Gravity

Smart Campus

Gravity LDO Environmental Statement

Volume 2 – Appendices

Appendix 12.2

Bat Activity Survey Report

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1. INTRODUCTION

1.1. Background

1.1.1. Ecology Solutions Ltd was commissioned on behalf of This Is Gravity in March 2020 to undertake a comprehensive programme of ecology survey work for This is Gravity Ltd (TIGL), at the site known as Gravity, at Puriton, near Bridgwater, Somerset; hereafter referred to as the 'Site'.

1.1.2. Survey work undertaken at the Site includes a range of habitat and species-specific surveys covering the 2020 survey period. This report has been produced in order to detail the methodologies and findings of the habitat survey work undertaken.

1.1.3. It should also be recognised that the Site has already been subject to previous extensive ecological survey and assessment work as part of the decommissioning and remediation works which have planning consent, as well as to inform the extant hybrid planning permission for the Site redevelopment and Natural England licence applications.

1.1.4. The majority of the Site has been the subject of numerous ecological surveys since 2008. EnvironPlus International Limited (EPI) undertook an initial suite of surveys in 2008, with Ecology Solutions having undertaken regular update work since 2011. The results of the survey works are detailed in the Environmental Statement (2013) and ES Addendum (2017) produced by Ecology Solutions in support of the extant planning permission.

1.1.5. The majority of the site and the previous surveys on it, did not include the 'full' Site, therefore as well as updating previous surveys, surveys of the additional land to be contained in the LDO were included.

1.1.6. The extensive historic survey information available has been used to inform the update survey work and is referenced, where necessary, within this report.

1.2. Site Characteristics

1.2.1. The main component of the Site is located to the north east of Puriton. In addition, the Site includes a railway spur to the north west, a road connection from Junction 23 of the M5 motorway to the south west of the Site and a reedbed system that connects the Site to the River Huntspill to the north. The Site is within an agricultural setting, and is located between the villages of Puriton (to the west) and Woolavington (to the east).

1.2.2. Broadly, the Site comprises grasslands, woodland, scrub, hedgerows, tall ruderal and ephemeral vegetation along with standing water, reed bed, wet and dry ditches as well as buildings and hardstanding. There are also areas of disturbed / bare ground.

1.3. Bat Activity Survey Report

1.3.1. This document describes the results of bat activity survey work undertaken and provides a broad assessment of the current ecological interest of the Site as a whole, based upon field and desk-based studies.

1.3.2. Potential roosting habitat is also present in the form of Trees and Buildings is discussed with the Bat Roost Survey Report submitted as a separate appendix to the ES Chapter.

1.3.3. The importance of the habitats within the site is evaluated with due consideration given to the guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM) [1].

[1] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester

2. SURVEY METHODOLOGY

2.1 The methodology utilised for the bat survey work can be split into two areas, a desk study and specific faunal survey work. These are discussed in more detail below.

2.2 Desk Study

2.2.1 In order to compile background information on the use of the Site and its immediate surroundings by bats, Ecology Solutions contacted Somerset Ecological Records Centre (SERC). The records received are collated data from a number of sources and provide information on an array of bat species (covering a 3km search radius from the application site).

2.2.2 Information provided by SERC is referred to where relevant.

2.3 Bat Activity Surveys

2.3.1 Evening activity surveys were undertaken to ascertain whether the Site and surrounding area supports any features of potential importance for foraging and commuting bats. A total of seven surveys were undertaken monthly between April 2020 and October 2020.

2.3.2 The evening activity surveys were conducted from sunset to approximately 2 hours after sunset. Surveyors utilised EchoMeter Touch 2 Pro (EMT) bat detectors to aid identification of bats and record data. Surveyors walked transects in order to encompass relevant features of potential value to foraging and commuting bats.

2.3.3 In addition to the activity transects, automated detectors (Wildlife Acoustic Song Meter 4) were also deployed for several consecutive nights following the activity surveys at a strategic location to collect longer term data regarding the use of the Site by foraging and commuting bats. All bat data recorded was subsequently analysed using Kaleidoscope bat sound analysis software.

2.3.4 It should be noted that detectors may experience errors when deployed. Such an occurrence can be caused by a multitude of technical factors including issues with batteries, the internal clock, or the corruption of data. As such, on occasions, it is possible that deployed detectors either fail to record (or only partially record) data, or the data is corrupted and cannot be processed. In order to ensure that such incidents do not significantly impact the robustness of the survey, care has been taken to ensure that should any one detector fail, the survey area will remain adequately covered. In this instance, where detectors have failed for any given survey period, it is considered that the robustness of the wider survey has not been effected.

3. SURVEY RESULTS

3.4 The Site is noted to contain habitats suitable for bats foraging and commuting and is considered to be of moderate suitability for this species group. Potential roosting habitat is also present in the form of Trees and Buildings is discussed with the Bat Roost Survey Report submitted as a separate appendix to the ES Chapter.

3.5 **Previous surveys.** A suite of surveys was undertaken by EPI in 2009, including activity surveys. Furthermore, Ecology Solutions undertook additional update survey work in 2011 and 2017. The findings are summarised below.

3.6 Activity surveys undertaken in 2009 and 2011 recorded 5 species of bat including; Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pymaeus*, Brown Long-eared, Noctule *Nyctalus noctula* and a *Myotis* species. The majority of this activity was associated with Pipistrelle species.

3.7 Bat activity surveys undertaken in 2017 recorded a broadly comparable number of species. The majority of registrations are again attributed to Soprano Pipistrelle and Common Pipistrelle with Brown Long-eared Bat, Noctule and Serotine *Eptesicus serotinus* also recorded in lesser numbers. In addition, several registrations for rarer species including; Greater Horseshoe Bat *Rhinolophus ferrumequinum*, Lesser Horseshoe *Rhinolophus hipposideros* and Barbastelle *Barbastella barbastellus* were recorded. Registrations for these species were levels indicative use of the Site by single / small numbers bats on an occasional basis

3.8 The majority of the bat activity was associated with the eastern boundary, with higher levels of activity in the south east close to woodland and also with woodland edge / scrub habitat in the west and north west. In addition, localised activity was recorded along the southern boundary and in the centre of the Site.

3.9 Barbastelle and Lesser Horseshoe registrations (both in low numbers) were recorded in the south east and along the southern boundary. Greater Horseshoe registrations were recorded in the west and north west.

3.10 **Update surveys.** Bat surveys (both activity and automated surveys) have been conducted across the active season in 2020. The results of the surveys are presented below in chronological order.

3.11 Five bat activity transect surveys were undertaken at the Site during 2020, in line with methodology outlined in section 2 above. Table 1 below outlines the weather conditions during each survey visit.

Date	Weather Conditions
28.05.2020	20ºC, 10% Cloud Cover, Dry, Moderate Winds
25.06.2020	22ºC, 10% Cloud Cover, Dry, Light Breeze
27.07.2020	17ºC, 80% Cloud Cover, Dry, Light Breeze
03.09.2020	16ºC, 10% Cloud Cover, Dry, Moderate Breeze
30.09.2020	14ºC, 70% Cloud Cover, Dry, Light Breeze

Table 1: Weather conditions during each bat activity survey.

Automated Detector Survey 27th April - 12th May

3.12 Automated detectors were deployed throughout the Site at locations **D1**, **D2**, **D3** and **D4** (see Plan ECO1) and set to record for 16 consecutive nights from April 27th to May 12th. The results from each night are detailed below in Tables 1 to 3 (Appendix 12.2A) for each of the detector locations. The detector placed at location **D4** experienced technical difficulties resulting in no recordings being made for this survey period. However, given the coverage provided by the other detectors deployed, this is not considered have significantly impacted the robustness of the survey (see paragraph 2.3.12 for further details).

3.13 The automated detector survey undertaken between 27th April and 12th May showed mostly consistent bat activity within the Site, although some nights recorded relatively higher registrations than others. Bat activity was noted to be reduced towards the end of the survey period in all three locations.

3.14 The detector placed at **D3** recorded the highest amount of bat registrations during this survey period with relatively high numbers of *Nyctalus* and Common Pipistrelle registrations.

3.15 The detector placed at **D1** recorded the lowest amount of bat registrations during the survey period with the highest proportion of registrations associated with *Nyctalus* species although the majority of these registrations were recorded on just two nights (27th April and 3rd May)

3.16 The detector placed at **D3** also recorded the highest total registrations of notable species, namely Barbastelle, Greater Horseshoe and Lesser Horseshoe (54 total registrations) as well as the highest total counts of Barbastelle (2 registrations), Greater Horseshoe (45 registrations) and Lesser Horseshoe (7 registrations).

28th May Activity Survey

3.17 The activity survey undertaken on May 28th recorded at total of 557 registrations, most of which were related to Common Pipistrelle (231 registrations). Other species recorded during this survey were, unidentified *Nyctalus* species (120 registrations), Soprano Pipistrelle (117 registrations), Nathusius' Pipistrelle *Pipistrellus nathusii*, (37 registrations), Serotine (35 registrations), Brown Long-eared Bat (7 registrations), Barbastelle (6

registrations), unidentified *Myotis* species (3 registrations) and Lesser Horseshoe Bat (1 registration).

3.18 The majority of the activity of common and widespread species was associated with southern and south-eastern areas of the Site.

3.19 Nathusius' Pipistrelle is a species not previously recorded during 2017 surveys. The majority of Nathusius' Pipistrelle activity during this survey was associated with the north-eastern and south-eastern areas of the Site.

3.20 The Lesser Horseshoe and Barbastelle registrations were recorded in south and south-eastern areas of the Site.

Automated Detector Survey 28th May - 8th June

3.21 Following the activity survey, automated detectors were deployed throughout the site at locations **D1, D2, D3, D4, D5, D6, D7, D8, D9 and D10** (see Plan ECO1) and set to record for 12 consecutive nights from 28th May to 8th June. The results from each night are detailed below in Tables 4 to 12 (Appendix 12.2A) for each of the detector locations. The detector located at **D8** experienced technical difficulties, resulting in no recordings being made during this survey period. Again, given the coverage provided by the other detectors deployed, this is not considered have significantly impacted the robustness of the survey (see paragraph 2.3.12 for further details).

3.22 The automated detector survey undertaken between 28th May and 8th June showed mostly consistent and frequent bat activity within the Site, although some nights recorded relatively higher registrations than others.

3.23 The detectors placed at **D1** and **D4** recorded the highest amount of bat registrations during this survey period with relatively high numbers of Common Pipistrelle registrations at **D1** and relatively high numbers of Common Pipistrelle, Soprano Pipistrelle and Nathusius' Pipistrelle at **D4**.

3.24 The detectors placed at **D6, D8** and **D10** recorded the lowest amount of bat registrations during the survey period with the highest proportion of registrations associated with Common Pipistrelle in all three locations.

3.25 The detector placed at **D5** recorded the highest total registrations of notable species, namely Barbastelle, Greater Horseshoe and Lesser Horseshoe (41 registrations) as well as the highest counts of Lesser Horseshoe (14 registrations). **D8** returned the highest amount of Greater Horseshoe registrations despite recording a relatively low number of registrations (12 registrations), as noted above. The detector placed at **D6** recorded a high number of registrations associated with notable species (40 registrations) and the highest total registrations of Barbastelle (28 registrations). As with **D8,** the detector placed at **D6** recorded a relatively low number of registrations.

25th June Activity Survey

3.26 The activity survey undertaken on June 25th recorded a total of 378 registrations, most of which were attributed to Common Pipistrelle (172 registrations). Other species recorded during this survey were, Soprano Pipistrelle (113 registrations), unidentified *Nyctalus* species (52 registrations), Serotine (17 registrations), Brown Long-eared Bat (10 registrations), unidentified *Myotis* species (9 registrations), Nathusius' Pipistrelle (5 registrations) and Greater Horseshoe (1 registration).

3.27 The majority of the activity of common and widespread species during this survey was more widespread than in the survey undertaken on the 28th May, although still concentrated along the southern and south-eastern boundaries.

3.28 Nathusius' Pipistrelle was recorded three times throughout the Site in north-western, central and south-eastern areas.

3.29 A single Greater Horseshoe Bat registration was recorded along the south-eastern boundary of the Site.

Automated Detector Survey 25th June - 5th July

3.30 Following the activity survey, automated detectors were deployed throughout the Site at locations **D1, D2, D3, D4, D5, D6, D7, D8, D9 and D10** (see Plan ECO1) and set to record for 11 consecutive nights from June 25th to July 5th. The results from each night are detailed below in Tables 13 to 21 (Appendix 12.2A) for each of the detector locations. The detector located at **D8** experienced technical difficulties, resulting in no recordings being made during this survey period. Again, given the coverage provided by the other detectors deployed, this is not considered have significantly impacted the robustness of the survey (see paragraph 2.3.12 for further details).

3.31 The automated detector survey undertaken between 25th June and 5th July showed mostly consistent and frequent bat activity within the Site, although some nights recorded relatively higher registrations than others.

3.32 The detectors placed at **D2** and **D9** recorded the highest amount of bat registrations during this survey period with relatively high numbers of Common Pipistrelle and Soprano Pipistrelle registrations at both locations.

3.33 The detectors placed at **D1, D4** and **D6** recorded the lowest amount of bat registrations during the survey period, with the highest proportion of registrations associated with Common Pipistrelle and Soprano Pipistrelle at location **D4** and **D6** and *Nyctalus* species at **D1**.

3.34 The detector placed at **D3** recorded the highest total registrations of notable species, namely Barbastelle, Greater Horseshoe and Lesser Horseshoe (55 registrations) as well as the highest counts of Lesser Horseshoe (9 registrations) and Barbastelle (32 registrations). **D9** returned the highest amount of Greater Horseshoe registrations (18 registrations).

3.35 When comparing this survey to previous surveys in April and May, it can be seen that there is an obvious decline in notable species registrations at a number of the detector locations.

27th July Activity Survey

3.36 The activity survey undertaken on July 27th recorded a total of 485 registrations, most of which are once again related to Common Pipistrelle (260 registrations). Other species recorded during this survey were Soprano Pipistrelle (108 registrations), unidentified *Nyctalus* species (51 registrations), Serotine (22 registrations), unidentified *Myotis* species (22 registrations), Brown Long-eared Bat (10 registrations), Barbastelle (4 registrations), Nathusius' Pipistrelle (4 registrations) and Greater Horseshoe (4 registrations).

3.37 The majority of the activity of common and widespread species during this survey was concentrated along the southern and eastern boundaries of the site.

3.38 A small number of registrations of the previously unrecorded Nathusius' Pipistrelle were recorded in the south of the Site.

3.39 The small numbers of Greater Horseshoe Bat were recorded along the southern and northern boundaries of the Site and the Barbastelle registrations were recorded throughout the Site.

Automated Detector Survey 27th July - 9th August

3.40 Following the activity survey, automated detectors were deployed throughout the Site at locations **D1, D2, D3, D4, D5, D6, D7, D8, D9 and D10** (see Plan ECO1) and set to record for 14 consecutive nights from July 27th to August 9th. The results from each night are detailed below in Tables 22 to 30 (Appendix 12.2A) for each of the detector locations. The detector located at **D6** experienced technical difficulties, resulting in no recordings being made during this survey period. Again, given the coverage provided by the other detectors deployed, this is not considered have significantly impacted the robustness of the survey (see paragraph 2.3.12 for further details).

3.41 The automated detector survey undertaken between 27th July and 9th August returned a mixed set of results with some detector locations recording consistent and frequent bat activity within the Site, although some nights recorded relatively higher registrations than others. And other detector locations only recording bat registrations during a small number of nights within the survey period.

3.42 The detector placed at **D2** recorded the highest amount of bat registrations during this survey period with the vast majority of registrations associated with Common Pipistrelle and Soprano Pipistrelle.

3.43 The detectors placed at **D1** and **D5** recorded the lowest amount of bat registrations during the survey period with the highest proportion of registrations associated with Common Pipistrelle, Soprano Pipistrelle and *Nyctalus* species at both locations. It should be noted that the detector placed at **D5** recorded registrations on only two of the fourteen nights of the survey period.

3.44 The detector placed at **D9** recorded the highest total registrations of notable species, namely Barbastelle, Greater Horseshoe and Lesser Horseshoe (90 registrations) as well as the highest counts of Lesser Horseshoe (44 registrations) and Barbastelle (38 registrations) registrations. **D4** returned the highest amount of Greater Horseshoe (28 registrations) registrations.

3.45 This survey period continued the trend of low amounts of activity recorded by the detector placed at **D1** seen in the 25th June to 5th July survey period**.** The detector placed at this location recorded just 583 registrations across the 14 night survey period.

3.46 <u>3rd September Activity Survey</u>

3.47 The activity survey undertaken on September 3rd recorded a total of 377 registrations, Common Pipistrelle was recorded the most (168 registrations). Other species recorded during this survey were Soprano Pipistrelle (108 registrations) unidentified *Nyctalus* species (65 registrations), unidentified *Myotis* species (17 registrations), Brown Long-eared Bat (8 registrations), Serotine (6 registrations), Barbastelle (3 registrations), Nathusius' Pipistrelle (1 registration) and Greater Horseshoe (1 registration).

3.48 The majority of activity of common and widespread species during this survey was concentrated along the southern and south-eastern areas with northern and central areas of the site seeing minimal activity.

3.49 The low number of registrations of Barbastelle were recorded in the south-east of the Site. The registration of Greater Horseshoe was recorded in the south of the Site.

<u>Automated Detector Survey 3rd September - 7th September</u>

3.50 Following the activity survey, automated detectors were deployed throughout the Site at locations **D1, D2, D3, D4, D5, D6, D7, D8, D9 and D10** (see Plan ECO1) and set to record for 5 consecutive nights from September 3rd to September 7th. The results from each night are detailed below in Tables 31 to 39 (Appendix 12.2A) for each of the detector locations. The detector located at **D4** experienced technical difficulties, resulting in no recordings being made during this survey period. Again, given the coverage provided by the other detectors deployed, this is not considered have significantly impacted the robustness of the survey (see paragraph 2.3.12 for further details).

3.51 The automated detector survey undertaken between 3rd September and 7th September again returned a mixed set of results with some detector locations recording consistent and frequent bat activity within the Site, although some nights recorded relatively higher registrations than others. And other detector locations only recording bat registrations during a small number of the nights within the survey period.

3.52 The detector placed at **D7** recorded the highest amount of bat registrations during this survey period with the vast majority of registrations associated with Common Pipistrelle and Soprano Pipistrelle. However, there was also a relatively high number of *Plecotus* species registrations recorded at **D7** compared to in other locations.

3.53 The detectors placed at **D1, D2, D6** and **D10** recorded the lowest amount of bat registrations during the survey period with the highest proportion of registrations associated with Common Pipistrelle and *Nyctalus* species at **D1**, Common Pipistrelle at **D2** and Common Pipistrelle and Soprano Pipistrelle at both **D6** and **D10**.

3.54 The detectors placed at **D2**, **D6** and **D10** all recorded bat registrations on only some of the five nights of the survey period. With **D6** and **D10** recording registrations on only two nights and **D2** recording registrations on just three nights.

3.55 The detector placed at **D8** recorded the highest total registrations of notable species, namely Barbastelle, Greater Horseshoe and Lesser Horseshoe (27 registrations) as well as the highest counts of Greater Horseshoe registrations (15 registrations). **D1** returned the highest amount of Lesser Horseshoe registrations although it should be noted that this was a relatively low total of 4 registrations. **D3** and **D9** recorded the highest amount of Barbastelle registrations (14 registrations) during this survey period.

3.56 The detector placed at **D1** recorded just 214 registrations during this survey period, continuing the trend of low amounts of activity recorded by the detector placed at **D1** seen in both the 25th June to 5th July and 27th July to 9th August survey periods**.**

<u>30th September Activity Survey</u>

3.57 The activity survey undertaken on September 30th recorded a total of 212 registrations, most of which were related to Soprano and Common Pipistrelle (73 and 61 registrations respectively). Other species recorded were unidentified *Nyctalus* species (43 registrations), Brown Long-eared Bat (12 registrations), Serotine (11 registrations), unidentified *Myotis* species (11 registrations) and Greater Horseshoe (1 registration).

3.58 The majority of the activity of common and widespread species was once again concentrated in the south and south-eastern areas of the Site. With central and northern areas of the Site seeing little activity.

3.59 The Greater Horseshoe registration was recorded in the south of the Site.

Automated Detector Survey 30th September - 12th October

3.60 Following the activity survey, automated detectors were deployed throughout the Site at locations **D1, D2, D3, D4, D5, D6, D7, D8, D9** and **D10** (see Plan ECO1) and set to record for 13 consecutive nights from September 30th to October 12th. The results from each night are detailed below in Tables 40 to 49 (Appendix 12.2A) for each of the detector locations.

3.61 The automated detector survey undertaken between 30th September and 12th October again returned a mixed set of results with some detector locations recording consistent and frequent bat activity within the Site, although some nights recorded relatively higher registrations than others. Whilst other detector locations only recording limited bat registrations during a small number of the nights within the survey period.

3.62 The detector placed at **D8** recorded the highest amount of bat registrations during this survey period with the vast majority of registrations associated with Common Pipistrelle and Soprano Pipistrelle.

3.63 The detectors placed at **D1, D2** and **D5** recorded the lowest amount of bat registrations during the survey period with the highest proportion of registrations associated with *Nyctalus* species at **D1**, *Myotis* species at **D2**, and Common Pipistrelle at **D5**.

3.64 The detectors placed at **D1**, **D2** and **D5** all recorded bat registrations on only a small number of the thirteen nights of the survey period, with **D1** and **D2** recording registrations on only four and three nights respectively and **D5** recording registrations on six nights.

3.65 The detector placed at **D6** recorded the highest total registrations of notable species, namely Barbastelle, Greater Horseshoe and Lesser Horseshoe (142 registrations) as well as the highest count of Greater Horseshoe registrations (54 registrations). **D9** returned the highest amount of Lesser Horseshoe registrations (19 registrations) and **D10** recorded the highest amounts of Barbastelle (118 registrations) during this survey period, despite recording just 849 and 638 total bat registrations respectively.

3.66 The 142 registrations of notable species recorded at **D6** during this survey period is the highest total number of registrations recorded at any one location during surveys undertaken in 2020.

3.67 This survey period once again continued the trend of low amounts of activity recorded by the detector placed at **D1** seen in the three previous survey periods.

21st October Activity Survey

3.68 The activity survey undertaken on October 21st recorded a total of 461 registrations, most of which were related to Common Pipistrelle (262 registrations). Other species recorded were Soprano Pipistrelle (82 registrations), unidentified *Nyctalus* species (56 registrations), Serotine (46 registrations), unidentified *Myotis* species (7 registrations), Barbastelle (4 registrations), Nathusius' Pipistrelle (2 registrations) and Greater Horseshoe (2 registration).

3.69 The majority of the activity of common and widespread species was once again concentrated in the south and south-eastern areas of the Site. With central and northern areas of the Site seeing little activity.

3.70 The Greater Horseshoe and Barbastelle registrations were all recorded in the south and south-east of the Site.

Automated Detector Survey 21st October - 4th November

3.71 Following the activity survey, automated detectors were deployed throughout the Site at locations **D1, D2, D3, D4, D5, D6, D7, D8, D9** and **D10** (see Plan ECO1) and set to record for 15 consecutive nights from October 21st to November 4th. The results from each night are detailed below in Tables 50 to 59 (Appendix 12.2A) for each of the detector locations.

3.72 The automated detector survey undertaken between 21st October and 4th November once again returned a mixed set of results with some detector locations recording consistent and frequent bat activity within the Site, although some nights recorded relatively higher registrations than others. Whilst other detector locations only recorded limited numbers of bat registrations.

3.73 The detector placed at **D5** and **D10** recorded the highest amount of bat registrations during this survey period with the vast majority of registrations associated with Common Pipistrelle and Soprano Pipistrelle at both locations.

3.74 The detectors placed at **D1, D2, D6 and D7** recorded the lowest amount of bat registrations during the survey period with the highest proportion of registrations associated with *Myotis* species at **D1**, Soprano Pipistrelle at **D2**, Common Pipistrelle and *Nyctalus* species at **D6** and Brown Long-eared Bat at **D7**.

3.75 The detectors placed at **D2** and **D9** both recorded bat registrations on only a fraction of the fifteen nights of the survey period, with **D2** recording registrations on only seven nights and **D9** recording registrations on eleven nights.

3.76 The detector placed at **D5** recorded the highest total registrations of notable species, namely Barbastelle, Greater Horseshoe and Lesser Horseshoe (121 registrations) as well as the highest count of Barbastelle registrations (118 registrations). **D8** returned the highest amount of Greater Horseshoe

registrations (45 registrations) and **D9** recorded the highest amounts of Lesser Horseshoe (46 registrations) during this survey period.

Summary of Activity Surveys

3.77 Bat activity surveys undertaken throughout the active period of 2020 show that the vast majority of bat activity within the Site can be attributed to either Common Pipistrelle, Soprano Pipistrelle or *Nyctalus* species. Other species recorded were Serotine, *Myotis* species, Brown Long-eared Bat, Nathusius' Pipistrelle, Barbastelle, Greater Horseshoe Bat and Lesser Horseshoe Bat.

3.78 The activity of both common and widespread species and rarer species such as Barbastelle, Lesser Horseshoe and Greater Horseshoe is seen to be focused in the southern and south-eastern areas of the Site.

3.79 Given the small numbers of Barbastelle, Greater Horseshoe Bat and Lesser Horseshoe Bat registrations it is deemed that the Site is of use by single / small numbers of individual bats on an occasional basis.

Summary of Automated Surveys

3.80 Automated surveys undertaken throughout the active period of 2020 show similar patterns to the activity surveys. The vast majority of registrations recorded can be attributed to either Common Pipistrelle, Soprano Pipistrelle or *Nyctalus* species. No additional bat species were recording during automated surveys that were not recorded during the activity surveys.

3.81 The activity of common and widespread species is well distributed across the Site with no one location showing significantly higher registrations than the others. However, it should be noted that location **D6** consistently recorded lower amounts of registrations compared to other detector locations throughout the survey period and as mentioned above location **D1** also recorded low numbers of registrations in the majority of the survey periods.

3.82 When analysing the activity of notable species during the active period of 2020, it can be seen that on average locations **D1, D2** and **D4** returned the fewest numbers of notable bat registrations, whilst locations **D3**, **D6**, **D9** and **D10** returned the highest numbers.

3.83 Given location **D6's** high number of notable species registrations and low number of total bat registrations across the survey period. It is no surprise that **D6** recorded the highest proportion of notable bat species registrations with nearly 6.5% of the bat registrations recorded at this location associated with a notable species.

3.84 **Background records.** The desk study undertaken with SERC returned several records of bat species from within or immediately adjacent to the Site.

3.85 The records returned include Brown Long-eared Bat (2017) Lesser Horseshoe Bat (2017), Common Pipistrelle (2016), Greater Horseshoe Bat (2017), Barbastelle (2017), Noctule bat (2016) and Soprano Pipistrelle (2016). The nearest recorded roost site is located approximately 0.7km south east of the Site at its closest point recorded in 2018. This record does not identify the species of bat.

4. SUMMARY

3.86 Ecology Solutions Ltd was commissioned on behalf of This Is Gravity in April 2020 to undertake a suite of ecology survey work at the site known as the Gravity Smart Campus, Puriton, Somerset.

3.87 The Site was surveyed were undertaken with regard to best practice guidelines issued by Natural England (2004), the Joint Nature Conservation Committee (2004) and the Bat Conservation Trust (2016).

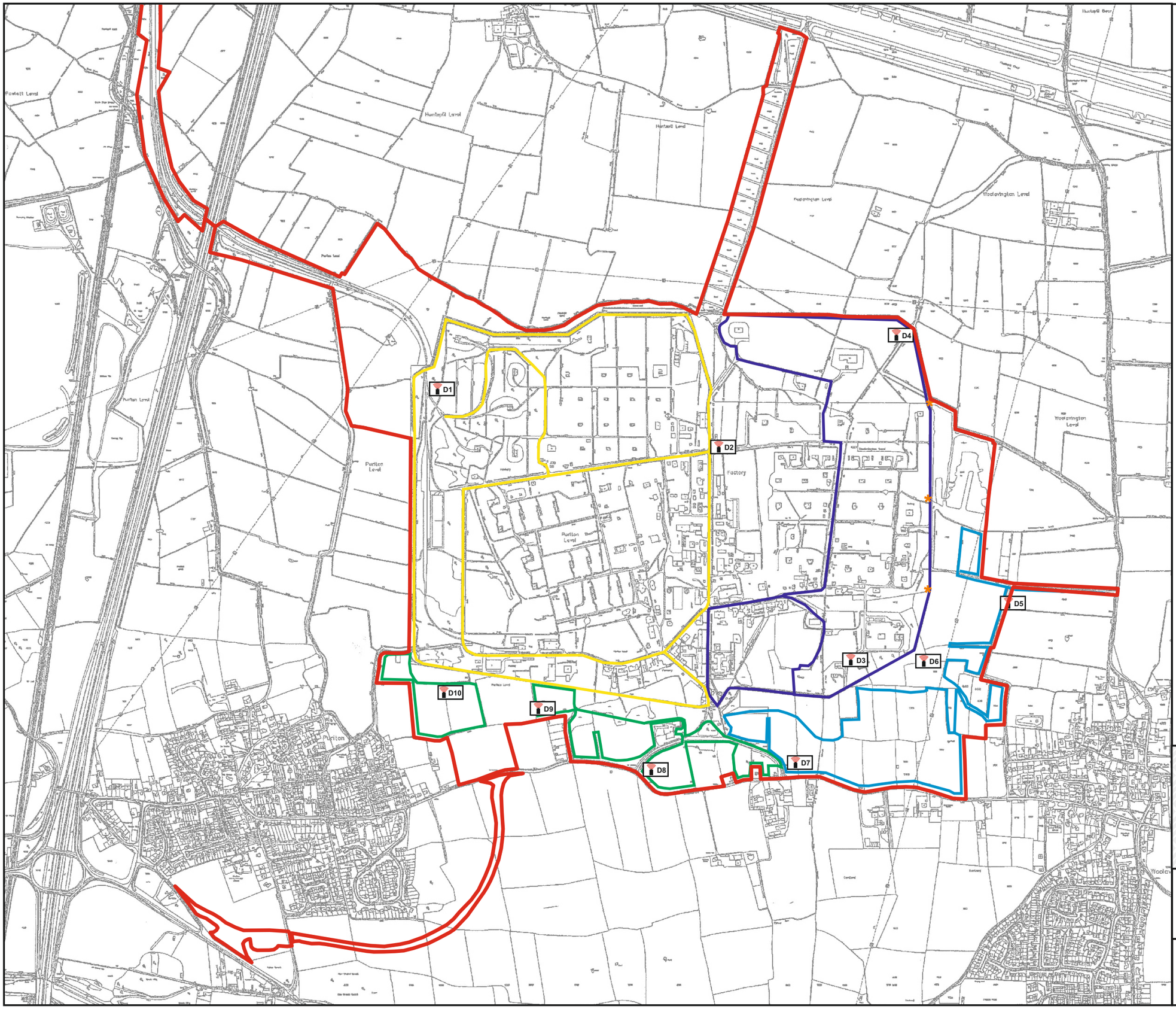
3.88 The results of the survey work undertaken are present within this report and it is considered that an extensive ecological baseline for bats has been established that can fully inform any future assessment / evaluation of the Site in ecological terms.

3.89 The survey work will inform the LDO process and the related Environmental assessment process.

PLANS

PLAN ECO1

Bat Survey Plan



KEY:

- SITE BOUNDARY
- ACTIVITY TRANSECT 1
- ACTIVITY TRANSECT 2
- ACTIVITY TRANSECT 3
- ACTIVITY TRANSECT 4
- D# STATIC DETECTOR LOCATION
- BAT MITIGATION ROOST

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7761: GRAVITY

PLAN ECO1: BAT SURVEY PLAN

Rev: C

Sept 2021

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APPENDICES

APPENDIX 12.2A

Bat Survey Results Tables

Location D1																	
Species	**27/04**	**28/04**	**29/04**	**30/04**	**01/05**	**02/05**	**03/05**	**04/05**	**05/05**	**06/05**	**07/05**	**08/05**	**09/05**	**10/05**	**11/05**	**12/05**	**Total**
Barbastelle	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Serotine	7	0	0	2	1	1	1	0	0	1	2	2	3	0	0	0	20
Myotis sp	4	4	2	6	1	0	0	2	2	1	1	1	1	0	1	0	26
Nyctalus sp	253	7	3	3	1	58	124	16	12	15	16	24	38	1	2	0	573
Nathusius' Pipistrelle	9	1	0	12	1	1	0	4	0	1	0	0	1	0	0	0	30
Common Pipistrelle	30	4	19	107	26	36	21	18	8	5	11	2	10	1	1	0	299
Soprano Pipistrelle	17	1	2	17	3	8	8	29	6	3	10	5	6	3	0	0	118
Brown Long-eared Bat	1	0	0	0	0	0	1	2	0	0	1	0	0	0	0	0	5
Greater Horseshoe	1	0	1	2	1	1	0	0	0	0	0	1	1	0	0	0	8
Lesser Horseshoe	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	322	17	27	149	34	105	155	71	28	26	41	35	61	5	4	0	1081

Table 1: Survey results from Location D1, 27th April to 12th May

Location D2																	
Species	**27/04**	**28/04**	**29/04**	**30/04**	**01/05**	**02/05**	**03/05**	**04/05**	**05/05**	**06/05**	**07/05**	**08/05**	**09/05**	**10/05**	**11/05**	**12/05**	**Total**
Serotine	76	0	0	0	1	17	11	1	1	16	4	13	41	0	0	0	181
Myotis sp	1	0	0	0	6	0	1	0	1	0	0	1	2	0	0	0	12
Nyctalus sp	12	3	0	0	1	9	21	1	3	10	5	7	2	0	0	0	74
Nathusius' Pipistrelle	0	1	0	0	0	1	4	0	4	3	0	2	0	0	0	0	15
Common Pipistrelle	212	20	0	1	3	98	91	59	71	69	33	63	93	0	0	0	813
Soprano Pipistrelle	8	0	0	1	0	6	13	95	10	24	5	12	16	1	1	0	192
Greater Horseshoe	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	5
Total	309	24	0	2	11	131	141	156	90	122	49	98	157	1	1	0	1292

Table 2: Survey results from Location D2, 27th April to 12th May

Location D3																	
Species	**27/04**	**28/04**	**29/04**	**30/04**	**01/05**	**02/05**	**03/05**	**04/05**	**05/05**	**06/05**	**07/05**	**08/05**	**09/05**	**10/05**	**11/05**	**12/05**	**Total**
Barbastelle	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Serotine	14	0	0	3	6	5	3	20	5	5	0	0	0	0	0	0	61
Myotis sp	15	25	18	15	37	24	25	25	18	27	3	0	0	0	0	0	232
Nyctalus sp	247	33	2	2	18	355	186	36	34	75	80	0	0	0	0	0	1068
Nathusius' Pipistrelle	1	1	6	1	0	1	1	6	1	2	0	0	0	0	0	0	20
Common Pipistrelle	24	57	244	275	153	174	69	524	35	49	45	0	0	0	0	0	1649
Soprano Pipistrelle	14	5	7	34	13	40	53	52	12	33	13	0	0	0	0	0	276
Brown Long-eared Bat	5	4	0	3	7	6	3	19	22	7	2	0	0	0	0	0	78
Greater Horseshoe	1	1	0	2	0	2	0	1	0	0	0	0	0	0	0	0	7
Lesser Horseshoe	5	2	12	15	4	2	2	1	1	1	0	0	0	0	0	0	45
Total	326	128	289	350	238	609	342	686	128	199	143	0	0	0	0	0	3438

Table 3: Survey results from Location D3, 27th April to 12th May

Location D1													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	1	0	0	0	0	3	1	1	4	0	1	0	11
Serotine	15	5	7	10	107	108	2	14	2	1	49	44	364
Myotis sp	6	20	2	2	3	2	4	2	0	3	10	5	59
Nyctalus sp	20	16	15	17	27	91	5	11	0	3	5	67	277
Nathusius' Pipistrelle	19	7	8	5	6	32	5	15	2	4	5	3	111
Common Pipistrelle	82	42	24	19	44	521	31	536	94	646	188	647	2874
Soprano Pipistrelle	5	4	7	14	12	126	0	27	10	36	13	54	308
Brown Long-eared Bat	2	2	5	2	1	10	1	10	0	2	1	2	38
Greater Horseshoe	3	1	0	2	2	1	0	0	0	0	0	0	9
Lesser Horseshoe	0	0	0	0	0	0	1	0	0	0	1	0	2
Total	153	97	68	71	202	894	50	616	112	695	273	822	4053

Table 4: Survey results from Location D1, 28th May to 8th June

Location D3													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	5	5	2	1	0	2	1	3	0	3	1	1	24
Serotine	14	10	5	4	23	6	0	2	0	1	2	15	82
Myotis sp	14	11	10	5	12	12	0	6	1	3	9	9	92
Nyctalus sp	47	60	29	42	20	21	6	21	2	7	24	13	292
Nathusius' Pipistrelle	18	29	9	17	3	2	0	8	0	0	9	1	96
Common Pipistrelle	39	41	15	36	59	50	41	73	13	16	68	56	507
Soprano Pipistrelle	15	15	15	17	16	13	2	17	1	10	16	9	146
Brown Long-eared Bat	13	9	10	8	5	13	0	2	0	1	9	5	75
Greater Horseshoe	1	0	2	0	3	0	1	0	0	0	2	0	9
Lesser Horseshoe	0	0	1	0	0	1	0	2	1	1	1	0	7
Total	166	180	98	130	141	120	51	134	18	42	141	109	1330

Table 5: Survey results from Location D3, 28th May to 8th June

Location D4													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	0	1	0	1	1	0	1	0	0	0	1	0	5
Serotine	2	6	3	3	3	3	0	0	0	0	2	0	22
Myotis sp	3	27	118	26	69	1	0	1	0	1	10	3	259
Nyctalus sp	4	1	2	7	1	8	0	2	1	0	1	4	31
Nathusius' Pipistrelle	248	159	184	44	22	10	1	6	0	0	18	8	700
Common Pipistrelle	905	292	120	87	217	308	7	272	2	28	920	563	3721
Soprano Pipistrelle	103	79	120	94	133	158	5	24	0	4	46	82	848
Greater Horseshoe	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	1265	565	547	263	446	488	14	305	3	33	998	660	5587

Table 6: Survey results from Location D4, 28th May to 8th June

Location D5													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	6	3	12	2	0	0	2	0	0	0	2	0	27
Serotine	53	21	29	53	7	3	0	0	0	0	2	2	170
Myotis sp	13	9	3	11	5	2	0	1	0	0	8	3	55
Nyctalus sp	4	10	9	8	10	12	2	2	2	5	4	4	72
Nathusius' Pipistrelle	14	10	208	20	11	10	1	0	0	0	4	0	278
Common Pipistrelle	370	274	238	195	88	59	43	34	7	13	59	27	1407
Soprano Pipistrelle	274	135	159	150	60	48	42	22	3	16	135	32	1076
Brown Long-eared Bat	10	4	3	0	4	1	0	1	0	0	2	1	26
Greater Horseshoe	3	3	1	4	0	0	0	1	0	0	1	1	14
Lesser Horseshoe	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	747	469	662	444	185	135	90	61	12	34	217	70	3126

Table 7: Survey results from Location D5, 28th May to 8th June

Location D6													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	1	0	3	0	0	0	3	4	9	7	0	1	28
Serotine	17	9	10	28	7	6	4	2	3	2	4	5	97
Myotis sp	9	5	2	2	2	1	1	0	0	0	5	0	27
Nyctalus sp	35	22	25	14	13	13	8	13	1	2	17	50	213
Nathusius' Pipistrelle	3	5	6	3	2	7	3	0	0	0	5	1	35
Common Pipistrelle	36	64	38	54	40	49	40	31	13	14	47	20	446
Soprano Pipistrelle	36	45	38	53	38	42	12	21	8	6	40	12	351
Brown Long-eared Bat	5	1	1	1	2	3	7	2	1	5	3	4	35
Greater Horseshoe	0	0	0	0	3	0	0	0	0	1	1	0	5
Lesser Horseshoe	1	0	0	1	0	0	3	0	1	0	0	1	7
Total	143	151	123	156	107	121	81	73	36	37	122	94	1244

Table 8: Survey results from Location D6, 28th May to 8th June

Location D7													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	3	3	0	1	0	1	3	1	1	1	1	0	15
Serotine	14	21	13	16	13	6	23	17	2	9	13	20	167
Myotis sp	42	36	29	32	28	29	37	19	3	11	17	8	291
Nyctalus sp	20	25	16	56	27	13	7	10	2	0	14	28	218
Nathusius' Pipistrelle	20	10	23	18	14	8	8	11	8	11	32	23	186
Common Pipistrelle	71	85	65	80	74	102	89	125	40	60	111	160	1062
Soprano Pipistrelle	133	95	95	54	59	197	18	137	27	17	128	142	1102
Brown Long-eared Bat	25	20	16	21	15	18	21	29	15	15	19	14	228
Greater Horseshoe	0	1	2	1	0	0	0	1	0	0	1	1	7
Lesser Horseshoe	0	1	0	0	2	0	0	0	0	0	0	0	3
Total	328	297	259	279	232	374	206	350	98	124	336	396	3279

Table 9: Survey results from Location D7, 28th May to 8th June

Location D8													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	2	5	1	3	1	0	0	1	0	0	1	0	14
Serotine	29	26	16	19	0	4	2	0	0	0	1	1	98
Myotis sp	8	5	6	6	2	2	0	1	0	0	0	1	31
Nyctalus sp	86	16	11	16	14	13	0	4	1	0	7	6	174
Nathusius' Pipistrelle	20	32	22	14	8	6	1	0	0	0	2	0	105
Common Pipistrelle	111	132	112	142	85	22	3	2	0	0	8	0	617
Soprano Pipistrelle	11	19	12	12	6	2	0	0	0	0	1	1	64
Brown Long-eared Bat	3	3	5	2	1	1	0	1	0	0	0	0	16
Greater Horseshoe	2	5	1	3	0	0	0	0	0	0	0	1	12
Lesser Horseshoe	0	0	0	5	1	0	0	0	0	0	0	2	8
Total	272	243	186	222	118	50	6	9	1	0	20	12	1139

Table 10: Survey results from Location D8, 28th May to 8th June

Location D9													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Barbastelle	2	1	6	0	0	0	1	1	0	0	2	0	13
Serotine	24	11	15	11	6	13	4	0	1	0	5	7	97
Myotis sp	16	15	14	9	8	17	8	3	1	7	18	18	134
Nyctalus sp	64	43	25	37	70	29	14	20	1	1	9	17	330
Nathusius' Pipistrelle	10	10	13	6	2	12	8	0	2	2	9	6	80
Common Pipistrelle	104	127	80	58	49	98	134	42	11	29	96	59	887
Soprano Pipistrelle	36	23	27	18	26	28	27	11	15	6	41	34	292
Brown Long-eared Bat	10	4	6	3	1	2	1	1	0	1	3	3	35
Greater Horseshoe	2	0	0	0	0	0	0	0	0	0	0	0	2
Lesser Horseshoe	0	0	0	0	1	0	0	1	0	0	2	0	4
Total	268	234	186	142	163	199	197	79	31	46	185	144	1874

Table 11: Survey results from Location D9, 28th May to 8th June

Location D10													
Species	**28/05**	**29/05**	**30/05**	**31/05**	**01/06**	**02/06**	**03/06**	**04/06**	**05/06**	**06/06**	**07/06**	**08/06**	**Total**
Serotine	4	6	2	4	3	3	0	1	1	0	5	1	30
Myotis sp	1	1	0	0	0	0	0	0	0	0	0	0	2
Nyctalus sp	16	12	10	2	8	11	5	5	1	2	3	7	82
Nathusius' Pipistrelle	3	16	6	5	5	18	0	4	0	8	5	12	82
Common Pipistrelle	37	48	12	52	53	268	6	34	9	12	16	28	575
Soprano Pipistrelle	23	9	16	12	26	77	7	7	2	16	22	25	242
Brown Long-eared Bat	1	1	0	2	0	4	1	0	0	0	0	0	9
Greater Horseshoe	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	85	93	46	77	95	381	19	51	14	38	51	73	1023

Table 12: Survey results from Location D10, 28th May to 8th June

Location D1												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Serotine	2	1	3	1	1	1	0	0	2	1	3	15
Myotis sp	0	4	0	0	0	0	1	0	1	0	2	8
Nyctalus sp	18	31	28	28	24	16	6	11	1	1	7	171
Nathusius' Pipistrelle	9	1	0	0	1	0	1	0	1	0	0	13
Common Pipistrelle	13	8	3	2	7	6	6	3	11	6	0	65
Soprano Pipistrelle	5	10	2	1	0	0	0	2	0	0	1	21
Brown Long-eared Bat	1	0	0	1	1	2	0	2	0	0	0	7
Greater Horseshoe	0	1	2	0	0	0	0	1	0	0	0	4
Total	48	56	38	33	34	25	14	19	16	8	13	304

Table 13: Survey results from Location D1, 25th June to 5th July

Location D2												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Barbastelle	0	0	0	2	0	0	0	0	0	0	0	2
Serotine	49	0	0	1	0	1	0	3	1	1	0	56
Myotis sp	9	7	3	2	7	3	3	2	3	0	1	40
Nyctalus sp	30	0	0	0	0	1	1	0	1	1	0	34
Nathusius' Pipistrelle	2	0	0	0	0	1	0	1	0	2	1	7
Common Pipistrelle	91	597	279	80	715	341	444	102	318	1021	10	3998
Soprano Pipistrelle	14	8	7	5	38	13	16	5	175	4	1	286
Brown Long-eared Bat	15	2	10	14	7	7	2	3	2	5	5	72
Total	210	614	299	104	767	367	466	116	500	1034	18	4495

Table 14: Survey results from Location D2, 25th June to 5th July

Location D3												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Barbastelle	0	0	4	4	2	5	4	0	0	3	10	32
Serotine	13	13	16	14	15	5	4	3	10	26	7	126
Myotis sp	5	11	18	12	2	7	5	8	3	5	7	83
Nyctalus sp	38	17	15	29	20	57	47	17	20	31	4	295
Nathusius' Pipistrelle	5	0	0	1	2	2	1	0	6	3	0	20
Common Pipistrelle	120	215	139	78	120	93	76	67	264	158	47	1377
Soprano Pipistrelle	9	7	10	13	11	7	10	8	11	16	9	111
Brown Long-eared Bat	7	11	6	7	3	13	4	5	10	8	6	80
Greater Horseshoe	0	0	0	3	0	0	4	2	2	1	1	13
Lesser Horseshoe	0	0	3	2	1	0	0	0	0	0	3	9
Total	197	274	211	163	176	189	155	110	326	251	94	2146

Table 15: Survey results from Location D3, 25th June to 5th July

Location D4												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Serotine	2	2	0	0	0	3	0	1	1	1	1	11
Myotis sp	4	4	0	0	2	5	4	2	1	0	0	22
Nyctalus sp	9	6	1	1	2	0	0	3	5	1	1	29
Nathusius' Pipistrelle	9	4	0	0	0	4	0	15	1	1	1	35
Common Pipistrelle	126	29	2	4	15	49	29	7	7	15	2	285
Soprano Pipistrelle	83	11	3	7	2	14	58	19	8	0	0	205
Brown Long-eared Bat	2	0	0	0	0	0	0	0	0	0	0	2
Greater Horseshoe	1	0	0	0	0	0	0	0	0	1	0	2
Total	236	56	6	12	21	75	91	47	23	19	5	591

Table 16: Survey results from Location D4, 25th June to 5th July

Location D5												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Barbastelle	0	1	0	0	0	0	1	0	1	0	0	3
Serotine	31	22	1	2	3	11	14	3	9	7	1	104
Myotis sp	5	5	0	1	1	0	1	1	0	0	0	14
Nyctalus sp	51	11	1	1	0	10	12	8	3	4	4	105
Nathusius' Pipistrelle	1	6	0	0	0	1	0	0	0	0	0	8
Common Pipistrelle	47	159	6	2	13	46	54	17	39	8	0	391
Soprano Pipistrelle	46	326	16	12	29	32	33	28	54	12	4	592
Greater Horseshoe	0	0	0	0	1	0	3	0	0	0	0	4
Total	181	530	24	18	47	100	118	57	106	31	9	1221

Table 17: Survey results from Location D5, 25th June to 5th July

Location D6												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Barbastelle	0	0	0	0	1	0	0	0	0	0	0	1
Serotine	6	0	0	1	2	0	2	1	1	2	0	15
Myotis sp	2	2	1	0	2	1	0	0	0	0	0	8
Nyctalus sp	3	1	0	1	1	2	2	0	1	0	1	12
Nathusius' Pipistrelle	0	2	0	0	1	3	3	1	1	0	0	11
Common Pipistrelle	28	13	3	8	10	18	8	4	2	6	7	107
Soprano Pipistrelle	21	10	4	5	4	13	4	4	5	4	5	79
Brown Long-eared Bat	2	2	1	1	1	3	0	0	0	0	1	11
Greater Horseshoe	0	1	1	0	0	1	0	1	0	0	0	4
Total	62	31	10	16	22	41	19	11	10	12	14	248

Table 18: Survey results from Location D6, 25th June to 5th July

Location D7												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Barbastelle	0	0	0	1	1	2	2	1	0	0	0	7
Serotine	26	20	31	46	29	24	24	22	23	45	16	306
Myotis sp	4	0	5	20	8	8	0	1	3	2	3	54
Nyctalus sp	28	4	2	1	1	13	4	7	4	6	1	71
Nathusius' Pipistrelle	3	6	2	2	4	6	4	2	2	3	2	36
Common Pipistrelle	68	78	28	40	46	64	37	27	83	127	23	621
Soprano Pipistrelle	30	6	3	7	3	8	8	3	8	10	9	95
Brown Long-eared Bat	10	6	6	3	9	7	3	9	6	7	4	70
Greater Horseshoe	0	0	0	1	1	1	1	2	0	0	1	7
Total	169	120	77	121	102	133	83	74	129	200	59	1267

Table 19: Survey results from Location D7, 25th June to 5th July

Location D9												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Barbastelle	1	0	0	1	0	14	2	1	2	0	0	21
Serotine	14	2	2	3	4	1	1	4	1	0	7	39
Myotis sp	5	8	2	4	8	4	5	1	6	4	0	47
Nyctalus sp	19	7	3	10	3	16	21	12	19	2	1	113
Nathusius' Pipistrelle	7	1	3	0	2	7	0	0	7	2	0	29
Common Pipistrelle	139	116	695	605	729	522	419	142	844	839	23	5073
Soprano Pipistrelle	114	100	117	12	110	73	145	62	10	25	122	890
Brown Long-eared Bat	5	12	3	3	9	5	11	15	16	3	12	94
Greater Horseshoe	0	0	3	5	3	2	1	2	2	0	0	18
Total	304	246	828	643	868	644	605	239	907	875	165	6324

Table 20: Survey results from Location D9, 25th June to 5th July

Location D10												
Species	**25/06**	**26/06**	**27/06**	**28/06**	**29/06**	**30/06**	**01/07**	**02/07**	**03/07**	**04/07**	**05/07**	**Total**
Barbastelle	0	0	0	3	2	0	0	1	0	0	0	6
Serotine	17	20	5	0	2	3	4	0	3	5	0	59
Myotis sp	8	4	2	0	1	5	2	4	1	1	1	29
Nyctalus sp	49	92	24	4	34	50	42	13	11	12	4	335
Nathusius' Pipistrelle	5	4	0	1	1	8	0	3	2	1	0	25
Common Pipistrelle	298	189	37	32	58	81	64	32	48	51	15	905
Soprano Pipistrelle	44	60	29	34	39	44	36	16	30	32	28	392
Brown Long-eared Bat	6	8	2	3	7	11	5	3	2	9	2	58
Greater Horseshoe	0	0	0	0	0	0	0	1	1	0	0	2
Lesser Horseshoe	0	0	0	1	0	0	0	1	0	0	0	2
Total	427	377	99	78	144	202	153	74	98	111	50	1813

Table 21: Survey results from Location D10, 25th June to 5th July

Location D1															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Serotine	3	0	2	2	3	1	4	1	5	6	6	9	0	3	45
Myotis sp	0	1	1	1	2	14	1	2	1	0	0	1	1	0	25
Nyctalus sp	17	6	33	28	17	9	12	10	7	11	22	4	8	8	192
Common Pipistrelle	16	6	11	5	59	10	8	5	27	16	12	12	8	0	195
Soprano Pipistrelle	7	2	5	12	6	9	2	1	16	6	10	6	12	1	95
Brown Long-eared Bat	0	1	2	0	2	2	3	0	1	0	7	1	3	1	23
Greater Horseshoe	0	0	0	0	0	1	2	2	1	0	1	0	0	0	7
Lesser Horseshoe	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	43	16	54	48	90	46	32	21	58	39	58	33	32	13	583

Table 22: Survey results from Location D1, 27th July to 9th August

Location D2															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Barbastelle	0	0	0	0	0	0	0	2	2	1	0	0	0	0	5
Serotine	1	2	11	5	5	2	8	0	2	16	12	3	7	0	74
Myotis sp	1	1	7	4	1	3	3	5	2	5	3	1	4	0	40
Nyctalus sp	2	2	9	21	10	6	8	4	5	12	8	4	6	0	97
Nathusius' Pipistrelle	0	0	0	2	0	0	0	1	0	1	2	0	2	0	8
Common Pipistrelle	536	98	192	250	171	54	572	160	685	478	359	801	164	0	4520
Soprano Pipistrelle	49	52	37	45	86	29	49	34	37	53	35	41	169	0	716
Brown Long-eared Bat	0	0	2	0	3	3	1	1	1	3	3	3	1	0	21
Greater Horseshoe	0	0	0	0	0	0	0	0	2	1	0	0	1	0	4
Total	589	155	258	327	276	97	641	207	736	570	422	853	354	0	5485

Table 23: Survey results from Location D2, 27th July to 9th August

Location D3															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Barbastelle	1	3	0	1	0	2	3	4	2	2	0	0	0	0	18
Serotine	3	2	8	35	10	3	12	0	38	18	36	5	6	0	176
Myotis sp	10	13	9	19	13	7	5	11	10	13	18	11	9	0	148
Nyctalus sp	13	57	30	98	23	16	36	42	166	111	113	36	17	0	758
Nathusius' Pipistrelle	0	1	0	0	2	0	0	0	2	2	0	1	1	0	9
Common Pipistrelle	260	53	61	90	143	83	39	46	232	105	155	374	79	0	1720
Soprano Pipistrelle	42	22	21	55	31	27	24	14	44	48	73	31	22	0	454
Brown Long-eared Bat	3	4	2	3	6	10	7	5	18	2	6	5	2	0	73
Greater Horseshoe	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	332	155	131	302	228	149	126	122	512	301	401	463	136	0	3358

Table 24: Survey results from Location D3, 27th July to 9th August

Location D4															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Barbastelle	1	0	0	0	1	0	3	0	1	0	0	0	0	0	6
Serotine	11	2	12	17	12	6	13	11	4	17	6	0	0	0	111
Myotis sp	5	8	12	11	9	6	7	5	1	14	4	0	0	0	82
Nyctalus sp	5	8	16	32	20	5	4	5	8	17	11	0	0	0	131
Nathusius' Pipistrelle	0	0	1	1	0	0	0	0	0	1	0	0	0	0	3
Common Pipistrelle	18	11	72	60	56	17	24	18	30	127	15	0	0	0	448
Soprano Pipistrelle	24	80	110	116	94	92	21	60	108	125	79	0	0	0	909
Brown Long-eared Bat	0	0	2	2	2	3	2	0	1	2	1	0	0	0	15
Greater Horseshoe	2	2	9	8	1	0	1	1	1	1	2	0	0	0	28
Total	66	111	234	247	195	129	75	100	154	304	118	0	0	0	1733

Table 25: Survey results from Location D4, 27th July to 9th August

Location D5															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Serotine	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4
Myotis sp	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4
Nyctalus sp	0	0	0	0	0	0	0	0	0	0	0	0	15	19	34
Nathusius' Pipistrelle	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Common Pipistrelle	0	0	0	0	0	0	0	0	0	0	0	0	41	9	50
Soprano Pipistrelle	0	0	0	0	0	0	0	0	0	0	0	0	38	8	46
Brown Long-eared Bat	0	0	0	0	0	0	0	0	0	0	0	0	5	3	8
Greater Horseshoe	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	106	42	148

Table 26: Survey results from Location D5, 27th July to 9th August

Location D7															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Barbastelle	1	0	3	0	0	0	0	1	0	0	0	0	0	0	5
Serotine	15	4	8	12	4	0	5	29	25	15	38	19	11	14	199
Myotis sp	2	1	1	0	0	1	2	2	2	2	0	2	4	0	19
Nyctalus sp	11	11	27	47	59	10	25	10	53	42	18	23	83	36	455
Nathusius' Pipistrelle	4	1	0	1	2	0	3	1	2	1	1	0	0	0	16
Common Pipistrelle	256	40	53	74	60	41	81	23	132	83	98	73	58	58	1130
Soprano Pipistrelle	24	5	9	19	9	9	13	4	24	27	23	22	24	27	239
Brown Long-eared Bat	25	13	29	19	6	7	21	16	16	8	3	30	13	14	220
Greater Horseshoe	0	0	0	0	1	0	1	0	0	0	1	0	0	2	5
Total	338	75	130	172	141	68	151	86	254	178	182	169	193	151	2288

Table 27: Survey results from Location D7, 27th July to 9th August

Location D8															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Barbastelle	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Serotine	2	5	32	85	5	5	0	0	0	0	0	0	0	0	134
Myotis sp	7	4	10	18	9	3	0	0	0	0	0	0	0	0	51
Nyctalus sp	15	43	32	56	13	10	0	0	0	0	0	0	0	0	169
Nathusius' Pipistrelle	1	0	2	2	1	0	0	0	0	0	0	0	0	0	6
Common Pipistrelle	82	96	88	306	67	25	0	0	0	0	0	0	0	0	664
Soprano Pipistrelle	9	27	21	55	35	13	0	0	0	0	0	0	0	0	160
Brown Long-eared Bat	2	0	2	1	1	1	0	0	0	0	0	0	0	0	7
Greater Horseshoe	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
Total	118	175	190	524	132	57	0	0	0	0	0	0	0	0	1196

Table 28: Survey results from Location D8, 27th July to 9th August

Location D9															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Barbastelle	0	0	0	0	0	7	6	2	4	0	19	0	0	0	38
Serotine	0	0	0	0	0	4	3	1	1	0	9	0	0	0	18
Myotis sp	0	0	0	0	0	2	6	1	6	0	15	0	0	0	30
Nyctalus sp	0	0	0	0	0	3	10	3	4	1	21	0	0	0	42
Common Pipistrelle	0	0	0	0	0	105	38	7	211	4	367	0	0	0	732
Soprano Pipistrelle	0	0	0	0	0	12	18	10	44	1	86	0	0	0	171
Brown Long-eared Bat	0	0	0	0	0	5	6	1	5	0	17	0	0	0	34
Greater Horseshoe	0	0	0	0	0	2	1	0	1	0	4	0	0	0	8
Lesser Horseshoe	0	0	0	0	0	1	1	2	17	1	22	0	0	0	44
Total	0	0	0	0	0	141	89	27	293	7	560	0	0	0	1117

Table 29: Survey results from Location D9, 27th July to 9th August

Location D10															
Species	**27/07**	**28/07**	**29/07**	**30/07**	**31/07**	**01/08**	**02/08**	**03/08**	**04/08**	**05/08**	**06/08**	**07/08**	**08/08**	**09/08**	**Total**
Barbastelle	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3
Serotine	5	11	18	42	54	2	0	0	0	0	0	0	0	0	132
Myotis sp	2	6	16	8	9	4	0	0	0	0	0	0	0	0	45
Nyctalus sp	17	38	52	81	68	17	0	0	0	0	0	0	0	0	273
Common Pipistrelle	42	44	69	88	90	34	0	0	0	0	0	0	0	0	367
Soprano Pipistrelle	61	62	139	121	126	32	0	0	0	0	0	0	0	0	541
Brown Long-eared Bat	2	0	0	1	3	0	0	0	0	0	0	0	0	0	6
Greater Horseshoe	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lesser Horseshoe	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	131	162	295	341	351	89	0	0	0	0	0	0	0	0	1369

Table 30: Survey results from Location D10, 27th July to 9th August

Location D1						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Serotine	1	4	3	3	4	15
Myotis sp	2	12	6	3	4	27
Nyctalus sp	9	11	9	12	10	51
Common Pipistrelle	10	8	19	7	17	61
Soprano Pipistrelle	6	3	9	10	9	37
Brown Long-eared Bat	6	2	3	4	3	18
Greater Horseshoe	0	0	0	1	0	1
Lesser Horseshoe	1	2	1	0	0	4
Total	35	42	50	40	47	214

Table 31: Survey results from Location D1, 3rd September to 7th September

Location D2						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	0	1	0	0	0	1
Serotine	1	0	1	0	0	2
Nyctalus sp	8	0	1	0	0	9
Common Pipistrelle	34	23	21	0	0	78
Soprano Pipistrelle	4	2	4	0	0	10
Lesser Horseshoe	1	0	0	0	0	1
Total	48	26	27	0	0	101

Table 32: Survey results from Location D2, 3rd September to 7th September

Location D3						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	3	1	2	5	3	14
Serotine	4	8	2	13	8	35
Myotis sp	4	4	9	7	9	33
Nyctalus sp	28	28	30	25	54	165
Common Pipistrelle	12	9	17	15	37	90
Soprano Pipistrelle	143	118	97	114	305	777
Brown Long-eared Bat	5	16	8	18	9	56
Greater Horseshoe	0	2	0	0	0	2
Lesser Horseshoe	2	0	0	0	0	2
Total	201	186	165	197	425	1174

Table 33: Survey results from Location D3, 3rd September to 7th September

Location D5						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	0	0	1	3	6	10
Serotine	21	15	6	8	65	115
Myotis sp	3	3	0	1	1	8
Nyctalus sp	17	17	17	25	21	97
Common Pipistrelle	59	253	42	358	47	759
Soprano Pipistrelle	29	68	16	73	51	237
Brown Long-eared Bat	1	2	1	3	1	8
Greater Horseshoe	1	0	0	1	0	2
Lesser Horseshoe	1	2	0	0	0	3
Total	132	360	83	472	192	1239

Table 34: Survey results from Location D5, 3rd September to 7th September

Location D6						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	0	0	0	4	2	6
Serotine	0	0	0	7	2	9
Myotis sp	0	0	0	14	4	18
Nyctalus sp	0	0	0	11	11	22
Nathusius' Pipistrelle	0	0	0	0	1	1
Common Pipistrelle	0	0	0	22	26	48
Soprano Pipistrelle	0	0	0	44	39	83
Brown Long-eared Bat	0	0	0	9	2	11
Total	0	0	0	111	87	198

Table 35: Survey results from Location D6, 3rd September to 7th September

Location D7						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	2	0	1	2	1	6
Serotine	4	9	6	4	1	24
Myotis sp	13	7	6	16	2	44
Nyctalus sp	5	12	8	8	24	57
Nathusius' Pipistrelle	0	0	0	1	3	4
Common Pipistrelle	395	618	733	681	1338	3765
Soprano Pipistrelle	56	128	249	77	120	630
Brown Long-eared Bat	41	36	26	39	24	166
Greater Horseshoe	2	3	2	1	1	9
Total	518	813	1031	829	1514	4705

Table 36: Survey results from Location D7, 3rd September to 7th September

Location D8						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	6	0	0	0	3	9
Serotine	17	6	3	18	14	58
Myotis sp	7	6	4	10	8	35
Nyctalus sp	12	17	9	9	22	69
Nathusius' Pipistrelle	1	0	0	0	2	3
Common Pipistrelle	65	9	20	10	150	254
Soprano Pipistrelle	16	3	9	4	47	79
Brown Long-eared Bat	3	0	2	0	0	5
Greater Horseshoe	3	2	4	2	4	15
Lesser Horseshoe	1	0	1	0	1	3
Total	131	43	52	53	251	530

Table 37: Survey results from Location D8, 3rd September to 7th September

Location D9						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	3	3	1	7	0	14
Serotine	8	7	6	21	0	42
Myotis sp	11	0	5	16	0	32
Nyctalus sp	20	14	15	49	0	98
Common Pipistrelle	156	112	118	386	0	772
Soprano Pipistrelle	26	64	13	103	0	206
Brown Long-eared Bat	4	3	1	8	0	16
Lesser Horseshoe	1	0	0	1	0	2
Total	229	203	159	591	0	1182

Table 38: Survey results from Location D9, 3rd September to 7th September

Location D10						
Species	**03/09**	**04/09**	**05/09**	**06/09**	**07/09**	**Total**
Barbastelle	4	1	0	0	0	5
Serotine	3	5	0	0	0	8
Myotis sp	13	2	0	0	0	15
Nyctalus sp	35	10	0	0	0	45
Common Pipistrelle	48	32	0	0	0	80
Soprano Pipistrelle	53	17	0	0	0	70
Brown Long-eared Bat	27	9	0	0	0	36
Greater Horseshoe	1	0	0	0	0	1
Lesser Horseshoe	2	0	0	0	0	2
Total	186	76	0	0	0	262

Table 39: Survey results from Location D10, 3rd September to 7th September

Location D1														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Serotine	1	0	0	0	0	2	0	0	0	0	0	0	0	3
Myotis sp	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Nyctalus sp	13	3	0	0	1	6	0	0	0	0	0	0	0	23
Nathusius' Pipistrelle	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Common Pipistrelle	2	0	0	0	7	2	0	0	0	0	0	0	0	11
Soprano Pipistrelle	4	0	0	0	5	1	0	0	0	0	0	0	0	10
Brown Long-eared Bat	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	23	3	0	0	14	12	0	0	0	0	0	0	0	52

Table 40: Survey results from Location D1, 30th September to 12th October

Location D2														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Serotine	9	0	0	0	9	0	0	0	0	0	0	0	0	18
Myotis sp	51	0	0	0	51	0	0	0	0	0	0	0	0	102
Nyctalus sp	7	0	0	0	7	0	0	0	0	0	0	0	0	14
Soprano Pipistrelle	10	0	0	0	10	0	0	0	0	0	0	0	0	20
Brown Long-eared Bat	2	0	2	0	4	0	0	0	0	0	0	0	0	8
Total	79	0	2	0	81	0	0	0	0	0	0	0	0	162

Table 41: Survey results from Location D2, 30th September to 12th October

Location D3														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	3	0	1	1	0	0	5	0	2	5	6	10	0	33
Serotine	55	0	0	0	4	51	2	62	59	19	8	128	2	390
Myotis sp	11	0	0	1	2	12	2	2	10	11	7	9	1	68
Nyctalus sp	256	2	2	2	28	215	15	50	192	19	12	388	17	1198
Nathusius' Pipistrelle	0	0	0	0	1	0	0	0	1	0	0	0	0	2
Common Pipistrelle	16	0	1	1	6	11	6	59	8	0	3	16	1	128
Soprano Pipistrelle	14	0	2	3	2	17	6	9	27	8	29	17	8	142
Brown Long-eared Bat	8	0	0	0	1	10	0	0	7	6	14	10	1	57
Greater Horseshoe	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lesser Horseshoe	1	0	0	0	0	0	0	0	0	2	0	0	0	3
Total	365	2	6	8	44	316	36	182	306	70	79	578	30	2022

Table 42: Survey results from Location D3, 30th September to 12th October

Location D4														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	0	0	0	0	0	0	0	1	1	0	4	7	1	14
Serotine	2	0	1	0	2	0	1	4	15	0	1	4	0	30
Myotis sp	30	0	0	0	24	7	0	1	26	13	29	51	12	193
Nyctalus sp	7	1	2	0	1	10	2	10	34	4	1	27	3	102
Nathusius' Pipistrelle	21	0	0	0	0	0	0	3	46	0	2	4	0	76
Common Pipistrelle	179	0	0	0	183	39	4	74	227	2	866	82	14	1670
Soprano Pipistrelle	129	0	1	0	97	50	7	13	106	21	127	68	20	639
Brown Long-eared Bat	2	0	0	0	1	2	0	0	2	2	1	1	0	11
Total	370	1	4	0	308	108	14	106	457	42	1031	244	50	2735

Table 43: Survey results from Location D4, 30th September to 12th October

Location D5														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Myotis sp	0	0	0	0	0	0	0	4	4	1	0	9	0	18
Nyctalus sp	0	0	0	0	0	0	0	1	1	1	0	1	0	4
Nathusius' Pipistrelle	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Common Pipistrelle	0	0	0	0	0	0	0	10	20	0	0	7	0	37
Soprano Pipistrelle	0	0	0	0	0	0	0	2	8	1	0	1	1	13
Brown Long-eared Bat	0	0	0	0	0	0	0	1	3	10	0	5	0	19
Total	0	0	0	0	0	0	0	18	37	13	0	24	1	93

Table 44: Survey results from Location D5, 30th September to 12th October

Location D6														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	0	0	2	0	4	0	49	1	0	1	23	1	0	81
Serotine	5	0	0	0	1	1	0	1	6	21	4	13	0	52
Myotis sp	0	0	0	0	0	1	6	0	3	9	16	2	5	42
Nyctalus sp	11	0	1	1	13	10	5	14	22	9	11	38	6	141
Common Pipistrelle	5	0	19	1	22	11	264	28	8	5	2	18	11	394
Soprano Pipistrelle	2	0	94	15	31	29	93	18	11	15	29	39	20	396
Brown Long-eared Bat	6	0	1	0	4	3	2	1	8	13	9	8	1	56
Greater Horseshoe	0	0	0	46	0	0	5	0	2	0	0	1	0	54
Lesser Horseshoe	0	0	0	0	0	0	2	0	3	1	0	1	0	7
Total	29	0	117	63	75	55	426	63	63	74	94	121	43	1223

Table 45: Survey results from Location D6, 30th September to 12th October

Location D7														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	1	0	0	0	0	0	0	0	1	0	1	1	0	4
Serotine	1	0	0	0	0	3	0	1	10	4	1	4	0	24
Myotis sp	2	0	0	0	0	2	3	0	7	8	5	4	0	31
Nyctalus sp	13	0	0	0	4	1	2	9	4	4	5	9	3	54
Nathusius' Pipistrelle	0	0	0	0	0	0	0	1	0	0	0	0	2	3
Common Pipistrelle	22	0	0	0	5	2	1	4	13	5	2	18	5	77
Soprano Pipistrelle	10	0	1	8	6	5	8	1	14	12	24	6	2	97
Brown Long-eared Bat	33	7	0	1	10	13	35	12	29	46	40	25	16	267
Greater Horseshoe	0	0	0	1	0	0	0	1	0	0	4	2	0	8
Lesser Horseshoe	0	0	0	0	0	0	0	0	0	1	0	1	0	2
Total	82	7	1	10	25	26	49	29	78	80	82	70	28	567

Table 46: Survey results from Location D7, 30th September to 12th October

Location D8														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	0	0	0	0	2	4	0	12	1	0	0	11	0	30
Serotine	26	1	0	0	3	13	0	21	18	17	3	29	0	131
Myotis sp	6	0	0	0	36	12	2	43	20	8	3	9	12	151
Nyctalus sp	18	1	0	0	14	13	3	34	47	8	15	31	2	186
Nathusius' Pipistrelle	0	0	0	0	0	2	0	1	0	0	0	1	0	4
Common Pipistrelle	56	1	0	2	118	310	439	468	111	107	449	127	200	2388
Soprano Pipistrelle	10	3	0	1	2	28	12	240	21	8	3	30	17	375
Brown Long-eared Bat	6	1	0	0	6	14	0	36	10	1	3	12	1	90
Greater Horseshoe	1	3	0	0	0	0	0	1	2	0	2	2	0	11
Lesser Horseshoe	0	0	0	0	1	0	0	0	0	0	0	1	0	2
Total	123	10	0	3	182	396	456	856	230	149	478	253	232	3368

Table 47: Survey results from Location D8, 30th September to 12th October

Location D9														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	0	0	0	0	0	0	0	0	0	2	29	3	0	34
Serotine	3	0	0	0	0	13	0	1	0	1	4	2	0	24
Myotis sp	2	0	0	0	6	2	0	11	8	1	1	12	0	43
Nyctalus sp	3	0	0	0	0	34	0	4	20	11	14	17	0	103
Nathusius' Pipistrelle	0	0	0	0	0	0	0	1	0	0	0	1	0	2
Common Pipistrelle	10	0	0	0	42	152	0	55	19	2	14	19	0	313
Soprano Pipistrelle	11	0	0	1	82	54	15	95	11	1	4	11	0	285
Brown Long-eared Bat	1	0	0	0	0	3	0	3	5	3	3	1	0	19
Greater Horseshoe	1	0	0	0	0	0	0	0	3	0	0	3	0	7
Lesser Horseshoe	0	0	0	0	2	0	0	0	1	6	8	2	0	19
Total	31	0	0	1	132	258	15	170	67	27	77	71	0	849

Table 48: Survey results from Location D9, 30th September to 12th October

Location D10														
Species	**30/09**	**01/10**	**02/10**	**03/10**	**04/10**	**05/10**	**06/10**	**07/10**	**08/10**	**09/10**	**10/10**	**11/10**	**12/10**	**Total**
Barbastelle	4	0	0	0	0	6	0	3	2	38	6	0	59	118
Serotine	1	0	0	0	0	1	3	2	2	6	3	3	21	42
Myotis sp	1	0	0	0	0	0	0	1	2	2	7	1	14	28
Nyctalus sp	8	0	1	1	4	1	6	8	1	7	7	2	46	92
Common Pipistrelle	12	1	1	0	2	0	3	21	6	9	20	9	84	168
Soprano Pipistrelle	7	0	2	2	2	1	1	8	0	4	7	5	39	78
Brown Long-eared Bat	8	0	0	1	0	0	2	14	1	8	14	0	48	96
Greater Horseshoe	0	0	0	0	0	0	0	1	1	0	0	0	2	4
Lesser Horseshoe	0	0	1	0	1	0	0	1	0	1	2	0	6	12
Total	41	1	5	4	9	9	15	59	15	75	66	20	319	638

Table 49: Survey results from Location D10, 30th September to 12th October

Location D1																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	4	6	2	0	4	1	0	0	0	0	0	1	0	0	0	18
Serotine	4	1	0	0	0	1	0	0	2	1	0	0	0	0	1	10
Myotis sp	11	4	2	0	3	0	4	0	27	0	10	21	8	0	3	93
Nyctalus sp	9	10	2	0	0	0	0	0	8	9	0	1	0	0	0	39
Common Pipistrelle	15	7	4	0	7	9	0	2	10	1	7	3	8	1	0	74
Soprano Pipistrelle	8	3	2	1	1	7	0	2	1	1	1	5	1	2	1	36
Brown Long-eared Bat	1	2	1	0	1	5	3	0	1	1	1	1	0	0	1	18
Lesser Horseshoe	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Total	52	34	13	1	16	23	7	4	49	14	19	32	17	3	6	290

Table 50: Survey results from Location D1, 21st October to 4th November

Location D2																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Serotine	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Myotis sp	1	2	0	3	1	0	0	0	0	0	0	0	0	0	0	7
Nyctalus sp	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Nathusius' Pipistrelle	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Common Pipistrelle	0	3	11	0	1	3	2	0	0	0	0	0	0	0	0	20
Soprano Pipistrelle	10	25	13	6	2	1	0	0	0	0	0	0	0	0	0	57
Brown Long-eared Bat	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Greater Horseshoe	6	2	0	0	0	1	0	0	0	0	0	0	0	0	0	9
Total	22	42	24	9	4	6	2	0	0	0	0	0	0	0	0	109

Table 51: Survey results from Location D2, 21st October to 4th November

Location D3																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	6	1	0	0	0	0	0	0	0	0	1	0	0	0	0	8
Serotine	8	3	8	0	0	0	0	0	2	30	0	1	0	0	0	52
Myotis sp	10	2	2	1	3	3	0	0	4	0	0	0	5	0	0	30
Nyctalus sp	14	8	5	0	0	0	1	1	4	30	1	5	0	0	2	71
Nathusius' Pipistrelle	0	0	0	0	0	1	0	0	0	5	0	1	0	0	0	7
Common Pipistrelle	555	0	3	0	0	0	1	1	105	10	9	54	0	1	2	741
Soprano Pipistrelle	7	36	9	5	3	5	7	7	123	15	10	15	1	0	3	246
Brown Long-eared Bat	6	0	1	0	1	1	0	0	3	2	0	0	0	0	0	14
Greater Horseshoe	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3
Total	607	50	28	6	7	10	9	10	242	92	21	76	6	1	7	1172

Table 52: Survey results from Location D3, 21st October to 4th November

Location D4																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	4
Serotine	1	0	0	0	0	0	0	0	0	7	0	0	0	0	0	8
Myotis sp	28	17	16	38	6	10	4	1	1	14	5	5	0	0	1	146
Nyctalus sp	7	8	1	0	0	0	0	0	1	6	0	0	0	0	1	24
Nathusius' Pipistrelle	13	0	0	0	0	0	0	0	10	2	0	0	0	0	0	25
Common Pipistrelle	29	61	1	0	0	2	6	1	2	67	0	0	0	17	1	187
Soprano Pipistrelle	21	30	9	7	2	4	3	5	4	75	0	0	0	0	0	160
Brown Long-eared Bat	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Lesser Horseshoe	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	100	116	27	46	10	18	13	7	18	171	5	5	0	17	3	556

Table 53: Survey results from Location D4, 21st October to 4th November

Location D5																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	15	21	5	0	4	4	0	0	0	68	1	0	0	0	0	118
Serotine	12	0	0	0	0	0	0	0	0	19	0	0	0	0	0	31
Myotis sp	29	6	0	0	2	0	0	1	1	7	2	1	0	0	5	54
Nyctalus sp	25	3	3	0	0	0	1	0	10	14	0	1	0	0	0	57
Nathusius' Pipistrelle	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Common Pipistrelle	21	16	7	0	2	49	4	6	132	443	5	3	63	0	35	786
Soprano Pipistrelle	83	51	19	7	10	111	7	4	359	79	51	36	30	4	5	856
Brown Long-eared Bat	1	0	0	0	1	0	1	0	0	3	0	0	0	0	1	7
Greater Horseshoe	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Lesser Horseshoe	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	186	98	34	7	19	164	14	11	503	635	59	41	93	4	46	1914

Table 54: Survey results from Location D5, 21st October to 4th November

Location D6																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Serotine	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	4
Myotis sp	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Nyctalus sp	7	9	4	0	0	0	0	0	4	11	1	1	0	0	1	38
Common Pipistrelle	0	2	0	0	0	2	0	1	1	6	3	1	7	1	14	38
Soprano Pipistrelle	0	1	1	1	0	1	1	0	2	2	0	1	1	1	1	13
Brown Long-eared Bat	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	10	12	6	1	0	3	1	1	7	21	4	3	8	2	17	96

Table 55: Survey results from Location D6, 21st October to 4th November

Location D7																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Serotine	1	1	0	2	0	0	0	0	0	1	0	0	0	0	0	5
Myotis sp	3	0	2	0	0	0	1	0	0	0	1	0	0	0	0	7
Nyctalus sp	8	8	1	0	0	0	0	0	8	11	1	3	0	0	0	40
Nathusius' Pipistrelle	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Common Pipistrelle	5	4	5	0	1	3	19	1	11	4	2	6	1	0	2	64
Soprano Pipistrelle	8	2	1	0	1	1	1	1	15	3	0	2	0	0	3	38
Brown Long-eared Bat	16	8	6	3	12	6	6	0	9	4	5	6	4	1	4	90
Greater Horseshoe	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Lesser Horseshoe	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	41	23	16	5	16	10	27	2	44	23	9	17	5	1	9	248

Table 56: Survey results from Location D7, 21st October to 4th November

Location D8																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	1	0	1	1	0	1	3	4	0	2	0	0	0	0	0	13
Serotine	2	0	2	0	1	0	0	0	2	27	0	0	0	0	0	34
Myotis sp	2	0	4	0	2	3	1	0	2	0	0	0	2	0	1	17
Nyctalus sp	11	4	7	0	0	0	0	0	6	14	1	1	0	0	3	47
Nathusius' Pipistrelle	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
Common Pipistrelle	171	3	6	2	1	9	6	7	117	573	20	48	2	5	3	973
Soprano Pipistrelle	23	25	96	26	11	41	8	17	59	62	14	26	4	1	1	414
Brown Long-eared Bat	3	0	1	0	0	0	2	0	1	1	0	0	0	0	5	13
Greater Horseshoe	1	0	0	2	1	18	16	3	0	3	0	1	0	0	0	45
Lesser Horseshoe	0	0	0	12	0	1	0	5	0	0	0	0	0	0	1	19
Total	214	32	117	43	16	73	36	36	189	683	35	76	8	6	14	1578

Table 57: Survey results from Location D8, 21st October to 4th November

Location D9																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Serotine	3	0	1	0	0	1	0	0	1	1	0	0	0	0	0	7
Myotis sp	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Nyctalus sp	23	4	56	0	0	3	0	1	10	3	1	0	0	0	0	101
Nathusius' Pipistrelle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Pipistrelle	317	9	4	11	4	141	45	134	166	11	60	0	0	0	0	902
Soprano Pipistrelle	60	6	1	1	0	278	15	14	80	6	48	0	0	0	0	509
Brown Long-eared Bat	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Greater Horseshoe	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Lesser Horseshoe	3	3	2	13	2	22	1	0	0	0	0	0	0	0	0	46
Total	408	22	65	25	6	446	61	150	257	22	109	0	0	0	0	1571

Table 58: Survey results from Location D9, 21st October to 4th November

Location D10																
Species	**21/10**	**22/10**	**23/10**	**24/10**	**25/10**	**26/10**	**27/10**	**28/10**	**29/10**	**30/10**	**31/10**	**01/11**	**02/11**	**03/11**	**04/11**	**Total**
Barbastelle	12	9	3	3	1	1	3	0	0	2	3	0	2	0	1	40
Serotine	0	0	1	0	0	0	0	0	2	4	0	0	0	0	0	7
Myotis sp	3	8	7	0	4	0	4	0	2	17	7	3	1	0	1	57
Nyctalus sp	11	11	4	0	0	0	0	0	5	19	1	3	0	1	1	56
Nathusius' Pipistrelle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Pipistrelle	308	48	147	81	20	8	31	24	125	92	22	19	14	5	289	1233
Soprano Pipistrelle	100	149	14	188	130	23	21	16	72	97	13	2	8	1	6	840
Brown Long-eared Bat	5	7	3	1	7	3	2	1	1	5	1	0	2	0	5	43
Greater Horseshoe	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lesser Horseshoe	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2
Total	440	232	179	273	162	35	62	41	207	236	48	27	27	7	303	2279

Table 59: Survey results from Location D10, 21st October to 4th November