

# **A Bat Assessment of The Proposed House Construction within and adjoining the grounds of Frankfort Castle, Old Frankfort, Dundrum, Dublin 14, and an Evaluation for Potential Impacts on the Bat Fauna**

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## **Introduction**

Bats are a widespread element of the Irish fauna. They are known to occur from much of the rural landscape and to a lesser extent, the urban environment and here they occupy buildings and occasionally trees for short or long periods. Houses and other buildings are a vital element of the annual cycle of all Irish bat species and at no time more so than the period May to August, but many bats may also avail of buildings as hibernation sites. In sites such as the proposed development site where there are several buildings, there is the potential for roosting within any one of the buildings if appropriate conditions are met to provide safe shelter from the elements and predation.

Furthermore, trees within the site proposed for development may have roost potential. Changes to a site including demolition or building repair, restoration or modification, tree, scrub, and hedgerow removal may destroy roosts, placing bats at risk during such procedures and may reduce the options available to bats as a roosting site and may also affect their feeding and commuting activity.

Bats are protected by Irish and EU law and to prevent unlawful injury or death, it is essential that a full understanding of the site is available in advance to protect the resident bats from unintentional disturbance, injury, or death and to create a pathway by which a legal derogation and exemption may be designed in consultation with the National Parks and Wildlife Service of the Department of Culture, Heritage, and the Gaeltacht.

The site at Frankfort Castle, Dundrum will see the demolition of some existing buildings and the construction of additional housing within the grounds of the existing split house (Frankfort Castle). This will see the green area of the grounds reduced greatly and a higher density of housing than at present within the area.

This assessment will address the potential for bat roosting within the site and identify the potential for impacts upon bat feeding and commuting within the lands that form the proposed site of construction based entirely upon a visual assessment of the lands and a walkover survey to determine the potential for roost sites within the trees on site.

Surveying in early May identifies early season activity which may identify transitional roosts of bats, or they may already be at maternity roosts, dependent upon the weather conditions leading up to the assessment. Surveying in late May would identify maternity roosts for the

current year. Surveying in August is a very suitable period to look at the breeding season when the single annual young are born and have taken to the wing and when females form the largest roost type (in the Irish context); the maternity roost. These roosts are typically in close proximity or within areas of good feeding. A bat detector assessment at this time can disclose the value of a site for feeding and how bats avail of a site in commuting to and from important sites including feeding sites and roosts. Checking of buildings at other periods can provide evidence of bat occupancy once the entire building is accessible.

## **Methodology**

The proposed site for the housing at Frankfort Castle, County Dublin was examined for bat activity over three separate dates between August 2019 and June 2021 and for signs of bats on a further date in November 2019. These were: August 21<sup>st</sup> to 22<sup>nd</sup> 2019, May 7<sup>th</sup> to 8<sup>th</sup> 2021 and May 31<sup>st</sup> to June 1<sup>st</sup>, 2021. The survey was undertaken by a single surveyor in 2019 and by three surveyors in May 2021. from sunset (20.40 hours) for over 1.5 hours on 21<sup>st</sup> August 2019 and again for over one hour up to sunrise on 22<sup>nd</sup> August 2019 to assess the site for bat usage and bat activity. The house attics and all external surfaces were examined for evidence of bat usage (droppings, staining, suitable access points) prior to sunset. The attic of 97A Highfield Park was examined on 8<sup>th</sup> November 2019. All attics were re-examined on 7<sup>th</sup> May 2021 to determine if bats had occupied any of the buildings in the intervening period.

In August 2019, the bat detector assessment that commenced prior to sunset (20.30 hours) was undertaken equipped with an Echometer 3 (EM3) full spectrum receiver with a screen displaying the ultrasonic signals received and recording all ultrasonic signals received to a SD card for later analysis. The surveyor walked around the perimeter of all buildings, concentrating on the main house and the approach avenue and the remaining lands around the buildings from hours immediately prior to sunset (20.30 hours) up to 22.00 hours.

A second bat detector / monitor a Songmeter2BAT+ (SM2) was positioned outside the main house firstly outside the southern section of the house, then in the garden east of the northern section of the house and finally moving to the northern area of the garden.

The gardens were walked in their entirety during the active bat survey, repeatedly walking around lawns, along paths and around the house. The main avenue and the passing roadway (Frankfort Court) were also walked to determine the presence of bats in the immediate area.

Sunrise was at 06.05 hours during the August 2019 survey.

All trees were examined from ground level for evidence of bat usage and for bat roost potential. Trees were examined as part of the bat activity survey and observations included a confirmation that bats were not (or were) entering or emerging from trees within the site.

The survey in 2021 was undertaken on two dates (overlapping two calendar days on each visit). The first assessment was 7<sup>th</sup> May 2021 during which all attics were re-examined prior to the activity assessment and subsequently one surveyor was appointed to each house and garden within the proposal (Frankfort Castle, the ruin to the south and 97A Highfield Park). Each surveyor observed the buildings and trees within the site for evidence of emerging bats. Surveying continued for 1.5 hours. One hour prior to sunrise, activity surveying re-commenced and continued up to sunrise.

On 31<sup>st</sup> May 2021, surveying involved observations of all buildings and trees for evidence of emerging bats from shortly before sunset (which was at 21.43 hours and for approximately 1.5 hours (finishing at 23.05 hours). Survey equipment included one Echometer Touch 2 Pro, 2 x Echometer 3, 2 x Songmeter Mini Bat static monitors and 1 Pettersson D240X heterodyne and time expansion detectors.

## **Survey Constraints**

On 31<sup>st</sup> May, sunset was at 21.43 hours and sunrise was at 0503 hours with temperatures of 15°C to 12°C and good insect activity. The weather conditions on the survey dates in August 2019 were suitable for surveying for bats at sunset and prior to sunrise. The ruined building to the south of Frankfort Castle was inaccessible. The bat activity survey allowed for an assessment of this building during the period of the year when activity is typically high and given the repeat visits with low bat activity, it is considered unlikely to be a significant bat roost.

Weather conditions on 7<sup>th</sup> to 7<sup>th</sup> May disimproved through the night and the dawn assessment was affected by the heavy rain. Emergence activity was noted

The assessment of 97A Highfield Park in November 2019 was adequate for evaluation of the presence of bats in winter as all attic areas were accessible. Overall, the survey is considered representative of the site in August , May and early June and would cover the breeding season for bats.

## **Existing Environment**

### **Species of bat roosting within the site**

Common pipistrelle – (*Pipistrellus pipistrellus*)

There is a maternity roost of common pipistrelles within the attic of 97A Highfield Park (one of the houses that would be demolished to facilitate this development). 20 bats emerged from the house on 31<sup>st</sup> May 2021 and bats were seen to return to the house prior to sunrise on 1<sup>st</sup> June 2021.

These bats dispersed over the area and were only occasionally noted within the Frankfort Castle gardens or the garden surrounding the roost.

No bats were seen or heard to emerge from Frankfort Castle or the neighbouring derelict building. No bat droppings or other indications of bat occupancy were noted in any of the three attics examined (all available attics).

### **Roost potential**

The house offers some roost potential given its age and the extent of the attics overall. There was no evidence of bat usage of the buildings.

There were two residents with whom bats were discussed at the time of survey. One was a recent occupant but had not encountered bats within the summer period. The second resident had lived within the house for over 20 years and had not encountered bats within this entire period. This would rule out the possibility of a large number of bats and of maternity roosts. Individual bats may go unnoticed for a considerable time or indefinitely.

There are a small number of trees with roost potential within the site due to loose bark or cavities. All tree cavities, loose bark and limb damage were devoid of evidence of bats based on a ground evaluation of the trees.

### **Species of bat feeding within and around the site**

Common pipistrelle	<i>Pipistrellus pipistrellus</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>
Leisler's bat	<i>Nyctalus leisleri</i>

Overall bat activity was low within the grounds throughout the night and there was a slightly greater level of common pipistrelle based on an evaluation of the full night's bat activity. This was due to the presence of the common pipistrelle roost within the Highfield Park property. Leisler's bat activity was low and ceased well in advance of sunrise close to the static monitor but was the last bat noted on the active survey in 2019. Soprano pipistrelle activity was present but quite localised (recorded during the active survey more than the passive / static survey). In 2021, the greatest level of bat activity was at 97A Highfield Park as bats returned to the roost. There was associated common pipistrelle activity within the grounds of Frankfort Castle as bats made their way towards the roost, feeding within the garden en route. There was much less activity noted in the southern section around the ruined house.

There were only two bat calls in 1.25 hours prior to sunrise in August 2019. These were a pipistrelle at 05.48 hours (either common or soprano pipistrelle) and a Leisler's bat at 06.12 hours. Neither bat entered the house (Frankfort Castle or the adjoining ruin) or any tree in the garden. A soprano pipistrelle was noted close to the pre-dawn signal at 21.52 to 21.53 hours feeding under the conifer branches (signals resembling a *Myotis* bat due to the cluttered feeding area and low altitude flight).

No bats were roosting in the buildings or trees at the time of survey and there was no evidence of bat occupancy within the building based on droppings, staining or carcasses.

None of the trees have high roost potential and in effect the trees have low roost potential taking account of the low bat activity within the site, the overall scarcity of good feeding immediately around the site and the tree crevices and cavities available.

## **Potential Impacts**

### **Loss of roost**

There will be building demolition as part of the proposal. 97A Highfield Park is a bat roost and will be demolished. This is the destruction of a protected structure and risk to a protected species if undertaken without mitigation.

### **Loss of cover for feeding and commuting**

There will be mature vegetation removal but given the relatively limited bat activity there will be no vegetation shown to be of high significance to feeding or commuting bats removed. There will be vegetation removed from around a known roost but given that the roost itself will be destroyed, this does not have the same significance.

### **Increased light levels within the area**

The new houses will require lighting for access and safety. This may lead to an increase in light levels throughout the remaining and much altered gardens especially in the vicinity of the new houses.

### **Impacts of changes to the site on resident and local bats**

The reduction in cover and the increase in lighting will have a long-term to permanent low negative impact on the bat population of the region.

## **Proposed Mitigation**

### **Acquisition of a derogation from protection of a bat roost in 97A Highfield Park**

A derogation has been acquired from NPWS and an updated derogation will be required prior to any work on the building that would affect bats. The derogation includes the following measures:

- Survey of the building prior to demolition.
- Exclusion of bats by a bat specialist licensed to capture and handle bats.
- Provision of alternative roost options
- Monitoring of alternative roost success

The building will be examined for the presence of bats in advance of demolition by a licensed bat specialist. Bats shall be excluded using one-way valves if required or if bats are inactive, supervision of demolition and removal of bats by the bat specialist by hand shall be undertaken and bats kept safely until demolition is complete.

***97A Highfield Park must not be demolished in the period May to the end of August unless it has been proven to be devoid of bats***

### ***Bat boxes***

A large colony heated bat roost box shall be installed within the substation / Refuse Cycle building. Large Colony Box: Height: 78cm, Width: 35cm, Depth: 13cm, Weight: 8kg, Heating: 50W ceramic heating, Material: FSC certified exterior grade plywood.

This box must be switched on during the months May to the end of August and must not be switched off during this period. This can be checked during the monitoring visit.



Heated Large Colony bat box



Treble Crevice bat box

2 x Treble crevice bat boxes (or equivalent) shall be attached to mature trees or buildings to provide alternative roost sites for bats (Treble Crevice Bat Box: Size: 33cm Height x 16cm Width x 13cm Depth, Weight: 2.0kg). One of these shall face a southerly direction and the other westerly. These should be unlit to be successful.

### **Checking Frankfort Castle and remaining buildings prior to demolition**

All remaining buildings or sections of buildings and especially attics shall be assessed for bat occupancy prior to demolition.

### **Checking mature trees prior to felling**

All trees with roost potential, as determined by a bat specialist, shall be examined by a bat specialist for bat occupancy prior to felling or major surgery.

### **Lighting**

Lighting shall be used in a targeted manner to ensure that there is no unnecessary light spillage. This should allow for areas where vegetation is unlit and where the roof level of houses is not illuminated.

Lighting should be controlled to avoid light pollution of vegetation and should be targeted to areas of human activity and for priority security areas. Motion-activated sensor lighting is preferable to reduce light pollution. It is recommended that lights are not continually lit at night. Bat boxes shall remain unlit.

### **Impacts Upon Bats Following Mitigation**

There are no rare bat species within the site and low bat activity. However, there will be the loss of a bat roost. Measures to provide alternative roosts have been included. Also, measures to limit light pollution will ensure feeding can continue within and around the site. There are also likely to be suitable roost sites in surrounding houses but the viability of such a roost site is unknown, given that the desirability of the presence of bats is very varied from household to household.



Appendices (see following pages)



**Figure 1: Existing Site (top) and Proposed development (bottom) at Frankfort Castle**

The proposal will see the demolition of added sections of Frankfort Castle, a derelict building in the southwest corner, 97A Highfield Park and tree and shrub loss.

The location for installing the heated bat box is shown in the bottom plan (yellow rectangle) This is proposed for the substation. Additionally, two x 2FEs shall be attached to buildings or trees, facing south and two facing west.



**Plate 1: Frankfort Castle and the garden where the new houses are proposed**



**Plate 2: Attics within Frankfort Castle**





**Plate 2: Trees with low to moderate roost potential based on the availability of loose bark or obvious minor cavities**

No bat was seen to enter or emerge from a tree on site



**Plate 3: Substantial trees with low roost potential (loose bark)**





**Plate 4: Bat roost evidence in 97A Highfield Park**



**Plate 5: Area (in green box) to which common pipistrelles (circling in upper image) returned on 1<sup>st</sup> June 2021 at 97A Highfield Park**





**Plate 6: Derelict house beside Frankfort Castle**



**Table 2: Bat Conservation Ireland data within 10 km (no records from within 1 km from Frankfort Castle)**

BCIreland data: search results 21 June 2021			
Search parameters: Roosts Transects Ad-hoc observation sites with observations of all bats within 1000m of O1678028912.			
Ad-hoc observations			
Survey	Grid reference	Date	Species
Dublin Bat Group surveys	O159298		Pipistrellus pygmaeus
EIA survey- Paul Scott (Scott Cawley)	O176292	15/04/11	Myotis spp.; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus; Unidentified bat
Faith Wilson	O177286	04/09/03	18/08/1999



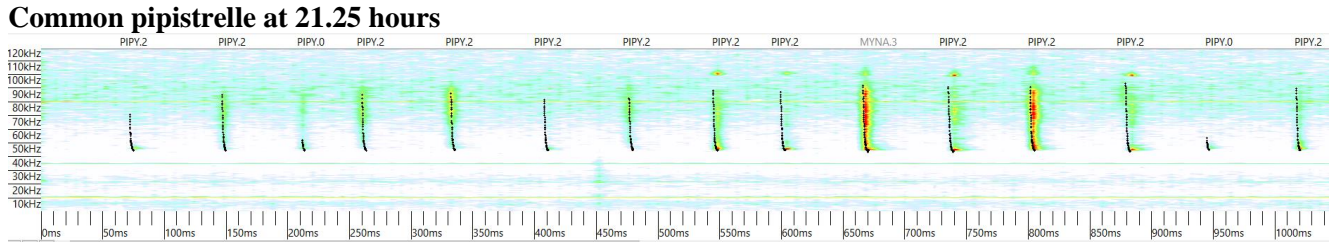
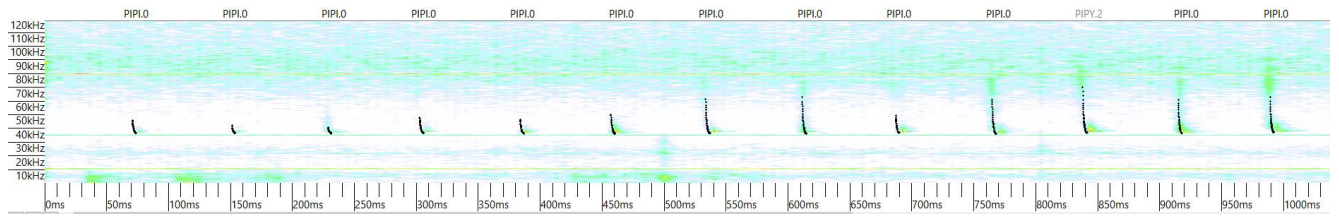
**Figure 2: Bat activity noted during the active survey, 2019**

*Blue – soprano pipistrelle*

*Green – common pipistrelle*

*Yellow – Leisler's bat*

*White line – Transect followed during the morning and night*



This species returned at 21.53 hours on two occasions.

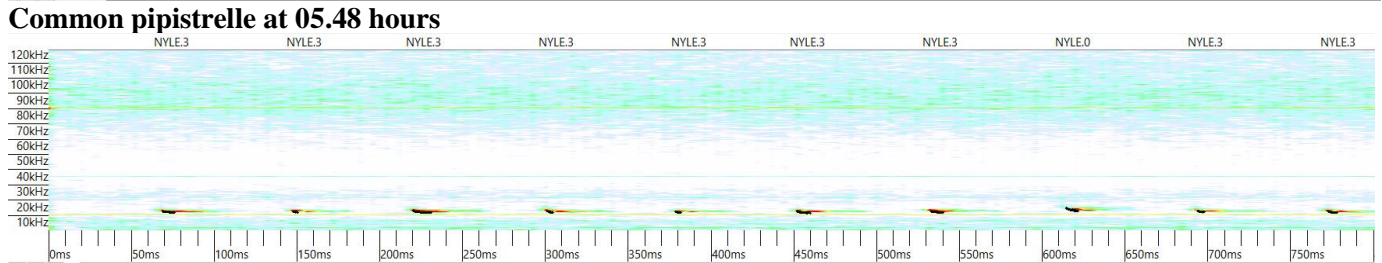
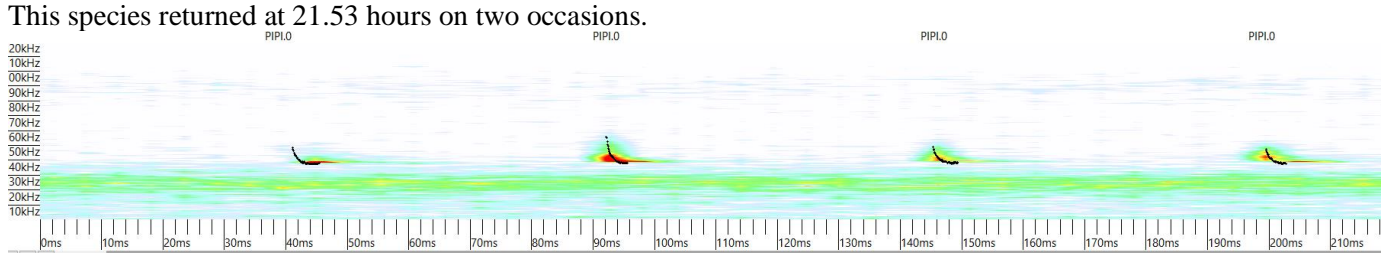


Figure 3 – Bat sonograms at Frankfort Castle August 2019





**Figure 4: Frankfort Castle 2021 bat activity Data from handheld EM3s and Echometer Touch Pro 2**  
 31<sup>st</sup> May to 1<sup>st</sup> June 2021

*Legend*

- Green paddles    Common pipistrelle    Green arrow    Common pipistrelle flight prior to sunrise
- Light yellow oval    Leisler's bat heard early in the survey period

**Table 1: Handheld Echometer Touch 2 Pro 97A Highfield Park 7<sup>th</sup> May 2021**

Date	Time	Auto Id	Pulses	Matching	Manual Id
07/05/2021	22:01:13	Common Pipistrelle	9	9	Common Pipistrelle
07/05/2021	22:01:23	Common Pipistrelle	13	13	Common Pipistrelle
07/05/2021	22:01:31	Common Pipistrelle	14	14	Common Pipistrelle
07/05/2021	22:01:36	Common Pipistrelle	20	19	Common Pipistrelle
07/05/2021	22:01:41	Common Pipistrelle	5	5	Common Pipistrelle
07/05/2021	22:01:49	Common Pipistrelle	6	6	Common Pipistrelle
07/05/2021	22:01:55	Common Pipistrelle	2	2	Common Pipistrelle
07/05/2021	22:02:21	Common Pipistrelle	27	27	Common Pipistrelle
07/05/2021	21:58:30	Soprano Pipistrelle	2	2	Soprano Pipistrelle

**Table 2a: Handheld Echometer 3 In the Southern Area of The Site, 6<sup>th</sup> To 7th May 2021**

Date	Time	Auto Id	Pulses	Matching	Manual Id
07/05/2021	22:23:46	Noid	1	0	Pip
07/05/2021	22:23:52	Common Pipistrelle	5	4	Pip
07/05/2021	22:28:42	Common Pipistrelle	5	5	Common Pipistrelle

**Table 2b: Handheld Echometer 3 around Frankfort Castle, 6<sup>th</sup> To 7th May 2021**

DATE	TIME	AUTO ID	PULSES	MATCHING	MANUAL ID
07/05/2021	22:23:46	NoID	1	0	Common Pipistrelle
07/05/2021	22:23:52	Common Pipistrelle	5	4	Soprano Pipistrelle
07/05/2021	22:28:42	Common Pipistrelle	5	5	Common Pipistrelle

**Table 3: Signals Recorded by Handheld EM3 Around Frankfort Castle 31<sup>st</sup> May To 1<sup>st</sup> June 2021**

Date	Time	Auto Id	Pulses	Matching	Manual Id
31/05/2021	22:02:43	Common Pipistrelle	9	9	Common Pipistrelle
31/05/2021	22:03:03	Common Pipistrelle	5	5	Common Pipistrelle
31/05/2021	22:03:18	Pina	6	3	Common Pipistrelle
31/05/2021	22:03:23	Common Pipistrelle	4	3	Common Pipistrelle
31/05/2021	22:03:48	Common Pipistrelle	16	10	Common Pipistrelle
31/05/2021	22:03:54	Common Pipistrelle	24	18	Common Pipistrelle
31/05/2021	22:03:59	Common Pipistrelle	60	35	Common Pipistrelle
31/05/2021	22:04:04	Pina	43	19	Common Pipistrelle
31/05/2021	22:04:09	Pina	52	20	Common Pipistrelle
31/05/2021	22:04:14	Common Pipistrelle	29	19	Common Pipistrelle
31/05/2021	22:04:19	Pina	15	8	Common Pipistrelle
31/05/2021	22:05:15	Common Pipistrelle	4	4	Common Pipistrelle
31/05/2021	22:08:17	Common Pipistrelle	3	2	Common Pipistrelle
31/05/2021	22:50:11	Leisler's Bat	2	2	
31/05/2021	22:58:54	Soprano Pipistrelle	15	15	
31/05/2021	23:00:44	Leisler's Bat	3	3	
01/06/2021	03:55:39	Common Pipistrelle	5	5	
01/06/2021	04:25:54	Common Pipistrelle	8	6	
01/06/2021	04:33:39	Noid	0	0	
01/06/2021	04:35:36	Common Pipistrelle	7	6	
01/06/2021	04:35:41	Common Pipistrelle	7	7	
01/06/2021	04:41:24	Common Pipistrelle	3	2	
01/06/2021	04:45:57	Common Pipistrelle	2	2	
01/06/2021	04:47:58	Noid	2	0	
01/06/2021	04:48:08	Common Pipistrelle	5	4	
01/06/2021	04:52:40	Pina	3	3	
01/06/2021	04:55:52	Leisler's Bat	2	2	Noise
01/06/2021	04:56:02	Common Pipistrelle	19	19	Common Pipistrelle

**Table 4: Handheld Echometer 3 In the Southern Area of The Site 31<sup>st</sup> May To 1<sup>st</sup> June 2021**

Date	Time	Auto Id	P	Matching	Manual Id
01/06/2021	04:30:11	Common Pipistrelle	3	3	Common Pipistrelle
01/06/2021	04:30:16	Common Pipistrelle	4	4	Common Pipistrelle
01/06/2021	04:30:56	Common Pipistrelle	2	2	Common Pipistrelle
01/06/2021	04:40:58	Common Pipistrelle	1	14	Common Pipistrelle
01/06/2021	04:41:03	Pina	1	6	Common Pipistrelle
01/06/2021	04:48:14	Pina	7	7	Common Pipistrelle
01/06/2021	04:48:34	Common Pipistrelle	1	10	Common Pipistrelle
01/06/2021	04:55:30	Common Pipistrelle	6	6	Common Pipistrelle
01/06/2021	04:55:35	Common Pipistrelle	9	7	Common Pipistrelle

**Table 5: Static Monitor At 97A Highfield Park 31<sup>st</sup> May To 1<sup>st</sup> June 2021**

Date	Time	Auto Id	Pulses	Matching	Manual Id
31/05/2021	21:57:58	Leisler's Bat	21	21	Leisler's Bat
31/05/2021	23:17:03	Soprano Pipistrelle	8	6	Pip
31/05/2021	23:42:30	Leisler's Bat	3	3	Leisler's Bat
31/05/2021	23:54:08	Common Pipistrelle	29	25	Common Pipistrelle
31/05/2021	23:54:13	Common Pipistrelle	27	24	Common Pipistrelle
31/05/2021	23:54:18	Common Pipistrelle	18	18	Common Pipistrelle
01/06/2021	04:25:26	Common Pipistrelle	36	29	Common Pipistrelle
01/06/2021	04:25:31	Common Pipistrelle	18	12	Common Pipistrelle
01/06/2021	04:30:17	Common Pipistrelle	31	30	Common Pipistrelle
01/06/2021	04:30:22	Common Pipistrelle	23	20	Common Pipistrelle
01/06/2021	04:30:27	Common Pipistrelle	26	25	Common Pipistrelle

**Table 6: Static Monitor at The Southern Section of Site 31<sup>st</sup> May To 1<sup>st</sup> June 2021**

Date	Time	Auto Id	Pulses	Matching	Manual Id
31/05/2021	22:59:38	Leisler's Bat	9	9	Leisler's Bat
31/05/2021	22:59:43	Leisler's Bat	3	2	Leisler's Bat
31/05/2021	23:25:44	Leisler's Bat	8	7	Leisler's Bat
31/05/2021	23:42:45	Leisler's Bat	3	3	Leisler's Bat
01/06/2021	00:00:23	Common Pipistrelle	5	3	Common Pipistrelle
01/06/2021	00:00:59	Soprano Pipistrelle	12	12	Soprano Pipistrelle
01/06/2021	00:36:06	Leisler's Bat	3	3	Leisler's Bat
01/06/2021	03:27:48	Leisler's Bat	2	2	Leisler's Bat
01/06/2021	03:57:31	Leisler's Bat	5	5	Leisler's Bat
01/06/2021	04:07:39	Leisler's Bat	5	5	Leisler's Bat
01/06/2021	04:40:00	Common Pipistrelle	19	4	Common Pipistrelle
01/06/2021	04:41:26	Common Pipistrelle	23	17	Common Pipistrelle
01/06/2021	04:41:31	Common Pipistrelle	28	22	Common Pipistrelle
01/06/2021	04:47:16	Common Pipistrelle	13	8	Common Pipistrelle
01/06/2021	04:48:42	Pina	12	8	Common Pipistrelle
01/06/2021	04:49:00	Pina	25	16	Common Pipistrelle
01/06/2021	04:49:05	Pina	3	3	Common Pipistrelle
01/06/2021	04:55:58	Common Pipistrelle	25	25	Common Pipistrelle
01/06/2021	04:56:03	Common Pipistrelle	3	2	Common Pipistrelle



**Table 7: Bat Data Recorded with The Handheld EM3 (Top 6 Results) On August 21<sup>st</sup> to 22<sup>nd</sup> 2019**

**And The Static SM2 (Remainder)**

Date	Time	Auto Id	Manual Id
21/08/2019	21:24:59	Common Pipistrelle	Common Pipistrelle
21/08/2019	21:25:40	Soprano Pipistrelle	Soprano Pipistrelle
21/08/2019	21:52:56	Soprano Pipistrelle	Soprano Pipistrelle
21/08/2019	21:53:17	Soprano Pipistrelle	Soprano Pipistrelle
22/08/2019	05:48:23	Common Pipistrelle	Pip
22/08/2019	06:12:22	Leisler's Bat	Leisler's Bat
<b>SM2 Results</b>			
Date	Time	Auto Id	Manual Id
21/08/2019	21:16:30	Leisler's Bat	Leisler's Bat
21/08/2019	21:17:00	Leisler's Bat	Leisler's Bat
21/08/2019	21:21:30	Leisler's Bat	Leisler's Bat
21/08/2019	21:33:38	Soprano Pipistrelle	Soprano Pipistrelle
21/08/2019	21:34:08	Leisler's Bat	Leisler's Bat
21/08/2019	22:19:16	Soprano Pipistrelle	Soprano Pipistrelle
21/08/2019	22:19:46	Soprano Pipistrelle	Soprano Pipistrelle
21/08/2019	22:23:16	Leisler's Bat	Leisler's Bat
21/08/2019	23:26:30	Common Pipistrelle	Common Pipistrelle
21/08/2019	23:36:38	Leisler's Bat	Common Pipistrelle
21/08/2019	23:37:08	Leisler's Bat	Common Pipistrelle
21/08/2019	23:44:08	Common Pipistrelle	Common Pipistrelle
21/08/2019	23:44:38	Common Pipistrelle	Common Pipistrelle
21/08/2019	23:48:08	Leisler's Bat	Common Pipistrelle
21/08/2019	23:48:38	Common Pipistrelle	Common Pipistrelle
21/08/2019	23:52:08	Common Pipistrelle	Common Pipistrelle
21/08/2019	23:52:38	Leisler's Bat	Common Pipistrelle
21/08/2019	23:53:08	Common Pipistrelle	Common Pipistrelle
22/08/2019	00:01:30	Common Pipistrelle	Common Pipistrelle
22/08/2019	00:02:00	Common Pipistrelle	Common Pipistrelle
22/08/2019	00:12:30	Leisler's Bat	Leisler's Bat
22/08/2019	00:15:00	Leisler's Bat	Common Pipistrelle
22/08/2019	00:55:08	Leisler's Bat	Common Pipistrelle
22/08/2019	01:14:08	Soprano Pipistrelle	Common Pipistrelle
22/08/2019	01:52:16	Leisler's Bat	Common Pipistrelle
22/08/2019	02:06:16	Common Pipistrelle	Common Pipistrelle
22/08/2019	02:41:54	Common Pipistrelle	Common Pipistrelle
22/08/2019	02:42:24	Leisler's Bat	Common Pipistrelle
22/08/2019	02:52:54	Noid	Common Pipistrelle
22/08/2019	05:47:56	Common Pipistrelle	Common Pipistrelle