A358 Taunton to Southfields Dualling

Bat roost technical report

PCF Stage 2

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Table of contents

Table of Figures

Table of Tables

Appendix

Executive summary

The proposed A358 Taunton to Southfields Dualling scheme aims to provide a dual carriageway along the length of the A358 between Taunton and Ilminster in Somerset, connecting the A303 at Ilminster to the M5 motorway to the north. The scheme would include grade separated junctions and, with the purpose of providing a high-quality free flow journey for those using the route, the removal of at-grade junctions and direct accesses.

In England, all native species of bat are fully protected under the *Conservation of Habitats and Species Regulations 2017* (as amended) and the *Wildlife and Countryside Act (WCA) 1981* (as amended).

In order to assess which bat species are present in the survey area, and how habitats within it are used by these species, a series of bat surveys were undertaken between 2017 and 2020. This report is primarily concerned with the identification of roost sites within the zone of influence (ZoI) of the scheme. Bat activity, including the identification of commuting and foraging habitat is covered by a separate report (HE551508-MMSJV-EBD-000-RP-LB-0051). Hibernation surveys are covered by a separate report (HE551508-MMSJV-EBD-000-RP-LB-0075).

The following surveys were undertaken to identify the location of bat roosts within the ZoI of the scheme:

- ground level tree inspections and external building and structure inspections, to identify potential roosting features
- climb and inspect tree surveys and internal building inspections, to provide further information on potential roosting features and assess for evidence of roosting bats
- emergence and re-entry surveys to assess the presence of roosts in buildings, structures (bridges) and trees

This bat roost report has identified the presence of five species of bats roosting within the surveyed areas, within 100m of the Pink Modified Option. This does not include a suspected Myotis species tree roost, which is not a confirmed roost. Roosts have been confirmed in six trees and 25 buildings (some of which are used by multiple species). Potential roosts have been identified in a further four trees and six buildings. Roosts identified include two common pipistrelle maternity roosts, 19 common pipistrelle day roosts, eight soprano pipistrelle day roots, one pipistrelle species day roost, one lesser horseshoe maternity roost (likely), three long-eared bat day roosts, and one serotine day roost. Six buildings had roosts of unknown species. There were also possible day roosts for three common pipistrelle, one soprano pipistrelle, one Myotis species, two pipistrelle species, two serotine and three unknown species identified.

The radio tracking study also recorded additional tree roosts, including ten Bechstein's roosts, two being maternity roosts (Huish Woods), two barbastelle roosts including one maternity roost (Bickenhall Wood) and one Natterer's roost. All roosts identified during the radiotracking study were over 100m away from the Pink Modified option. This report is to be read in conjunction with the Bat Trapping and Tracking Report HE551508-MMSJV-MMSJV-EBD-000-RP-LB-0047.

Further surveys are required to complete assessments on a total of 29 buildings, trees and bridges / culverts in 2021/22 to determine bat roosting presence or likely absence, due to factors including access constraints and weather conditions.

1. Introduction

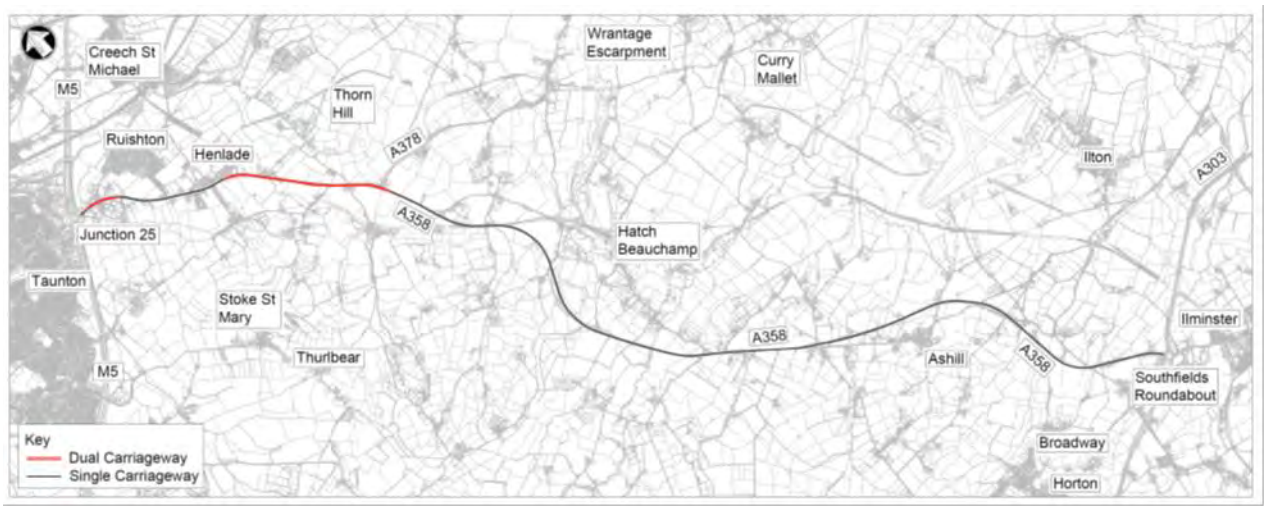
1.1. Background

1.1.1. The A303 / A358 corridor is a vital connection between the south-west, London and the south-east. Due to the population density, employment opportunities, urban concentrations and tourist attraction of the South West the A303 / A30 / A358 corridor experiences a wide range of traffic flows which lead directly to severe and regular instances of congestion and delay.

1.1.2. The A303 / A30 is part of the strategic road network (SRN) and together with the A358 forms a key strategic link between the South West Peninsular (SWP) and the rest of the south, south-east and London. Although it is dualled over much of its length there are several unimproved single carriageway sections between the M3 motorway at Basingstoke and the M5 at Taunton and Exeter which cause congestion, especially during summer weekends.

1.1.3. The existing A358 between Taunton and Southfields Roundabout is predominantly single carriageway with a short (1.1 miles) dual carriageway section in the vicinity of Thornfalcon and a 3 lane (2+1) section (0.3 miles) immediately to the south of that. It has many side roads and private accesses directly onto it. The national speed limit applies between Southfields and Henlade where it reduces to 30mph; the speed limit increases to 40mph north of Henlade on the approach to M5 junction 25. A plan showing the existing route between Taunton and Southfields is provided in Figure 1:1.

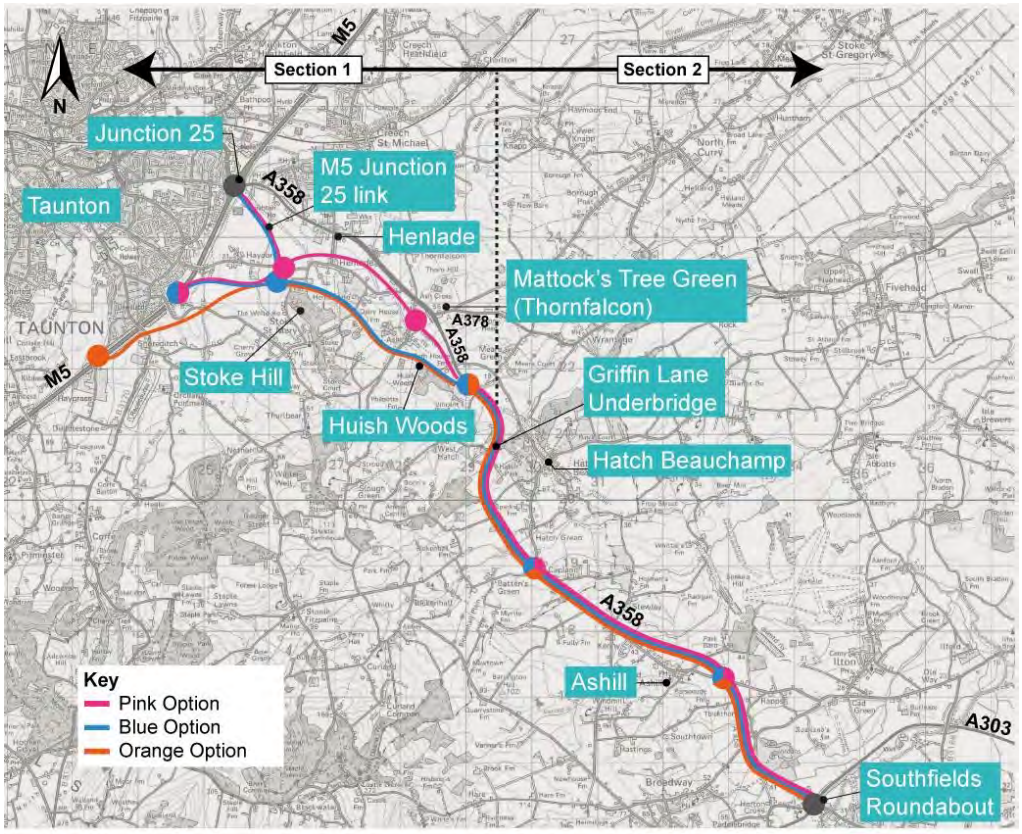
Figure 1:1 : A358 Taunton to Southfields existing road layout



1.1.4. Three potential route options were chosen, the Orange, Pink and Blue. At the public consultation in 2017 only the Orange option was presented. A further consultation was held in 2018 in which all three options were presented. The three route options presented at the 2018 consultation are described below:

- The **Pink option** commences at a new junction on the M5 approximately 1.2 miles (2 kilometres) south of junction 25. South-facing slip roads from the M5 would combine to become the new dual carriageway, which runs eastwards and north of Stoke Hill. Here a limited-movement junction is proposed with east-facing slip road connections to the new road which would allow traffic to travel between the new A358 and junction 25 via a new 0.9 mile (1.5 kilometre) dual carriageway link past the planned Nexus 25 site. The proposed route would then follow the existing A358 to Southfields Roundabout enabling the existing road to be upgraded from a single to a dual carriageway. The total length of the Pink option is 9 miles (14.6 kilometres), plus the 0.9 miles (1.5 kilometres) spur leading to M5 junction 25.
- The **Blue option** commences at the M5 approximately 1.2 miles (2 kilometres) south of junction 25 and runs eastwards on a more southerly alignment. At Stoke Hill a junction is proposed similar to that with the Pink option which would allow traffic to travel between the road and junction 25 via a new 1.2 miles (2 kilometres) dual carriageway link past the planned Nexus 25 site. The road would then continue in a south-easterly direction to West Hatch Lane, where an all-movement, grade separated junction is proposed to allow access to Hatch Beauchamp, Henlade and surrounding communities, and the A378. This option is identical to the Pink option from this point onwards to Southfields Roundabout. The total length of the Blue option is 8.7 miles (14.1 kilometres), plus the 1.2 miles (2 kilometres) spur leading to M5 junction 25.
- The **Orange option** commences at the M5 approximately 2.1 miles (3.5 kilometres) south of junction 25 at a proposed new 2-bridge roundabout which would form a new all-movements junction between the new A358 and the motorway. The proposed road initially takes a north-easterly course towards Henlade before arcing around the north of Stoke Hill. In contrast to the Blue option, there is no link to junction 25 from this location, and therefore no junction at Stoke Hill. This option is identical to the Blue option from this point onwards. The total length of the Orange option is 9.5 miles (15.3 kilometres).

Figure 1:2 : A358 Route options presented at the public consultations



Source: Mott MacDonald Sweco Joint Venture. This Map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Highways England 100030649 2016.

1.2. Scheme proposal

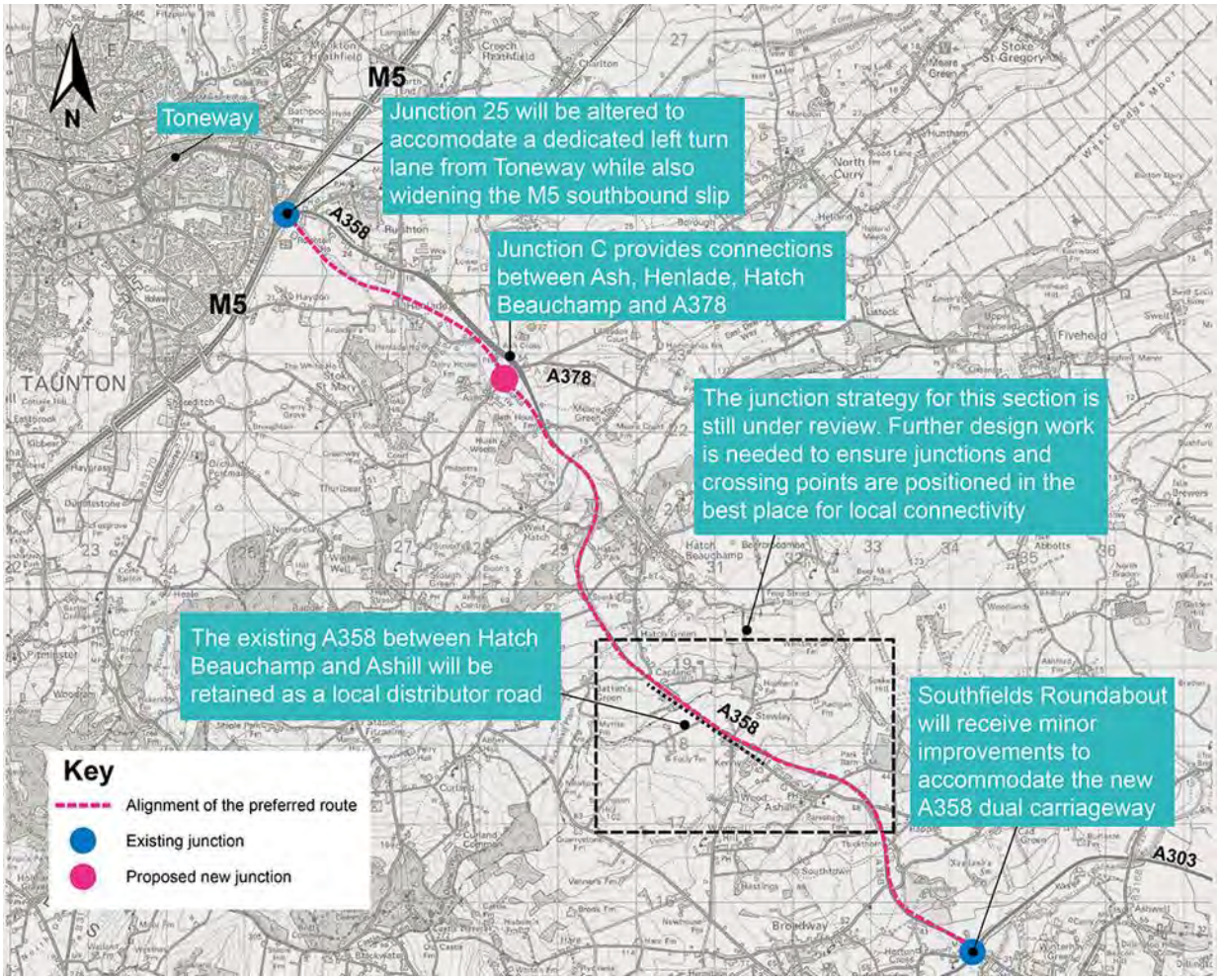
1.2.1. The Preferred Route Announcement (PRA) on the 13 June 2019 identified the Pink Modified Option (PMO) as the preferred route option (refer to the Scheme Appraisal Report (SAR) for details of the development of the Pink option to the Pink Modified Option (PMO).

1.2.2. The PMO would comprise online widening between West Hatch Lane and Southfields Roundabout. This option would involve the re-use of a large amount of the existing A358 corridor, and between West Hatch Lane and Henlade the route would pass close to the A378 junction at Mattocks Tree Green. This would enable direct movement between the proposed road and the A378. The PMO retains bypasses Henlade, connects with the A378, and connects directly to junction 25 on the M5. A plan showing the Pink Modified route is shown in Figure 1:3 below.

1.2.3. The scheme would provide a dual carriageway along the length of the A358 between Taunton and Ilminster in Somerset, connecting the A303 at Ilminster to the M5 motorway to the north. The scheme would include grade separated junctions and, with the

purpose of providing a high-quality free flow journey for those using the route, the removal of at-grade junctions and direct accesses.

Figure 1:3 : Pink Modified Option



1.3. Purpose of the report

1.3.1. This bat roost technical report has been prepared during Stage 2 of the Highways England's Project Control Framework (PCF). This technical report provides an overview of the results for the potential roost sites surveyed, undertaken between 2017 and 2020 within 100m of the PMO. The report provides methods, constraints and results of the bat roost surveys undertaken for the scheme. Confirmed roosts that are now not within 100m of the confirmed route are presented in Appendix A for completeness.

1.4. Scope of report

1.4.1. The objective of the report is to present the methodology, constraints and results of the surveys of potential bat roosts.

1.4.2. The report does not provide any detailed impact assessment or recommendations for mitigation as this aspect will be developed during PCF Stage 3 of the scheme.

1.4.3. Guidance on ecological assessment recommends that all ecological features that occur within a zone of influence (ZoI) for a proposed scheme are investigated (CIEEM, 2018)[1]. All areas within 100m of the PMO's proposed scheme footprint were assessed for potential roosting features for bats.

1.4.4. This report is to be read in conjunction with the Bat Activity Report HE551508-MMSJV-EBD-000-RP-LP-0051 and the Bat Trapping and Radio Tracking Report HE551508-MMSJV-EBD-000-RP-LB-0047.

1.5. Legislation

1.5.1. All native bat species are afforded full protection under the *Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019)*, the *Countryside and Rights of Way (CRoW) Act 2000*, the *Natural Environment and Rural Communities (NERC) Act* and the *Wildlife and Countryside Act (WCA) 1981* (as amended).

1.5.2. Under Regulation 41 of the *Conservation of Habitats and Species Regulations* it is illegal to:

- Deliberately capture, injure or kill any UK bat species
- Deliberately disturb bats (in particular, disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong)
- Damage or destroy a breeding site or resting place of any UK bat

1.5.3. Under Schedule 5 of the *Wildlife and Countryside Act 1981* it is illegal to:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost
- Deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if not occupied at the time)

[1] Chartered Institute of Ecology and Environmental Management (2018) Guideline for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal.

- Possess or advertise / exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

1.5.4. The *Conservation of Habitats and Species Regulations 2017* strengthens protection given under the WCA 1981, making it an offence to disturb bats, particularly where this may impair their ability to survive, breed, reproduce, hibernate, nurture or rear their young, or significantly affect the local distribution or abundance of a species.

1.5.5. The *CRoW Act 2000* further strengthens the *WCA 1981*, requiring the conservation of biodiversity in accordance with the *Convention on Biological Diversity (CBD) 1992*.

1.5.6. The *NERC Act 2006* places obligation on public authorities to take the conservation of species and habitats of principal importance, for conserving biodiversity, into consideration. Section 41 of the Act contains a list of habitats and species of principal importance in England.

1.5.7. The following bat species are listed as Annex II species within the *EU Habitats Directive 1992*, and therefore are given additional protection:

- Barbastelle *Barbastella barbastellus*
- Bechstein's bat *Myotis* bechsteinii
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*

1.5.8. This means that these species have been assessed as meeting the criteria for site selection of Special Areas of Conservation (SAC), to specifically observe them. Site selection is based on evidence of a large and robust population of one or more of these bat species.

1.6. Status of bats at county level

1.6.1. The are 16 species of bat present in Somerset. These are common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared *Plecotus auritus*, grey long-eared *Plecotus austriacus*, greater horseshoe, lesser horseshoe, Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri*, Bechstein's bat, whiskered *Myotis mystacinus*, Brandt's bat *Myotis brandti*, barbastelle, Nathusuis' pipistrelle *Pipistrellus nathusii*, Leisler's bat *Nyctalus leisleri*, noctule *Nyctalus noctula* and serotine *Eptesicus serotinus*. There are five SACs designated for bats. These are Hestercombe House for its lesser horseshoe population; North Somerset and Mendip Bats, Mendip Limestone Grasslands and Mells Valley for their greater horseshoe bats; and Exmoor and Quantock Oakwoods for its barbastelle and Bechstein's bat populations. All bat species are 'County Notable' species. Greater horseshoe bats are in the *Mendip Local Biodiversity Action Plan* and lesser horseshoe bats are in the *West Somerset Local*

Biodiversity Action Plan. The Somerset Biodiversity Strategy includes a group Species Action Plan for bats.

1.6.2. Somerset Bat Group[2] has the following information on the distribution and status of the 16 bat species within the county:

- **Common pipistrelle**: Common throughout Somerset, often roosting in modern houses.
- **Soprano pipistrelle**: Not as frequent as common pipistrelles, but still common and frequently found in damp Somerset woodland, or near water. Good places to see them are the Westhay reserve and Chard Reservoir.
- **Brown long-eared**: Fairly common throughout Somerset, it roosts in open lofts in older buildings or barns.
- **Grey long-eared**: Rare in Somerset. This bat is generally a little larger than the brown long-eared bat and has a dark face. A back from the brink target species. Somerset may be a hotspot for them.
- **Greater horseshoe**: Uncommon in Somerset, However, around 12% of the national breeding colony are roosting in the Mendips, and hibernating in local caves.
- **Lesser horseshoe**: A species locally common in the Mendips, uncommon elsewhere. Prefers to roost in older buildings and stone outbuildings.
- **Daubenton's**: Common throughout Somerset in wet woodlands or near water. Good places to see them are the Bishops Palace moat in Wells, Chard Reservoir or on the River Tone in Taunton.
- **Natterer's**: Uncommon in Somerset. A woodland bat, regularly seen in the Mendips. Roosts in bat boxes and some bat houses.
- **Bechstein's**: These were recorded during the Bat Conservation Trust Bechstein's survey, with possible breeding colonies towards the Dorset border.
- **Whiskered**: Uncommon in Somerset. Small roosts in older cottages, little information available on Somerset roosts.
- **Brandt's**: Has been recorded in Somerset, but limited knowledge of their breeding status so far. Believed to be rare in the county.
- **Barbastelle**: Rare in Somerset. Surveys have confirmed it as breeding in the county's ancient woodland.
- **Nathusius' pipistrelle**: A few have been recorded in flight, but little information on breeding in Somerset. Has been found breeding north of the Mendips.
- **Leisler's**: Very little information available, however recently discovered a roost in the center of Taunton.
- **Noctule**: Common throughout Somerset. A woodland bat, often roosting in hollow trees or bat boxes.

[2] https://somersetbat.group/bats/somerset/

- **Serotine**: Uncommon and declining in Somerset, now less frequently seen. Feeds over cattle grazed pasture. Likes to roost in Victorian houses with clay tile roofs and deep barge boards.

1.7. Bat ecology

1.7.1. Bats are sociable animals that can live up to 30 years. During the summer months female bats form maternity colonies - which may be in a variety of natural or artificial structures, such as houses, trees or bridges depending on the species - to have their young. These tend to be the same site every year. A mature female may produce one offspring every year or so. Maternity roosts disperse in September or October and many bats hibernate in an alternative site, some species using caves, tunnels, bridges or mines.

1.7.2. Bats are nocturnal and emerge from their roosts at dusk to feed. In the UK all bat species feed on insects. Numerous feeding sites are needed throughout the year as insect availability changes. They can forage several kilometres away from their roost site and often rely on hedgerows, woodland edge, tree lines, copses and watercourses to commute.

2. Methodology

2.1. Desk study

2.1.1. A detailed biological records search was requested from Somerset Environmental Records Centre (SERC) in 2016, for all historical records within a 2 kilometre radius of the scheme.

2.1.2. This desk study was based on a 2km search of the Pink Modified Option (PMO) during the early stages of scheme design and should be updated during PCF Stage 3 to support the Development Consent Order (DCO) application and should be extended to 10 kilometres.

2.1.3. The desk study also included a search for current and historic bat mitigation licenses on the Multi-agency geographic information for the countryside (Magic)[3] website for licences within 10km of the PMO in February 2021.

2.1.4. All potentially suitable habitats with potential to be impacted by the three scheme options under consideration at the time were identified using the Department for Environment Food and Rural Affairs (Defra) Multi Agency Geographic Information for the Countryside (MAGIC) online viewer tool (Defra 2017), the use of 1:10,000 Ordnance Survey Mapping and aerial photography. Bat European Protected Species Licences were also searched for within a 10 kilometre radius of the scheme.

2.2. Habitat assessment

2.2.1. An extended Phase 1 habitat survey was undertaken in May 2016 and potentially suitable habitats for bats to find roosts in were identified within 100m of the three scheme options. Habitats were initially assessed using aerial photography as part of a desk study exercise. These habitats were then subject to ground truthing during the extended Phase 1 habitat surveys undertaken in May 2016 to assess their suitability, where access was permitted. Following the extended Phase 1 habitat survey, more detailed preliminary roost assessments were undertaken as outlined below.

2.3. Preliminary roost assessments

2.3.1. In accordance with IAN 116/08, buildings, bridges and trees within 100m of the proposed construction footprint were assessed for their potential to support bats to roost in, between May 2017 and September 2019. IAN 116/08 was superseded in 2020 by LD 118. LD 118 does not provide any guidance on survey buffers but refers to the use of standard guidance. The Bat Conservation Trust (BCT) Guidelines[4] do not suggest survey

[3] https://magic.defra.gov.uk/MagicMap.aspx
[4] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

buffers. Therefore, due to the majority of surveys taking place before 2020, the previous guidance was also followed for surveys undertaken after the issue of LD118 for consistency. A memo was produced (see Appendix C) with this methodology suggested, which was agreed by Natural England.

2.4. External assessment of buildings and structures from ground level

2.4.1. Surveys were undertaken in accordance with BCT Guidelines. Building surveys were carried out externally, using binoculars and a high-powered torch and internally, using torches and an endoscope between 2017 and 2020. Each building or structure was methodically surveyed in order to identify any potential ingress or egress points, noting the following:

- type of feature (for example, missing roof tile)
- size of ingress / egress point
- height and orientation of each feature
- any sign of bat use, such as scratch marks, urine staining or droppings

2.4.2. This information was used to determine the overall potential of each building or structure to support roosting bats including an initial assessment of the potential for supporting hibernation roosts.

2.4.3. The types of suitable features searched for signs of bat use within buildings included but were not limited to:

- wall cavities
- weep holes
- loose tiles or felt
- broken or loose soffit boxes and fascia boards
- missing mortar between brickwork which may lead into a cavity wall
- gaps under lead flashing

2.4.4. Bridge surveys were carried out in accordance with BCT Guidelines, in which potentially suitable features were searched including, but not limited to:

- cracks leading to voids
- missing mortar between stone or brickwork
- expansion joints
- drainage pipes and ducts

2.4.5. The respective classifications are described in Table 2:1 below, with assignment based on the BCT Guidelines.

Table 2:1 : Categories of potential suitability of features for bats

Bat Roost Suitability	Description
Confirmed	Bats or evidence of bats recorded within the structure or tree, including both current and / or historic roosts.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and / or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost sites, but with none seen from the ground or features seen with only very limited roosting potential.
Negligible	Negligible habitat features likely to be used by roosting bats.

2.4.6. A brief description of each building and any relevant features was produced, referencing the glossary of architectural terms in the *Bat Workers' Manual* (Mitchell-Jones, 2004)[5]

2.4.7. All information recorded during the external building and structures assessment was recorded on a standardised form, including GPS co-ordinates. Digital photographs were taken of each of the features in addition to the building or structure as whole (if permitted to do so by the landowner), which can then be cross-referenced with each potential roost feature within the form.

2.5. Assessment of trees from ground level

2.5.1. Ground level tree assessments were undertaken in accordance with BCT Guidelines. Surveys were undertaken between 2017 and 2020. All trees within a 100m buffer of the scheme construction footprint were assessed for their potential to support roosting bats by a survey team consisting of at least one ecologist with suitable knowledge and experience in conducting these assessments.

2.5.2. Trees were surveyed from ground level, using binoculars and a torch, where appropriate, to obtain an initial judgement of the depth of any potential roost features.

2.5.3. Each surveyed tree was given a unique reference code, marked on a map, and had GPS coordinates recorded. Digital photographs were taken of each tree and where possible any key potential roosting features. This information was then cross-referenced to the standardised form, with information provided detailing the number of potential

[5] A J Mitchell Jones & C J Robertson (2004) Bat Workers Manal –3rdEdition –JNCC.

roosting features, the height and aspect of features and the type of roosting features, such as the following:

- trunk cavities
- branch cavities
- woodpecker holes
- loose bark
- hazard beams
- callus rolls
- splits

2.5.4. Where evidence of bat use could be seen from ground level, such as staining or droppings, this was also noted in the standard forms.

2.5.5. This initial assessment categorised the structure or tree as having either negligible, low, moderate, or high bat roosting potential; or as a confirmed roost, based on the criteria used in the Bat Conservation Trust Guidelines (see Table 2:1), taking into account its connectivity to the wider environment and position in the context of the landscape. Trees were also assessed for their hibernation potential based on the presence of features with potential to support hibernating bats.

2.6. Internal building and structure surveys

2.6.1. Internal building inspections were undertaken during 2019 in accordance with BCT Guidelines on buildings to be directly impacted by the scheme and confirmed roosts within 100m of the PMO.

2.6.2. Based on the survey buffers above and where access to these buildings was granted, internal building inspections were undertaken. This allowed for further assessment of the buildings potential to support roosting bats. All internal building inspections were undertaken by a pair of surveyors, at least one of which held a current Natural England level 1 bat licence as a minimum. Where more intrusive survey techniques were used including the use of endoscopes, surveys were led by a surveyor with a level 2 bat licence.

2.6.3. Where possible and safe to do so, surveyors accessed all areas within the building, including attic, loft spaces, and cellars. High-powered torches with red filters, binoculars and endoscopes were used to assess all accessible areas, with any access constraints recorded in survey notes and fed into the assessment of the building.

2.6.4. Digital photographs of evidence of bat use (such as droppings and urine staining), were taken where it could be ensured that this would not disturb any roosting bats.

2.6.5. Where droppings were found, a small sample considered to be representative of each species within the roost were collected. These were then collected in a plastic bag or sample tube, and marked with the following details:

- Date of sample collection (day / month / year)
- Survey location reference
- GPS co-ordinates
- Suspected species
- Surveyor name

2.6.6. These samples were then stored in a cool, dry place until they could be sent off for DNA analysis by the University of Warwick to confirm species. Where droppings were characteristic of a species and a positive identification could be made by a licenced bat worker, droppings were not sent for analysis.

2.6.7. Using the results from the internal building inspections, buildings were then reclassified for their potential to support roosting bats. Additional information on the potential type of roost which the building could support, in addition to its rough size, was also noted when the information obtained from this survey could be used to do this.

2.6.8. Each building was also further assessed for its potential to support hibernating bats, including identifying any cellars or other suitable features.

2.7. Potential roosting features tree climbing inspection surveys

2.7.1. To provide further assessment of trees with potential to be affected by the scheme, climb and inspect surveys were undertaken in accordance with BCT Guidelines in 2017 and 2019. The scope of trees assessed by climb and inspect surveys followed the survey buffers as agreed with Natural England. This included all high potential trees within 100m of the scheme footprint and all trees with moderate potential to support roosting bats within 20m of the scheme footprint. In accordance with BCT Guidelines, trees with low potential were not subject to further survey, unless directly impacted by the scheme.

2.7.2. Climb and inspect surveys were undertaken by two suitably qualified tree climbers (CS38), at least one of whom held a current Natural England level 2 bat survey licence. This survey enabled potential roost features to be inspected up close and larger features were inspected using an endoscope to allow a more accurate assessment of the potential of a tree to support roosting bats. Each tree, where safe to do so, was subject to a single climb and inspect survey. Following the inspection, the potential for a tree to support roosting bats was either:

- Upgraded: climb and inspect survey allowed for a better assessment of features and revealed that features were more suitable than originally thought from the ground level assessment

- Downgraded: the aerial advantage point allowed for reducing the potential of features, or even ruling them out altogether as having roosting potential
- Confirmed: the classification for each potential roost feature attributed during the ground level assessment
- Confirmed: roosting bats, where evidence of current use was identified. This may be the presence of bats themselves, fresh droppings or fresh staining

2.8. Dusk emergence and dawn re-entry surveys

2.8.1. Surveys of the structures and trees previously identified as having potential roosting features were undertaken by experienced surveyors, to adequately cover all features. Methodology from the BCT Guidelines was followed, which involved surveyors observing the features from 15 minutes before sunset, until 90 minutes after sunset for dusk emergence surveys. Dawn re-entry surveys were from 90 minutes before sunrise until 15 minutes after sunrise. Where late emerging / early returning species were identified during surveys, surveys were extended beyond 90 minutes up to 120 minutes after sunset / before sunrise. For surveys to be valid, they needed to be carried out in optimal conditions, with temperatures at sunset of 10 degrees Celsius or higher and with no persistent rainfall, unless justified by the leading surveyor. Features of high potential were surveyed three times, with at least two of these occurring in the core season between May and August. Moderate potential features were surveyed twice, with at least one between May and August. Low potential building features were surveyed once during the core season. There was a minimum of a 2 week gap between repeat surveys.

2.8.2. Full spectrum bat detectors (Anabat Walkabout and Elekon Batlogger detectors) were used to record any calls which were made by bats and the sound files were then analysed using the analysis software Anabat Insight and BatExplorer to determine species (where possible, otherwise identified to genus level) and the level of bat activity in the area.

2.8.3. The surveys were undertaken in accordance with the BCT Guidelines as set out in the below table:

Table 2:2 : Recommended minimum number of survey visits for presence / absence surveys to give confidence in a negative result for structures.

Low Roost Suitability	Moderate Roost Suitability	High Roost Suitability
One survey visit. One dusk emergence or dawn re-entry survey (structures). **No further surveys required (trees).**	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.

Source: Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016)

2.9. Radio tracking surveys

2.9.1. Mist netting surveys were undertaken in Huish Wood between April and September 2017, which identified populations of barbastelle and Bechstein's bats in the area. This was carried out by Dave Byett under project trapping licence 2017-30599-SCI-SCI. Multiple nets were used per trapping session to allow for three trapping sessions per woodland surveyed (six woodland surveyed), in accordance with BCT Guidelines to determine presence / likely absence of Bechstein's foraging / commuting in a woodland. In addition, barbastelle bats and lesser horseshoe bats were recorded during static and transect surveys. These bats have higher protection measures and a post lactating female Bechstein's was trapped, suggesting that the woodland is used as a maternity foraging ground / or breeding. It was therefore important to determine where they were roosting, as a significant proportion of the woodland would have been impacted by the Blue and Orange proposed routes. It is also considered that data from radio tracking is still relevant, even though the PMO was chosen that avoids impacts to Huish woods. This is due to the widening of the existing A358 potentially effecting areas of woodland used by local populations of Bechstein's and barbastelle bats, which may be connected to the woodland surveyed.

2.9.2. Following 2017's results, radio tracking was undertaken by Davidson-Watts Ecology in July 2018, August 2018 and June 2020 to fully assess the status of barbastelle and Bechstein's bats within and adjacent to the scheme footprint and to determine whether there were any roosts in Huish Wood[6] which at the time of the 2018 surveys was to be directly impacted by the preferred option. The methodology and study area for the radiotracking surveys are provided within the Radio-Tracking report HE551508-MMSJV-EBD-000-RP-LB-0047. Previous survey techniques had not identified any roosts for the two species. However, due to the species frequently transitioning between roost sites, it is difficult to find roosts using the most widely used survey techniques, which are ground and aerial inspections.

2.10. Grouping of bat species calls

2.10.1. Calls from bats belonging to the species Myotis are all known to produce very similar sounding calls, which are difficult to distinguish between in the field, and when using bat call analysis software. For the purposes of this assessment the following species have been grouped to be reported as Myotis sp.

- Alcathoe bat Myotis alcathoe
- Bechstein's bat
- Brandt's bat
- Daubenton's bat
- Natterer's bat

[6] Davidson-Watts Ecology – Bat Trapping and Radio-tracking 2018 and 2020: A358 Taunton to Southfields.

- Whiskered bat

2.10.2. This grouping is required to lower the probability of misidentification of species recorded during surveys. However, it is not expected to significantly impact the results of this assessment. Where roosts were identified confirmation of species was made through DNA analysis of droppings, where possible. Bat droppings were sent for DNA testing where the experienced bat surveyor could not easily determine the species from the droppings.

2.10.3. Common pipistrelle and soprano pipistrelle calls which look and sound the same, have peak frequencies only 10kHz apart. These calls often overlap as a result of call plasticity, allowing bats to adapt their calls to the habitats they are in. Therefore, to avoid misidentification of species, the label Pipistrellus sp. has been used for any calls falling within the range of peak frequency where call overlap is known to occur between 49kHz and 51kHz.

2.10.4. This is also the case for common pipistrelle and Nathusius' pipistrelle, with the lower end of the common pipistrelle call range overlapping with the higher end of the Nathusius' pipistrelle range. As all three species of pipistrelle have been recorded within the survey area, Pipistrellus sp., has been used as a species identifier where calls have been recorded in the overlap ranges, but definitive calls from all three species have not been recorded during a specific survey or at that location. The purpose of which is to ensure that none of these three species are underreported within this assessment.

2.11. Constraints

2.11.1. It was not possible to survey numerous structures and trees, due to lack of access for various reasons. The following section details where no access was permitted for certain land parcels within the PMO buffer:

Preliminary appraisal for potential roosting features

2.11.2. Access was denied for numerous buildings and land parcels. This means that it has not been possible to fully assess the status of bats roosting within these land parcels. Details of the buildings and land parcels which could not be accessed are provided in the below table.

Table 2:3 : Building numbers and land parcels where no access for preliminary appraisals

Building number / land parcel number	Description
77 and 78 / ST207263	Access denied. Crossing point undertaken instead
173 and 174 / ST307743	No confirmation of access. Surveys postponed until 2021
285 / ST307472	No confirmation of access. Surveys postponed until 2021

2.11.3. Buildings 290, 292, 294, 311, 312, 313, 314,and 315, have been scoped out as whilst they are within 100m of the wider construction footprint, these works are minor, such as minor works to existing minor roads, and they are over 100m away from the main works and therefore disturbance would be negligible from the scheme.

2.11.4. In addition to those land parcels where access had been denied for the preliminary appraisals as outlined in Table 2:3, numerous landowners refused access for the internal inspections due to the increased intrusiveness of these surveys. Details of these additional buildings are outlined in Table 2:4.

Table 2:4 : Building numbers and land parcels where no access for internal inspections

Building number / land parcel number	Description
50 / ST291158	Access refused. Try again in 2021
57 / ST56479	Unable to contact. Reschedule 2021
107 / ST277430	Rescheduled for 2021
157 / ST183453	Unable to contact. Reschedule 2021
186 / ST328598	Unable to contact. Reschedule 2021
196 / ST158468	Scheduled for 2021
210 / ST162905	Unable to contact. Reschedule 2021
221 / ST201892	Rescheduled for 2021
230 / WS79692	Unable to contact. Reschedule 2021
238 / WS36502	Unable to contact. Reschedule 2021
243 / U00053	No access to loft. Survey not possible
245 / WS43216	Access refused. Try again in 2021
274 / ST72677 / WS30942	Unable to contact. Reschedule 2021

Potential roosting feature inspection surveys of trees

2.11.5. During the at height surveys of trees with bat roosting potential, it was not possible to climb numerous trees due to safety concerns. Trees were assessed as unsafe to climb when they were either dead or showed significant signs of decay. For these trees, where features could be accessed from the ground, a close-up inspection of potential roosting features (PRFs) was undertaken, including an endoscope inspection of any cervices or cavities. A GoPro camera on an extendable pole was also used to inspect features where climbing couldn't take place. Trees which were not safe to climb are shown in Table 2:5.

Table 2:5 : Tree numbers where climbing surveys were not safe to undertake

Tree number	Land parcel number
100	WS78653
177	ST324729
181	ST324729
182	ST324729
183	ST324729
212	ST324337
216	U00035
218	U00035

Tree number	Land parcel number
238	WS78713
250	WS78713
317	WS78616

Emergence and re-entry surveys

2.11.6. In addition to those land parcels and building numbers where access was denied during initial preliminary assessments as outlined in Table 2:3, the below buildings and trees were subject to access constraints during surveys. Details of these constraints are outlined in the below table.

Table 2:6 : Building numbers with access restrictions for emergence and re-entry surveys

Building or tree number / land parcel number	Description
Building 185 / ST208537	Access denied. Static detector placed adjacent to the building. Though these results can't be used to determine presence / likely absence. Therefore, this building will need further surveys in 2021
Building 244 / WS59340 WS59343	During 2nd survey, heavy rain before the start of the survey, then light drizzled throughout, no bats heard so survey deemed invalid. Need to be updated in 2021
Buildings 277, 278 and 279 / ST43481	No access confirmed. Postponed until 2021.
Tree 54 / WS44368	Feature of the tree was obscured by bramble and will need to be revisited in 2021
Tree 352 and 355 / ST307472	Access denied, both high potential, will need three surveys in 2021
Tree 350, 351 and 354 / ST307472	Access denied, all moderate potential, will need two surveys in 2021

2.11.7. The below list shows that several buildings, trees and bridges / culverts will need further surveys to complete the required survey effort due to either poor weather conditions or access restrictions at the time of assessment, to which further information can be found in Appendixes G, H, and I.

- Tree 73, two emergence and / or re-entry survey
- Tree 169, three emergence and / or re-entry survey
- Tree 178, emergence or re-entry
- Tree 234, further emergence or re-entry
- Tree 238, three emergence and / or re-entry survey
- Tree 350, full assessment
- Tree 351, full assessment
- Tree 352, full assessment
- Tree 354, full assessment
- Tree 355, full assessment
- Tree 370, two emergence and / or re-entry
- Building 67S, further emergence or re-entry

- Building 71, emergence or re-entry
- Building 74, emergence or re-entry
- Building 77, full assessment
- Building 78, full assessment
- Building 111, two emergence and / or re-entry survey
- Building 174, full assessment
- Building 173, full assessment
- Building 109, emergence or re-entry
- Building 185, three emergence and / or re-entry survey
- Building 273, emergence or re-entry
- building 274, emergence and / or re-entry
- Building 277, three emergence and / or re-entry survey
- Building 278, two emergence and / or re-entry survey
- Building 279, two emergence and / or re-entry survey
- Building 285, full assessment
- Bridge 4, three emergence and / or re-entry survey
- Bridge 114, two emergence and / or re-entry survey

Hibernation surveys

2.11.8. To date no hibernation surveys have been undertaken, this is due to programme changes. Surveys are due to be undertaken in December 2020 and January and February 2021; please refer to the A358 Bat Hibernation Report HE551508-MMSJV-EBD-000-RP-LB-0075

3. Results

3.1. Desk study

3.1.1. Biological records obtained from Somerset Environmental Records Centre (SERC) revealed there were records of common pipistrelle *pipistrellus pipistrellus*, soprano pipistrelle, brown long-eared, noctule, Daubenton's *Myotis daubentonii*, serotine *Eptesicus serotinus*, lesser horseshoe, whiskered *Myotis Mystacinus*, possible Brandt's *Myotis brandtii*, Natterer's *Myotis Nattereri*, Bechstein's, barbastelle and unidentified bats within 2 kilometres of the scheme.

3.1.2. A significant number of bat records were returned from SERC within 2 kilometres of the scheme. A summary of the results is provided in the Table 3:1 and map and all records received from SERC are provided in Appendix D.

3.1.3. When only selecting records within the past 10 years, a number of significant roosts are omitted from the data including maternity and hibernation roosts, many of which are likely to persist and still be present, unless otherwise affected by development. Therefore, all data has been included below in table 3.1.

Table 3:1 : SERC bat records for 2km of the Pink Modified Option

Species	Number of records within 2km Shows number of records (with total abundance in brackets)	Notes on significant records (hibernation and maternity roosts[7])
Bats	34 (38)	Including 10 hibernation roosts. The closest being 78m west of the scheme. (recorded in 1992, likely one of Park Farm House, though exact one unknown)
Bechstein's bat	1 (1)	1.9km south-west of the scheme in Thurlbear Wood.
Brown long-eared bat	46 (146)	Including seven hibernation roosts. The closest being 698m south-west of the scheme. Including three maternity roosts. The closest being 270m east of the scheme.
Common pipistrelle	36 (379)	Including three hibernation roost, 1.04km south-east of the scheme. Including two maternity roosts. The closest being 200 metres south west of the scheme.
Daubenton's bat	3 (3)	No maternity or hibernation roosts identified.
Lesser horseshoe bat	54 (1026)	Including four hibernation roosts. The closest being 696m east of the scheme. Including one maternity roost, 2km east of the scheme.

[7] Assessment of summer roost status based on maximum counts recorded and months when bats were recorded to determine difference between maternity and day roosts. Any records recorded within the core hibernation months of December, January and February, were taken as a hibernation roost.

Species	Number of records within 2km Shows number of records (with total abundance in brackets)	Notes on significant records (hibernation and maternity roosts[7])
Long-eared bat species	1 (1)	No maternity or hibernation roosts identified.
Natterer's bat	2 (3)	No maternity or hibernation roosts identified.
Noctule bat	8 (8)	No maternity or hibernation roosts identified.
Pipistrelle bat species	12 (12)	No maternity or hibernation roosts identified.
Serotine	26 (26)	One hibernation roost 698m south-west of the scheme. No maternity roosts identified.
Soprano pipistrelle	10 (33)	Including one maternity roost with 24 bats, 1.6km south of the scheme. No Hibernation roosts.
Unidentified bat	8 (8)	No maternity or hibernation roosts identified.
Western barbastelle	4 (4)	Records from four separate sites. Closest is 2.4km west in Thurlbear Wood.
Whiskered bat	4 (4)	No maternity or hibernation roosts identified.
Whiskered / Brandt's bat	**1 (1)**	**No maternity or hibernation roosts identified.**

3.1.18. The data search results show the importance of the area for lesser horseshoe bats, with lesser horseshoe records representing the highest number of records with 54 records (comprising a total count of individuals recorded of 1,026) records within 10km of the scheme, including one maternity roost (940 of the 1,026 records are associated with this maternity roost) and four hibernation roosts. At least 11 species of bat have been recorded within 10km of the scheme.

3.2. Existing bat mitigation licenses

3.2.1. A search for current and historic bat mitigation licenses on Multi-agency geographic information for the countryside (Magic)[8] in February 2021 identified 67 bat mitigation licences within 10km of the scheme footprint. These licences covered the following species:

- Lesser horseshoe – 22 licences
- Greater horseshoe – three licences
- Brown long-eared – 46 licences
- Common pipistrelle – 48 licences
- Soprano pipistrelle – 19 licences
- Whiskered – five licences
- Natterer's – nine licences

[8] https://magic.defra.gov.uk/MagicMap.aspx

- Brandt's – one licence
- Serotine – 14 licences
- Barbastelle – one licence

3.2.2. The above licences covered impacts to 12 breeding roosts. As the licences covered multiple species it is not possible to confirm which species the breeding roosts supported, with the exception of licences for single species which included one lesser horseshoe breeding roost and one brown long-eared breeding roost.

Two of the bat mitigation licences are within 2km of the scheme footprint. These are listed in Table 3:2 below.

Table 3:2 : Bat mitigation licenses within 2 kilometres of the proposed scheme.

License number	Bat species	Start date	End date	Location	Distance from Scheme
2015-13117-EPS-MIT-1	Brown long-eared, common pipistrelle, soprano pipistrelle	03/08/2015	02/08/2020	Stoke St Mary	890m south-west
2014-2694-EPS-MIT	**Brown long-eared, lesser horseshoe and whiskered**	**27/08/2014**	**01/10/2015**	**Between Ruishton and Thornfalcon**	**980m north-east**

3.3. Field surveys

3.3.1. Information obtained from the bat surveys undertaken throughout the 2017 to 2020 and survey seasons is presented below within their respective survey type sections. This includes classification of features, species identification during each survey type and potential features used for roosting, foraging and commuting bats.

3.3.2. A meeting was held with Natural England in May 2017 to discuss proposed protected species surveys and in particular bat surveys for the A358 Taunton to Southfields Dualling Scheme. In advance of this meeting, Natural England were sent a memo outlining the proposed surveys. Natural England agreed with the scope of surveys proposed. A copy of the memo is in Appendix C.

Preliminary bat roost potential assessment

Trees

Ground level tree assessment

3.3.3. During the preliminary appraisal for potential roosting features, there were a number of individual mature and semi-mature trees across the study area which had features identified as having the potential to support roosting bats. These were identified within hedgerows, copses, woodland and along field boundaries from initial ground level assessments. Suitable roosting features included rot holes, splits, hazard beams, tears, hollow limbs, flaking bark and thick matted ivy.

3.3.4. During the ground level tree assessment surveys, a total of 144 trees were assessed within 100m of the PMO as having either low, moderate or high bat roost potential.

3.3.5. A total of 42 trees were initially assessed as having a high potential to support roosting bats within the 100m buffer of the PMO.

3.3.6. A total of 68 trees were initially assessed within 100m of the PMO as having a moderate potential to support roosting bats.

3.3.7. A total of 34 trees were initially assessed as having low potential to support roosting bats within 100m of the PMO.

3.3.8. The results of the ground level tree assessment are summarised in Appendix G

Potential roost feature – climb and inspect survey

3.3.9. Where safe to climb, trees were subject to climb and inspect surveys in line with the methodology outlined in section 2.7. Potential to support roosting bats was subsequently reclassified based on the outcome of these surveys, if necessary.

3.3.10. Fifty-eight trees were subject to a climb and inspect survey. The remaining trees were not climbed due to health and safety risks (if the trees were in poor health), or if the only feature with roosting potential was dense ivy which is not possible to inspect thoroughly.

3.3.11. Of the 42 trees initially assessed as having a high potential to support roosting bats within the 100m buffer of the PMO, 19 trees were subject to a single climb and inspect survey. Following climb and inspect surveys, 11 trees remained high potential, five trees were downgraded to moderate, one tree was downgraded to low and two trees were downgraded to negligible.

3.3.12. Of the 68 trees initially assessed within 100m of the PMO as having a moderate potential to support roosting bats, it was possible to climb 37. The climbing survey downgraded 15 trees to negligible potential, 11 trees were downgraded to low potential 10 trees remained moderate and one tree was upgraded to high potential. Thirty-one moderate potential trees within the PMO did not have a climb and inspect survey for the reasons noted in section 3.3.4 or were further than 20m from the scheme, thereby not requiring further surveys.

3.3.13. Of the 34 trees initially assessed as having low potential to support roosting bats within 100m of the PMO, three are within the scheme footprint. All of these trees were subject to a climb and inspect survey, which downgraded one tree to negligible with two trees remaining as low potential.

3.3.14. Overall, following the climb and inspect surveys, the total number of trees with high potential to support roosting bats within 100m of the scheme was reduced from 42 to 34 (including trees retained as high potential where no climb and inspect surveys were undertaken on these trees).

3.3.15. Overall, following the climb and inspect surveys, the total number of trees with moderate potential to support roosting bats within 100m of the scheme was reduced from 68 to 46 (including trees retained as moderate potential where no climb and inspect surveys were undertaken on these trees).

3.3.16. Overall, following the climb and inspect surveys, the total number of trees with low potential to support roosting bats within 100m of the scheme increased from 34 to 45. The majority of low potential trees were not subject to climb and inspect surveys due to their distance from the scheme.

3.3.17. A total of 19 trees were assessed as having negligible potential following the climbing surveys.

3.3.18. The location of these trees in relation to the scheme is contained within Appendix E.

3.3.19. Table 3:3 shows the tree results which are within the 100m buffer zone of the PMO:

Table 3:3 : Summary of results for tree surveys

Bat Roost Suitability	Ground Level Tree Assessment	Updated following PRF Climb and Inspect Surveys
High	42	34
Moderate	68	46
Low	34	45
Negligible	N/A[9]	19
Total	144	144

[9] Due to the very high number of trees with no or negligible potential, these were not recorded during the survey

Bat radio tracking surveys

3.3.20. Bechstein's and barbastelle bat tree roosts were found during radio tracking, undertaken by Davidson-Watts Ecology[10]. Bechstein's were found to be roosting in two trees on the northern edge of Huish Woods and possible Bechstein's roosts in Abbey Wood, Captain Raven's Wood, Bickenhall Wood and Line Wood. A barbastelle roost was found roosting in a tree at the south western corner of Huish Woods. Within these results, there were two maternity roosts (19 Bechstein's bats in one tree and 21 Bechstein's bats in another) in the south-western corner of Huish Woods and one maternity roost with at least 11 barbastelle bats in Bickenhall Wood. Additionally, a female Natterer's bat was tracked to a tree roost in a hedgerow tree near West Hatch. All of these roosts are outside of the 100m buffer of the PMO. Detailed radio tracking survey results are provided within the A358 Radio Tracking Report.

Buildings

Preliminary roost assessment – External assessment

3.3.21. Any man-made structure was included within this assessment, which included, buildings, bridges, underpasses, etc. A total of 193 buildings and six bridges / culverts were identified within 100m of the PMO, which required external inspection to determine potential. Dates of external building assessments varied due to access restrictions, but the majority were undertaken during the survey season of 2017. Further external building assessments were undertaken during the 2018 survey season as and when access was granted to a particular land parcel.

3.3.22. Table 3:4, provides a summary of building potential from external assessments within 100m of the Modified Pink option prior to emergence or re-entry. Detailed external survey results are provided in Appendix H.

Table 3:4 : Summary of building and bridges / culverts external assessment results

Roost Potential	Total Number of buildings and bridges / culverts
Confirmed	2
High	39
Moderate	29
Low	34
Negligible	79
Undetermined	5
Scoped out	11

Emergence / re-entry surveys

[10] Davidson-Watts Ecology – Bat Trapping and Radio-tracking 2018 and 2020: A358 Taunton to Southfields.

Trees

3.3.23. The emergence / re-entry surveys identified the presence of six trees supporting confirmed bat roosts and possible confirmed presence of bat roosts in four trees within 100m of the PMO. Common and soprano pipistrelle bats were found to be roosting in the confirmed tree roosts within the PMO buffer, during emergence and re-entry surveys. Tree 335, in a field south of Shrubbery Farm, on the northern side of the A358 had a maximum count of one common and one soprano pipistrelle roosting in it. Tree 369, in a small area of woodland, on the north side of the A358 at the southern extremity of the scheme had a single soprano pipistrelle re-enter a roost within the tree. This emergence was an incidental survey results picked up when carrying out an emergence survey from 250. One soprano pipistrelle was confirmed emerging from a lower feature of tree 244 and continued to forage in the local area. Two soprano pipistrelle bats were seen exiting from tree 237 during one survey and one was seen re-entering during another survey. Tree 233 had emergences of two soprano pipistrelle and one common pipistrelle and commuting along the adjoining hedge line. Tree 234 had a common pipistrelle enter under loose bark. An unknown species, likely pipistrelle, was seen possibly emerging from flaking bark on a branch of tree 245. A Myotis sp. was seen possibly emerging from tree 239. Tree 295 had a potential emergence of soprano pipistrelle observed to drop from the tree. One pipistrelle bat was seen possibly emerging from tree 370. A summary of the confirmed and possible roosts identified within trees are shown in full detail in Appendix G and a map showing confirmed roosts in Appendix A.

Table 3:5 : Summary of results for tree emergence and re-entry surveys for confirmed roosts

Tree Number	Roost Status (maximum count)	Date of peak count
233	One x common pipistrelle. Two x soprano pipistrelle.	25/06/2019
234	One x common pipistrelle.	11/07/2019
237	Two x soprano pipistrelle.	31/07/2019
239	One x myotis species – potential emergence.	31/07/2019
244	One x soprano pipistrelle.	27/06/2019
245	One x possible, unknown (likely pipistrelle due to early emergence and size of bat) and possible serotine emergence.	25/06/2019
295	One x possible soprano pipistrelle emergence.	12/08/2020
335	One x common pipistrelle. One x soprano pipistrelle.	27/08/2019
369	One x soprano pipistrelle.	15/08/2019
370	One x pipistrelle species – potential emergence.	06/08/2020

Buildings

Internal building assessments

3.3.24. The internal building assessments provided additional information on the suitability of buildings to support roosting bats within the buffer of the scheme. Where access was granted, internal inspections included the assessment of loft spaces, cellars and within sheds, outbuildings and barns. These were carried out in 2019. Where droppings were identified these were collected and kept for analysis if the species needed to be confirmed. Twenty-two buildings were subjected to internal assessments, nine buildings have not been subject to internal inspections due to no access being granted; 57, 71, 74, 107, 112, 186, 196, 230, 238, 245, 268, 277, 278, 279 and 210SE. Findings are outlined in the Table 3:6 below.

Table 3:6 : Summary of results for internal building surveys

Building number	Description	Evidence	DNA analysis undertaken?	Species present
56	This building has a central section which is 720 years old according to the owner, who is renovating it. Other sections of the building are 16th century and Georgian. Parts of the building roof are in poor repair. Lead flashing is present along with gaps between many areas of roof tiles and sometimes wall cavities.	Small and large droppings were found scattered thinly around the roof void. No large piles of droppings were found.	No	Likely pipistrelle species
68	Older residential building, part stone part brick with an extension, possible 19th century building that has been converted.	Droppings found near gable ends and next to supporting posts, with gaps at the top end of each.	No	Likely pipistrelle species
108 and 108a	The house is in excellent condition, with three chimneys and soffit box.	Small number of droppings identified.	No	Likely pipistrelle species
111	Residential building, 2 storey cottage over 100 years old. Good condition.	The only loft hatch opens up into a small area, approximately 4x4m in size, above the bathroom, which has little potential for bats to roost in. There is a plastered wall between this and the main roof void, with some exposed brickwork at the bottom and thatch at the top. No bat droppings were found. There is also a hatch on the wall at the top of the stairs, which opens into	N/A	N/A

Building number	Description	Evidence	DNA analysis undertaken?	Species present
		an area just big enough for the water tank to fit into		
119A	A small wooden garden shed in corner of garden, surrounded by agricultural fields and adjacent to a358.	The shed offers a small internal space with equipment preventing internal access.	N/A	N/A
119B	Garden shed, surrounded by agricultural fields and adjacent to a358	Standard garden shed	N/A	N/A
119E	Shed - wooden with felt roof.	Standard garden shed	N/A	N/A
181	Garage with corrugated asbestos roof and northern wall made of concrete asbestos. Breeze block and plastered walls with recently replaced wooden sarking boards.	Sarking boards and insulation between the rafters. One bat dropping found, not enough for DNA analysis	No	Possible pipistrelle
185	Very old, rusting stable with wooden structure and corrugated tin roof. Poor condition with holes in roof, with space between the tin roof and wooden boarding. No windows so open access.	Sarking boards with droppings found, too old for DNA analysis	No	Possible pipistrelle
187	Stone house with old rear extension. Raised ridge tiles-Feature reference A. Raised chimney flashing-Feature reference B. Raised ridge tiles on old back extension. Raised roof tiles Holes in wall under gutter. Raised roof tiles at back of main building. Gaps under Ridge tiles at back of main building.	Droppings were found in the older section of the roof, with more found in there than in the newer section.	No	Likely pipistrelle species
189	Tight old stone wall. Clay and slate tiles (slate on north-west roof, clay on south-east roof).	Droppings of numerous bat species found however unclear of how many are using space as droppings recently cleared by owner.	No	Likely pipistrelle species and long-eared bat species
192A	Old shed with lots of loose tiles and entry points, surrounded by grassland and trees	The wall of the building has collapsed making a thorough investigation unsafe. In addition,	N/A	N/A

Building number	Description	Evidence	DNA analysis undertaken?	Species present
		there are a lot of objects stored inside, making it difficult to inspect. No evidence of bats were found in the areas that we were able to access.		
204	Stone walls with bricks above windows as decorative features at front / south side. Cement rendering on north, east and west walls. Wooden-framed windows. Two brick chimneys, both good condition with lead flashing around. Cement rendering on north, east and west walls. Single-storey extension on east side and single-storey porch extension on west side which has a small section of soffit box.	Droppings were found in the older roof void, but only one was found in the newer loft, on the wall between the two, which indicates there may be a gap at the top of the wall, allowing access.	No	Likely long-eared bat
210	The house is part of a large complex, bats are moving around inside the roof voids.	Significant droppings identified, around amp converter - possible maternity roost.	Yes	Lesser horseshoe bat
211	Originally built in 1800s, extensions added later. Slate good condition. Roofing new.	Small numbers of droppings found in central accessible section of roof.	Yes	Serotine bat
212	Wooden barn, with ridged tiles	General use, open, no evidence	N/A	N/A
212A	Wooden barn, with ridged tiles.	General use, open, no evidence	N/A	N/A
213	Wooden barn, with ridged tiles.	General use, open, no evidence	N/A	N/A
226	Residential building, stone roof – known to be a confirmed bat roost.	Lots of droppings found under the known roost features.	No	Likely pipistrelle species
241	Wooden walls and tiled roof. Built in the 1980s Good condition, with soffits but no chimneys.	Only two droppings were found and it is likely that the roof tiles themselves are mainly used for roosting in, instead of the bats finding their way inside the building.	No	Likely pipistrelle species
262	Stone built residential building.	Lots of droppings present throughout the roof void, including many fresh droppings, with small piles present	No	Likely long-eared bat

Building number	Description	Evidence	DNA analysis undertaken?	Species present
		near both gable ends of the building.		

3.3.25. Following emergence / re-entry surveys there were 25 buildings found to have bats roosting in them (two of them likely disused old night roosts) and six buildings which have possible roosts from emergence/re-entry surveys and also anecdotal evidence from landowners within the Pink Modified option buffer. Buildings with confirmed and possible roosts are outlined below along with the maximum counts from emergence and re-entry surveys:

- Building 56 – seven common pipistrelle
- Building 57 – one common pipistrelle
- Building 68 – four pipistrelle species and two possible common pipistrelles. One possible serotine emergence
- Building 74 - one unknown (owner noted found under stairs years ago)
- Building 107 – one common pipistrelle
- Building 108 – one common pipistrelles re-entry and one unknown bat species possibly re-entered
- Building 111 – one possible serotine
- Building 119A – possible bat, no bats seen by surveyors – landowner claims to have seen an emergence
- Building 157 - two common pipistrelle
- Building 181 - species unknown, possible pipistrelle spp. (likely old disused night roost roost)
- Building 185 - species unknown, possible pipistrelle spp. (likely old disused night roost roost)
- Building 186 – one common pipistrelle and one unknown species
- Building 187 – one common pipistrelle
- Building 189 - likely pipistrelle spp. (numbers unknown) and likely brown long-eared (numbers unknown)
- Building 192A – one common pipistrelle
- Building 196 – possible confirmed, one common pipistrelle
- Building 204 – one soprano pipistrelle, two common pipistrelle, likely brown long-eared (numbers unknown)
- Building 205 – possible confirmed (one common pipistrelle)
- Building 206 - possible common pipistrelle
- Building 210 and 210 south-east – five common pipistrelle and two unknown species, lesser horseshoe (numbers unknown ID from droppings, not present during emergence/re-entry surveys)
- Building 211 – four common pipistrelle

- Building 226 – thirty-seven common pipistrelle, possible brown long-eared (presence unconfirmed during emergence/re-entry surveys)
- Building 230 – thirty-three common pipistrelle
- Building 238 – one common pipistrelle
- Building 240 – two or three common pipistrelle
- Building 241 – one common pipistrelle
- Building 244 - one common pipistrelle and 2 unknown species
- Building 245 – four soprano pipistrelle bats and two unknown species
- Building 262 – one soprano pipistrelle and likely brown long-eared (numbers unknown)
- Building 274 – possible confirmed – one pipistrelle species

3.3.26. Five buildings (77, 78, 173, 174 and 285) have undetermined potential. This includes two buildings which could only be scoped from a distance and will have a crossing point survey undertaken instead, and three buildings which will be surveyed in 2021 due to previous land access issues. Three buildings with moderate potential (277, 278 and 279) will require a survey in 2021 due to no access being granted. Full details are provided in Appendix H and confirmed roosts in Appendix A. The location of these buildings in relation to the proposed scheme are shown in Appendix F.

3.3.27. A total of 193 buildings were surveyed within 100m of the Pink Modified option, to which Table 3:7 below shows the totals for final roost value of buildings following emergence / re-entry surveys in the buffers of scheme.

Table 3:7 : Summary of results for building surveys within 100m of the Pink Modified Option

Bat Roost Suitability	Final roost value of buildings for Pink Modified option buffer
Confirmed (within 100m)	25
Possible confirmed (within 100m)	6
High (within 100m)	13
Moderate (within 100m)	23 (2 within 20m scheme footprint)
Low (within 100m)	33 (0 within scheme footprint)
Negligible (within 100m)	77
Not determined (either no access, scoped out due to significant barriers or no longer exist. (within 100m	16
Total	193

Bridge and culverts

3.3.28. Bridge and culvert assessments were carried out on all that fell within 100m of the PMO. Only Bridge 114 had emergence / re-entry surveys, which didn't note any roosts

to be present. Bridge 4 (Gore Langton Underpass) needs further surveys in 2021 for both emergence / re-entry and hibernation surveys.

3.3.29. Appendix I shows the full details of bridges and surveys and results. Table 3:8 below gives a summary of the results of bridges within 100m of the Modified Pink Option.

Table 3:8 : Summary of results for bridge surveys within 100m of the Pink Modified Option

Bridge number	Land Parcel Number	Final roost value of building for Pink Modified option buffer	Further survey summary
Br1	ST53161	Moderate (within 20m)	No further surveys needed
Br2	U00027	Low (not within scheme footprint)	No further surveys needed
Br3	U00027	Negligible	No further surveys needed
Br4	ST307472	High (within 100m)	**Further emergence/re-entry and hibernation surveys needed in 2021**
Br5	Unknown	Negligible	No further surveys needed
Br114	U00025	Moderate (not within 20m)	**Further emergence/re-entry and hibernation surveys needed in 2021**

4. Conclusion

4.1.1. Surveys undertaken for the A358 Taunton to Southfields Dualling scheme between 2017 and 2020 have identified a total of six trees supporting confirmed roosts and four trees supporting potential roosts. Building surveys confirmed 25 buildings as having roosts or multiple roosts and six buildings as supporting possible roosts. A summary of the identified roosts is given below.

Long-eared bat

4.1.2. Buildings 189, 204 and 262 had likely long-eared bat roosts which were identified during the internal inspections. B226 was noted by the owner as brown long-eared were present however, none were recorded emerging or re-entering during surveys.

Common pipistrelle

4.1.3. Common pipistrelle bat roosts were confirmed within buildings 56, 57, 107, 108, 157, 186, 187, 192A, 204, 210, 210SE, 211, 226, 230, 238, 240, 241 and 244 from emergence / re- entry surveys. Buildings 196, 205 and 206 had possible common pipistrelle emergences. Due to the low numbers of bats identified all of the roosts identified are likely to be day roosts with the exception of the roosts identified in buildings 226 and 230 which are likely to be maternity roosts as peak counts of 37 (building 226 surveyed in 2020) and 33 (building 230 surveyed in 2019) bats were seen emerging respectively during the July surveys. Trees 233, 234, and 335, all had single common pipistrelle bat emergences indicating a day roost. Buildings 56, 68, 108, 187, 189, 211, 226 and 241 all had likely pipistrelle roosts from internal building inspections.

Soprano pipistrelle

4.1.4. Soprano pipistrelle bat roosts were confirmed within buildings 204, 245 and 262, all of which are within 100m of the scheme. All are likely day roosts. Trees 233, 237, 244, 335 and 369 had confirmed roosts, again all likely day roosts. Tree 295 had a potential emergence of one soprano pipistrelle.

Pipistrelle species

A pipistrelle species roost was confirmed within building 68. A possible pipistrelle species emergence was recorded at tree 370 and a possible pipistrelle species emergence was recorded from buildings, 189 and 274.

Myotis species

4.1.5. It was possible that a single Myotis spp. bat emerged from the woodpecker hole of tree 239, which as there was only one bat, is likely to be a day roost.

Serotine

4.1.6. A serotine roost was confirmed through DNA analysis of droppings in building 211 and possible roosts were identified during emergence and re-entry surveys in buildings 68 and 111.

Lesser horseshoe

4.1.7. DNA analysis showed that lesser horseshoe bats have been roosting in building 210. The high number of droppings suggests that it is potentially a maternity roost, though during the 2017 no lesser horseshoe were recorded emerging or re-entering.

Unknown species

4.1.8. A number of unconfirmed species roosts were identified during the surveys, where no identification could be made due to echolocation calls not being picked up. These included confirmed roosts in buildings 74, 186, 210 and 245 and potential roosts in buildings 108 and 119a. Two possible pipistrelle roosts were also identified during internal inspections of buildings 181 and 185, however species couldn't be confirmed due to the age of droppings.

Further surveys

4.1.9. Further surveys are needed on the following to have a complete roost assessment:

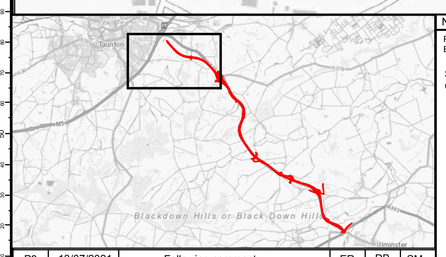
- Tree 73, two emergence and / or re-entry survey
- Tree 169, three emergence and / or re-entry survey
- Tree 178, emergence or re-entry
- Tree 234, further emergence or re-entry
- Tree 238, three emergence and / or re-entry survey
- Tree 350, full assessment
- Tree 351, full assessment
- Tree 352, full assessment
- Tree 354, full assessment
- Tree 355, full assessment
- Tree 370, two emergence and / or re-entry
- Building 274, further emergence or re-entry
- Building 67s, emergence or re-entry
- Building 71, emergence or re-entry
- Building 74, emergence or re-entry
- Building 77, full assessment
- Building 78, full assessment

- Building 111, two emergence and / or re-entry
- Building 174, full assessment
- Building 173, full assessment
- Building 109, emergence or re-entry
- Building 185, three emergence and / or re-entry survey
- Building 273, emergence or re-entry
- Building 277, three emergence and / or re-entry survey
- Building 278, two emergence and / or re-entry
- Building 279, two emergence and / or re-entry
- Building 285, full assessment
- Bridge 4, three emergence and / or re-entry survey
- Bridge 114, two emergence and / or re-entry survey

Appendix A – Confirmed roosts across all scheme options

295
74
50
57
56
119A
68 68 68
32A
R6
B90
111
108
107

NTS 0 180 360 540 720 m



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	13/07/2021	Following comment	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat data, Mott MacDonald (2020)

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Key to symbols

- Pink modifed scheme option
- 100m buffer

Confirmed building roost present

- Pipistrelle spp.
- Common pipistrelle
- Soprano pipistrelle
- Serotine
- Lesser horseshoe
- Long-eared
- Unknown

Possible confirmed day roosts

Building

- Common pipistrelle
- Serotine
- Unknown

Maternity roost

Building

- Lesser Horeshoe

Confirmed radio tracking roost present

- Barbastelle

Possible confirmed tree roost

Tree

- Soprano pipsitrelle

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Project Title: A358 Taunton to Southfields

Drawing Title: Bat roosts: confirmed, possible and maternity
Page 1 of 4

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size	**Date**	**Date**	**Date**	**Date**
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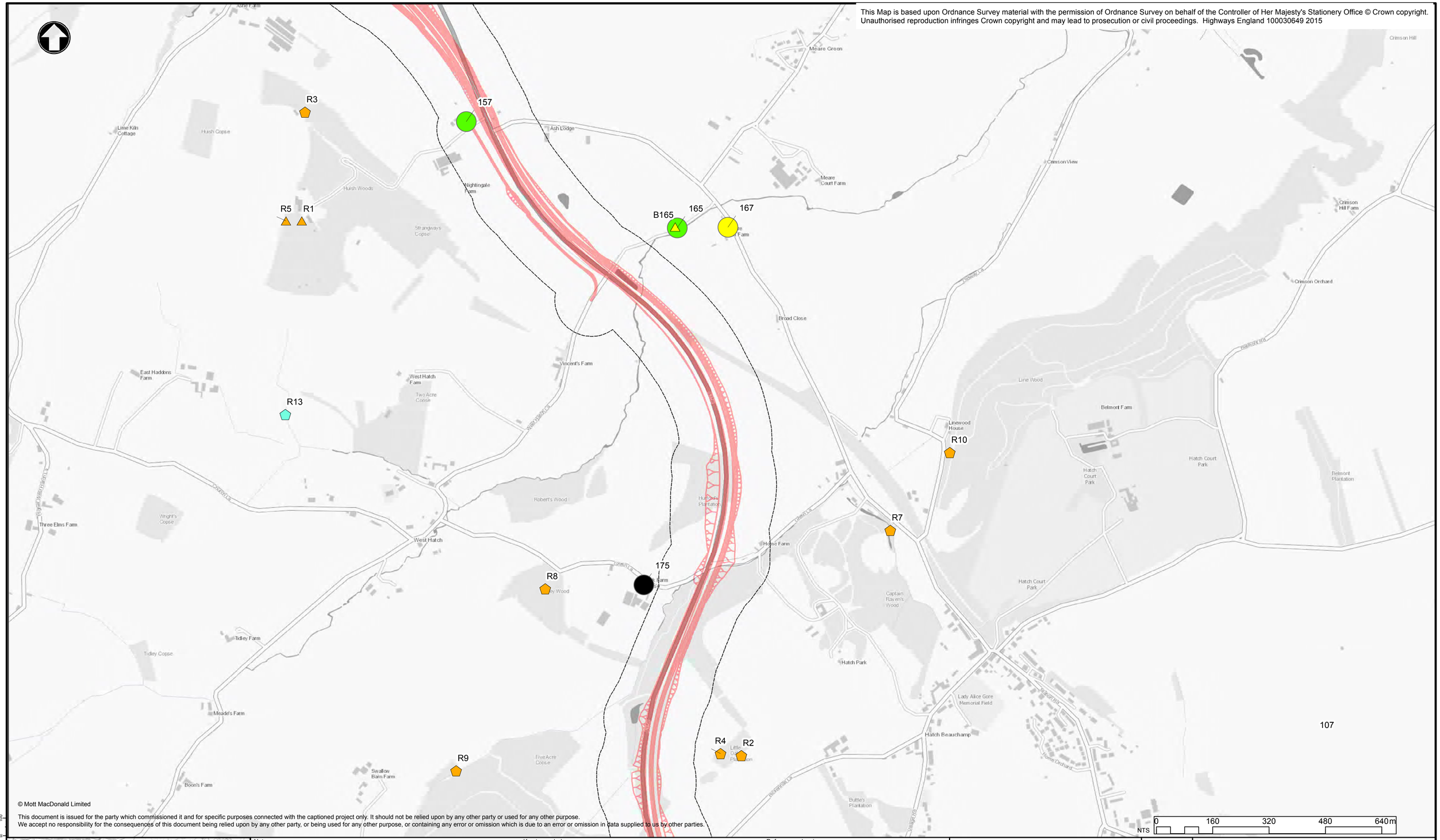
Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0 154
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
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Key to symbols

- Pink modifed scheme option
- 100m buffer

Confirmed building roost present

- Pipistrelle spp.
- Common pipistrelle
- Soprano pipistrelle
- Serotine
- Lesser horseshoe
- Long-eared
- Unknown

References drawings

Maternity roost

Building

- Pipistrelle species

Confirmed radio tracking roost present

- Bechstein's
- Natterer's

Radio tracking

- Bechstein's

Drawing Status: Suitable for Stage Approval

Suitability: S4

Project Title: A358 Taunton to Southfields

Drawing Title: Bat roosts: confirmed, possible and maternity
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Original Size	Date	Date	Date	Date
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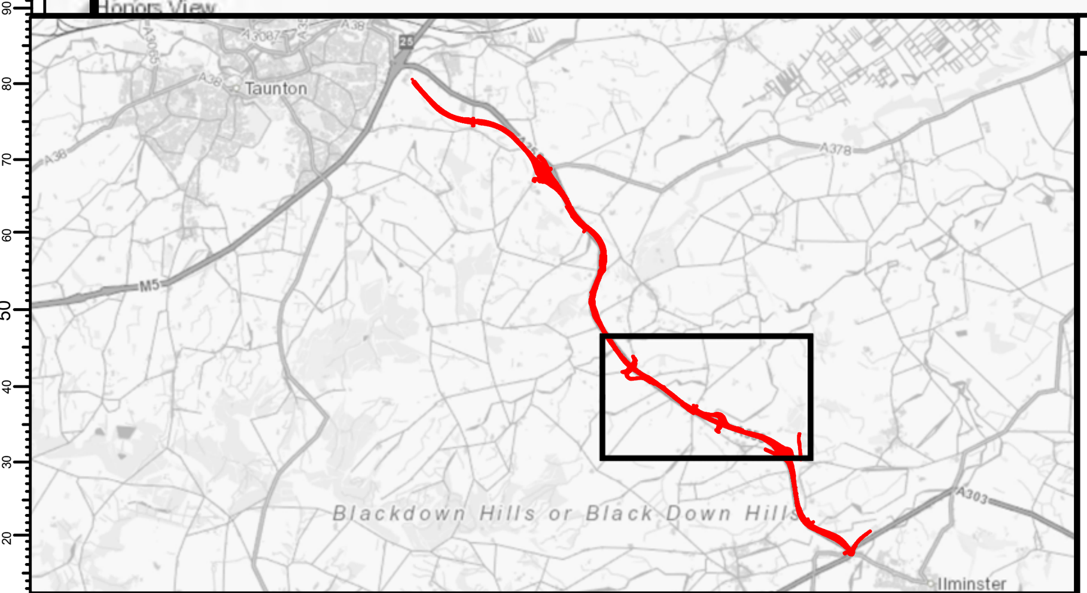
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	13/07/2021	Following comment	ER	DB	SM

Notes

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Bat data, Mott MacDonald (2020)

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Key to symbols

- Pink modifed scheme option
- 100m buffer

Confirmed building roost present

- Pipistrelle spp.
- Common pipistrelle
- Soprano pipistrelle
- Serotine
- Lesser horseshoe
- Long-eared
- Unknown

Possible confirmed day roosts

Building

- Pipistrelle spp.
- Common pipistrelle

Maternity roost

Building

- Common Pipistrelle

Possible confirmed tree roost

Tree

- Pipistrelle species

References drawings

Drawing Status	Suitability
Suitable for Stage Approval	S4

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Scale	Designed	Drawn	Checked	Approved
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Original Size	Date	Date	Date	Date
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Drawing Number: HE PIN | Originator | Volume
HE551508 - MMSJV - EBD -
000 - DR - LB - 0 156
Location | Type | Role | Number

Project Ref. No.: 370774

Revision: P3

262
233
234
244
245
239
335
369
237
274
107

Rapps Farm Cottage
Rapps
White House Farm
Thickthorn House
Lower Parsonage
Cad Farm
Old Leggs Farm
Old Way
Burleaze Farm
Bank Stream
Cartref
Shrubbery Farm
Rowlands Farm
Jordans
Eames Farm
River Isle
Ashwell
Winterhay Farm
Well House
Green Farm
Beacon Hill
Horton Cross
Yetford Dairy House
Puddlebridge
Blackdown Hills or Black Down Hills

0 160 320 480 640m
NTS

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	13/07/2021	Following comment	ER	DB	SM

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Key to symbols

- Pink modifed scheme option
- 100m buffer

Confirmed building roost present

- Pipistrelle spp.
- Common pipistrelle
- Soprano pipistrelle
- Serotine
- Lesser horseshoe
- Long-eared
- Unknown

References drawings

Possible confirmed day roosts

Building

- Pipistrelle spp.

Confirmed tree roost present

Tree - species

- Common Pipistrelle
- Soprano Pipistrelle

Possible confirmed tree roost

Tree

- Myotis species
- Unknown

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Drawing Title: Bat roosts: confirmed, possible and maternity
Page 4 of 4

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM

Original Size	Date	Date	Date	Date
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Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0 157
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774
Revision: P3

Appendix B – Bat species listed under NERC Act 2006 Schedule 41 and their specific species actions

Species	Priority Group	Action Priority	Action
Barbastelle	1 – global concern	High	Ensure species is considered in agri-environment, assisting at a farm scale to ensure hedgerow, small linear wood and field margin creation, persisting in the landscape and maintaining landscape level connectivity and insect biodiversity. Improvements to small farm woodlands and wet meadows, blocking land drains may also encourage retention of trees used for roosting.
			Continuation and expansion of research into more detailed habitat requirements by this species, including the impact of regional differences and management needs.
			Continued monitoring through the National Bat Monitoring Programme (NBMP) to monitor population trends of this species.
			Protect the condition of priority wetland and woodland habitats, to contribute towards provision of sufficient good quality trees for roosting and insect rich foraging grounds. Ensure the protection and preservation of mature woodland and improve the conditions of young woodland specifically for this species.
			Help buffer core woodland areas with the encouragement of woodland expansion, increasing flight-line connectivity between woodland areas and other foraging habitats at a landscape level.
Bechstein's bat	1 – global concern	High	Ensure sufficient roosting and foraging habitats are available through woodland habitat management meeting the requirements of this species, such as encouragement of continuous cover canopy and a well-developed understorey.
			Ensure the protection and monitoring of maternity colonies, hibernation sites and swarming sites, and designation of appropriate woodland and underground sites identified through survey.
			Continuation and expansion of research into more detailed habitat requirements by this species, including the impact of regional differences and management needs.
			Expand woodlands around their core areas, reconnecting fragmented woodlands with treeline and hedgerow planting, to allow recolonisation of previously populated areas and aid seasonal dispersal for mating and hibernating.
		Medium	Provide advice to woodland managers and arboriculturalists regarding the retention of roost trees, and management of areas suitable for foraging. Discouragement of felling and where necessary mitigating through staged felling.
			Wider woodland policy such as requirement for bat surveys and mitigation agreement prior to the granting of felling licences in certain woodland types, identified as having the potential to support Bechstein's bat, has been identified as potentially assisting this species.
			Ensure the improvement and retention of the condition of woodlands. This is also likely to benefit other bat species which roost in trees and woodlands.
Brown long-eared bat	3 – national concern	High	Continued monitoring through NBMP to monitor population trends of this species. In addition to this the recording of roost used by species should be promoted by local bat groups, local record centres and consultants through appropriate information sharing, and by species conservation plans.
			The best roosts (identified as those supporting the largest colonies) should be considered for designation as Sites of Special Scientific Interest (SSSIs).
			Critical resources should be protected at landscape level, including all types of roost and important foraging grounds and commuting routes. For this the provision of appropriate landscape features are required, including habitats not classified as UK priority habitats but are important foraging resources and for connectivity.
			Improvement of mitigation in barns and lofts targeting brown long eared bat, by developing designs specifically for this species previously found to be successful (e.g. incorporation of adequate roof space/use of the correct roofing material to provide an environment with the desired thermal characteristics).
		Medium	Ensure this species is considered in agri-environment schemes and woodland policy, with improvements in farmland, woodland edges, hedgerow, small farm woodlands and mixed woodland. In addition to retaining and protecting older trees for roosts as part of land-use policies>
			Consider the impacts of light pollution on this species.

			Consideration of the effectiveness of different conservation management on brown long-eared bat, with detailed understanding of priority habitats. Better guidance should be produced for land managers particularly on habitat structures and features.
			Improve planning policy in relation to bat roosts in buildings, particularly for this species, reducing levels of exclusion and roost destruction through tighter planning control and legal enforcement. In addition to ensuring building regulations to consider bats which roost in buildings.
			Reducing habitats fragmentation and increasing habitat connectivity between foraging grounds and roosts, particularly between woodlands, tree lines and high hedgerows.
Greater horseshoe bat	2 – European concern	High	Continue with monitoring through the NBMP activity count and hibernation survey. This should focus on male to female ratios within roosts, and consider new colonies will form with small numbers of bats which are often overlooked.
			Continue the protection of designated sites and known roosts (i.e. building and underground) notifying local authorities and other relevant bodies of records. Ensuring the management of sites is appropriate to the species needs, with the designation of new sites where appropriate.
			Encouragement of appropriate habitat management particularly within 4km of maternity roosts of woodlands, wood pasture, pasture and connecting hedgerows, with these habitats representing critical foraging areas for pregnant and lactating bats, and their offspring. Landscape suitable for the survival of this species throughout its range should be protected through woodland policy, agri-environment schemes and planning policy in respect to building and underground sites.
		Medium	Research into climate change adjustments in the phenology of invertebrate prey populations and the impact of the decline of these populations, particularly moths, dung beetles cockchafers and tipulids.
			Ensure advice and good practice information is offered on habitat management and relevant grants schemes.
			Expand priority habitats used for foraging and commuting, and close to maternity colonise, enhancing these to increase insect prey populations. Increase the extent of suitably managed woodland and connective hedgerows, particularly those linking foraging areas and maternity sites. It should be noted as a landscape species greater horseshoe may use habitats not classified with priority status, so action should not be restricted to priority habitats.
Lesser horseshoe bat	2 - European concern	High	Research to improve understanding of which priority and non-priority habitats are used by lesser horseshoe bat. This should aim to provide Habitat Groups with suggested targets for increase in area and condition of habitats of importance for this species, considering conservation at a landscape level. This should also contribute towards future success criteria for lesser horseshoe.
			Maintain monitoring of designated sites and known roosts through the NBMP and provision of records to appropriate authorities.
			Consideration of this species in planning, woodland and agri-environment policy to protect roosts and retain and create suitable habitat and landscape features throughout the range of this species.
			Ensure protection of all known roosts via implementation of legislation and policy and implementation of appropriate mitigation and monitoring of effectiveness and compliance.
			Ensure a landscape approach is undertaken when considering the conservation of this species and ensuring that habitat such as woodland foraging habitat, old hedgerows and treelines, and roosting sites are increased and managed appropriately for the needs of lesser horseshoe, improving connectivity between these.
		Medium	Priority and other important habitats close to roosts (including maternity, hibernation mating and transitory roosts), used for commuting and foraging should be improved and expanded to maximise insect prey density. Non-priority habitats should be managed in addition to priority habitats as this species utilised many habitats.
			Ensure that site management is appropriate to the needs of lesser horseshoe and there is consideration of the importance of a landscape approach to the conservation of this species. Cross-sector conservation should be implements to address issues such as habitat fragmentation, for example, with the adoption of the Batscapes concept.

Noctule	3 – national concern	High	Avoid conflict with the requirements of H&S policy with regard to mature trees and noctule roosts, through collaborative working between bat workers, H&S inspectors and arboriculturalists.
			Enhance existing monitoring schemes via the NBMP to provide long term roost population trends. Surveys for roosts throughout the noctule range are also required to better understand the distribution of this species.
			All roosts must be proactively protected through measures such as accurate recording on local and national schemes and local authority tree records so they are flagged up during planning searches and tree safety routines. Mitigation for loss of roosts needs to be effective to maintain populations. Surveys should also be undertaken before tree-felling, to look for roosts and potential roosts.
			High flying species such as noctule should be considered in policy relating to wind turbine developments.
			Ensure that the requirements of this species are considered in woodland, windfarm, agri-environment, water quality, tree protection (including H&S considerations) policy. Older trees should be retained and protected for noctule roosts, with this included in land-use policies (particularly planning and woodland).
		Medium	There should be a focus on woodland and lowland agricultural habitats at the landscape level when considering habitat improvements. Although noctule are a mosaic species, increasing the quality of existing habitats such as insect-rich wetlands may also help noctule.
			Improve the management of urban, suburban, rural, woodland and riverine landscapes for insect populations and roost protection.
			Consider how climate change may results in a range shift for noctule in relevant policy.
			Further research should be conducted into understanding how this species uses priority habitats and what ones are imperative to them, the effects of climate change, and impacts of windfarms. A greater understanding is also required of types of roost used by this species.
			The designation of woodlands which encompass several tree roosts used by a colony should be considered. Good foraging areas which could be subject to specific action for improvements should also be identified.
Soprano pipistrelle	3 – national concern	High	Ensure the provision of on-going free advice, with this species often roosting in houses, and forming the largest colonies in buildings in the UK. Appropriate advice and support are required to find solutions for people living and using buildings where roost exist to protect this species and manage issues associated with large roosts such as noise and smell.
			Continuation of population monitoring via field survey and colony count surveys with the NBMP, ensuring on-going national co-ordination, regional training and local volunteer engagement.
			Ensure the protection of known roosts through the implementation of legislation and policy. Surveys should be undertaken to identify new roosts and advice on proposed works and development should be provided through education and volunteer networks in addition to the private consultancy sector. Proportionate and appropriate mitigation must be implemented where required, accompanied by monitoring of effectiveness and compliance.
			Undertake research to understand the effectiveness of mitigation proposed on specific management recommendations. This should aim to provide habitat groups with target suggestions to increase the extend and quality of habitat for this species and contribute towards future success criteria for soprano pipistrelle.
			Promote the improvement, expansions and creation of key habitats for this species, including wetlands, and features such as hedgerows and woodland edges, ensuring the provision of maximal foraging opportunities. The landscape approach to conservation of this species should be considered, with this species using additional habitats to those listed previously and the delivery of conservation actions for soprano pipistrelle only likely to be achieved when considering other habitats.
			Ensure the needs of this species are considered in agri-environment schemes, planning, wetland creation, wind farm and water quality policy. The impacts of climate change on this species should also be considered in policy making, such as how the drying up of wetlands could impact this riparian associated species.

		Medium	Consider designating larger roosts as SSSI's.
			Consider ensuring the biggest roosts are notified and protected.

Appendix C – Bat memo

Mott MacDonald Sweco

Subject	Ecology Surveys
To	Julia Barrett
From	Simon Mason
Our reference	Bat Survey Methods
Office	Southampton
Date	02.03.2017
Your reference	A303 Sparkford to Ilchester & A358 Taunton to Southfields

This memo outlines the proposed bat survey approach for two Highways England Road Improvement Schemes (RIS), A303 Sparkford to Ilchester and A358 Taunton to Southfields. Appendix A provides an outline of these two schemes. The assessment of both of these schemes are being undertaken under a Development Consent Order (DCO), which is currently scheduled to be submitted in 2018. The current stage in the development of both schemes is the Option Selection stage, and as such, several route options are currently under consideration for both schemes.

The aim of this memo is to provide a platform for agreeing an approach to survey, which is acceptable to all parties involved, and which can be included in a Statement of Common Ground to facilitate the DCO application process.

Background

Highways England are currently proposing to undertake a number of major Road Improvement Schemes (RIS) of which the A303 and A358 are two schemes which the Mott MacDonald Sweco Joint Venture (MMS) are currently working on. Other schemes are currently being assessed by other consultancies and have been subject to some initial consultation with Natural England. To ensure a consistent approach is undertaken, MMS are seeking to align the proposed survey effort with the agreed approach with other Highways England RIS Schemes of a similar scale.

WSP/Parsons Brinkerhoff are currently working on the A30 Chiverton to Carland Cross dualling scheme in Cornwall. As part of their survey planning they produced a memo[1] which outlined their proposed approach to undertaking bat surveys to assess the impacts of the scheme. The A30 Chiverton to Carland Cross memo provided an assessment of various survey methods including standard methods outlined within the Bat Conservation Trust 2016 survey guidelines[2], together with the consideration of methods outlined within recently published research funded by Defra[3]. This memo was sent to Natural England (NE) on the 13th December 2016. Katherine Walsh, Natural England Senior Specialist Mammals, provided a response to this memo on the 26th January 2017. A copy of this response is included in Appendix B of this memo.

Summary of Natural England's Response to A30 Bat Survey Memo

WSP/Parsons Brinkerhoff (WSP/PB) had proposed to omit the Landscape Scale transects as outlined within the 2015 DEFRA study from the proposed A30 survey approach. However, NE confirmed (having consulted John Altringham)

[1] WSP | Parsons Brinckerhoff 1st September 2016 - A30 Chiverton to Carland Cross Bat Survey Approach, v2
[2] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.
[3] Berthinussen & Altringham (2015) 'Development of a cost-effective method for monitoring the effectiveness of mitigation for bats crossing linear transport infrastructure'

that the landscape scale transects were required and important for enabling monitoring of future impacts on the bat population.

> 'by not including the transect methodology, the proposed survey design does not allow for a methodology that is repeatable i.e. it does not establish a baseline by which the bat population can be assessed. At a landscape scale the proposed survey design will not be able to statistically assess whether bat populations have remained stable, increased, decreased or if bat diversity has been altered to any degree by this scheme. Whilst, the methodology should be suitable for identifying crossing points, it won't provide a baseline by which to effectively measure the success or otherwise of any mitigation.'

Natural England's response confirmed that they are happy with WSP/PB's approach to standard roost and activity surveys which are based on the methods outlined within the BCT survey guidelines.

> 'Your existing survey methodology has/is addressing the 'other survey' requirements which are desirable for this scheme, which we welcome.'

Proposed Bat Survey Methods for A303 and A358

Following the consultation with NE on the proposed survey methodology for the A30, the proposed methods outlined below for the A303 and A358 are based on the standard survey methods and effort proposed by WSP/PB which were deemed as acceptable by NE, together with crossing point surveys and landscape scale transects broadly in line with the methods outlined in Berthinussen & Altringham (2015). Details of the proposed survey methods are outlined below.

Preliminary Ecological Appraisal for Bats – Desk Study

The desk study will involve the collation of data from the Somerset Environmental Records Centre (SERC), and MAGIC together with a review of aerial photography and ordnance survey mapping.

The following search areas will be used for the desk study:

- 30 km from the scheme options for SACs designated for bats (specifically in relation to the Assessment of Implications on European Sites);
- 10 km from the scheme options for bat records;
- 10 km from the scheme options for bat licensing information (obtained from MAGIC); and
- Historic mapping will be used to help identify the presence of any underground sites (e.g. mine shafts) within 100 m of the scheme options .

These search areas are based on published guidance, consideration of core sustenance zones (CSZ's) for bats likely to be impacted, and initial consideration of the scheme's zone of influence (ZoI) on bats. The wider 10 km search area will be used to provide context to the data obtained in closer proximity to the scheme.

The desk study will provide context in the EcIA regarding the species of conservation importance recorded in the zone of influence for the scheme and identify any significant habitats of note for focussing survey effort.

Preliminary Ecological Appraisal for Bats – Scoping Walkover

An extended phase 1 habitat survey was undertaken for both the A303 and A358 in March 2016. This walkover survey covered the various route options, undertaking an initial assessment of potential roosting, commuting and foraging habitats. The extended phase 1 survey covered a broad area up to 250-500m from the proposed route options. The aim of the initial scoping walkover was to determine the suitability of the sites for bats, to assess what further bat surveys will be needed and how those surveys should safely be carried out.

Preliminary Roost Inspection Surveys

In accordance with IAN 116/08[4], both mature trees and structures within 100 m of the proposed construction footprint will be assessed for their potential to support bat roosts. For the A303, an area of 250 m from the proposed new road centrelines is being assessed, as a proposed construction footprint is currently unknown. Given the potential presence of rare woodland bat species barbastelle and Bechstein's, the presence of tree roosting bats is considered as important a consideration as roosts within buildings and structures. Preliminary roost inspection surveys are being undertaken between February and April 2017.

Building and Structure Surveys

Building and structure (bridge) surveys on the A303 and A358 will comprise external surveys only at this stage. The surveys will conform to the methodology outlined within the BCT survey guidelines and buildings and bridges will be assessed for their suitability to support roosting bats in accordance with BCT Guidelines as summarised in Table 1. Internal inspections will be undertaken on suitable buildings following the identification of the emerging preferred route option selection for both schemes, anticipated to be July 2018. This will minimise any unnecessary disruption to homeowners who are located outside of the emerging preferred route options. Prior to the internal inspections, a precautionary assessment of roost suitability will be made, based on the external inspection survey results.

Table 1 – Bat Roost Suitability Assessment

Potential to support roosting bats	Description
Confirmed	A feature / structure within which bats are seen to be present (either live bats, or bat carcasses) or heard 'chattering' inside will be classified as a confirmed roost. In addition any feature/structure found to contain droppings during inspections will in the first instance be considered as a confirmed roost. N.B. In some cases it may be appropriate to revise this assessment following further survey (e.g. for buildings containing low numbers of old droppings and showing no evidence of use during emergence surveys).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely

[4] Highways Agency (2008) Interim Advice Note 116/08: Nature conservation advice in relation to bats

Potential to support roosting bats	Description
	to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Negligible	Negligible habitat features on site likely to be used by roosting bats.

Tree Surveys – Ground Level Roost Assessment
The tree survey will include a ground level roost assessment using binoculars, a torch and endoscope to identify Potential Roosting Features (PRFs). An assessment of a trees suitability to support roosting bats will be made in accordance with BCT guidelines outlined in Table 1.

Tree Surveys - PRF Inspection Surveys
Following the ground level tree roost assessment, at-height Potential Roost Feature (PRF) inspection surveys will be undertaken on trees identified as having moderate or high roosting potential during the ground level tree assessment. The at-height survey will enable a more detailed inspection of PRF's to assess in more detail their likely suitability for bats and to look for evidence of bats such as live or dead bats, droppings, staining or odour. These surveys will help prevent unnecessary emergence/dawn work where features appear to be of high suitability from the ground but are actually of limited or no suitability.

Emergence/Re-entry Surveys

Buildings/Structures

The spatial extent of the building roost emergence and re-entry surveys will be based on MMS's professional opinion and will be proportionate to the roost suitability, likely ecological importance and potential impacts. This is based on the approach being proposed on the A30 by WSP/PB. As a guide, the building roost surveys will include all structures with low, moderate, and high roosting suitability which are within the construction footprint[5], structures with moderate suitability which are within 20 m of the construction footprint, and structures with high suitability which are within 100 m of the construction footprint. These spatial extents may be extended if there are any features of potential high conservation significance, such as potential maternity roosts of Annex II species, within the core sustenance zones of these species. Structures with negligible suitability will not be surveyed further.

[5] Note for the A303, until a construction footprint has been defined, the potential footprint will be determined as a 150m buffer either side of the proposed centreline.

The survey effort for bat emergence surveys will be based on BCT guidelines as outlined in Table 2.

Table 2: Minimum number of emergence & re-entry survey visits for high, moderate and low potential buildings and high and moderate potential trees

High bat roosting potential	Moderate bat roosting potential	Low bat roosting potential
Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. May to September[6]	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. May to September[7].	One survey visit. One dusk emergence or dawn re-entry survey (structures). May to August. No further surveys required (trees).

Source: Bat Surveys – Good Practice Guidelines 3nd Edition (Collins, 2016).

Surveyors are to be positioned in sufficient numbers so that all potential roost features can be seen by at least one surveyor during each survey. Evening emergence surveys are to be undertaken from 15 minutes before sunset until 1.5 to 2 hours after sunset; and dawn re-entry surveys undertaken from 1.5 to 2 hours before sunrise until 15 minutes after sunrise.

Trees
As outlined above for structure surveys, the spatial extent of the tree roost emergence and re-entry surveys will be based on MMS's professional opinion and will be proportionate to the roost suitability, likely ecological importance and potential impacts. In accordance with BCT guidelines, trees assessed as having low roost potential will not be subject to further surveys, but where they are directly impacted will be subject to avoidance measures such as supervised soft felling. Trees with moderate suitability which are within 20 m of the construction footprint, and trees with high suitability which are within 100 m of the construction footprint will be subject to dusk emergence surveys and/or dawn re-entry surveys.

The survey effort for bat emergence surveys will be based on BCT guidelines as outlined in Table 2. Surveyors are to be positioned in sufficient numbers so that all potential roost features (PRF) can be seen by at least one surveyor during each survey. Evening emergence surveys are to be undertaken from 15 minutes before sunset until 1.5 to 2 hours after sunset; and dawn re-entry surveys undertaken from 1.5 to 2 hours before sunrise until 15 minutes after sunrise.

Hibernation Surveys

If the preliminary building surveys identify buildings/structures with the potential to act as bat hibernation sites, these will be surveyed by an ecologist with a NE licence to disturb hibernating bats. A minimum of two visits will be undertaken, one in mid-January 2018 and one in mid-February 2018. These surveys will entail the systematic search of the sites from the entrance, with the locations of any bats seen marked on a plan of the site. In addition, static detectors will be placed within potential hibernation sites for a period of 2 weeks between January 2018 and February 2018 to monitor species present

[6] At least two of the surveys should be undertaken between May and August
[7] At least one of the surveys should be undertaken between May and August

Bat Activity Surveys – Transects

The transect surveys are designed to identify species composition and general distribution along the length of the schemes, and to inform the locations of crossing point surveys. Transects will be circular routes of c.5 km each largely following the liner route of the scheme options and the habitats likely to be impacted in the construction footprints. For the A303, a total of six transects will be surveyed. For the A358, a total of 12 transects will be surveyed.

Each transect will be surveyed at dusk once per month for 7 months April to October 2017 inclusive. In addition, each transect will be subject to a single follow-up dawn transect surveys within the same 24h period between July and August 2017. Approximately 8 point counts will be included per transect, with each transect taking approximately 3 hours to complete. The transect routes will be reversed on each visit and where possible, start points will be randomised to produce more robust data. Dusk transect surveys are to be undertaken from sunset until 2-3 hours after sunset. Dawn transects will be undertaken from 2-3 hours before sunrise until sunrise.

Due to the length of the schemes, the suitability of the foraging and commuting habitat is variable, ranging from low to high. Low value habitats include intensively farmed areas containing large arable/pastoral fields divided by heavily manged hedgerows. High value habitats include areas of broadleaved woodland, river corridors and smaller fields bordered by mature species-rich hedgerows.

To ensure survey effort is cost effective and proportional, the proposed survey effort of one survey per month (April to October) is based on the 'moderate' survey effort outlined in the BCT survey guidelines (2016)[8]. This effort is considered adequate for the assessment due to the mix of habitats present across the schemes, and given that the surveys will be supplemented by crossing point surveys which will be targeted on the higher quality habitats, and Landscape Scale Transects. Additionally, where areas of high quality broadleaved woodland are likely to be impacted on the A358, advanced survey techniques will be undertaken, including mist netting. These survey techniques will provide robust survey data to enable the assessment of the impacts of the schemes on bats.

Bat Activity Surveys – Static Automated

A total of three static detectors are to be installed for each transect route on the A303 and A358 (18 Static Sites for A303, 36 Static Sites for A358), in accordance with the specifications within the BCT guidelines (Collins 2016). Each detector will be deployed for five consecutive nights per month between April and October.

The automated detector sampling strategy will be stratified, which will allow the statistical comparison of data between paired locations. Static detectors will be deployed within a range of suitable habitats which may be directly or indirectly affected (fragmented) by the scheme options including hedgerows, riparian corridors, woodland, parkland, orchards and scrub. A random or systematic sampling strategy is not considered practical for the scheme due to landowner constraints and risk of damage to equipment if set up in the middle of arable/pastoral fields which make up much of the sites. A random or systematic sampling strategy would also be less useful in informing the crossing point surveys, which will be concentrated on linear features bisected by the scheme (as described below).

[8] The scale of transect surveys is comparable to the A30 proposal which Natural England commented 'The long transects along the length of the scheme does seem onerous and could be scaled down.' Therefore, any increased survey effort is considered unnecessary.

Advanced Survey Techniques

Due to the potential impacts of the A358 scheme on areas of mature broadleaved woodland, including areas of ancient woodland, and due to the potential presence of Annex II species within the ZoI for the A358, including Barbastelle and Bechstein's, targeted mist netting surveys are proposed within key habitats to provide more detailed information on the status of these species within the survey area. Mist netting surveys will only be used where sufficient information cannot be determined from non-intrusive methods. Surveys will only be undertaken by appropriately licenced and experienced surveyors. A detailed methodology will be produced for each mist netting site once these targeted sites have been identified following completion of the preliminary bat assessments.

Crossing Point Surveys

A series of crossing point surveys will be undertaken in line with the methods described in Berthinussen and Altringham 2015. The surveys will be static, visual surveys designed to inform the impact assessment in relation to the fragmentation of bat foraging/ commuting habitat and direct mortality. This data will be used to inform the nature and location of required bat crossing structures and will facilitate the future monitoring of the effectiveness of any mitigation.

The crossing point survey method described in Berthinussen and Altringham 2015 requires at least six visits per location to provide a robust baseline from which to monitor the effectiveness of crossing structures. Berthinussen and Altringham conducted their surveys between June and August, however, due to the selection of emerging preferred routes for the A303 and A358 in July 2017, we are proposing to undertake the six surveys at each location following the identification of the emerging preferred routes, to minimise any unnecessary survey effort. Due to the southerly location of the site and the potential for hibernation / transitional / swarming sites in the surrounding landscape, it is considered appropriate to undertake surveys between July and September 2017. Repeated surveys will be at least 1 week apart.

The crossing point survey locations will be informed by the first three months of transect and automated survey data, and also by the results of the preliminary surveys of buildings and trees with roost potential. It is estimated that 25 crossing point surveys will be required for the A358 and 10 for the A303. This is based on a visual assessment of the habitats being severed by the schemes which are likely to be important for commuting and foraging bats, focusing on mature hedgerows with good connectivity, woodland blocks and riparian habitats which the schemes will impact.

The surveys will record bat species, numbers, flight height, direction, location, time of crossing, and any other general behaviour. The surveys will commence at sunset and will be undertaken for a minimum of 60 minutes. After 60 minutes, it is usually too dark to record visual bat movements accurately. However, if late emerging species are recorded, surveys will be extended by up to 30 minutes.

Landscape Scale Transect Surveys

Landscape scale surveys will be undertaken in line with the methods described in Berthinussen and Altringham 2015. The survey will consist of walked transects 1 km either side of and perpendicular to the proposed routes, with bat activity recorded using full spectrum bat detectors during 10 min stationary spot checks at 100 m intervals

from the route centrelines. Weather and habitat variables will also be recorded at each spot check. Ten transects will be carried out on both the A358 and A303 to ensure sufficient data to detect changes in overall bat activity. For the A358 this will include 10 independent transects (with five walked towards the road, and five walked away). Due to the smaller size of the scheme, the A303 surveys will include 5 independent transects (each walked twice, once away from and once towards the road). Each transect will be at least 500m apart. Each of the ten transects will be repeated once during the season. Surveys will commence 30 minutes after sunset, and be completed within approximately two hours. Surveys will be undertaken between July and August 2017, following the identification of the emerging preferred routes for both schemes. An equal number of transects will be selected on each side of the road and equal numbers walked towards and away from the road. Transects will be located along minor roads, bridleways or public footpaths so that they will be repeatable for future monitoring. In accordance with the survey method, data will be subject to auto species analysis using Bat Classify or comparable software. Data will then be statistically analysed using the methodology outlined in Berthinussen and Altringham (2015).

Berthinussen and Altringham recommend that baseline data is collected over two survey season where possible. Due to the time constraints associated with the DCO Application which is currently scheduled for May 2018, it is not possible to undertake two seasons of surveys prior to the applications for each scheme. However, in accordance with the survey method, it is proposed to repeat the surveys between June and August 2018. These 2018 surveys will not inform the Environmental Statement but will be used to provide a robust baseline.

Conclusion

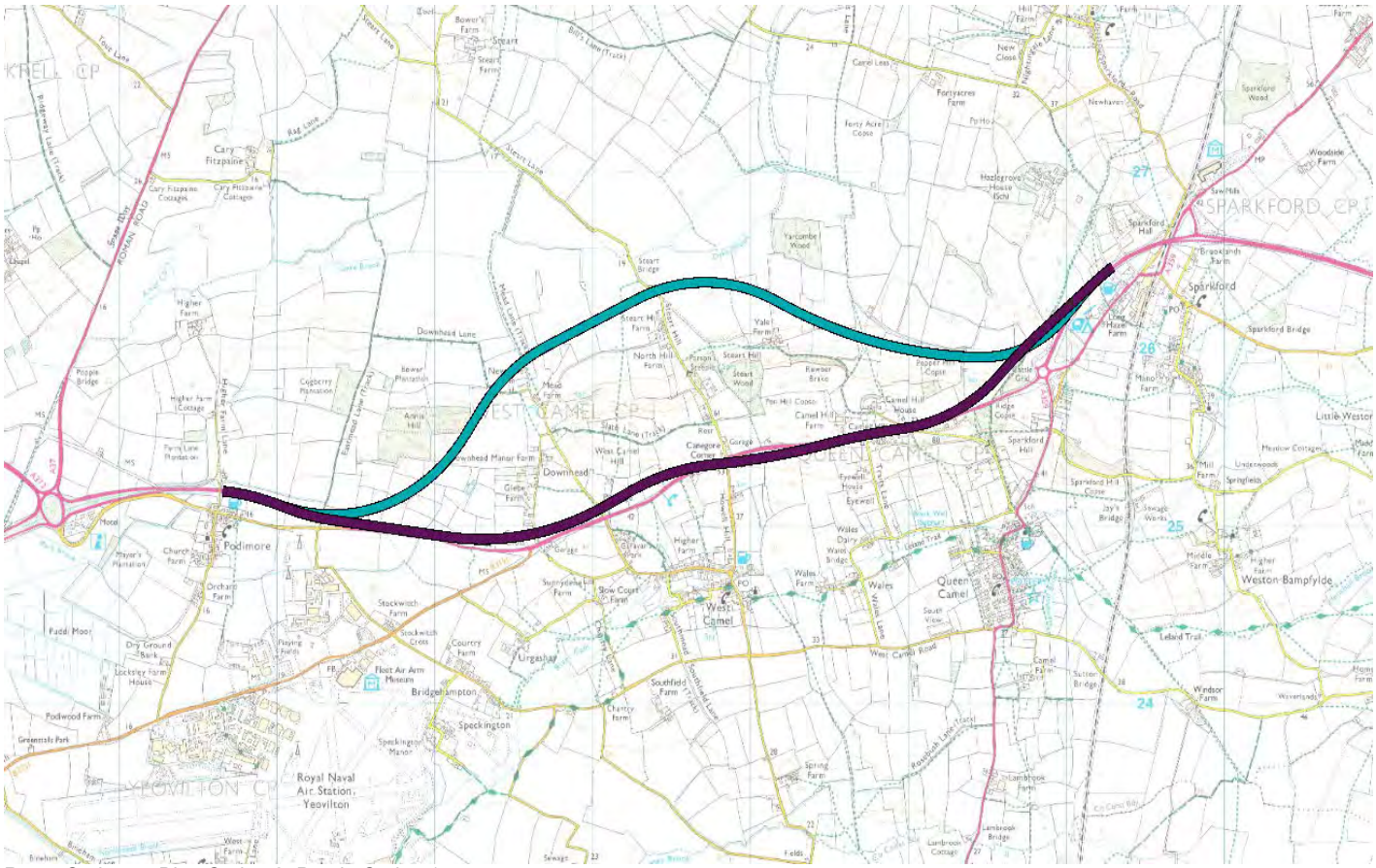
The above methodology is considered to provide a robust approach for assessing the impacts of the A303 and A358 schemes on bats and will provide a baseline to monitor the impacts and success of mitigation. The recommended methods are in line with both the BCT Guidelines (2016) and Berthinussen and Altringham (2015).

Mott MacDonald Sweco

Appendix A – Outline of Schemes

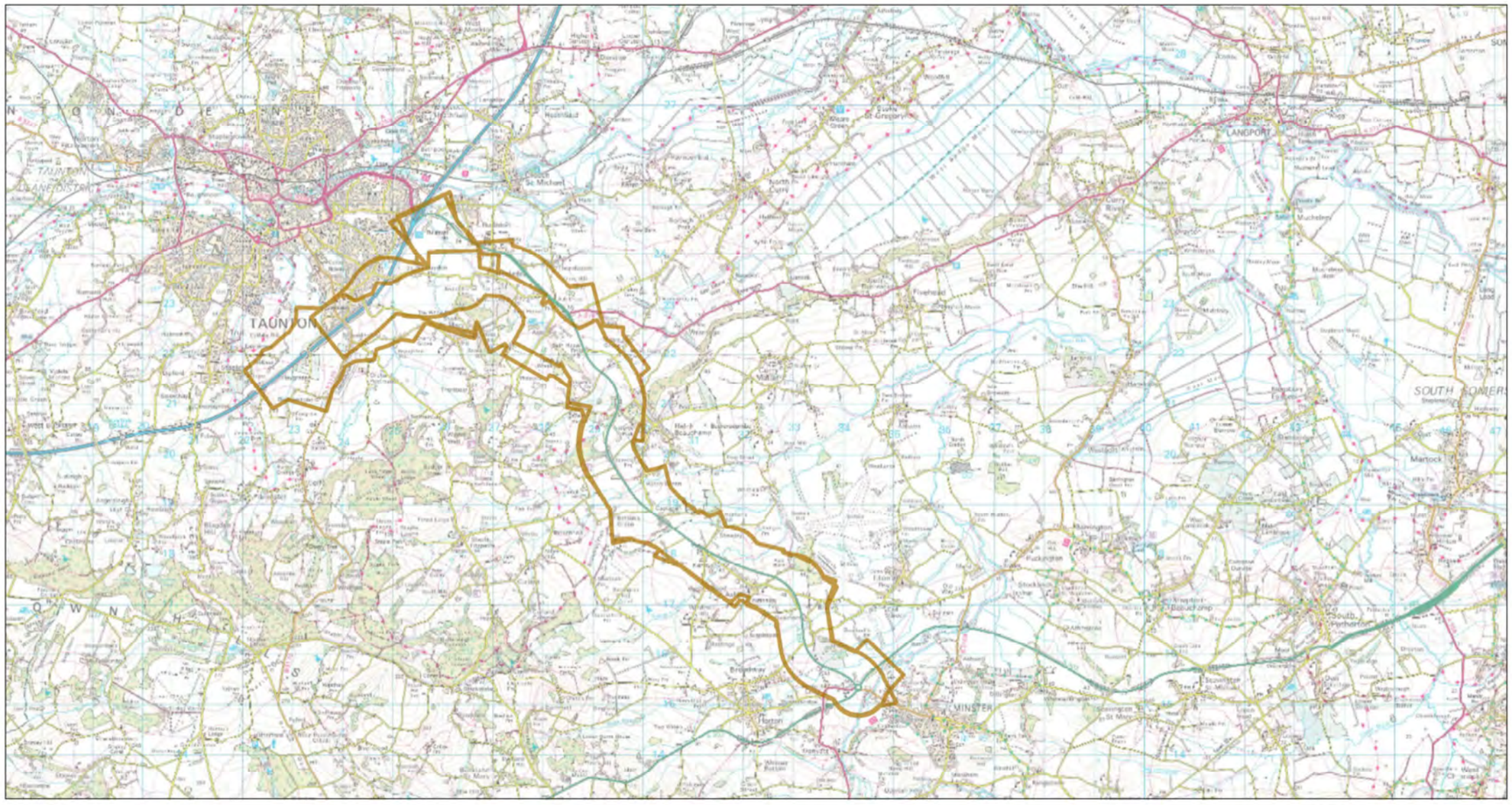
The current proposal extent of each scheme is presented in Figure 1 and 2 below.

Figure 1: A303 Route options



Route Options – Blue Option 2, Purple Option 1

Figure 2: A358 Route Buffers



Appendix B – Natural England Response to WSP/PB A30 Survey Approach

Response to WSP/Parsons Brinckerhoff on Meeting Notes and Memo

Thank you for the opportunity to comment on the WSP/PB memo dated 1st September and meeting notes dated 3rd September describing the bat survey approach for the A30, sent to us on 13th December.

In preparing this response I have spoken to both Jean Matthews (NRW) and Professor John Altringham (Leeds University –retired) All three of us were members on the Steering Group for the Defra commissioned 'WC1060 – Development of a Cost-Effective method for monitoring the effectiveness of mitigation for bats crossing linear transport infrastructure'. Professor John Altringham was the lead researcher on the project. John does not agree with the meeting notes, which state that the landscape methodology was not to be taken forward, so maybe there was a misunderstanding, as different methodologies and research proposals were discussed at the workshop.

As noted in our previous discussions, the Defra report makes it clear that the methodology should be used in combination with existing methodology for identifying bat roosts, important foraging habitats and species which are not easy to detect, for example through use of acoustic detectors only.

Your existing survey methodology has/is addressing the 'other survey' requirements which are desirable for this scheme, which we welcome. However, by not including the transect methodology, the proposed survey design does not allow for a methodology that is repeatable i.e. it does not establish a baseline by which the bat population can be assessed. At a landscape scale the proposed survey design will not be able to statistically assess whether bat populations have remained stable, increased, decreased or if bat diversity has been altered to any degree by this scheme. Whilst, the methodology should be suitable for identifying crossing points, it won't provide a baseline by which to effectively measure the success or otherwise of any mitigation.

We would suggest that a combination of the proposed WSP/PB methodology with that stated in the WC1060 report would be advisable for this scheme. The long transect(s) along the length of the scheme does seem onerous and could be scaled down. This could then allow for the transect methodology to be incorporated in a cost-effective way.

A couple of final points of detail,:

- if statics were to be used as a replacement for people walking the transects with detectors, which is acceptable as an alternate methodology, this would require statics being placed at each of those spot check points. Collins et al (2016) states on P8 that 'this edition of the guidelines does not include specific advice in relation to road and rail schemes, although the principles of survey design and execution do apply. Berthinussen and Altringham (2015) provide information on pre and post construction surveys of linear infrastructure schemes, designed specifically to assess the effectiveness of mitigation for bats crossing them'.

We would be happy to discuss further the above points to agree a proportionate and cost effective way forward for replicable bat surveys for pre and post construction for this important road scheme, so that any measures

required to address and monitor the impacts of the scheme are based on a robust evidence base and are proportionate and cost effective.

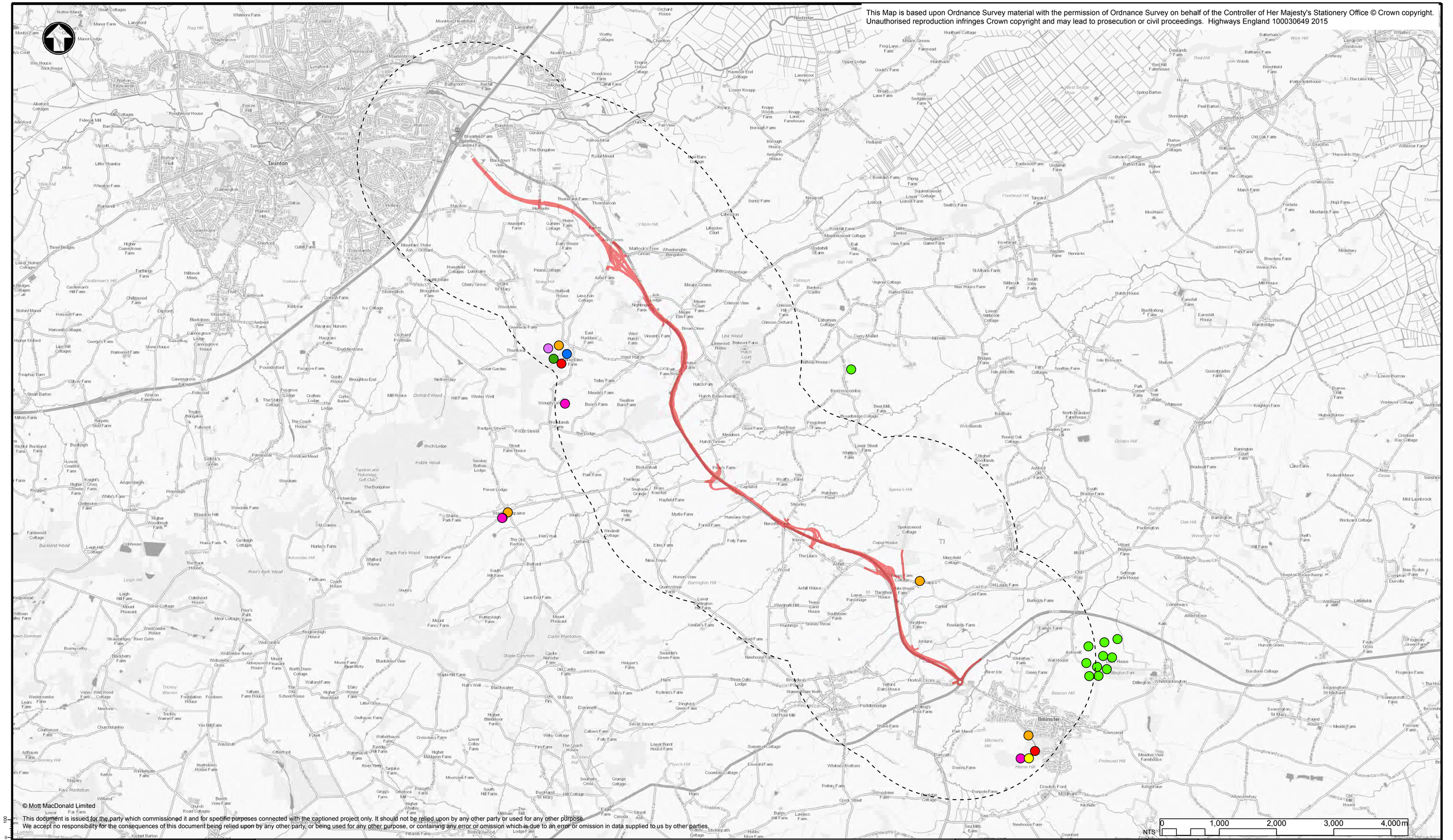
I am free morning of 31st Jan to discuss further. I will then be on leave for 4 weeks. I look forward to hearing from you.

Yours Sincerely,

K, Walsh

Katherine Walsh (Senior Specialist – Mammals)

Appendix D – Somerset environmental records



Notes

Pink Modified Scheme, Mott MacDonald (2018)
Historical Record data, Somerset Environmental Record Centre, (2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 2km buffer

Species

- Bechstein's Bat
- Brown Long-eared Bat
- Common Pipistrelle Bat
- Lesser Horseshoe Bat
- Natterer's Bat
- Serotine Bat
- Soprano Pipistrelle Bat
- Whiskered/Brandt's Bat

References drawings

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	08/12/2020	Suitable for Stage Approval	ER	SM	ER

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat historical records

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	SM	ER
Original Size	Date	Date	Date	Date
A1	08/12/2020	08/12/2020	08/12/2020	08/12/2020

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0135
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

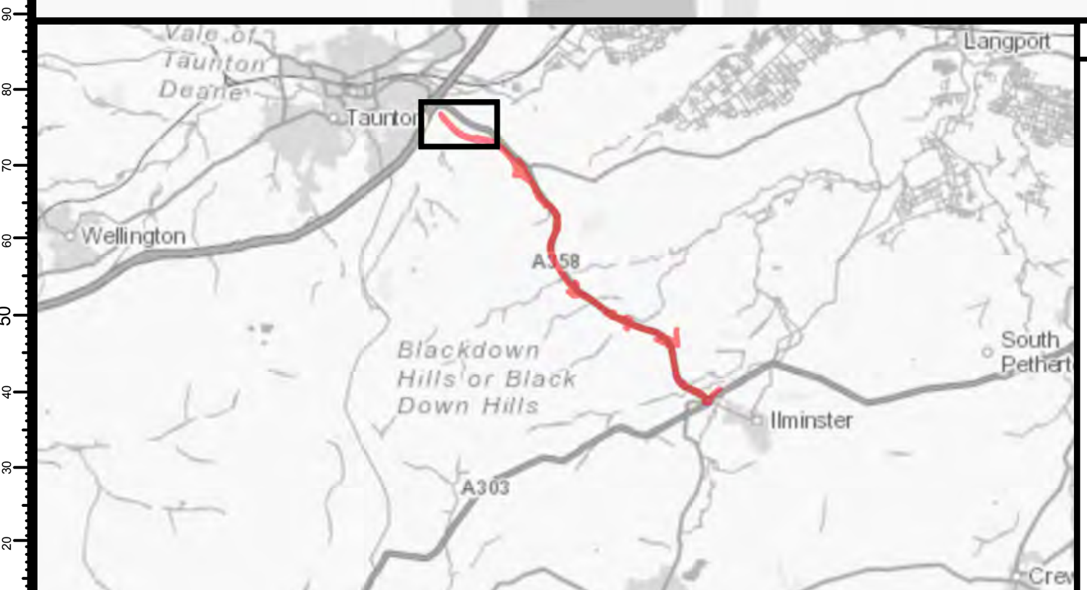
Revision: P1

Table 4:1 : Biological records for all bat records from Somerset Environmental Records Centre within 2km of the Pink Modified Option

Scientific	Common	Site	X	Y	Date	Abundance
Rhinolophus hipposideros	Lesser Horseshoe Bat	Chard Canal Tunnel, Beercrocombe	332400	120800	02/01/2010	2 Count of Adult
Pipistrellus pipistrellus	Common Pipistrelle	Herne Hill, Ilminster [woodland]	335500	114000	26/04/2010	
Eptesicus serotinus	Serotine	Herne Hill, Ilminster [woodland]	335500	114000	26/04/2010	
Pipistrellus pygmaeus	Soprano Pipistrelle	Herne Hill, Ilminster [woodland]	335500	114000	26/04/2010	
Myotis nattereri	Natterer's Bat	Thurlbear Wood,Thurlbear,Taunton [deciduous woodland]	327200	121000	22/05/2010	2 Count of Adult
Myotis bechsteinii	Bechstein's Bat	Thurlbear Wood,Thurlbear,Taunton [deciduous woodland]	327200	121000	22/05/2010	1 Count of Adult Female
Plecotus auritus	Brown Long-eared Bat	Thurlbear Wood,Thurlbear,Taunton [deciduous woodland]	327200	121000	22/05/2010	2 Count of Adult
Myotis mystacinus/brandtii	Whiskered/Brandt's Bat	Thurlbear Wood,Thurlbear,Taunton [deciduous woodland]	327200	121000	22/05/2010	1 Count of Adult
Pipistrellus pipistrellus	Common Pipistrelle	Thurlbear Wood,Thurlbear,Taunton [deciduous woodland]	327200	121000	22/05/2010	1 Count of Adult
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	02/06/2010	34 Count of Adult
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	09/06/2010	37 Count of Adult
Plecotus auritus	Brown Long-eared Bat	Deacons,Rapps,Ilminster [house]	333600	117100	02/08/2010	20 Count of Adult
Eptesicus serotinus	Serotine	Prey Lane, Slough Green	327400	120200	09/03/2011	1 Count of dead male
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	31/05/2011	15 Count of Adult
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	15/06/2011	41 Count of Adult
Pipistrellus	Common Pipistrelle	St Peters Church, Staple Fitzpaine	326300	118200	03/10/2011	
Eptesicus serotinus	Serotine	St Peters Church, Staple Fitzpaine	326300	118200	03/10/2011	

Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	11/10/2011	1 Count of Adult
Plecotus auritus	Brown Long-eared Bat	Recreation Ground, Ilminster	335500	114400	23/05/2012	1 Count of dead
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	28/05/2012	26 Count of Adult
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	11/06/2012	52 Count of Adult
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	03/06/2013	49 Count of Adult
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	15/06/2013	48 Count of Adult
Rhinolophus hipposideros	Lesser Horseshoe Bat	Dillington House College, Ilminster [former stable block]	336700	115600	26/06/2013	55 Count of Adult
Plecotus auritus	Brown Long-eared Bat	Staple Fitzpatrick	326400	118300	22/02/2014	1 Count of Adult

Appendix E – Location of trees



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P2	18/03/2021	Suitable for Stage Approval	ER	SM	ER

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat tree potential, Mott MacDonald (2017 - 2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 100m buffer

Current potential

- Possible confirmed roost
- High
- Moderate
- Negligible
- Low

References drawings

Drawing Status: Suitable for Stage Approval
Suitability: S4

Mott MacDonald Sweco
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Southampton
SO50 9NW
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Fax : +44 (0)23 8062 8801
www.mottmac.com

Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat tree potential
Page 1 of 7

Scale	Designed	Drawn	Checked	Approved
NTS	DB	ER	SM	ER
Original Size A1	Date 18/03/2021	Date 18/03/2021	Date 18/03/2021	Date 18/03/2021

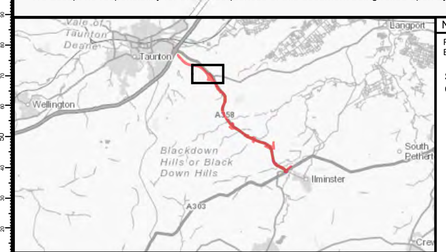
Drawing Number: HE PIN HE551508 - | Originator MMSJV - | Volume EBD -
Location 000 - | Type DR - | Role LB - | Number 0136

Project Ref. No. 370774

Revision P2

158
159
38
368
367
340
341
339
208
209
289

NTS 0 150 300 450 m



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P2	17/03/2021	Suitable for Stage Approval	ER	SM	ER

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat tree potential, Mott MacDonald (2017 - 2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Current potential

High

Moderate

Negligible

Low

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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www.mottmac.com

Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat tree potential
Page 2 of 7

Scale	Designed	Drawn	Checked	Approved
NTS	DB	ER	SM	ER
Original Size: A1	Date: 17/03/2021	Date: 17/03/2021	Date: 17/03/2021	Date: 17/03/2021

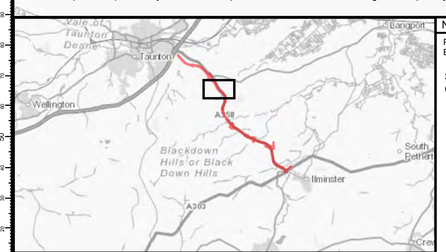
Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0137
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P2

299
298
297
204
200
203
304
198
199
301
300
196
197
195
331
216
333
332
334
217
218

NTS 0 150 300 450m



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P2	17/03/2021	Suitable for Stage Approval	ER	SM	ER

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat tree potential, Mott MacDonald (2017 - 2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Current potential

High

Moderate

Low

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat tree potential
Page 3 of 7

Scale	Designed	Drawn	Checked	Approved
NTS	DB	ER	SM	ER
Original Size	Date	Date	Date	Date
A1	17/03/2021	17/03/2021	17/03/2021	17/03/2021

Drawing Number: HE PIN | Originator | Volume
HE551508 - MMSJV - EBD -
000 - DR - LB - 0138
Location | Type | Role | Number

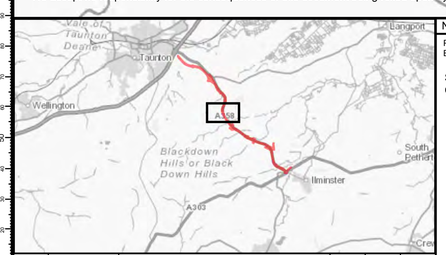
Project Ref. No.: 370774

Revision: P2

194
190
191a
349
350
351
352
353
354
31
27
26
30
28
29
176
178
177
183
184
185
181
180
182
212
174

Park Farm House
Abbey Wood
Tidley Farm
Swallow Barn Farm
Five Acre Copse
Little Oakley Plantation
Bickenhall Wood
Bowdens Copse
Barn's Copse
Captain Raven's Wood
Hatch Court Park
Hatch Park
Lady Alice Gore Memorial Field
Hatch Beauchamp
Butlers Plantation
Hatch Green
Meadows

0 150 300 450m
NTS



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P2	17/03/2021	Suitable for Stage Approval	ER	SM	ER

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat tree potential, Mott MacDonald (2017 - 2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option
100m buffer

Current potential

High
Moderate
Negligible
Low

References drawings

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Client: highways england

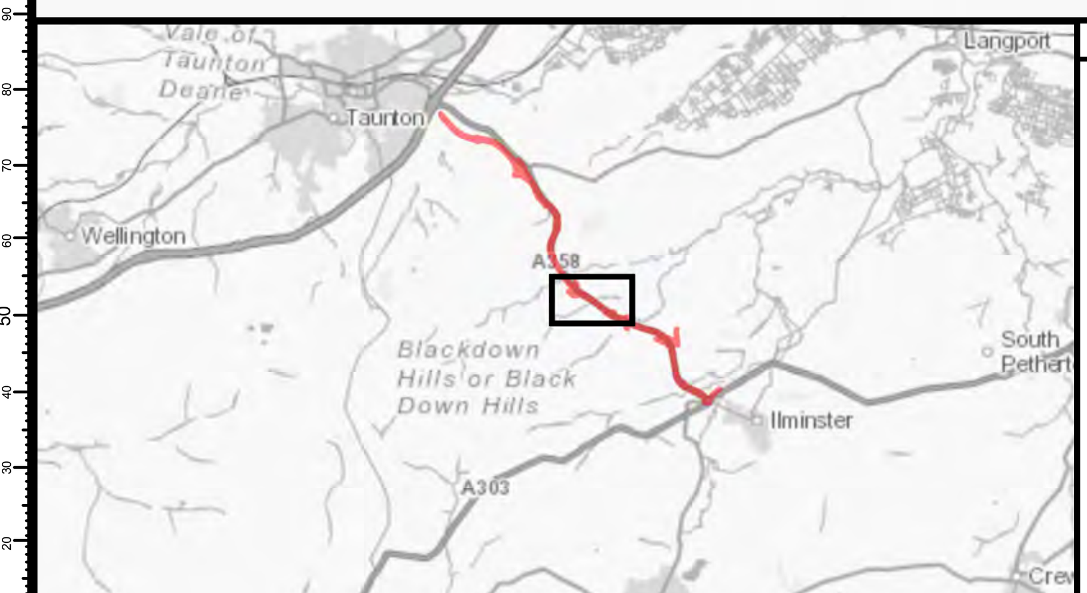
Project Title: A358 Taunton to Southfields

Drawing Title: Bat tree potential
Page 4 of 7

Scale	Designed	Drawn	Checked	Approved
NTS	DB	ER	SM	ER
Original Size	**Date**	**Date**	**Date**	**Date**
A1	17/03/2021	17/03/2021	17/03/2021	17/03/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0139
(Location | Originator | Volume | Type | Role | Number)

Project Ref. No.: 370774
Revision: P2



P2	17/03/2021	Suitable for Stage Approval	ER	SM	ER
REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat tree potential, Mott MacDonald (2017 - 2020)

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Key to symbols

- Pink modified scheme option
- 100m buffer

Current potential

- Possible confirmed roost
- High
- Moderate
- Negligible
- Low

References drawings

Drawing Status	Suitability
Suitable for Stage Approval	S4

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Fax : +44 (0)23 8062 8801
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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat tree potential
Page 5 of 7

Scale	Designed	Drawn	Checked	Approved
NTS	DB	ER	SM	ER
Original Size A1	Date 17/03/2021	Date 17/03/2021	Date 17/03/2021	Date 17/03/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0140
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No. 370774

Revision P2

131 169 55 98 2 21 22 20 191 130 96 53 97 54 52 95 363 166 41 42 44 45 43 319 317 364 318 320 327 328 329 330 167 57 241 101

NTS 0 125 250 375 500 m

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P2	17/03/2021	Suitable for Stage Approval	ER	SM	ER

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat tree potential, Mott MacDonald (2017 - 2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Current potential

High

Moderate

Negligible

Low

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat tree potential
Page 6 of 7

Scale	Designed	Drawn	Checked	Approved
NTS	DB	ER	SM	ER
Original Size: A1	Date: 17/03/2021	Date: 17/03/2021	Date: 17/03/2021	Date: 17/03/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0141
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P2

100 243 244 245 326 335 239 240 219 220 221 223 229 230 225 226 227 224 228 232 231 233 234 235 250 238 369 248 247 237 236 366 365

Shrubbery Farm
Rowlands Farm
Jordans
Horton Cross
Yetford Dairy House
River Isle

NTS 0 100 200 300 400m

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P2	17/03/2021	Suitable for Stage Approval	ER	SM	ER

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat tree potential, Mott MacDonald (2017 - 2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 100m buffer

Current potential

- Confirmed
- Possible confirmed roost

References drawings

- High
- Moderate
- Negligible
- Low

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Client: highways england

Project Title: A358 Taunton to Southfields

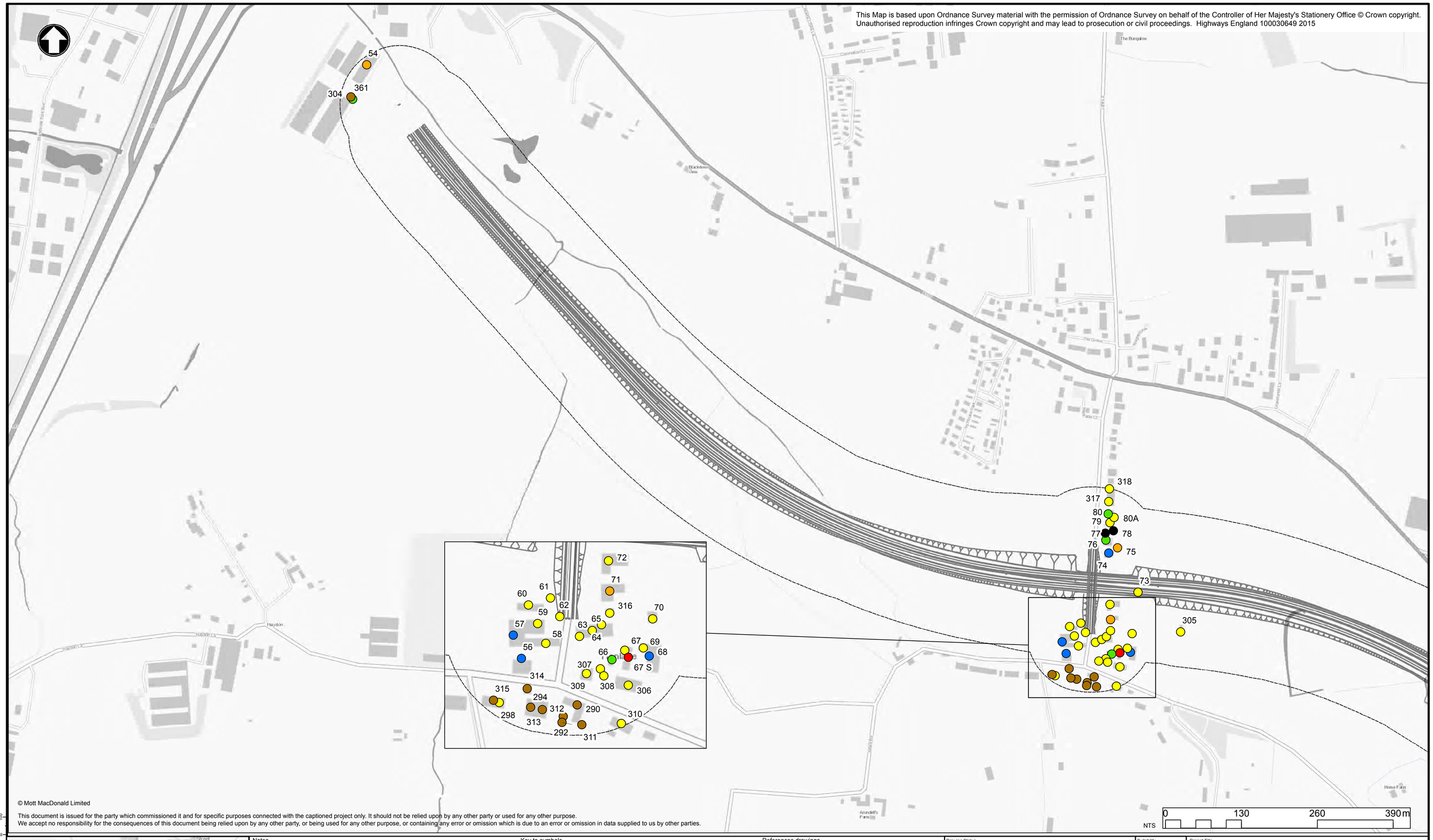
Drawing Title: Bat tree potential
Page 7 of 7

Scale	Designed	Drawn	Checked	Approved
NTS	DB	ER	SM	ER
Original Size	**Date**	**Date**	**Date**	**Date**
A1	17/03/2021	17/03/2021	17/03/2021	17/03/2021

Drawing Number: HE PIN | Originator | Volume
HE551508 - MMSJV - EBD -
000 - DR - LB - 0143
Location | Type | Role | Number

Project Ref. No.: 370774
Revision: P2

Appendix F – Locations of buildings



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 100m buffer

Roost potential

- Confirmed
- High
- Moderate
- Negligible
- Low
- Not Determined
- Scoped out

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 1 of 10

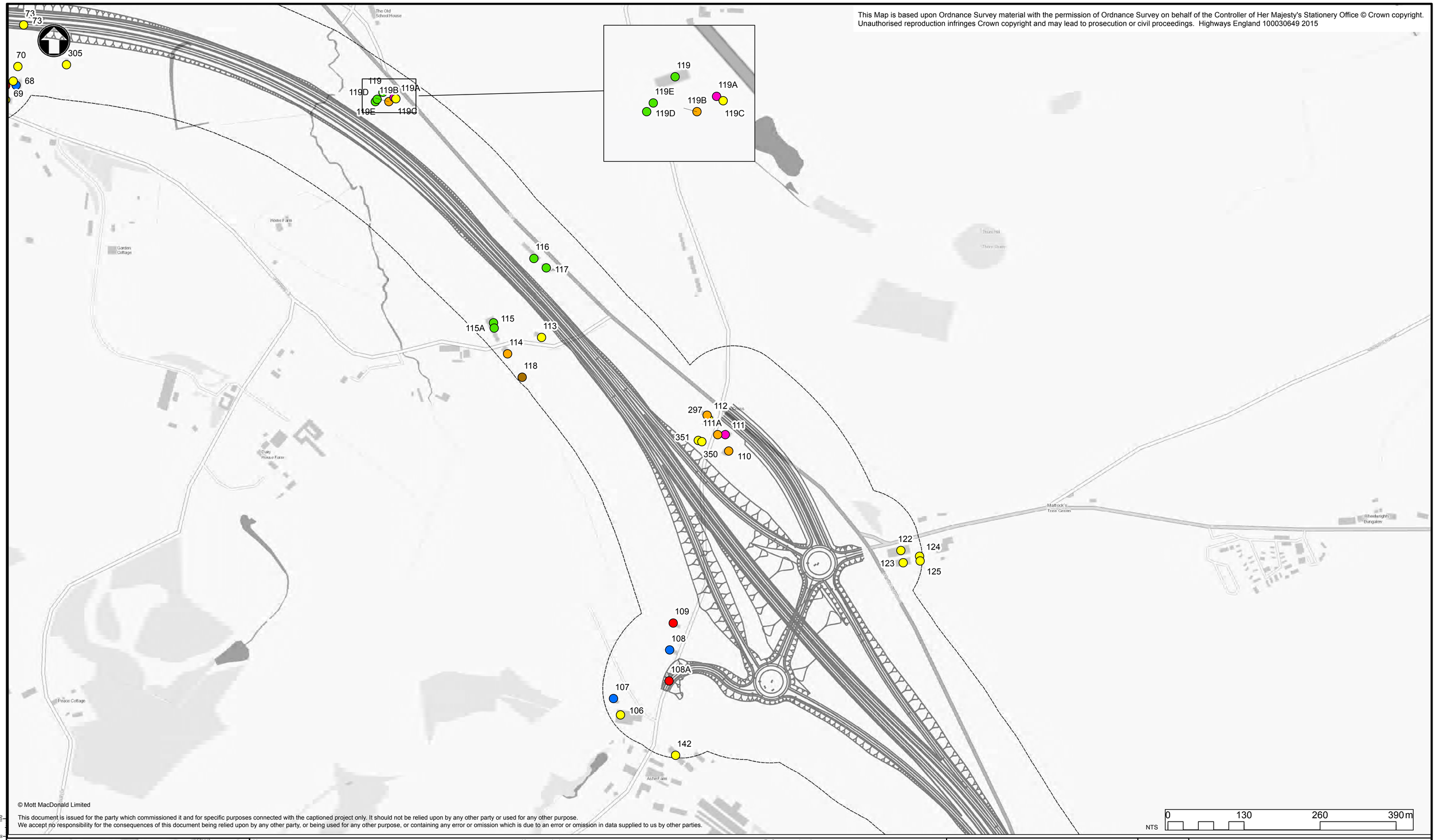
Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM

Original Size	Date	Date	Date	Date
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0144
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 100m buffer

Roost potential

- Confirmed
- Possible confirmed

References drawings

- High
- Moderate
- Negligible
- Low
- Scoped out

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Fax : +44 (0)23 8062 8801
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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 2 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM

Original Size	Date	Date	Date	Date
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0145
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3

295
293
291
156
158
157
154
277
280
278
279
Ash Lodge
Nightingale Farm
Huish Woods
Strangways Copse

0 40 80 120m
NTS

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option
100m buffer

Roost potential

Confirmed

References drawings

High
Moderate
Negligible
Low

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Fax : +44 (0)23 8062 8801
www.mottmac.com

Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential
Page 3 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size	Date	Date	Date	Date
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0146
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774
Revision: P3

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Roost potential

Not Determined

References drawings

Drawing Status	Suitability
Suitable for Stage Approval	S4

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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 4 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size	Date	Date	Date	Date
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0147
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3

179A 179 181 180 182 183 184 185 186 187 188 189 191 190 193 192A

Perry's Farm

NTS 0 40 80 120m

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Roost potential

Confirmed

High

Moderate

Negligible

Low

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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SO50 9NW

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Fax : +44 (0)23 8062 8801
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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 5 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM

Original Size	Date	Date	Date	Date
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0148
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3

179A 179 181 180 182 183 184 185 186 187 188 189 191 190 193 192A

Perry's Farm

NTS 0 40 80 120m

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Roost potential

Confirmed

High

Moderate

Negligible

Low

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

Mott MacDonald Sweco

Stoneham Place
Stoneham Lane
Southampton
SO50 9NW

Tel : +44 (0)23 8062 8800
Fax : +44 (0)23 8062 8801
www.mottmac.com

Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 5 of 10

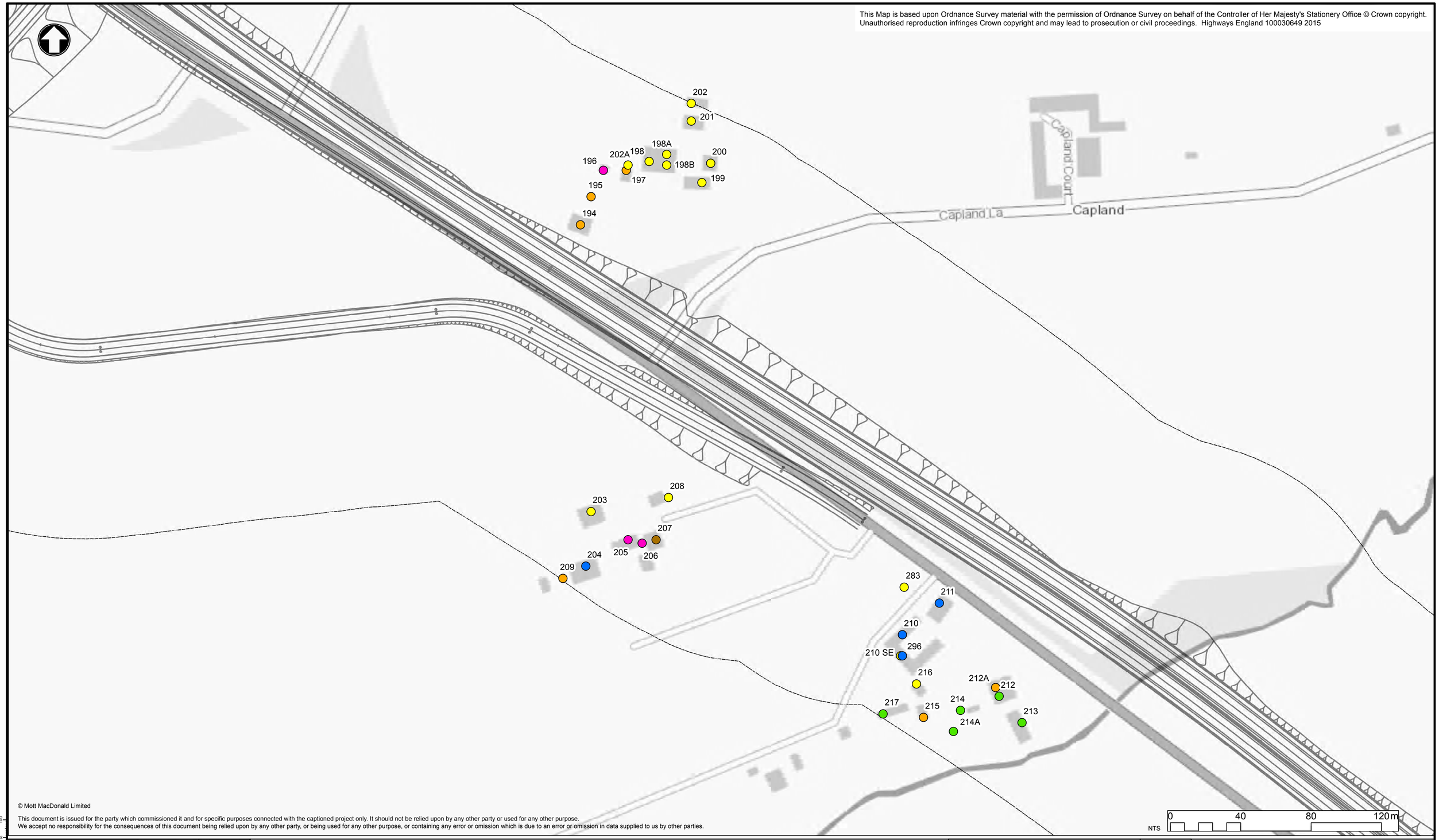
Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM

Original Size	Date	Date	Date	Date
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0148
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 100m buffer

Roost potential

- Confirmed
- Possible confirmed
- Moderate
- Negligible
- Low
- Scoped out

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Stoneham Lane
Southampton
SO50 9NW
Tel : +44 (0)23 8062 8800
Fax : +44 (0)23 8062 8801
www.mottmac.com

Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 6 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0149
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3

Folly Drove

Folly Drove

A358

222

222A

223

Neroche Farm

225

225A

224

226

238

237

236

227

235

231

232

234

233

228

230

240

241

242

282

244

244A

245

Kenny

0 50 100 150 m

NTS

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Roost potential

Confirmed

High

Moderate

Negligible

Low

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Fax : +44 (0)23 8062 8801
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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 7 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0150
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3

240
241
242
247
282
244
244A
245
246
253
248
249
254
255
251
250
252
281
257
Island Copse
The Lilacs
Wyatt Way

0 75 150 225 m
NTS

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Roost potential

Confirmed

High

Moderate

Negligible

Low

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Fax : +44 (0)23 8062 8801
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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Bat building potential

Page 8 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0151
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3

261
262
263
264
265
266
267
268
269
270

Rapps
Rapps Farm Cottage
White House Farm
Thickthorn House
Lower Parsonage

NTS 0 75 150 225m

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

Pink modified scheme option

100m buffer

Roost potential

Confirmed
High
Moderate
Negligible
Low

References drawings

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Project Title: A358 Taunton to Southfields

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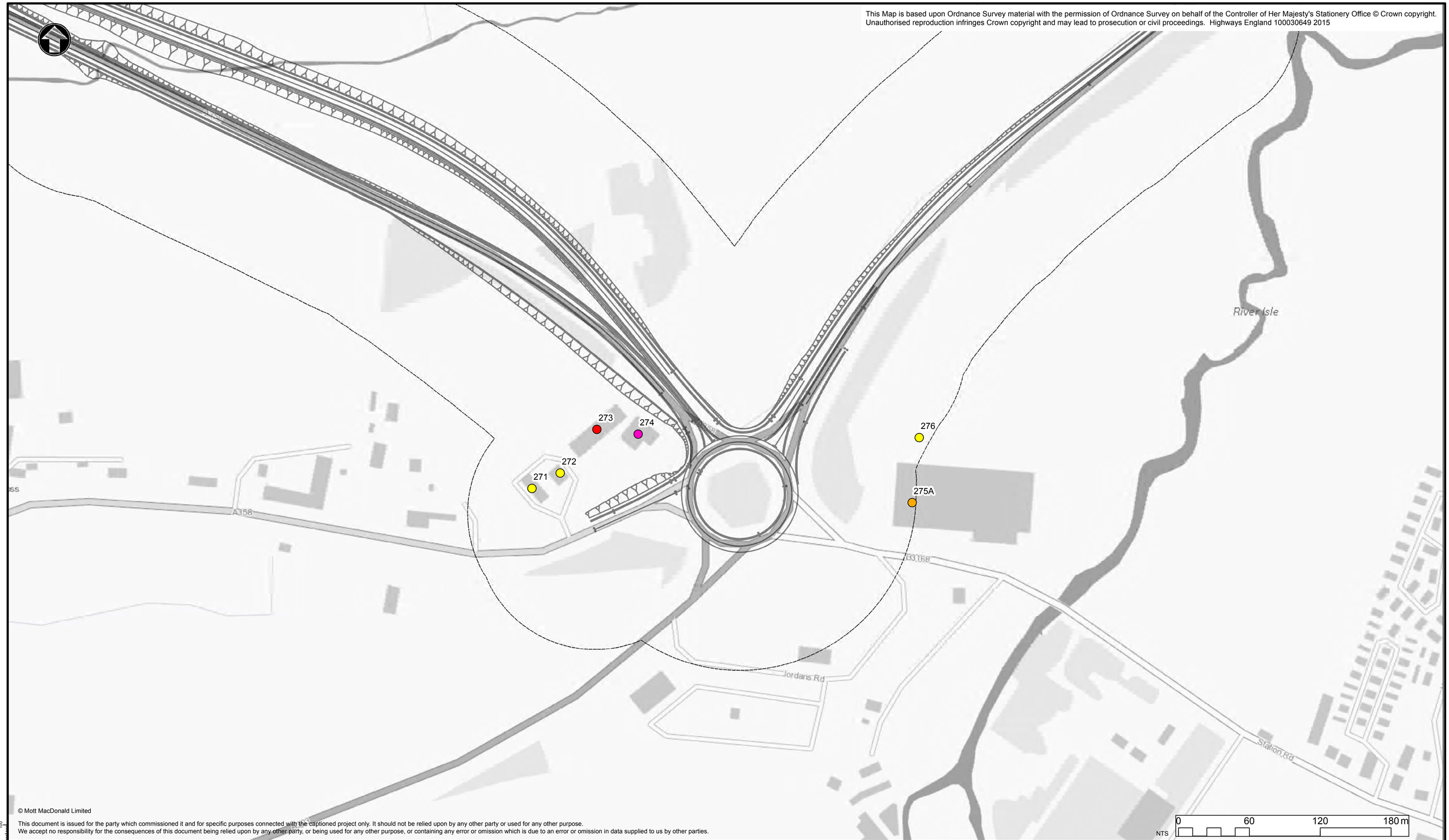
Page 9 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	12/07/2021	12/07/2021	12/07/2021	12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0152
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P3	12/07/2021	Following comments	ER	DB	SM

Notes

Pink Modified Scheme, Mott MacDonald (2018)
Bat building potential, Mott MacDonald (2017-2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 100m buffer

Roost potential

- Possible confirmed
- High
- Moderate
- Negligible

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Drawing Title: Bat building potential

Page 10 of 10

Scale	Designed	Drawn	Checked	Approved
NTS	ER	ER	DB	SM
Original Size: A1	Date: 12/07/2021	Date: 12/07/2021	Date: 12/07/2021	Date: 12/07/2021

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0153
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P3

Appendix G – Results of tree surveys

Table G-1 : Results for all radio tracking surveys, undertaken by Davidson-Watts Ecology

Species	Roost ID	Type	Grid reference	Feature	Count
M. bechsteinii	R1	Ash tree	ST2824021790	Woodpecker hole	21
M. bechsteinii	R2	Tree**	ST2947420277	No access	n/a
M. bechsteinii	R3	Tree**	ST2829422099	No access	n/a
M. bechsteinii	R4	Tree**	ST2947420277	No access	n/a
M. bechsteinii	R5	Ash tree	ST2824021790	Woodpecker hole	19
B. barbastellus	R6	Oak tree	ST2692422801	Loose bark	1
M. bechsteinii	R4	Tree**	ST2947420277	No access	n/a
M. bechsteinii	R7	Tree**	ST2995620911	No access	n/a
M. bechsteinii	R8	Tree	ST2897620745	No emergence*	n/a
M. bechsteinii	R9	Oak	ST2872320228	No emergence*	n/a
M. bechsteinii	R10	Tree**	ST3012521132	No access	n/a
M. bechsteinii	R11	Ash tree	ST2820519699	No emergence*	n/a
B. barbastellus	R12	Oak tree	ST2846119865	Split	11+
M. nattereri	R13	Oak tree	ST2823821240	Split in limb	1

*emergence survey not undertaken due to resources focussing on road crossing points of tagged bats.

** based on triangulation and habitat used during day roosting.

Scheme Tree Number	Tag Number	Land parcel number/name	Tree Species	Easting	Northing	Tree potential. Ground level tree survey	Summary of ground tree level assessment	Date of ground level tree assessment	Tree potential. Climb inspection survey	Date of climbing survey	Summary of features following climbing survey	Current potential since most recent survey	Within 100m	Within 20m if moderate	Directly impacted if low	Number of surveyors required for emergence	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
233	No tag	WS78713	Pedunculate oak	334000	115643	High	1 x loose bark 4m from ground level facing west. 1 x woodpecker hole 10m from the ground facing south.	04/10/2017	High	18/10/2017	Loose bark and woodpecker hole present. Unsafe to climb tree	Confirmed	Y	N/A	N/A	1	25/06/2019	Y	Temp: 18C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 21:28 Start: 20:58 Finish: 23:28	1 common pipistrelle and 2 soprano pipistrelle emerged from under loose bark, flying north and west. Common and soprano pipistrelle, noctule, Myotis species and serotine calls recorded	11/07/2019	N	Temp: 16C Cloud cover: 0 Wind: 0 Rain: 0	Sunrise: 05:09 Start: 03:09 Finish: 05:24	Common and soprano pipistrelle, noctule and Myotis species calls	29/07/2019	N	Temp: 19C Cloud cover: 2 Wind: 3 Rain: 0	Sunset: 21:04 Start: 20:34 Finish: 23:04	Common and soprano pipistrelle, noctule, serotine, Myotis species and long-eared calls
234	No tag	WS78713	Pedunculate oak	334001	115632	Moderate	Loose bark 4m from the ground east facing.	04/10/2017	Moderate	18/10/2017	Loose bark endoscoped. No bats identified	Confirmed	Y	N/A	N/A	1	25/06/2019	N	Temp: 18C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 21:29 Start: 20:59 Finish: 23:29	Common and soprano pipistrelle, noctule and Nyctalus species calls	11/07/2019	Y	Temp: 16C Cloud cover: 8 Wind: 0 Rain: 0	Sunrise: 05:09 Start: 03:09 Finish: 05:24	Common pipistrelle re-entered roost under loose bark. Common and soprano pipistrelle, Myotis, noctule and long-eared calls	Needs further survey in 2021						
237	No tag	WS78713	Common Ash	334271	115540	High	Branch cavity 8m from ground level north facing	04/10/2017	High	04/10/2017	Branch cavity and flaking bark present. Tree unsafe to climb	Confirmed	Y	N/A	N/A	1	09/07/2019	N	Temp: 19C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 21:24 Start: 20:54 Finish: 23:24	Common and soprano pipistrelle, Myotis species, Leisler's and serotine calls	31/07/2019	Y	Temp: 18C Cloud cover: 1 Wind: 0 Rain: 0	Sunset: 21:00 Start: 20:30 Finish: 23:00	2 soprano pipistrelle bats emerged from tree. Noctule, long-eared, Myotis species and serotine calls	15/08/2019	N	Temp: 15C Cloud cover: 7 Wind: 2 Rain: 0	Sunrise: 05:57 Start: 03:57 Finish: 06:12	Soprano pipistrelle may have re-entered tree roost. Common and soprano pipistrelle and noctule calls
244	643	WS78706	Turkey Oak	333508	115920	High	1 x callus roll 10m from the ground north east facing. 1 x callus roll 5m above the ground north facing.	09/10/2017	High	19/10/2017	Two callus rolls. Unsafe to climb tree	Confirmed	Y	N/A	N/A	1	27/06/2019	Y	Temp: 19C Cloud cover: 2 Wind: 3 Rain: 0	Sunset: 21:31 Start: 21:01 Finish: 23:31	Soprano pipistrelle emerged from lower callus roll, then foraged around trees. Common and soprano pipistrelle, noctule, Nyctalus species and serotine calls	31/07/2019	N	Temp: 15C Cloud cover: 8 Wind: 4 Rain: 0	Sunrise: 05:34 Start: 03:34 Finish: 05:54	Soprano pipistrelle, pipistrelle species calls and noctule seen commuting from west to east over the tree	04/06/2020	N	Temp: 13C Cloud cover: 7 Wind: 4 Rain: 0	Sunset: 21:21 Start: 20:51 Finish: 23:21	Common and soprano pipistrelle, noctule, serotine, Myotis species and long-eared calls
335	No tag	WS78706	Pedunculate oak	333587	115837	High	5 x woodpecker holes 4m from the ground north west facing.	10/06/2019	N/A	N/A	No climb required - complete set of emergence and re-entry surveys undertaken	Confirmed	Y	N/A	N/A	2	27/08/2019	Y	Temp: 19C Cloud cover: 8 Wind: 1 Rain: 2	Sunset: 20:09 Start: 19:50 Finish: 22:09	Emergences of both a single common and a soprano pipistrelle from tree. Commuting pipistrelles, noctules, a myotis sp. brown-long-eared bat and barbastelle were also recorded.	29/07/2020	N	Temp: 17C Cloud cover: 7 Wind: 1 Rain: 0	Sunset: 21:01 Start: 20:31 Finish 23:01	Foraging noctule and serotine bats observed. Myotis sp. soprano pipistrelle; and brown-long-eared bats also recorded.	13/10/2020	N	Temp: 8C Cloud cover: 4 Wind: 1 Rain: 1	Sunrise: 07:30 Start: 05:30 Finish 07:45	commuting soprano and common pipistrelle bats were identified.
369	No tag	WS78713	Pedunculate oak	334193	115587	Confirmed	Woodpecker hole 13m from the ground facing east.	15/08/2019	N/A	N/A	Woodpecker hole. No climb survey - incidental roost confirmation whilst surveying tree 250.	Confirmed	Y	N/A	N/A	1	29/07/2020	N	Temp: 18C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:03 Start: 20:33 Finish 23:03	Commuting soprano pipistrelle. Common pipistrelles and noctules recorded.	13/08/2020	N	Temp: 19C Cloud cover: 7 Wind: 1 Rain: 0	Sunrise: 05:56 Start: 03:56 Finish: 06:11	Commuting common and soprano pipistrelles; serotine and noctule bats.	15/08/2019	Y	Temp: 16C Cloud cover: 6 Wind: 2 Rain: 0	Sunrise: 05:57 Start: 03:57 Finish 06:13	1 soprano pipistrelle re-entry. Constant foraging and socialising of common and soprano pipistrelle bats
22	No tag	ST161973	Oak	331208	118034	High	Woodpecker hole 15m above ground level north west facing	14/02/2017	High	13/04/2017	Woodpecker hole - couldn't fully inspect with endoscope, used mirror attachment, but clean and dry. looks to extend up past 30cm	High	Y	N/A	N/A	1	15/08/2017	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 05:59 Start: 03:59 Finish: 06:14	Common pipistrelle and Nyctaloid commuting/socialising	18/09/2017	N	Temp: 17C Cloud cover: 1 Wind: 0 Rain: 0	Sunset: 19:20 Start: 18:50 Finish: 21:20	Pipistrelle foraging/ socialising	03/05/2018	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 20:37 Start: 20:07 Finish: 22:37	Foraging pipistrelle and myotis
57		ST106972	Oak	332937	117266	High	2 x branch cavity 3m west facing and 4m north east facing	07/03/2017	High	N/A	2 x branch cavities and loose bark present. No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	2	08/08/2017	N	Temp: 14C Cloud cover: 1 Wind: 2 Rain: 1	Sunrise: 05:48 Start: 03:48 Finish: 06:03	no bats	30/08/2017	N	Temp: 13C Cloud cover: 7 Wind: 1 Rain: 0	Sunrise: 06:22 Start: 04:22 Finish: 06:37	no bats	12/10/2017	N	Temp: 10C Cloud cover: 1 Wind: 2 Rain: 0	Sunrise: 07:30 Start: 05:30 Finish: 07:45	no bats
100	No tag	WS78653	Pedunculate oak	333319	116536	High	Trunk cavity 1m above ground level east facing. Loose bark 8m above ground level east facing and branch cavity 5m above ground level east facing.	07/03/2017	High	N/A	Trunk cavity, 2 x branch cavities and loose bark. Unsafe to climb	High	Y	N/A	N/A	2	09/07/2019	N	Temp: 13C Cloud cover: 2 Wind: 0 Rain: 0	Sunrise: 05:08 Start: 03:08 Finish: 05:23	pipistrelles, serotine and myotis commuting/foraging	30/07/2019	Possible	Temp: 17C Cloud cover: 8 Wind: 4 Rain: 2	Sunset: 20:30 Start: 21:00 Finish: 23:00	potential re-entry of soprano pipistrelle, circling tree at 22:24	29/08/2019	N	Temp: 20C Cloud cover: 6 Wind: 3 Rain: 0	Sunset: 20:05 Start: 19:45 Finish: 22:05	noctule and soprano pipistrelles commuting
169	484	WS64776	Common Ash	331736	118126	High	Woodpecker hole 9m above ground level facing south east. Tree is located next to high quality bat foraging habitat, in the form of a stream.	04/05/2017	N/A	N/A	N/A	High	Y	N/A	N/A		Needs further survey in 2021															
39	No tag	ST316480	Pedunculate oak	327050	123105	Low	Moderately ivy covered tree	21/02/2017	Low		Ivy cover may be obscuring suitable features	Low	n	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
174	No tag	ST324729	Oak sp.	329603	119333	High	Callus roll 3m above sea level facing north east.	03/05/2017	N/A	N/A	No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	1	05/09/2017	N	Temp: 15C Cloud cover: 0 Wind: 3 Rain: 0	Sunset: 19:50 Start: 19:20 Finish: 21:50	No bat activity	17/10/2017	N	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 18:14 Start: 17:44 Finish: 20:14	single serotine call	26/08/2020	N	Temp: 16C Cloud cover: 3 Wind: 4 Rain: 0	Sunset: 06:17 Start: 04:17 Finish: 06:32	myotis, noctule and pipistrelle calls
177	No tag	ST324729	Common Ash	329428	119578	High	Callus roll 2m above ground level facing north west. 20 features on main trunks. Very high potential with no clear view.	03/05/2017	N/A	N/A	Unsafe to climb	High	Y	N/A	N/A	1	18/08/2017	N	Temp: 15C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 06:03 Start: 04:00 Finish: 06:18	Myotis and noctule activity	06/09/2017	N	Temp: 13C Cloud cover: 6 Wind: 2 Rain: 0	Sunset: 19:46 Start: 19:11 Finish: 21:46	pipistrelle and possible barbastelle calls	17/10/2017	N	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 18:15 Start: 17:45 Finish: 20:15	No bat activity
178	No tag	ST324729	Common Ash	329393	119572	High	Callus roll 10m above ground facing east.	03/05/2017	N/A	N/A	No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	1	18/08/2017	N	Temp: 15C Cloud cover: 0 Wind: 4 Rain: 0	Sunrise: 06:04 Start: 04:04 Finish: 06:19	single myotis, pipistrelle and noctule calls	06/09/2017	N	Temp: 12C Cloud cover: 4 Wind: 1 Rain: 0	Sunset: 19:47 Start: 19:17 Finish: 21:47	No bat activity	Needs further survey in 2021				
180	No tag	ST324729	Oak sp.	329499	119488	High	Branch cavity 3m above ground level south east facing.		N/A	N/A	No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	1	14/08/2017	N	Temp: 15C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 20:35 Start: 20:05 Finish: 22:15 Finished slightly early due to heavy rain	A single noctule pass, one soprano pipistrelle and regular common pipistrelle and Myotis passes	05/09/2017	N	Temp: 16C Cloud cover: 1 Wind: 2 Rain: 0	Sunset: 19:50 Start: 19:20 Finish: 21:50	Common and soprano pipistrelle calls and a single Myotis call	17/10/2017	N	Temp: 14C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 18:15 Start: 17:55 Finish: 20:15	No bat activity
182	No tag	ST324729	Goat Willow	329533	119511	High	Woodpecker hole 3.5m above ground level facing north.	03/05/2017	N/A	N/A	No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	1	18/07/2017	N	Temp: 12C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 06:04 Start: 03:59 Finish: 06:19	A single Myotis commuting	17/10/2017	N	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 18:14 Start: 17:44 Finish: 20:14	A single noctule bat was recorded	25/05/2018	N	Temp: 18C Cloud cover: 4 Wind: 2 Rain: 2	Sunset: 21:06 Start: 20:36 Finish: 23:06	Common and soprano pipistrelle, noctule, Nyctalus species and serotine calls
183	No tag	ST324729	Oak sp.	329473	119615	High	Trunk cavity 1.5m above ground level south facing.	03/05/2017	N/A	N/A	Unsafe to climb	High	Y	N/A	N/A	1	18/08/2017	N	Temp: 19C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 06:04 Start: 04:04 Finish: 06:19	Pipistrelle species and noctule calls	17/10/2017	N	Temp: 12C Cloud cover: 8 Wind: 1 Rain: 2	Sunset: 18:15 Start: 17:45 Finish: 20:15	No activity	18/05/2020	N	Temp: 17C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 20:58 Start: 20:28 Finish: 22:58	Noctule, serotine, Leisler's, Myotis and common pipistrelle calls. Soprano pipistrelle foraging adjacent to line of trees
200	No tag	U00032	Willow	328824	121879	High	1 x trunk cavity 1m from the ground facing east. 1 x callus roll 2m above the ground south facing.	10/05/2017	N/A	N/A	Trunk cavity and callus roll. No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	2	01/05/2018	N	Temp: 10C Cloud cover: 8 Wind: 3 Rain: 1	Sunset: 20:33 Start: 20:03 Finish: 22:33	Common pipistrelle, long-eared species and Nyctalus species	21/05/2018	N	Temp: 17C Cloud cover: 6 Wind: 1 Rain: 2	Sunset: 21:04 Start: 20:34 Finish: 23:04	Common and soprano pipistrelle, noctule, Leisler's, long-eared species, barbastelle and serotine calls	02/10/2018	N	Temp: 14C Cloud cover: 8 Wind: 3 Rain: 0	Sunrise: 07:15 Start: 05:15 Finish: 07:30	Common and soprano pipistrelle, Myotis and long-eared calls
212	723	ST324337	oak	329706	119478	High	Trunk cavity 2m above ground level south facing.	01/06/2017	N/A	N/A	Main trunk splits where branches extend out, appears hollow to the top. Hidden by young branches, split visible at ground level	High	Y	N/A	N/A	2	23/08/2017	N	Temp: 17C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 06:11 Start: 04:10 Finish: 06:26	No recordings	24/10/2017	N	Temp: 16C Cloud cover: 7 Wind: 2 Rain: 0	Sunset: 18:05 Start: 17:32 Finish: 20:02	Common and soprano pipistrelle and one noctule calls	25/08/2020	N	Temp: 16C Cloud cover: 2 Wind: 4 Rain: 0	Sunset: 20:12 Start: 19:50 Finish: 22:12	Common pipistrelle, Myotis, noctule and serotine calls
216	No tag	U00035	Hybrid black poplar	329248	121489	High	Callus roll 10m above ground level facing North East.	19/07/2017	N/A	N/A	Two callus rolls present. Unsafe to climb tree	High	Y	N/A	N/A	2	11/06/2019	N	Temp: 11C Cloud cover: 8 Wind: 3 Rain: 0	Sunset: 21:24 Start: 20:54 Finish: 23:24	Common and soprano pipistrelle, Myotis species, noctule and serotine calls	05/06/2020	N	Temp: 10C Cloud cover: 4 Wind: 1 Rain: 0	Sunrise: 05:00 Start: 03:01 Finish: 05:30	Common and soprano pipistrelle, Myotis species and a barbastelle call	28/07/2020	N	Temp: 15C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:04 Start: 20:25 Finish: 23:04	Common and soprano pipistrelle foraging north and south along hedge. Myotis and serotine calls
218	No tag	U00035	willow	329252	121397	High	Trunk cavity 2m above ground level north east facing.	19/07/2017	N/A	N/A	Trunk cavity. No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	2	12/06/2019	N	Temp: 10C Cloud cover: 8 Wind: 1 Rain: 1	Sunrise: 04:56 Start: 02:56 Finish: 05:11	Soprano pipistrelle, noctule and lesser horseshoe calls	15/07/2020	N	Temp: 15C Cloud cover: 7 Wind: 2 Rain: 0	Sunset: 21:21 Start: 21:06 Finish: 23:21	Numerous noctule bats flying towards A358 above line of trees. Common and soprano pipistrelle and serotine calls	06/08/2020	N	Temp: 15C Cloud cover: 6 Wind: 1 Rain: 0	Sunrise: 05:46 Start: 04:16 Finish: 06:01	Common and soprano pipistrelle, Myotis species, long-eared species, barbastelle calls
220	490	WS78570	lime	333537	115765	High	Trunk cavity 1.5m above the ground level facing west.	04/10/2017	High	18/10/2017	Trunk cavity extends 3m within the hollow trunk. The top of the feature is dry and sheltered.	High	Y	N/A	N/A	1	02/07/2019	N	Temp: 14C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 03:17 Start: 03:07 Finish: 05:17	Common and soprano pipistrelle, Myotis species and Nyctaloid species calls	30/07/2019	N	Temp: 17C Cloud cover: 8 Wind: 4 Rain: 1	Sunset: 21:02 Start: 20:32 Finish: 23:02	Soprano pipistrelle, noctule and pipistrelle species calls	20/08/2020	N	Temp: 17C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 20:22 Start: 19:52 Finish: 22:22	Common and soprano pipistrelle and Myotis species calls
221	491	WS78570	horse chestnut	333530	115755	Moderate	Loose bark 1m above ground level east facing.	04/10/2017	High	18/10/2017	Loose bark offers no shelter. Branch cavity is dry and extends up by 30cm. Inside is enclosed and clean	High	Y	N/A	N/A	1	02/07/2019	N	Temp: 11C Cloud cover: 6 Wind: 1 Rain: 0	Sunrise: 05:01 Start: 03:08 Finish: 05:16	One common pipistrelle call	30/07/2019	N	Temp: 17C Cloud cover: 8 Wind: 6 Rain: 2	Sunset: 21:04 Start: 20:34 Finish: 23:04	One common pipistrelle call	20/08/2020	N	Temp: 18C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 22:22 Start: 19:52 Finish: 20:22	Common and soprano pipistrelle, Myotis and serotine calls
231	No tag	WS78713	Common Ash	334025	115706	High	1 x branch cavity 5m above the ground facing north. 1 x branch cavity 9m above the ground level north west facing. 1 x branch cavity 3m above the ground level south facing.	04/10/2017	High	18/10/2017	Three branch cavities. Tree unsafe to climb, but lower cavity checked and is too shallow to be suitable for bats	High	Y		N/A	2	16/06/2020	N	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 21:28 Start: 20:58 Finish: 23:28	Common and soprano pipistrelle, noctule, serotine and Myotis species calls. Pipistrelle and noctule bats flying adjacent to and over the hedge	30/06/2020	N	Temp: 11C Cloud cover: 5 Wind: 1 Rain: 0	Sunrise: 05:00 Start: 03:00 Finish: 05:15	Common and soprano pipistrelle, noctule, long-eared species Leisler's, Myotis species, barbastelle and serotine calls. Foraging in all directions, mainly along watercourse	30/07/2020	N	Temp: 13C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:31 Start: 03:31 Finish: 05:46	Common and soprano pipistrelle, Myotis species and noctule calls. Pipistrelle bats commuting towards A358
238	No tag	WS78713	Common Ash	334221	115596	High	1 x trunk cavity 8m from the ground north facing. 1 x trunk cavity 12m from the ground facing south east. 1 x trunk cavity 12m above the ground north west facing.	04/10/2017	N/A	N/A	Multiple woodpecker holes in dead tree. Unsafe to climb	High	Y	N/A	Y	-	Needs further survey in 2021															
248	649	WS78713	Willow	334220	115592	High	1 x split 5m above the ground facing north west. 1 x woodpecker hole 6m above the ground level north west facing.	04/10/2017	High	16/10/2017	Woodpecker hole at the top of the trunk's split. Unsafe to climb	High	Y	N/A	N/A	1	03/07/2019	N	Temp: 17C Cloud cover: 2 Wind: 1 Rain: 0	Sunset: 21:30 Start: 21:00 Finish: 23:30	Common and soprano, noctule and serotine calls	31/07/2019	N	Temp: 16C Cloud cover: 8 Wind: 5 Rain: 0	Sunrise: 05:36 Start: 03:36 Finish: 05:51	Common and soprano pipistrelle and noctule calls. Foraging around pond in all directions	27/08/2019	N	Temp: 20C Cloud cover: 8 Wind: 2 Rain: 2	Sunset: 20:09 Start: 19:39 Finish: 22:09	Common and soprano pipistrelle, noctule and serotine calls
250	654	WS78713	Ash	334204	115592	High	1 x woodpecker hole 10m above the ground facing north west. 1 x split 15m above the ground level north facing.	04/10/2017	N/A	N/A	N/A	High	Y	N/A	N/A	2	16/07/2019	N	Temp: 18C Cloud cover: 1 Wind: 2 Rain: 0	Sunset: 21:21 Start: 20:51 Finish: 23:21	Common and soprano, noctule, Myotis species and long-eared species calls	15/08/2019	N	Temp: 16C Cloud cover: 8 Wind: 2 Rain: 0	Sunrise: 05:57 Start: 03:57 Finish: 06:13	Common and soprano pipistrelle foraging in all directions. Soprano pipistrelle re-entry into nearby oak tree. No record of tree number	03/09/2019	N	Temp: 18C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 19:35 Start: 21:54 Finish: 19:54	Common and soprano pipistrelle, noctule, Nyctalus species, long-eared species and serotine calls. Foraging in all directions
289	581	ST277430	Pedunculate oak	328299	122608	High	1 x branch cavity 5m from the ground facing east. 1 x branch cavity 1.5 above the ground north east facing.	23/02/2017	High	13/11/2017	Branch cavity extends up by 15cm. Very open and no shelter. Another branch cavity extends up by 50cm. It is clean and dry. It extends down by 40cm, there are old feeding remains of a squirrel.	High	Y	N/A	N	2	11/09/2019	N	Temp: 17C Cloud cover: 6 Wind: 3 Rain: 0	Sunset: 19:36 Start: 19:06 Finish 21:36	A commuting noctule recorded and foraging common and soprano pipistrelle bats.	16/06/2020	N	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 04:59 Start: 02:56 Finish 05:30	Foraging common and soprano pipistrelles. Commuting common and soprano pipistrelles, noctules and myotis sp. bats.	09/07/2020	N	Temp: 16C Cloud cover: 7 Wind: 3 Rain: 2	Sunset: 21:25 Start: 20:55 Finish 23:26	Foraging common pipistrelles. Commuting noctules, soprano pipistrelles and a serotine heard.
295	537	ST198116	Crack willow	325825	124271	High	Trunk cavity 2m from the ground south facing.	06/07/2018	N/A	N/A	Branch cavity present. No climb required - complete set of emergence and re-entry surveys undertaken	Possible confirmed roost	Y	N/A	N/A	2	09/07/2019	N	Temp: 18C Cloud cover: 2 Wind: 0 Rain: 0	Sunrise: 03:37 Start: 03:07 Finish 05:23	Commuting common and soprano pipistrelle bats along with noctule and myotis species. Foraging common and soprano pipistrelles recorded.	24/07/2019	N	Temp: 23C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:11 Start: 21:41 Finish 23:11	A moderate level of activity from foraging common and soprano pipistrelles, noctules, myotis spp, and serotines	12/08/2020	Y	Temp: 20C Cloud cover: 1 Wind: 1 Rain: 2	Sunset: 20:40 Start: 20:10 Finish 22:40	Potential emergence of soprano pipistrelle - observed to drop from the tree. Soprano pipistrelles noted foraging. Other bats recorded common pipistrelle, long-eared bat and myotis sp.

Scheme Tree Number	Tag Number	Land parcel number/name	Tree Species	Easting	Northing	Tree potential. Ground level tree survey	Summary of ground tree level assessment	Date of ground level tree assessment	Tree potential. Climb inspection survey	Date of climbing survey	Summary of features following climbing survey	Current potential since most recent survey	Within 100m	Within 20m if moderate	Directly impacted if low	Number of surveyors required for emergence	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
324	No tag	ST198119	Common ash	326600	123700	High	1 x Callus roll 12m from the ground north west facing. 1 x Woodpecker hole 10m above ground level facing east.	17/07/2019	N/A	N/A	Callus roll and woodpecker hole present. No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N	2	15/08/2019	N	Temp: 20C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 20:34 Start: 20:04 Finish 22:34	Common and soprano pipistrelle, noctule, long-eared species and Myotis species calls	09/09/2019	N	Temp: 14C Cloud cover:8 Wind: 1 Rain: 1	Sunset: 19:41 Start: 19:11 Finish 21:41	Commuting common pipistrelle and long eared bat recorded along with pipistrelle sp. social calls a myotis spp and a Noctule call.	27/05/2020	N	Temp: 10C Cloud cover: 0 Wind: 0 Rain: 0	Sunrise: 05:07 Start: 03:07 Finish 05:15	Mainly common pipistrelle commuting with some foraging. Soprano pipistrelles recorded commuting along with myotis species and noctules/ Nyctalus sp.
102	No tag	ST289333	Pedunculate oak	323491	122341	High		07/03/2017			Tree observed from distance as no access - multiple features appear to be present	High	N																		
103	No tag	ST289333		323487	122362	Moderate		07/03/2017			Dead tree observed from distance as no access to land parcel	Moderate	N																		
104	865	ST95798	Field Maple	328682	121758	Moderate				N/A		Moderate	N																		
105	862	ST95798	Silver Birch	328646	121764	Moderate			Moderate	N/A		Moderate	N																		
106	863	ST176126	Oak	326475	123056	Moderate		14/02/2017	Moderate	21/03/2017	Trunk cavity Extends up 60cm, clean and dry, but low to ground	Moderate	N																		
107	860	ST316480	Common Ash	327070	122757	High		21/02/2017	Moderate	23/03/2017	Four woodpecker holes connect with callus roll. Ivy may be obscuring other features	Moderate	N																		
108	859	ST316480	Common Ash	327078	122756	High		21/02/2017			Two callus rolls, two woodpecker holes and split present. Tree unsafe to climb	High	N																		
109	858	ST316480	Common Ash	327094	122755	Low		21/02/2017	Low	23/03/2017	Ivy cover may be concealing features	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	842	ST316480	Unknown	327351	123057	Moderate		21/02/2017	Low	23/03/2017	Loose bark - tight cavity, space seems limited.	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	844	ST316480	Common Ash	327295	122974	High		21/02/2017	Low	23/03/2017	Woodpecker hole has no cavity, branch cavity connects with woodpecker hole and trunk cavity has some shelter, but is quite exposed	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	861	ST316480	Pedunculate oak	327070	122894	Low		21/02/2017	Low	23/03/2017	Branch cavity has no suitability, but ivy cover may be obscuring other features	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113	862	ST316480	Pedunculate oak	327061	123116	High		21/02/2017			Trunk cavity, split, two callus rolls and two woodpecker holes present. Unsafe to climb tree	High	N																		
114	No tag	ST316480	Pedunculate oak	327048	123136	Moderate		21/02/2017			Split and woodpecker hole present. Unsafe to climb tree	Moderate	N																		
115	861	WS44373	Pedunculate oak	332690	117601	High		22/02/2017	Moderate	22/03/2017	Trunk cavity extends >1m dry with lots of cobwebs, but room for bats to manoeuvre. Very cluttered around the entrance with a large pile of rubbish and gravel on the outside of hedgerow.	Moderate	N																		
116	No tag	WS59340_WS59343	Unknown	332093	117896	Low		09/03/2017		N/A		Low	N/A																		
117	No tag	WS59340_WS59343	Common Ash	332103	117888	Low		09/03/2017		N/A		Low	N/A																		
118	No tag	WS59340_WS59343	Common Ash	332138	117898	Low		09/03/2017		N/A		Low	N/A																		
119	No tag	WS59340_WS59343	Pedunculate oak	332172	117974	Low		09/03/2017		N/A		Low	N/A																		
120	No tag	WS59340_WS59343	Pedunculate oak	332165	118028	Low		09/03/2017		N/A		Low	N/A																		
121	No tag	WS59340_WS59343	Common Ash	332140	118063	Low		09/03/2017		N/A		Low	N/A																		
122	No tag	WS59340_WS59343	Unknown	331982	117969	Moderate		09/03/2017		N/A		Moderate	N																		
123	No tag	WS59340_WS59343	Willow	332013	117993	Moderate		09/03/2017		N/A		Moderate	N																		
124	No tag	WS59340_WS59343	Willow	332020	117978	Moderate		09/03/2017		N/A		Moderate	N																		
125	No tag	WS59340_WS59343	Willow	332041	117972	Moderate		09/03/2017		N/A		Moderate	N																		
126	No tag	WS59340_WS59343	Willow	332067	117959	Moderate		09/03/2017		N/A		Moderate	N																		
127	No tag	WS59340_WS59343	Conifer	331889	117582	low		09/03/2017		N/A		low	N/A																		
128	No tag	WS59340_WS59343	Conifer	331335	117796	Low		09/03/2017		N/A		Low	N/A																		
129	No tag	WS59340_WS59343	Pedunculate oak	331221	117765	Moderate		09/03/2017		N/A		Moderate	N																		
329	No tag	ws78621	Sessile Oak	333275	117397	High	1 x trunk cavity 4m from the ground. 1 x woodpecker hole 6m from the ground.	21/06/2019	N/A	N/A	Trunk cavity and woodpecker hole present. No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	2	19/08/2019	N	Temp: 17C Cloud cover: 4 Wind: 5 Rain: 0	Sunset: 20:25 Start: 19:55 Finish 22:25	Serotines, noctules, common and soprano pipistrelles recorded along with a single myotis sp. Some social calls recorded from pipistrelle sp.	02/09/2019	No	Temp: 18C Cloud cover: 4 Wind: 1 Rain: 0	Sunset: 19:56 Start: 19:26 Finish 21:56	Moderate activity from foraging noctules and serotines. Commuting serotines identified along with *Nyctalus* sp. social calls.	17/06/2020	N	Temp: 10 Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 04:59 Start: 02:59 Finish 05:30	Commuting soprano and common pipistrelles, myotis sp. bats and a noctule were recorded.
348	No tag	ST94298	Willow -unknown/hybrid	325977	124342	High	Woodpecker hole 2m from the ground facing north east.	07/10/2019	High	01/06/2020	35cm cavity clean and dry, uncluttered entrance.	High	Y	N/A	N/A	2	08/07/2019	N	Temp: 15C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 05:07 Start: 03:07 Finish 05:20	Continuous periods of foraging by common pipistrelles with soprano pipistrelles, myotis sp. and noctules recorded.	27/07/2019	N	Temp: 15C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:06 Start: 20:25 Finish: 23:06	Continuous periods of foraging by common and. soprano pipistrelles	10/08/2019	N	Temp: 23C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 20:42 Start: 20:12 Finish 22:42	Commuting myotis sp. soprano; and common pipistrelles with occasional noctule; serotine; and brown long eared bat recorded. Common pipistrelles recorded foraging.
132	No tag	ST211650	Common ash	326737	123135	Low		16/02/2017		wb 15.07.17		Low	N/A																		
133	No tag	ST211650	Pedunculate oak	326738	123127	Low		16/02/2017		wb 15.07.17		Low	N/A																		
134	No tag	ST211650	Pedunculate oak	326715	123104	Low		16/02/2017		wb 15.07.17		Low	N/A																		
135	581	ST211650	Pedunculate oak	326693	123087	High		16/02/2017	Moderate	02.08.17		Moderate	N																		
136	558	ST211650	Pedunculate oak	326687	123102	Low		16/02/2017		wb 15.07.17		Low	N/A																		
137	580	ST211650	Common ash	326689	123117	High		16/02/2017	Moderate	02.08.17		Moderate	N																		
138	No tag	ST211650	Pedunculate oak	326668	123142	Moderate		16/02/2017	Low	02.08.17		Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
139	No tag	ST211650	Common ash	326552	123176	High		16/02/2017	High	wb 15.07.17		High	N																		
140	No tag	ST211650	Common ash	326657	123016	Moderate		16/02/2017		wb 15.07.17		Moderate	N																		
141	No tag	ST211650	Common ash	326566	123111	High		16/02/2017	Moderate	wb 15.07.17		Moderate	N																		
142	546	ST211650	Common ash	326563	123119	High		16/02/2017	High	wb 15.07.17		High	N																		
143	No tag	ST211650	Common ash	326552	123125	High		16/02/2017	Moderate	02.08.17		Moderate	N																		
144	No tag	ST211650	Pedunculate oak	326565	123122	Moderate		16/02/2017	Moderate	wb 15.07.17		Moderate	N																		
145	No tag	ST211650	Common ash	326520	123139	High		16/02/2017	Moderate	02.08.17		Moderate	N																		
146	No tag	ST211650	Common ash	326537	123143	High		16/02/2017	Moderate	wb 15.07.17		Moderate	N																		
147	No tag	ST211650	Common ash	326535	123148	Moderate		16/02/2017	High	wb 15.07.17		High	N																		
148	532	ST211650	Common ash	326541	123146	High		16/02/2017	Confirmed	wb 15.07.17		Confirmed	N																		
149	No tag	ST211650	Common ash	326542	123156	Low		16/02/2017		wb 15.07.17		Low	N/A																		
150	577	ST211650	Common ash	326549	123154	Moderate		16/02/2017	Low	wb 15.07.17		Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
151	539	ST211650	Common ash	326552	123152	High		16/02/2017	Negligible	wb 15.07.17		Negligible	N			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
152	No tag	ST211650	Common ash	326544	123157	Low		16/02/2017		wb 15.07.17		Low	N/A																		
153	No tag	ST211650	Common ash	326539	123160	Low		16/02/2017	Low	wb 15.07.17		Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
155	No tag	ST211650	Common ash	326403	123239	High		16/02/2017	Moderate	02.08.17		Moderate	N																		
156	No tag	ST269315	Common ash	324952	123295	High						High	N																		
157	No tag	ST269315	Common ash	324927	123238	High						High	N																		
352	No tag	ST307472	Common ash	329331	120148	High	Callus role 4m from the ground facing east.	08/10/2019	N/A	N/A	Callus roll. Further surveys required in 2021. No access for 2020	High	Y	N/A	N/A	1	No access - Needs further survey in 2021														
355	No tag	ST307472	Common ash	329321	120135	High	Woodpecker hole 7m above ground level north west facing.	08/10/2019	N/A	N/A	Woodpecker hole. Further surveys required in 2021. No access for 2020	High	Y	N/A	N/A	1	No access - Needs further survey in 2021														
298	No tag	ST232489	Walnut	328782	122077	High	1 x Callus roll 2.5m from the ground east facing. 1 x callus roll 2.5m from the ground facing north. Trunk cavity 1.5m above the ground facing north	05/07/2018	N/A	N/A	Two callus rolls and a trunk cavity present. No climb required - complete set of emergence and re-entry surveys undertaken	High	Y	N/A	N/A	1	09/08/2018	N	Temp: 17C Cloud cover: 1 Wind: 2 Rain: 0	Sunset: 21:43 Start: 20:13 Finish 22:43	Common and soprano pipistrelle calls	28/08/2018	N	Temp: 19C Cloud cover: 6 Wind: 0 Rain: 0	Sunset: 20:07 Start: 19:24 Finish 22:07	Common and soprano, noctule and long-eared species	12/09/2018	N	Temp: 12C Cloud cover: 8 Wind: 1 Rain: 1	Sunrise: 06:43 Start: 04:43 Finish 06:58	Common and soprano pipistrelle, noctule, serotine and Myotis
27	562	ST283142	Beech	329219	119970	Moderate	Trunk cavity 7m above ground level facing west.	20/02/2017	Low	06/04/2017	Trunk cavity extends 7cm up, clean, full of woodlice	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162	966	U00044	Trunk Cavity	330291	119033	Moderate		20/04/2017		N/A		Moderate	N																		
163	No tag	ST240870	Pedunculate oak	326032	122964	Low		28/03/2017	Low	N/A - surveyed during ground inspection	Thick ivy cladding near bottom, though seems tight to the tree	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
165	No tag	ST308680;ST308682	Common ash	324716	122611	Moderate		29/03/2017				Moderate	N																		
29	569	ST283142	Ash	329264	119943	Moderate	Trunk cavity 0.5m above ground level facing west.	20/02/2017	Low	06/04/2017	Trunk cavity extends up over 1m, though not very clean. as access is low potential is low, check with endo if to be directly affected	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	565	ST283142	Beech	329217	119959	Moderate	Callus roll 8m above ground level facing south east	20/02/2017	Low	06/04/2017	Callus roll extends 10cm up, damp at the back, possibly fungus	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	564	ST283142	Beech	329190	120001	Moderate	Callus roll 9m above ground level facing north east	20/02/2017	Low	06/04/2017	Callus roll extends up 20cm, though narrow, slighlty damp near the top. woodlice present	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	851	WS44373	Pedunculate oak	332704	117604	Moderate	Branch cavity 7m above ground level north west facing. Spilt 6m above ground level, north west facing.	22/02/2017	Low	22/03/2017	Branch cavity wet inside and extends back 20cm. Split 15cm deep, but very narrow	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171		U0124	Oak sp.	329707	118841	High						High	N																		
52	572	WS44368	Pedunculate oak	331537	117885	High	Trunk cavity 0.5m above ground level west facing and callus roll 2.5m south west facing.	21/02/2017	Low	05/04/2017	Trunk cavity extends 20-25cm, but clean and dry. Callus roll shallow, slight cavity, 5-10cm deep, clean, very limited shelter	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	No tag	WS59340_WS59343	Pedunculate oak	331376	117977	Low	Ivy cover 0m above ground level. Mature oak with ivy covering entire trunk and covering potential features.	09/03/2017	N/A	N/A	N/A	Low	Y	N/A	N																
175		ST324729	Oak sp.	329569	119299	Moderate		03/05/2017				Moderate	N																		
131	No tag	WS59340_WS59343	Unknown	331368	118246	Low	Woodpecker hole 6m above ground level south facing. Very old dead tree with one woodpecker hole.	09/03/2017	N/A	N/A	N/A	Low	Y	N/A	N																
167	No tag	ST85456	Pedunculate oak	333149	117300	Negligible	N/A	05/04/2017	N/A	N/A	N/A	Low	Y	N/A	N/A																
168	No tag	ST46048	Willow sp.	330676	118538	Low	Trunk cavity 1.5m above ground level north facing	04/04/2017	N/A	N/A	N/A	Low	Y	N/A	N																
179		ST324729	Common Ash	329418	119494	Moderate		03/05/2017				Moderate	N	N/A	N/A																
176		ST324729	Common Ash	329470	119636	Low	Loose bark 2m above ground level west facing.	03/05/2017	N/A	N/A	N/A	Low	Y	N/A																		
184		ST324729	Common Ash	329496	119551	Low	Loose bark 1m above ground level. Loose barks cracks all the way up tree. Not deep.	03/05/2017	N/A	N/A	N/A	Low	Y	N/A	N																		
197	No tag	U00033	Pedunculate oak	329265	121684	Low	Ivy cover 1m above ground level facing south.	11/05/2017	N/A	N/A	N/A	Low	Y	N/A	N																
198	No tag	U00032	Poplar	329012	121712	Low	Loose bark 10m above ground level north west facing.	10/05/2017	N/A	N/A	N/A	Low	Y	N/A	N																
199	No tag	U00032	Pedunculate oak	328974	121685	Low	Branch cavity 4m above ground level facing north west.	10/05/2017	N/A	N/A	N/A	Low	Y	N/A	N																
203	469	ST123986	Pedunculate oak	328896	121844	Moderate	Callus roll 6m above ground level facing north west.	17/05/2017	N/A	N/A	Callus roll. No climb required - complete set of emergence and re-entry surveys undertaken	Low	Y	N/A	Y	1	29/08/2017	N	Temp: 16C Cloud cover: 7 Wind: 3 Rain: 0	Sunset: 20:05 Start: 19:35 Finish: 22:05	Common and soprano pipistrelle, brown long-eared and Myotis calls	16/08/2019	N	Temp: 16C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 06:00 Start: 04:00 Finish: 06:15	One noctule bat commuting	-	-	-	-	-
186	No tag	ST178456	Pedunculate oak	330500	118462	Low		06/03/2017				Low	N/A																		
187	No tag	ST178456	Pedunculate oak	330468	118445	Low		06/03/2017				Low	N/A																		
188	No tag	ST178456	crab apple	330487	118474	Moderate		06/03/2017				Moderate	N																		

Scheme Tree Number	Tag Number	Land parcel number/name	Tree Species	Easting	Northing	Tree potential. Ground level tree survey	Summary of ground tree level assessment	Date of ground level tree assessment	Tree potential. Climb inspection survey	Date of climbing survey	Summary of features following climbing survey	Current potential since most recent survey	Within 100m	Within 20m if moderate	Directly impacted if low	Number of surveyors required for emergence	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
189	No tag	ST256092	Pedunculate oak	325224	123061	Moderate		08/03/2017	Moderate	17/10/2017	Branch cavity extends back up into the tree by 10cm. Cobwebs are present. The space is small, narrow but dry with some shelter. Loose bark - 6cm x 50cm entrance. There are cobwebs at the top, however the feature extends backwards 15cm. Some shelter. Split does not extend into cavity	Moderate	N																		
204	470	ST123986	Common ash	328847	121890	Moderate	Callus roll 4m above the ground facing south.	17/05/2017	N/A	N/A	-	Low	Y	N/A	N																	
205	465	ST158468	Willow	330269	118847	High	1 x split 1.5m above ground level facing south. 1 x trunk cavity 0.5m from the ground facing south. 1 x loose bark 0.5m above the ground facing south. 1 x callus roll 1m from the ground south facing.	25/10/2017	Negligible	N/A	Split, trunk cavity and loose bark, all to exposed	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192	No tag	U00039	Dead	329200	120548	High		10/05/2017	Moderate	17/10/2017	Two trunk cavities and a woodpecker hole, which may extend back. Unsafe to climb, but checked from ground	Moderate	N/A																			
193	No tag	U00039	Dead	329188	120549	Moderate		10/05/2017	Moderate	17/10/2017	Woodpecker hole and trunk cavity. Unable to climb, but trunk cavity checked and the feature does not extend back	Moderate	N																			
208	724	U00029	oak	328480	122865	Low	Split dead branch on northern side, possibly extends into branch. Close to fence line at top of bank	01/06/2017	Low	wc 16.10.17	Go Pro. The feature extends back 5cm and is clean and dry, however there is very little shelter	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
223	494	WS78562	Pedunculate oak	333795	115764	Moderate	1 x branch cavity 10m above the ground facing west. 1 x trunk cavity 8m from the ground facing north. 1 x other feature 10m from the ground facing south.	04/10/2017	Low	18/10/2017	Branch and trunk cavity - assessed using binoculars. Features do not extend back.	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
224	497	WS78562	Pedunculate oak	333801	115706	Low	1 x trunk cavity 0.1m from the ground facing south. 1 x branch cavity 10m above the ground facing south.	04/10/2017	N/A	N/A	N/A	Low	Y	N/A	Y	2	25/06/2020	N	Temp: 22C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:28 Start: 20:58 Finish: 23:10 Finished 20 minutes early due to heavy rain	Common and soprano pipistrelle, noctule, serotine and Myotis species calls	-	-	-	-	-	-	-	-	-	-	-
225	498	WS78562	Pedunculate oak	333822	115715	Moderate	1 x trunk cavity 9m above the ground facing south east. 1 x woodpecker hole 10m above the ground south facing.	04/10/2017	Low	18/10/2017	Trunk cavity does not lead to a cavity. There is some space under the split bark. Woodpecker hole identified during climbing survey. Feature extends up and down by 30cm. Feature is dry, however there is evidence of active squirrel use.	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
226	499	WS78562	Pedunculate oak	333836	115719	low	Loose bark 8m above ground level facing south west.	04/10/2017	N/A			low	Y	N/A	N																	
229	No tag	WS78562	Common lime	333836	115770	Moderate	Branch cavity 2m above ground level facing east.	04/10/2017	Low	18/10/2017	Branch cavity extends upwards by 10cm, however features is wet with slugs and woodlice present. Feature offers little shelter.	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
230	No tag	WS78562	Common lime	333895	115775	Moderate	Branch cavity 7m above ground level west facing.	04/10/2017	Low	18/10/2017	Branch cavity open and exposed with little shelter	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
201	No tag	ST324159	Willow	324981	122872	Moderate		12/05/2017	Negligible	26.10.17		Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
202	No tag	ST291741	Ash	325970	124374	Moderate	Woodpecker Hole 7m N	10/05/2017	No Survey undertak	No Survey undertaken		Moderate	N																		
235	No tag	WS78713	Pedunculate oak	334104	115652	Low	Loose bark 6m above ground level facing south west.	04/10/2017	N/A	N/A	N/A	Low	Y	N/A	N																	
236	No tag	WS78713	Common Ash	334246	115541	Moderate	Branch cavity 4m above ground level facing east.	04/10/2017	Low	24/10/2017	Branch cavity doesn't lead anywhere	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288	No tag	ST313487	Pedunculate oak	325991	124203	Low	Branch cavity 6m above the ground facing east.	06/11/2017	N/A	N/A	Two branch cavities. Too rotten to climb	Low	Y	N/A	N																	
206	467	ST158468	Unknown	330310	118970	Moderate		18/05/2017	Low	25/10/2017	Loose bark, open to rain	Low	N			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207	468	ST158468	Unknown	330347	119050	Moderate		18/05/2017	-	25/10/2017	-	Moderate	N																		
296	No tag	ST198116	Black poplar	326041	124288	Low	Callus roll 10m above ground level facing south west.		N/A	N/A	N/A	Low	Y	N/A	N																	
297	No tag	ST232489		328697	122011	Low	Ivy cover covering a large area south facing.		N/A	N/A	N/A	Low	Y	N/A	N																	
210	No tag	ST324337	ash	329854	119388	Low		01/06/2017			Ivy cover may be obscuring suitable features	Low	N/A																			
211	722	ST324337	oak	329826	119424	Moderate		01/06/2017				Mod	N																			
301	No tag	U00032	Willow	328962	121680	Low	Loose bark 1.5m above the ground level facing south	24/05/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
213	464	U00045	oak	330476	119124	High		01/06/2017				High	N																			
214	721	U00045	oak	330492	119138	High		01/06/2017				High	N																			
215	483	ST208537	oak	330200	119113	High			Negligible	03/07/2019		Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
318	No tag	WS78616	Pedunculate Oak	333247	117647	Low	Callus roll 5m from the ground facing south.	25/06/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
319	No tag	WS78616	Common Ash	333296	117690	Moderate	Trunk cavity 1.5m from the ground facing west.	25/06/2019	N/A	N/A	N/A	Low	Y	N	N																	
320	No tag	WS78616	Pedunculate Oak	333290	117642	Low	Loose bark 1m from the ground east facing.	25/06/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
321	No tag	ST198119	Pedunculate oak	326433	123768	Low	1 x Branch cavity 12m from ground level facing north west. 1 x Other feature 8m above the ground level facing south east.		N/A	N/A	N/A	Low	Y	N/A	N																	
326	No tag	WS78561	Pedunculate Oak	333468	115881	Low	Split trunk 5m from the ground south facing.	08/08/2019	N/A	N/A	Split trunk present. No climb required - complete set of emergence and re-entry surveys undertaken	Low	Y	N/A	Y	2	26/06/2020	N	Temp: 19C Cloud cover:2 Wind: 1 Rain: 0	Sunset: 21:30 Start: 21:00 Finish 23:30	Most activity recorded from noctules, common and soprano pipistrelles; with calls also identified from Daubenton's bat, barbastelle and myotis sp.	-	-	-	-	-	-	-	-	-	-	-
328	No tag	ws78621	Sessile Oak	333281	117411	Low	1 x Ivy cover 2m from the ground facing south east. 1 x other feature 3m above the ground facing north.	21/06/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
222	492	WS78570	lime	333547	115657	High		04/10/2017	Moderate	18/10/2017	One branch cavity offers no shelter and another extends up by 10cm and is dry, however slugs are present.	Moderate	N																			
331	No tag	U00034	Pedunculate oak	329228	121498	Low	Ivy cover 4m from the ground facing north.		N/A	N/A	N/A	Low	Y	N/A	N																	
332	No tag	U00034	Small leaved lime	329234	121480	Low	Ivy cover 6m from the ground north facing. Trunk cavity 1m from the ground north facing	12/08/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
336	No tag	ST178457	Crack Willow	330556	118470	Low	Branch cavity 3m form the ground facing south.		N/A	N/A	A willow tree located overhanging a track has a shattered snag end feature with a shallow cavity that has potential for bats to use on an opportunistic basis.	Low	Y	N/A	N																	
337	No tag	ST178457	Common Ash	330528	118471	Moderate Low	1 x callus roll 4m from the ground facing west. 1 x loose bark 4m above the ground facing west.		N/A	N/A	N/A	Low	Y	N/A	N																	
340	No tag	ST218934	Poplar	328420	122919	Moderate	woodpecker hole 12m from the ground facing north west.	11/09/2019	N/A	N/A	N/A	Low	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
341	No tag	ST218934	Pedunculate Oak	328240	122924	Low	Ivy cover. No height or orientation provided.	11/09/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
343	No tag	ST94298	Willow -unknown/hybrid	326016	124320	Low	Trunk cavity 2.5m above the ground facing north.	07/10/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
353	No tag	ST307472	Common ash	329331	120149	Low	Callus role 3m above the ground north east facing.		N/A	N/A	N/A	Low	Y	N/A	N																	
363	No tag	WS85732	Ash	331541	117800	Low	Ivy cover 3m from the ground north facing.	07/06/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
365	No tag	U00086	Pedunculate Oak	334396	115312	Low	Branch cavity 9m from the ground facing south.	03/07/2017	N/A	N/A	N/A	Low	Y	N/A	N																	
366	No tag	U00087	English Elm	334559	115618	Low	Loose bark 6m from the ground east facing.	18/07/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
367	No tag	U00025	Common ash	327863	123112	Low	Loose bark 8m from the ground facing east.	22/10/2019	N/A	N/A	N/A	Low	Y	N/A	N																	
240	No tag	WS78713	European beech	333638	115788	Moderate	1 x split 5m above the ground facing south west. 1 x other 5 above the ground level facing south west.	04/10/2017	Low	18/10/2017	Branch rub wound on trunk - open and exposed. Goes up by 5cm. Woodlice and slugs present.	Low	Y	N/A	Y	1	03/06/2020	N	Temp: 16C Cloud cover: 8 Wind: 1 Rain: 2	Sunrise: 05:01 Start: 03:03 Finish: 05:01	Common and soprano pipistrelle and noctule calls	-	-	-	-	-	-	-	-	-	-	-
20	No tag	ST161973	Apple	331163	118013	Moderate	Trunk cavity 2m from the ground facing south west	14/02/2017	Moderate	13/04/2017	Trunk cavity extends 40cm back, clean and dry. small old nest at the back	Moderate	Y	N	N/A																
21	No tag	ST161973	Ash	331173	118054	Moderate	Trunk cavity 2m from the ground south west facing	14/02/2017	Moderate	13/04/2017	Trunk cavity not safe to assess	Moderate	Y	Y	N/A	1	15/08/2017	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 05:59 Start: 03:59 Finish: 06:14	Common pipistrelle socialising	10/07/2020	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 21:24 Start: 20:54 Finish: 23:24	Foraging pipistrelles, myotis, brown long eared. Emergence from adjacent building	-	-	-	-	-
28	563	ST283142	Oak	329251	119952	Moderate	Trunk cavity 1m above ground level north west facing	20/02/2017	Moderate	06/04/2017	Trunk cavity large and open, extends 40cm up, slightly dirty. Bird droppings at base of cavity	Moderate	Y	N	N/A																
38	855	ST316480	Pedunculate oak	327692	123336	Moderate	Split 7m above ground level facing east.	21/02/2017	Moderate	23/03/2017	Hole at base of broken limb. Unable to view from east.	Moderate	Y	N	N/A																
50	588	ST80580	Ash	330934	118166	High	3 x woodpecker holes: 4m above ground level west facing 4m above ground level south facing 8m above ground level south facing. 2 x branch cavity: 4m above ground level south east facing Trunk cavity 4m, south east facing.	13/02/2017	Moderate	23/03/2017	3 x woodpecker holes - one extends only down 40cm, dry but slight dirty near the bottom, one only extends down 20cm, damp at bottom, bird droppings present. Third only extends down 5cm. A branch cavity extends down 5cm and is wet and dirty	Moderate	Y	N	N/A																
242	652	WS78660	Oak	333067	116625	Moderate		09/10/2017	Low	19/10/2017	A healing callus roll. It extends just 5cm left and is wet.	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	867	WS44368	Black poplar	331609	117983	High	Woodpecker hole 13m above ground level north west facing, 2 x trunk cavities: 7m above ground level north facing and 12m above ground level east facing.	21/02/2017	Moderate	05/04/2017	Woodpecker hole extends 30cm. Nesting material at bottom. Rooks nest inside trunk cavity. Extends approx. 30cm. Wet	Moderate	Y	Y	N/A	1	08/08/2017	N	Temp: 14C Cloud cover: 1 Wind: 2 Rain: 1	Sunrise: 05:48 Start: 03:30 Finish: 06:03	pipistrelle and leisler foraging	25/08/2017	N	Temp: 9C Cloud cover: 1 Wind: 0 Rain: 0	Sunrise: 04:15 Start: 06:15 Finish: 06:30	pipistrelle commuting	14/07/2020	N	Temp: 15C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 05:14 Start: 03:14 Finish: 05:29	commuting pipistrelle and myotis
54	839	WS44368	Ash	331590	117962	Moderate	Trunk cavities 6m and 9m above ground level both east facing.	21/02/2017	Moderate	05/04/2017	Trunk cavity - not possible to endoscope due to type of feature. Looked dry and clean. Could extend upwards. Trunk cavity - too shallow and open	Moderate	Y	N	N/A	1	14/07/2020	N	Temp: 15C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 05:14 Start: 03:14 Finish: 05:29	myotis/ pipistrelle/ noctule foraging	Unable to view from south side on 30/07/2020. Further survey needed in 2021										
55	868	WS44368	Willow	331754	118086	Moderate	Branch cavity 3m above ground level west facing	21/02/2017	Moderate	05/04/2017	Branch cavity extends 30cm, dry and fairly clean. Narrow	Moderate	Y	N	N/A																
246	648	WS78706	Pedunculate Oak	333885	115834	Low		09/10/2017				Low																			
73	No tag	ST317599	Common ash	326569	123733	High	4 x woodpecker hole: 7m above ground level north east facing 9m above ground level north east facing 2 x 8.5m above ground level north east facing	08/02/2017	Moderate	01/08/2017	PLEASE NOTE FURTHER SURVEYS REQUIRED	Moderate	Y	Y	N/A		Further survey needed in 2021															

Scheme Tree Number	Tag Number	Land parcel number/name	Tree Species	Easting	Northing	Tree potential. Ground level tree survey	Summary of ground tree level assessment	Date of ground level tree assessment	Tree potential. Climb inspection survey	Date of climbing survey	Summary of features following climbing survey	Current potential since most recent survey	Within 100m	Within 20m if moderate	Directly impacted if low	Number of surveyors required for emergence	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
74	No tag	ST317599	Common ash	326533	123797	Moderate	Callus roll 9m above ground level facing east.	08/02/2017	N/A	N/A	Not suitable for climbing	Moderate	Y	N	N/A																
249	647	WS78713	Willow	334190	115589	High		04/10/2017	Negligible	17/10/2017	Woodpecker hole is shallow and does not lead to any shelter	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	No tag	ST274040_ST202820	Unknown	325727	124393	Moderate	Trunk cavity 2m above ground level south facing	15/02/2017	N/A	N/A	Not suitable for climbing	Moderate	Y	N	N/A																
251	No tag	U00039	Dead	329196	120560	Moderate		10/05/2017	Moderate	17/10/2017	Split present, but tree unsafe to climb	Moderate	N																		
252	655	ST277430	Field maple	328372	122027	Moderate		23/02/2017	Moderate	26/10/2017	Trunk cavity extends up approx. 50cm, dry, slightly dirty	Moderate	N																		
253	575	ST277430	Common ash	328362	122060	Moderate		23/02/2017	Negligible	26/10/2017	Woodpecker hole doesn't extend up. No shelter	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
254	579	ST277430	Common ash	328383	122073	High		23/02/2017	Moderate	26/10/2017	Trunk cavity nesting material. No shelter. A second trunk cavity goes up past endoscope's reach which could be suitable	Moderate	N																		
255	576	ST277430	Field maple	328297	122097	Moderate		23/02/2017	Moderate	26/10/2017	Trunk cavity endoscoped. Extends up and back. Some shelter. Dry	Moderate	N																		
256	549	ST277430	Pedunculate oak	328269	122155	High		23/02/2017	Negligible	26/10/2017	Woodpecker hole doesn't offer suitable shelter	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
257	578	ST277430	Common ash	328274	122113	Moderate		23/02/2017	High	26/10/2017	Callus roll doesn't lead to a cavity. Another callus roll doesn't lead to a cavity. A woodpecker hole extends up by 60cm. Dry and can't see any droppings at the back. Flat.	High	N																		
258	551	ST277430	Pedunculate oak	328282	122130	High		23/02/2017	High	26/10/2017	Two woodpecker holes connected together via the same cavity. Sheltered	High	N																		
259	589	ST277430	Common ash	328276	122117	Moderate		23/02/2017	Negligible	26/10/2017	Two callus rolls with no suitable cavities	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
260	552	ST277430	Common ash	328207	122129	High		23/02/2017	Low	26/10/2017	Seven woodpecker holes don't extend up. Including a cluster of five which have a nest at the bottom of a 10cm drop	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
261	656	ST277430	Common ash	328181	122152	Low		23/02/2017	Low	26/10/2017	Ivy cover may be obscuring suitable features	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
263	657	ST277430	Common ash	328210	122174	Low		23/02/2017	Low	26/10/2017	Ivy cover may be obscuring suitable features	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
264	658	ST277430	Pedunculate oak	328210	122158	Moderate		23/02/2017	Negligible	26/10/2017	Branch cavity very wet, extends in slightly, but no suitable cavity, cavity is not enclosed	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
265	659	ST277430	Pedunculate oak	328194	122215	Low		23/02/2017	Low	26/10/2017	No obvious features but recommend climb and inspect as large tree and not all visible - no features observed	Low	N/A																		
266	No tag	ST277430	Other	328174	122214	High		23/02/2017	Negligible	26/10/2017	Dead standing tree, no suitable feature - checked with GoPro	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
267	584	ST277430	Common ash	328208	122179	High		23/02/2017	High	26/10/2017	Two woodpecker holes were unsafe to inspect	High	N																		
268	660	ST277430	Common ash	328230	122141	Low		23/02/2017	Low	26/10/2017	Features may be obscured by ivy cover	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
269	661	ST277430	Common ash	328239	122139	Low		23/02/2017	Low	26/10/2017	Features may be obscured by ivy cover	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270	523	ST277430	Common ash	328220	122183	High		23/02/2017	Low	26/10/2017	Woodpecker hole very cluttered and open, a small cavity, very cob web filled and cluttered	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
271	633	ST277430	Common ash	328253	122172	High		23/02/2017	High	26/10/2017	Three woodpecker holes were unsafe to inspect	High	N																		
272	662	ST277430	Sweet chestnut	328250	122173	Low		23/02/2017	Low	26/10/2017	Features may be obscured by ivy cover	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
273	663	ST277430	Common ash	328268	122151	Low		23/02/2017	Low	26/10/2017	Features may be obscured by ivy cover	Low	N/A																		
274	664	ST277430	Common ash	328279	122140	Low		23/02/2017	Low	26/10/2017	No obvious features but large tree and not all visible	Low	N/A																		
275	577	ST277430	Pedunculate oak	328290	122115	High		23/02/2017	High	26/10/2017	Woodpecker hole has no suitable cavity. Another woodpecker hole extends up, clean and dry. Not possible to fully inspect due to angle of decay, but likely to extend up high. Callus roll has no suitable cavity	High	N																		
276	665	ST277430	Pedunculate oak	328310	122108	Low		23/02/2017	Low	26/10/2017	Features may be obscured by ivy cover	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
277	999	ST277430	Pedunculate oak	328302	122110	Low		23/02/2017	Low	26/10/2017	Features may be obscured by ivy cover	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
278	667	ST277430	Pedunculate oak	328298	122106	Low		23/02/2017	Low	26/10/2017	Features may be obscured by ivy cover	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
279	668	ST277430	Common ash	328321	122098	Moderate		23/02/2017	Negligible	26/10/2017	Trunk cavity cluttered with ivy with no suitable cavity	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
280	No tag	ST230883	Common ash	327673	122721	Moderate		22/08/2017	Negligible	14/11/2017	Branch cavity is not actually a cavity	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
281	No tag	ST230883	Common alder	327444	122793	Moderate		22/08/2017	Negligible	14/11/2017	Trunk cavity is not actually a cavity	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
282	No tag	ST230883	Common ash	327306	122868	High		22/08/2017	High	14/11/2017	4 x callus rolls and trunk cavity. Unsafe to climb	High	N			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
283	No tag	ST230883	Common ash	327306	122837	Negligible		22/08/2017	Negligible	14/11/2017	One tiny callus roll high on branch	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
284	No tag	ST230883	Common ash	327427	122653	Moderate		22/08/2017	Negligible	14/11/2017	2 x callus rolls do not have a cavity	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
285	No tag	ST230883	Common ash	327691	122412	Moderate		22/08/2017	High	14/11/2017	2 x woodpecker holes GoPro from ground - both features lead back to a hollow branch. Cavity could extend up and down branch	High	N																		
286	675	ST230883	Common ash	327708	122422	Moderate		22/08/2017	Negligible	14/11/2017	3 x callus rolls all wet and do not extend back	Negligible	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
287	676	ST230883	Common ash	327733	122487	High		22/08/2017	Moderate	14/11/2017	4 x woodpecker holes - two are too shallow and exposed, another extends back 40cm and the final hole extends up and down 5cm and 10cm with nesting material present	Moderate	N																		
290	162	ST198116	Sessile oak	325617	124440	Moderate						Moderate	N																		
291	532	ST198116	Field maple	325659	124437	Moderate						Moderate	N																		
292	534	ST198116	Sessile oak	325658	124437	Low						Low	N																		
293	535	ST198116	Sessile oak	325672	124429	High						High	N																		
160	9600	ST324325	Field Maple	329942	118635	Moderate	Trunk cavity 2.5m above ground level west facing. Not sure of species. Could be reached with ladder.	20/04/2017	N/A	N/A	N/A	Moderate	Y	N/A	N/A																
161	834	ST324325	Callus Roll	329912	118724	Moderate	Callus roll 3m above sea level facing west. Likely unsafe to climb, no anchor points. Tree in front tagged.	20/04/2017	N/A	N/A	N/A	Moderate	Y	N/A	N/A																
172		ST324729	Oak sp.	329811	118836	Moderate	Callus roll 4m above ground south facing.	03/05/2017	N/A	N/A	N/A	Moderate	Y	N	N/A																
173		ST324729	Oak sp.	329843	118983	Moderate	Loose bark at 2m above ground level north facing.	03/05/2017	N/A	N/A	N/A	Moderate	Y	N	N/A																
181	No tag	ST324729	Goat Willow	329538	119521	Moderate	Branch cavity 3m above ground level south facing.	03/05/2017	N/A	N/A	No climb required - complete set of emergence and re-entry surveys undertaken	Moderate	Y	Y	N/A	2	30/08/2017	N	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 06:23 Start: 04:17 Finish: 06:38	No recordings	11/09/2017	N	Temp: 15C Cloud cover: 3 Wind: 3 Rain: 1	Sunset: 19:36 Start: 19:06 Finish: 21:36	No activity	-	-	-	-	-
185		ST324729	Silver Birch	329447	119532	Moderate	Callus roll 6m above ground level north facing.	03/05/2017	N/A	N/A	N/A	Moderate	Y	N	N/A																
191	No tag	ST161973	Unknown	331207	118021	Moderate	Branch cavity 1m above ground level south facing.	14/02/2017	Moderate	13/04/2017	Branch extends in 1m, connects with small hole on side of limb, clean and dry	Moderate	Y	Y	N/A	1	15/08/2017	N	Temp: 13C Cloud cover: 4 Wind: 0 Rain: 0	Sunrise: 05:59 Start: 03:59 Finish: 06:14	Noctule and common pipistrelle calls. Common pipistrelle foraging over garden	09/07/2020	N	Temp: 14C Cloud cover: 8 Wind: 2 Rain: 2	Sunset: 21:24 Start: 20:54 Finish: 23:24	Common pipistrelle, noctule, Leisler's, Myotis species, brown long-eared, Serotine and Nathusius' pipistrelle calls	-	-	-	-	-
302	No tag	ST344075	Field Maple	328927	121649	Low						Low	N																		
303	No tag	ST344075	Oak	328957	121586	Low						Low	N																		
194	No tag	U00039	Field maple	329283	120608	Moderate	Trunk cavity 0.3m above sea level facing east.	10/05/2017	Moderate	17/10/2017	Trunk cavity extends up by 80cm. It is clean and dry, however it is very close to the ground.	Moderate	Y	N	N/A																
305	No tag	ST344075	Oak	328725	121776	Low						Low	N																		
306	No tag	ST344075	Ash	328714	121771	Moderate						Moderate	N																		
307	No tag	ST344075	Ash	328788	121573	Low						Low	N																		
308	No tag	ST265230	Oak	330295	119026	Moderate						Moderate	N																		
309	No tag	ST265230	Oak	330292	119033	Low						Low	N																		
310	No tag	ST265230	Oak	330290	119041	Moderate						Moderate	N																		
311	No tag	ST265230	Oak	330286	119049	Moderate						Moderate	N																		
312	No tag	ST265230	Oak	330277	119230	Moderate						Moderate	N																		
313	No tag	ST265230	Oak	330286	118959	Moderate						Moderate	N																		
314	No tag	WS85732	Apple	331539	117779	Low		07/06/2019				Low	N																		
315	No tag	U0156	Common Ash	327675	124236	Moderate		10/06/2019				Moderate	N																		
316	No tag	U0156	Field Maple (possible hybrid	327635	123994	Moderate		10/06/2019				Moderate	N																		
195	No tag	U00033	Poplar	329262	121612	Moderate Moderate	1 x branch cavity 15m from the ground facing south. 1 x callus roll 6m from the ground south facing.	11/05/2017	N/A	N/A	Branch cavity and callus roll. No climb required - complete set of emergence and re-entry surveys undertaken	Moderate	Y	Y	N/A	1	21/08/2017	N	Temp: 20C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 20:21 Start: 19:51 Finish: 22:21	Common and soprano pipistrelle, noctule, Leisler's, serotine and Myotis species calls. Common pipistrelle foraging along stream	08/09/2020	N	Temp: 15C Cloud cover: 6 Wind: 2 Rain: 1	Sunrise: 06:35 Start: 04:35 Finish: 07:05	Common and soprano pipistrelle, noctule and barbastelle calls. Noctule seen flying east and west, to and from the direction of the road, above line of trees	-	-	-	-	-
196	No tag	U00033	Pedunculate oak	329258	121679	Moderate	Split 5m above ground facing south west.	11/05/2017	N/A	N/A	N/A	Moderate	Y	N	N/A																
217	No tag	U00035	Oak	329257	121412	Moderate	Trunk cavity 5m above ground level facing east.	19/07/2017	N/A	N/A	N/A	Moderate	Y	N	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
232	No tag	WS78713	Pedunculate oak	333995	115695	High	1 x loose bark 4m from ground level facing south east. 1 x split 4m above the ground south facing.	04/10/2017	Moderate	18/10/2017	Loose bark - Some shelter, however open in area to rain. Small split that goes down a dead branch from the tip	Moderate	Y	N	N/A																
243	641	WS78706	Common horse chestnut	333465	115998	High	Callus roll 6m from the ground facing north west.	09/10/2017	Moderate	19/10/2017	Callus roll extends back 20cm, dry and narrows towards end. Small cavity present	Moderate	Y	Y	N/A	2	15/07/2020	N	Temp: 13C Cloud cover: 7 Wind: 0 Rain: 0	Sunrise: 05:19 Start: 03:19 Finish: 05:34	Common and soprano pipistrelle and noctule calls	26/08/2020	N	Temp: 16C Cloud cover: 2 Wind: 2 Rain: 0	Sunset: 20:09 Start: 19:52 Finish: 22:09	Common and soprano pipistrelle, noctule, long-eared species, Myotis species and serotine calls	-	-	-	-	-
300	No tag	U00032	Crack Willow	329007	121637	Moderate	Branch cavity 2.5m above the ground north east facing. Split trunk 2m from the ground south west facing	24/05/2019	N/A	N/A	large splits in trunk and branch with possible bat droppings present. may benefit from endoscoping rather than tree climb	Moderate	Y	N	N/A																
304	No tag	ST344075	Oak	328778	121826	Moderate					Tree is outside of the 100m buffer upon review	Moderate	N	N	N/A																
322	No tag	ST198119	Other	326424	123752	Moderate	Trunk cavity 2m from the ground east facing.		N/A	N/A	N/A	Moderate	Y	N	N/A																
325	No tag	WS78561	Turkey Oak	333449	116027	Moderate		08/08/2019				Moderate	N																		
323	No tag	ST198119	Pedunculate oak	326414	123738	Moderate	Branch cavity 20m above the ground level facing east.		N/A	N/A	N/A	Moderate	Y	N	N/A																
327	No tag	ws78621	Sessile Oak	333286	117425	Moderate	1 x woodpecker hole 10m from the ground east facing. 1 x callus roll 7m above the ground facing south. 1 x loose bark 8m from the ground facing south.	21/06/2019	N/A	N/A	Woodpecker hole present. No climb required - complete set of emergence and re-entry surveys undertaken	Moderate	Y	Y	N	2	22.08.2019	N	Temp: 18C Cloud cover: 7 Wind: 1 Rain: 0	Sunset: 20:20 Start: 19:50 Finish 22:20	Foraging and commuting noctules and serotines heard occasionally. Commuting myotis sp. fairly frequent alongside common and soprano pipistrelles. The sopranos occasionally social calling.	18.06.2020	N	Temp: 12C Cloud cover:8 Wind: 1 Rain: 0	Sunrise: 04:59 Start: 02:56 Finish 05:30	Foraging and commuting common and soprano pipistrelles; Commuting myotis sp. and a single barbastelle and noctule recorded.	-	-	-	-	-
330	No tag	ws78621	Sessile Oak	333296	117380	Moderate	1 x 12m from the ground north facing. 1 x branch cavity 5m above the ground facing north. 1 x callus roll 4m above the ground south facing.	21/06/2019	N/A	N/A	Woodpecker hole, two branch cavities and a callus roll present. No climb required - complete set of emergence and re-entry surveys undertaken	Moderate	Y	Y	N	2	22.08.2019	N	Temp: 18C Cloud cover: 8 Wind: 2 Rain: 0	Sunset: 20:20 Start: 19:50 Finish 22:20	1 lesser horseshoe bat pass heard. Fairly high levels of foraging activity from common and soprano pipistrelles, noctules and serotines.	10/06/2020	N	Temp: 9C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 04:59 Start: 02:59 Finish 05:30	Moderate commuting activity from soprano and common pipistrelles. A single noctule also recorded.	-	-	-	-	-
334	No tag	U00034	Black poplar	329247	121445	Moderate	Trunk cavity 5m from the ground north facing.	12/08/2019	N/A	N/A	Branch cavity present. No climb required - complete set of emergence and re-entry surveys undertaken	Moderate	Y	N	N/A	1	16/07/2020	N	Temp: 15C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 05:20 Start: 03:20 Finish 05:35	Myotis sp. common and soprano pipistrelles recorded along with noctules.	14/09/2020	N	Temp: 23C Cloud cover: 2 Wind: 1 Rain: 0	Sunset: 19:27 Start: 18:57 Finish: 21:27	Noctule, serotine and soprano pipistrelle bats observed commuting. Pipistrelle species observed foraging along with barbastelle. Myotis sp. also recorded.	-	-	-	-	-

Scheme Tree Number	Tag Number	Land parcel number/name	Tree Species	Easting	Northing	Tree potential. Ground level tree survey	Summary of ground tree level assessment	Date of ground level tree assessment	Tree potential. Climb inspection survey	Date of climbing survey	Summary of features following climbing survey	Current potential since most recent survey	Within 100m	Within 20m if moderate	Directly impacted if low	Number of surveyors required for emergence	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
342	No tag	ST94298	Willow -unknown/hybrid	326015	124320	Moderate	Trunk cavity 3m from the ground north facing.	07/10/2019	N/A	N/A	N/A	Moderate	Y	N	N/A																
344	No tag	ST94298	Willow -unknown/hybrid	326022	124309	Moderate	Trunk cavity 2.5m above the ground facing north.	07/10/2019	Moderate	01/06/2020	Fallen branch covers this feature, very cluttered and not assessable. Feature downgraded.	Moderate	Y	N/A	N															
349	No tag	ST307472	Pedunculate oak	329216	120412	Moderate	Callus roll 12m above the ground south facing.		N/A	N/A	N/A	Moderate	Y	N	N/A															
350	No tag	ST307472	Pedunculate oak	329247	120419	Moderate	Split trunk 12m above the ground facing south.	08/10/2019	N/A	N/A	Split trunk. Further surveys required in 2021. No access for 2020	Moderate	Y	Y	N/A	1	(No Access)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
351	No tag	ST307472	Common ash	329315	120148	Moderate	Woodpecker hole 7m from the ground facing north.	08/10/2019	N/A	N/A	Woodpecker hole and callus roll. Further surveys required in 2021. No access for 2020	Moderate	Y	Y	N/A	1	(No Access)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
354	No tag	ST307472	Common ash	329321	120134	Moderate	Woodpecker hole 4m above the ground facing west.	08/10/2019	N/A	N/A	Woodpecker hole. Further surveys required in 2021. No access for 2020	Moderate	Y	Y	N/A	1	(no Access)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
364	No tag	WS78618	Pedunculate Oak	333361	117651	Moderate	Other feature 4m above the ground facing south.	25/06/2019	N/A	N/A	N/A	Moderate	Y	N	N/A																
294	536	ST198116	Sessile oak	325695	124421	Moderate	callus roll 9m above the ground south west facing.	06/07/2018	N/A	N/A	N/A	Moderate	Y	N	N/A																
299	No tag	ST232489	Cherry	328752	122121	Moderate	Loose bark 2.5 from the ground facing north.	05/07/2018	N/A	N/A	Loose bark present. No climb required - complete set of emergence and re-entry surveys undertaken	Moderate	Y	Y	N/A	1	09/08/2018	N	Temp: 10C Cloud cover: 4 Wind: 2 Rain: 0	Sunrise: 05:50 Start: 03:50 Finish 06:05	1 common pipistrelle call	30/08/2018	N	Temp: 11C Cloud cover: 4 Wind: 0 Rain: 0	Sunrise: 06:22 Start: 04:22 Finish 06:37	No calls	-	-	-	-	-
2	557	ST123410	Unknown	331595	118054	Moderate	Branch cavity at 2m from the ground level north facing.	09/02/2017	Negligible	06/04/2017	4x4cm hole in branch. Too shallow	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	561	ST283142	Ash	329201	119978	Moderate	Callus roll 8m above ground level south west facing	20/02/2017	Negligible	06/04/2017	Callus roll - no suitable cavity, too shallow	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	847	WS44373	Pedunculate oak	332621	117618	Moderate	3 x split limbs at 8, 10 and 15m above ground level. West, south-west and east respectively. Branch cavity 7m above ground level facing east.	22/02/2017	Negligible	22/03/2017	3 x splits and a branch cavity. Surveyed with GoPro. Not suitable	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	848	WS44373	Pedunculate oak	332630	117608	Moderate	Ivy cover 7m above ground level and split limb 10m above ground level, north facing.	22/02/2017	Negligible	22/03/2017	Ivy cover and split surveyed with GoPro. Not suitable	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	849	WS44373	Common Ash	332644	117586	Low	Callus roll 6m above ground level, facing east.	22/02/2017	Negligible	22/03/2017	Callus roll surveyed with GoPro. Not suitable	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	850	WS44373	Pedunculate oak	332728	117616	Moderate	1 x branch cavity 7m above ground level west facing. 2 x trunk cavities 12 and 10m above ground level facing north-west and south respectively. 1 x split 9m above ground level south facing.	22/02/2017	Negligible	22/03/2017	2 x trunk cavities and a split surveyed with GoPro. Not suitable	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
346	No tag	ST94298	Poplar -other	326029	124278	Moderate						Moderate	N																		
347	No tag	ST94298	Willow -unknown/hybrid	326974	124352	Moderate						Moderate	N																		
158	No tag	U00023	Common hazel	327566	123607	Moderate	Trunk cavity 2m above ground level facing south east.	13/04/2017	Negligible	01/08/2017	Trunk cavity too shallow	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
159	No tag	U00023	Common ash	327536	123554	Moderate	Loose bark at 5m	13/04/2017	Negligible	01/08/2017	Loose bark too shallow	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
166	No tag	WS49918;WS44371;WS44365	Willow	332162	117634	Moderate	Branch cavity 2m above ground level west facing. Extends along branch, entrance facing towards middle of split.	17/05/2017	Negligible	17/05/2017	Branch cavity extends in 20cm, but very open, with cluttered entrance	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
190	No tag	U00039	Field Maple	329238	120556	Moderate	Branch cavity 1m above sea level facing north west.	10/05/2017	Negligible	17/10/2017	Branch cavity does not provide shelter and is wet	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
209	725	U00029	ash	328494	122867	Moderate	Split /callus role where branch has snapped off. Close to top of steep bank	01/06/2017	Negligible	wc 16.10.17	Go Pro. The feature does not lead back and is very open.	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
219	489	WS78570	lime	333528	115772	Moderate	Trunk cavity 4m above the ground facing west.	04/10/2017	Negligible	18/10/2017	Trunk cavity is tight with no depth	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
227	500	WS78562	Pedunculate oak	333882	115706	Moderate	1 x branch cavity 3m from the ground facing east. 1 x other feature 4m above the ground south facing. 1 x loose bark 8m from the ground facing south.	04/10/2017	Negligible	18/10/2017	Branch cavity, tear and loose bark do not lead to a deep enough cavity	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228	No tag	WS78562	Common lime	333871	115702	Moderate	1 x branch cavity 6m above ground level facing south east. 1 x branch cavity 10m above ground level east facing.	04/10/2017	Negligible	18/10/2017	Branch cavity does not extend back	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
356	No tag	WS20103	Oak	332042	117574	Moderate		29/04/2019				Moderate	N																		
357	No tag	WS20103	Oak	332045	117575	Moderate		29/04/2019				Moderate	N																		
358	No tag	ST257417	Elder	325836	123284	High						High	N																		
359	No tag	ST227743	Ash	330182	119201	Moderate						Moderate	N																		
360	No tag	ST227743	Ash	330177	119210	Low						Low	N																		
361	No tag	ST227743	Ash	330174	119213	Low						Low	N																		
362	No tag	U00019	other	327580	123736	Low						Low	N																		
247	651	WS78713	Pedunculate Oak	334220	115569	Moderate	1 x woodpecker hole 6m above the ground facing east. 1 x split 5m above the ground facing north west. 1 x woodpecker hole 6m above the ground level north west facing. 1 x woodpecker hole 5m from the ground facing north.	04/10/2017	Negligible	17/10/2017	Woodpecker hole - the feature does not extend down. There are bird droppings and cobwebs present. No shelter.	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
317	No tag	WS78616	Common Ash	333264	117641	Low	Split trunk 2m above the ground south facing.	25/06/2019	N/A	N/A	N/A	Negligible	Y	N/A	N																
339	No tag	ST218934	Common ash	328426	122959	Low	Callus roll 8m from the ground north facing.	11/09/2019	N/A	N/A	N/A	Negligible	Y	N/A	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
345	No tag	ST94298	Willow -unknown/hybrid	326023	124310	High	Trunk cavity 2m from the ground facing east.	07/10/2019	Negligible	01/06/2020	No cavity, feature goes straight through and there is a further fallen branch.	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
368	No tag	U00025	Oak	327922	123153	Moderate	Split in branch 10m from the ground east facing.	22/10/2019	Negligible	01/06/2020	Feature unsuitable.	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
191a	No tag	U00039	European beech	329231	120540	High	1 x woodpecker hole 4m above ground facing north. 1 x trunk cavity 3m from the ground south east facing. 1 x callus roll 4m from the ground facing east.	10/05/2017	Negligible	17/10/2017	Woodpecker hole, trunk cavity and callus roll present. All features are wet with no shelter	Negligible	Y	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
245	642	WS78706	Turkey Oak	333552	115911	High	Other feature 2.5m from the ground facing south west.	09/10/2017	High	19/10/2017	Short, large branch, broken and split in several places. Bark lifted in several places. Leads to multiple nooks and crannies which are difficult to endoscope	Possible confirmed roost	Y	N/A	N/A	2	25/06/2019	Y	Temp: 18C Cloud cover: 8 Wind: 2 Rain: 1	Sunset: 21:29 Start: 20:59 Finish: 23:29	Unknown species possibly emerged from flaking bark. Common and soprano pipistrelle, noctule, serotine, long-eared species and Myotis species calls. Myotis seen flying north	17/07/2019	N	Temp: 11C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 05:17 Start: 03:17 Finish: 05:32	Common and soprano pipistrelle, Myotis species, noctule and long-eared species	05/08/2019	Y	Temp: 18C Cloud cover: 6 Wind: 2 Rain: 0	Sunset: 20:53 Start: 20:23 Finish: 22:53	Possible serotine emergence. Common and soprano, noctule, serotine and Myotis species calls
239	No tag	WS78713	Common horse chestnut	333661	115809	High	1 x trunk cavity 4m above the ground north facing. 1 x branch cavity 6m above ground level facing south. 1 x trunk cavity 10m above the ground level facing east. 1 x branch cavity 2m above the ground facing south. 1 x branch cavity 7m from the ground east facing. 1 x branch cavity 4m above the ground facing	04/10/2017	High	18/10/2017	Trunk cavity - extends back 1.5m. Birds nest at base (possible bird of prey). Trunk cavity - goes up 10cm, with a dome at top of feature. Dry and offers shelter. Branch cavity - goes in 50cm, but very wet with puddle at base. Branch cavity - Go Pro used. Extends back 2m, dry and sheltered. Hollow branch - very wet, extends up and down by more than 1m. 30mm wide. Some shelter. Branch cavity - nesting material at base of feature. Goes up 60cm, dry, some shelter.	Possible confirmed roost	Y	N/A	N/A	1	08/07/2019	N	Temp: 18C Cloud cover: 2 Wind: 1 Rain: 0	Sunset: 21:25 Start: 20:55 Finish: 23:25	Common pipistrelle and serotine calls	31/07/2019	Possible	Temp: 19C Cloud cover: 1 Wind: 0 Rain: 0	Sunset: 21:00 Start: 20:41 Finish: 23:00	Myotis species possibly emerged from woodpecker hole. Common and soprano pipistrelle, noctule and serotine calls	03/06/2020	N	Temp: 16C Cloud cover: 0 Wind: 0 Rain: 1	Sunrise: 05:01 Start: 03:01 Finish: 05:16	Common and soprano pipistrelle, noctule, serotine and Myotis species calls
154a	No tag	ST211650	Pedunculate oak	326325	123230	High		16/02/2017	High			High	N																		
370	No Tag	ST328598	Ash	330115	119071	Moderate	Loose bark 4m above the ground north west facing.	06/08/2020	N/A	N/A	Two woodpecker holes and a callus roll. Climbing inspection surveys or emergence re-entry survey needed in 2021. As the tree is now a probable roost, with the incidental roost being half a survey. So 2 more surveys are required to complete survey effort	Possible confirmed roost	Y	N/A	N/A	2	06/08/2020	Possible.	Temp: 21C Cloud cover: 0 Wind: 0 Rain: 0	Sunset: 20:49 Start: 20:29 Finish 22:49	Possible emergence Pipistrelle sp. Noctule commuting. Common pipistrelle foraging. This is an incidental recording whilst surveying adjacent building 186	27/08/2020	N	Temp: 12C Cloud cover: 4 Wind: 0 Rain: 0	Sunrise: 06:18 Start: 04:18 Finish 06:30	two common pipistrelles foraging; one noctule commuting	-	-	-	-	-
194A		ST324159	Willow -unknown/hybrid	324981	122872	Moderate	Trunk Cavity 3m E	12/05/2017	Negligible	26/10/2017	Feature does not lead into anything.	Negligible	N/A	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
219a	No tag	U00035	Oak	329247	121373	Moderate		19/07/2017	over 20m			Moderate	N			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
230A	580	ST277430	Willow -unknown/hybrid	327966	122949	Moderate		23/02/2017	Moderate	13/11/2017	Branch cavity extends 25cm right and left 5cm. Damp, some shelter however the feature is cluttered.	Moderate	N																			
231A	669	ST277430	Field Maple	328020	122056	Moderate		23/02/2017	High	13/11/2017	Branch cavity extends up by 40cm but doesn't go down. It is dry.	High	N																		
232A	670	ST277430	Field Maple	328024	122076	Moderate		23/02/2017	Low	13/11/2017	Callus roll leads back 5cm. Dry, however little shelter.	Low	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
233a	671	ST277430	Common Ash	328025	122094	Moderate		23/02/2017	Negligible	13/11/2017	Branch cavity doesn't extend up or down. There are also a lot of slugs.	High	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234A	672	ST277430	Field Maple	328031	122114	Moderate		23/02/2017	Low	13/11/2017	Trunk cavity extends up by 10cm. Little shelter however there is room for one bat	Moderate	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
235A	673	ST277430	Common Ash	327990	122125	High		23/02/2017	High	13/11/2017	Trunk cavity extends up over 1m and provides shelter.	High	N																		
236A	674	ST277430	Common Ash	327970	122089	Moderate		23/02/2017	High	13/11/2017	Trunk cavity extends up by 40cm. Dry and clean.	High	N																		
237A	675	ST277430	Field Maple	327964	122078	Moderate		23/02/2017	High	13/11/2017	Branch cavity extends up by 50cm plus. It is dry.	High	N																		
1	No tag	ST231004_ST58840	Pedunculate oak	327382	122914	High	SCOPED OUT					High	N																		
3	591	ST138847_ST89020	Willow	324695	123098	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
4	520	ST138847_ST89020	Unknown	324728	123047	Low	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
5	547	ST274040_ST202820	Ash	325635	124454	Moderate	SCOPED OUT					Moderate	N																		
6	569	ST176126	Ash	326328	123005	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
7	527	ST176126	Ash	326324	123016	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
8	525	ST176126	Oak	326388	123114	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
9	559	ST176126	Oak	326415	123065	Moderate	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
10	594	ST176126	Oak	326455	123060	Moderate	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
11	560	ST176126	Oak	326492	123065	High	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
12	531	ST176126	Oak	326509	123071	High	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
13	562	ST176126	Oak	326579	123026	Moderate	SCOPED OUT					Moderate	N																		
14	858	ST176126	Oak	326522	123111	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
15	838	ST176126	Ash	326519	123090	Moderate	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		

Scheme Tree Number	Tag Number	Land parcel number/name	Tree Species	Easting	Northing	Tree potential. Ground level tree survey	Summary of ground tree level assessment	Date of ground level tree assessment	Tree potential. Climb inspection survey	Date of climbing survey	Summary of features following climbing survey	Current potential since most recent survey	Within 100m	Within 20m if moderate	Directly impacted if low	Number of surveyors required for emergence	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
16	859	ST176126	Oak	326509	123114	Moderate	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
17	843	ST176126	Oak	326449	123153	High	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
18	842	ST176126	Oak	326425	123138	High	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
19	845	ST176126	Oak	326327	123170	High	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
23	No tag	WS59859	Oak	332888	117086	Moderate	SCOPED OUT					Moderate	N																		
24	524	ST174989	Apple	328651	122857	High	SCOPED OUT					High	N																		
25	583	ST174989	Apple	328719	122866	High	SCOPED OUT					High	N																		
32	857	ST316480	Common Ash	327131	122754	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
33	841	ST316480	Non native oak	327384	123085	Low	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
34	843	ST316480	Redwood	327355	122997	High	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
35	845	ST316480	Field maple	327264	122832	Moderate	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
36	846	ST316480	Pedunculate oak	327179	122809	High	SCOPED OUT					Moderate	N																		
37	853	ST316480	Pedunculate oak	327532	123376	High	SCOPED OUT					High	N																		
46	863	ST95798	Oak	328604	121845	Moderate	SCOPED OUT					High	N																		
47	864	ST95798	Ash	328656	121756	Moderate	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
48	866	ST95798	Ash	328678	121794	High	SCOPED OUT					High	N																		
49	849	ST157666	Oak	326318	122947	High	SCOPED OUT					Moderate	N																		
51	No tag	ST80580	Ash	331060	117883	High	NEGLIGIBLE POTENTIAL SURVEY COMPLETE					Negligible	N																		
56	869	WS44376	Field Maple	331925	118028	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
58	548	ST153469	Field Maple	327307	122682	Moderate	SCOPED OUT					Moderate	N																		
59	No tag	ST108726;ST96666;ST95012	Ash	323941	122313	Moderate	SCOPED OUT					Moderate	N																		
60	598	ST250992	Sycamore	325114	123788	Moderate	SCOPED OUT					Moderate	N																		
61	593	ST250992;ST294783;ST294785	Common ash	325414	124186	Moderate	SCOPED OUT					Moderate	N																		
62	599	ST250992;ST294783;ST294785	Pedunculate oak	325406	124092	Moderate	SCOPED OUT					Moderate	N																		
63	595	ST250992;ST294783;ST294785	Common ash	325269	123795	High	SCOPED OUT					High	N																		
64	No tag	ST255741;ST185206	Small leaved lime	323185	121723	High	SCOPED OUT					High	N																		
65	No tag	ST255741;ST185206	Conifer	323317	121593	Low	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
66	570	ST47722_ST308683	Pedunculate oak	324384	122105	Moderate	SCOPED OUT					Moderate	N																		
67	597	ST47722_ST308683	Pedunculate oak	324205	122093	Moderate	SCOPED OUT					Moderate	N																		
68	550	ST47722_ST308683	Pedunculate oak	324178	122096	High	SCOPED OUT					High	N																		
69	No tag	ST89435_ST120155	Sessile Oak	328724	121770	High	SCOPED OUT					High	N																		
70	528	ST258753	Hybrid back poplar	323411	121642	Moderate	SCOPED OUT					Moderate	N																		
71	564	ST258753	Pedunculate oak	323496	121718	Moderate	SCOPED OUT					Moderate	N																		
72	543	ST258753	Pedunculate oak	323505	121773	High	SCOPED OUT					High	N																		
75	No tag	ST171855	Field Maple	324819	123071	Moderate	SCOPED OUT					Moderate	N																		
76	522	ST171855	Willow	324821	123123	Moderate	SCOPED OUT					Moderate	N																		
77	No tag	ST171855	Willow	324706	123093	High	SCOPED OUT					High	N																		
78	571	ST201892	Fruit Trees	330754	118880	Moderate	SCOPED OUT					Moderate	N																		
79	572	ST201892	Fruit Trees	330720	118877	High	SCOPED OUT					High	N																		
80	575	ST201892	Fruit Trees	330686	118853	High	SCOPED OUT					High	N																		
81	576	ST60420	Hybrid back poplar	330970	118642	High	SCOPED OUT					High	N																		
82	590	ST60420	Hybrid back poplar	330931	118680	Low	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
83	No tag	ST171855 - on adjacent land	Hybrid back poplar	330907	118658	Moderate	SCOPED OUT					Moderate	N																		
84	555	ST274040_ST202820	Ash	325695	124679	Moderate	SCOPED OUT					Moderate	N																		
85	526	ST274040_ST202820	Ash	325682	124692	Moderate	SCOPED OUT					Moderate	N																		
86	561	ST274040_ST202820	Ash	325642	124743	High	SURVEY INCOMPLETE					High	N																		
87	585	ST274040_ST202820	Unknown	325636	124756	High	SURVEY INCOMPLETE					High	N																		
89	844	ST176126	Oak	326332	123170	Moderate	SCOPED OUT					Moderate	N																		
90	846	ST176126	Oak	326281	123074	High	SCOPED OUT					High	N																		
91	841	ST176126	Cherry	326330	123068	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
92	837	ST277672	Oak	328495	121961	High	SCOPED OUT					High	N																		
93	855	ST97517	Ash	328326	121970	High	NO TREE					Tree now felled -	N																		
94	861	ST97517	European Hornbeam	328337	122013	High	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
99	869	WS44368	Field Maple	331925	118028	Moderate	LOW POTENTIAL SURVEY COMPLETE					Low	N																		
101	No tag	WS78642	Pedunculate oak	333277	116749	High	SURVEY COMPLETE NO ROOST					High	N																		

Appendix H - Results of building surveys

ID No	Building Number	Land parcel number/name	Eastings - Updated	Northings - Updated	Distances from PMO - Updated (Metres)	Potential following external assessment	Potential following internal assessment	Final roost status following Emergence/Re-entry Surveys?	Buildings within 100 metres?	Moderate buildings within 20 metres?	Low buildings directly impacted by Pink Modified option?	Bat species present if confirmed roost	Notes
263	62	ST185812	326942	123621	0.27	Negligible	N/A	Negligible	Y	N/A	N/A		
63	57	ST56479	326902	123605	41.78	Moderate	N/A	Confirmed	Y	N/A	N/A	1 common pipistrelle	
86	71	ST263738	326985	123643	25.40	High	N/A	Moderate	Y	N	N/A		
272	73	ST290947	327032	123690	1.28	Negligible	N/A	Negligible	Y	N/A	N/A		
134	108A	ST48779	328135	122569	1.59	High	N/A	High	Y	N/A	N/A		
214	261	U00078	333189	117187	3.31	Low	N/A	Low	Y	N/A	N		
59	56	ST185812	326909	123585	47.27	High	N/A	Confirmed	Y	N/A	N/A	7 common pipistrelles	
262	61	ST185812	326934	123637	4.71	Negligible	N/A	Negligible	Y	N/A	N/A		
130	263	U00078	333254	117167	8.18	High	N/A	High	Y	N/A	N/A		
328	281	WS32545	332175	117725	8.73	Negligible	N/A	Negligible	Y	N/A	N/A		
411	285	ST307472	329391	119913	9.00	Not Determined	N/A	Not Determined	Y	N/A	N/A		No access. Surveys to be undertaken in 2021
234	194	ST158468	330314	118775	10.28	Moderate	N/A	Moderate	Y	Y	N/A		
217	266	ST85456	333305	117154	10.41	Negligible	N/A	Negligible	Y	N/A	N		
87	74	ST290947	326982	123757	17.85	High	Confirmed	Confirmed	Y	N	N/A	Unknown	
181	222	ST98872_WS51469	331000	118192	12.36	Low	N/A	Low	Y	N/A	N		
135	158	ST232489	328772	122083	13.37	High	N/A	High	Y	N/A	N/A		
66	107	ST277430	328040	122539	82.75	High	N/A	Confirmed	Y	N/A	N/A	1 common pipistrelle	
186	351	ST106936	328185	122980	14.70	Negligible	N/A	Negligible	Y	N/A	N/A		
264	63	ST321726	326959	123604	15.01	Negligible	N/A	Negligible	Y	N/A	N/A		
68	111	ST190586;ST39020	328231	122990	15.27	High	High	Possible confirmed	Y	N/A	N/A	Unknown	
327	280	ST43481	328853	122089	15.55	Negligible	N/A	Negligible	Y	N/A	N/A		
265	64	ST100955	326970	123609	15.91	Negligible	N/A	Negligible	Y	N/A	N/A		
141	76	ST131395	326977	123779	16.38	Low	N/A	Low	Y	N/A	N		
218	267	ST85456	333295	117204	16.90	Negligible	N/A	Negligible	Y	N/A	N		
301	242	WS44368	331495	117984	16.99	Negligible	N/A	Negligible	Y	N/A	N/A		
185	350	ST106936	328191	122978	17.12	Negligible	N/A	Negligible	Y	N/A	N/A		
271	72	ST132576	326984	123669	17.69	Negligible	N/A	Negligible	Y	N/A	N/A		
65	68	ST44854	327019	123587	69.23	High	Confirmed	Confirmed	Y	N/A	N/A	4 pipistrelle species and 2 possible common pipistrelles. 1 possible serotine emergence	
252	59	ST185812	326923	123615	18.71	Negligible	N/A	Negligible	Y	N/A	N/A		
344	297	ST106936	328203	123016	20.12	Negligible	N/A	Negligible	Y	N/A	N/A		
83	274	ST72677; WS30942 (Little Chef)	334214	115383	20.59	High	N/A	Possible confirmed	Y	N	N/A	1 Pipistrelle species	This building has been modified since the surveys.
239	223	U00047	331102	118101	20.77	Moderate	N/A	Moderate	Y	N	N/A		
342	112	ST106936; ST284109	328200	123023	23.98	Moderate	N/A	Moderate	Y	N	N/A		
266	65	ST100955	326978	123614	21.01	Negligible	N/A	Negligible	Y	N/A	N/A		
69	186	ST328598	330142	119056	20.96	High	N/A	Confirmed	Y	N/A	N/A	1 common pipistrelle and 1 unknown species	
323	270	WS78653	333227	116695	22.32	Negligible	N/A	Negligible	Y	N/A	N/A		
275	113	U00025	327917	123156	22.68	Negligible	N/A	Negligible	Y	N/A	N/A		
247	111A	ST190586;ST39020	328218	122990	23.60	Moderate	N/A	Moderate	Y	N	N/A		
72	196	ST158468	330327	118806	43.79	High	N/A	Possible confirmed	Y	N/A	N/A	1 common pipistrelle	
261	60	ST185812	326915	123631	24.30	Negligible	N/A	Negligible	Y	N/A	N/A		
251	58	ST185812	326930	123598	24.37	Negligible	N/A	Negligible	Y	N/A	N/A		
307	247	WS44368	331649	117923	24.73	Negligible	N/A	Negligible	Y	N/A	N/A		
405	77	ST207263	326976	123791	24.80	Not Determined	N/A	Not Determined	Y	N/A	N/A		Scoping needed 20 m from scheme. No access to parcel - crossing point undertaken instead. Surveys to be undertaken in 2021

ID No	Building Description	Date of Inspection	External Inspection Result	Internal Inspection Description	Date Internal Inspection Undertaken	Results	Hibernation Potential	Date of Hibernation survey	Results of Hibernation Survey	Number of surveyors required for emergence survey
263	Negligible building, no description.									
63	Converted apple barn, early 19th century.	15/02/2017	F001a) Gap between top of stone and roof all around the building. Size of access 4cmx4cm, height 4m, high potential feature. F001b) big gap near window, size of feature 10cmx1cm, height of feature 4m west facing, moderate potential feature. F001c) big gap near window, size of feature 10cmx1m, height of feature 4m west facing. F001d) gap into brick work, size of feature 2cmx4cm, height of feature 2m south west facing, low potential feature.	No access for internal inspection.	N/A	N/A	Y	08/12/2020	Clean and dry, with some boarding. could not access most suitable features - the walls at either end due to lack of floorboards. **Not fully assessed due to COVID-19, further surveys required.**	4
86	Detached bungalow. Many gaps under tiles above garage, built 1960s or later. Gaps mostly above gutter.	07/02/2017	F001a) Gaps under roof/tile all around the aspects of building F001b) Access to soffit box at 1-3cm all around soffit. F001c) Gap under loose flashing at 4cm.	No access for internal inspection.	N/A	N/A	N			3
272	Negligible building, no description.									
134	Stone garage, approximately 80 years old. In reasonable condition, open on two sides with corrugated roof with wooden facade. No chimney or soffits.	07/02/2017	A- cavity in wall, 10x8cm, 2m, W, clear drop zone, moderate. B- cavity in wall, 10x2cm (5x), 1-2m, N, clear drop zone, high.	No droppings or feeding remains found. Access very limited due to wood blocking the walls.	22/08/2019	A- cavity in walls, 10x3cm (x5), 1-2m, S, clear drop zone, high.	N			2
214	Garage - plastered brick garage with metal and wooden door.	12/04/2017	Gaps under tiles - Low potential	No internal assessment undertaken	N/A	N/A	N			
59	This building has a central section which is 720 years old according to the owner, who is renovating it. Other sections of the building are 16th century and Georgian. Parts of the building roof are in poor repair. Lead flashing is present along with gaps between many areas of roof tiles and sometimes wall cavities.	24/08/2017	a) gaps under roof tiles/felt, 1cmx3cm, 3m northwest - near gable end - moderate potential. b) gaps under roof felt/tiles 2cm, 2.3m north facing, low potential. C) loose flashing size of access 3cm, 5m north facing, moderate potential. d) gaps under roof tiles/felt, size of access 3.5m. Height 2.3m east facing, low potential feature. e) gaps under roof tiles/felt, size of access point 3cm, height 2.3m south facing, low potential feature. f) gaps under roof tiles/felt, size of access point 3cm, height 7m east facing, low potential feature. g) access to soffit box and wall cavity, size of access point 7cm, height 7m west facing, high potential feature. h) gaps under roof tiles/felt, size of feature 3cm, height 8m north facing, moderate potential feature. i) gap between fascia board and tiled roof, size of feature 6cm, height 7m north west facing, moderate potential feature.	This building has a central section which is 720 years old according to the owner, who is renovating it. Other sections of the building are 16th century and Georgian. Parts of the building roof are in poor repair. Lead flashing is present along with gaps between many areas of roof tiles and sometimes wall cavities.	24/08/2017	Small and large droppings were found scattered thinly around the roof void. No large piles of droppings were found. Likely pipistrelle species.	Y	Not undertaken due to the COVID-19 Pandemic. **Survey required 2021/2022**	N/A	4
262	Negligible building, no description.									
130	Small stone built shed outbuilding. Wooden walls, tiled with lead flashing.	12/04/2017	A- gaps under roof tiles/ felt, 1-10cm, 1.5-2.5m, S, clear drop zone, high.	No internal assessment undertaken	N/A	N/A	Y			1
328	Negligible building, no description.									
411							Y			
234	Two storey residential house. Concrete wash walls with concrete underneath. Lean-to shelter on north side with clay tiles. South facing roof recently re-done. Approx. 40-50 years old. Lots of house martins nesting in eaves and at gable end. Two chimneys No pictures taken at request of the owner.	18/05/2016	A- Gaps under ridge tiles, 10cm, 9m high, N, Moderate. B- Missing pointing on chimney, 10cm, 9.5m, E and W, Low. C- Various raised roof tiles, 2.5m heigh, N, Low	No internal assessment undertaken	N/A	N/A	N			2
217	Negligible building, no description.									
87	Detached house. Generally good condition with a few signs of wearing, owner mentioned she found a bat under her staircase years ago.	14/02/2017	F001a) Cavity in wall with a 2 x 4 cm gap. F001b) Grille or air brick in wall with 2 x 4 cm gap F001c) 10 x 20 cm gap Access to soffit box.	No access for internal inspection.	N/A	N/A	N			4
181	Main house with conservatory.	07/02/2017	A- A few small gaps under roof tiles, 4.5cm, 2.5m high, SW, Low potential	No internal assessment undertaken	N/A	N/A	N			
135	School, 50 -100 years old. good condition.	05/07/2018	A- Gaps under roof tiles,, High. B- Ivy, 2cm, 4m heigh, S, Low. C- Gap between roof and wall, 2cm, 4m high, E, Moderate	No internal assessment undertaken	N/A	N/A	N			4
66	Rendered brick walls and tiled roof.	21/02/2017	Gaps under roof tiles / felt, size of access 10x5cm, height of feature 3m. High potential feature.	No access for internal inspection.	N/A	N/A	N			2
186	Negligible building, no description.									
264	Negligible building, no description.									
68	Residential building, 2 storey cottage over 100 years old. Good condition.	01/02/2017	F001a) Gap between badge board and wall, size of feature 30cm, height 4m south facing, high potential feature. F001b) Size of feature 15cm, height 3m south facing, low potential feature. F001c) hole in mortar between thatch and chimney wall, size of feature 5cm, height 5m south facing, moderate potential feature. F001d) gap between badge board and wall, size of feature 30cm, height 3m west facing, moderate potential feature. F001e) Gap between roof and wall, size of feature 50cm, height 4m west facing, high potential feature. F001f) Gap between thatching and boards, size 100cm, height 2m north facing, moderate potential feature.	The only loft hatch opens up into a small area, approximately 4x4m in size, above the bathroom, which has little potential for bats to roost in. There is a plastered wall between this and the main roof void, with some exposed brickwork at the bottom and thatch at the top. No bat droppings were found. There is also a hatch on the wall at the top of the stairs, which opens into an area just big enough for the water tank to fit into. No evidence of bats was seen in there either.	23/08/2019	No evidence of roosting bats	N	N/A	N/A	4
327	Negligible building, no description.									
265	Negligible building, no description.									
141	Residential building - two storey brick built building with a wooden extension with a plastic roof. Built approximately 1950-60's.	13/02/2017	A- gap between ridge tile, 3cm, 5m, E, clear drop zone, low. B- access to soffit box, 20cm, 2.5m, S, clear drop zone, low, with an old bird nest inside.	No internal assessment undertaken	N/A	N/A	N			
218	Negligible building, no description.									
301	Negligible building, no description.									
185	Negligible building, no description.									
271	Negligible building, no description.									
65	Older residential building, part stone part brick with an extension, possible 19th century building that has been converted. Generally in good condition.	13/02/2017	F001a) Leads into roof or wall cavity space from cladding gap, cobwebs. Size of feature 3x1.5cm, height of feature 1.8m west facing. Moderate potential feature. F001b) Access to soffit box and cavity wall. Size of feature 3x5cm, height 2m west facing, low potential feature. F001c) Access to soffit box and wall cavity, size of feature 5x8cm, height 2m west facing, high potential feature. F001d) Access to soffit box and wall cavity, size of feature 5x5cm, height 1.5m, west facing, moderate potential feature. F001e) Access to soffit box and wall cavity, size of feature 5x3cm, heigh 1.5m west facing, low potential feature. F001f) Gaps under hanging board near stone work, size of feature 3x10cm, height 4m north facing, moderate potential feature. F001g) Possible gap into wall cavity/roof new window, size of feature 5x10c, height 4m east facing, low potential feature. F001h) loose flashing, size of feature 3x4cm, height 5m south facing, low potential feature.	Roofing felt / membrane, bat droppings present, no bats in situ, no urine staining, no scratch marks, no smooth / cleaned surfaces	28/08/2019	Droppings found near gable ends and next to supporting posts, with gaps at the top end of each. Likely common pipistrelle species.	No	N/A	N/A	4
252	Negligible building, no description.									
344	Negligible building, no description.									
83	Large modern restaurant outlet (Little Chef) - 10 - 20 yrs. old.	09/02/2017	F002a) Gaps under roof felt / tiles, size 30x2cm, height 4m north west facing, low potential feature. F002b) Grille or air brick, size 0.5mx3cm, height 9m, low potential feature. F002c) Gaps under roof felt and tiles, size 20x4cm, height 6m north west facing, moderate potential feature.	No internal assessment undertaken	N/A	N/A	N			4
239	A two storey well maintained farm cottage built approx. 20yrs ago. The walls are made of brick and the roof is pitched with roof tiles and gable ends. It has plastic and wooden window frames which are tight fitting.	12/07/2017	A- Gaps under roof tiles / felt, 10cm, 3m high, N, Moderate. B- Gaps under roof tiles / felt, 10cm, 3m, S, Moderate. C- loose flashing, 10cm, 3m high, S, Moderate	No internal assessment undertaken	N/A	N/A	N			4
342	The building on-site is a large complex with a two-storey early 20th century main building made of pebble dashed construction with a tiled pitched roof. Attached to the north-western elevation of the main building is a single storey modern extension made of pebble dashed walls and roman tiled roof. F001 was in a reasonable condition but the main building roof showed several areas of disrepair. The roof is in moderate to poor condition due to multiple missing, loose and broken tiles. The extension buildings are in good condition, tight and generally lacking any features. F001 walls are noted to be in good condition with no cracks or crevices. The lead flashing and brickwork around the chimney was in good condition and offered no crevice roosting opportunities. The soffit boxes around the building are tight and well maintained with no features observed. The boxed eves were observed to be well maintained, with the exception for the south-eastern corner where water ingress has seeped through causing rot to form, but no crevices have developed. All window ledges and frames have been recently refurbished and have no	16/08/2017	F001a Gaps under roof tiles/felt, 3cm, heigh 4m, W, moderate, F001b, Gaps under roof tiles/felt, 5cm, 6-12 meters, W, moderate, F001c Gaps under roof tiles/felt, Gaps under roof tiles/felt, 5cm, 6-12 meters, E, Moderate, F001e Gaps under roof tiles/felt, 5cm, 3meters, E, Low. F001e, Gap between roof and the roof and drain pipe, 10cm, 6m high, N, Low.	Not undertaken, no access	N/A	N/A	No	N/A	N/A	4
266	Negligible building, no description.									
69	Semidetached, only surveyed half that is in this land parcel. Building has recent extension <10 years old, garden still being landscaped. Original section of building >50 years old. one high potential feature in outhouse (connected to main building) but owners in process of modernising outhouse so may not be there long.	03/07/2018	186a) Gap between roof and wall, size 1cm, height 8m facing west, low potential feature. 186b) Lifter lead flashing, size 4cm, height 6.5m east facing, moderate potential feature. 186c) Cavity in wall, size 4cm, height, 2,5m east facing, high potential roost feature. 186d) Gaps under roof tiles/loose, size 2cm, height 2.5m, east facing, moderate potential feature.	No access for internal inspection.	N/A	N/A	N	N/A	N/A	3
323	Negligible building, no description.									
275	Negligible building, no description.									
247	small garage approx. 50 years, in ok condition, though degradation in areas	01/02/2017	A- Gaps under roof tiles / felt, 5cm, 4m heigh, W, Low. B-Gaps around edge of door frame and wall 5cm, 2m high, W, Low. C-Gaps between bargeboard panelling, 10cm, 3m heigh, W, Moderate	No internal assessment undertaken	N/A	N/A	N			
72	Brick outbuilding used for storage. Can see through windows, the building has a false ceiling and likely roof space. However, no access to roof to check for signs of bats. Some areas have been newly pointed. Approx. 60-70 years old. Wooden soffit box. Birds nesting. No pictures due to owners request.	18/05/2017	F003a) Access to soffit box, various access points, height 2.5-3m west facing, high potential feature. F003b) Gaps under roof tiles / felt, size 10cm, height 3m east facing, high potential roost feature.	No access for internal inspection.	N/A	N/A	N	N/A	N/A	2
261	Negligible building, no description.									
251	Negligible building, no description.									
307	Disused agricultural barn. Very exposed. No features present.									
405	N/A	N/A	N/A	N/A	N/A	N/A	N/A			N/A

ID No	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	4th survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
263																				
63			Temp: 14C Cloud cover: 7 Wind: 2 Rain: 0	Sunrise: 05:30 Start: 03:20 Finish 05:45	Common and soprano pipistrelle and noctule calls	24/08/2017	N	Temp: 12C Cloud cover: 7 Wind: 1 Rain: 0	Sunrise: 06:12 Start: 04:12 Finish 06:27	Common pipistrelle re-entered roost under fascia board. Common and soprano pipistrelle noctule and serotine calls. Pipistrelles foraging around garden and by barn	12/09/2017	Y	Temp: 12C Cloud cover: 7 Wind: 1 Rain: 0	Sunset: 19:34 Start: 19:04 Finish 21:34	Common pipistrelle emerged from near security box and flew east. Common and soprano pipistrelle noctule and Nyctalus species or serotine calls	-	-	-	-	-
86	04/07/2017	N	Temp: 18C Cloud cover: 8 Wind: 0 Rain: 0	Sunrise: 05:04 Start: 03:04 Finish 05:19	Common and soprano pipistrelle and noctule calls. Common pipistrelle briefly foraging	28/07/2017	N	Temp: 15C Cloud cover: 8 Wind: 3 Rain: 1	Sunrise: 05:32 Start: 03:28 Finish 05:47	Brief common pipistrelle and noctule calls	Further surveys needed in 2021					-	-	-	-	-
272																				
134	31/05/2017	N	Temp: 14C Cloud cover: 2 Wind: 2 Rain: 0	Sunset: 21:16 Start: 21:02 Finish 23:15	Common pipistrelle and long-eared species calls. Foraging in all directions	31/07/2017	N	Temp: 15C Cloud cover: 7 Wind: 0 Rain: 0	Sunset: 21:00 Start: 20:35 Finish 23:00	Common and soprano pipistrelle and Myotis calls	28/09/2017	N	Temp: 12C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 07:07 Start: 05:07 Finish 07:22	Common and soprano pipistrelle serotine and Myotis species calls					
214																				
59	14/09/2017	Y	Temp: 13C Cloud cover: 2 Wind: 2 Rain: 0	Sunset: 19:30 Start: 19:00 Finish 21:30	Common pipistrelle emerged from chimney area and flew east. 7 common pipistrelles returned to roost under front tile on bottom right of roof facing west. Common and soprano pipistrelle long-eared species serotine and Myotis species calls	22/09/2017	N	Temp: 9C Cloud cover: 1 Wind: 0 Rain: 0	Sunrise: 06:58 Start: 04:58 Finish 07:13	A single soprano pipistrelle and Myotis species calls	27/09/2017	N	Temp: 13C Cloud cover: 7 Wind: 1 Rain: 0	Sunrise: 07:07 Start: 05:07 Finish 07:22	Common pipistrelle Myotis species and long-eared species calls	-	-	-	-	-
262																				
130	01/06/2017	N	Temp: 12C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 05:03 Start: 03:10 Finish 05:17	Commuting common pipistrelle bats recorded.	02/08/2017	N	Temp: 14C Cloud cover: 8 Wind: 2 Rain: 0	Sunrise: 05:39 Start: 03:39 Finish 05:54	Commuting common pipistrelle identified.	18/09/2017	N	Temp: 18C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 19:19 Start: 18:49 Finish 21:19	No recordings					
328																				
411																				
234	18/06/2020	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 21:29 Start: 21:00 Finish 23:30	Common pipistrelle noctule and Myotis species calls. Noctule flew north over house common pipistrelle foraging west side of house	09/07/2020	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 1	Sunrise: 05:07 Start: 03:07 Finish 05:22	Common pipistrelle noctule Leisler's and Nyctalus species calls	-	-	-	-	-	-	-	-	-	-
217																				
87	10/08/2017	N	Temp: 13C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:51 Start: 03:51 Finish 06:06	Brief common pipistrelle and Myotis species calls	05/10/2017	N	Temp: 13C Cloud cover: 1 Wind: 2 Rain: 0	Sunset: 18:42 Start: 18:12 Finish 20:42	Common and soprano pipistrelle and Myotis species calls	Further surveys needed in 2021					-	-	-	-	-
181																-	-	-	-	-
135	17/07/2018	N	Temp: 14C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:20 Start: 20:10 Finish 23:20	Common and soprano noctule Myotis species long-eared species and Leisler's calls	28/08/2018	N	Temp: 16C Cloud cover: 7 Wind: 2 Rain: 0	Sunset: 20:07 Start: 19:32 Finish 22:07	Soprano pipistrelle flew south over building. Common and soprano pipistrelle noctule Myotis species serotine long-eared species and lesser horseshoe calls	19/06/2019	N	Temp: 14C Cloud cover: 3 Wind: 2 Rain: 0	Sunset: 21:30 Start: 21:00Finish 23:30	Common and soprano pipistrelle noctule Myotis species serotine calls	15/09/2017	N	Temp: 12C Cloud cover: 2 Wind: 1 Rain: 0	Sunset: 19:28 Start: 19:05 Finish 22:28	Soprano pipistrelle serotine Leisler's and Myotis species calls
66	30/08/2017	N	Temp: 16C Cloud cover: 0 Wind: 0 Rain: 0	Sunset: 20:02 Start: 19:43 Finish 22:02	Common and soprano pipistrelle barbastelle and long-eared species calls	14/09/2017	Y	Temp: Cloud cover: 2 Wind: 2 Rain: 0	Sunset: 19:28 Start: 19:10 Finish 21:28	1 x Common pipistrelle emerged from roof possible from north facing tile flying west. Common pipistrelle and long-eared species calls	05/10/2017	N	Temp: Cloud cover: 6 Wind: 4 Rain: 1	Sunrise: 07:19 Start: 05:21 Finish 07:34	Common pipistrelle calls	-	-	-	-	-
186																				
264																				
68	07/05/2019	N	Temp: 14C Cloud cover: 8 Wind: 2 Rain: 3 **Invalid due to rain**	Sunset: 20:41 Start: 20:12 Finish 22:42	Common pipistrelle followed hedge and crossed A358. Common pipistrelle, noctule, *Nyctalus* species *Myotis* species, long-eared species calls	04/07/2019	Y	Temp: 11C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:03 Start: 03:03 Finish 05:18	Possible serotine re-entry. Noctule common and soprano pipistrelle also heard	Further surveys needed in 2021					-	-	-	-	-
327																				
265																				
141																				
218	26/10/2017	N	Temp: 15C Cloud cover: 6 Wind: 0 Rain: 0	Sunset: 17:57 Start: 17:27 Finish 19:57	Common and soprano pipistrelle and lesser horseshoe calls															
301																				
185																				
271																				
65	06/07/2017	N	Temp: 14c Cloud Cover 4 Wind:0 Rain: 0	Sunrise: 05:06:00 Start: 03:06:00 Finish: 05:21:00	Common pipistrelle and noctule.	27/07/2017	N	Temp:18c Cloud Cover:6 Wind: 1 Rain: 0	Sunset: 21:06 Start: 20:46 Finish 23:06	Noctule and pipistrelle calls	26/09/2017		Temp: 18C Cloud cover: 4 Wind: 1 Rain: 0	Sunset: 19:01 Start: 18:31 Finish 21:01	Noctule and common and soprano pipistrelle calls		-	-	-	-
252																				
344																				
83	21/06/2017	Y	Temp: 22C Cloud cover: 4 Wind: 2 Rain: 0	Sunset: 21:30 Start: 21:00 Finish 23:30	Commuting and foraging common pipistrelles recorded and commuting and socialising noctules identified along with soprano pipistrelles and brown a long-eared bat. Possible pipistrelle emergence	20/07/2017	N	Temp: 20C Cloud cover: 8 Wind: 2 Rain: 1	Sunrise: 05:18 Start: 03:18 Finish 05:34	regular- foraging and commuting common pipistrelles	Further surveys needed in 2021					-	-	-	-	-
239	24/07/2017	N	Temp: 18C Cloud cover: 1 Wind: 3 Rain: 0	Sunset: 21:11 Start: 20:40 Finish 23:11	4 - 5 common pipistrelle bats foraging around mature oak for 30 minutes. Common pipistrelle noctule Nyctalus species long-eared species Myotis species and serotine calls	13/09/2017	N	Temp: 13C Cloud cover: 4 Wind: 2 Rain: 0	Sunrise: 06:44 Start: 04:44 Finish 06:59	Common and soprano pipistrelle calls. 2 bats seen flying east over house	-	-	-	-	-	-	-	-	-	-
342	31/08/2017	N	Temp: 9C Cloud cover: 6 Wind: 1 Rain: 1	Sunrise: 06:24 Start: 04:24 Finish 06:39	Noctule and Nyctalus species calls	06/10/2017	N	Temp: 8C Cloud cover: 1 Wind: 2 Rain: 0	Sunrise: 07:20 Start: 05:20 Finish 07:35	Noctule and Leisler's calls	-	-	-	-	-					
266																				
69	23/07/2019	Y	Temp: 25C Cloud cover: 6 Wind: 1 Rain: 0	Sunset: 21:12 Start: 20:42 Finish 23:12	Unknown bat species emerged from under soffit on northern side of building. Pipistrelle bats commuting north and south. Common and Nathusius' pipistrelle noctule serotine Nyctalus species Myotis species Leisler's long-eared species calls	08/08/2019	N	Temp: 13C Cloud cover: 7 Wind: 0 Rain: 0	Sunrise: 05:48 Start: 03:48 Finish 06:03	Common pipistrelle and long-eared species flying north. Common pipistrelle and pipistrelle species noctule serotine and long-eared species calls	13/07/2020	-	Invalid - heavy rain	-	-	06/08/2020	Y	Temp: 20C Cloud cover: 0 Wind: 1 Rain: 0	Sunset: 20:49 Start: 20:49 Finish 22:49	Common pipistrelle and likely pipistrelle spp. emerged. Noctule Myotis spp. and Lesser horseshoe also heard
323																				
275																				
247																				
72	29/06/2017	N	Temp: 11C Cloud cover: 8 Wind: 0 Rain: 1	Sunrise: 05:00 Start: 03:00 Finish 05:15	No recordings	08/07/2020	y	Temp: 17C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 21:26 Start: 20:56 Finish 23:26	Common pipistrelle, noctule *Nyctalus* species and *Myotis* species calls. Common pipistrelle may have entered the building. Bats seen commuting south	29/07/2020	N	Temp: 11C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:34 Start: 03:34 Finish 05:49	No recordings	-	-	-	-	-
261																				
251																				
307																				
405	No access	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

ID No	Building Number	Land parcel number/name	Eastings - Updated	Northings - Updated	Distances from PMO - Updated (Metres)	Potential following external assessment	Potential following internal assessment	Final roost status following Emergence/Re-entry Surveys?	Buildings within 100 metres?	Moderate buildings within 20 metres?	Low buildings directly impacted by Pink Modified option?	Bat species present if confirmed roost	Notes
78	230	WS79692	331235	117943	86.96	Confirmed	N/A	Confirmed	Y	N/A	N/A	33 common pipistrelle	
143	116	ST146776	327904	123291	25.70	Low	N/A	Low	Y	N/A	N		
67	108	ST48779	328136	122622	21.19	High	Confirmed	Confirmed	Y	N/A	N/A	1 common pipistrelles re-entered and 1 unknown bat species possibly re-entered	
294	208	ST155736	330364	118620	26.78	Negligible	N/A	Negligible	Y	N/A	N/A		
89	156	ST232489	328758	122081	27.02	High	N/A	High	Y	N/A	N/A		
235	195	ST158468	330320	118791	27.25	Moderate	N/A	Moderate	Y	N	N/A		
60	157	ST232489	328752	122072	26.30	High	N/A	Confirmed	Y	N/A	N/A	2 common pipistrelles	
363	316	ST100955	326985	123624	27.76	Negligible	N/A	Negligible	Y	N/A	N/A		
230	110	ST338482	328237	122962	29.39	Moderate	N/A	Moderate	Y	N	N/A		
158	117	ST146776	327925	123275	29.49	Low	N/A	Low	Y	N/A	N		
216	265	ST85456	333280	117161	30.19	Negligible	N/A	Negligible	Y	N/A	N		
232	181	ST227743	330110	119221	85.90	Moderate	Confirmed	Confirmed	Y	N	N/A	Unknown	Likely old disused night roost
215	264	ST85456	333285	117153	30.43	Negligible	N/A	Negligible	Y	N/A	N		
330	283	ST162905	330498	118569	30.71	Negligible	N/A	Negligible	Y	N/A	N/A		
319	249	ST78475	331767	117708	32.28	Negligible	N/A	Negligible	Y	N/A	N/A		
120	185	ST208537	330142	119104	40.33	High	Confirmed	Confirmed	Y	N/A	N/A	Unknown	No access for emergence surveys. Static placed adjacent. Likely an old night roost, disused
267	67	ST44854	326998	123592	33.46	Negligible	N/A	Negligible	Y	N/A	N/A		
221	119D	ST63856	327633	123559	35.11	Low	N/A	Low	Y	N/A	N		
308	248	ST78475	331777	117714	35.78	Negligible	N/A	Negligible	Y	N/A	N/A		
209	237	WS36502	331254	117999	36.07	Low	N/A	Low	Y	N/A	N		
406	78	ST207263	326990	123795	36.67	Not Determined	N/A	Not Determined	Y	N/A	N/A		Scoping needed 36m from scheme. No access crossing point undertaken instead. Surveys to be undertaken in 2021
391	293	ST183453	328740	122093	36.96	Negligible	N/A	Negligible	Y	N/A	N/A		
131	273	ST72677; WS30942 (Travelodge)	334179	115387	37.50	High	N/A	High	Y	N/A	N		
321	251	ST78475	331764	117696	37.82	Negligible	N/A	Negligible	Y	N/A	N/A		
392	295	N/A	328722	122123	38.18	Negligible	N/A	Negligible	Y	N/A	N/A		
242	252	ST78475	331772	117683	39.29	Moderate	N/A	Moderate	Y	N	N/A		
325	272	WS6807	334148	115350	40.09	Negligible	N/A	Negligible	Y	N/A	N/A		
222	119E	ST63856	327636	123563	40.11	Low	N/A	Low	Y	N/A	N		
402	305	ST304833 ST56170	327105	123622	40.20	Negligible	N/A	Negligible	Y	N/A	N/A		
79	238	WS36502	331239	118019	11.51	Moderate	N/A	Confirmed	Y	N	N/A	common pipistrelle. 1 identified on all 3 occasions but 2 different features.	
70	187	ST186310	330148	119047	30.25	High	Confirmed	Confirmed	Y	N/A	N/A	1 common pipistrelle	
225	225A	U00047	331136	118051	42.51	Low	N/A	Low	Y	N/A	N		
81	245	WS43216	331484	117835	94.00	High	N/A	Confirmed	Y	N/A	N/A	4 soprano pipistrelle bats and 2 unidentified bats during surveys.	The unidentified bat from 30th May is likely a myotis or pipistrelle sp.
273	79	ST321050	326984	123809	44.44	Negligible	N/A	Negligible	Y	N/A	N/A		
320	250	ST78475	331778	117701	45.12	Negligible	N/A	Negligible	Y	N/A	N/A		
211	253	WS59340_WS 59342	331794	117720	45.41	Low	N/A	Low	Y	N/A	N		
140	66	ST40957	326987	123584	45.68	Low	N/A	Low	Y	N/A	N		
407	307	ST135737	326977	123576	47.13	Negligible	N/A	Negligible	Y	N/A	N/A		
122	189	ST47663	330169	119012	53.66	High	Confirmed	Confirmed	Y	N/A	N/A	possible pipistrelle, possible long-eared	
413	309	ST135737	326965	123572	47.53	Negligible	N/A	Negligible	Y	N/A	N/A		
248	119B	ST63856	327656	123559	48.20	Moderate	N/A	Moderate	Y	N	N/A		
229	75	ST290947	326997	123766	48.31	Moderate	N/A	Moderate	Y	N	N/A		
414	222A	ST98872;U00047	330973	118166	48.58	High	N/A	High	Y	N/A	N/A		
236	197	ST158468	330340	118806	49.67	Moderate	N/A	Moderate	Y	N	N/A		
324	271	WS6807	334124	115337	50.17	Negligible	N/A	Negligible	Y	N/A	N/A		

ID No	Building Description	Date of Inspection	External Inspection Result	Internal Inspection Description	Date Internal Inspection Undertaken	Results	Hibernation Potential	Date of Hibernation survey	Results of Hibernation Survey	Number of surveyors required for emergence survey	1st survey date
78	House with attached garage, farmland for foraging down lane.	23/05/2019	230a) Gaps between corrugated iron roof and wall, potential entry points to garage, size 3cm, height 2.5 south facing, low potential feature. 230b) Gaps into roof on northern edge but lots of cobwebs, size 3cm, height 4m north facing, low potential feature. 230c) One loose tile on back of house, size 3cm, height 6m east facing, low potential feature. 230d) Gap in bricks where cladding has come loose, size 6cm, height 3m east facing, moderate potential feature. 230e) size 4cm, height 2.5m south facing low potential feature. 230f) size 3cm, height 2.5 south facing, moderate potential feature. 230g) Bat droppings all around beam to the right of the front door. No roosting features seen here, possible foraging around light, height 1.5m west facing, high potential feature.	No access for internal inspection.	N/A	N/A	N	N/A	N/A	4	01/07/2019
143	Warehouse - single skin corrugated steel building. Old building.	01/06/2017	Unable to inspect most of the building due to trees or dense vegetation or the A358 restricting access. No signs of roosting features but beams could have feeding perch potential. Low potential.	No internal assessment undertaken	N/A	N/A	N				
67	Built in the 1590s, with a thatched roof and rendered walls. There is also an extension which was built in the 1980s, made of rendered and pebble dashed brick walls and a tiled roof	07/02/2017	F002a) Thatched, size of feature 5x3cm, height 2.5m south facing, low potential feature. F002b) Gaps under roof tiles / felt, size of access point 5x4cm, height 1m, moderate potential feature. F002c) Access to soffit box, size of feature 10x10cm, heigh 5m west facing, high potential feature. F002d) Split and knot hole in wooden facia board. Size of feature 30x2cm, height 4m west facing, high potential feature. F002e) gap behind facia board, size of feature 10x3cm, height 5m east facing, low potential feature.	Open in roof void, used for storage, some cobwebs hanging in places	22/08/2019	A small number of droppings were found in the newer, tiled roof, but nothing was found in the older, thatched roof. It was not possible to access some of the newer roof, due to lack of flooring. Likely common pipistrelle.	N	N/A	N/A	4	31/05/2017
294	Negligible building, no description.										
89	School, 50-100 years old, 157 and 156 connected and assessed as one building	09/11/2018	A- gap between roof and wall, 1cm, 3m high, N, Moderate. B- cavity in wall, 4cm, 1m high, N, Low. C- Cavity ion wall, 2cm, 2.5m high, N, Moderate. D- Gaps under tiles, 3cm (All over the building), 4m high, High. E- gap between roof and wall, 2cm, 2.5m high, W, Moderate. F- Gap between roof and wall, 1cm, 3m high, E, Low. G- Raised lead flashing, 1cm, 4m high, N, Low. H- underneath lead flashing, 4cm, 5m high, W, Moderate. I- Gap between roof and wall, 2cm, 6m heigh, S, Moderate	No internal assessment undertaken	N/A	N/A	N	N/A	N/A	4	23/07/2018
235	One storey brick out house. In poor condition in parts. Single skin. Owner says it is well used for storage and has not seen bats. Clay tiles. Approx. 60-70 years old. No pictures at owners request.	18/05/2017	A- Gaps under roof tiles / felt (missing tiles leading to the inside) 30cm, 3.5m heigh, N, Moderate. B- Gaps under roof tiles / felt, 5cm, 3m heigh, N, Low. C- Missing pointing on chimney, 3.5m, E/W/S, Low. D- Gaps under roof tiles / felt (missing ridge tile leading to the inside), 5cm, 3.5m heigh, S, Moderate	No internal assessment undertaken	N/A	N/A	N				02/10/2017
60	School, 50-100 years old, 157 and 156 connected and assessed as one building	09/11/2018	A- gap between roof and wall, 1cm, 3m heigh, N, Moderate. B- cavity in wall, 4cm, 1m heigh, N, Low. C- Cavity ion wall, 2cm, 2.5m high, N, Moderate. D- Gaps under tiles, 3cm (All over the building), 4m high, E- gap between roof and wall, 2cm, 2.5m high, W, Moderate. F- Gap between roof and wall, 1cm, 3m high, E, Low. G- Raised lead flashing, 1cm, 4m high, N, Low. H- underneath lead flashing, 4cm, 5m high, W, Moderate. I- Gap between roof and wall, 2cm, 6m heigh, S, Moderate	No internal assessment undertaken	N/A	N/A	N	N/A	N/A	4	23/07/2018
363	House with concrete tiles	28/03/2017	No habitat for any protected species. Negligible roosting potential.	N/A	N/A	N/A	N			N/A	
230	Residential 2 storey thatched building, built in 1971.	11/02/2020	A- gaps in lead flashing, 4cm, 6m, W, clear drop zone, low. B- gaps between thatch and building wall in all directions around the house, 3m, clear drop zone, moderate potential	No internal assessment undertaken	N/A	N/A	N			4	15/06/2020
158	Residential building - brick built with ridge tiles. Newer house, less than 50 years old.	01/06/2017	A- gap under tile, 2cm, 5m, NW, clear drop zone, low. B- gap in gable end covered in cobwebs, 1cm, 5m, SW, negligible. C- gap between wall and soffit, 1cm, 5m, NE, negligible.	No internal assessment undertaken	N/A	N/A	N				
216	Negligible building, no description.										
232	Garage with corrugated asbestos roof and northern wall made of concrete asbestos. Breeze block and plastered walls with recently replaced wooden sarking boards.	09/07/2018	A- access to soffit box, currently used by sparrows with no evidence of bats, 2cm, 4m, E, uncluttered drop zone, moderate. B- cavity in top right corner of the door, 1cm, 4m, NE, uncluttered drop zone, low. C- not suitable cavity between metal wall and concrete, 6cm, 3.5m, NE, low. D- three gaps under corrugated asbestos, 2cm, 1.5m, N, uncluttered drop zone, moderate. E- two access points on roof where concrete under corrugated asbestos has fallen out, 4cm, 4m, E, moderate. F- cavity between wooden wall extension and pebble dashed wall, 1cm, 3.5m, E, moderate. G- cavity between metal facial board and wooden wall, 1cm, 3.5m, SW, low. H- gap between brick wall and roof, possible cavity between asbestos roof and brick wall, 1cm, 3.5m, W, low. I- access between brick wall and roof, 1cm, 3.5m, W, low. J- cavity above the lintel above the door, sparrows seen entering with nesting material, 2cm, 3.5m, NW, moderate.	Sarking boards and insulation between the rafters. One old bat dropping found, small possible pipistrelle, not enough for DNA analysis	09/07/2018	Old droppings, not suitable for DNA	N				Building is an old disused transitional roost and considered moderate as no evidence of use in a long time. As not within 20m of the scheme no surveys were undertaken
215	Negligible building, no description.										
330	Negligible building, no description.										
319	Negligible building, no description.										
120	Very old, rusting stable with wooden structure and corrugated tin roof. Poor condition with holes in roof, with space between the tin roof and wooden boarding. No windows so open access.	10/06/2019	A- gap between tin roof and wooden board underneath throughout, over 100cm long, 2.5m high, uncluttered drop zone, moderate potential. B- open cavity between tin roof and wooden boarding throughout, over 100cm long, 2.5m high, no clear drop zone, moderate potential. C- space behind boarding, 10cm wide, 2m high, E, no clear drop zone, moderate potential. D- broken roof with space under tin, 100cm wide, 2m high, E, no clear drop zone, high potential. E- separate small outbuilding, covered in ivy but possible gaps between wood and tin roof, 10m south,1.5m high, no clear drop zone, low potential.	Sarking boards and droppings found, possible pipistrelle	03.07.19	couple of old likely pipistrelle droppings found in southern compartment of stables.	N				Static survey undertaken instead 15/07/19 to 29/07/19 placed on tree directly adjacent. A number of bats species were recorded though not possible to determine whether any species emerged/re-entered. Therefore further surveys in 2021 are needed.
267	Negligible building, no description.										
221	Garden shed - wooden, with felt roof.	12/08/2020	A- gaps between boards on side, 2cm, 1.5m, S, clear drop zone, low. B- gap above door, 3cm, 1.5m, S, clear drop zone, low potential. C- windows on east side cluttered, 1.5m, E, no clear drop zone, negligible.	No internal assessment undertaken	N/A	N/A	N				
308	Negligible building, no description.										
209	Bungalow	14/02/2017	A- gaps under ridge near soffit boxing 1-2cm, 2m heigh, W Low potential	No internal assessment undertaken	N/A	N/A	N				
406	N/A	N/A	N/A	N/A	N/A	N/A	N/A			N/A	No access
391	Negligible building, no description.										
131	Large modern hotel building, 10-20 years old. Brick built, pitched building with concrete tiles.	09/02/2017	A- loose flashing, 5cm, 10m, SE, Clear drop zone, low. B- Access to soffit box, 10cm, 2m, SE, clear drop zone, low. C- gaps under roof tiles/felt, 20x3cm, 2m, SE, clear drop zone, low. D- gaps under ridge, 15cmx5cm, 8m, E, clear drop zone, low. E- gaps under weather boarding, 5-7cm, 12m, NW and SE, clear drop	No internal assessment undertaken	N/A	N/A				4	13/07/2017
321	Negligible building, no description.										
392	Negligible building, no description.										
242	Small office onsite of petrol fuelling station. Concrete tiles. Access might be restricted due to health and safety	09/02/2017	A- Gaps under weather boarding, 3-5cm, 3m heigh, SW, Moderate. B- Cavity Wall, 10x10cm, 3m high, SE, Low. C-gaps under roof tiles/ felt, 3x3cm, 3m high, SW, Moderate	No internal assessment undertaken	N/A	N/A	N			2	28.06.2017
325	Negligible building, no description.										
222	Shed - wooden with felt roof.	13/08/2020	A- Gap in wall	Standard garden shed	12/08/2020	No evidence	N				
402	Approximately 40 years old. brick and rendered walls, with corrugated metal roof.	11/06/2019	The building is very open inside, with no insulation and no evidence of bats found.	N/A	N/A	N/A	N			N/A	
79	Residential building stone built garage.	14/02/2017	Gap between roof tile and roof, size 1cm, height 3-6m facing north west, moderate potential feature.	No access for internal inspection.	N/A	N/A	N	N/A	N/A	2	22/06/2017
70	Stone house with old rear extension. Raised ridge tiles-Feature reference A. Raised chimney flashing-Feature reference B. Raised ridge tiles on old back extension-Feature reference C. Raised roof tiles -Feature reference D. Holes in wall under gutter-Feature reference E. Raised roof tiles at back of main building-feature reference F. Gaps under Ridge tiles at back of main building-feature reference G.	07/07/2017	F001a) size 5-10cm, south facing, low potential feature. F001b) loose flashing, 5-10cm east facing. F001c) size 5-10cm, height 5m east facing, moderate potential feature. F001d) Gap between roof tile and roof, size 5-10cm, east facing, moderate potential feature. F001e) wall cavity, size 5-10cm, east facing, high potential feature. F001f) Gaps under roof tiles/felt 5-10cm, height 10m north facing, moderate potential feature. F001g) Gaps under roof tiles / felt, size 5-10cm, height 10m, north facing, moderate potential feature.	Stone house with old rear extension. Raised ridge tiles-Feature reference A. Raised chimney flashing-Feature reference B. Raised ridge tiles on old back extension. Raised roof tiles Holes in wall under gutter. Raised roof tiles at back of main building. Gaps under Ridge tiles at back of main building	22/08/2019	Droppings were found in the older section of the roof, with more found in there than in the newer section. A wall divides the two sections, although there may be gaps, allowing access across both for bats. A few droppings were found at the top of the wall on the newer side. Likely pipistrelle species.	N	N/A	N/A	3	24/08/2017
225	Dutch barn made of timber with concrete frame, corrugated metal and asbestos roof with metal walls.	12/07/2017	A- gaps between join in corrugated sheets on roof, 100cm, 10m, N/A, clear drop zone, low potential.				N				
81	Approximately 200 years old . Rendered walls, with tiled and slate roofs. Building is in good condition, with only a few raised tiles. Chimney present	21/02/2107	F001a) Gaps under roof tiles / felt, size 10x5cm, height 2 to 4m, high potential feature. F001b) Missing mortar under tiles, size 10x5cm, height 2m, high potential feature. F001c) Gaps under wooden cladding, 400x3cm, height 3 to 5m west facing, high potential feature.	No access for internal inspection.	N/A	N/A	N	N/A	N/A	3	30.05.2017
273	Negligible building, no description.										
320	Negligible building, no description.										
211	Metal outbuilding	06/04/2017	Gaps between metal sheeting	No internal assessment undertaken	N/A	N/A	N				
140	Garage used to store a car and other general items. Modern brick built building with a pitched tiled roof. Large metal door at the front with a small single-glazed window at back. Wooden boarding at top of the wall at front and back.	21/02/2019	A- gaps under boarding above window frame but covered with cobwebs, 1x40cm, 1.5m, N, no clear drop zone, low. B- gap between boarding and tile, 1x40cm, 2m, N, no clear drop zone, low. C- some gaps under boarding at front of building, 2x3, 2m, S, clear drop zone, low.	No internal assessment undertaken	N/A	N/A	N				
407	Residential building in good repair.	22/02/2017	N/A	N/A	N/A	N/A	N/A			N/A	
122	Residential building - original stone built building with a stone extension, clay tiles on SE roof and slate tiles on NW roof.	10/02/2017	A- gaps under weatherboarding, 2cmx50cm, 5m, NE, clear drop zone, high. B- gaps under roof tiles/ felt, multiple 10cmx20cm, 6-8m, NE, clear drop zone, high. C- loose flashing, 3cmx3cm, 8m, NE, clear drop zone, moderate.	Droppings of numerous bat species found however unclear of how many are using space as droppings recently cleared by owner. multiple entries visible. couldn't endoscope gable end of nw side as no floorboards. droppings distributed evenly. cavities in gable end brickwork however little opportunity in majority of roof due to no insulation on one end and well secured/Maintained felting on the other.	21/08/2019	confirmed - species likely pipistrelle spp. and likely brown long-eared	N			3	18/07/2017
413	Negligible potential no building description.										
248	garden shed, surrounded by agricultural fields and adjacent to a358	12/08/2020	A- gap between top of door and door frame on both sides, 5cm, 2m high, W, Moderate. B- Gap at apex, 5cm, 2m, W Low. C- Gap at apex, 5cm, 2m, E Low	Standard garden shed	12/08/2020	No evidence	N			1	14/09/2017
229	Garage, brick built, in generally good condition built in 1950's. Tiled pitched roof with ridge tiles.	14/02/2017	A- gaps either side of garage door, 2x20cm, 2m, W, clear drop zone, moderate. B- on both sides (N&S) the roof overhang creates a gap above the wall, all around, 2m, moderate potential	No internal assessment undertaken	N/A	N/A	N			2	10/08/2017
414	Outbuilding, breeze block rendered walls, clay tiles.	07/02/2017	Gaps under roof tiles / felt, size 5-10cm, height 2m north facing, high potential feature.	N/A	N/A	N/A	N	N/A	N/A	2	17/07/2019
236	Two storey barn used for storage. Ground floor is used for wood storage and is open and light. First floor is a hay loft which looks dark and undisturbed. Northern end of structure has a metal	18/05/2017	A- Air hole into hay loft, 20cm, 4.5m heigh, S, Moderate. B- Missing panel leading into hay loft, 50cm, 2.5m heigh, W, Moderate. C- Missing glass panel leading to hay loft, 30cm, 3m, W, Moderate. D- Gap at top of the wall between roof and wall, length of roof, 3-4m	No internal assessment undertaken	N/A	N/A	N				02/10/2017
324	Negligible building, no description.										

ID No	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	4th survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
78	Y	Temp: 18C Cloud cover: 3 Wind: 2 Rain: 0	Sunset: 21:30 Start: 21:00 Finish 23:30	33 common pipistrelle bats emerged from a crack to the right of a door with 11 seen returning. Common and soprano pipistrelle noctule and serotine calls	01/08/2019	Y	Temp: 22C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:00 Start: 20:30 Finish 23:00	Common pipistrelle and pipistrelle species noctule Myotis species Nyctalus species long-eared species and serotine calls	03/09/2019	Y	Temp: 14C Cloud cover: 7 Wind: 2 Rain: 0	Sunrise: 06:28 Start: 04:28 Finish 06:43	1 common pipistrelle re-entry. Common and soprano pipistrelle Long eared Myotis spp. and noctule heard	-	-	-	-	-
143																			
67	Possible	Temp: 14C Cloud cover: 3 Wind: 0 Rain: 0	Sunrise: 05:05 Start: 03:05 Finish 05:20	Possible re-entry of bat with no calls recorded. Common pipistrelle and unknown bat calls	25/07/2017	Y	Temp: 16C Cloud cover: 0 Wind: 0 Rain: 0	Sunrise: 05:27 Start: 03:27 Finish 05:42	Common pipistrelle flew back and forth up to building and entered under corner roof tile and above soffit box. Common pipistrelle Myotis species and pipistrelle species calls	02/10/2017	N	Temp: 12C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 18:42 Start: 18:32 Finish 20:47	Common and soprano pipistrelle and Myotis species calls	-	-	-	-	-
294																			
89	N	Temp: 22C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:11 Start: 20:55 Finish 23:10	Common and soprano noctule Myotis species long-eared species Leisler's and serotine calls	07/08/2018	N	Temp: 14C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 05:47 Start: 03:47 Finish 06:02	Common and soprano pipistrelle noctule calls	24/06/2019	N	Temp: 18C Cloud cover: 1 Wind: 0 Rain: 0	Sunset: 21:29 Start: 20:59 Finish 23:29	Common and soprano pipistrelle noctule Myotis species serotine and Nyctalus species long-eared bat and Leisler's calls. Commuting and foraging in all directions	-	-	-	-	-
235	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 18:49 Start: 18:09 Finish 20:49	Common pipistrelle and Myotis calls	Further surveys needed														
60	N	Temp: 22C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:11 Start: 20:55 Finish 23:10	Common and soprano noctule Myotis species long-eared species Leisler's and serotine calls	07/08/2018	N	Temp: 14C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 05:47 Start: 03:47 Finish 06:02	Common and soprano pipistrelle noctule calls	24/06/2019	y	Temp: 18C Cloud cover: 1 Wind: 0 Rain: 0	Sunset: 21:29 Start: 20:59 Finish 23:29	2 common pipistrelle emerged from ridge tiles. Common and soprano pipistrelle noctule Myotis species serotine and *Nyctalus* species long-eared bat and Leisler's calls. Commuting and foraging in all directions					
363																			
230	N	Temp: 16C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:29 Start: 20:59 Finish 23:29	Common and soprano pipistrelle noctule Leisler's and barbastelle calls	07/07/2020	N	Temp: 12C Cloud cover: 3 Wind: 1 Rain: 0	Sunrise: 05:07 Start: 03:07 Finish 05:22	Soprano pipistrelle and noctule calls	-	-	-	-	-	-	-	-	-	-
158																			
216																			
232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
215																			
330																			
319																			
120															-	-	-	-	-
267																			
221															-	-	-	-	-
308																			
209																			
406	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
391																			
131	N	Temp: 13C Cloud cover: 7 Wind: 1 Rain: 0	Sunrise: 05:12 Start: 03:10 Finish 05:25	Common pipistrelle bats recorded foraging and commuting.	01/08/2017	N	Temp: 17C Cloud cover: 7 Wind: 0 Rain: 0	Sunset: 20:59 Start: 20:29 Finish 22:59	Moderate activity from commuting common and soprano pipistrelle bats and noctules. lesser horseshoe bat pass recorded along with serotine and Nyctalus sp.	Further surveys needed in 2021									
321																			
392																			
242	N	Temp: 14C Cloud cover: 8 Wind: 1 Rain: 3	Sunset: 21:30 Start: 21:00 Finish 23:30	Commuting common pipistrelles and foraging noctules identified.	05/10/2017	N	Temp: 13C Cloud cover: 8 Wind: 4 Rain: 2	Sunrise: 07:18 Start: 05:18 Finish 07:33	Foraging of common pipistrelle bats.	-	-	-	-	-	-	-	-	-	-
325																			
222																			
402																			
79	Y	Temp: 20C Cloud cover: 8 Wind: 2 Rain: 0	Sunrise: 04:57 Start: 02:57 Finish 05:13	1 common pipistrelle re-entered a ridge tile feature close to a gable end near the apex. Commuting and foraging common pipistrelles with noctules serotines brown-long eared bats soprano pipistrelles and myotis species recorded less frequently. Natterers bat was identified.	01/08/2017	N	Temp: 16C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 20:58 Start: 20:28 Finish 22:58	Commuting and foraging common pipistrelle and myotis species with occasional serotines recorded.	21/09/2020	Y	Temp: 14C Cloud cover: 7 Wind: 2 Rain: 3	Sunrise: 06:55 Start: 04:55 Finish 07:10	Common pipistrelle bat re-entering a missing tile close to the base of the roof at a gable end. Low activity from common pipistrelles recorded.	-	-	-	-	-
70	Y	Temp: 14C Cloud cover: 8 Wind: 0 Rain: 0	Sunrise: 06:13 Start: 04:13 Finish 06:28	Common pipistrelle entered loft space through large hole under eaves at front of house. Common pipistrelle and pipistrelle species noctule *Nyctalus* species serotine and long-eared species calls	13/09/2017	N	Temp: 12C Cloud cover: 7 Wind: 3 Rain: 3	Sunset: 19:32 Start: 19:15 Finish 21:32	Common pipistrelle Myotis species long-eared species barbastelle and noctule calls	12/10/2017	N	Temp: 10C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 07:30 Start: 05:30 Finish 07:45	No recordings	-	-	-	-	-
225															-	-	-	-	-
81	Y	Temp: 19C Cloud cover: 8 Wind: 1 Rain: 1	Sunset: 21:15 Start: 20:50 Finish 23:15	Emergence of an unidentified bat (myotis or pipistrelle sp.) from gable end area. Commuting common pipistrelles and noctules. Common pipistrelles also foraging.	19/07/2017	Y	Temp: 20C Cloud cover: 7 Wind: 1 Rain: 2	Sunset: 21:16 Start: 20:55 Finish 23:16	Emergence of 4 soprano pipistrelles from top of gable end under a loose tile. A moderate level of activity from common and soprano pipistrelles along with occasional noctules brown long-eared bats and a single Nathusius pipistrelle call identified.	23.08.2017	Y	Temp: 19C Cloud cover: 4 Wind: 1 Rain: 0	Sunset: 20:18 Start: 19:48 Finish 22:18	An unidentified bat (with no call recorded) emerged from under wooden cladding. Moderate activity with commuting noctules and serotines identified during the survey along with common and soprano pipistrelles and occasional brown long-eared bats and myotis sp.	-	-	-	-	-
273																			
320																			
211																			
140																			
407																			
122	N	Temp: 23C Cloud cover: 0 Wind: 0 Rain: 0	Sunset: 21:16 Start: 20:46 Finish 23:16	Common pipistrelle serotine Nyctalus species Myotis species and noctule calls. Common pipistrelles that were seen flew north and south	21/08/2017	N	Temp: 21C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 20:20 Start: 19:50 Finish 22:20	Common pipistrelle serotine Myotis species and noctule calls. Common pipistrelle bats seen commuting east and west	26/09/2017	N	Temp: 16C Cloud cover: 0 Wind: 1 Rain: 0	Sunset: 19:02 Start: 18:32 Finish 21:02	Common and soprano pipistrelle noctule and serotine calls. Common pipistrelle bats seen flying east and south	-	-	-	-	-
413																			
248	N	Temp: 11C Cloud cover: 2 Wind: 1 Rain: 0	Sunset: 19:28 Start: 18:58 Finish 21:28	No recordings	12/08/2020	N	Temp: 26C Cloud cover: 7 Wind: 1 Rain: 1	Sunset: 20:38 Start: 20:08 Finish 22:38	Common and soprano pipistrelle noctule serotine and long-eared calls	-	-	-	-	-					
229	N	Temp: 13C Cloud cover: 0 Wind: 0 Rain: 0	Sunrise: 05:51 Start: 03:51 Finish 06:06	Common pipistrelle long-eared species and Myotis species calls	03/10/2017	N	Temp: 12C Cloud cover: 2 Wind: 1 Rain: 0	Sunset: 18:47 Start: 18:25 Finish 20:50	Common and soprano pipistrelle and Myotis species calls	-	-	-	-	-	-	-	-	-	-
414	N	Temp: 20C Cloud cover: 8 Wind: 2 Rain: 0	Sunset: 21:21 Start: 20:49 Finish 23:31	Common pipistrelle noctule leisler's Plecotus spp. and poss. barbastelle calls	29/08/2019	N	Temp: 9C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 06:20 Start: 04:20 Finish 06:35	Common pipistrelle and Myotis species calls	25/06/2020	N	Temp: 12C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:00 Start: 03:00 Finish 05:30	Myotis spp. Noctule Nyctaloid and common and soprano pipistrelle					
236	N	Temp: 13C Cloud cover: 8 Wind: 1 Rain: 1		Common pipistrelle and Myotis calls															
324																			

ID No	Building Number	Land parcel number/name	Eastings - Updated	Northings - Updated	Distances from PMO - Updated (Metres)	Potential following external assessment	Potential following internal assessment	Final roost status following Emergence/Re-entry Surveys?	Buildings within 100 metres?	Moderate buildings within 20 metres?	Low buildings directly impacted by Pink Modified option?	Bat species present if confirmed roost	Notes	Building Description	Date of Inspection	External Inspection Result	Internal Inspection Description	Date Internal Inspection Undertaken	Results
250	212A	ST157298	330550	118512	50.28	Moderate	N/A	Moderate	Y	N	N/A			Wooden barn, with ridge tiles	13/02/2017	F003a, Gaps between hanging wood timbers on Northern wall, 1cm, 8m heigh, N, Moderate. F003b, Gap between roof tile and roof, 2cm, 8m heigh, Low	General use, open	13/02/2017	No evidence
241	225	U00047	331125	118047	50.79	Moderate	N/A	Moderate	Y	N	N/A			A one storey shed divided into four compartments. It has a pitched corrugated asbestos roof supported by metal and wooden frames. The walls are made of wood with wooden sections in areas.	12/07/2017	Metal gutter surrounded by wooden planks which provides a cavity, Moderate	No internal assessment undertaken	N/A	N/A
128	207	ST110517	330357	118596	50.92	Scoped out	N/A	Scoped out	Y	N/A	N/A		Building no longer exists	N/A	03/02/2017	N/A	N/A	N/A	N/A
208	236	WS36496	331271	117990	51.98	Low	N/A	Low	Y	N/A	N			mobile home, 70's style.	14/02/2017	gaps under eves - continuous. Low potential	No internal assessment undertaken	N/A	N/A
390	291	ST183453	328717	122064	52.79	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
398	202A	ST158468	330341	118809	53.26	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
176	212	ST157298	330552	118507	53.30	Low	N/A	Low	Y	N/A	N			Wooden barn, with ridge tiles	13/02/2017	A- Gaps between hanging wood timbers on Northern wall, 1cm, 6m heigh, N, Low. B- Gap between roof tile and roof, 2c, 8m high, N, Low potential.	General use, open	13/02/2017	No evidence
88	109	ST48779	328142	122668	53.46	High	N/A	High	Y	N/A	N/A			Approximately 80 year old structure with brick and stone walls, open on two sides. Corrugated metal roof and wooden façade.	07/02/2017	F001 a) Multiple wall cavities extending off to the sides within wall	No internal assessment undertaken	N/A	N/A
73	204	ST39451	330317	118581	85.59	High	Confirmed	Confirmed	Y	N/A	N/A	1 soprano pipistrelle 2 common pipistrelles, long-eared droppings.		Two storey residential building with one original old section (eastern section) and one newer section (western section).	22/02/2017	F001a) size 1cm, height 3m north facing, low potential feature. F001b) size 5cm, height 3m south facing, high potential feature. F001c) size 3x1cm, height 2.5m south facing, moderate potential feature. F001d) size 3x2cm, height 3 south facing, high potential.	The majority of the roof was inaccessible due to lack of floorboards and obstructions. The gable end walls have very loose bricks, creating features with roosting potential. Gaps were also above the apex of each timber beneath the ridge. likely long eared droppings were found in the older roof void, but only one was found in the newer loft, on the wall between the two, which indicates there may be a gap at the top of the wall, allowing access.	23/08/2019	Likely long-eared bat
74	210	ST162905	330497	118542	53.75	High	Confirmed	Confirmed	Y	N/A	N/A	5 common pipistrelle, 2 unknown, lesser horseshoe (DNA)		Large courtyard surrounded by stone buildings, house and external buildings. Hollow loft space above arched stone entrance into courtyard- good bat potential. Open double garage in courtyard, a wooden structure with a felt and slate roof with negligible potential. Slated wood on walls of courtyard, potential spaces under wood. Archway into central courtyard through electric gates. Brick arch with gaps between stone and the wood ceiling. Home owner think they have seen bats in the past. Surround central courtyard	06/04/2017	Old convert farm building, split into different houses. In good condition, though there are some large visible access holes into the roof with high potential	The house is part of a large complex, bats are moving around inside the roof voids. spread out with a large heaped pile of droppings (sample taken for DNA) around the amp box (which is warm) in the roof, that comes down from the solar panels on the south facing aspect. Owner cleaned up over the winter and a significant pile is present - leading to think that possible maternity	02/02/2017	Lesser horseshoe bat
408	308	ST135737	326980	123570	53.83	Negligible	N/A	Negligible	Y	N/A	N/A			Residential building in good repair.	22/02/2017	N/A	N/A	N/A	N/A
403	306	ST192199	327001	123562	54.60	Negligible	N/A	Negligible	Y	N/A	N/A			No Building description	11/06/2019	N/A	N/A	N/A	N/A
160	119	ST63856	327646	123575	55.67	Low	N/A	Low	Y	N/A	N			Residential building - thatched cottage with roof replaced in 2012. Tiles on roof at back of the house.	12/08/2020	A- tiles loose at back of the house, 2cm, 2.5m, S, clear drop zone, low potential.	No internal assessment undertaken	N/A	N/A
404	268	WS78653	333259	116710	55.94	Negligible	N/A	Negligible	Y	N/A	N/A			Approximately 40 years old. 4 pitched asbestos roofs. Concrete posts. Open sides for most of the building.	10/10/2017	Corrugated asbestos roof, with brick walls	N/A	N/A	N/A
317	80A	ST77215	326991	123818	55.95	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
233	190	ST42211	330172	119005	56.49	Moderate	N/A	Moderate	Y	N	N/A			Outbuilding. Clay tiled roof, wooden soffit box, wooden doors and panelling	07/02/2017	A- Gaps under roof tiles / felt (x12 features), 3-5m heigh, SE, Moderate	No internal assessment undertaken	N/A	N/A
127	206	ST110517	330349	118594	56.60	High	N/A	Possible confirmed	Y	N/A	N/A	possible common pipistrelle		Part of B205, residential property, connected	03/02/2017		N/A	N/A	N/A
121	188	ST47663	330171	119028	56.92	High	N/A	High	Y	N/A	N/A			Garage - clay tiles, rendered breeze blocks, felt lined with no loft	10/02/2017	A- gaps under roof tiles/felt, 2cmx8cm, 3-5m, SE, clear drop zone, high. B- loose flashing, gap above weather boarding, 2cm, 3m, SE, clear drop zone, high. C- cavity in wall, 4cmx2cm, 4m, SW, clear drop zone, high.			
316	80	ST77215	326981	123824	57.14	Low	N/A	Low	Y	N/A	N			Built in 1960s, garage built in 1994, good condition, well sealed.	13/02/2017	A- gaps under roof tiles, 4.5cm in size, 2.5m high facing west with an uncluttered drop zone, b- loose flashing, 4.5cm gap, 2.5m high facing north east with an uncluttered drop zone	No internal assessment undertaken	N/A	N/A
182	227	WS46416	331194	117989	58.05	Low	N/A	Low	Y	N/A	N			Small stone house with attached garage. Built in 1970s.	10/02/2017	A- Access to soffit box, 2x2cm, 3m high, E, Low potential.	No internal assessment undertaken	N/A	N/A
178	213	ST157298	330565	118492	58.30	Low	N/A	Low	Y	N/A	N			Barn Wooden barn, with ridged tiles.	13/02/2017	A- Whole wall (no solid wall), 6m, Low. B - Gap between roof tile and roof, 2cm+ 8m heigh, N, Low potential	Open access.	13/02/2017	No
198	231	WS29546	331228	117972	58.44	Low	N/A	Low	Y	N/A	N			1960's bungalow	15/02/2017	A- Gap between roof tile and roof, 4cm, 2m high, Low potential (only at lower eaves by gutter)	No internal assessment undertaken	N/A	N/A
293	203	ST155736	330320	118612	58.79	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
410	174	ST307743	329574	120858	59.09	Not Determined	N/A	Not Determined	Y	N/A	N/A		No access. Surveys to be undertaken in 2021						
84	119A	ST63856	327665	123566	59.10	High	N/A	Possible confirmed	Y	N/A	N/A	Unknown	No bats seen by surveyors. Landowner claims to have seen an emergence.	A small wooden garden shed in corner of garden, surrounded by agricultural fields and adjacent to a358.	12/08/2020	F001a) gap between top of door and door frame, High	The shed offers a small internal space with equipment preventing internal access.	12/08/2020	Nothing identified.
382	119C	ST63856	327668	123564	59.20	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.			No internal assessment undertaken	N/A	N/A
126	205	ST110517	330341	118596	59.50	High	N/A	Possible confirmed	Y	N/A	N/A	1 common pipistrelle		Residential house, in good condition	03/02/2017	A- Gaps under tiles, B gap at corner of building between wall and roof, C- gap under barge boarding	N/A	N/A	N/A
288	198	ST158468	330353	118811	59.62	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
289	199	ST158468	330383	118799	60.90	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
268	69	ST44854	327014	123594	61.69	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
384	198B	ST158468	330363	118809	62.15	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
207	235	WS36496	331259	117972	62.54	Low	N/A	Low	Y	N/A	N			mobile home, 70's style.	14/02/2017	gaps under eves - continuous. Low potential	No internal assessment undertaken	N/A	N/A
123	191	ST42211	330178	119011	62.62	High	N/A	High	Y	N/A	N/A			Residential building - stone built old house with modern extensions, semi-detached, clay-tiled, probable loft space.	07/02/2017	A- gaps under roof tiles/ felt, many tiles, up to 10cm on both sides, 7m, SW, clear drop zone, high. B- Loose flashing, 10x2cm, 4m, NE, clear drop zone, moderate. C- gap under ridge tiles, 10x2cm, 8m, NE, clear drop zone, high.			
199	232	WS36496	331240	117967	63.12	Low	N/A	Low	Y	N/A	N			Bungalow - 70's	14/02/2017	Gaps under ridge tile, gaps under weather boarding. Low potential	No internal assessment undertaken	N/A	N/A
269	70	ST44854	327022	123619	64.22	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
343	296	ST162905	330496	118530	64.26	Negligible	N/A	Negligible	Y	N/A	N/A			Archway into central courtyard through electric gates. Brick arch with gaps	06/04/2017	Large courtyard surrounded by stone buildings, house and external buildings.	N/A	N/A	N/A
75	211	ST52923	330518	118560	27.52	High	Confirmed	Confirmed	Y	N	N/A	4 common pipistrelle. Serotine (DNA)		Originally built in 1800's, extensions added later. Slate good condition. Roofing new. House Martin nests under roof edge	13/02/2017	F001a) Gap between roof tile and roof, size 1cm, height 8m facing south east, low potential feature. F001b) Gap under Eves at apex, size 5x30cm, height 8m facing south west, high potential feature. F001c) Gap between roof tile and roof, size 1-3cm, height 2m south west facing, low potential feature. F001d) Gaps under weather boarding at eves, size 102cm, height 6m facing north east, moderate potential feature. F001e) size 204cm, height 8m north west facing, moderate potential feature.	Loft access from central chamber of roof void, section 1. 1 section could be accessed but section separated by chimney. small numbers of droppings found in central accessible section of roof. to the south east of the north west facing gable wall was partitioned away from central section. see sketch section of roof void. inspected with a torch but couldn't be accessed.	27/08/2019	Small numbers of droppings found in central accessible section of roof. Serotine bat.
125	193	ST42211	330180	119006	64.50	High	N/A	High	Y	N/A	N/A			Outbuilding - Breeze block rendered walls, clay tiles, bitumen felt lined, no loft	07/02/2017	A- Gaps under roof tiles/felt (multiple gaps), 2-4m high, NE, High			
276	122	ST174752	328531	122792	64.99	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
361	314	ST209359	326914	123559	66.47	Scoped out	N/A	Scoped out	Y	N/A	N/A		Building scoped out as over 100m from main works.						
220	115A	U00025	327835	123181	67.26	Low	N/A	Low	Y	N/A	N			Storage unit next to bridge - corrugated tin structure supported by metal scaffolding	01/06/2017	A- other, 1-2cm, 1m, N, low	No internal assessment undertaken	N/A	N/A
383	198A	ST158468	330363	118815	67.96	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
277	123	ST174752	328535	122771	68.08	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
205	233	WS36496	331248	117962	69.10	Low	N/A	Low	Y	N/A	N			mobile home, 70's style.	14/02/2017	gaps under eves - continuous. Low potential	No internal assessment undertaken	N/A	N/A
76	226	ST161973	331171	118036	32.79	Confirmed	Confirmed	Confirmed	Y	N/A	N/A	37 common pipistrelles + long-		Stone brick building - 50 years +. confirmed bat roost, droppings present,	14/02/2017	F001a) size 1cm, height 8m north facing, moderate potential feature. F001b) Gap	Lots of droppings are found under the features known about that act as roosts	22/08/2019	Likely pipistrelle species
42	67 S	ST44854	327001	123586	71.61	High	N/A	High	Y	N/A	N/A			Possible old stable or garage extended with breeze block with stone and timber	13/02/2017	4cm x 1cm access point, into roof from F002a) bathroom window 2m from the ground	N/A	N/A	N/A
206	234	WS36496	331259	117962	71.91	Low	N/A	Low	Y	N/A	N			mobile home, 70's style.	14/02/2017	gaps under eves - continuous. Low potential	No internal assessment undertaken	N/A	N/A
179	214	ST61854;ST52808	330530	118499	72.34	Low	N/A	Low	Y	N/A	N			Wooden stables - 10 years old. New stables with wooden panel wall, corrugated bitumen roof and window skylight.	02/02/2016	A- gaps along entire edge of roof, corrugated roof and wooden boards, 7cm, 2.5m, E, clear drop zone, low. B- Gap at gable end between boards, 8cm, 3m, N, clear drop zone, low.	No internal assessment undertaken	N/A	N/A
142	115	U00025	327836	123172	72.96	Low	N/A	Low	Y	N/A	N			Workshop/ storage - brick built building with metal corrugated roof.	30/08/2017	A- overlap in corrugated metal, 2x5cm, 2.5m, SW, clear drop zone, low. B- large opening into building, 3m, SW, clear drop zone, low. C- superficial hole in stone/brick, 3cm, 3m, SW, clear drop zone, negligible. D- large opening into building, 5x6, 5m, NW, clear drop zone, low.	No internal assessment undertaken	N/A	N/A
290	200	ST158468	330388	118810	72.98	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
295	216	ST61854;ST52808	330505	118514	73.25	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
133	290	ST132051	326957	123545	73.47	Scoped out	N/A	Scoped out	Y	N/A	N/A		Scoped out as over 100m from main works						
243	269	WS78653	333280	116686	73.98	Moderate	N/A	Moderate	Y	N	N/A			Approximately 40 years old. Brick walls and asbestos roof. Boarded up doors	10/10/2017	Gaps behind asbestos roof over hanging wall, 20x3cm, 3-4m high, NW, Moderate	No access previously granted	N/A	N/A
212	254	WS59340_WS59343	331831	117705	75.49	Low	N/A	Low	Y	N/A	N			Metal outbuilding	06/04/2017	Gaps between metal sheeting	No internal assessment undertaken	N/A	N/A
409	173	ST307743	329591	120874	76.09	Not Determined	N/A	Not Determined	Y	N/A	N/A		No access. Surveys to be undertaken in 2021						
119	179	ST46907	330083	119221	76.29	High	N/A	High	Y	N/A	N/A		No further surveys required. Within 100m of wider footprint but not within 100m of the main scheme.	Semi detached bungalow with cross hipped roof built in the 1950's. Brick built with pebble dash walls in good condition with no gaps. Extension to the eastern aspect with a flat bitumen roof.	07/05/2019	A- gaps under roof tiles/loose, 3cm, 2m, S, clear drop zone, low. B- gap between soffit and wall, cobwebs showing no recent use, 1cm, 2.5m, S, clear drop zone, low. C- gap between felt and tiles into loft space, 1cm, 2.5m, E, clear drop zone, moderate. D- multiple gaps under flu pipe, 1cm, 5m, E, clear drop zone, low. E- access under ridge tiles into loft space due to missing mortar, 1cm, 5m, SE, clear drop zone, moderate. F- gaps under roof tiles/ loose, 1cm, 3.5m, N, clear drop zone, low. G- gaps between tiles, 1cm, 4m, W, clear drop zone, low. H- gap under lead flashing right of dormer windows, previously used by starlings, 3cm, 5m, W, clear drop zone, high.	No internal assessment undertaken	N/A	N/A
213	255	WS59340_WS59343	331857	117689	76.48	Low	N/A	Low	Y	N/A	N			Metal outbuilding	06/04/2017	Gaps between metal sheeting	No internal assessment undertaken	N/A	N/A
329	282	WS59340 WS59343	331399	117896	76.62	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
283	180	ST227743	330095	119218	76.77	Negligible	N/A	Negligible	Y	N/A	N/A			Negligible building, no description.					
364	317	ST50101	326982	123845	77.70	Negligible	N/A	Negligible	Y	N/A	N/A			Residential building					
219	361	ST304696	325687	124534	78.42	Low	N/A	Low	Y	N	N		Demolished	Small outbuilding - since been demolished	N/A	N/A	N/A	N/A	N/A
210	246	WS44374	331624	117786	79.80	Low	N/A	Low	Y	N/A	N			Agricultural building containing cows with three sections, mostly open. Walls constructed from breeze blocks at the bottom and corrugated metal at the top with some wood on one section. Mostly open on south side, though middle section is sealed with a large metal door. Roof is sometimes corrugated metal and sometimes corrugated asbestos.	22/02/2017	Largely open structure with single skinned walls and roof with low bat roost potential.	No internal assessment undertaken	N/A	N/A
360	313	ST209359	326927	123541	79.93	Scoped out	N/A	Scoped out	Y	N/A	N/A		Building scoped out as over 100m from main works.						
139	294	ST209359	326917	123543	80.43	Scoped out	N/A	Scoped out	Y	N/A	N/A		Scoped out as over 100m from main works						
223	179A	ST46907	330079	119226	80.53	Low	N/A	Low	Y	N/A	N			Garage - modern brick built, flat corrugated metal roof	07/05/2019	A- corrugated board above the garage in poor condition with gaps into the building, 5cm, 2m, E, clear drop zone, low potential			

ID No	Hibernation Potential	Date of Hibernation survey	Results of Hibernation Survey	Number of surveyors required for emergence survey	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	4th survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
250	N																							
241	N				02/05/2018	N	Temp: 12C Cloud cover: 0 Wind: 3 Rain: 0	Sunset: 20:35 Start: 20:05 Finish 22:35	Common and soprano pipistrelle and Myotis species calls											-	-	-	-	-
128	N				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
208	N																							
390																								
398																								
176	N																			-	-	-	-	-
88	N			2	31/05/2017	N	Temp: 14C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:15 Start: 21:00 Finish 23:15	Common pipistrelle noctule and long-eared species calls	25/07/2017	N	Temp: 16C Cloud cover: 0 Wind: 0 Rain: 0	Sunrise: 05:27 Start: 03:27 Finish 05:42	Common pipistrelle Myotis species long-eared species and noctule calls. Bats seen were foraging along hedge by road	Further surveys needed in 2021					-	-	-	-	-
73	N	N/A	N/A	2	31/05/2017	Y	Temp: 12C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:04 Start: 03:15 Finish 05:19	Common and soprano pipistrelle serotine Myotis species long-eared species calls. Soprano pipistrelle seen re-entering building	26/07/2017	N	Temp: 15C Cloud cover: 1 Wind: 2 Rain: 0	Sunset: 21:09 Start: 20:45 Finish 23:09	Noctule calls	10/10/2017	Y	Temp: 14C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 18:33 Start: 18:10 Finish 20:33	2 common pipistrelle and 1 soprano emerged from fascia board	-	-	-	-	-
74	N	N/A	N/A	8	17/07/2017	Possible	Temp: 20C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:19 Start: 20:50 Finish 23:20	Possible emergence of common pipistrelle flying south east. Common and soprano pipistrelle noctule and Myotis species calls	29/08/2017	Y	Temp: 15C Cloud cover: 6 Wind: 2 Rain: 0	Sunset: 20:04 Start: 19:49 Finish 22:04	3 common pipistrelle bats emerged flying south and 2 emerged from apex of south western gable flying east. Common pipistrelle and noctule calls	20/09/2017	Y	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 19:15 Start: 20:45 Finish 21:15	2 unknown silent bats emerged from south west apex of building and flew south east. Another emerged slightly to the right of the previous emergences at the top of the wall. Common and soprano pipistrelle Myotis species and serotine calls	-	-	-	-	-
408	N/A																							
403	N/A			N/A																				
160	N																							
404	N			N/A																				
317																								
233	N			2	12/07/2017	N	Temp: 19C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 21:24 Start: 20:54 Finish 23:24	Common pipistrelle noctule Myotis species calls. Common pipistrelle bats were seen commuting west and noctules seen commuting south and east	05/10/2017	N	Temp: 14C Cloud cover: 4 Wind: 4 Rain: 2	Sunrise: 07:18 Start: 05:18 Finish 07:33	Nothing recorded.	-	-	-	-	-	-	-	-	-	-
127	N			3	30/05/2017	Y	Temp: 14C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 21:15 Start: 21:10 Finish 23:15	Common pipistrelle possibly emerged flying across roof then north along west side of house. Common and soprano pipistrelle noctule long-eared species and Myotis species calls. Bats seen foraging and commuting in all directions	18/07/2017		Temp: 16C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 05:19 Start: 03:19 Finish 05:34	Common pipistrelle noctule and Myotis species calls	25/08/2017	N	Temp: 17C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 20:14 Start: 19:44 Finish 22:14	Common pipistrelle and Myotis species calls. Common pipistrelle seen commuting south over building					
121	N			2	18/07/2017	N	Temp: 21C Cloud cover: 2 Wind: 0 Rain: 0	Sunset: 21:16 Start: 20:46 Finish 23:16	Common pipistrelle and noctule calls	03/08/2017	N	Temp: 15C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 20:55 Start: 20:25 Finish 22:55	Common pipistrelle and serotine calls	26/09/2017	N	Temp: 19C Cloud cover: 4 Wind: 1 Rain: 0	Sunset: 19:02 Start: 18:32 Finish 21:02	Common pipistrelle and noctule calls. All bats seen flying west	-	-	-	-	-
316																								
182	N																							
178	N																			-	-	-	-	-
198	N																			-	-	-	-	-
293																								
410	N/A					-	-	-	-	-	-	-	-	-	-	-	-	-	-					
84	N			2	08/07/2017	Y	Temp: 16C Cloud cover: 1 Wind: 1 Rain: 0	Sunset: 20:47 Start: 20:17 Finish 22:47	Land owner said they saw a bat emerge from their parasol. Common and soprano pipistrelle noctule Myotis species and long-eared species calls	01/08/2017	N	Temp: 12C Cloud cover: 5 Wind: 0 Rain: 0	Sunrise: 05:37 Start: 03:37 Finish 05:52	No recordings	31/08/2017	N	Temp: 15C Cloud cover: 5 Wind: 1 Rain: 0	Sunset: 20:04 Start: 19:45 Finish 22:15	Common and soprano pipistrelle noctule, *Nyctalus* species serotine and lesser horseshoe calls	-	-	-	-	-
382																								
126	N			3	30/05/2017	Y	Temp: 14C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 21:15 Start: 21:10 Finish 23:15	Common pipistrelle possibly emerged flying across roof then north along west side of house. Common and soprano pipistrelle noctule long-eared species and Myotis species calls. Bats seen foraging and commuting in all directions	18/07/2017	N	Temp: 16C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 05:19 Start: 03:19 Finish 05:34	Common pipistrelle noctule and Myotis species calls	25/08/2017	N	Temp: 17C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 20:14 Start: 19:44 Finish 22:14	Common pipistrelle and Myotis species calls. Common pipistrelle seen commuting south over building	-	-	-	-	-
288																								
289																								
268																								
384																								
207	N																							
123	N			2	26/06/2017	N	Temp: 16C Cloud cover: 8 Wind: 0 Rain: 0	Sunset: 21:30 Start: 21:15 Finish 23:30	Common pipistrelle and noctule calls. Common pipistrelle bats seen circling over gardens	20/07/2017	N	Temp: 15C Cloud cover: 7 Wind: 3 Rain: 0	Sunset: 21:16 Start: 20:46 Finish 23:16	Common pipistrelle noctule and long-eared species calls	21/09/2017	N	Temp: 15C Cloud cover: 0 Wind: 1 Rain: 3	Sunrise: 06:57 Start: 04:57 Finish 07:12	Faint calls of common pipistrelle and noctule	-	-	-	-	-
199	N																			-	-	-	-	-
269																								
343	N			N/A																				
75	N	N/A	N/A	4	24/07/2018	Y	Temp: 16C Cloud cover: 2 Wind: 1 Rain: 0	Sunrise: 05:25 Start: 03:25 Finish 05:40	Common and soprano pipistrelle Myotis species calls. Re-entry of 2 common pipistrelle bats at south west of building	07/08/2018	Y	Temp: 18C Cloud cover: 2 Wind: 2 Rain: 0	Sunset: 20:47 Start: 20:17 Finish 22:47	Common and soprano Nyctalus species serotine long-eared species Myotis species calls. 4 common pipistrelle bats emerged from under soffit at south west of building	21/08/2018	N	Temp: 18C Cloud cover: 8 Wind: 1 Rain: 0	Sunrise: 06:08 Start: 04:08 Finish 06:23	Common and soprano pipistrelle noctule long-eared species Myotis species serotine calls. Common pipistrelle entered hole at apex of adjacent building on the opposite side of the driveway	-	-	-	-	-
125	N			2	05/06/2019	N	Temp: 11C Cloud cover: 2 Wind: 0 Rain: 0	Sunset: 21:21 Start: 20:51 Finish 23:21	Common pipistrelle and noctule calls	25/07/2019	N	Temp: 17C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:28 Start: 03:25 Finish 05:43	Common pipistrelle long eared and noctule heard	13/08/2019		Temp: 17C Cloud cover: 7 Wind: 1 Rain: 0	Sunset: 20:36 Start: 20:05 Finish 22:36	Common and soprano pipistrelle noctule					
276																								
361																								
220	N																							
383																								
277																								
205	N																							
76	N	N/A	N/A	4	02/06/2017	Y	Temp: 13C Cloud cover: 0	Sunrise: 05:03 Start: 02:52 Finish	A re-entry of a common pipistrelle under a tile near the roof apex on the	09/07/2020	Y	Temp: 18C Cloud cover: 8	Sunset: 21:17 Start: 20:47	Emergence of 1 common pipistrelle from gap between	18/09/2017	Y	Temp: 14C Cloud cover: 4	Sunset: 19:20 Start: 18:50	Emergence of 1 common pipistrelle from gap between tiles below roof	-	-	-	-	-
42	No			2	11/07/2017	N	Temp: 15C Cloud cover: 8	Sunrise: 05:12 Start: 03:00 Finish	Common and soprano pipistrelle noctule and serotine calls. Noctules	22/08/2017	N	Temp: 20C Cloud cover: 1	Sunset: 20:20 Start: 19:50	Common and soprano pipistrelle Leisler's and	Further surveys to be undertaken in	-	-	-	-					
206	N																							
179	N																			-	-	-	-	-
142	N																							
290																								
295																								
133																				-	-	-	-	-
243	N																			-	-	-	-	-
212	N																			-	-	-	-	-
409	Y					-	-	-	-	-	-	-	-	-	-	-	-	-	-					
119	N				26/08/2020	N	Temp: 15 Cloud cover: 2 Wind: 5 Rain: 0	Sunrise: 06:15 Start: 04:15 Finish 06:45	Common and soprano pipistrelle noctule long-eared species and serotine calls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
213	N																							
329																								
283																								
364																								
219	N/A																							
210	N																							
360																								
139																								
223	N																			-	-	-	-	-

ID No	Building Number	Land parcel number/name	Eastings - Updated	Northings - Updated	Distances from PMO - Updated (Metres)	Potential following external assessment	Potential following internal assessment	Final roost status following Emergence/Re-entry Surveys?	Buildings within 100 metres?	Moderate buildings within 20 metres?	Low buildings directly impacted by Pink Modified option?	Bat species present if confirmed roost	Notes
146	304	ST304696	325684	124538	82.13	Scoped out	N/A	Scoped out	Y	N/A	N/A		Demolished
274	106	ST277430	328052	122511	82.29	Negligible	N/A	Negligible	Y	N/A	N/A		
132	277	ST43481	328848	122098	14.23	Low	Low	Low	Y	N/A	N/A		Access gained for scoping but not emergence and re-entry surveys. Schedule for 2021
359	312	ST132051	326945	123535	83.94	Scoped out	N/A	Scoped out	Y	N/A	N/A		Building scoped out as over 100m from main works.
224	214A	ST61854;ST52808	330526	118487	84.39	Low	N/A	Low	Y	N/A	N		
231	114	U00025	327859	123128	84.78	Moderate	N/A	Moderate	Y	N	N/A		This is a bridge and not a building. Hibernation survey to be undertaken winter 2020/2021
245	278	ST43481	328829	122080	0.98	Moderate	N/A	Moderate	Y	Y	N/A		Access gained for scoping but not emergence and re-entry surveys. Schedule for 2021
129	240	ST123410	331484	118120	90.66	High	N/A	Confirmed	Y	N/A	N/A	2-3 common pipistrelle	Best record of roost is RW proforma 11/10/2017. JS of 22.06.2020 had bats re-enter for a second/ but
80	241	ST123410	331498	118121	93.78	High	Confirmed	Confirmed	Y	N/A	N/A	1 common pipistrelle	
238	215	ST178456	330509	118495	87.23	Moderate	N/A	Moderate	Y	N	N/A		
306	244	U00053	331462	117850	89.94	Moderate	N/A	Confirmed	Y	N/A	N/A	Common pipistrelle 1 and likely Pipistrelle spp. 2	
228	54	ST304696	325711	124593	87.68	Moderate	N/A	Moderate	Y	N	N/A		
144	298	U00017	326890	123547	88.58	Negligible	N/A	Negligible	Y	N/A	N/A		Scoped out as over 100m from main works
138	292	ST132051	326944	123530	88.84	Scoped out	N/A	Scoped out	Y	N/A	N/A		Scoped out as over 100m from main works
287	184	ST208537	330187	119126	89.70	Negligible	N/A	Negligible	Y	N/A	N/A		
246	279	ST43481	328834	122073	0.89	Moderate	N/A	Moderate	Y	Y	N/A		Access gained for scoping but not emergence and re-entry surveys. Schedule for 2021
362	315	U00017	326885	123549	90.25	Scoped out	N/A	Scoped out	Y	N/A	N/A		Building scoped out as over 100m from main works.
58	154	ST89435_ST120155	328713	121968	90.41	Moderate	N/A	Moderate	Y	N	N/A		
322	257	WS44373	332704	117640	90.63	Negligible	N/A	Negligible	Y	N/A	N/A		
358	311	ST132051	326961	123528	90.65	Scoped out	N/A	Scoped out	Y	N/A	N/A		Building scoped out as over 100m from main works.
292	202	ST158468	330377	118844	90.66	Negligible	N/A	Negligible	Y	N/A	N/A		
82	262	U00078	333220	117176	4.38	Moderate	Confirmed	Confirmed	Y	N/A	N/A	1 soprano pipistrelle. Likely long-eared	
326	276	WS16492	334452	115380	90.93	Negligible	N/A	Negligible	Y	N/A	N/A		
298	228	U00049	331194	117949	90.98	Negligible	N/A	Negligible	Y	N/A	N/A		
43	118	U00025	327884	123088	91.32	Scoped out	N/A	Scoped out	Y	N/A	N/A		Building no longer exists
297	224	U00047	331077	118029	91.54	Negligible	N/A	Negligible	Y	N/A	N/A		
285	182	ST227743	330140	119203	91.96	Negligible	N/A	Negligible	Y	N/A	N/A		
71	192A	ST265230	330203	118998	87.56	High	N/A	Confirmed	Y	N/A	N/A	1 common pipistrelle	Falling down brick built shed
85	210 SE	ST162905	330497	118530	64.32	High	N/A	Confirmed	Y	N/A	N/A	5 common pipistrelle	
278	124	ST174752	328563	122782	95.69	Negligible	N/A	Negligible	Y	N/A	N/A		
281	142	ST277430	328146	122442	95.75	Negligible	N/A	Negligible	Y	N/A	N/A		
279	125	ST174752	328564	122774	96.75	Negligible	N/A	Negligible	Y	N/A	N/A		
226	275A	WS16492	334446	115325	96.88	Moderate	N/A	Moderate	Y	N/A	N		Lots of flood lighting in the area
357	310	ST239270	326995	123529	97.65	Negligible	N/A	Negligible	Y	N/A	N/A		
180	217	ST178456	330486	118497	97.83	Low	N/A	Low	Y	N/A	N		
399	244A	U00053	331457	117843	98.44	High	N/A	High	Y	N/A	N/A	N/A	
237	209	ST39451	330304	118574	98.93	Moderate	N/A	Moderate	Y	N	N/A		
291	201	ST158468	330377	118834	98.97	Negligible	N/A	Negligible	Y	N/A	N/A		
365	318	ST41177	326983	123867	99.41	Negligible	N/A	Negligible	Y	N/A	N/A		
286	183	ST208537	330159	119186	99.64	Negligible	N/A	Negligible	Y	N/A	N/A		

ID No	Building Description	Date of Inspection	External Inspection Result	Internal Inspection Description	Date Internal Inspection Undertaken	Results	Hibernation Potential	Date of Hibernation survey	Results of Hibernation Survey	Number of surveyors required for emergence survey
146	Small outbuilding - since been demolished	N/A	N/A	N/A	N/A	N/A	N/A			
274	Negligible building, no description.									
132	Residential buildings. last 50 years , 2 storey, stone work and mortar in good condition. L shaped with pitched roof, conservatory extension. new roof last 10 years	10/09/2019	A- Gaps under roof tiles/loose, 3cm, 7m heigh W, Low. B- Cavity in wall, 2cm, 10m high, W, Low. C- Access to soffit box, 4cm, 6m high, Moderate, D-Gaps under roof tiles/loose, 3cm, 8m high, Moderate. E-Gaps under roof tiles/loose, 3cm,2m high, N, Moderate. F- Cavity in wall, 3cm, 2m, N, Moderate. G- Gap between roof & wall, 6cm, 9m heigh, NW, High. H- Gap between roof & wall, 3cm, 9m, NW, Low	No access previously granted	N/A	N/A				4
359										
224	Wooden shed in good condition 5-10 years old. Wooden panel wall, corrugated bitumen roof with window skylight	02/02/2017	A- gaps along entire edge of roof, corrugated roof and wooden boards, 7cm, 2.5m, E, clear drop zone, low. B- Gap at gable end between boards, 8cm, 3m, N, clear drop zone, low potential.				N			
231					Building is a bridge - has been added to bridge summary spreadsheet		Y			
245	Workshop with timber cladded walls , breeze block, built in approx. last 20 years. Windows are well sealed and in good condition with no gaps.	10/09/2019	A- Cavity in wall, 4cm, 1m heigh, NE, Moderate. B- Gap between wall and roof, 1m high, NE, Moderate. C- Gaps under roof tiles/felt, 3cm, 1m high, NW, Moderate	No access previously granted	N/A	N/A	N			2
129	Garage, stone walls and tiled roof. Built in the 1980s. Very good condition, with soffits but no chimneys	09/02/2017	A- Gaps under tiles/felt, 10x5cm (x30), 2-4m heigh, High. B- Narrow slit, 30x5cm, 4m heigh, N, High	No internal assessment undertaken	N/A	N/A	N			4
80	Barn with wooden walls and tiled roof. Built in the 1980s Good condition, with soffits but no chimneys.	14/02/2017	Loose tiles all over building, size 10x5cm x 30, height 2 to 4m, high potential features.	Only the centre of the roof has flooring, which was not possible to access due to being used as a storage area for boxes. The roof is in good condition and no access for bats was visible. However, two of the barn doors have gaps above them which are wide enough for bats to crawl through and then fly up to cavities inside, such as the inner and outer panelling of the SW wall and between roofing felt and sarking boards, where some of the sarking is missing. Only two droppings were found and it is likely that the roof tiles themselves are mainly used for roosting in, instead of the bats finding their way inside the building.	27/08/2019	Likely pipistrelle species.	N	N/A	N/A	2
238	Converted single storey building with pebble dash walls, currently being used as a commercial office.	06/03/2017	A- Access under cladding (old blackbird nest), 3x10cm, 2m heigh, N, Moderate. B- Access under cladding, 3x5m, 2m heigh, N, Low. C- Gaps under roof tiles, 3x5cm,3m heigh, W, Low.	No internal assessment undertaken	N/A	N/A	N			
306	Building built within the last 30 years with stone walls, tiled roof and eaves in poor condition with multiple access points into building and the building has a plastered extension and conservatory.	08/05/2019	B1a) gaps under roof/tiles/loose, size of feature 3cm, height of feature 2cm facing south west, moderate roosting feature.	N/A	N/A	N/A	Y			4
228	Chicken barn. Approximately 1980s. Good condition with very little damage.	17/07/2018	A - Gaps under corrugated roof along entire stretch, with wooden boards as a lining, which bats could rest on. 100cm+, 2m both sides, Moderate	No internal assessment undertaken	N/A	N/A	N			
144	Negligible building, no description.									
138										
287	Negligible building, no description.									
246	Workshop with timber cladded walls , breeze block, built in approx. last 20 years.	10/09/2019	A- Cavity in wall roof membrane , multiple entry points, chicken wire), 1m high, Moderate	No access previously granted	N/A	N/A	N			2
362										
58	Industrial warehouse, single skimmed metal clad.	08/02/2017	A- roof edge gap, along all edges, 5-8m heigh, Moderate. B- Gap between asbestos, 10cm, 5-8m, NE & SW, Moderate	No internal assessment undertaken	N/A	N/A	N			
322	Negligible building, no description.									
358										
292	Negligible building, no description.									
82	Stone residential building.	12/04/2017	F001a) Gaps under roof tiles / felt, size 1-4cm, height 2-4m facing east, high potential feature. F001b) Gaps under roof tiles / felt, size 1-4cm, height 2-4m facing north, moderate potential feature. F001c) Gaps under roof tiles / felt, size 1-4cm, height 2-4m facing south, moderate potential feature	Lots of droppings present throughout the roof void, including many fresh droppings, with small piles present near both gable ends of the building	22/08/2019	Likely long eared bat.	Y	Not undertaken due to the COVID-19 Pandemic. Survey required 2021/2022	N/A	2
326	Negligible building, no description.									
298	Negligible building, no description.									
43	Building no longer exists.	30/08/2017	N/A	N/A	N/A	N/A	N/A			N/A
297	Negligible building, no description.									
285	Negligible building, no description.									
71	Old shed with lots of loose tiles and entry points, surrounded by grassland and trees	22/05/2019	192a) Gaps under roof tiles, size 5cm, high potential feature. 192b) Gap between roof and wall, size 6cm, moderate potential feature.	The wall of the building has collapsed making a thorough investigation unsafe. In addition, there are a lot of objects stored inside, making it difficult to inspect. No evidence of bats were found in the areas that we were able to access.	22/05/2019	Nothing identified.	N	N/A	N/A	2
85	Large courtyard surrounded by stone buildings, house and external buildings. Hollow loft space above arched stone entrance into courtyard- good bat potential. Open double garage in courtyard, a wooden structure with a felt and slate roof with negligible potential. Slated wood on walls of courtyard, potential spaces under wood.	06/04/2017	F001a) Slated wood on walls of courtyard, potential spaces under wood, High.	No access for internal inspection.	N/A	N/A	N			8
278	Negligible building, no description.									
281	Negligible building, no description.									
279	Negligible building, no description.									
226	Industrial offices and warehouse building, flat roof extension but pitched main body of building.	09/02/2017	A- loose flashing around flat roof, 3cm, 4m, NE, clear drop zone, low. B- gaps under corrugated metal walls, 20cmx5cm round all edges, 10m, E, clear drop zone, low. C- gaps and missing mortar in walls around bricks, 10cmx3cm with many gaps, 9m, S, clear drop zone, moderate potential. D- gaps between metalwork which may lead to cavity, 5x7cm, 9m, W, clear drop zone, moderate potential.	No internal assessment undertaken	N/A	N/A	N			
357	Negligible building, no description.									
180	Residential building - brick built with pebble dash two storey building. Good condition with thick walls, post 2000 construction.	06/03/2017	A- gaps under cladding, 2x10cm, 3.5m, E, clear drop zone, negligible. B- gaps under tiles, 3x4cm, 2m, N, clear drop zone, low. gaps under roof tiles/ felt, 3cm, 4.5m, N, clear drop zone, low potential.	No internal assessment undertaken	N/A	N/A	N			
399	Semi detached modern garage with plastered walls in good condition and roman roof tiles with missing insultation within one tile. All other tiles had their insulation intact and no gaps were observed under the facia board.	08/05/2019	B2a) gaps under the roof/loose tiles, size of feature is 1cm, height of feature is 2m facing west, moderate roosting potential. B2b) Missing mortar between tile and wall. Size of feature is 1cm, height of feature is 3m facing south-west. High potential feature. B2c) gap under ridge tile, size of feature 2cm, heigh of feature 3cm facing north, high potential feature.	N/A	N/A	N/A	N			4
237	Double garage with two metal doors used to store car and for other storage. Brick garage building with cement rendering on walls with two sections; one with a pitched roof with slate tiles and a soffit box on the front/east and the other with a flat roof covered in roofing felt and some fascia boarding on the west.	22/02/2017	A- gaps under roof tiles/ felt, 2cm, 2.5m heigh, S, Moderate	No internal assessment undertaken	N/A	N/A	N			
291	Negligible building, no description.									
365	Negligible building, no description.									
286	Negligible building, no description.									

ID No	1st survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	2nd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	3rd survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity	4th survey date	Roost present?	Summary of weather conditions	Sunset/sunrise start/finish	Summary of bat activity
146																				
274																				
132	No access	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
359																				
224																-	-	-	-	-
231																-	-	-	-	-
245	No access, surveys in 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
129	22/06/2017	Y	Temp: 16C Cloud cover: 8 Wind: 3 Rain: 0	Sunrise: 04:58 Start: 03:00 Finish 05:13	Brief re-entries followed by emergences of two common pipistrelle bats. Commuting and foraging common pipistrelles with	20/07/2017	N	Temp: 16C Cloud cover: 3 Wind: 4 Rain: 0	Sunset: 23:15 Start: 20:45 Finish 23:15	Commuting and foraging common pipistrelles. Noctules myotis species. and brown long-eared bats also	11/10/2017	Y	Temp: 14C Cloud cover: 6 Wind: 3 Rain: 1	Sunset: 18:29 Start: 18:09 Finish 20:29	Emergence of a single unidentified pipistrelle species bat from a tile near the apex of the roof. A moderate to high level of bat activity					
80	01/06/2017	N	Temp: 17C Cloud cover: 3 Wind: 2 Rain: 0	Sunset: 21:17 Start: 21:00 Finish 23:17	Foraging noctules and common pipistrelles recorded.	20/09/2017	Y	Temp: 14C Cloud cover: 8 Wind: 4 Rain: 1	Sunset: 19:16 Start: 18:46 Finish 21:16	Emergence of 1 common pipistrelle rom under a tile. Myotis sp. common and soprano pipistrelles identified commuting and foraging.	28.09.2017	N	Temp: 12C Cloud cover: 1 Wind: 1 Rain: 0	Sunrise: 07:08 Start: 05:07 Finish 07:23	Commuting serotines myotis species common and soprano pipistrelle bats.	-	-	-	-	-
238																-	-	-	-	-
306	21/05/2019	N	Temp: 16C Cloud cover: 2 Wind: 2 Rain: 0	Sunset: 21:02 Start: 20:32 Finish 23:02	Common and soprano pipistrelle and noctule heard	13/06/2019	N	Temp: 11C Cloud cover: 8 Wind: 0 Rain: 2	Sunrise: 04:47 Start: 02:55 Finish 05:00	No bats recorded due to rain. Survey repeat needed	18/07/2019	Y	Temp: 20C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:02 Start: 20:32 Finish 23:02	Common pipistrelle confirmed emerging from ridge tile. Possible 2 other pipistrelle spp. as well from same location. Also heard noctule and serotine					
228																-	-	-	-	-
144																				
138																				
287																				
246	No access	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
362																				
58																				
322																				
358																				
292																				
82	31.05.2017	N	Temp: 15C Cloud cover: 3 Wind: 4 Rain: 0	Sunset: 21:16 Start: 20:50 Finish 23:16	Commuting noctule and common and soprano pipistrelles identified.	02/08/2017	N	Temp: 16C Cloud cover: 7 Wind: 6 Rain: 1	Sunrise: 05:38 Start: 03:38 Finish 05:54	Commuting serotine and common pipistrelle sp. identified. Nyctalus sp. also recorded.	18/09/2017	Y	Temp: 18C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 19:19 Start: 18:49 Finish 21:19	Emergence of soprano pipistrelle from apex of gable end 8m high. Moderate activity from common and soprano pipistrelles and myotis species also recorded. along with Nyctalus sp.	-	-	-	-	-
326																				
298																				
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
297																				
285																				
71	05/06/2019	Y	Temp: 11C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:21 Start: 20:51 Finish 23:21	Common pipistrelle emerged from between roof and wall. Common pipistrelle and noctule calls	25/07/2019	N	Temp: 16C Cloud cover: 0 Wind: 1 Rain: 0	Sunrise: 05:28 Start: 03:28 Finish 05:43	Common pipistrelle and noctule calls	13/08/2019	Y	Temp: 17C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 20:36 Start: 20:06 Finish 22:36	Common pipistrelle emerged. Common pipistrelle and Nyctalus species calls	-	-	-	-	-
85	17/07/2017	y	Temp: 20C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:19 Start: 20:50 Finish 23:20	Possible emergence of common pipistrelle flying south east. Common and soprano pipistrelle noctule and Myotis species calls	29/08/2017	Y	Temp: 15C Cloud cover: 6 Wind: 2 Rain: 0	Sunset: 20:04 Start: 19:49 Finish 22:04	3 common pipistrelle bats emerged flying south and 2 emerged from apex of south western gable flying east. Common pipistrelle and noctule calls	20/09/2017	Y	Temp: 11C Cloud cover: 8 Wind: 1 Rain: 0	Sunset: 19:15 Start: 20:45 Finish 21:15	2 unknown silent bats emerged from south west apex of building and flew south east. Another emerged slightly to the right of the previous emergences at the top of the wall. Common and soprano pipistrelle Myotis species and serotine calls	-	-	-	-	-
278																				
281																				
279																				
226																-	-	-	-	-
357																				
180																-	-	-	-	-
399	21/05/2019	N	Temp: 16C Cloud cover: 2 Wind: 2 Rain: 0	Sunset: 21:02 Start: 20:32 Finish 23:02	Common and soprano pipistrelle and noctule heard	13/06/2019	N	Temp: 11C Cloud cover: 8 Wind: 0 Rain: 2	Sunrise: 04:47 Start: 02:55 Finish 05:00	No bats recorded due to rain. Survey repeat needed	18/07/2019	N	Temp: 20C Cloud cover: 3 Wind: 1 Rain: 0	Sunset: 21:02 Start: 20:32 Finish 23:02	Common pipistrelle noctule and serotine heard					
237																-	-	-	-	-
291																				
365																				
286																				

Appendix I - Results of bridge and culvert surveys

Land Parcel Number	X	Y	Bridge Number	Bridge Name	Roost Potential After Assessment	Hibernation Potential	Within 100m	Confirmed/High	Moderate and within 20m	Low within Scheme foot print	Further survey?	Notes	1st Survey Date	1st Survey Result - Roost Present Yes/No/Possible	Notes	2nd Survey Date	2nd Survey Result - Roost Present Yes/No/Possible	Notes	3rd Survey Date	3rd Survey Result - Roost Present Yes/No/Possible	Notes
ST53161	329717	119292	Br1	Fivehead River Underbridge	Moderate	No	Y	N/A	Y	N/A	Yes	No roosts recorded	09.05.2018	No	None	02.07.2018	No	None	N/A	N/A	N/A
U00027	328155	122510	Br2	Bowerman Bridge 1	Low	No	Y	N/A	N/A	N	No - not within scheme footprint	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U00027	328120	122534	Br3	Bowerman Bridge 2	Negligible	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ST307472	329254	120217	Br4	Gore Langton Underpass	High	Yes	Y	Y	N/A	N/A	Yes	There was multiple access points between each joint to access an internal space behind the concreate slabs. No evidence of bats, mouse droppings present	Further surveys in 2021 needed								
-	325476	124751	Br5	M5 Bridge	Negligible	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U00025	327859	123128	Br114	-	Moderate	Yes	Y	N/A	N	N/A	Yes	-	Further surveys in 2021 needed								