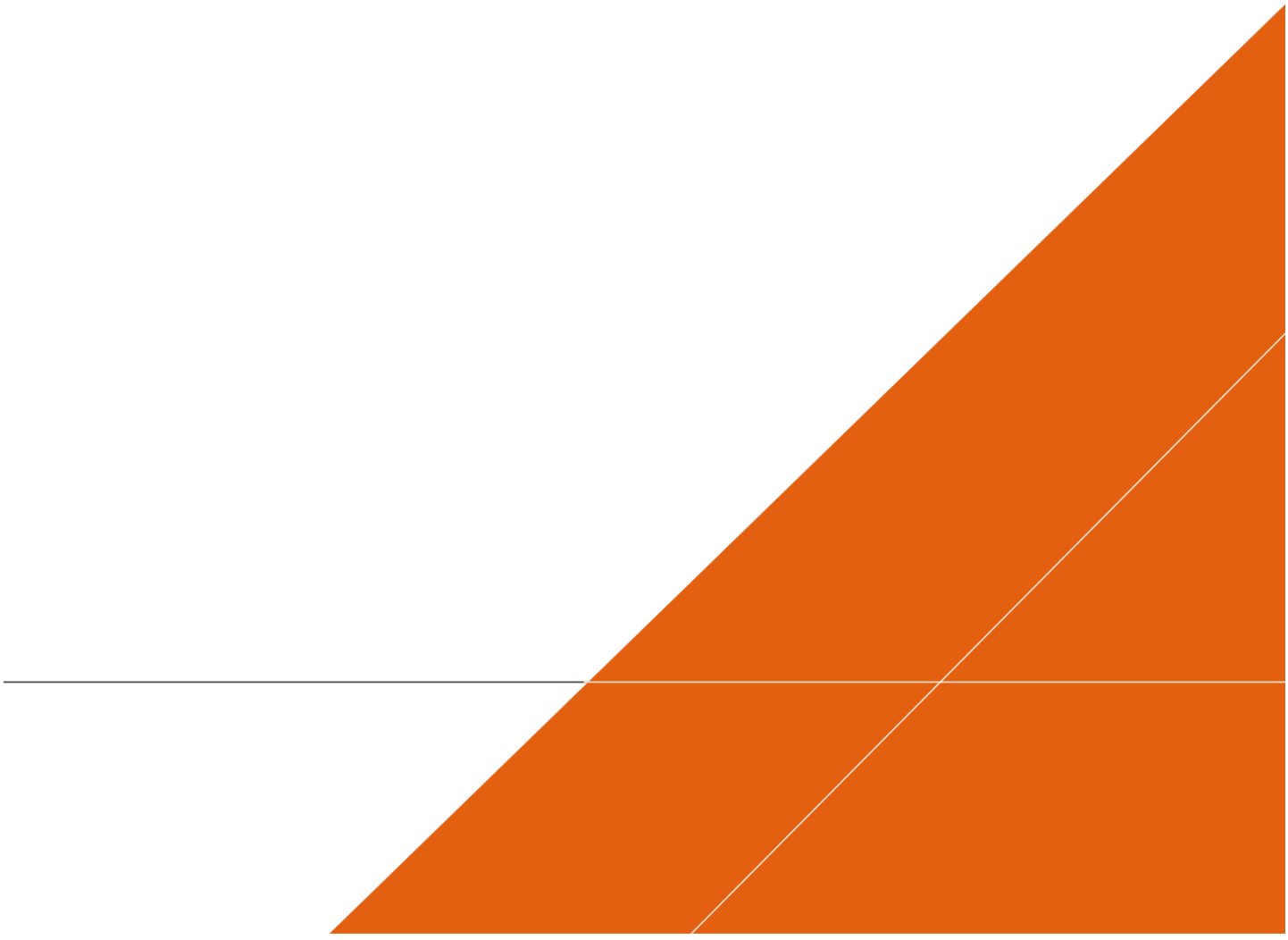
OTTERPOOL PARK

Environmental Statement Appendix: 7.7 Confidential Badger Survey Report – Update to Include 2020 Survey Data

MARCH 2022



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Executive summary

Arcadis Consulting (UK) Limited has been commissioned on behalf of Otterpool Park LLP to undertake surveys for badger (*Meles meles*) to inform an Environmental Impact Assessment (EIA) for the proposed Development and accompany an amended outline planning application. The proposed Development is 'Otterpool Park', a Garden settlement located within Folkestone, Kent. The proposed Development area has been identified as an 'area of search'; hereafter, the area of search is referred to as "the site".

The site is located within Folkestone, Kent within the administrative boundary of Folkestone and Hythe District Council (F&HDC) and spans a large area located immediately south of Junction 11 of the M20. The site is largely agricultural in nature with the majority of the site comprising arable and pasture fields, a disused horseracing course with an artificial lake ('Folkestone Racecourse Lake'), areas modified from historical use (airfields), existing historic settlements and relatively new industrial areas. The site area of the proposed Otterpool Park Area Development is approximately 589 ha.

The development proposals are to be submitted in outline as an amendment for a new garden settlement of up to 8,500 dwellings and other uses including commercial, retail, education, health, community and leisure facilities, parking, landscaping, and public open space.

In order to fulfil the requirements of the survey, a comprehensive badger survey was undertaken. Due to access restrictions on the site, it was not possible to complete the badger survey during a single survey period, therefore data was collected on a number of occasions throughout 2016, 2017, 2018 and 2020.

Badger data was primarily collected during extended Phase 1 habitat surveys in October 2016 by Arcadis ecologists Guy Stone MCIEEM (Associate Technical Director) and Brandon Murray MCIEEM (Associate Technical Director). Targeted badger surveys were then undertaken in March 2017 by Brandon Murray, Aline Brodzinski MCIEEM (Senior Ecologist) and Ewan Gibson ACIEEM (Ecologist).

To update the validity of the surveys, targeted badger surveys were performed in May and June 2020 by Brandon Murray, Rory Roche ACIEEM (Ecologist) and Liam Price ACIEEM (Ecologist) to assess the current locations and status of badger setts and to note signs of badger activity.

In surveys undertaken in 2016-2018, 103 badger setts were recorded within the survey area in addition to multiple latrines, hairs, pathways and mammal runs. Of the 103 setts, 18 were classified as Active Main setts with the number of entrances ranging from 10 – 35. Eight setts were classified as Annexe, and eight Subsidiary setts were identified. Of the remaining 69 setts, 67 were classified as outlier setts. These consisted of 37 Active setts, 27 Partially used setts and 3 Disused setts. The other two setts were not fully classified due to access limitations. The setts were widely distributed across the survey area, however they were largely associated with woodland, hedgerows or embankments.

In surveys undertaken in 2020, an additional 23 setts were identified. However, the majority of these (18 of the 23 additional setts identified) are outlier setts, and do not impact the overall assessment of badgers on the site. The additional main and annexe setts (three additional setts of each type) that were identified in 2020 are all located in areas where setts have previously been recorded, for example in Park Wood, Harringe Brooks Wood, along the north of the site (on the railway embankment) or along hedgerows with exiting badger evidence. As such, the 2020 survey updates suggest that the site is largely as assessed in the 2016 - 2018 surveys, the site being of notable value for badgers, with key areas possible to identify across the site.

The 2020 surveys concluded that:

- No further badger surveys are required to inform a 2021 amendment of the ES; and
- The valuations utilised in the 2018 submission are considered to be valid, with only minor and documented changes in the usage of the site by badgers.

Impacts to badger would be minimised through avoidance of setts within the design. Early in the masterplanning design process, main setts were identified and Green Infrastructure and habitat corridors were positioned to retain the majority of these setts and create a buffer around the retained setts.

Of the 18 main setts identified, initial impact assessments suggest that only two of these setts will likely require closure to facilitate the proposed Development (although this number may change as design details are finalised). This will need to be confirmed as the detailed design of each parcel is finalised.

In addition, embedded design measures within the design will ensure that badgers can continue to utilise the site, for commuting and foraging. Habitat corridors are to be created across the site, where possible, these corridors will follow the main pathways of badger identified within the surveys. A green grid has been incorporated into the designs to permit wildlife, including badger to move through and beyond the site.

In addition, tunnels will be positioned throughout the site, in locations where confirmed badger commuting routes are to be bisected by roads and other linear infrastructure.

Green infrastructure within the proposed Development will be designed to maximise foraging opportunities within the site for badger. This will be through the creation of a range of habitats, including rough grassland, managed grassland, traditional orchards, Sustainable drainage systems (SuDS) including swales and woodland and tree planting. Overall impacts to foraging habitat availability will be quantified within the Environmental Statement (ES), taking into account access to off-site foraging areas by badger.

In addition to the design mitigation measures, a range of mitigation measures would be implemented within the construction and operation phases of the development, including offsetting and working methodologies etc. to safeguard badgers. It is also likely that some of the badger setts will need to be closed / disturbed to facilitate the development. The requirement to close a given sett will be outlined as the design details of each parcel are developed. The impacts to badger will be fully quantified and assessed within the relevant section of the ES.

The surveys conducted are considered sufficient to fulfil the purpose and rationale of the ES and outline planning application. However, considering the extended timescales for buildout of the project and phased approach to planning, it is foreseen that further surveys and input will be required to inform mitigation proposals.

1 Introduction

1.1 Overview

1.1.1 Arcadis Consulting (UK) Limited has been commissioned on behalf of Otterpool Park LLP to undertake surveys for badger (Meles meles) to inform an EIA for the proposed Development and accompany an outline planning application. The proposed development is 'Otterpool Park', a garden settlement located within Folkestone, Kent. The development area has been identified as an 'area of search'; hereafter, the area of search is referred to as "the site". This report presents the results of badger surveys conducted in 2016, 2017, 2018 and 2020.

1.2 Site Location and Setting

1.2.1 The site is located within Folkestone, Kent within the administrative boundary of Folkestone and Hythe District Council (F&HDC) and spans a large area located immediately south of Junction 11 of the M20. The site as referred to in this report is largely agricultural in nature with the majority of the site comprising arable and pasture fields, a disused horseracing course with an artificial lake ('Folkestone Racecourse Lake'), areas modified from historical use (airfields), existing historic settlements and relatively new industrial areas.

1.2.2 The M20 motorway, Channel Tunnel Rail Link and Westenhanger Station are located to the north of the site, beyond which lie the villages of Stanford and Postling within a largely rural setting including the Kent Downs Area of Outstanding Natural Beauty (AONB). This AONB extends to the east, beyond which lies the town of Hythe, and to the south where it includes Lympne village. The site also includes the settlements of Barrowhill, Sellindge, Westenhanger and Newingreen. Lympne Industrial Park and some areas of woodland are located immediately south of the site. In addition, East Stour River flows through the site in a north-east to west direction. The site is centred on BNG TR 111 363.

1.2.3 An aerial image illustrating the site surveyed is presented in Image 1. Photographs of the site can be found in Appendix A – Target Notes.

Image 1 Aerial imagery of the site

1.3 Proposed Development

1.3.1 The proposed Otterpool Park Area Development is located on 589ha of land within the wider study area as shown in Figure 1. The planning application seeks permission for a new garden settlement accommodating up to 8,500 homes (Use Classes C2 and C3) and Use Class E, F, B2, C1, Sui Generis development, including use of retained buildings as identified, with related infrastructure, highway works, green and blue infrastructure, with access, appearance, landscaping, layout and scale matters to be reserved. A summary of the maximum floorspace areas for each land use type is provided in Chapter 4: The Site and the Proposed Development of the Environmental Statement (ES).

1.4 Badger Biology

1.4.1 The badger population in England and Wales is estimated to be around 485,000 (Judge et al., 2017) which is a marked increase in population numbers since the 1980's.

1.4.2 The population density of badgers is limited by the environment in which they live. The pastures, meadows, hedgerows and woodlands of England and Wales create rich habitat with abundant food and shelter. One of the strongholds for the species is the south of England where many badger populations may have reached the natural carrying capacity, but in other areas, badgers are at much lower densities.

1.4.3 Badgers in the UK do not have any natural predators, though elsewhere in Europe cubs may be taken by mammals such as bears and wolves. The main 'predator' for the badger in the UK is currently the car, with an estimated 50,000 badger killed on our roads every year (Sleeman et al., 2012).

1.4.4 Badgers normally live in social groups. Social group size can vary considerably but typically averages five animals per group (Neal and Cheeseman, 1996). Badgers live in complexes of underground tunnels and chambers called setts, which are excavated in a variety of locations including woodlands, hedge banks, drainage ditches, quarries, railway embankments or other suitable locations with well-drained soil that is suitable for digging.

1.4.5 Badgers are nocturnal and their diet is principally composed of earthworms (which account for approximately 75% of their food intake) which are caught on pasture or in woodland, particularly on wet nights. Badgers require a steady supply of food throughout the year so when conditions are unsuitable for catching worms, other food sources such as fruit, bulbs, cereals, root crops, insects, rabbits, amphibians and small mammals become more important.

1.4.6 Badger territories are centred around a main sett but there may also be several auxiliary setts within the badger's territory (the different types of sett are described in section 2.2) which are used at varying times of the year. Territory sizes vary from as little as 15ha to over 300ha, depending on the quality of the habitat, the average size in rural Kent given the habitat is likely to be around 50ha (Kruuk, 1989). Territory size is often dependent upon the availability of suitable foraging habitat and the proximity of other neighbouring badger social groups. Larger territories are found where badger groups are widely spread, and this is often concomitant with widely spread or sub-optimal foraging patches. Territorial boundaries of social groups are typically marked by dung pits or latrines. These boundaries are regularly patrolled and actively defended from trespassing badger.

1.4.7 Mating can take place at any time of year however the main peak period is during the spring. Normally only the dominant female in a social group breeds each year. Litters of two to three cubs are born in February or March, regardless of the time of mating. This is due to delayed implantation which ensures that cubs are born at the most appropriate time of year for optimal survival. Cubs are able to forage independently after approximately 15 weeks.

1.5 Legislation and Conservation Status

1.5.1 Badgers are legally protected from intentional cruelty, such as badger-baiting and from the results of lawful human activities, such as housing, road or other developments, under the Protection of Badgers Act (PBA) 1992.

1.5.2 Badgers are afforded full protection from wilful or attempted killing, injuring and interference with the badger's sett. The PBA 1992 defines a badger sett as: 'any structure or place which displays signs indicating current use by a badger'. Badgers are also given protection from killing or taking by certain means under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended).

1.5.3 Legal activities, subject to compliance with conditions in the PBA 1992, include habitat loss through road and housing developments, forestry and agricultural operations.

1.5.4 Given the common and widespread distribution of badger populations within the UK, badgers are not listed as a priority species in the UK Biodiversity Action Plan (BAP) now species "of principal importance for the purpose of conserving biodiversity" covered under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006. In recent years it appears that badger populations in England are growing at a rate of approximately 2.5% a year (Judge et al 2013).

2 Methodology

2.1 Desk Study

2.1.1 The purpose of the desk study was to review existing information to inform the survey and subsequent impact assessment. In March 2018 information was requested from the local records centre (Kent and Medway Biological Records Centre (KMBRC) for badger within a 2km radius of the site boundary as recommended in the Chartered Institute of Environmental Assessment's 'Guidelines for Baseline Ecological Assessment' (1997) and CIEEM's Guidelines for Preliminary Ecological Appraisal 2nd Edition (2017). An updated information request for records of badger was obtained from KMBRC in April 2020.

2.1.2 Desk study information was also collected from a number of sources, including ecological appraisals from previous planning applications on site. Sources of data utilised included:

- Data from KMBRC, obtained in March 2018 and in April 2020;
- Aerial photography (e.g. google mapping);
- WYG (2016) Shepway District Council, Folkestone Kent, Extended Phase 1 Habitat Survey Ecology Report;
- Highways England (2016) M20 Lorry Area Stanford West Interim Environmental Assessment Report;
- Ecotricity (2012) Harringe Brooks Wind Park Environmental Statement;
- Peter Brett Associates LLP (2015) Link Park Phase 2 Supplementary Environmental Statement Non- Technical Summary;
- CSA Environmental Planning (2013) Ecological Appraisal – Lympne, Former Lympne Airfield – Proposed Housing Development;
- Waterman Energy, Environment & Design Limited (2010) Ecological Appraisal, Folkestone Racecourse, Kent;
- Ecology Solutions Ltd (2014) Ecological Assessment, Land at Sellindge, Kent; and
- NBN Atlas https://nbn.org.uk/.

2.1.3 The results of the desk study are discussed and presented in Section 3 and Figure 1 respectively.

2.2 Field Survey

Survey rationale and purpose

2.2.1 The purpose of the badger surveys were to:

- identify the location and distribution of badger setts around the site to inform the masterplan design and the impact and mitigation assessment for the proposed development, avoiding impacts where practicable;
- identify the use of the site by badger to inform Green Infrastructure design of the proposed development to provide foraging areas and commuting corridors for badger;
- provide information sufficient for impacts to badgers to be quantified within the ES; and
- detail the status of setts on the site to inform requirements for future surveys, studies and licensing.

2.2.2 Badger surveys can be carried out at any time of year, however outside of the late spring and summer months are more optimum when vegetation has died back providing better opportunities to observe and record field signs.

2.2.3 The survey area (presented in Figure 1) covered all potentially suitable habitat within the site, with exception of land where access was not permitted or practicable (see section 2.3 on limitations). The area assessed is herein referred to as the survey area. Where areas were not

separated from the site by barriers such as roads, a minimum 30m area from the site boundary was surveyed, if possible. Where badger signs suggested that badger activity within the site was associated with an off-site sett, and access was permitted, the adjoining area was also surveyed.

2.2.4 Areas including residential conurbations (such as Lympne Village, residential properties along the A20 and Barrow Hill, Sellindge) were not surveyed (unless otherwise stated) as these largely supported sub optimal habitat and / or were not accessible to survey.

Surveys were undertaken by looking for field signs and setts. Evidence of badger activity is usually detected by the following signs:

- presence of holes with evidence of badgers such as footprints, discarded hair etc.;
- presence of dung pits or latrines;
- presence of well used runs with subsidiary evidence of badger activity; and
- presence of other indications of badger activity, such as signs of foraging and footprints and evidence of where badgers have traversed under a fence ('push-under').

Badger surveys 2016-2018

2.2.5 Due to access restrictions within the site, it was not possible to complete the badger surveys during a single survey period, therefore data were collected on several occasions throughout 2016, 2017 and 2018. Data was collected via targeted surveys and via incidental reporting during other targeted surveys.

2.2.6 Badger data was collected during targeted surveys on the following dates:

- by Arcadis ecologists Guy Stone (Associate Technical Director, MCIEEM) and Brandon Murray (Associate Technical Director, MCIEEM) combined with Phase 1 habitat surveys conducted on 4, 5 and 6 October 2016;
- by Arcadis ecologists Aline Brodzinski (Senior Ecologist, MCIEEM) and Ewan Gibson (Ecologist, ACIEEM) on 15 and 16 March 2017 and by Brandon Murray, Ewan Gibson and Aline Brodzinski on 20 – 24 March 2017.
- Combined with Phase 1 habitat surveys as access to additional areas of the site were obtained and as part of site supervision for Archaeology and Ground Investigation (GI). Table 1 below provides the dates where additional areas of the site were accessed and badgers were surveyed for.
- In addition, any badger setts or signs observed during other surveys on the site were noted throughout 2017 and 2018, and data was updated throughout this period.

Table 1: Dates of additional surveys where incidental badger data was collected / updated (2016-2018).

Date	Surveyor(s)	Areas Accessed
25/10/2016	Brandon Murray and Martina Girvan	Lympne Airfield Land and land north of Lympne and targeted surveys on other areas of the site
04/08/2017	Brandon Murray, Alex Ward	Properties along the south of the A20 (The Willows, north of the A20 (White House) Cob Tree Cottage) and Upper Otterpool
14/08/2017	Hannah Tracey	Lorry Park south of the A20
03/05/2018	Brandon Murray	Hillhurst Farm and surrounds
11/05/2018	Brandon Murray and Katy Smart	Field west of Stone Street

Date	Surveyor(s)	Areas Accessed
31/05/2017	Brandon Murray and Ewan Gibson	Pack and Holiday Extras land
14/06/2016	Brandon Murray and Rebecca Beale	"Willows" and surrounds south of the A20 'Whiteways' and 'Boleh' north of the A20
15/06/2018	Brandon Murray and Rebecca Beale	Rose Cottage north of the A20
21/06/2018	Brandon Murray	Little Greys Cottage and surrounds
28/06/2018	Brandon Murray and Katy Smart	Arable field adjacent to Cob Tree Cottage 'Killymoon' north of the A20
12-13/06/2018	Brandon Murray and Martina Girvan	Detailed botanical assessment of grassland areas of the site

Badger surveys 2020

2.2.7 To update the validity of the surveys undertaken between 2016-2018, targeted badger surveys were undertaken in May and June 2020. Due to access restrictions on the site, it was not possible to survey the entire site or to complete the badger survey during a single survey therefore data were collected on several occasions.

2.2.8 Badger data was collected during targeted surveys on the following dates:

- by Arcadis ecologist Rory Roche on 6 May 2020;
- by Arcadis ecologists Brandon Murray MCIEEM and Liam Price ACIEEM (Ecologist) on 7-15 May 2020; and
- by Arcadis ecologist Brandon Murray MCIEEM on 16 June 2020.

2.2.9 In addition, throughout 2020 and 2021 (including during bat surveys, bird surveys and dormouse surveys), any badger setts or signs were recorded.

2.2.10 As outlined in the limitations section below, some areas of the site and setts could not be accessed in 2020. Where this was the case, a precautionary assessment that these setts are as they previously recorded was made (i.e. the 2016 / 2018 assessment was carried over) was made, and this is utilised to inform the population assessment.

Sett classification

2.2.11 The following sett classification system, following Neal and Cheeseman (1996) was utilised during the badger survey within the site.

- Main – Several Holes with large spoil heaps and obvious paths emanating from and between sett entrances;
- Annexe – Normally less than 150m from main sett, comprising several holes. May not be in use all the time, even if main sett is very active;
- Subsidiary – Usually at least 50m from main sett with no obvious paths connecting to other setts; and
- Outlier – Little spoil outside holes. No obvious paths connecting to other sets and only used sporadically. Sometimes used by foxes and rabbits.

2.2.12 Subsequent grading depending on activity levels followed (Harris et al., 1989).

- Active – Sett or hole displaying evidence of recent active use. This may include fresh bedding in the entrance or around the sett, fresh earth around the sett, footprints, trails linking fresh latrines, the presence of hairs etc;

- Partially-used – A potentially active sett that may have been used within the past 12 months. A partially used sett would tend to display relatively recent earth mounds around the entrance, but these may show some plant colonisation. Such diggings often have untidy entrances with accumulation of windblown litter and so not have fresh footprints close by.
- Disused – Disused sett with no evidence of current or recent usage.

2.2.13 For both sett classification and activity, if the survey assessment was inconclusive, a precautionary approach whereby the greatest possible level of activity and / or most important sett classification was utilised, to ensure that impact assessment fully covered potential impacts to badgers.

2.3 Survey Limitations

2.3.1 Access was limited to some areas of the site which were predominantly within residential or industrial use. Areas in the vicinity of the site boundary, such as Harringe Brooks Woods were difficult to survey due to the density of the vegetation.

2.3.2 Badger searches could not be completed along the rail corridor alongside the northern site boundary as these areas were behind railway fencing and accessing these areas would be disproportionate to the scope of the assessment. Evidence of badger activity within these areas (such as 'push-unders' through the railway fence) and when setts were visible within railway owned land were recorded.

2.3.3 There is also the possibility that considering the size of the site, density of vegetation in some areas (within woodlands, along the river corridors and within dense hedgerows) setts may have been missed during the surveys, however this was minimised through the number of visits to the site conducted between 2016 and 2018.

2.3.4 Areas where surveys were not conducted are presented in Figure 1.

2.3.5 Data collected from the surveys are deemed sufficient to inform the outline masterplan in terms of impact assessment and mitigation incorporated into the design, construction and operational phases of the proposed development.

2.3.6 It should be noted that badgers are a highly mobile species and setts are used to varying extents at varying times of the year. In addition, new setts can be rapidly created by badgers, forming additional setts within the wider landscape.

2.3.7 Due to the outbreak of the COVID-19 virus in 2020, survey scope was greatly impacted and had to be altered to what was safe and practical to achieve. As such, the 2020 surveys endeavoured to collect the information intrinsic to ensuring the submission is founded on robust survey data, whilst acknowledging that the surveys needed to be proportionate in light of the additional risks to Arcadis employees and members of the public. As a result, the following changes were made to the scopes:

- for the update surveys, access was not requested to parcels of land where members of the public were likely to be at increased risk of coming into contact with Arcadis employees;
- access to private homes and businesses (excluding farms) was not requested, both to reduce the exposure risk and to avoid potential for negative reactions to interaction with Arcadis staff;
- where it was felt that the revised three-tiered approach for a reduced presence on site, without impacting upon the needs of the submission, this approach was adopted to reduce risk associated with surveyor travel.

2.3.8 The surveys in 2020 were conducted outside of the optimal survey period for badgers (due to timing of access arrangements), however considering the extensive surveys conducted on the site, this is not considered a constraint to the veracity of the results. Where setts could not be accessed in 2020, a precautionary assessment that these setts are as they previously recorded was made (i.e. the 2016 / 2018 assessment was carried over). This is a robust methodology,

which although it risks over assessing the badger population, is in line with the EIA precautionary principles and allows a robust assessment to be made.

3 Results

3.1 Desk Study

3.1.1 Information was received from the organisations and documents listed in section 2.1 and is summarised in Table 2.

Table 2: Desk study data summary

Organisation	Data Received
Kent and Medway Biological Records Centre (obtained March 2018, updated April 2020)	Within 2km of the site, 69 records of badgers were returned. Of these, the following were from the last 10 years: Badger recorded on the 17/08/2011 at OS grid reference TR087354; Badger recorded on the 24/10/2012 at OS grid reference TR091350 (pasture and woods below Court at Street); Badger recorded on the 24/10/2012 at OS grid reference TR0961535044 (Court at Street); Badger recorded in 2012 at OS grid reference TR097350 (Queen's Court); Badger recorded on the 17/02/2010 at OS grid reference TR1129336525 (Sellindge). Badger recorded on the 17/05/2012 at OS grid reference TR115360 (Lympne). Badger recorded on the 04/05/2013 at OS grid reference TR130356 (woods at Bilsington, western section). Badger recorded in 2008 at OS grid reference TR153364 (Saltwood). Badger recorded on the 20/07/2013 at OS grid reference TR1535 (Saltwood Village). Badger recorded on the 02/02/2014 at OS grid reference TR1537 (Thorn Wood). Badger recorded on the 05/06/2017 at OS grid reference TR1095936815 (Barrow Hill, Seliindge). Badger recorded on the 19/11/2015 at OS grid reference TR112365 (Barrow Hill, Seliindge). The updated information request in April 2020 did not return any additional badger records within 2km of the site.
CSA Environmental Planning	Walkover survey, October 2008, former Lympne Airfield Site - a subsidiary sett was located over 0.7km north of the site and main sett located within a wooded area 0.8km north of the airfield. Badger survey 17/12/2012, former Lympne Airfield Site – Less than 5m south of the former bunker walls a five hole sett was recorded. A 2 hole sett was also recorded at the base of a landscape bund in the west of the Lympne Airfield site.
SLR Consulting	Walkover survey 12/2007, Otterpool Quarry, Sellindge - During the site survey a seven entranced sett was recorded in the south east corner of the site.
Waterman Energy, Environment and Design Ltd	Ecological Appraisal September 2010, multiple setts recorded on site within the Folkestone Racecourse area of the site. Multiple setts entrances around TR 11396 37384; A set entrance at TR 11396 37384; A set entrance at TR 11758 36991; A set entrance at TR 11814 37092; A set entrance at TR 12394 37332.

3.1.2 Overall, the data study confirmed that badger were widely distributed within the site and within the surrounding area. The desk study data was also used to guide the field surveys in locations where setts had been previously recorded.

3.2 Field Survey

Badger surveys 2016-2018

3.2.1 The results of the badger survey are summarised in Table 3. Target Notes (TN) detailing the setts and field signs recorded during the surveys have been tabulated and are presented in Appendix A. Mapping of the setts and field signs recorded are presented in Figure 2, Figure 3 and Figure 4.

3.2.2 Across the survey area, 103 badger setts were recorded in addition to multiple latrines, hairs, pathways and mammal runs.

3.2.3 Of the 103 setts, 18 were classified as Main setts, 17 Active and 1 Partially used sett, the number of entrances ranged from 10 – 35.

3.2.4 Eight setts were classified as Annexe setts, 7 Active and 1 Partially used.

3.2.5 Eight setts were classified as Subsidiary setts, 6 Active and 2 Partially used setts.

3.2.6 Of the remaining 69 setts, 67 were classified as outlier setts. These consisted of 37 Active setts, 27 Partially used setts and 3 Disused setts. The other two setts were not fully classified due to access limitations.

3.2.7 Whilst the setts were widely distributed across the survey area, they were largely associated with woodland, hedgerows or embankments.

Table 3: Field survey data summary 2016-2018

Status	Main	Annexe	Subsidiary	Outlier	Unknown
Active	17	7	6	37	1*
Partially used	1	1	2	27	0
Disused	0	0	0	3	0
Unknown	0	0	0	0	1**
Totals	**18**	**8**	**8**	**67**	**2**

*Sett behind the fence on the railway with a clear mammal path present (Sett TN9);

**badgers seen exiting main sett and heading towards densely vegetated area, pers. comm. from landowner saying that badger traffic in this area was regular and consistent suggesting that presence of a sett is highly likely (Sett TN102).

Badger surveys 2020

3.2.8 In 2020, 23 additional badger setts were identified. In addition, where accessible, the status of the setts identified in 2016 – 2018 was also updated. The table below (Table 4) outlines the updated status of the setts within the site following the 2020 update surveys.

3.2.9 Of the 126 setts, 21 were classified as Main setts (an increase of 3 since 2018), 19 Active and 2 Partially used setts.

3.2.10 Eleven setts were classified as Annexe setts (an increase of 3 since 2018), 7 Active, 3 Partially used and one disused.

3.2.11 Seven setts were classified as Subsidiary setts, four Active, two Partially used and one Disused sett.

3.2.12 Of the remaining 87 setts, 85 were classified as outlier setts (an increase of 18 since 2018). These consisted of 47 Active setts, 25 Partially used setts and 13 Disused setts. The other two setts were not fully classified due to access limitations.

3.2.13 Whilst the setts were widely distributed across the survey area, they were largely associated with woodland, hedgerows or embankments.

Table 4: Field survey data summary 2020

Status	Main	Annexe	Subsidiary	Outlier	Unknown
Active	19	7	4	47	1*
Partially used		3	2	25	
Disused	2	1	1	13	
Unknown					1**
Totals	**21**	**11**	**7**	**85**	**2**

*Sett behind the fence on the railway with a clear mammal path present (Sett TN9);

**badgers seen exiting main sett and heading towards densely vegetated area, pers. comm. from landowner saying that badger traffic in this area was regular and consistent suggesting that presence of a sett is highly likely (Sett TN102).

3.2.14 The information regarding the location and status of the setts was utilised to inform the masterplan design, and information on the field signs recorded was utilised to determine the usage of the site by badgers.

4 Discussion

Badger surveys 2016-2018 and 2020

4.1.1 In the 2020 surveys, additional badger setts were identified. However, the majority of these (18 of the 23 additional setts identified) are outlier setts, and do not impact the overall assessment of badgers on the site. The additional main and annexe setts (three additional setts of each type) that were identified in 2020 are all located in areas where setts have previously been recorded, for example in Park Wood, Harringe Brooks Wood, along the north of the site (on the railway embankment) or along hedgerows with exiting badger evidence. As such, the 2020 survey updates suggest that the site is largely as assessed in the 2016 - 2018 surveys, the site being of notable value for badgers, with key areas possible to identify across the site.

4.1.2 The 2020 badger surveys identified minor changes in the usage of the site by badgers from the results of the 2016-2018 surveys. Therefore, it was concluded that:

- No further badger surveys are required to inform a 2021 resubmission of the ES; and
- The valuations utilised in the 2018 submission are considered to be valid, with only minor and documented changes in the usage of the site by badgers.

4.1.3 The updated sett locations and classifications will be used to inform the updated mitigation proposals for the 2021 submission.

Estimating the density of territories within the site

4.1.4 The majority of the site is comprised of agricultural farmland and pasture, interspersed with ponds, the East Stour River, ditches, streams, hedgerows and blocks of woodland. The majority of the site provides good habitat for badgers, with some small areas of woodland and associated areas providing excellent habitats. The site provides a range of foraging areas and food sources, containing arable fields, grasslands, woodland and urban areas. Distribution of badgers across the site is relatively broad, with main setts across the site, although the density in the north east of the site was lower than elsewhere across the site, likely attributable to the topography and management of these areas.

4.1.5 In order to assess the importance of the site to badgers, it was necessary to determine the relative density of badger setts in relation to similar areas within the UK. The estimated mean density of main setts in rural England and Wales has been estimated at 0.485km^2 (Judge *et al* 2014). When considering the habitat of the site, an assessment based upon the Land Class Group (LCG) (a description of the habitat type within a given area) can be utilised. Different land class groups are presented in Table 5. The site falls into land class group 2 and studies have suggested that the density of badger main setts in these rural landscapes is approximately 0.411 main setts per km^2. Based on a site survey area of approximately 7.5 km^2 and a Main sett number of 21 this is a density of approximately 2 - 3 setts per km^2 which is over 4 times the average density. However, this finding would suggest that each of the badger territories within the area of search is in the region of 35 - 40 ha, which is not dissimilar to the average set size of 50ha in rural Kent (Kruuk 1989).

Table 5: Descriptions of the seven land class groups in England and Wales (sourced from Judge et al., 2014)

Land Class Group	Habitat Type	Description
1	Arable	Open, gentle slopes, varied agriculture, often wooded or built-up
2	Arable	Flat, arable and intensive agriculture, often cereals & grass mixtures
3	Arable	Lowlands with variable land use, mainly arable and intensive agriculture

Land Class Group	Habitat Type	Description
4	Pastoral	Undulating country, gently rolling enclosed country mainly fertile pastures. Some coastal areas mainly pasture with varied morphology and vegetation.
5	Pastoral	Heterogeneous land-use, includes flat plains, valley bottoms and undulating lowlands with mixed agriculture including pastoral and arable
6	Marginal Upland	Rounded hills and slopes, wide range of vegetation types including moorland and improvable permanent pasture
7	Upland	Mountainous, with moorlands, afforestation and bogs

4.1.6 This suggests that the site is particularly valuable to badgers, supporting a sett density that is higher than the England and Wales average and higher than the average for areas with similar habitat types. This could be attributable to a range of factors, which could include:

- the surveys conducted were very thorough, and are likely to have identified more setts than broader suite of surveys conducted to determine badger sett densities at a national scale;
- the site encompassed a high proportion of suitable habitat for badgers, if lower quality areas such as the industrial estate adjacent to the site were included within the survey this may result in lower densities;
- some areas of the site (approximately 45% of the farmland) are under Higher Land Stewardship, which is likely to provide a larger feeding resource for badgers than other differently managed arable landscapes;
- areas of the site are relatively difficult to access, with minimal to no access by the public, which is likely to reduce disturbance and persecution by humans; and
- density of badger figures are from 2011 – 2013, and previous surveys had suggested that badger populations were growing at an annual rate of 2.6% prior to this most recent survey. The high density of badger recorded on the site may only be indicative of a wider increase in badger populations across the country.

4.1.7 However, the survey does indicate that the site supports a notably high density of badger.

Estimating population size

4.1.8 Badger signs and setts are widespread throughout the site (although within the north-eastern section of the site they are relatively sparse, probably due to maintenance of the racecourse, ground conditions and the site topography). Setts are generally constructed on sloping ground, in woodland or on the periphery of farmland. This is reflected in the survey results, with the majority of setts being clustered in woodland areas and others scattered along agricultural boundaries.

4.1.9 A study conducted in 2017 (Judge *et al* 2017) found that the average number of badgers per social group in LCG2 landscapes is 6.27 badgers per main sett (with a Standard Error of 1.74). Using these figures, and an estimated number of 21 social groups within the survey area, the total number of badgers inhabiting the survey area is likely to be within the range of 93 – 169.

Assessing impacts to setts

4.1.10 Once the survey was completed, it was possible to assess the impacts to badger setts likely to result from the development.

4.1.11 Of the 121 Main setts identified, initial impact assessments suggest that only two of these setts will likely require closure to facilitate the development (although this number may change as design details are finalised). This will need to be confirmed as the detailed design of each land parcel is finalised.

4.1.12 With regards to the other sett types, it is not possible at the time of reporting to determine the likely impact to these features. Impacts to Outlier, Annexe and Subsidiary setts will be discussed in the ES.

5 Mitigation Recommendations and Further Work

5.1 Introduction

5.1.1 This section of this report outlines the mitigation proposed to minimise impacts to badgers within the proposed development. The full impact assessment is presented within the ES Chapter 7: Biodiversity and within ES Appendix 7.18: Confidential Badger Mitigation Strategy.

5.1.2 Considering the very high density of badgers within the site, mitigation for this species will have an impact upon the design of the development and the ongoing management of the site. In addition, construction activities will require a specific set of mitigation measures to be implemented to minimise impacts to individual badgers and badger populations.

5.1.3 This section of the report provides a brief overview of the mitigation likely to be employed to safeguard badgers within the project. In line with the mitigation hierarchy, the main method through which impact to badgers are being minimised is through avoidance within the design.

5.2 Design Mitigation

Avoidance

5.2.1 Impacts to badgers are being predominantly minimised through avoidance of setts within the design. Early in the masterplanning design process, Main setts were identified and green infrastructure and habitat corridors were designed to retain the majority of these setts and create a buffer around the retained setts.

5.2.2 Of the 18 Main setts identified, initial impact assessments suggest that only two of these setts will likely require closure to facilitate the development. This will need to be re-appraised as the detailed design of each land parcel is finalised.

Habitat enhancement and creation

5.2.3 Design mitigation includes green infrastructure design to ensure that badges can continue to utilise the site, for commuting and foraging. Habitat corridors have been created across the site, where it was possible, these corridors follow the main pathways of badgers identified within the surveys. A green grid has been built into the designs to permit wildlife, including badgers to move through and beyond the site.

5.2.4 The design of the green infrastructure within the proposed Development will maximise foraging opportunities within the site for badger. Habitats will include, rough grassland, managed grassland, traditional orchards, Sustainable Drainage Systems (SuDS) including swales and woodland and tree planting. Overall impacts to foraging habitat availability will be quantified within the ES, taking into account access to off-site foraging areas by badgers.

5.3 Construction Mitigation

5.3.1 A Code of Construction Practice (CoCP) will be produced to include best practice construction mitigation. This will avoid and/or reduce impacts to areas that are not within the proposed Development area which will reduce direct mortality. It will also layout the areas which would operate under a protected species licence where partial or full sett closure is required. Such measures that would be included are:

- setting appropriate offsets from any badger setts (with appropriate fencing and demarcation if required) during construction to ensure that disturbance to setts is minimised;
- ensuring that badgers are not attracted to works sites, by ensuring good housekeeping particularly with regards to storage of food and disposal of waste; and
- measures should be implemented to prevent badgers becoming trapped in excavations, including covering and ramping open excavations, as necessary.

5.3.2 Such measures will be proposed as appropriate within the ES Chapter 7: Biodiversity of the ES.

5.4 Additional Mitigation

5.4.1 In addition to the design and construction mitigation measures outlined above, a range of mitigation measures would be implemented within the construction and operational phases of the development. These actions may include:

- if any of the setts within the site require removal to facilitate the development, a licence will need to be obtained from Natural England. Badgers will need to be humanely excluded from the sett(s). the following will need to be ensured for this to be conducted;
- exclusion from setts should be undertaken between 1 July and 30 November. Alternative setts nearby that badgers can move to should be identified, this may be existing nearby setts or newly created artificial setts; and
- one way badger gates would be used to allow badgers out from their setts but prevent them from returning. These gates are kept in place for at least 21 days from the last sign of badgers accessing the sett - gates must be checked at least once every 3 days for signs of badgers entering or leaving the sett.

5.5 Operational Mitigation

5.5.1 During the operational phase of the development, a number of approaches will be employed to limit impacts to badger populations. Where areas are identified as of key importance for badgers, the design of the proposed Development should limit human activity within these areas. This includes:

- routing of new pathways away from these areas;
- using topography to limit human activity in sensitive areas; and
- ensuring that key corridors remain unlit.

In addition, during the detailed design stage management and monitoring will be required in relation to areas of importance to badgers. This is likely to include:

- maintenance of mitigation features created, including setts (if applicable);
- maintenance of any tunnels or crossings installed, and associated badger fences (to limit road deaths); and
- monitoring of any impacted setts, particularly using badger bait marking techniques.

5.6 Further Survey

5.6.1 The surveys conducted for the ES and the outline planning application are considered sufficient to fulfil the purpose and rationale of the surveys. However, considering the extended timescales for buildout of the project and phased approach to planning, it is anticipated that further survey and input will be required to inform mitigation proposals.

5.6.2 Further surveys are likely to be required if significant sett disturbance/destruction is deemed necessary.

5.6.3 Bait marking surveys may be required to inform the detailed planning of the development. Bait marking is a technique that relies upon badgers marking their territorial boundaries with latrines. Bait is placed outside the main sett, with indigestible coloured markers within it. Then when the badger later defecates, coloured markers allow the surveyor to trace which main sett the badger belongs to and therefore map clan distribution.

5.6.4 Bait marking surveys may also be conducted to help further determine the boundaries of different clan territories. Considering the high density of main setts within the site recorded during the 2016 – 2018 surveys, it is considered that the proposed Development could affect the behaviour and territories of social groups. It is likely that this will need to be understood within the detailed planning of mitigation for each proposed Development parcel. Bait marking is also likely to be required to establish if there are alternative neighbouring setts that badgers could colonise if destruction of the current sett they occupy is deemed necessary and could

also help to determine the most suitable locations for mitigations e.g. replacement artificial setts, if required.

5.6.5 Camera trapping to assist the surveys may also be required, camera traps may be used to monitor the use of setts and determine the significance of the sett to a clan.

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6 Conclusions

6.1.1 In surveys undertaken in 2016-2018, 103 badger setts were recorded within the survey area in addition to multiple latrines, hairs, pathways and mammal runs. Of the 103 setts, 18 were classified as Active Main setts with the number of entrances ranging from 10 – 35. Eight setts were classified as Annexe, and eight Subsidiary setts were identified. Of the remaining 69 setts, 67 were classified as outlier setts. These consisted of 37 Active setts, 27 Partially used setts and 3 Disused setts. The other two setts were not fully classified due to access limitations. The setts were widely distributed across the survey area, however they were largely associated with woodland, hedgerows or embankments.

6.1.2 In surveys undertaken in 2020, an additional 23 setts were identified. However, the majority of these (18 of the 23 additional setts identified) are outlier setts, and do not impact the overall assessment of badgers on the site. The additional main and annexe setts (three additional setts of each type) that were identified in 2020 are all located in areas where setts have previously been recorded, for example in Park Wood, Harringe Brooks Wood, along the north of the site (on the railway embankment) or along hedgerows with exiting badger evidence. As such, the 2020 survey updates suggest that the site is largely as assessed in the 2016 - 2018 surveys, the site being of notable value for badgers, with key areas possible to identify across the site.

6.1.3 The 2020 badger surveys identified minor changes in the usage of the site by badgers from the results of the 2016-2018 surveys. Therefore, it was concluded that:

- No further badger surveys are required to inform a 2021 resubmission of the ES; and
- The valuations utilised in the 2018 submission are considered to be valid, with only minor and documented changes in the usage of the site by badgers.

6.1.4 Key badger pathways were identified within the site from the field signs observed during the surveys. The location of these pathways combined with the presence of known foraging areas has been used to inform the evolution of the design to minimise impacts and to inform the subsequent impact assessment and mitigation.

6.1.5 While the majority of Main setts can be retained within the proposed design, it is likely that some of the badger setts will need to be closed / disturbed to facilitate the development. The extensive loss of foraging habitat necessary to facilitate the development, it is likely that there will be a residual impact upon this species. The impacts to badgers will be fully quantified and assessed within the relevant section of the EIA and mitigation presented within ES Technical Appendix 7.18: Confidential Badger Mitigation Strategy

6.1.6 Surveys will be undertaken during the future detailed design and phasing to confirm the sett closure and associate mitigation required.

7 References

Ref	Reference Description
Ref 1	Anon (1981) Wildlife and Countryside Act. HMSO, London.
Ref 2	Anon (1992) Protection of Badgers Act (1992) HMSO, London.
Ref 3	Anon (2000) *Countryside and Rights of Way Act*. HMSO, London, [online] (http://www.legislation.gov.uk/ukpga/2000/37/introduction)
Ref 4	Anon (2006) The Natural Environment and Rural Communities Act HMSO, London.
Ref 5	Anon (2010-2017) *The Conservation of Habitats and Species Regulations.* HMSO, London, [online]
Ref 6	Bunce, R.G.H, Barr, C.J., Wittaker H.A. (1981) Land Classes in Great Britain: Preliminary Descriptions for Use of the Marlewood Method of Land Classification (Institute of Terrestrial Ecology).
Ref 7	CIEEM (2013). Guidelines for Preliminary Ecological Appraisal. Chartered Institute of Ecology and Environmental Management, UK.
Ref 8	CIEEM (2016). Guidelines for Ecological Impact Assessment in the UK and Ireland. Chartered Institute of Ecology and Environmental Management, UK.
Ref 9	Harris, S., Jeffries, D., Cheeseman, C. & Booty, C. (1994). Problems with Badgers? RSPCA, Horsham, UK.
Ref 10	https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects [accessed July 2017]
Ref 11	Judge, J., Wilson G.J., Macarthur, R., McDonald, R.A., Delahay, J. (2017) Abundance of Badgers (*Meles meles*) in England and Wales, Scientific Reports.
Ref 12	Judge, J., Wilson G.J., Macarthur, R., McDonald, R.A., Delahay, J. (2014) Density and Distribution of badger social groups in England and Wales in 2011 – 2013.
Ref 13	Kruuk, H. (1989). The Social Badger. Oxford University Press, Oxford.
Ref 14	National Biodiversity Network (NBN) Trust. NBN Gateway. Available from: http://www.searchnbn.net/ [Accessed June 2017].
Ref 15	Neal, E. & Cheeseman, C. (1996). Badgers. T & A D Poyser Ltd, London.
Ref 16	Sleeman, P., Collins, D., Davenport, J. (2012). What proportion of badgers (*Meles meles*) are killed on roads in rural areas in the Republic of Ireland? The Mammal Society, London.

Figure 1: Survey Area (2016-2018 and 2020)

N
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Legend

- Outline Planning Application Boundary
- Framework Masterplan Boundary
- Badger Survey Area
- Partial Survey
- Area not Fully Surveyed

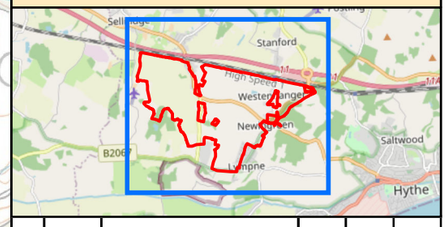

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Figure 1
Badger Survey Area

scale	original size	datum	grid
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C:\Users\psi01069\ARCADIS\10029956 - Otterpool Park Stage 4a - 23 GIS\Figures_2021\Ecology\7.7 - Confidential Badger\Figure 1 - Badger Survey Area.mxd

Figure 2: Sett Target Notes Map (2016-2018)

Legend

- Outline Planning Application Boundary
- Framework Masterplan Boundary
- Sett Target Notes

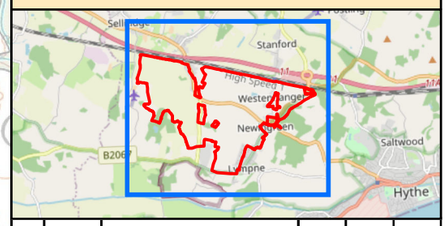

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Figure 2
Badger Survey Results
Setts and Target Notes 2016-2018

scale	original size	datum	grid
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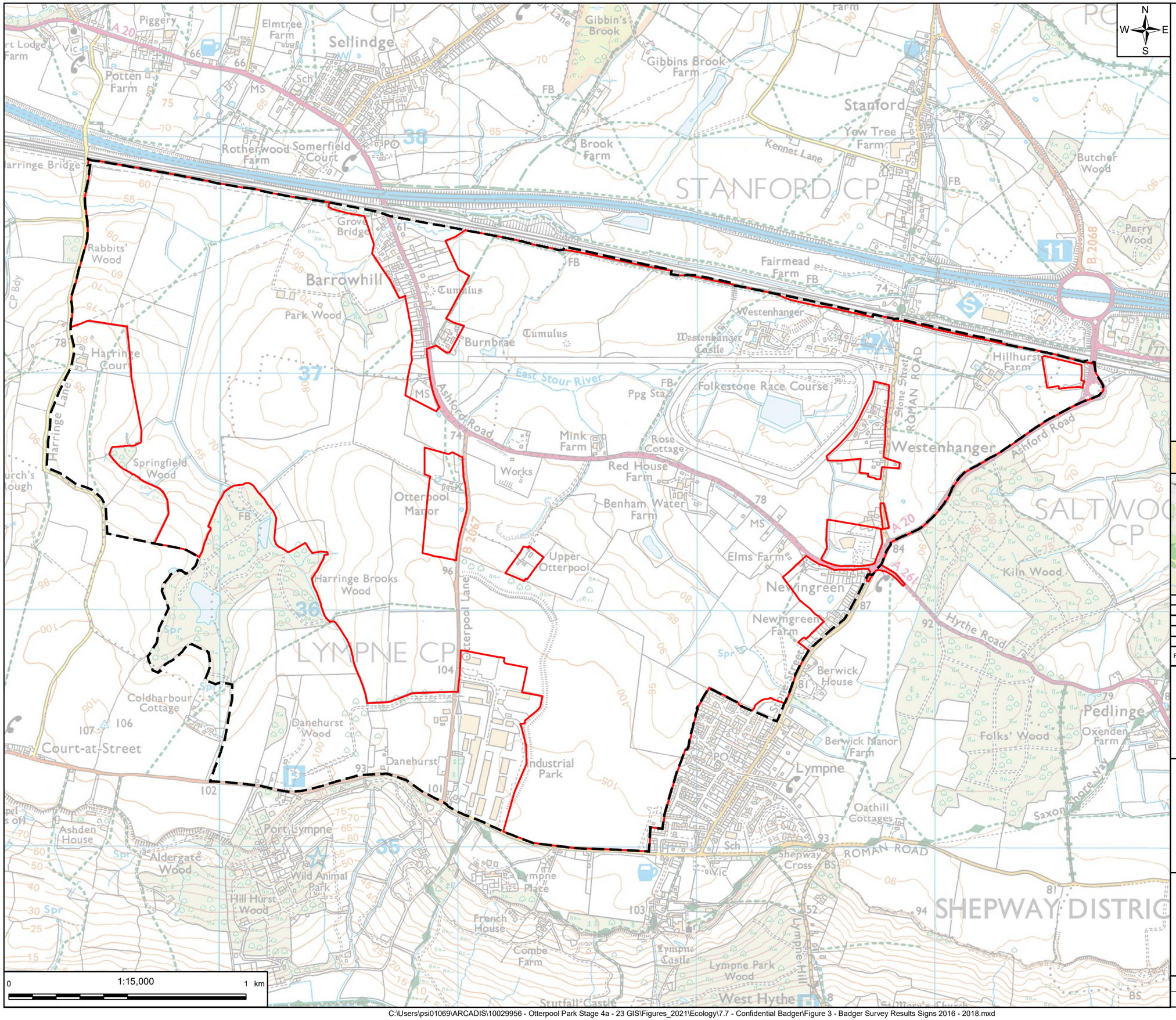
Figure 3: Signs and Pathways Target Notes Map (2016-2018)



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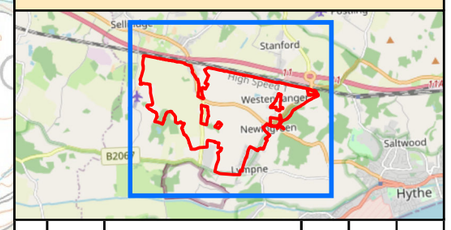

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Figure 3
Badger Survey Results
Badger Signs and Key Pathways 2016 - 2018

scale	original size	datum	grid
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Figure 4: Badger Sett Classification map (2016-2018)

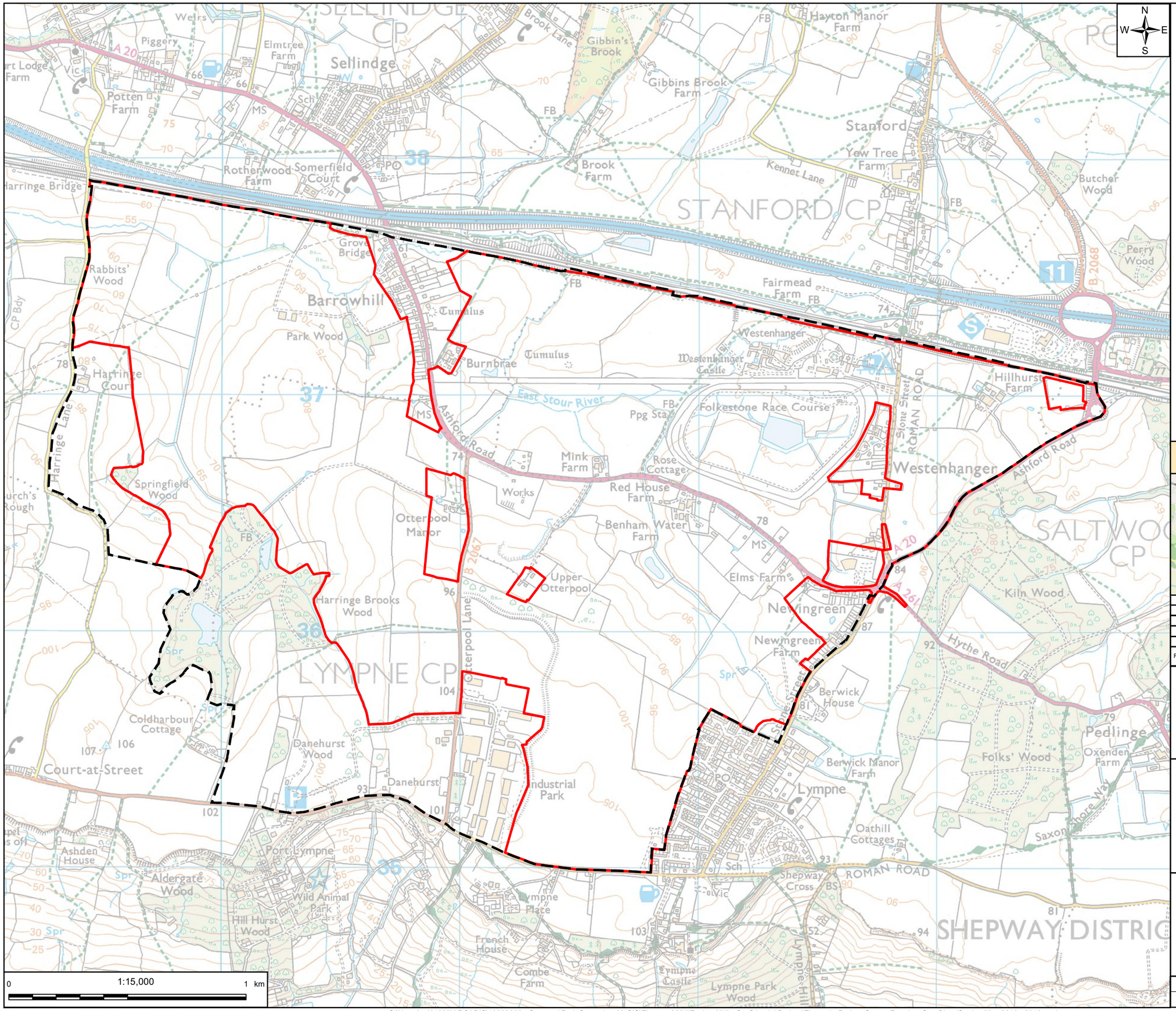

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Figure 4
Badger Survey Results
Sett Classification 2016-2018

scale	original size	datum	grid
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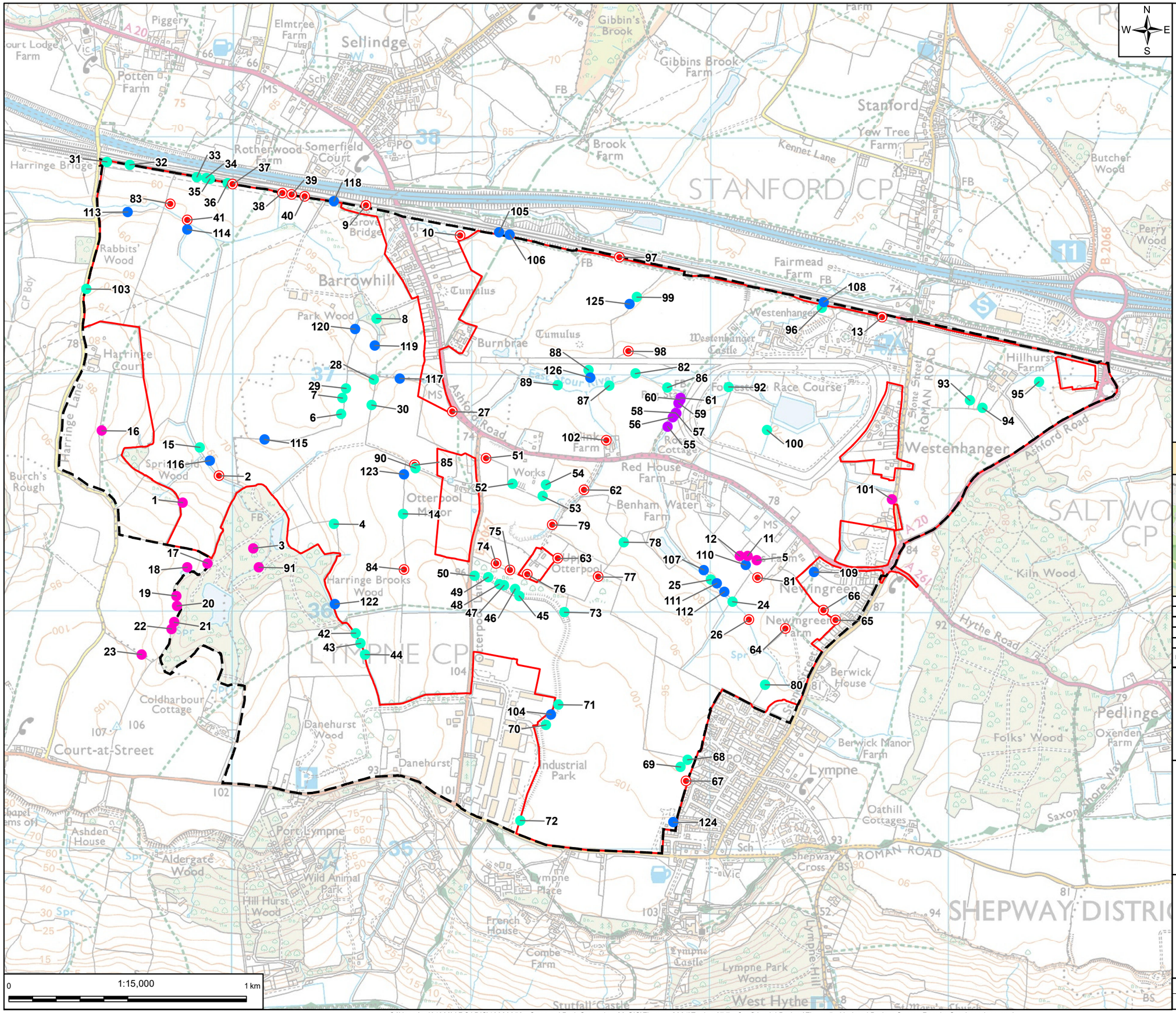
C:\Users\psi01069\ARCADIS\10029956 - Otterpool Park Stage 4a - 23 GIS\Figures_2021\Ecology\7.7 - Confidential Badger\Figure 4 - Badger Survey Results - Sett Classification Map 2016 - 2018.mxd

Figure 5: Badger sett target notes 2020



C:\Users\psi01069\ARCADIS\10029956 - Otterpool Park Stage 4a - 23 GIS\Figures_2021\Ecology\7.7 - Confidential Badger\Figure 5 - Updated Badger Survey Results Sett Locations.mxd

Figure 6: Updated Badger Signs and Target Notes (2020)

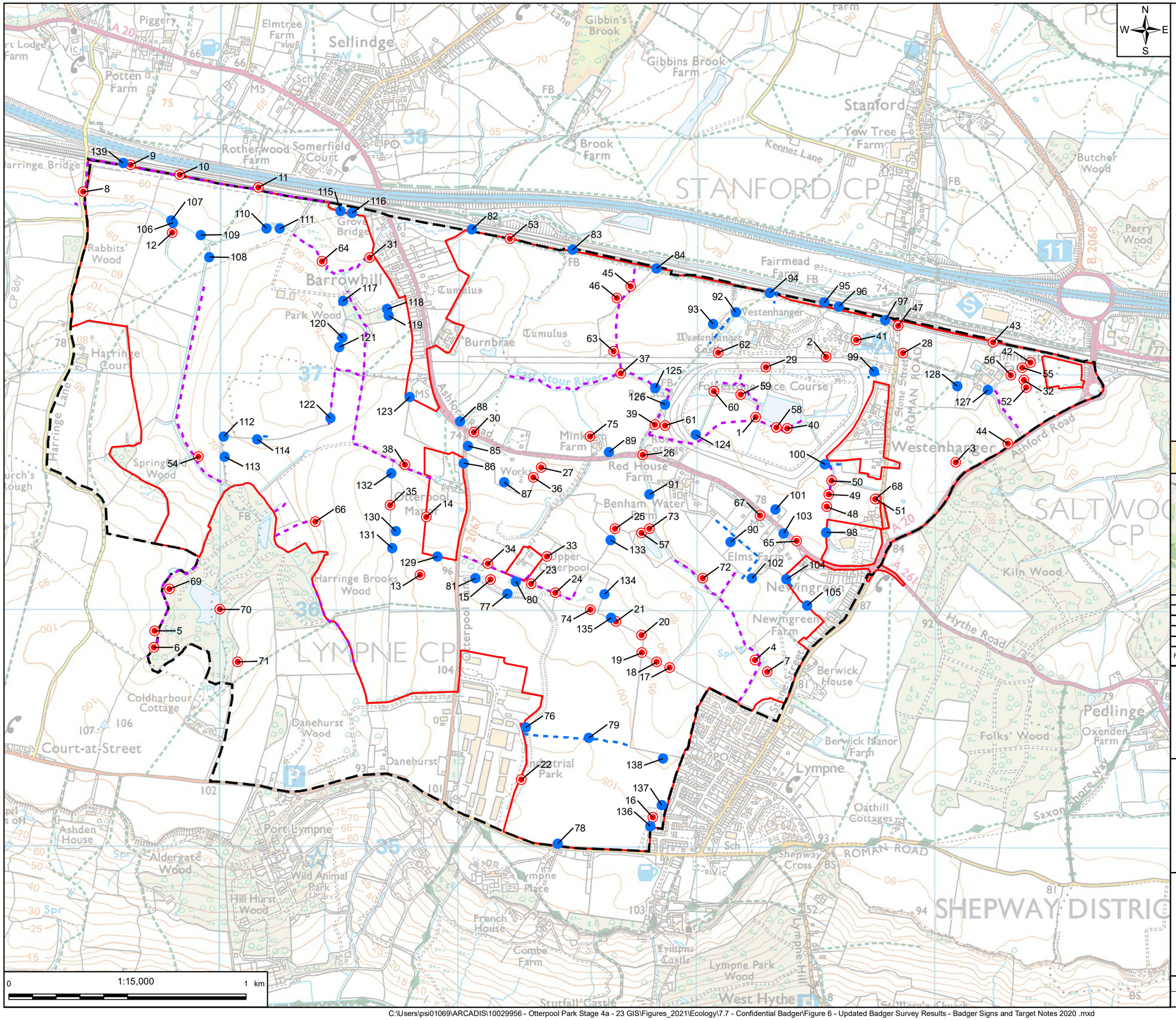


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Figure 6
Updated Badger Survey Results
Badger Signs and Target Notes 2020

scale	original size	datum	grid
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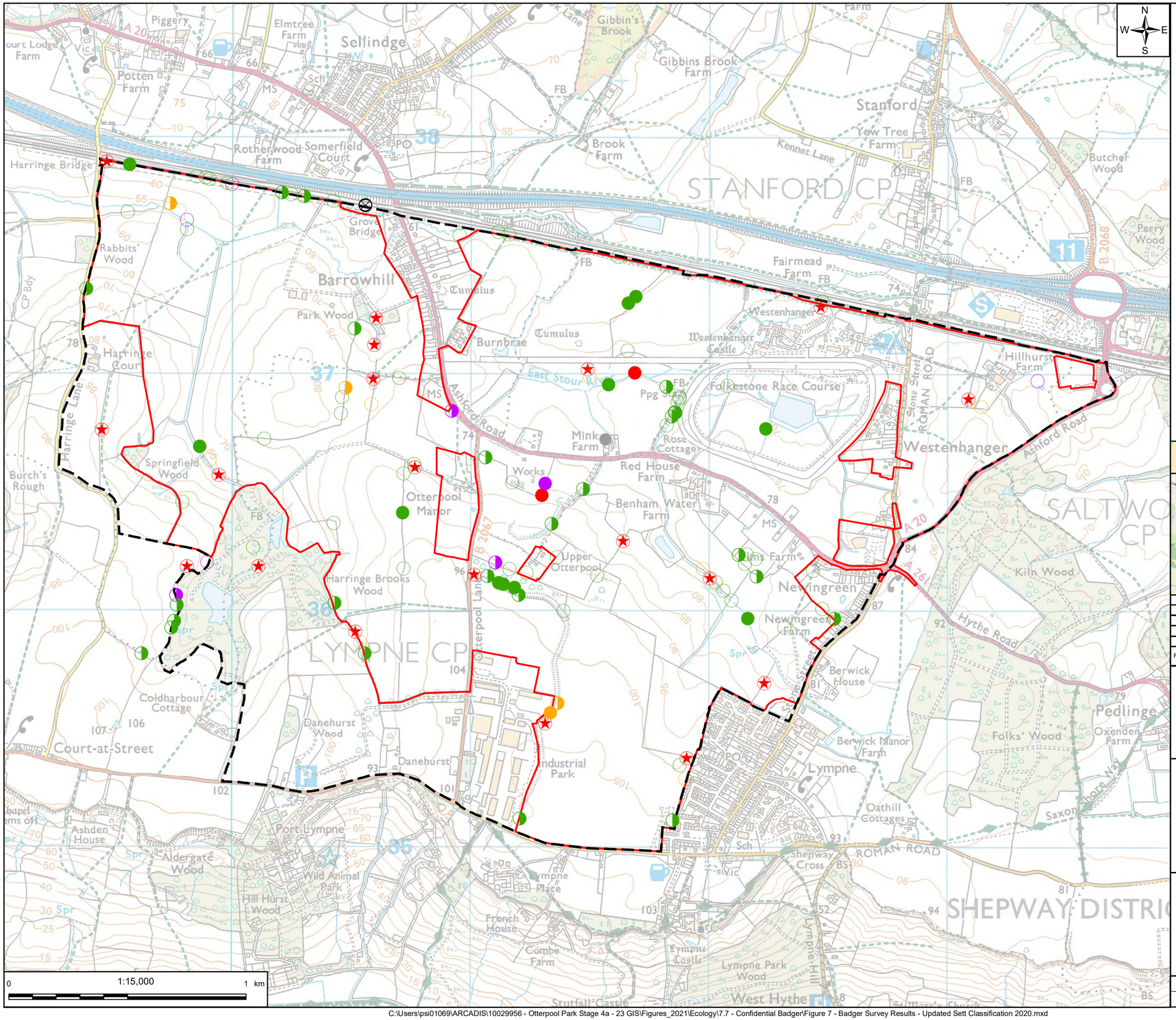
Figure 7: Updated Badger Sett Classifications (2020)



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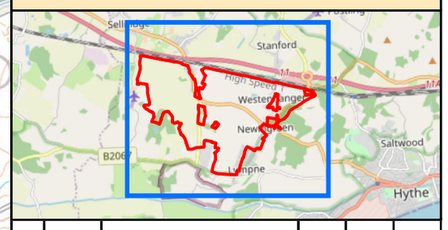

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Figure 7
Updated Badger Survey Results
Sett Classification 2020

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APPENDIX A: Target notes (2016-2018 and 2020)

Table 6: Target notes - setts

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
1	TR0978536460	No secondary evidence found, size and shape indicative of badger.	Outlier	Active	17.05.17	No access.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
2	TR 09937 36573	6 entrance holes visible including fresh excavations within land parcel. Latrines and pathway located in close proximity to sett. Re survey in 2018: 18 active holes observed with additional field signs including latrines, hairs and pathways.	Main	Active	6.10.16, 17.05.17 10.05.18	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
								
3	TR1008236268	3 entrance holes present, two active and one partially used. Badger hairs found in entrance to sett along with active paths.	Outlier	Active	15.03.17	No access.	N/A	No photograph.

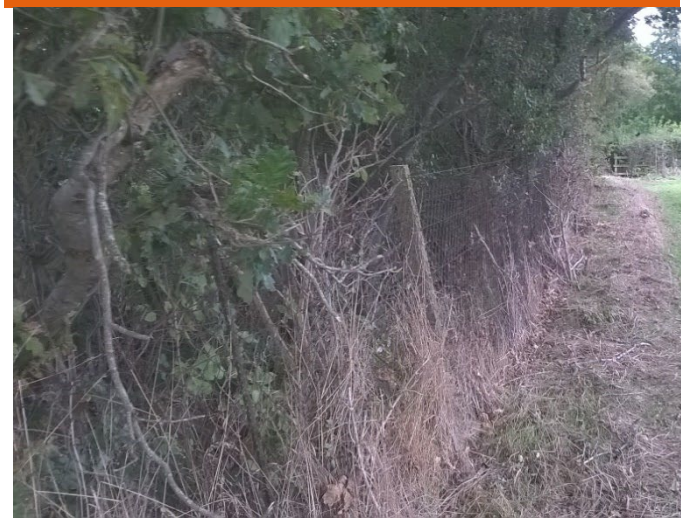
Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
4	TR1042136370	Active sett. 6 entrance holes. Badger skull found.	Outlier	Active	16.03.17	5 hole outlier sett. Latrine present.	Active	 

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
5	TR1219936218	No secondary evidence identified, size and shape of sett indicative of badger.	Outlier	Active	11/05/2017	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
6	TR1045136832	Single entrance hole. Excavations identified. Paths found leading to large sett.	Outlier	Active	15.03.17, 28.09.17	Outlier. Single entrance hole.	Active	 Setts 6 and 7 concealed within hedgerow.
7	TR1045636900	Single entrance hole partially active. Concealed within hedgerow.	Outlier	Partially Used	20.03.17	Outlier. Single entrance hole.	Active	See photograph above.

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
8	TR1060037234	Large sett with 6+ active entrances and a total of 10 visible entrances. Hairs and latrines present. Fresh excavations identified.	Main	Active	6.10.16, 17.05.17	Active sett.	Active	
9	TR1055537710	Evidence of fresh excavations identified within railway owned land. Multiple potential setts visible from field boundary but no access to railway owned land to confirm.	Unknown, unlikely to be a main sett considering location of main setts at TN8 and TN31.	Appears active	15.03.17, 29.09.2017	Not accessed/not found.	N/A	Setts not directly photographed – area shown below (area of railway owned land located to the immediate left of second photograph)

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
								

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
								

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
10	TR1095137583	2 active entrances. Well-worn paths identified. Badger hairs found.	Outlier	Active	20.03.17	No access.	N/A	
11	TR1216136237	No secondary signs identified but size and shape of sett indicative of badger.	Outlier	Active	11-05-2017	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
12	TR1212836236	3 entrance holes. Size and shape of sett indicative of badger. No secondary signs.	Outlier	Partially used	11-05-2017	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
13	TR1272637240	Single entrance hole. Size and shape indicative of badger. Well-worn badger paths leading to sett. Not accessible to survey due to being located within railway owned land.	Outlier	Active	04.10.2017	Not accessed/not found.	N/A	
14	TR1071136413	3 holes in hedgerow, one active and 2 partially used. No secondary signs but size and shape of sett indicative of badger.	Outlier	Active / partially used	18/09/2017	Multiple disused entrance holes. Field signs of rabbit identified.	Disused	No photograph taken.
15	TR0985736693	At least 2 entrance holes on eastern	Outlier	Active	15.03.17	Disused outlier sett.	Disused	No photograph of sett, seen from a distance (inaccessible due to scrub – photograph shows dense scrub / hedgerow habitat).

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
		embankment of stream. Unable to survey therefore observations noted from a distance. Excavations identified which are indicative of badger.						

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
16	TR0944436763	Approximately 17 active entrances, located at the edge of a pasture field. Bedding and a badger hair were observed.	Main	Active	15.03.17	No access.	N/A	
17	TR0988936205	Single active entrance, located within the edge of field and woodland. Fresh spoil and scratch marks observed.	Subsidiary (to main sett TN18)	Active	16.03.17	No access.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
18	TR0980436188	8+ active entrances, located at the edge of a woodland pond, amongst an area of rubbish/littler most likely disposed of by fly tipping. Therefore, additional entrances and field signs might have been obscured by the above. 5+ badgers were observed emerging from this sett during a great crested newt survey.	Main	Active	16.03.17	No access.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
19	TR0975836068	4 partially used entrances, located within the embankment facing the woodland. Bedding observed.	Subsidiary (to main sett at TN18)	Partially used	16.03.17	No access.	N/A	
20	TR0976136026	Single entrance hole partially used. Size and shape of sett indicative of badger.	Outlier	Partially used	16.03.17	No access.	N/A	No photograph of sett – located within field / woodland edge – indicative area shown below. 
21	TR0974935957	Single hole partially used.	Outlier	Partially used	16.03.17	No access.	N/A	No photograph of sett. See photograph above.

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
		Size and shape of sett indicative of badger.						
22	TR0973835929	2 partially used entrances. Bedding observed.	Outlier	Partially used	16.03.17	No access.	N/A	
23	TR0961235822	2 partially used entrances. Several rabbit holes, located within field boundary.	Outlier	Partially used	16.03.17	No access.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
24	TR1209736044	Single entrance hole. Located within the scrub dominated edge of the ditch.	Outlier	Partially used	15.03.17	Outlier with single entrance hole. Bedding present.	Active	
25	TR1200536137 Extends between TR11894 36245 and TR 12031 36119	20+ active entrances, linearly spread over 40m along a ditch embankment amongst the hedgerow. Some holes are present in the field to the north east of the river corridor. Fresh spoil observed.	Main	Active	15.03.17	Main sett. Active 12+ entrance holes.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
26	TR1216535967	Single disused entrance hole. Large spoil heap observed. Size and shape of sett indicative of badger. Dead fox found at the entrance of the sett.	Outlier	Disused	15.03.17	Not accessed/not found.	N/A	No photograph taken.
27	TR1091836842	5+ badger holes identified within scattered scrub by pond. Area could not be accessed (privately owned land). Observations taken from field boundary. Possible further spoil heap between road and	Subsidiary	Partially used	16.03.17	Not accessed/not found.	N/A	No photo, of area – within private garden. Photograph of adjacent trees shown below. 

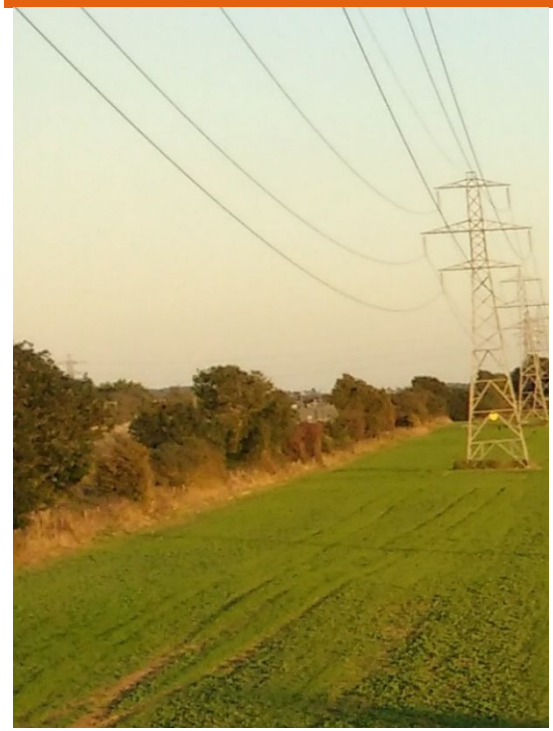
Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
		plantation fence. No clear paths visible.						
28	TR1058836977	30+ active entrances. Located along the arable field hedge boundary and up to 15m within the field itself. Bedding observed by some of the entrances. Pathways and hairs identified.	Main	Active	15.03.17	>18 entrance holes.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
29	TR1047136940	Approximately 10 active entrances. Located within the edge of the arable field.	Annexe	Active	16.03.17	Partially used annexe sett. 5 entrance holes.	Partially used	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
30	TR1057936870	Single entrance hole. Pathway identified leading north to main sett 28.	Annexe	Active	16.03.17, 04.08.2017	3 hole annexe sett.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
31	TR0946637893	10 active entrances, located along the railway line. Not fully visible from accessible land, likely that additional entrances are present within this area of land.	Main	Active	20.03.17	Active main sett with 6 entrance holes visible. More holes located within railway owned land.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
								
32	TR0956237880	Single partially used entrance hole. Located within south facing railway owned land.	Outlier	Partially used	20.03.17	Disused outlier sett. Single entrance hole.	Disused	Railway owned land, not accessed. Photograph of embankment shown below.

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
								
33	TR0984437829	Single entrance hole. Located within south facing railway owned land.	Outlier	Active	20.03.17	Outlier. Single entrance hole.	Active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
		Bedding observed.						
34	TR0988337825	2 partially used entrance holes. Located within south facing railway owned land.	Outlier	Partially used	20.03.17	Outlier. Single entrance hole.	Active	No photograph
35	TR0989937820	2 active entrance holes. Located within south facing railway owned land. Fresh spoil observed.	Outlier	Active	20.03.17	Outlier. Single entrance hole.	active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
36	TR0997437803	Single active entrance hole. Located adjacent to the railway line on south facing land. Bedding observed.	Outlier	Active	20.03.17	Outlier. Single entrance hole.	active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
37	TR0999437799	4 entrances holes. Located within south facing railway owned land.	Subsidiary	Active	20.03.17	Not accessed/not found.	N/A	No photograph
38	TR1020337762	3 partially used entrances. Located within south facing railway owned land. Fresh spoil observed.	Outlier	Partially used	20.03.17	Not accessed/not found.	N/A	No photograph
39	TR1024337756	Single active entrance. Located within south facing railway owned land. Fresh spoil observed.	Outlier	Active	20.03.17	Not accessed/not found.	N/A	No photograph
40	TR1029837746	2 south facing partially used holes.	Outlier	Partially used.	20.03.2017	Not accessed/not found.	N/A	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
41	TR0980437647	3 east facing active entrances. Bedding observed. Not possible to fully access.	Subsidiary, no nearby main sett found	Active	20.03.17	Not accessed/not found.	N/A	Located near river corridor within vegetated riparian habitat. Limited access. No photograph.
42	TR1051235912	12 west facing active entrances. Located within embankment.	Main	Active	20.03.17	Main sett with 10 active holes.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
43	TR1053335868	2 west facing entrances.	Annexe	Active	20.03.17	4 active holes and 4 disused holes.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
44	TR1055235822	2 entrance holes. One entrance is east facing and one entrance is west facing.	Outlier	Active	23.03.17	Outlier sett with 2 entrance holes.	Partially active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
45	TR1120036068	Single partially used entrance hole. Located south of the bund.	Outlier	Partially used.	16.03.17	Not able to relocate.	NA	
46	TR1118336097	Single partially used entrance. Located north of the bund. Claw marks observed.	Outlier	Partially used.	16.03.17	Outlier sett with 3 entrances located north of the bund.	Disused	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
47	TR1113636112	Single active entrance. Located north of the bund. Claw marks, badger hair and well-worn paths were observed.	Outlier	Active.	16.03.17	Leaf litter in entrance. Inactive.	Disused	
48	TR1111636117	Single disused entrance hole, partially obstructed by roots. Located north of the bund at Link Park. Claw marks and badger hair observed.	Outlier	Disused	16.03.17	Leaf litter in entrance. Inactive.	Disused	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
49	TR1107036146	2 partially used entrances. Located north of the bund. Badger hair and well-worn paths observed.	Outlier	Partially used	Link park 16.03.17	Outlier sett with two partially used entrances, located north of the bund.	Partially used	
50	TR1101236152	5 active entrances. Located on the south west end of the bund. Latrine and well-worn paths observed.	Main Previously categorised as main and subsidiary sett, use may have reduced over time (Ref: Lympne, Former Lympne Airfield – Proposed Housing	Active	16.03.17	6 active entrances. Well-worn path. Evidence of pigeon killing.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
			Development)					
51	TR1106136647	Single partially used entrance. Several rabbit holes around the sett.	Outlier	Partially used	16.03.17	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
52	TR1117236540	Single partially used entrance hole. Located on the embankment around lorry park.	Outlier	Partially used	16.03.17	Outlier with several active and partially used entrances.	Active	
53	TR1129836487	7 partially used entrances. Located within the lorry park. Only surveyed from fence line bordering lorry park.	Main	Partially used	16.03.17, 14.08.17	Now used by rabbits.	Disused	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
54	TR1131236535	3 active entrances. Located within the lorry park.	Subsidiary	Active	16.03.17 14.08.17	Now used by rabbits.	Disused	
55	TR1182436780	Single active entrance hole facing the stream. Fresh spoil observed.	Outlier	Active	16.03.17	Entire area completely overgrown with scrub. Badger paths visible in the area. Setts not possible to review in 2020 due to dense woodland vegetation. Precautionary assessment	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
						of sett status made.		
56	TR1184636819	2 partially used entrances. Claw marks observed.	Outlier	Partially used	16.03.17	Entire area completely overgrown with scrub. Badger paths visible in the area. Setts not possible to review in 2020 due to dense vegetation. Precautionary assessment of sett status made.	N/A	
57	TR1186136835	Single partially used entrance hole by stream.	Outlier	Partially used.	16.03.17	Entire area completely overgrown with scrub. Badger paths visible in the area. Setts not possible to review in	N/A	No photographs taken.

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
						2020 due to dense woodland vegetation. Precautionary assessment of sett status made.		
58	TR1185836837	2 partially used entrances.	Outlier	Partially used.	16.03.17	Entire area completely overgrown with scrub. Badger paths visible in the area. Setts not possible to review in 2020 due to dense woodland vegetation. Precautionary assessment of sett status made.	N/A	
59	TR1187036879	Single active entrance.	Outlier	Active.	16.03.17	Entire area completely	N/A	No photographs taken.

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
						overgrown with scrub. Badger paths visible in the area. Setts not possible to review in 2020 due to dense woodland vegetation. Precautionary assessment of sett status made.		

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
60	TR1187736893	Single active entrance.	Outlier	Active	16.03.17	Entire area completely overgrown with scrub. Badger paths visible in the area. Setts not possible to review in 2020 due to dense woodland vegetation. Precautionary assessment of sett status made.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
61	TR1187836901	Single active entrance.	Outlier	Active.	16.03.17	Entire area completely overgrown with scrub. Badger paths visible in the area. Setts not possible to review in 2020 due to dense woodland vegetation. Precautionary assessment of sett status made.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
62	TR1147236514	Single partially used entrance.	Outlier	Partially used.	16.03.17	Not accessed/not found.	N/A	
63	TR1136236225	Single active entrance hole. Located within a private garden.	Outlier	Active	16.03.17	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
64	TR1231935931	2 active entrance holes.	Outlier	Active.	15.03.17	Not accessed/not found.	N/A	
65	TR1253035966	Single active entrance. Located under the foundations of a large barn.	Outlier	Active	15.03.17	Outlier. Single entrance hole partially used.	Partially used	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
66	TR1247936008	3 active entrance holes. Fresh spoil observed.	Outlier	Active	15.03.17	Not accessed/not found.	N/A	
67	TR1190135291	10+ active entrance holes with potentially more enclosed within the dense scrub. Latrine, badger hair, bedding and well-worn paths observed.	Annexe (likely to the sett located south within the wood (Sett 68))	Active	15.03.17	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
68	TR1190835379	10+ active entrances with potentially more enclosed within this location (field signs obstructed by litter/rubbish likely disposed of by fly-tipping). Latrine, bedding and well-worn paths observed.	Main	Active	15.03.17	Main. 8 holes. Fresh excavations.	Active	 

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
69	TR1187935349	4 active entrance holes. Bedding and badger hair observed.	Annexe to Sett 68	Active.	15.03.17	Single entrance hole - outlier.	Active	
70	TR1131235525	7 active entrance holes. 1 disused entrance holes, located east of the bund. Bedding observed.	Main	Active	15.03.17	Main sett with 4 active and 4 disused entrances. Located east of the bund. Significant amounts of fresh bedding observed.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
								
71	TR1136435611	Single active entrance hole. Located near the ridge of the bund on the western side. Large fresh spoil heap observed.	Annexe	Active	15.03.17	Annexe with a single entrance., located near the ridge of the bund on the western side. Large fresh spoil heap observed.	Partially used	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
72	TR1120435124	Single partially used entrance. Located by the bunker.	Outlier	Partially used	15.03.17	Outlier sett with a single partially used entrance, located by the bunker.	Partially used	
73	TR1139035999	3 active entrance holes. Located north-east of the bund. Fresh spoil observed.	Outlier	Active	16.03.17	Outlier sett with 5 entrances located north-east of the bund. No fresh spoil. Leaves and twigs in entrances.	Disused	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
74	TR1110336204	3 partially and active entrances. Located along the woodland edge. Bedding and several rabbit holes observed.	Subsidiary	Partially used/Active	16.03.17	Not accessed/not found.	N/A	
75	TR1116136177	2 active entrances. Located within the edge of the woodland. Claw marks observed.	Outlier	Active.	16.03.17	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
76	TR1123336159	Single active entrance. Latrine identified adjacent to sett.	Outlier	Active	16.03.17, 04.08.17	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
77	TR1153236148	2 entrance holes. No secondary signs, size and shape of one entrance hole indicative of badger.	Outlier	Active	16.03.2017	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
78	TR1164036294	35+ entrances. Mostly active entrances located along a fence line enclosed within scrub, mostly on the western side. Bedding observed.	Main	Active	16.03.17 11.05.18	23 holes. 13 active holes. 8 partially active holes. 2 collapsed holes.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
								

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
79	TR1133936366	Single hole partially obstructed. No secondary evidence identified. Claw marks on a rock.	Outlier	Partially used	16.03.17	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
80	TR1223435695	11 active entrance holes. Fresh spoil, bedding and latrines identified.	Main sett	Active	15.03.2017	Active main sett.	active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
81	TR1220336145	5 partially used entrance holes within hedge. No secondary badger signs. Size and shape of sett indicative of badger.	Outlier	Partially used	15.03.2017	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
82	TR 11689 37003	6 entrance holes. Located south of the East Stour River. Contained at least two active holes and two partially used holes. Fresh bedding and spoil. Very well used pathways.	Main	Active/ partially used	28.11.2017, 16.06.2020	Area very overgrown with scrub and dense woodland vegetation – not possible to fully survey. Appeared disused at the time of the survey. No pathways evident.	Disused	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
83	TR 09732 37716	4 entrance holes (potentially more but concealed by dense scrub). Large spoil heaps surrounding sett with badger hair identified. Well-worn/recently used runs between entrances and to wider landscape.	Annexe	Partially used	28.11.2017	Not accessed/not found.	N/A	
84	TR 10715 36178	2 entrance holes (possibly more concealed due to dense vegetation). Located within hedgerow. Fresh bedding outside the	Outlier	Active	28.11.2017	Not accessed/not found.	N/A	No Photograph.

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
		entrance of sett.						
85	TR 10760 36618	2 entrance holes. Large spoil heap outside entrance.	Outlier	Active	28.11.2017	Not accessed/not found.	N/A	

86	TR 11823 36944	Single entrance hole. Partially used with some leaves in entrance. Size and shape of sett indicative of badger. Path identified.	Outlier	Partially used	19. 02.2018, 16.06.2020	No significant change since last survey.	Partially used	

87	TR 11579 36952	2 active entrance holes with associated pathways identified. Size and shape of sett indicative of badger.	Outlier	Partially Used	19. 02.2018; 16.06.2020	Sett still has 2 holes but is now disused.	Disused	

88/89	TR 11491 37018	88: 2 entrance holes and pathways present. Badger hairs present. 89: 3 entrance holes. Active sett with badger footprints identified.	Outlier	Active	19. 02.2018, 16.06.2020	Setts 88 and 89 are now connected and now functioning as one sett. 5 very active holes with fresh digging observed. Main sett.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
90	TR 10763 36605	17 entrance holes. Spoil heap and bedding observed.	Subsidiary	Active	18.12.2018	Main sett with 16 active holes and hairs observed within spoil.	Active	
91	TR 12081 36946	Single entrance hole. Size and shape of sett indicative of badger. Hairs identified within spoil.	Outlier	Active	08.03.2018 ; 16.06.2020	As before – active single holed outlier sett.	Active	No photograph, incidental.
92	TR 10104 36188	11 active entrance holes. Located off site within adjacent woodland. Latrines, bedding and	Main	Active	08.03.2018	Not accessed.	Active	No photograph, incidental.

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
		hairs observed.						
93	TR 13095 36889	18 entrance holes. Hairs and footprints observed. Fresh excavations. Latrines and well-worn pathways observed.	Main	Active	03.05.2018	12 entrance holes identiifed.	Not noted	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
94	TR 13148 36858	5 entrance holes. Pathways, footprints and bedding observed.	Annexe to main sett TN93.	Active	03.05.2018	4 holes with 1 actively used.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
95	TR 13386 36968	Single entrance hole. Badger hairs and footprints observed. Size and shape of sett indicative of badger. One fox scat located within entrance hole.	Outlier	Active	03.05.2018	4 entrance holes with numerous latrines and hairs nearby. Subsidiary to 94. One hole located in hedgerow. west of pond.	Active	
96	TR 12473 37279	10+ entrances. Located on railway embankment (not possible to fully inspect). Badger paths, large spoil heaps and nearby push-unders observed.	Main (precautionary assessment)	Active	10/05/2018	Main sett. 6+ holes.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
97	TR 11621 37492	Badger paths located within vicinity of sett.	Outlier (not fully accessed)	Active	10/05/2018	Not accessed/not found.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
98	TR 11659 37097	Badger hair and indicative spoil heap of badger observed.	Outlier	Active	10/05/2018	Not accessed/not found.	N/A	
99	TR 11695 37324	Size and shape of sett indicative of badger (approx..35cm X 20cm).	Outlier (precautionary assessment)	Partially used	10.05.2018	Outlier.	Disused	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
		Rabbit droppings present and multiple rabbit warrens located nearby.						
100	TR 12242 36765	Disused badger sett.	Outlier	Disused	09.05.2018, 16.06.2020	As before – disused single hole outlier.	Disused	No photograph
101	TR 12767 36473	Sett concealed within dense vegetation. Latrine observed close to sett.	Outlier	Active	11.05.2018	Not accessed/not found.	N/A	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
102	TR 11566 36722	Location of sett inaccessible to survey due to dense scrub. Personal communication with residents within the adjacent properties reported that badgers were often observed within the area and it was considered likely that a sett was present.	Unknown (No significant paths observed – likely to be an outlier if present)	Unknown (precautionary assessment of active)	14.06.2018 (personal communication with residents of 'Boleh' and 'Whiteways'). ; 16/06/2020	Not accessible.	N/A	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
103	TR09380 37358	2 east facing entrance holes. Size and shape indicative of a badger sett. Badger hairs identified within spoil.	Outlier	Partially used	12.06.2018	Partially used outlier badger sett. 2 holes identifed.	Partially used	
104	TR 11334 35570	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded sett between setts 70 and 71, with a single entrance. Classified as an Annexe sett.	Disused	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
						Strong odour of fox present by sett.		
105	TR 11115 37595	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier badger sett. 3 holes.	Active	No photograph
106	TR 11160 37586	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded outlier badger sett. 2 entrance holes.	Active	No photograph
107	TR 11976 36177	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. >8 holes. Likely to be an Annexe to Sett 24 / 25	Active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
108	TR 12480 37304	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded Outlier. 3 entrance holes.	Active	
109	TR 12440 36168	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Single hole observed.	Active	No photograph
110	TR 12153 36197	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. 2 entrance holes.	Active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
111	TR 12031 36121	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. 2 entrance holes.	Active	No photograph
112	TR 12063 36085	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Single entrance hole.	Active	No photograph
113	TR 0955437682	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. 3 entrance hole active sett.	Active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
114	TR 09804 37608	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Single active entrance hole.	Active	
115	TR 10129 36726	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Single hole entrance with bedding.	Active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
116	TR 09899 36637	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Annexe to Main Sett 2. 23 active entrance holes. Lots of hairs idenitifed. Excavations within field.	Active	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
117	TR 10698 36982	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier Sett. 2 entrance holes.1 hole disused. Latrine identified.	Disused	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
118	TR 10421 37728	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Single entrance hole.	Active	
119	TR 10592 37120	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. In same woodland as sett number 8 – Main Sett.	Active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
						19 active holes and 3 disused. Located further to the south of sett 8. More holes in this area now and thus recorded seperately.		

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
120	TR 10510 37189	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Partially used.	Partially used	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
122	TR 10424 36033	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Partially used.	Partially used	
123	TR 10715 36580	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Single entrance hole outlier. Badger hairs identified.	Active	No photograph

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
124	TR 11848 35117	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Single hole partially active.	Partially active	No photograph
125	TR 11663 37295	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded. Outlier. Disused sett with lots of rabbit burrows.	Disused	

Target Note	Grid reference	Evidence	Sett Classification	Activity Status	Survey Date / Date identified	2020 comments	2020 status	Photograph
126	TR11500 36986	Not identified within 2016-2018 surveys	N/A	N/A	N/A	Newly recorded on 16.06.20. Annexe to 88 / 89. 3 active holes Active sett with fresh badger excavations. Badger hairs present.	Active	

Table 7: Target notes – badger field signs

Target Note	Field Sign Type	Notes	Grid Reference
1	Badger Latrine	N/A	TR 12249 36816
2	Badger Latrine	N/A	TR 12546 37070

Target Note	Field Sign Type	Notes	Grid Reference
3	Badger Latrine	N/A	TR 13092 36625
4	Badger Latrine	N/A	TR 12247 35791
5	Badger Latrine and Bedding	Several latrines and fresh bedding by underpass of fence.	TR 09718 35915
6	Badger Digging	Spoil visible in woodland.	TR 09715 35845
7	Badger Latrine	Fresh Latrine	TR 12299 35743
8	Badger Latrine	N/A	TR 09418 37765
9	Badger Latrine	N/A	TR 09617 37878
10	Badger Latrine	Fresh latrine visible on railway owned land.	TR 09824 37837
11	Badger Latrine	Latrine	TR 10155 37783
12	Badger Latrine	Latrine	TR 09792 37593
13	Badger Latrine	Latrine	TR 10836 36150
14	Badger Latrine	Three latrines	TR 10863 36395
15	Badger Latrine	Fresh latrine	TR 11133 36130
16	Badger Latrine	Fresh latrine	TR 11816 35129
17	Badger Latrine	Old badger latrine	TR 11888 35760
18	Badger Latrine and Push Under	Two fresh latrines near worn push under by fence.	TR 11833 35783
19	Bader Latrine and Push Under	Old latrine. Push under beneath fence.	TR 11770 35823

Target Note	Field Sign Type	Notes	Grid Reference
20	Bader Latrine and Push Under	Fresh latrine near worn push under fence.	TR 11769 35897
21	Bader Latrine and Push Under	Fresh latrine near worn push under fence.	TR 11661 35954
22	Possible Badger Pathways	Survey access restricted by dense scrub on bund.	TR 11263 35288
23	Badger Latrine and Push Under	Multiple latrines (some fresh) within and edge of woodland. Well used path through fence	TR 11304 36113
24	Latrine and Pathway	Latrine and well-worn path	TR 11406 36075
25	Badger Bedding	Bedding matching that at nearby sett. Material matches that found at sett	TR 11657 36345
26	Badger Latrine	Latrine in bramble patch next to road where stream passes under.	TR 11775 36656
27	Badger Digging	Adjacent to two setts	TR 11346 36603
28	Badger Latrine	One fresh latrine	TR 12870 37085
29	Badger Latrine	N/A	TR 12293 37025
30	Badger Corpse	Incidental badger corpse on road	TR 11063 36751
31	Badger Latrine	Multiple latrines by bridge in this area	TR 10624 37487
32	Badger Latrine	N/A	TR 13380 36971
33	Badger Latrine	N/A	TR 11370 36228
34	Badger Latrine	N/A	TR 11122 36197
35	Badger Latrine	N/A	TR 10710 36445

Target Note	Field Sign Type	Notes	Grid Reference
36	Badger Latrine	N/A	TR 11313 36562
37	Badger Latrine	N/A	TR 11682 36999
38	Badger Latrine	Badger latrine adjacent to spoil heap	TR 10773 36615
39	Badger Foraging	Evidence of extensive foraging in the surrounding area	TR 11825 36784
40	Badger Foraging	Evidence of extensive foraging in the surrounding area	TR 12383 36767
41	Badger Foraging	Evidence of extensive foraging in the surrounding area	TR 12674 37140
42	Latrines	Multiple Latrines	TR 13407 37046
43	Lots of rabbit burrows	Burrows all along rail edge	TR 13250 37131
44	Badger paths	Badger path over road into wood	TR 13312 36704
45	Lots of rabbit burrows and fox earths	Multiple rabbit burrows and fox earths all along hedgerow. No holes indicative of badger recorded	TR 11724 37367
46	Badger path	Badger path parallel to hedgerow	TR 1166537318
47	Badger Latrine	N/A	TR12850 37201
48	Badger latrine	Latrine by ditch	TR 12549 36437
49	Fox earth	Size and shape indicative of fox earth	TR12558 36490
50	Badger path	Footprints present	TR 12570 36546 – TR 12551 36310

Target Note	Field Sign Type	Notes	Grid Reference
51	Badger latrine	N/A	TR 12758 36469
52	Badger latrine	N/A	TR 13390 36939
53	Badger path	Badger path visible intermittently along railway embankment	TR 11215 37567 – TR 11778 37459
54	Badger path	Badger path visible all along stream edge. Most visible by sett 2	TR 09902 36648
55	Rabbit burrows	Present along ditch	TR 13373 37024
56	Badger foraging	Snuffle holes and latrines	TR 13325 36992
57	Badger foraging and latrines	Foraging by pond	TR 11769 36327
58	Badger foraging	Snuffle holes	TR 12337 36771
59	Badger latrine	Single latrine	TR 12187 36910
60	Badger latrines and foraging	Around ditch end	TR 12074 36924
61	Badger path	Towards ditch in the west	TR 11868 36780
62	Lots of rabbit burrows	Pathways in vegetation largely attributable to rabbits	TR 12092 37088
63	Badger foraging	Snuffle holes in rough grassland / tall ruderal	TR 11651 37092
64	Badger latrines and foraging	All along south of East Stour River	TR 10423 37472
65	Lots of rabbit burrows in embankment	N/A	TR 12422 36293
66	Badger path	Path across field	TR10395 36375

Target Note	Field Sign Type	Notes	Grid Reference
67	Badger latrine	Lots of rabbit burrows also present	TR 12268 36401
68	Badger latrine	N/A	TR 12753 36470
69	Badger latrines	Spread across a large area of the woodland	TR 09781 36092
70	Badger latrines	N/A	TR 09993 36005
71	Badger latrine	N/A	TR 10068 35785
72	Badger paths	N/A	TR 12027 36136
73	Badger latrine	N/A	TR11802 36346
74	Badger latrine	N/A	TR 11554 36004
75	Badger latrine	N/A	TR 11552 36733

Table 8: Field signs 2020

Target Note	Field Sign Type	Notes	Grid Reference
76	Mammal path	Relatively well-worn mammal path leading into dense scrub	TR 11282 35509
77	Digging	Freshly dug pit. South of bund	TR 11204 36071
78	Rabbit warren	Large rabbit warren in wooded area	TR 11416 35019
79	Mammal path	N/A	TR 11547 35465

Target Note	Field Sign Type	Notes	Grid Reference
80	Rabbit warren	Large rabbit warren in old root system	TR 11240 36124
81	Rabbit warren	N/A	TR 11070 36136
82	Rabbit warren	Likely rabbit burrows	TR 11055 37606
83	Mammal path	N/A	TR 11478 37521
84	Rabbit warren	Rabbit burrows	TR 11832 37442
85	Rabbit warren	N/A	TR 11038 36694
86	Mammal path	N/A	TR 11020 36622
87	Rabbit warren	N/A	TR 11190 36542
88	Rabbit warren	N/A	TR 11005 36798
89	Rabbit warren	Likely rabbit burrows	TR 11632 36669
90	Mammal path	N/A	TR 12144 36289
91	Fox sighted	N/A	TR 11803 36490
92	Rabbit warren	N/A	TR 12167 37256
93	Mammal path	Disused	TR 12070 37208
94	Mammal path	N/A	TR 12309 37339
95	Rabbit warren	Likely rabbit warren on railway	TR 12539 37298
96	Rabbit warren	Likely rabbit burrow	TR 12600 37282

Target Note	Field Sign Type	Notes	Grid Reference
97	Rabbit sighted	N/A	TR 12796 37224
98	Rabbit burrows	N/A	TR 12546 36329
99	Mammal path	N/A	TR 12749 37008
100	Mammal path	N/A	TR 12541 36617
101	Rabbit burrow	N/A	TR 12333 36426
102	Rabbit burrow	N/A	TR 12234 36136
103	Rabbit burrow	Likely rabbit burrow	TR 12367 36325
104	Mammal path	N/A	TR 12379 36133
105	Fox burrow	Fox in burrow	TR 12467 36022
106	Badger latrine	N/A	TR 09796 37635
107	Mammal path	N/A	TR 09788 37644
108	Badger path	N/A	TR 09948 37490
109	Cavities	Shallow cavities in riverbank.	TR 09913 37583
110	Mammal track	Deer tracks	TR 10190 37611
111	Badger poo	N/A	TR 10245 37609
112	Badger latrine	N/A	TR 10009 36735
113	Badger latrine	N/A	TR 10013 36648

Target Note	Field Sign Type	Notes	Grid Reference
114	Badger path	N/A	TR 10150 36722
115	Badger path	Push-under	TR 10501 37684
116	Badger path	Push-under	TR 10550 37675
117	Mammal path	N/A	TR 10512 37305
118	Badger path	Push-under	TR 10697 37270
119	Badger path	Push-under	TR 10704 37243
120	Badger latrine	N/A	TR 10509 37150
121	Mammal path	N/A	TR 10496 37110
122	Badger bedding and latrine	N/A	TR 10459 36811
123	Mammal path	N/A	TR 10793 36900
124	Badger latrine	old	TR 11998 36741
125	Rabbit burrow	N/A	TR 11827 36938
126	Rabbit warren	N/A	TR 11869 36869
127	Rabbits	N/A	TR 13229 36930
128	Fox/rabbit hole	N/A	TR 13099 36946
129	Push-under	N/A	TR 10910 36228
130	Badger latrine	N/A	TR 10735 36335

Target Note	Field Sign Type	Notes	Grid Reference
131	Fox earth	N/A	TR 10719 36263
132	Fox earth	N/A	TR 10715 36580
133	Rabbit	N/A	TR 11638 36298
134	Badger path	Push-under	TR 11613 36069
135	Badger path	Push-under	TR 11641 35970
136	Rabbit burrows	N/A	TR 11806 35093
137	Rabbits	N/A	TR 11854 35180
138	Badger path	Push-under	TR 11859 35377
139	Badger path	Push-under	TR 09587 37885
140	Snuffle holes	N/A	TR 11665 36989

APPENDIX B: Key surveyor pen portraits (2018)

Surveyor	CV details
Aline Brodzinski (Senior Ecologist) BSc (hons) MSc MCIEEM	Aline has been an ecologist for over 10 years and has extensive fieldwork experience surveying for bats, water voles, reptiles, great crested newts and badger. Aline is proficient at planning and conducting badger surveys and has been an accredited agent on badger licences.
Brandon Murray (Principal Ecological Consultant) BSc(hons) MCIEEM	Brandon has been a professional ecologist for over 10 years and has been surveying badger and inputting into the design of appropriate mitigation for badger for eight years. Brandon has been an accredited agent on badger sett closure licences. He has completed professional courses on badger surveying.
Ewan Gibson, (Assistant Ecologist) BSc (hons) GradCIEEM	Ewan Gibson is a graduate ecologist with a broad range of ecological experience. Ewan has been a professional ecologist for 5 years and has conducted surveys for a range of species, including bats, badger, dormouse, amphibians and reptiles, as well as being licensed to survey for barn owl. Ewan strives to collect and collate data with accuracy and precision. He has received in-house 'on the job' training in order to understand the requirements of these surveys, including the usage of survey equipment and identification of field signs."

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