced off and could not be inspected fully.
5. Although no sett entrances were identified on either site during the walkover there is suitable commuting, foraging and sett-building habitat for this species, and there is evidence that they are present in the form of field signs including footprints, hair and droppings.
6. Badgers are a highly mobile species and readily move territories and build new setts. It is therefore recommended that at both the main SRFI site and the Junction 15a site are reassessed no more than six months prior to the commencement of any development or clearance within the PDA.
7. Any works involving vegetation clearance where thick vegetation may be obscuring a sett entrance should be carried out under a method statement with supervision by a suitably qualified ecologist. An ecologist should be consulted during the detailed design stage in order to ensure that the layout of the development (particularly any associated landscaping) is compliant with the requirements for badgers.

1 INTRODUCTION

Purpose of this Report

This annex presents the results of Badger (*Meles meles*) surveys carried out in connection with a possible future rail development project on land south of Milton Malsor, Northamptonshire (Ordnance Survey Grid reference: SP 733 544)(*Figure N1.1*), in conjunction with improvement works at Junction 15a (*Figure N1.2*). RSK carried out the surveys at the Main SRFI Site during August 2017 and at Junction 15a in October 2017.

During the Preliminary Ecological Appraisal (PEA) suitable habitat was identified, comprising agricultural land, rough grass margins and areas of woodland and scrub in various locations across both sites, as illustrated in *Figures N2.1* and *N2.2*. Surveys of areas suitable for badgers were required, first to determine whether the proposals could affect badgers, and second to inform a mitigation strategy to reduce any potential impacts to non-significant levels.

Structure of this Report

The remainder of the report is structured as follows:

- *Section 2* describes the survey methods;
- *Sections 3,4* and *5* summarises the results;
- *Section 6* details the evaluations and conclusions; and
- *Section 7* lists the documents referenced in this report

Appendix A provides the relevant legislation; and

Appendix B provides the figures

2 METHODS

Background Data Search

A search was made for reference materials relating to the presence of badgers, on and within 2 km of the PDA. The results of which are presented in *Appendix 16, Annex A*.

Habitat Assessment

The PDA and its immediate surroundings were assessed to identify Badger activity, including commuting, foraging and sett-building signs within 30 m of all areas potentially affected by works (where access was possible). The area was systematically searched for field signs of Badgers that may indicate their presence nearby, including setts, tracks, footprints, hair on barbed wire fences, feeding signs and dung pits.

Badgers can occupy a range of habitats, including woodland, pasture, arable fields and suburban gardens, as well as disused ground and embankments along railway lines and water courses.

Sett Terminology

Individual holes or setts are described using terminology defined by Harris *et al* (1984 and 1989) as set out below.

- *Well-used Holes* - These are clear of any debris and vegetation, are obviously in regular use, and may or may not have been excavated recently.
- *Partially-used Holes* - These are not in regular use and have debris such as leaves or twigs in the entrance, or have moss or other plants growing in or around the entrance. Partially-used holes could be in regular use after a minimal amount of clearance.
- *Disused Holes* - These have not been in use for some time, are partially or completely blocked, and cannot be used without a considerable amount of clearance. If the hole has been disused for some time, all that may be visible is a depression in the ground where the hole used to be, and the remains of a spoil heap, which may be covered in moss or other plants.
- *Currently-used Setts* - Any sett entrance that is well-used or partially-used can fall within the category of current use as interpreted by English Nature (1995 & 2002).

- *Disused Setts* - If all the entrances of a sett are disused, then even though it was originally dug by a Badger, it is no longer a Badger sett as defined under *The Badger Act 1992*.
- *Cohabitation* - Both Fox and Rabbit are sometimes known to occupy Badger setts at the same time as Badgers are resident. The presence of Fox hair and Rabbit signs at a sett complex does not necessarily indicate that the sett is being used exclusively by these animals. These findings should be considered in conjunction with other findings or observations in and around the sett.
- *Main Sett* - A Badger sett forming the main abode of a group of Badgers. Main setts are occupied continually throughout the year, and are generally used by at least one sow to rear young. In a national survey of setts, the average number of holes for a main sett was 12, although there may be any number of holes from one to more than 40.
- *Annexe Sett* - Setts situated in the immediate vicinity of a main sett. Although such setts are often occupied throughout the year, they will generally only be used for breeding when the main sett is used by another breeding sow. These setts can have any number of holes although it is usually around eight. The distinguishing feature of these setts is an obvious, well-used path running to the main sett.
- *Subsidiary Sett* - Setts situated away from the main sett that may represent an area of particularly good foraging. Such setts are used occasionally throughout the year and occasionally for breeding, but are more likely to be used only to exploit a seasonal food source. These setts usually have around four holes.
- *Outlying Sett* - These setts are away from the main sett. They have a small number of holes, often only one or two. Such setts are rarely in continuous occupation and are most often used either to exploit a seasonal food source or as a refuge when visiting certain parts of the territory.

Survey Constraints

Badger surveys can be undertaken at any time of year however, territorial signs, such as dung pits/latrines, are at their highest during the period February to April, which coincides with when vegetation is at its lowest and therefore easier to find. It is possible that by undertaking the survey in October and December that visible activity by Badgers

may be less than at other times of the year. A couple of locations could not be inspected fully due to dense vegetation or a lack of access.

Despite these constraints it is considered that the survey undertaken was suitable for assessing general Badger activity within the site and its immediate surroundings.

Validity of Data

Badgers regularly change location and establish new setts, therefore this data is only valid for a period of 12 months. The site should be surveyed again no more than six months prior to construction in order that the appropriate mitigation can be developed.

3 RESULTS – MAIN SRFI SITE

Background Data Search

No records of Badgers were returned from the data search.

Habitat Assessment

Scrub, woodland, arable farmland, field margins and areas of rough grassland provide suitable commuting, foraging and sett-building environments for Badgers. These habitats were identified in several areas of the site, as shown in *Figure L2.1*.

Evidence of Badgers

Occasional field signs of badgers were identified in several locations across the site, including of tracks, footprints, and latrines. In several field margins and embankments there was evidence of digging but this was attributed to rabbits rather than badgers. Disused or collapsed setts were identified in two locations in the south of the site. One active sett consisting of one well-used and two partially-used entrances was noted outside of the potential development area to the south of the site. Field signs are concentrated in the south-east corner of the site, with some signs also present along the eastern boundary along the railway. Some small areas could not be fully inspected fully due to dense vegetation or a lack of access.

4 RESULTS – JUNCTION 15A SITE

Background Data Search

Records of Badger within 2 km of the Junction 15 a site were returned from the data search (*Table N1*).

Table N1: Badger Records within 5 km of the Main SRFI Site Boundary

Latin Name	Common Name	Designation	Within 100m	Within 2km
<i>Meles meles</i>	Badger	BA		<input checked="" type="checkbox"/>

Habitat Assessment

Scrub, woodland, arable farmland, field margins and areas of rough grassland provide suitable commuting, foraging and sett-building environments for Badgers. These habitats were identified in several areas of the site, as shown in *Figure L2.2*.

Evidence of Badgers

A single latrine was identified along a field boundary and some digging was visible through the highway fence east of the A43, but this area could not be accessed to inspect it. In the southeast of the site two disused setts were recorded; one of which a three-hole sett and the other a two-hole sett.

5 RESULTS – OTHER MINOR HIGHWAY WORKS

Works are restricted to the highway and immediate verges and therefore it is considered unlikely that Badgers will be impacted. Pre-constriction walkover surveys will be undertaken to ensure that there are no setts within or adjacent to the works.

6 EVALUATION AND CONCLUSIONS

Badgers

There are occasional field signs, including disused sett entrances, across both the Main SRFI site and the Junction 15a site. One active sett was noted in a strip of woodland just off the site, but this could not be accessed to fully assess it for levels of badger activity. It is evident that both areas are used regularly by Badgers for commuting and foraging and both sites offer opportunities for these activities. There are several areas suitable for sett-building and despite no active setts confirmed during the survey it is extremely possible that new ones could be constructed prior to development commencing. Some areas in the south of the Main SRFI site could not be surveyed effectively due to dense vegetation and these areas would benefit from being resurveyed during winter months when vegetation has died back.

Badgers are a mobile species and can readily create new setts, therefore the site will need to be resurveyed no more than six months prior to the commencement of development including site clearance works.

Loss of habitat suitable for foraging and commuting will be compensated for in mitigation plans.

7 REFERENCES

English Nature (now Natural England; 2002), Badgers and development.

Harris S., Creswell P. and Jefferies D.J. (1989). Surveying badgers. Mammal Society, London.

Natural England (2009). Badgers and Development: A Guide to Best Practice and Licensing.

Roper, T (2010). Badger. New Naturalist.

APPENDIX A: RELEVANT LEGISLATION

Badgers

Meles meles (Badger) is protected in Britain under the *Protection of Badgers Act 1992* and *Schedule 6 of the Wildlife and Countryside Act 1981* (as amended).

The legislation affords protection to Badgers and Badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or to attempt to do so;
- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

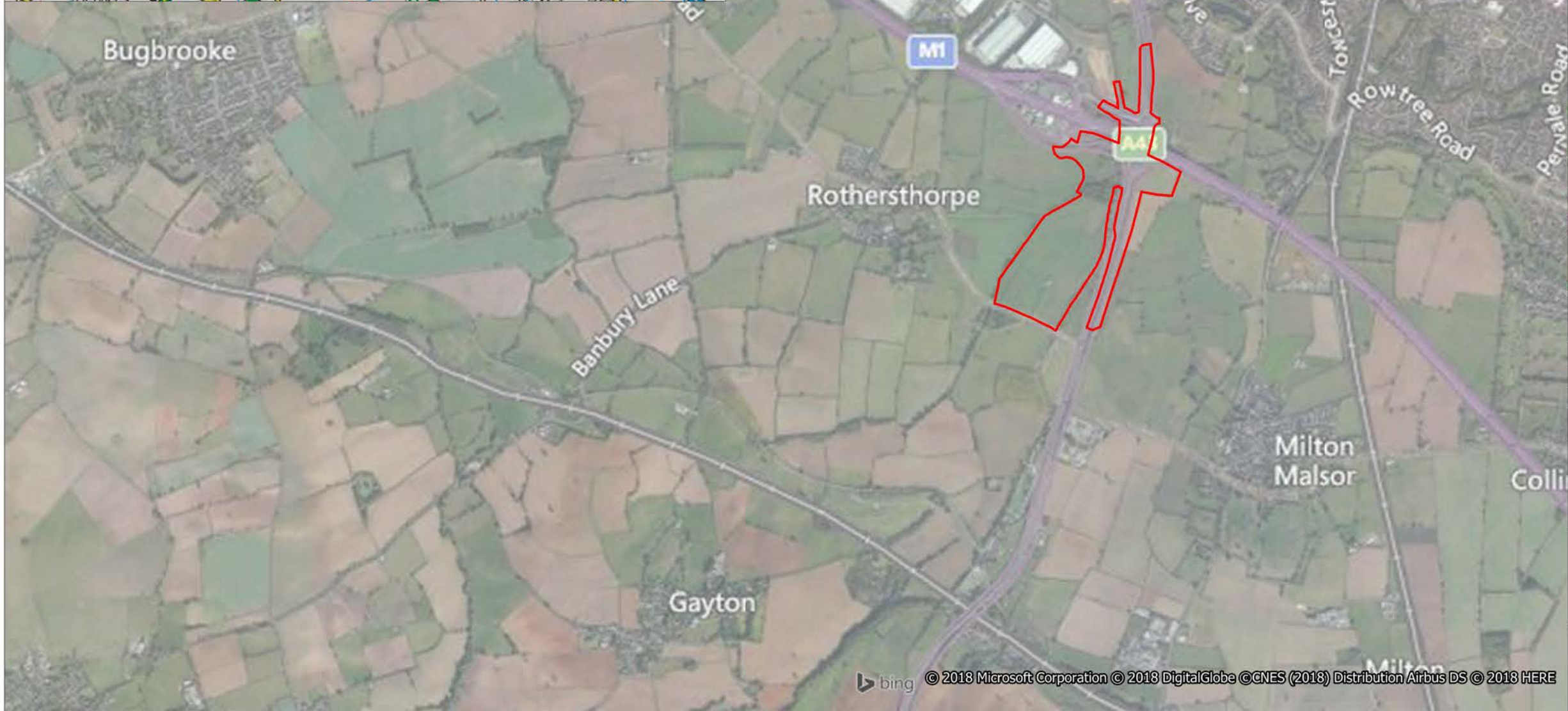
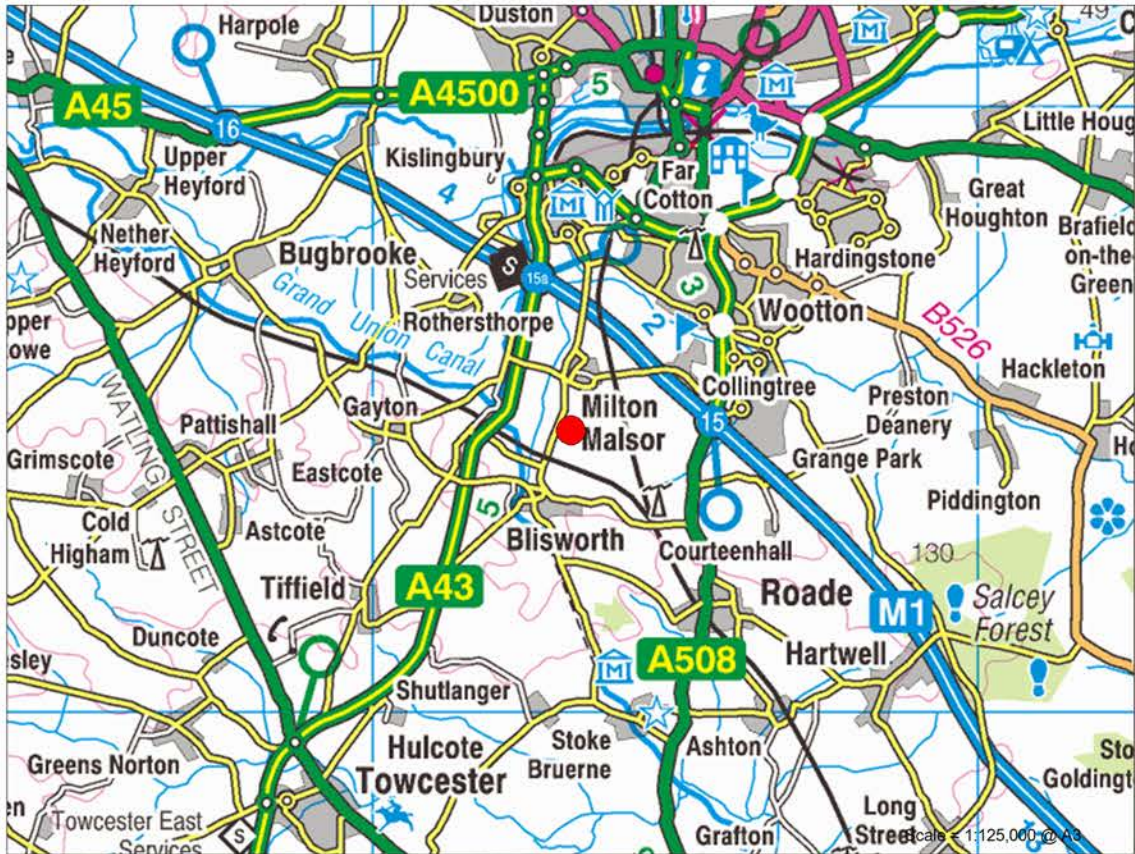
APPENDIX B: FIGURES

Figure L1.1 – Main SRFI Site Location Plan

Figure L1.2 – Junction 15a Site Location Plan

Figure F2.1 – Badger Walkover Survey Results

Figure F2.2 – Badger Walkover Survey Results



Site boundary (Jan 2018)

00	29.01.18	855950	SP	RG	RE
Rev	Date	Description	Drn	Chk	App

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Figure N1.2

Junction 15a

Site Location Plan

0

750

Metres

Scale = 1:25,000 @ A3

N

E

S

W

REV 00



Site boundary (July 2017)

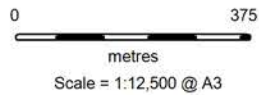


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Rev	Date	Description	Drn	Chk	App

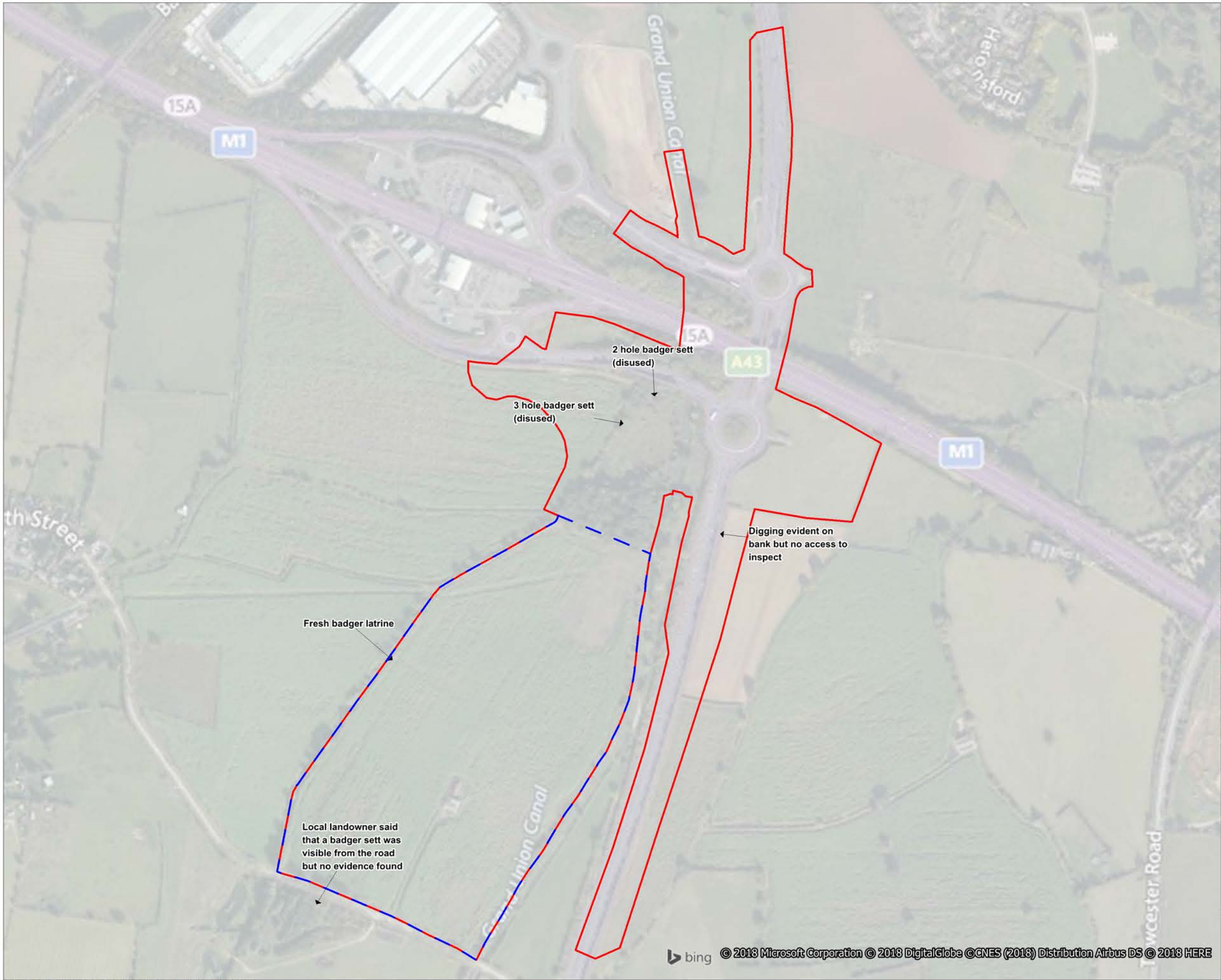
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Figure N2.1
Badger Walkover Survey Results



REV 00



- Site boundary (Jan 2018)
- Ecological mitigation area

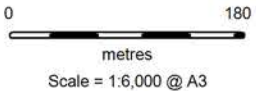


Rev	Date	Description	Drn	Chk	App
00	29.01.18	855950	SP	RG	RE

Rail Central



Figure N2.2
Badger Walkover Survey Results



REV 00