

APPENDIX 10.2: BAT SURVEY ANALYSIS

1.1 Bat Risk Assessment

Table 10.2.1: Individual Bats likely to be at risk from wind turbines (Source: Natural England, 2014)

Low Risk	Medium Risk	High Risk
<i>Myotis</i> species	Common pip.	Noctule (<i>Nyctalus</i>)
Long eared-bats	Serotine	Leisler's (<i>Nyctalus</i>)
Horseshoe bats	Soprano pip.	Nathusius' pipistrelle
	Barbastelle	

Table 10.2.2: Total Bat Passes – Risk to Individual Bats

	Low Risk	Medium Risk	High Risk	
Open Habitat	0	1357	0	
Edge Habitat	11	405	2	
Closed Habitat	0	0	0	
Height Habitat	0	19	0	
Total Passes	11	1781	2	1794

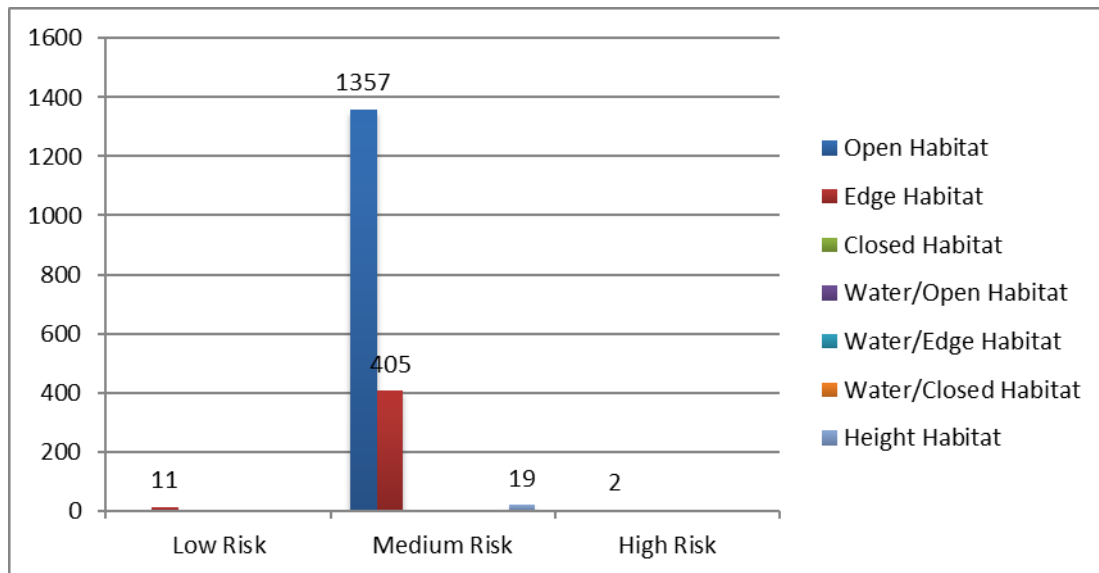


Figure 10.2.1

Table 10.2.3: Individual Bats likely to be at risk from wind turbines (Source: Natural England, 2014)

Low Risk	Medium Risk	High Risk
<i>Myotis</i> species	Common pip.	Noctule (<i>Nyctalus</i>)
Long eared-bats	Serotine	Leisler's (<i>Nyctalus</i>)
Horseshoe bats	Soprano pip.	Nathusius' pipistrelle
	Barbastelle	

Table 10.2.4: Total Bat Passes per Hour Surveyed – Risk to Individual Bats

	Low Risk	Medium Risk	High Risk	
Open Habitat	0.00	4.18	0.00	
Edge Habitat	0.02	0.66	0.00	
Closed Habitat	0.00	0.00	0.00	
Height Habitat	0.00	0.02	0.00	
Total Passes per Hour	0.01	1.05	0.00	1.06

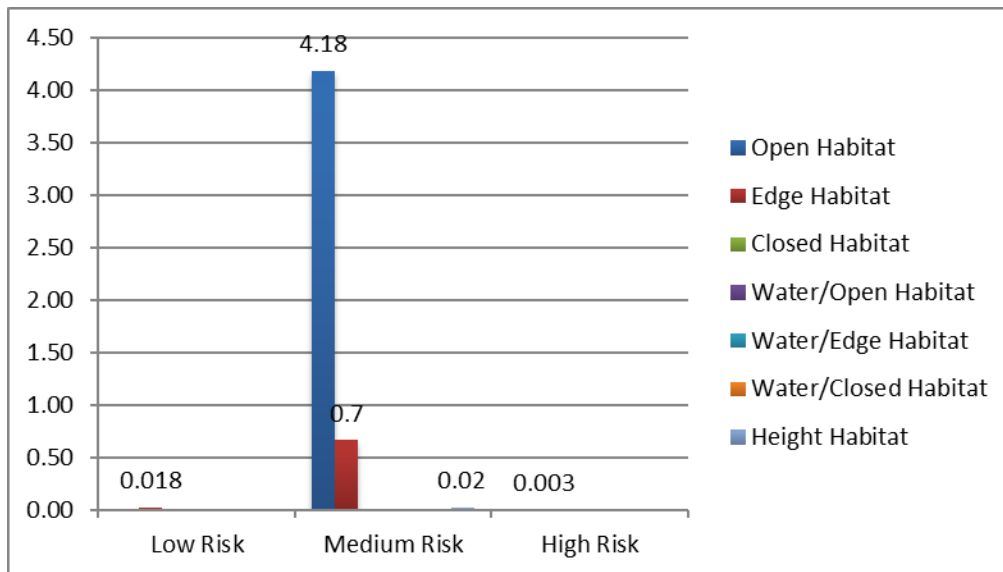


Figure 10.2.2

Table 10.2.5: Populations likely to be threatened due to impacts from wind turbines (Source: Natural England, 2014)

Low Risk	Medium Risk	High Risk
Long-eared bats	Serotine	Noctule (<i>Nyctalus</i>)
<i>Myotis</i> species	Barbastelle	Leisler's (<i>Nyctalus</i>)
Common pipistrelle		Nathusius' pipistrelle
Soprano pipistrelle		
Horseshoe bats		

Table 10.2.6: Total Bat Passes – Risk to Bat Populations

	Low Risk	Medium Risk	High Risk	
Open Habitat	1357	0	0	
Edge Habitat	416	0	2	
Closed Habitat	0	0	0	
Height Habitat	19	0	0	
Total Passes	1792	0	2	1794

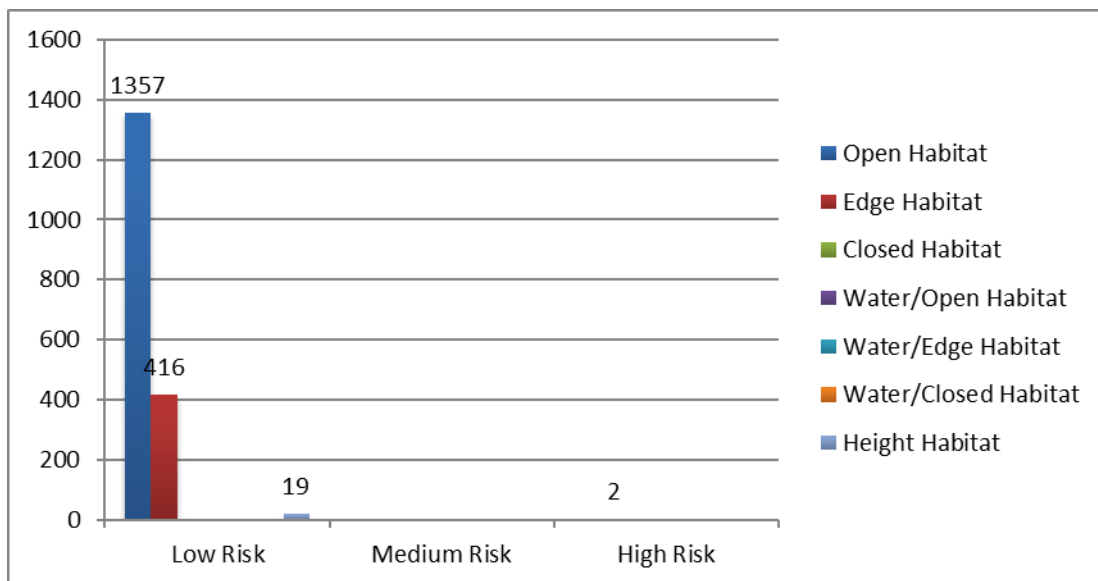


Figure 10.2.3

Table 10.2.7: Populations likely to be threatened due to impacts from wind turbines (Source: Natural England, 2014)

Low Risk	Medium Risk	High Risk
Long-eared bats	Serotine	Noctule (<i>Nyctalus</i>)
<i>Myotis</i> species	Barbastelle	Leisler's (<i>Nyctalus</i>)
Common pipistrelle		Nathusius' pipistrelle
Soprano pipistrelle		
Horseshoe bats		

Table 10.2.8: Total Bat Passes per Hour Surveyed – Risk to Bat Populations

	Low Risk	Medium Risk	High Risk	
Open Habitat	4.18	0.00	0.00	
Edge Habitat	0.68	0.00	0.00	
Closed Habitat	0.00	0.00	0.00	
Height Habitat	0.02	0.00	0.00	
Total Passes per Hour	1.06	0.00	0.00	1.06

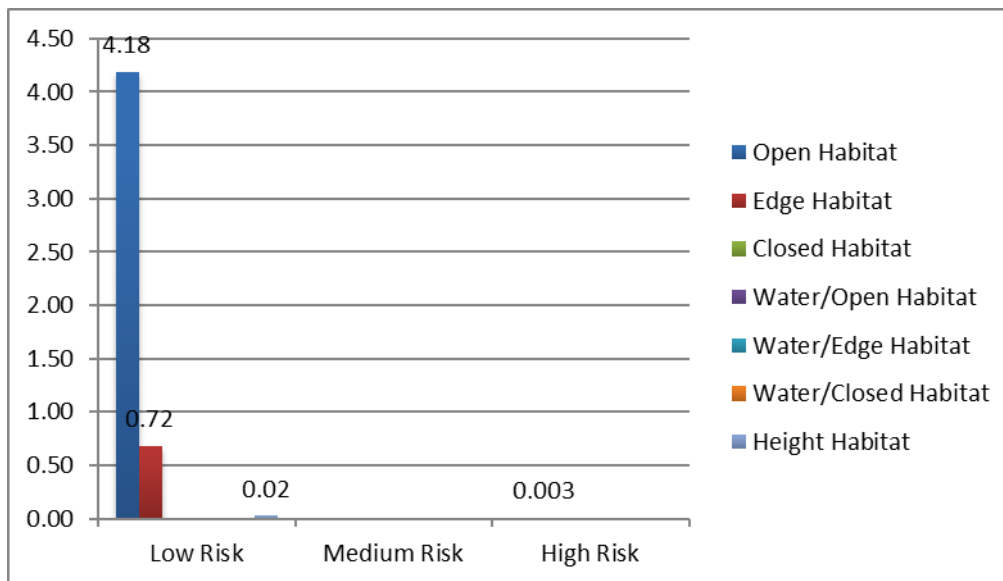


Figure 10.2.4

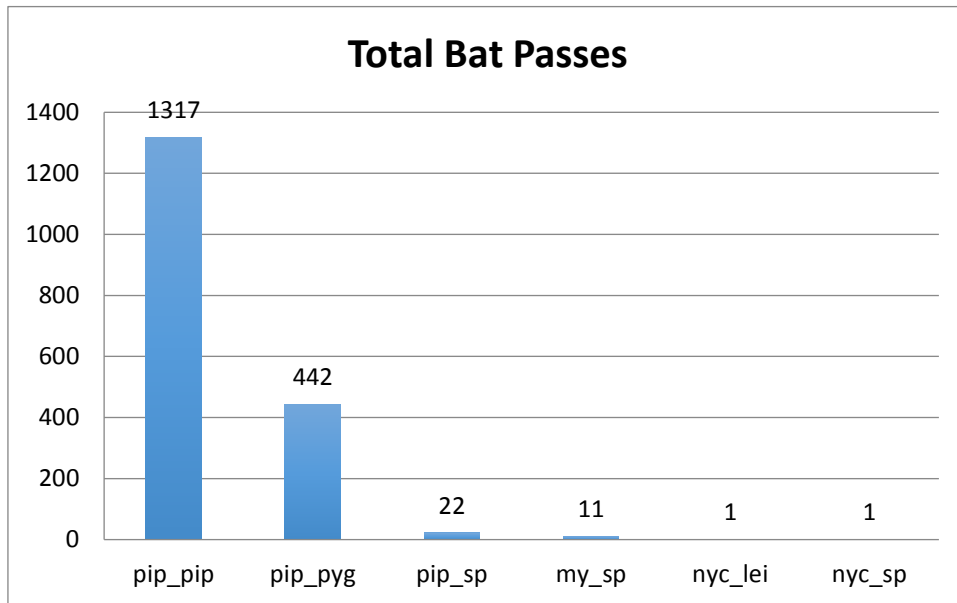


Figure 10.2.5

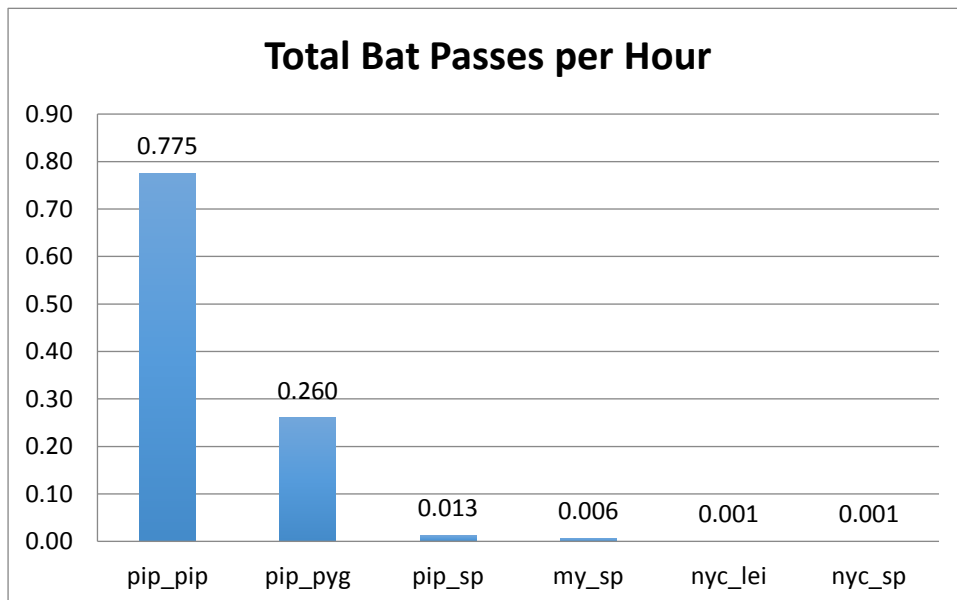


Figure 10.2.6

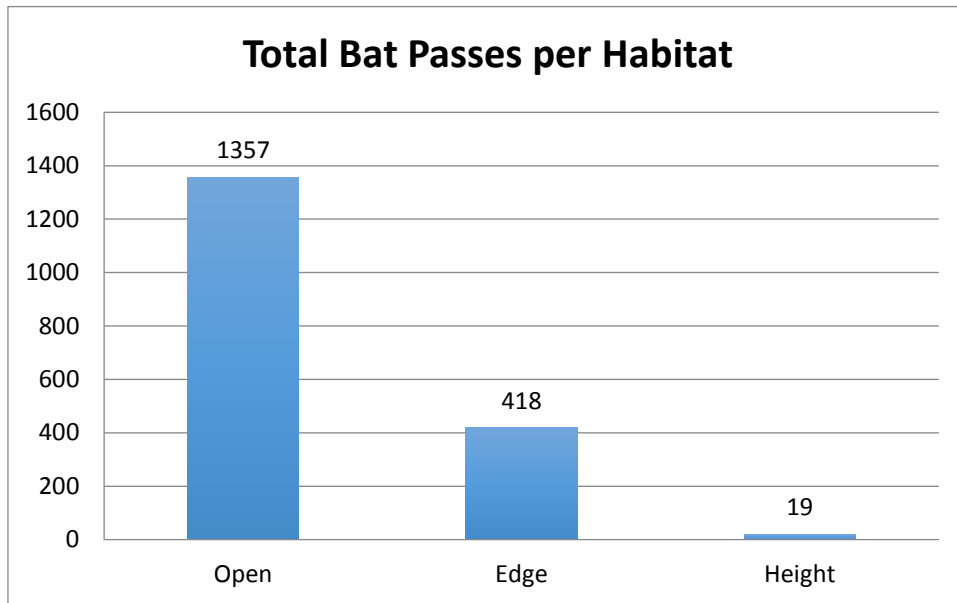


Figure 10.2.7

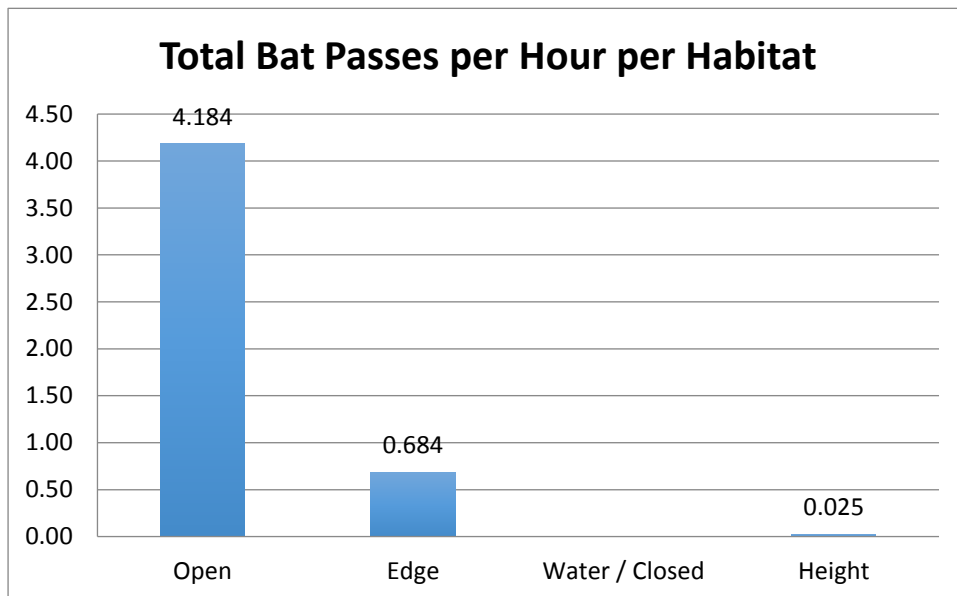


Figure 10.2.8

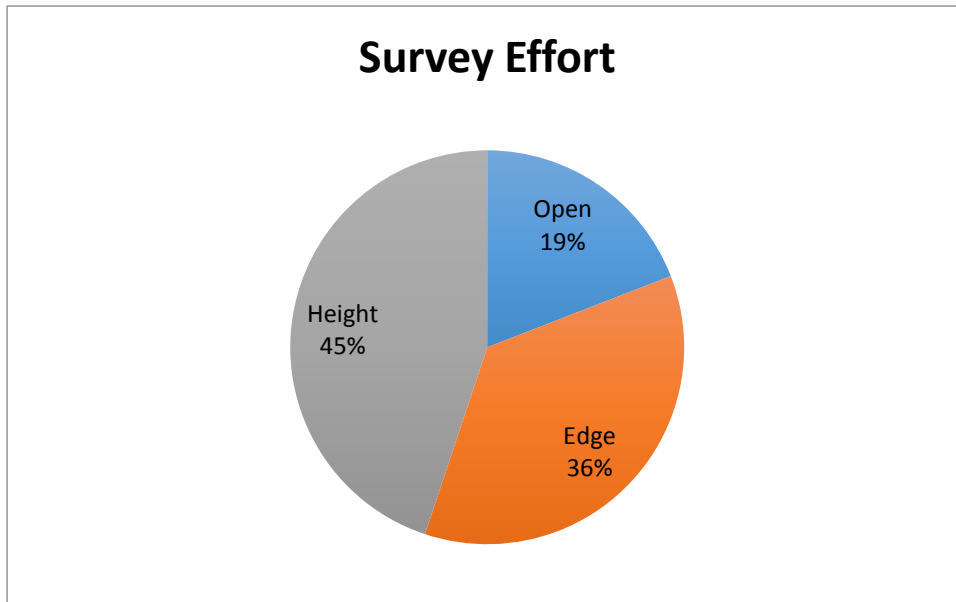


Figure 10.2.9

Table 10.2.9: Automated Bat Detector Sessions: Total Bat Passes/Pulses per Hour				
Habitat Types	Open	Edge	Height	Total All Habitat Locations
Survey Minutes	19459	36671	45702	101832
Minutes converted to Hours	324h 19mins	611h 11 mins	761h 42mins	1697h 12mins
pip_pip	3.07	0.50	0.02	0.77
pip_pyg	1.07	0.15	0.01	0.26
pip_sp	0.04	0.01	0.00	0.01
my_sp	0.00	0.02	0.00	0.01
nyc_lei	0.000	0.002	0.000	0.001
nyc_sp	0.000	0.002	0.000	0.001
Total Bat Passes/Pulses	1357	418	19	1794
Bat Passes/Pulses per Hour	4.18	0.68	0.02	1.06

Table 10.2.10: Bat Survey Transect Results

Habitat	Pip. Pip.	Pip. Pyg	Pip. Sp.	My. Sp.	Total
Open Habitat (by existing turbine)	1	0	1	0	2
Open Habitat	16	11	4	4	35
Conifer Woodland	37	14	21	4	76
Woodland Edge Conifer	9	11	15	4	39
Broadleaved Edge	34	21	35	16	106
Mixed Broadleaved Conifer Woodland	14	2	3	0	19
Loch	23	59	7	7	96
Total	134	118	86	35	373

Habitat	Pip. Pip.	Pip. Pyg	Pip. Sp.	My. Sp.	Total
Open Habitat (by existing turbine)	0.05	0.00	0.05	0.00	0.11
Open Habitat	0.85	0.58	0.21	0.21	1.86
Conifer Woodland	1.97	0.74	1.12	0.21	4.04
Woodland Edge Conifer	0.48	0.58	0.80	0.21	2.07
Broadleaved Edge	1.81	1.12	1.86	0.85	5.63
Mixed Broadleaved Conifer Woodland	0.74	0.11	0.16	0.00	1.01
Loch	1.22	3.14	0.37	0.37	5.10
Total	7.12	6.27	4.57	1.86	11.35

Habitat	Time	Percent
Open Habitat (by existing turbine)	90	05%
Open Habitat	450	23%
Conifer Woodland	857	43%
Woodland Edge Conifer	360	18%
Broadleaved Edge	45	02%
Mixed Broadleaved Conifer Woodland	56	03%
Loch	112	06%
Total	1971	100%