

High Speed Rail (Crewe – Manchester)

Background information and data

Ecology and biodiversity

BID EC-011-00001_Part 2

Ecological baseline data - bats - Part 2 of 2

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Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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2.4 Baseline [MA05-MA08]

Risley to Bamfurlong (MA05)

2.4.1 Table 84 provides a summary of bat roosts identified in MA05 from field surveys. This table should be read in conjunction with Background Information and Data, Ecology Map Book Map Series EC-05. Survey information collected has been allocated an ecology survey code to provide a unique identification for use on mapping.

Overview of bat species status in the vicinity of MA05

2.4.2 There are no statutory designated sites (within 10km) or non-statutory designated sites (within 5km) of MA05 which support bats as features for their designations.

2.4.3 Habitats within MA05 suitable to support roosting, foraging and commuting bats include several areas of broad-leaved woodland such as Culcheth Linear Park and Viridor Wood, a number of watercourses including Windy Bank Brook and Coffin Lane Brook and several smaller tributaries, water bodies, grassland and farmland containing hedgerows. The majority of these habitats are located within and adjacent to the land required for the construction of the Proposed Scheme.

2.4.4 Field surveys and desk study records recorded at least 10 species of bats in MA05. All 10 species were identified from field surveys. The total bat assemblage is as follows:

- common pipistrelle (*Pipistrellus pipistrellus*);
- soprano pipistrelle (*Pipistrellus pygmaeus*);
- *Pipistrellus* species;
- Nathusius' pipistrelle (*Pipistrellus nathusii*);
- brown long-eared bat (*Plecotus auritus*);
- noctule (*Nyctalus noctula*);
- Leisler's bat (*Nyctalus leisleri*);
- serotine (*Eptesicus serotinus*);
- *Myotis* species;
- whiskered bat (*Myotis mystacinus*)/Brandt's bat (*Myotis brandtii*);
- Daubenton's bat (*Myotis daubentonii*); and
- Natterer's bat (*Myotis nattereri*).

Roosting (trees)

2.4.5 A total of 372 trees were subject to an initial ground-based assessment and subsequent further detailed climbed surveys where appropriate (in line with the methods described in the FSMS document).

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- 2.4.6 Of the 372 trees that were initially assessed, the following results were obtained:
- 19 trees identified as having high potential to support roosting bats;
 - 163 trees identified as having moderate potential to support roosting bats; and
 - the remaining 190 trees were classified as having low or negligible potential to support roosting bats. These trees were subsequently scoped out of further survey.
- 2.4.7 Of the 182 trees assessed as having moderate or high potential to support roosting bats:
- a total of 60 were subject to further surveys in the form of a tree climbing inspection during which no roosts were identified;
 - 19 trees were reassessed as having low to negligible potential to support roosting bats and were scoped out of further surveys;
 - 20 trees were subject to emergence surveys during which no roosts were recorded; and
 - no trees were subject to back-tracking surveys.

Roosting (buildings and structures)

- 2.4.8 A total of 249 buildings in this area were subject to initial inspections, resulting in the following:
- 13 buildings were confirmed to support 17 roosts;
 - two roosts were confirmed via external and internal inspections and 15 roosts were identified from emergence surveys and re-entry surveys;
 - five buildings had high potential to support bats;
 - 60 buildings had moderate potential to support bats;
 - 57 buildings had low potential to support bats; and
 - 114 buildings had negligible potential to support bats.
- 2.4.9 Of the 122 buildings confirmed as having roosts, or assessed as having high, moderate or low potential to support bats:
- 70 buildings were subject to internal inspections resulting in identification of two bat roosts;
 - 40 buildings were subject to a total of 73 emergence and re-entry surveys identifying a further 15 roosts; and
 - two roosts were visually identified as *Pipistrellus* bat species from droppings found on the internal inspections, but this has not been confirmed via DNA analysis.
- 2.4.10 Details of confirmed roosts in buildings/structures in MA05 are provided in Table 84.

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Table 84: Confirmed roosts in buildings and structures within MA05

Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
GM915771_L4943_BS3_F001_010818	Slag Lane, north-east Wigan	SJ62489847	Residential	Soprano pipistrelle (1)	1 August 2018, emergence survey	Occasional	Residential building, newly built (circa. 10 years old) with partly rendered walls, plastic soffit box and concrete tiles. One bat seen emerging from the northern side of the chimney located on the western gable end.	MA05	Within
GM455634_L18532_BS3_F001_290818	Lily Lane, Bamfurlong	SD60020167	Residential	Soprano pipistrelle (1)	29 August 2018, re-entry survey	Occasional	Red brick, 20th century semi-detached residential house with a slate tiled pitched roof and a chimney. Single-storey extension to the rear of the house.	MA05	4m east
GM455634_L18532_BS3_F001_190919	Lily Lane, Bamfurlong	SD60020167	Residential	Common pipistrelle (1)	19 September 2019, re-entry survey	Occasional	Red brick, 20th century semi-detached residential house with a slate tiled pitched roof and a chimney. Single-storey extension to the rear of the house.	MA05	4m east
GM519457_L19004_BS3_F001_300818	Lily Lane, Bamfurlong	SD60020167	Residential	Common pipistrelle (1)	30 August 2018, emergence survey	Occasional	Red brick, semi-detached, Edwardian building with a pitched roof and a chimney. Two modern extensions at the back.	MA05	2m east
CH287045_L20840_BS3_F001_040918	Wigshaw Lane, south-west of Culcheth	SJ64789475	Residential	Soprano pipistrelle (4)	4 September 2018, emergence	Occasional	Two-storey brick building, extended to west, with a pitched roof clad with clay tiles. Single-storey porch with a sloping tile roof on the northern wall of the	MA05	1m north-east

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Ecology survey code	Location	OS grid reference	Building/structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
					survey		extension. There is a brick chimney on the western wall.		
CH375511_L20988_BS3_F001_130819	Kenyon Lane, Kenyon	SJ63169589	Residential	Common pipistrelle (2)	28 August 2019, emergence survey	Occasional	Edwardian house with swimming pool house attached on the western edge. Pitched and flat roof. Well-lit in places.	MA05	20m west
CH375511_L20988_BS3_F001_130819	Kenyon Lane, Kenyon	SJ63169589	Residential	<i>Myotis</i> species (1)	28 August 2019, emergence survey	Occasional	Edwardian house with swimming pool house attached on the western edge. Pitched and flat roof. Well-lit in places.	MA05	20m west
CH449806_L21029_BS2_F002_110718	Robin's Lane, south-west of Culcheth	SJ64749485	Residential	<i>Pipistrellus</i> sp. (Visual droppings ID)	11 July 2018, internal inspection	Occasional	A residential building of brick construction possibly of Victorian era. Pitched slate tile roof with chimney.	MA05	25m south
GM159720_L21082_BS2_F002_090818	Slag Lane, Lowton	SJ62439888	Stables	<i>Pipistrellus</i> sp. (Visual droppings ID)	9 August 2018, internal inspection	Occasional	Garage with stable block on the northern aspect. The garage is constructed from brick with metal sheet roofing resembling pan tiles.	MA05	7m north-east
MAN211851 - MAN24092_L4610_BS3_F001_260918	Lightshaw Lane, Goldborne	SJ61489954	Residential	Common pipistrelle (2)	26 September 2018, re-entry survey	Occasional	A two-storey residential building with a slate tiled pitched roof, no longer inhabited and thought to be over 50 years old.	MA05	30m north
GM425997_L5285_BS3_	Wigan Road, Goldborne	SJ60739977	Barn	Common pipistrelle (1)	30 July 2018,	Occasional	Red brick farm building with a pitched roof, approximately 100 years old, used	MA05	5m west

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Ecology survey code	Location	OS grid reference	Building/structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
F001_300718					emergence survey		for storage but not accessed often.		
GM425997_L5285_BS3_F002_180718	Wigan Road, Goldborne	SJ60709976	Residential	Common pipistrelle (1)	18 July 2018, emergence survey	Occasional	Old farm building comprising two sections: the first is a large single-storey asbestos barn used both for storage and as a workshop. The second is an old two-storey brick building attached to the eastern side of this which is used for storage on the ground floor and not used on the second floor. The asbestos section of the building is likely to have been built in the 1950s/1960s and the brick section of the building is likely to be 100 years old.	MA05	Within
GM216298-GM806542_L5791_BS3_F001_180618	Garton Common, Hindley Green	SJ62469835	Barn	Common pipistrelle (6)	18 August 2018, emergence survey	Occasional	Open warehouse structure made from corrugated metal used for horses. Pitched roof also made from corrugated metal.	MA05	15m south-east
MAN171180_L5810_BS3_F001_190718	Hesketh Meadow Lane, Lowton	SJ63039751	Disused hospital unit	Common pipistrelle (1)	19 July 2018, re-entry survey	Occasional	A large period building built in three sections. The main middle section is approximately 100 years old, the western section is approximately 80 years old and there is a more modern extension attached to the north-east which is approximately 30 years old.	MA05	7m west

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MAN171180_L5810_BS3_F001_230818	Hesketh Meadow Lane, Wigan	SJ63039751	Disused Hospital Unit	Soprano pipistrelle (3)	23 August 2018, emergence survey	Occasional	A large period building built in three sections. The main middle section is approximately 100 years old, the western section is approximately 80 years old and there is a more modern extension attached to the north-east which is approximately 30 years old.	MA05	7m west
MAN171180_L5810_BS3_F001_230818	Hesketh Meadow Lane, Wigan	SJ63039751	Disused Hospital Unit	Brown long-eared bat (2)	23 August 2018, emergence survey	Occasional	A large period building built in three sections. The main middle section is approximately 100 years old, the western section is approximately 80 years old and there is a more modern extension attached to the north-east which is approximately 30 years old.	MA05	7m west
GM719324, GM917074, U200978_L6100_BS3_F001_210819	A573 Wigan Road, Stubshaw Cross	SD60570021	Residential	Common pipistrelle (11)	21 August 2019, emergence survey	Possible Maternity	A three-storey, brick built residential building with slate tiled pitched roof. Eighty years old in very poor condition.	MA05	30m east

Roosting (woodlands)

- 2.4.11 This section applies to all trees subject to the surveying woodlands methodology. Ten discrete areas of woodland, comprising either single large woodland blocks or groups of smaller woodlands, were identified to be surveyed in accordance with the surveying woodland methodology.
- 2.4.12 The results of woodlands identified for survey and the results of initial ground-based assessments of trees and surrounding area are summarised in Table 85. Trees with negligible potential for roosting bats were not recorded or mapped.

Table 85: Potential roosting resource within woodlands in MA05

Woodland	Number of trees with features of potential value to roosting bats			Overall suitability of woodland for bats*
	High suitability	Moderate suitability	Low suitability	
Holcroft Moss	1	2	10	Low – isolated, semi-mature trees. Connectivity to woodlands to the west and ponds to the east. Light pollution along M62 to the north may form barrier to movement.
Culcheth Linear Park	0	12	8	Moderate – long linear park providing good connectivity via the disused railway and surrounding hedgerows to a large area.
Bryom Wood	0	16	12	Moderate – woodland comprising semi-mature trees within 500m of Pennington Flash Country Park, connected by a range of ditches, brooks and tree lined fields.
Ince Moss	Unknown	Unknown	Unknown	Moderate – large area of lakes and woodlands.
Viridor Wood	Unknown	Unknown	Unknown	Moderate – planted woodland connected to other smaller woodlands and hedgerows. There is also connectivity to the Leeds and Liverpool Canal.
Windy Bank Brook Wood	0	2	2	Moderate – small area of woodland. Good connectivity to Liverpool and Leeds canal and Hey Brook.
Unnamed wood, south of Warrens Croft Farm in Lowton Common.	0	0	8	Low – small woodland with poor connectivity.
Woodland north of Edge Green	Unknown	Unknown	Unknown	Moderate – woodland with arable fields to west and east. Nan Holes Brook runs through wood and there is connectivity to Viridor Wood and surrounding habitat. The woodland surrounds an

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Woodland	Number of trees with features of potential value to roosting bats			Overall suitability of woodland for bats*
				aggregate factory.
Pestfurlong Hill	0	7	4	Moderate – woodland with various water bodies and very good connectivity to Birchwood Forest Park and Risley Moss to south. M62 may impede movement north.
Silver Lane Ponds Local Wildlife Site (LWS)	Unknown	Unknown	Unknown	Low – immature plantation woodland adjacent to wildlife area and connectivity to Holcroft Moss. M62 to the south may provide a barrier to movement.

*based on the quality and quantity of the roost and feeding resource and ecological position of the wood

2.4.13 Transects and static detector surveys were undertaken around each woodland where access was available in order to gain an understanding of the bat assemblage and levels of bat activity. The results of these surveys are included in the bat activity surveys section.

Bat activity surveys

2.4.14 At least 10 species have been recorded during the range of bat activity surveys conducted in MA05:

- common pipistrelle;
- soprano pipistrelle;
- *Pipistrellus* bat species;
- Nathusius' pipistrelle;
- brown long-eared bat;
- noctule;
- Leisler's bat;
- serotine;
- *Myotis* species;
- whiskered bat/Brandt's bat;
- Daubenton's bat; and
- Natterer's bat.

Table 86: Bat activity surveys conducted within MA05

Ecology survey code	Transect location	Numbers of surveys conducted	First survey date	Final survey date	CA	Map reference
DT02	South of Culcheth	7	4 July 2018	21 September 2020	MA05	EC-06-530
DT03	South-west of Culcheth	8	23 July 2018	1 September 2020	MA05	EC-06-529/530/531

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Ecology survey code	Transect location	Numbers of surveys conducted	First survey date	Final survey date	CA	Map reference
DT04	North of Golborne	5	23 July 2018	17 April 2019	MA05	EC-06-533/533-R1/534
DT05	South-west of Abram	7	26 June 2018	17 April 2019	MA05	EC-06-535
DT07	North-west of Golborne	5	24 July 2018	11 October 2018	MA05	EC-06-534/534-R1
DT08	East of Warrington	9	25 July 2018	21 September 2020	MA05	EC-06-528/528-R1
D12	Dismantled railway, Glazebrook Moss	3	23 July 2018	11 October 2019	MA05	EC-06-527b/528
D13	South of M62	6	23 July 2018	10 June 2019	MA05	EC-06-528
D14	Silver Lane Lakes	6	28 June 2018	10 October 2019	MA05	EC-06-529
D15	Silver Lane Lakes	5	4 September 2018	11 June 2019	MA05	EC-06-529
D16	Silver Lane Lakes	6	31 July 2018	11 June 2019	MA05	EC-06-529
D17	Laburnum Farm	1	3 July 2018	10 July 2018	MA05	EC-06-530
D18	Wigshaw and Glaziers Lane	4	23 July 2018	23 October 2018	MA05	EC-06-530
D19	Culcheth Linear Park	5	23 July 2018	16 April 2019	MA05	EC-06-531
D20	Culcheth Linear Park	7	24 July 2018	17 June 2019	MA05	EC-06-531
D21	Culcheth Linear Park	7	24 July 2018	17 June 2019	MA05	EC-06-531
D22	Culcheth Linear Park	6	24 July 2018	13 August 2019	MA05	EC-06-531
D23	Burchall's Farm	6	24 July 2018	19 June 2019	MA05	EC-06-532
D24	South of A580	6	24 July 2018	17 June 2019	MA05	EC-06-532
D25	North of A580	3	22 August 2018	16 April 2019	MA05	EC-06-532
D26	Lowton	7	15 August 2018	12 September 2019	MA05	EC-06-532
D27	Lowton Common	7	24 July 2018	17 June 2019	MA05	EC-06-532
D28	Small	2	30 July 2018	17 June 2019	MA05	EC-06-533

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Ecology survey code	Transect location	Numbers of surveys conducted	First survey date	Final survey date	CA	Map reference
	Brook					
D29	Garton Common	2	30 July 2018	17 June 2019	MA05	EC-06-533
D30	Slag Lane	7	26 June 2018	24 May 2019	MA05	EC-06-533
D31	Little Byrom Hall Farm	5	28 June 2018	31 July 2020	MA05	EC-06-533
D32	South of Byrom Wood	7	28 June 2018	24 May 2019	MA05	EC-06-533
D33	North of Byrom Wood	7	30 July 2018	18 June 2019	MA05	EC-06-533
D35	Lightshaw Lane	7	30 July 2018	18 June 2019	MA05	EC-06-534
D36	Windy Bank Brook	4	31 July 2018	29 October 2018	MA05	EC-06-534
D37	Wigan Road	5	27 June 2018	29 October 2018	MA05	EC-06-534
D38	Nan Holes Brook	2	23 September 2020	7 October 2020	MA05	EC-06-534
D39	Locker Lane, Wigan	7	27 June 2018	7 October 2020	MA05	EC-06-535
D40	Coffin Lane Brook	5	31 July 2018	18 June 2019	MA05	EC-06-535
D42	Lily Lane, Wigan	7	31 July 2018	18 June 2019	MA05	EC-06-535-C1

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Table 87: Bat activity transect survey results for Transect DT02

Ecology survey code	Transect location				Description of habitats covered by transect																	
DT02	South of Culcheth.				Transect begins at Warrington Road (A574) and follows a drain within a narrow strip of woodland, heading south and passing New Hall where it follows a hedgerow looping around scrubland containing four large water bodies before re-joining the original route within the narrow woodland strip.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	Nl	Es	Ny/Es	
Visit 1: Dusk: 4 July 2018	21	1	0	1	47	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	
Visit 2: Dusk: 8 August 2018	19	1	0	1	71	29	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	
Visit 3: Dawn: 9 August 2018	10	0	0	2	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 4: Dawn: 6 September 2018	10	8	0	2	13	12	0	0	0	4	0	0	0	0	0	2	0	0	0	0	0	
Visit 5: Dusk: 2 October 2018	15	7	0	2	34	43	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	
Visit 6: Dawn: 25 April 2019	9	0	0	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
May 2019 – Incomplete	N/A – Data corrupt																					
June 2019 – Incomplete	N/A – Survey cancelled																					
Visit 7: Dusk: 21 September 2020	17	0	0	1	33	80	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	

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Pp – common pipistrelle, *P py* – soprano pipistrelle, *Pn* – Nathusius' pipistrelle, *P sp.* – Pipistrellus species, *Mb* – Bechstein's bat, *Md* – Daubenton's bat, *Mn* – Natterer's bat, *Mm* – whiskered bat, *Mbr* – Brandt's bat, *Mm/Mb* – whiskered/Brandt's bat, *M.sp* – Myotis species, *Pa* – brown long-eared bat, *Bb* – barbastelle, *Nn* – noctule, *Nl* – Leisler's bat, *Es* – serotine, *Ny/Ep* – Nyctalus/Eptesicus bat.

Cloud cover on a scale of 0 – 8 where: 0 = sky completely clear, 4 = sky half cloudy, 8 = sky completely cloudy.

Precipitation intensity on scale of 0 – 5 where: 0 = dry, 1 = light drizzle, 2 = light rain, 3 = moderate rain, 4 = heavy rain, 5 = torrential rain.

Wind speed score of 0 – 12 against Beaufort scale where: 0 = calm, 2 = light breeze, 4 = moderate breeze, 6 = strong breeze, 7 = high wind, 9 = strong gale, 12 = hurricane.

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- 2.4.15 Moderate levels of common pipistrelle activity and low to moderate levels of soprano pipistrelle activity were recorded at this location with peaks of 71ppn and 80ppn in August 2018 and September 2020, respectively. Generally low numbers of *Myotis* species were recorded, peaking with four ppn of Daubenton's bat in September 2018. Low levels of *Nyctalus* species were recorded, with one ppn of both Leisler's bat and noctule in August 2018 and October 2018, respectively.

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Table 88: Bat activity transect survey results for Transect DT03

Ecology survey code	Transect location				Description of habitats covered by transect																	
DT03	South-west of Culcheth.				Transect follows a disused railway north-west from Culcheth Linear Park south of Golborne, before traversing hedgerows around arable fields scattered with small ponds. The transect then passes through land at Blakely Farm Cottage.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.s p	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 23 July 2018	23	7	0	0	112	32	0	0	0	1	0	0	0	0	1	0	0	10	1	0	0	
Visit 2: Dawn: 24 July 2018	20	6	0	1	62	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	
August 2018 – Incomplete	N/A – Survey cancelled																					
Visit 3: Dawn: 6 September 2018	14	7	0	0	42	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
Visit 4: Dusk: 3 October 2018	18	7	0	2	66	14	0	0	0	0	0	0	0	0	28	5	0	3	3	0	0	
Visit 5: Dusk: 16 April 2019	14	6	0	1	80	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 6: Dusk: 20 May 2019	12	0	0	1	21	13	0	0	0	0	0	0	0	8	1	0	0	3	0	0	0	
June 2019 – Incomplete	N/A – Access refused																					
Visit 7: Dusk: 7 August 2019	20	4	0	1	126	25	5	0	0	0	0	0	0	9	0	0	0	0	0	0	0	
Visit 8: Dusk: 1 September	16	5	0	0	95	89	0	10	0	0	0	0	0	0	8	0	0	3	0	0	0	

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Ecology survey code	Transect location	Description of habitats covered by transect
2020		

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- 2.4.16 High levels of common pipistrelle and low to moderate levels of soprano pipistrelle activity were recorded at this location with peaks of 126ppn in August 2019 and 89ppn in September 2020, respectively. Additionally, a low level of *Myotis* species activity was recorded, which included Daubenton's bat, Natterer's bat and Brandt's/whiskered bat with a peak of 28ppn of *Myotis* species in October 2018. Low to moderate levels of noctule activity were recorded, with a peak of 10ppn in July 2018. A peak of three ppn of Leisler's bat and a peak of five ppn of brown long-eared bats were recorded in October 2018.

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Table 89: Bat activity transect survey results for Transect DT04

Ecology survey code	Transect location				Description of habitats covered by transect																	
DT04	Directly north of Golborne.				The transect begins at Critchley House, north of Golborne and follows woodland edge of Bryom Wood before turning back on itself until reaching Slag Lane and following it until breaking off into Bryom Wood. The transect follows the outer edge of the woodland, which includes scattered water bodies, until reaching a residential area where it backtracks again, ending at a track leading to Byrom Hall.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 23 July 2018	19	3	0	0	68	6	0	0	0	0	0	0	0	1	0	0	0	37	3	0	0	
Visit 2: Dawn: 24 July 2018	17	2	0	0	49	5	0	0	0	0	0	0	0	0	0	0	0	28	2	0	0	
Visit 3: Dusk: 9 August 2018	15	4	2	2	40	10	0	0	0	0	0	0	0	0	0	0	0	34	4	0	0	
September 2018 – Incomplete	N/A – Survey cancelled																					
Visit 4: Dusk: 4 October 2018	17	7	0	3	102	20	0	0	0	0	0	0	0	0	1	2	0	2	1	0	0	
Visit 5: Dawn: 17 April 2019	9	6	0	1	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
May 2019 – Incomplete	N/A – Access refused																					
June 2019 – Incomplete	N/A – Access refused																					
July 2019	N/A – Survey completed 2018																					

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Ecology survey code	Transect location	Description of habitats covered by transect																	
August 2019	N/A – Survey completed 2018																		
September 2019 – Incomplete	N/A – Access refused																		

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- 2.4.17 Moderate to high levels of common pipistrelle and low levels of soprano pipistrelle activity were recorded across the surveys for this transect, with peaks of 102ppn and 20ppn, respectively, in October 2018. Low levels of *Myotis* species activity were recorded, with a peak of one ppn of whiskered/ Brandt's bat in July 2018 and *Myotis* species in October 2018. In addition, two ppn of brown long-eared bat were recorded in the October 2018. Low to moderate levels of Leisler's bat activity were recorded, with a peak of four ppn in August 2018. High levels of noctule activity were recorded, with a peak of 37ppn in July 2018.

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Table 90: Bat activity transect survey results for Transect DT05

Ecology survey code	Transect location				Description of habitats covered by transect																	
DT05	South-west of Abram, starting on Riding Lane.				The transect begins at a track off Riding Lane, south of Wigan, and traverses through Viridor Wood which contains mixed habitats including hedgerows, woodland and scrub before crossing a railway line and following Coffin Lane Brook. The transect meanders amongst water bodies through scrubby grasslands until following a railway line north, crossing over and following Coffin Lane Brook south and ending back at Riding Lane.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.s p	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 26 June 2018	23	1	0	0	19	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	
Visit 2: Dusk: 26 July 2018	19	1	0	0	51	8	0	0	0	1	0	0	0	0	1	1	0	8	1	0	0	
Visit 3: Dawn: 27 July 2018	16	1	0	1	63	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
Visit 4: Dusk: 28 August 2018	16	8	0	0	129	10	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	
Visit 5: Dawn: 12 September 2018	7	6	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 6: Dusk: 25 October 2018	11	8	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 7: Dusk: 17 April 2019	15	3	0	1	62	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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Ecology survey code	Transect location	Description of habitats covered by transect																		
May 2019 – Incomplete	N/A – Access refused																			

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- 2.4.18 Moderate to high levels of common pipistrelle and low levels of soprano pipistrelle activity were recorded at this location with peaks of 129ppn and 10ppn, respectively, in August 2018. Low numbers of *Myotis* species were recorded, with peaks of one ppn of Daubenton's bat in June, July and August 2018. Moderate levels of noctule activity were recorded across half of the surveys with a peak of eight ppn in July 2018. One ppn of brown long-eared bat and Leisler's bat were recorded in July 2018.

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Table 91: Bat activity transect survey results for Transect DT07

Ecology survey code	Transect location				Description of habitats covered by transect																	
DT07	North-west of Golborne				2km east of Ashton in Makerfield. The transect begins at Aye Bridge Road south of Wigan and follows scattered trees along the roadside bordered by arable fields and grazing pastures until turning off and following Windy Bank Brook. The transect then turns back when reaching Hey Brook and follows a disused railway line, continuing south until it follows Lightshaw Lane and turns back on itself upon reaching Lightshaw Hall.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.s p	Mb	Md	Mn	M m	Mbr	Mm/ Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/ Es	
Visit 1: Dusk: 24 July 2018	18	3	0	0	81	12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Visit 2: Dawn: 25 July 2018	12	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Visit 3: Dusk: 29 August 2018	19	5	0	4	31	3	0	0	0	1	0	0	0	0	0	0	0	8	0	0	0	
Visit 4: Dawn: 18 September 2018	19	6	0	5	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 5: Dusk: 11 October 2018	13	8	2	7	101	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	
April – Incomplete	N/A – Access refused																					
May – Incomplete	N/A – Access refused																					
June – Incomplete	N/A – Access refused																					

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- 2.4.19 High levels of common pipistrelle activity were recorded at this location with a peak of 101ppn in October 2018. Low numbers of soprano pipistrelle, noctule and Leisler's bat were recorded, with peaks of 12ppn, eight ppn and one ppn, respectively. One ppn of a Daubenton's bat was recorded in August 2018 demonstrating the low levels of *Myotis* species recorded.

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Table 92: Bat activity transect survey results for Transect DT08

Ecology survey code	Transect location				Description of habitats covered by transect																	
DT08	East of Warrington				The transect begins at Holcroft Lane, south-east of Culcheth and follows the M62 along woodland edges of Holcroft Moss before reaching water bodies further north and continuing to follow the woodland edge. The transect then crosses over the M62 and finished at the end of a track through Holcroft Moss.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 25 July 2018	21	2	0	2	6	22	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
Visit 2: Dawn: 26 July 2018	15	1	0	1	9	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	
Visit 3: Dusk: 20 August 2018	21	2	0	2	80	49	0	0	0	0	0	0	0	0	0	1	0	47	0	0	0	
Visit 4: Dawn: 19 September 2018	14	6	1	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 5: Dusk: 16 October 2018	15	3	0	2	52	20	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
Visit 6: Dawn: 16 April 2019	7	4	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 7: Dusk: 7 May 2019	11	1	0	1	36	22	0	17	0	0	0	0	0	0	0	1	0	0	0	0	0	
Visit 8: Dusk: 19 June 2019	15	1	0	1	5	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 9: Dusk: 21 September 2020	17	1	0	0	12	10	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	

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- 2.4.20 Low to moderate levels of common pipistrelle and soprano pipistrelle activity were recorded at this location with peaks of 80ppn and 49ppn, respectively, in August 2018. One ppn of a brown long-eared bat was recorded in May 2019, August and October 2018. Low levels of noctule activity were recorded, with a high peak of 47ppn in August 2018. One ppn of a Leisler's bat was recorded in July 2018.

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Table 93: Summary of static detector monitoring results for D12

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D12	Dismantled railway, Glazebrook Moss	SJ68449299	Corner of grassland, west of Church Farm, north of Lymm.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.s p	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
23 July 2018 – 30 July 2018	7	1864	494	0	0	0	0	0	0	0	0	47	0	0	15	0	0	0		
August 2018 – Incomplete	N/A – Access refused																			
September 2018 – Incomplete	N/A – Access refused																			
October 2018 – Incomplete	N/A – Access refused																			
April 2019 – Incomplete	N/A – Access refused																			
May 2019 – Incomplete	N/A – Survey cancelled																			
June 2019 – Incomplete	N/A – Access refused																			
July 2019	N/A – Survey completed 2018																			
August 2019 – Incomplete	N/A – Access refused																			
4 September 2019 – 11 September 2019	7	238	76	0	10	0	9	0	0	0	0	1	2	0	1	0	0	0		

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Ecology survey code	Static location	OS grid reference	Description of habitats																	
3 October 2019 – 10 October 2019		7	613	295	0	0	0	0	0	0	0	0	0	13	1	0	0	0	0	0

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- 2.4.21 High levels of common pipistrelle and soprano pipistrelle activity were recorded in July 2018 with peaks of 1864ppn and 494ppn, respectively. Moderate to high levels of *Myotis* species activity were recorded, with a peak of 47ppn in July 2018. Additionally, nine ppn of Daubenton's bats were recorded in September 2019. Low to moderate levels of brown long-eared bat activity and of noctule activity were recorded at two ppn in September and 15ppn in July 2018, respectively. Data was only captured on three occasions over two years. Based on the data and location of the area, it is considered that the results are representative of the activity in this area.

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Table 94: Summary of static detector monitoring results for D13

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D13	South of M62	SJ68109334	Hedgerow on edge of Holcroft Moss, adjacent to M62, north-east of Warrington.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
23 July 2018 – 30 July 2018	7	178	129	0	0	0	0	0	0	0	0	0	6	4	0	8	4	0	0	
14 August 2018 – 21 August 2018	7	432	162	0	0	0	0	0	0	0	0	0	3	1	0	15	0	0	0	
4 September 2018 – 11 September 2018	7	379	68	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	
2 October 2018 – 9 October 2018	7	1012	92	0	0	0	0	0	0	0	0	0	39	1	0	0	0	0	0	
3 April 2019 – 9 April 2019	6	36	10	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	
May 2019 – Incomplete	N/A – Survey cancelled																			
4 June 2019 – 10 June 2019	7	108	36	0	16	0	1	0	0	0	0	0	4	1	0	3	0	2	0	

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- 2.4.22 High levels of common and moderate to high levels of soprano pipistrelle activity were recorded, with peaks of 1,012ppn and 162ppn in October and August 2018, respectively. Low levels of *Myotis* species activity were recorded throughout most of the surveys but a peak of 39ppn was recorded in October 2018. Two ppn of serotine were also recorded in June 2019. High levels of brown long-eared bat activity were recorded, with peaks of four ppn in July 2018. Moderate to high levels of noctule activity were recorded, with a peak of 15ppn in August 2018.

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Table 95: Summary of static detector monitoring results for D14

Ecology survey code	Static location	OS grid reference	Description of habitats																
D14	Silver Lane Ponds	SJ66819415	Hedgerow adjacent to pond, south of Franks Farm, north of Warrington.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
28 June 2018 – 3 July 2018	5	18	35	0	0	0	0	0	0	0	0	2	1	0	3	1	0	0	
3 July 2018 – 10 July 2018	7	135	18	0	0	0	0	0	0	0	0	5	0	0	2	1	0	0	
August 2018 – Incomplete	N/A – Access refused																		
4 September 2018 – 2 October 2018	7	139	107	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	
October 2018 – Incomplete	Data corrupted																		
3 April 2019 – 9 April 2019	7	0	0	0	0	0	0	0	0	0	3	8	0	0	0	0	0	0	
8 May 2019 – 15 May 2019	7	121	166	0	1	0	6	0	0	0	0	17	0	0	4	0	0	0	
June 2019	N/A – Survey completed 2018																		
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		
September 2019	N/A – Survey completed 2018																		
3 October 2019 – 10	7	229	250	0	0	0	0	0	0	0	0	85	0	0	2	0	0		

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Ecology survey code	Static location	OS grid reference	Description of habitats														
October 2019																	

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- 2.4.23 Moderate to high levels of common pipistrelle and soprano pipistrelle activity were recorded, with peaks of 229ppn and 250ppn, respectively, during October 2019. Moderate levels of *Myotis* species activity were recorded, with a peak of 85ppn in October 2019. Additionally, Daubenton's bat displayed a high peak of six ppn in May 2019. One ppn of a brown long-eared bat was recorded in June 2018 and low numbers of noctule and Leisler's bats were recorded on most surveys with peaks of four ppn and one ppn, respectively.

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Table 96: Summary of static detector monitoring results for D15

Ecology survey code	Static location	OS grid reference	Description of habitats																
D15	Silver Lane Ponds	SJ66439414	Hedgerow adjacent to pond, north of Landfill Site, north of Warrington.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
August 2018 – Incomplete	N/A – Access refused																		
4 September 2018 – 11 September 2018		7	1871	1177	0	0	0	5	0	0	0	0	171	2	0	12	0	0	0
2 October 2018 – 8 October 2018		6	63	21	0	0	0	0	0	0	0	0	10	0	0	3	0	0	0
3 April 2019 – 9 April 2019		6	81	104	0	3	0	2	0	0	0	0	1	1	0	0	0	0	0
8 May 2019 – 15 May 2019		7	114	43	1	2	0	1	0	0	0	0	0	0	0	5	1	0	0
4 June 2019 – 11 June 2019		7	160	5	1	16	0	0	0	0	0	0	1	0	0	4	0	0	0
July 2019 – Incomplete	N/A – Access refused																		
August 2019 – Incomplete	N/A – Access refused																		

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- 2.4.24 High levels of common and soprano pipistrelle activity were recorded, with a peak of 1,871ppn and 1,177ppn during September 2018. There were low numbers of *Myotis* species, except in September 2018, with peaks of 171ppn of *Myotis* species and five ppn of Daubenton's bat, respectively. In this month, there was also a moderate to high peak of 12ppn for noctule. Low numbers of brown long-eared bat were recorded, with a high peak of two ppn in September 2018, and one ppn of a Leisler's bat was recorded in May 2019.

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Table 97: Summary of static detector monitoring results for D16

Ecology survey code	Static location	OS grid reference	Description of habitats																
D16	Silver Lane Ponds	SJ66219422	Hedgerow adjacent to pond, north of Landfill Site, north of Warrington.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
31 July 2018 – 7 August 2018	7	1446	199	0	0	0	0	0	0	0	0	0	4	0	0	5	0	0	0
4 September 2018 – 12 September 2018	8	812	605	0	0	0	0	0	0	0	0	6	0	0	3	0	0	0	
2 October 2018 – 8 October 2018	6	648	658	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	
3 April 2019 – 9 April 2019	6	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	
8 May 2019 – 15 May 2019	7	30	35	0	0	0	0	0	0	0	0	1	0	0	5	0	0	0	
4 June 2019 – 11 June 2019	7	120	19	7	15	0	0	0	0	0	0	0	0	0	3	0	0	0	
July 2019 – Incomplete	N/A – Access refused																		

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- 2.4.25 High levels of common and soprano pipistrelle activity were recorded, with peaks of 1,446ppn in August 2018 and 658ppn in October 2018, respectively. Low to moderate numbers of *Myotis* species and noctule were recorded, with 10ppn in April 2019 and five ppn in July 2018 and May 2019, respectively. One ppn of a brown long-eared bat was recorded in October 2018.

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Table 98: Summary of static detector monitoring results for D17

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D17	Laburnum Farm	SJ65559432	Hedgerow in corner of arable field, adjacent to New Hall Lane.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
3 July 2018 – 10 July 2018	7	838	22	0	0	0	1	0	0	0	0	4	0	0	2	1	0	0		
August 2018 – Incomplete	N/A – Access refused																			
September 2018 – Incomplete	N/A – Access refused																			
October 2018 – Incomplete	N/A – Access refused																			
April 2019 – Incomplete	N/A – Access refused																			
May 2019 – Incomplete	N/A – Access refused																			
June 2019 – Incomplete	N/A – Access refused																			
July 2019	N/A – Survey completed 2018																			
August 2019 – Incomplete	N/A – Access refused																			
September 2019 – Incomplete	N/A – Access refused																			
October 2019 –	N/A – Access refused																			

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Ecology survey code	Static location	OS grid reference	Description of habitats														
Incomplete																	

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- 2.4.26 July 2018 was the only month static data was completed for this area due to access refusal for all other months. High levels of common pipistrelle activity were recorded. Low to moderate levels of soprano pipistrelle and *Myotis* species were recorded. One ppn of a Leisler's bat and two ppn of noctule were recorded during this survey.

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Table 99: Summary of static detector monitoring results for D18

Ecology survey code	Static location	OS grid reference	Description of habitats																
D18	Wigshaw and Glaziers Lane	SJ64749477	Treeline in corner of arable field directly adjacent to Wigshaw House, north of Warrington.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
23 July 2018 – 30 July 2018	7	79	49	0	0	0	0	0	0	0	0	0	5	0	0	7	5	0	0
21 August 2018 – 28 August 2018	7	594	90	0	0	0	2	0	0	0	0	0	14	0	0	2	0	0	0
28 August 2018 – 4 September 2018	7	307	122	0	0	0	2	0	0	0	0	0	10	0	0	2	0	0	0
16 October 2018 – 23 October 2018	7	152	49	1	0	0	0	0	0	0	0	0	5	2	0	1	0	0	0
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		
June 2019 – Incomplete	N/A – Access refused																		

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- 2.4.27 High levels of common pipistrelles were recorded at this location with peaks of 594ppn in August 2018. Moderate to high levels of soprano pipistrelle activity were recorded of 122ppn in September 2018. Low to moderate levels of *Myotis* species were recorded, with a peak of 14ppn in August 2018. Two ppn of brown long-eared bats were recorded in October 2018. There were low to moderate numbers of noctule, with peaks of seven ppn and five ppn of Leisler's bat recorded in July 2018.

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Table 100: Summary of static detector monitoring results for D19

Ecology survey code	Static location	OS grid reference	Description of habitats																
D19	Culcheth Linear Park	SJ64179529	Hedgerow adjacent to Culcheth Linear Park, south of Leigh Golf Course, north of Warrington.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
23 July 2018 – 29 July 2018	6	354	58	0	0	0	0	0	0	0	0	0	12	1	0	36	0	0	0
30 July 2018 – 28 August 2018	7	456	82	0	0	0	0	0	0	0	0	0	0	3	0	7	1	0	0
11 September 2018 – 18 September 2018	7	192	36	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0
2 October 2018 – 9 October 2018	7	407	34	0	0	0	0	0	0	0	0	0	10	0	0	2	0	0	0
10 April 2019 – 16 April 2019	6	94	64	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
May 2019 – Incomplete	N/A – Access refused																		
June 2019 – Incomplete	N/A – Access refused																		

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- 2.4.28 High levels of common pipistrelle and noctule activity were recorded, with a peak of 456ppn in July 2018 and 36ppn in July 2018, respectively. Moderate to high levels of soprano pipistrelle bats were recorded, with peaks of 82ppn in August 2018. Low to moderate levels of *Myotis* species were also recorded, with a peak of 12ppn in July 2018. Peaks of three ppn of brown long-eared bat and one ppn of Leisler's bat were recorded in August 2018.

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Table 101: Summary of static detector monitoring results for D20

Ecology survey code	Static location	OS grid reference	Description of habitats																
D20	Culcheth Linear Park	SJ63989546	Hedgerow in corner of arable field, immediately adjacent to Culcheth Linear Park, north of Warrington.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
24 July 2018 – 31 July 2018	7	148	311	0	0	0	0	0	0	0	0	16	2	0	6	0	0	0	
15 August 2018 – 22 August 2018	6	712	113	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	
17 September 2018 – 24 September 2018	7	527	202	0	0	0	0	0	0	0	0	10	0	0	1	0	0	0	
15 October 2018 – 22 October 2018	7	426	32	0	0	0	0	0	0	0	0	8	0	0	3	0	0	0	
10 April 2019 – 16 April 2019	7	241	69	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	
16 May 2019 – 21 May 2019	5	788	200	0	3	0	109	0	0	0	0	24	1	0	11	0	0	0	
12 June 2019 – 17 June 2019	6	6	8	0	3	0	1	0	0	0	0	3	0	0	2	0	0	0	

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- 2.4.29 High levels of common pipistrelle activity were recorded, with a peak of 788ppn in May 2019. High levels of soprano pipistrelle activity were recorded, with a peak of 311ppn in July 2018. Moderate to high numbers of *Myotis* species were recorded, with a peak of 24ppn in May 2019 and high levels of Daubenton's bat activity, with a peak 109ppn. This occurred on one survey, with Daubenton's bat only recorded in one other month, consisting of a single pass. Moderate to high levels of noctule activity were recorded, with a peak of 11ppn in May 2019. Two ppn of brown long-eared bat were also recorded in July 2018.

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Table 102: Summary of static detector monitoring results for D21

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D21	Culcheth Linear Park	SJ63789580	Hedgerow in corner of arable field, immediately adjacent to Culcheth Linear Park, north of Warrington.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
24 July 2018 – 8 August 2018	7	377	250	0	0	0	0	0	0	0	0	28	0	0	9	1	0	0		
15 August 2018 – 22 August 2018	7	1445	199	0	0	0	0	0	0	0	0	10	0	0	11	1	0	0		
17 September 2018 – 15 October 2018	7	264	44	0	0	0	0	0	0	0	0	19	1	0	1	0	0	0		
15 October 2018 – 22 October 2018	7	179	110	0	0	0	0	0	0	0	0	34	0	0	1	0	0	0		
10 April 2019 – 16 April 2019	6	46	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0		
16 May 2019 – 21 May 2019	5	1,293	210	0	0	0	5	0	0	0	0	30	0	0	20	0	0	0		
5 June 2019 – 17 June 2019	5	111	106	0	5	0	3	0	0	0	0	10	0	0	14	0	0	0		

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- 2.4.30 High levels of common pipistrelle activity were recorded, with a peak of 1,445ppn in August 2018. High levels of soprano pipistrelle activity were recorded, with a peak of 250ppn in August 2018. High levels of *Myotis* species activity were recorded, with a peak of 34ppn in October 2018. High levels of noctule activity were recorded, with a peak of 20ppn in May 2019. One ppn of brown long-eared bat was recorded in September 2018 and one ppn of Leisler's bat was recorded in July and in August 2018.

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Table 103: Summary of static detector monitoring results for D22

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D22	Culcheth Linear Park	SJ63609622	Hedgerow in corner of arable field immediately adjacent to railway line and south of White's Farm, south of Wigan.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
24 July 2018 – 31 July 2018	7	113	54	0	0	0	0	0	0	0	0	0	27	3	0	11	2	0	0	
August 2018 – Incomplete	N/A – Access refused																			
10 September 2018 – 17 September 2018	7	123	26	0	0	0	0	0	0	0	0	0	5	4	0	6	0	0	0	
8 October 2018 – 15 October 2018	7	759	731	0	0	0	0	0	0	0	0	0	13	2	0	14	0	0	0	
10 April 2019 – 16 April 2019	6	18	4	0	1	0	0	0	0	0	0	0	0	2	0	1	1	0	0	
16 May 2019 – 23 May 2019	7	979	294	0	9	0	25	0	0	0	0	0	5	3	0	32	0	0	0	
June 2019 – Incomplete	Data corrupted																			
July 2019	N/A – Survey completed 2018																			
6 August 2019 – 13 August 2019	7	448	131	32	0	0	0	0	0	0	0	0	11	0	0	4	0	0		

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- 2.4.31 High levels of common pipistrelle and of soprano pipistrelle activity were recorded, with peaks of 979ppn in May 2019 and 731ppn in October 2018, respectively. High levels of noctule activity were also recorded, with a peak of 32ppn, and moderate to high levels of *Myotis* species with a peak of 27ppn. High levels of Daubenton's bat activity were recorded, with a peak of 25ppn in May 2019. Moderate levels of brown long-eared bat activity were recorded, with a peak of four ppn in September 2018. Moderate levels of Leisler's bat were recorded with a peak of two ppn of Leisler's bat in July 2018.

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Table 104: Summary of static detector monitoring results for D23

Ecology survey code	Static location	OS grid reference	Description of habitats																
D23	Birchall's Farm	SJ63489655	Hedgerow at the end of track in corner of arable field, west of a disused railway, north of Birchall's Farm, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
24 July 2018 – 31 July 2018	7	124	36	0	0	0	0	0	0	0	0	7	0	0	30	4	0	0	
15 August 2018 – 22 August 2018	7	195	31	0	0	0	0	0	0	0	0	1	0	0	11	0	0	0	
September – Incomplete	N/A – Access refused																		
8 October 2018 – 15 October 2018	7	75	70	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	
10 April 2019 – 16 April 2019	6	52	70	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	
16 May 2019 – 23 May 2019	8	1,147	248	0	0	0	0	0	0	0	0	154	0	0	14	1	0	0	
11 June 2019 – 19 June 2019	9	228	88	0	0	0	0	0	0	0	0	29	0	0	15	1	0	0	

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- 2.4.32 High levels of common pipistrelle and noctule activity were recorded in May 2019, with peaks of 1,147ppn and 30ppn, respectively; and *Myotis* species in July 2018, with a peak of 154ppn. Low to moderate levels of Leislers' bats were recorded, with a peak of four ppn in July 2018. Brown long-eared bats were also recorded in July 2018 with a peak of five ppn.

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Table 105: Summary of static detector monitoring results for D24

Ecology survey code	Static location	OS grid reference	Description of habitats																
D24	South of A580	SJ63389683	Hedgerow at edge of arable field, south of East Lancashire Road, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
24 July 2018 – 31 July 2018	7	289	64	0	0	0	0	0	0	0	0	0	4	2	0	23	0	0	0
15 August 2018 – 22 August 2018	7	211	237	0	0	0	0	0	0	0	0	0	7	2	0	10	0	0	0
September 2018 – Incomplete	N/A – Access refused																		
8 October 2018 – 15 October 2018	7	404	48	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
10 April 2019 – 16 April 2019	6	33	9	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
16 May 2019 – 23 May 2019	7	645	133	2	2	0	4	0	0	0	0	0	12	0	0	14	0	0	0
12 June 2019 – 17 June 2019	5	42	18	0	16	0	0	0	0	0	0	0	3	0	0	6	0	0	0
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		
September 2019 – Incomplete	N/A – Access refused																		

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- 2.4.33 High levels of common pipistrelle, soprano pipistrelle and noctule activity were recorded, with peaks of 645ppn, 237ppn and 23ppn in May 2019, August 2018 and July 2018, respectively. Low to moderate levels of *Myotis* species activity were recorded, with a peak of 12ppn in July 2018. Brown long-eared bat activity were also recorded, with a peak of two ppn in July and in August 2018.

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Table 106: Summary of static detector monitoring results for D25

Ecology survey code	Static location	OS grid reference	Description of habitats																
D25	North of A580	SJ63359697	Hedgerow at edge of arable field, immediately north of East Lancashire Road, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
22 August 2018 – 29 August 2018	7	859	99	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
September 2018 – Incomplete	N/A – Access refused																		
8 October 2018 – 15 October 2018	7	98	86	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0
10 April 2019 – 16 April 2019	6	32	17	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0
May 2019 – Incomplete	N/A – Access refused																		
June 2019 – Incomplete	N/A – Access refused																		
July 2019 – Incomplete	N/A – Access refused																		
August 2019	N/A – Survey completed 2018																		
September 2019 –	N/A – Access refused																		

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Ecology survey code	Static location	OS grid reference	Description of habitats																
Incomplete																			

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- 2.4.34 High levels of common pipistrelle activity were recorded, with a peak of 859ppn in August 2018. Moderate to high levels of soprano pipistrelle were recorded, with a peak of 99ppn in August 2018. Low to moderate levels of noctule activity were recorded, with five ppn recorded in August 2018. Low levels were recorded for *Myotis* species, with two ppn in October 2018. One ppn of a Nathusius' pipistrelle and of brown long-eared bat were recorded in October 2018. Data was only captured on three occasions over two years. Based on the data and location, it is considered that the results are representative of the activity in this area.

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Table 107: Summary of static detector monitoring results for D26

Ecology survey code	Static location	OS grid reference	Description of habitats																
D26	Lowton	SJ63269727	Hedgerow alongside drain immediately south of Lowton Business Park, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
15 August 2018 – 22 August 2018	7	128	25	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0
September 2018 – Incomplete	Data corrupted																		
8 October 2018 – 15 October 2018	7	108	10	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0
10 April 2019 – 16 April 2019	6	85	34	1	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0
16 May 2019 – 23 May 2019	7	276	5	1	13	0	1	0	0	0	0	0	0	0	6	1	0	0	0
12 June 2019 – 17 June 2019	5	107	1	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0
2 July 2019 – 19 July 2019	5	90	10	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
August 2019	N/A – Survey completed 2018																		
5 September 2019 – 12 September	7	139	2	4	10	0	3	0	0	0	0	3	0	0	1	0	0	0	0

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Ecology survey code	Static location	OS grid reference	Description of habitats														
2019																	

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- 2.4.35 Moderate to high levels of common pipistrelle activity were consistently recorded, with a notable peak of 276ppn in May 2019. Low to moderate levels of soprano pipistrelle and noctule activity were additionally recorded, with a peak of 34ppn and six ppn for these species in April and May 2019, respectively. Three ppn were recorded for *Myotis* species with an additional peak of three ppn for Daubenton's bat in September 2019. One ppn of a Leisler's bat was recorded in August 2018 and in May 2019.

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Table 108: Summary of static detector monitoring results for D27

Ecology survey code	Static location	OS grid reference	Description of habitats																
D27	Lowton Common	SJ62979798	Hedgerow in corner of The Meadows (Playing Field), south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
24 July 2018 – 31 July 2018	7	276	29	0	0	0	0	0	0	0	0	0	6	1	0	22	2	0	0
22 August 2018 – 4 September 2018	7	689	26	0	0	0	2	0	0	0	0	0	3	0	0	5	0	0	0
18 September 2018 – 25 September 2018	7	612	5	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0
16 October 2018 – 23 October 2018	7	256	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
10 April 2019 – 16 April 2019	6	18	4	0	1	0	2	0	0	0	0	0	0	0	0	2	0	0	0
16 May 2019 – 23 May 2019	7	241	8	1	5	0	5	0	0	0	0	0	0	0	0	27	2	0	0
12 June 2019 – 17 June 2019	5	394	9	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0

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- 2.4.36 High levels of common pipistrelle and noctule activity were recorded, with peaks of 689ppn in August 2018 and 27ppn in May 2019, respectively. Low to moderate levels of soprano pipistrelle, *Myotis* species and brown long-eared bat activity were recorded, with peaks of 29ppn, six ppn and one ppn in July 2018, respectively. One ppn of Nathusius' pipistrelle was recorded in September 2018 and May 2019. A peak of two ppn of Leisler's bat was recorded in May 2019 and July 2018.

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Table 109: Summary of static detector monitoring results for D28

Ecology survey code	Static location	OS grid reference	Description of habitats																
D28	Small Brook	SJ62839818	Hedgerow adjacent to drain, south of Red House Farm, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
30 July 2018 – 6 August 2018	8	452	76	0	0	0	0	0	0	0	0	7	0	0	36	0	0	0	
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		
12 June 2019 – 17 June 2019	5	734	136	0	4	0	2	0	0	0	0	5	1	0	12	0	0	0	
July 2019	N/A – Survey completed 2018																		
August 2019 – Incomplete	N/A – Access refused																		
September 2019 –	N/A – Access refused																		

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Ecology survey code	Static location	OS grid reference	Description of habitats															
Incomplete																		
October 2019 - Incomplete	N/A – Access refused																	

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- 2.4.37 Two surveys have been undertaken during summer months in different years in this location, access was refused for other surveys therefore the data does not enable analysis of activity levels outside of these periods. High levels of common pipistrelle and noctule activity were recorded, with peaks of 734ppn (June 2019) and 36ppn (July 2018), respectively. Moderate to high levels of soprano pipistrelle activity were recorded, with a peak of 136ppn in June 2019. Low to moderate levels of *Myotis* species activity were recorded, with a peak of seven ppn in July 2018. One ppn of a brown long-eared bat and two passes of a Daubenton's bat were recorded in June 2019.

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Table 110: Summary of static detector monitoring results for D29

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D29	Garton Common	SJ62669839	Hedgerow south of Eaburnam Farm, south of Wigan.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
30 July 2018 – 6 August 2018	7	909	47	0	0	0	0	0	0	0	0	3	0	0	71	1	0	0		
August 2018 – Incomplete	N/A – Access refused																			
September 2018 – Incomplete	N/A – Access refused																			
October 2018 – Incomplete	N/A – Access refused																			
April 2019 – Incomplete	N/A – Access refused																			
May 2019 – Incomplete	N/A – Access refused																			
12 June 2019 – 17 June 2019	5	766	44	0	1	0	2	0	0	0	0	9	0	0	6	0	0	0		
July 2019	N/A – Survey completed 2018																			
August 2019 – Incomplete	N/A – Access refused																			
September 2019 – Incomplete	N/A – Access refused																			
October 2019 –	N/A – Access refused																			

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Ecology survey code	Static location	OS grid reference	Description of habitats														
Incomplete																	

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- 2.4.38 Two surveys have been undertaken during summer months in different years in this location, access was refused for other surveys therefore the data does not enable analysis of activity levels outside of these periods. High levels of common pipistrelle and noctule activity were recorded, with peaks of 909ppn and 71ppn in July 2018, respectively. Low to moderate levels of soprano pipistrelle and *Myotis* species activity were recorded, with peaks of 47ppn and nine ppn in July 2019 and June 2018, respectively.

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Table 111: Summary of static detector monitoring results for D30

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D30	Slag Lane	SJ62539854	Treeline directly between Slag Lane and Eaburnum Farm, south of Wigan.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
26 June 2018 – 3 July 2018	7	555	11	0	0	0	0	0	0	0	0	0	0	1	0	146	1	0	0	
30 July 2018 – 6 August 2018	7	315	22	0	0	0	0	0	0	0	0	0	1	0	0	32	0	0	0	
21 August 2018 – 28 August 2018	7	131	17	0	0	0	0	0	0	0	0	0	2	0	0	19	0	0	0	
18 September 2018 – 25 September 2018	7	341	24	3	0	0	0	0	0	0	0	19	4	0	32	1	0	0	0	
16 October 2018 – 23 October 2018	7	90	1	2	0	0	0	0	0	0	0	0	2	0	12	0	0	0	0	
11 April 2019 – 18 April 2019	7	284	42	1	3	0	0	0	0	0	0	0	1	0	163	30	0	0	0	
17 May 2019 – 24 May 2019	7	418	48	2	2	0	0	0	0	0	0	0	5	0	158	7	0	0	0	

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- 2.4.39 High levels of common pipistrelle, noctule and Leisler's bat activity were recorded, with a peak of 555ppn in June 2018 and 163ppn and 30ppn in April 2019, respectively. Noctule activity was notably high during the earlier months of survey. Moderate to high levels of *Myotis* species activity were recorded, with a peak of 19ppn in September 2018. Low to moderate levels of soprano pipistrelle activity were recorded at levels of 48ppn in May 2019. High levels of brown long-eared bat activity were recorded, with a peak of five ppn in May 2019. A peak of three ppn of Nathusius' pipistrelle was recorded in September 2018, which represents moderate to high levels of activity for this species.

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Table 112: Summary of static detector monitoring results for D31

Ecology survey code	Static location	OS grid reference	Description of habitats																
D31	Little Byrom Hall Farm	SJ62349867	Hedgerow in corner of field, east of Little Byrom Hall Farm, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
28 June 2018 – 2 July 2018	5	185	6	0	0	0	1	0	0	0	0	2	1	0	60	1	2	0	
July 2018 – Incomplete	N/A – Access refused																		
28 August 2018 – 4 September 2018	7	1,119	49	0	0	0	0	0	0	0	0	18	0	0	13	0	0	0	
18 September 2018 – 25 September 2018	7	1,378	396	1	0	0	0	0	0	0	0	6	0	0	3	0	0	0	
16 October 2018 – 23 October 2018	6	230	26	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		

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Ecology survey code	Static location	OS grid reference	Description of habitats																		
June 2019	N/A – Survey completed 2018																				
July 2019 – Incomplete	N/A – Access refused																				
27 July 2020 – 31 July 2020		5	293	24	0	2	0	0	0	0	0	0	2	0	0	35	0	0			

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- 2.4.40 High levels of common pipistrelle activity were recorded, with a peak of 1,378ppn in September 2018. High levels of soprano pipistrelle and noctule activity were recorded, with peaks of 396ppn in September 2018 and 60ppn in July 2018, respectively. Moderate to high levels of *Myotis* species activity were recorded at levels of 18ppn in August 2018. One ppn of Nathusius' pipistrelle was recorded in September 2018, with one ppn of a brown long-eared bat and of a Leisler's bat, both recorded in June 2018. Additionally, there were also two passes of a serotine recorded in June 2018 which is of a moderate to high level for this species.

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Table 113: Summary of static detector monitoring results for D32

Ecology survey code	Static location	OS grid reference	Description of habitats																
D32	South of Byrom Wood	SJ62159882	Hedgerow on edge of arable field, immediately south of Byrom Wood, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
28 June 2018 – 3 July 2018	5	116	11	0	0	0	0	0	0	0	0	0	0	0	0	39	7	0	0
30 July 2018 – 6 August 2018	7	453	84	0	0	0	0	0	0	0	0	10	1	0	47	3	0	0	
21 August 2018 – 28 August 2018	7	409	61	0	0	0	0	0	0	0	0	2	0	0	6	0	0	0	
18 September 2018 – 25 September 2018	7	455	30	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	
16 October 2018 – 23 October 2018	7	579	5	0	0	0	0	0	0	0	0	1	0	0	26	0	0	0	
11 April 2019 – 17 April 2019	6	67	21	4	0	0	1	0	0	0	0	0	0	0	10	2	0	0	
17 May 2019 – 24 May 2019	7	462	52	0	3	0	0	0	0	0	0	0	0	0	36	0	0	0	

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- 2.4.41 High levels of common pipistrelle and noctule activity were recorded, with a peak of 579ppn in October 2018 and 47ppn in July 2018, respectively. Moderate to high numbers of soprano pipistrelle and Leisler's bat activity were recorded, with peaks of 84ppn in July 2018 and seven ppn in June 2018, respectively. Low to moderate numbers of *Myotis* species were recorded, with 10ppn in July 2018. One ppn of brown long-eared bat was recorded in July 2018. A moderate to high number of Nathusius' pipistrelle was identified on one survey in April 2019, with four ppn.

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Table 114: Summary of static detector monitoring results for D33

Ecology survey code	Static location	OS grid reference	Description of habitats																
D33	North of Byrom Wood	SJ61999913	Treeline in corner of grassland pasture, immediately north of Byrom Wood, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
30 July 2018 – 6 August 2018	7	382	132	0	2	0	0	0	0	0	0	0	18	0	0	23	1	0	0
21 August 2018 – 28 August 2018	7	160	46	0	0	0	0	0	0	0	0	0	4	0	0	6	0	0	0
18 September 2018 – 25 September 2018	7	101	54	0	0	0	0	0	0	0	0	0	8	0	0	3	0	0	0
16 October 2018 – 23 October 2018	7	80	8	0	0	0	0	0	0	0	0	0	6	0	0	3	0	0	0
11 April 2019 – 17 April 2019	6	62	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 May 2019 – 24 May 2019	7	324	23	4	9	0	0	0	0	0	0	0	0	0	0	35	0	0	0
13 June 2019 – 18 June 2019	5	480	36	0	1	0	2	0	0	0	0	0	2	0	0	39	2	0	0

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- 2.4.42 High levels of common pipistrelle and of noctule activity were recorded, with peaks of 480ppn and 39ppn in June 2019, respectively. Moderate to high levels of soprano pipistrelle and *Myotis* species activity were recorded, with peaks of 132ppn and 18ppn in July 2018, respectively. A peak of four ppn of Nathusius' pipistrelle and two ppn of Leisler's bats were recorded in May 2019 and June 2019, respectively.

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Table 115: Summary of static detector monitoring results for D35

Ecology survey code	Static location	OS grid reference	Description of habitats																
D35	Lightshaw Lane	SJ60919966	Hedgerow next to Lightshaw Lane, adjacent to pond and directly east of Roby Cottage, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
30 July 2018 – 6 August 2018	7	687	80	0	0	0	0	0	0	0	0	5	0	0	8	1	0	0	
21 August 2018 – 28 August 2018	7	390	46	0	0	0	0	0	0	0	0	1	0	0	5	0	0	0	
18 September 2018 – 25 September 2018	7	1,522	465	0	0	0	0	0	0	0	0	13	0	0	2	0	0	0	
16 October 2018 – 23 October 2018	7	523	226	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	
11 April 2019 – 17 April 2019	6	67	18	0	1	0	0	0	0	0	0	0	0	0	6	0	0	0	
17 May 2019 – 24 May 2019	7	230	40	0	4	0	3	0	0	0	0	0	0	0	37	0	0	0	
13 June 2019 – 18 June 2019	5	316	24	0	2	0	0	0	0	0	0	0	0	0	37	1	0	0	

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- 2.4.43 High levels of common pipistrelle activity were recorded, with a peak of 1,522ppn in September 2018. Moderate to high levels of soprano pipistrelle and high levels of noctule activity were additionally recorded, with peaks of 465ppn in September 2018, and 37ppn in May 2019 and June 2019, respectively. Moderate to high levels of *Myotis* species activity were recorded, with 13ppn in September 2018. One ppn of a Leisler's bat was recorded in June 2019 and in July 2018.

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Table 116: Summary of static detector monitoring results for D36

Ecology survey code	Static location	OS grid reference	Description of habitats																
D36	Windy Bank Brook	SJ60829974	Edge of woodland adjacent to Windy Bank Brook, north of Roby Cottage, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
31 July 2018 – 6 August 2018	6	182	54	0	1	0	0	0	0	0	0	0	13	2	0	10	1	0	0
22 August 2018 – 29 August 2018	7	205	16	0	0	0	0	0	0	0	0	0	3	0	0	7	0	0	0
26 September 2018 – 3 October 2018	7	146	26	0	0	0	0	0	0	0	0	0	3	0	0	4	0	0	0
22 October 2018 – 29 October 2018	7	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		
June 2019 – Incomplete	N/A – Access refused																		

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- 2.4.44 High levels of common pipistrelle activity were recorded, with a peak of 205ppn in August 2018. A low number of soprano pipistrelles was recorded, with a peak of 54ppn July 2018. Low to moderate levels of noctule and *Myotis* species activity were recorded, with peaks in July 2018 of 10ppn and 13ppn, respectively. Low levels of brown long-eared bat and Leisler's bat activity were recorded, with peaks of two ppn and one ppn, respectively, both in July 2018.

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Table 117: Summary of static detector monitoring results for D37

Ecology survey code	Static location	OS grid reference	Description of habitats																
D37	Wigan Road	SJ60749986	Hedgerow running parallel to Wigan Road, north of Balmer's Farm, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
27 June 2018 – 3 July 2018	6	829	42	0	0	0	0	0	0	0	0	1	0	0	5	0	0	0	
31 July 2018 – 6 August 2018	7	455	6	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	
22 August 2018 – 29 August 2018	7	801	7	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	
26 September 2018 – 3 October 2018	7	1,102	39	0	0	0	0	0	0	0	0	1	0	0	23	0	0	0	
22 October 2018 – 29 October 2018	8	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		

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- 2.4.45 High levels of common pipistrelle bat activity were recorded, with a peak of 1,102ppn in September 2018. High levels of noctule activity were recorded, with a peak of 23ppn in October 2018. Generally low levels of *Myotis* species activity were recorded, with a moderate peak in August 2018 of 18ppn. Low to moderate levels of soprano pipistrelle activity were recorded, with a peak of 42ppn June 2018.

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Table 118: Summary of static detector monitoring results for D38

Ecology survey code	Static location	OS grid reference	Description of habitats																
D38	Nan Holes Brook	SD60570008	Nan Holes Brook is scrubbed over and flows from west to east across the proposed route of the scheme.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
23 September 2020 – 30 September 2020	8	832	8	0	0	0	0	0	0	0	0	21	0	0	2	0	0	3	
1 October 2020 – 7 October 2020	6	868	10	0	0	0	0	0	0	0	0	19	0	0	5	0	0	5	

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- 2.4.46 High levels of common pipistrelle bat activity were recorded, with a peak of 868ppn in October 2020. Low levels of noctule activity were recorded, with a high peak of five ppn in October 2020. Low levels of *Myotis* species activity were recorded, with a moderate peak in September 2020 of 21ppn. Low levels of soprano pipistrelle activity were recorded, with a moderate peak of 10ppn in October 2020.

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Table 119: Summary of static detector monitoring results for D39

Ecology survey code	Static location	OS grid reference	Description of habitats																
D39	Locker Lane, Wigan	SD6033610	Hedgerow on field boundary adjacent to railway line, south of Coffin Lane Brook, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
27 June 2018 – 3 July 2018	6	352	4	0	0	0	0	0	0	0	0	3	0	0	10	3	0	0	
31 July 2018 – 6 August 2018	6	204	20	0	0	0	0	0	0	0	0	4	1	0	11	2	0	0	
22 August 2018 – 29 August 2018	7	250	6	0	0	0	0	0	0	0	0	3	0	0	4	0	0	0	
September 2018 – Incomplete	N/A – Access pending																		
October 2018 – Incomplete	Data corrupted																		
10 April 2019 – 16 April 2019	6	20	7	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	
17 May 2019 – 24 May 2019	7	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
June 2019	N/A – Survey completed 2018																		
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		
September 2019 – Incomplete	Data corrupted																		

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Ecology survey code	Static location	OS grid reference	Description of habitats																	
23 September 2020 – 30 September 2020		8	1,036	60	1	8	0	0	0	0	0	0	0	17	0	0	1	0	0	0
1 October 2020 – 7 October 2020		6	997	135	0	27	0	0	0	0	0	0	0	32	0	0	3	0	0	1

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- 2.4.47 High levels of common pipistrelle activity were recorded, with a peak of 1,036ppn in September 2020. Moderate activity levels including a peak of 135ppn of soprano pipistrelle, 32ppn of *Myotis* species were recorded in October 2020 and 11ppn of noctule and one ppn of a brown long-eared bat all recorded in July 2018. Three ppn of Leisler's bat were recorded in June 2018.

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Table 120: Summary of static detector monitoring results for D40

Ecology survey code	Static location	OS grid reference	Description of habitats																	
D40	Coffin Lane Brook	SD60170093	End of hedgerow immediately adjacent to railway line and Coffin Lane Brook, south of Wigan.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
31 July 2018 – 6 August 2018	6	238	6	0	0	0	0	0	0	0	0	12	0	0	15	1	0	0		
22 August 2018 – 29 August 2018	7	178	6	0	0	0	0	0	0	0	0	5	0	0	11	0	0	0		
September 2018 – Incomplete	N/A – Access refused																			
22 October 2018 – 29 October 2018	7	121	83	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0		
April 2019 – Incomplete	Data corrupted																			
17 May 2019 – 21 May 2019	5	167	9	2	1	0	1	0	0	0	0	0	0	0	38	0	0	0		
13 June 2019 – 18 June 2019	5	177	5	0	1	0	1	0	0	0	0	0	0	0	7	1	0	0		
July 2019	N/A – Survey completed 2018																			
August 2019	N/A – Survey completed 2018																			
September 2019 – Incomplete	Data corrupted																			

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- 2.4.48 High levels of *common* pipistrelle activity were recorded, with a peak of 238ppn in July 2018. Moderate to high levels of noctule activity were recorded, with a peak of 38ppn in May 2019. Low levels of soprano pipistrelle activity were recorded on the majority of surveys, other than October 2018, when a moderate to high peak of 83ppn was recorded. Low to moderate levels of *Myotis* species were recorded, with a peak of 12ppn in July 2018. One ppn of Leisler's bat was recorded in June 2019 and July 2018.

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Table 121: Summary of static detector monitoring results for D42

Ecology survey code	Static location	OS grid reference	Description of habitats																
D42	Lily Lane, Wigan	SD59912110	Tree directly adjacent to Leeds and Liverpool Canal, west of Lily Lane, south of Wigan.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
31 July 2018 – 6 August 2018	6	112	9	0	1	0	0	0	0	0	0	0	1	1	0	57	2	0	0
22 August 2018 – 29 August 2018	7	836	5	0	0	0	0	0	0	0	0	0	3	0	0	7	0	0	0
26 September 2018 – 3 October 2018	7	183	9	2	0	0	0	0	0	0	0	0	2	1	0	24	0	0	0
22 October 2018 – 29 October 2018	7	26	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11 April 2019 – 17 April 2019	6	61	5	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
17 May 2019 – 24 May 2019	7	434	7	2	3	0	0	0	0	0	0	0	12	0	0	24	0	0	0
13 June 2019 – 18 June 2019	5	40	1	2	0	0	0	0	0	0	0	0	0	0	0	17	1	0	0

2.4.49 Moderate to high levels of common pipistrelle were recorded, with a high peak of 836ppn in August 2018. Low levels of soprano pipistrelle were recorded, with peaks of nine ppn in both July and September 2018. High levels of noctule were recorded, with a peak of 57ppn in July 2018. Low levels of *Myotis* species were recorded, with a moderate to high peak of 12ppn recorded in May 2019. One ppn of brown long-eared bat was recorded in July and in September 2018, and a peak of two ppn of Leisler's bat was recorded in July 2018. A moderate to high peak of three ppn of Nathusius' pipistrelle was recorded in April 2019.

Discussion

Bat assemblage

2.4.50 Data from field surveys and desk study records are summarised below and provide the basis for identifying bat assemblages associated with habitat in and adjoining the land required for the construction of the proposed scheme in MA05. These assemblages are described in the Environmental Statement Volume 2, Community Area report: Risley to Bamfurlong (MA05), Section 7 and are present in the following locations:

- bat assemblage between the M62 and Culcheth Linear Park;
- bat assemblage at Abram and Pennington Flashes;
- between the M62 and Lowton; and
- bat assemblage between woodland south of Holcroft Moss to the M62 in the Broomedge to Glazebrook area and the Risley to Bamfurlong area (MA04).

2.4.51 There were numerous occasional roosts for common pipistrelle and soprano pipistrelle, and fewer roosts for *Myotis* species and brown long-eared bats, one possible maternity roost of common pipistrelle was recorded.

2.4.52 Field surveys carried out in 2018, 2019 and 2020 confirmed the presence of at least 10 bat species along the route of the Proposed Scheme, including rarer species: whiskered/Brandt's bat, Daubenton's bat, Leisler's bat, natterer's, serotine and Nathusius' pipistrelle bats.

2.4.53 Common and widespread bats including common pipistrelle and soprano pipistrelle were the most recorded species in the community area in MA05, with peaks of 1,871ppn and 1,177ppn on one night in July 2018 at Silver Lane Ponds LWS.

2.4.54 The walked transects recorded a peak of 129ppn for common pipistrelle on a transect south-west of Abram, along the margins of Viridor Wood and where the Proposed Scheme joins the West Coast Mainline (WCML). A peak of 49ppn for soprano pipistrelle was recorded south of Holcroft Moss, along a transect north and south of the M62 that includes woodlands and water bodies.

2.4.55 Brown long-eared bats were recorded very infrequently across the surveys, but with moderate to high numbers for the species. Peaks of five ppn were recorded during both transects and static surveys along Culcheth Linear Park.

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- 2.4.56 Noctule were recorded in low to moderate numbers across all walked transects and static monitoring across MA05. However, peaks of high activity were recorded, with 47ppn during walked transect surveys and 163ppn during static monitoring surveys. The greatest activity throughout the survey season was in the vicinity of Byrom Wood.
- 2.4.57 *Myotis* species were recorded in low numbers on the majority of walked transects and static monitoring surveys. However, high peaks of *Myotis* species were recorded in the months of September and October 2018, with a peak of 23ppn during transect surveys and 171ppn on static detectors. A number of high peaks were consistently recorded in October transects between Byrom Wood, Culcheth Linear Park and Silver Lane Ponds LWS. This was consistent with high peaks recorded in October along static detectors positioned along Culcheth Linear Park and Silver Lane Ponds LWS.
- 2.4.58 Leisler's bat was recorded in low numbers across a number of the transect and static monitoring surveys, with high peaks of 30ppn recorded at the start and end of the bat active season around Byrom Wood.
- 2.4.59 The static detector in the centre of Silver Lane Ponds LWS, within the tree line around the lakes, recorded at least six different species of bats on a number of occasions. This would indicate that this location is an important habitat for a number of different common species, such as common pipistrelle, soprano pipistrelle, *Myotis* species and noctule.
- 2.4.60 The land within Culcheth Linear Park and Silver Lane Ponds LWS supported habitats which could be important to foraging and commuting bats. Woodlands could additionally support roosts and provide foraging and commuting habitats such as Byrom Wood, Viridor Wood and Windy Bank Brook Wood.
- 2.4.61 Lack of access may have resulted in some roosts been unrecorded. The key areas where access was not available during the summer season included land to the west of Silver Lane Ponds LWS, Bryom Wood and land surrounding Windy Bank Brook.

Roosts

- 2.4.62 The desk-study records identified no bat roosts within 500m of the land required for the construction of the Proposed Scheme in MA05.
- 2.4.63 No roosts were identified in trees.
- 2.4.64 A total of 17 roosts were identified in 13 buildings and structures in the area. Emergence/re-entry surveys identified 15 buildings with roosts and two were identified by droppings found during internal inspections.
- 2.4.65 Two *Pipistrellus* sp. roosts were identified through internal surveys where droppings were recorded. It is unknown how many bats use these roosts, but they were considered to be occasional roosts based on visual evidence of the number and age of the droppings.
- 2.4.66 Nine common pipistrelle roosts were recorded across MA05 for the Proposed Scheme in eight buildings. All were recorded as occasional roosts, with the exception of one roost in a

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residential building, A573 Wigan Road, Stubshaw Cross, which was recorded as a potential maternity roost, with a peak of 11 common pipistrelle bats.

- 2.4.67 Four soprano pipistrelle roosts were recorded across four buildings. All were occasional roosts with a peak of four bats in a residential building, south of Wigshaw Lane, in Warrington.
- 2.4.68 A single brown long-eared bat roost was recorded in a disused hospital unit off Hesketh Meadow Lane, Wigan. This was identified as an occasional roost, with a peak of two bats observed using the roost.
- 2.4.69 A single *Myotis* species roost was recorded in a residential building on Kenyon Lane, Wigan. This was identified as an occasional roost with a peak of one bat.

Foraging habitat

- 2.4.70 The landscape within MA05 is comprised largely of agricultural and improved grassland fields with broadleaved woodlands, several small and large water bodies, extensive hedgerows networks and tree lined roads, and active and disused railway lines. Generally, static and walked transect data results showed large numbers of common pipistrelle in May, July, August and September. High numbers of noctule in May and June and consistent moderate to high numbers of *Myotis* species were recorded across the year.
- 2.4.71 The walked transects noted higher levels of foraging activity along Culcheth Linear Park and Byrom Wood and at Silver Lane Ponds LWS. This was dominated by common pipistrelle. Soprano pipistrelle activity was found to be consistently low across all transects. *Myotis* species, noctule, Leisler's bat and brown long-eared bats were also recorded in relatively low numbers across MA05, with increased levels of activity along these at different times of the season. Seasonal differences were particularly notable for *Myotis* species and noctule, which were recorded in high numbers around woodland habitats during September and October static surveys.
- 2.4.72 Foraging bats were consistently recorded along the transect and static detectors at Byrom Wood and Viridor Wood, compared with other woodlands surveyed in MA05, with high numbers of common pipistrelle and moderate to high levels of noctule activity, compared to surrounding agricultural habitat. Therefore, based on the habitats and the number of foraging bats, these locations are assumed to be key foraging areas for both species.
- 2.4.73 The transects at Culcheth Linear Park and Silver Lane Ponds LWS include linear habitats as well as woodland and water bodies. Moderate to high levels of *Pipistrellus* species and peaks of *Myotis* species and brown long-eared bats were recorded in October compared to habitats to the north and south of this site. Comparatively high levels of activity of these species were also recorded on the static detectors in this area. Based on the habitats and the number of foraging bats, it is assumed that this is a key foraging area.
- 2.4.74 High numbers of common pipistrelle, soprano pipistrelle, brown long-eared bat, noctule and Leisler's bats were recorded on the static detector located on Slag Lane. The high levels of

calls were not recorded on the adjacent statics, indicating that Slag Lane is a key foraging/commuting corridor and/or a significant roost is located nearby.

Commuting habitat

- 2.4.75 The hedgerow network throughout this area is well established, with good connections to some of the larger woodlands, such as Byrom Wood. There are also tree-lined fields, watercourses, active and disused railway lines and roads that, together, create an extensive network of habitats for commuting bats.
- 2.4.76 The walked transects and static detectors recorded high levels of *Pipistrellus* species activity around Silver Lane Ponds LWS (peaking in July) and the Culcheth Linear Park (peaking in August). Additionally, there were high peaks of *Myotis* species and brown long-eared bat recorded activity at Silver Lane Ponds LWS Culcheth Linear Park and Byrom Wood. The static detectors in vicinity to these transects recorded similar peaks in activity over several nights of monitoring. Therefore, it is assumed that the Culcheth Linear Park provides a key commuting corridor for bats to potentially travel between Silver Lane Ponds LWS and Byrom Wood.
- 2.4.77 Commuting bats used hedgerows and the bankside vegetation along the Leeds and Liverpool Canal to navigate to foraging habitats, such as Shale Pit and Pennington Flash. Due to a lack of access and limited data for this area, and considering the suitable habitats, as a precautionary approach it is an assumed key commuting route.
- 2.4.78 High numbers of common pipistrelle, soprano pipistrelle, brown long-eared bat, noctule and Leisler's bats were recorded on the static detector located on Slag Lane. High levels of calls were not recorded on adjacent statics, indicating that Slag Lane is a key commuting corridor, or a significant roost is located nearby. It is likely that Slag Lane could potentially provide a commuting corridor between foraging habitats at Pennington Flash and Byrom wood.
- 2.4.79 Commuting bats were recorded by static detectors in the hedgerows that connect to Pennington Flash, suggesting it is a key commuting corridor, possibly linking roosts within the woodland area and foraging habitat to the east.

Hulseheath to Manchester Airport (MA06)

2.4.80 Table 122 to Table 124 provide summaries of bat roosts identified in MA06 from field surveys. These tables should be read in conjunction with Background Information and Data, Ecology Map Book, Map Series EC-05. Survey information collected has been allocated an ecology survey code to provide a unique identification for use on mapping.

Overview of bat species status in the vicinity of MA06

- 2.4.81 There are no statutory designated sites (within 10km) or non-statutory designated sites (within 5km) of MA06 which support bats as features for their designations.
- 2.4.82 Habitats within MA06 suitable to support roosting, foraging and commuting bats include several areas of broad-leaved woodland, water bodies such as Rostherne Mere, main watercourses such as the River Bollin and several smaller watercourses such as Blackburn 's Brook. The majority of the land is farmland comprising improved grasslands and arable land with associated hedgerows and tree lines.
- 2.4.83 Field surveys and desk study records recorded at least 10 species of bats in MA06. All species were identified from field surveys. The total bat assemblage is as follows:
- common pipistrelle;
 - soprano pipistrelle;
 - *Pipistrellus* species;
 - Nathusius' pipistrelle;
 - brown long-eared bat;
 - noctule;
 - Leisler's bat;
 - serotine;
 - *Myotis* species;
 - whiskered bat/Brandt's bat;
 - Daubenton's bat; and
 - Natterer's bat.

Roosting (trees)

- 2.4.84 A total of 382 trees were subject to an initial ground-based assessment and subsequent further detailed climbed surveys where appropriate in line with the methods described in the FSMS.
- 2.4.85 Of the 382 trees that were initially assessed, the following results were obtained:
- 54 trees identified as having high potential to support roosting bats;
 - 156 trees identified as having moderate potential to support roosting bats; and

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- the remaining 172 trees were classified as having low or negligible potential to support roosting bats. These trees were subsequently scoped out of further survey.

2.4.86 Of the 210 trees assessed as having moderate or high potential to support roosting bats:

- a total of 70 were subject to further surveys in the form of a tree climbing inspection during which one roost was identified;
- 30 were reassessed as having low to negligible potential to support roosting bats and were scoped out of further surveys;
- ten trees were subject to emergence surveys during which three roosts were recorded; and
- 14 trees were subject to back-tracking surveys.

2.4.87 One back-tracking survey was undertaken in MA06 at one site. A high incidence of trees with high and moderate potential were identified at these sites, therefore this method was undertaken in order to gain an understanding of the bat assemblage at this site.

2.4.88 Details of confirmed tree roosts in MA06 are provided in Table 122.

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Table 122: Confirmed tree roosts within MA06

Ecology survey code	Location	OS grid reference	Tree species	Species confirmed as utilising roost and (peak count)	Date of peak count and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
GM506853_L43411_B T2_F026_0 81220	Hasty Lane, Altrincham	SJ80508567	Ash	Noctule (1)	08 December 2020, tree climbing inspection	Transitional	A noctule was found inside the cavity. It is considered to be a transitional roost as the bat was very active inside the cavity. However, the feature does have hibernation potential and could be used for hibernation.	MA06	Within
GM17960_L43438_BT 3_N/A_260 918	Bankside, Timperley	SJ79728473	Hybrid poplar	Common pipistrelle (1)	26 September 2018, re-entry survey	Occasional	Re-entry observed into a non-target tree.	MA06	50m east
GM17960_L43438_BT 3_F003_04 0918	Bankside, Timperley	SJ79668473	Oak	Soprano pipistrelle (2)	04 September 2019, emergence survey	Occasional	Flew directly out towards surveyors from tree.	MA06	80m east
GM17960_L43438_BT 3_F005_26 0918	Bankside, Timperley	SJ79668472	Oak	Soprano pipistrelle (1)	26 September 2018, re-entry survey	Occasional	Re-entry into a dead branch of the tree.	MA06	110m east

Roosting (buildings and structures)

- 2.4.89 A total of 150 buildings in this area were subject to initial inspections, resulting in the following:
- 27 buildings were confirmed to support 41 roosts;
 - 13 roosts were confirmed via internal inspections and 28 roosts were identified from emergence and re-entry surveys;
 - 18 buildings had high potential to support bats;
 - 32 buildings had moderate potential to support bats;
 - 25 buildings had low potential to support bats; and
 - 75 buildings had negligible potential to support bats.
- 2.4.90 Of the 75 buildings confirmed as having roosts, or assessed as having high, moderate or low potential to support bats:
- 44 buildings were subject to internal inspections resulting in identification of 13 bat roosts;
 - 18 buildings were subject to a total of 53 emergence and re-entry surveys identifying a further 28 roosts; and
 - visual inspection of droppings found during the internal inspections identified 10 roosts; one *Pipistrellus* species roost, eight brown long-eared bat roosts and one *Myotis* species roost. In addition, one whiskered bat roost and one brown long-eared bat roost were identified through DNA analysis of droppings.
- 2.4.91 Details of confirmed roosts in buildings/structures in MA06 are provided in Table 123.
- 2.4.92 Details of roosts over 100m from the Proposed Scheme are provided in Table 124.

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Table 123: Confirmed roosts in buildings and structures within MA06

Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
CH574986_L20769_BS3_F002_130718	Tom Lane, Rostherne	SJ74958482	Residential	Soprano pipistrelle (1)	13 July 2018, re-entry survey	Occasional	Two-storey, semi-detached, red brick building (19th century) with a pitched slate tile roof.	MA06	Within
CH211096_L20843_BS3_F001_190918	Tom Lane, Rostherne	SJ74968481	Residential	<i>Myotis</i> species (1)	19 September 2018, re-entry survey	Occasional	Two-storey, semi-detached, red brick building (19th century) with a pitched slate tile roof.	MA06	Within
CH211096_L20843_BS3_F001_210818	Tom Lane, Rostherne	SJ74968481	Residential	Soprano pipistrelle (3)	21 August 2018, emergence survey	Occasional	Two-storey, red brick residential building with pitched felt tiled roof. Conservatory on the south-east wall and one-storey extension connecting it to neighbouring property. Approximately 100+ years old.	MA06	Within
CH211096_L20843_BS3_F001_190918	Tom Lane, Rostherne	SJ74968481	Residential	Brown long-eared bat (1)	19 September 2018, re-entry survey	Occasional	Two-storey, red brick residential building with pitched felt tiled roof. Conservatory on the south-east wall and one-storey extension connecting it to neighbouring property. Approximately 100+ years old.	MA06	Within
CH242367_L39463_BS3_F001_170718	Castle Mill Lane, Altrincham	SJ79268407	Residential	Soprano pipistrelle (1)	17 July 2018, re-entry survey	Occasional	18th century semi-detached two-storey house with modern rear extension, converted from a barn in the 1920s.	MA06	Within
GM36083_L4250_BS3_F001_2	Hale Road, Hale Barns	SJ80168528	Residential	Common pipistrelle (7)	29 August 2018, emergence	Occasional	A red brick residential building with a pitched roof with stone interlocking	MA06	Within

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Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
90818					survey		tiles.		
GM372536_L43146_BS3_F001_290819	Hasty Lane, Altrincham	SJ80208544	Residential	Common pipistrelle (4)	29 August 2019, re-entry survey	Occasional	Modern mansion, approximately 30 years old. Brick walls, hipped, tiled roof, gable ends, chimneys. Two windows in attic.	MA06	Within
CH126162_L43412_BS2_F002_130618	Back Lane, Ashley	SJ78738388	Barn	Brown long-eared bat (Visual droppings ID)	13 June 2018, internal inspection	Feeding Perch	Modern one-storey red brick stables with a pitched roof and concrete moulded tiles.	MA06	Within
MAN250154_L4455_BS3_F001_060818	Sunbank Lane, Altrincham	SJ79718441	Residential	Common pipistrelle (1)	6 August 2018, emergence survey	Occasional	Modern detached brick building with a pitched roof. Three-storeys, with a one-storey garage attached on side extension.	MA06	Within
CH422827 - CH432214_L4822_BS2_F001_081118	Thowler Lane, High Legh	SJ72058443	Residential	Pipistrellus sp. (Visual droppings ID)	8 November 2018, internal inspection	Occasional	Country farmhouse over 100 years old. Brick built painted over with slate roof. Structure is rectangular with two intersecting gable ends both to the west of the building. The central section of the rectangle structure is lower than either end creating two more gables.	MA06	Within
GM713451_L4208_BS2_F001_071118	Hasty Lane, Altrincham	SJ80118542	Residential	Brown long-eared bat (Visual droppings ID)	7 November 2018, internal inspection	Occasional	Rectangular residential building gabled at two ends with one intersecting gable and 5 dormer windows. Less than 30 years old.	MA06	Within
CH126162_L43412_	Back Lane, Ashley	SJ78698391	Residential	<i>Myotis</i> species (1)	1 August 2018,	Occasional	Detached two-storey house. Main section has a hipped roof with a	MA06	Within

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Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
BS3_F001_010818					emergence survey		chimney and lead flashing. The eastern extension, comprising a garage with a bedroom above, has a pitched roof with a gable end facing north, wooden boarding, wooden soffit boxes and a flat felted roof section on the southern elevation.		
CH448367_L5290_B S3_F010_1 20718	Thowler Lane, High Legh	SJ72078427	Barn	Soprano pipistrelle (1)	12 July 2018, emergence survey	Occasional	Red brick barn with a slate roof and ridged tiles. Red brick barn in complete disrepair and unsafe to enter.	MA06	Within
CH448367_L5290_B S3_F010_2 60718	Thowler Lane, High Legh	SJ72078427	Barn	Common pipistrelle (6)	26 July 2018, re-entry survey	Occasional	Red brick barn with a slate roof and ridged tiles. Red brick barn in complete disrepair and unsafe to enter.	MA06	Within
CH448367_L5290_B S3_F010_2 60718	Thowler Lane, High Legh	SJ72078427	Barn	<i>Myotis</i> species (11)	26 July 2018, re-entry survey	Possible Maternity	Red brick barn with a slate roof and ridged tiles. Red brick barn in complete disrepair and unsafe to enter.	MA06	Within
CH237195_L43894_BS2_F001_010819	Back Lane, Ashley	SJ79008402	Residential	Whiskered bat (DNA analysis of droppings)	1 August 2019, internal inspection	Occasional	16th century farmhouse. Painted walls with pitched slate tile roof and open walled awning over the front door.	MA06	Within
CH480792_L5149_B S3_F004_0 60718	Castle Mill Lane, Altrincham	SJ79328391	Barn	Brown long-eared bat (1)	6 July 2018, re-entry survey	Occasional	Old decorative barn with brick air vents. A modern garage and brick flat roof lean to building are attached.	MA06	Within
CH480792	Castle Mill	SJ79328391	Barn	<i>Myotis</i> species	2	Occasional	Old decorative barn with brick air	MA06	Within

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Ecology survey code	Location	OS grid reference	Building/structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
_L5149_B S3_F004_0 20920	Lane, Altrincham			(1)	September 2020, emergence survey		vents. A modern garage and brick flat roof lean to building are attached.		
CH480792 _L5149_B S3_F004_2 20818	Castle Mill Lane, Altrincham	SJ79328391	Barn	Common pipistrelle (25)	22 August 2018, re-entry survey	Possible Maternity	Old decorative barn with brick air vents. A modern garage and brick flat roof lean to building are attached.	MA06	Within
CH480792 _L5149_B S3_F004_2 20818	Castle Mill Lane, Altrincham	SJ79328391	Barn	Soprano pipistrelle (4)	22 August 2018, re-entry survey	Occasional	Old decorative barn with brick air vents. A modern garage and brick flat roof lean to building are attached.	MA06	Within
CH480792 _L5149_B S3_F001_0 20818	Castle Mill Lane, Altrincham	SJ79298393	Residential	Common pipistrelle (2)	2 August 2018, re-entry survey	Occasional	Two-storey farmhouse dated 1889 made of red and decorative blue brick with a slate central pitched roof.	MA06	Within
CH480792 _L5149_B S3_F001_0 20818	Castle Mill Lane, Altrincham	SJ79298393	Residential	Soprano pipistrelle (3)	2 August 2018, re-entry survey	Occasional	Two-storey farmhouse dated 1889 made of red and decorative blue brick with a slate central pitched roof.	MA06	Within
CH546967 _L5760_B S2_F002_2 80819	Brickhill Lane, Ashley	SJ78908379	Warehouse	Brown long-eared bat (Visual droppings ID)	28 August 2019, internal inspection	Feeding Perch	Corrugated metal storage shed/warehouse with relatively flat corrugated metal roof.	MA06	10m east
CH448367 _L5290_B S3_F008_1	Thowler Lane, High Legh	SJ72098427	Barn	Common pipistrelle (8)	12 July 2018, emergence survey	Occasional	Red brick barn. Two-storeys to the west, single-storey to the east. Slate roof and ridge tiles with lead flashing in some parts. Barge boards present	MA06	10m north

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Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
20718							along eastern extension, but open at the eaves on the western section. Approximately 100 + years.		
CH448367_L5290_B_S3_F008_2_60718	Thowler Lane, High Legh	SJ72098427	Barn	Soprano pipistrelle (4)	26 July 2018, emergence survey	Occasional	Red brick barn. Two-storeys to the west, single-storey to the east. Slate roof and ridge tiles with lead flashing in some parts. Barge boards present along eastern extension, but open at the eaves on the western section. Approximately 100 + years.	MA06	10m north
CH448367_L5290_B_S3_F008_2_60718	Thowler Lane, High Legh	SJ72098427	Barn	Whiskered bat (21)	26 July 2018, emergence survey	Possible Maternity	Red brick barn. Two-storeys to the west, single-storey to the east. Slate roof and ridge tiles with lead flashing in some parts. Barge boards present along eastern extension, but open at the eaves on the western section. Approximately 100 + years.	MA06	10m north
CH448367_L5290_B_S2_F008_3_10719	Thowler Lane, Agden	SJ72098427	Barn	Brown long-eared bat (Visual droppings ID)	31 July 2019, internal inspection	Occasional	Red brick barn. Two-storeys to the west, single-storey to the east. Slate roof and ridge tiles with lead flashing in some parts. Barge boards present along eastern extension, but open at the eaves on the western section. Approximately 100 + years.	MA06	10m north
CH439073_L21054_BS2_F001_141118	Boothbank Lane, Lymm	SJ72098478	Residential	Brown long-eared bat (Visual droppings ID)	14 November 2018, internal	Occasional	L-shaped farmhouse with three gable ends. Extremities are new extensions around 20 years old and the original structure is 19th century.	MA06	10m south

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Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
					inspection				
CH422827 - CH432214_L4822_B S2_F002_0 81118	Thowler Lane, High Legh	SJ72098444	Barn	Brown long-eared bat (Visual droppings ID)	8 November 2018, internal inspection	Occasional	Stables with adjoining metal garage/workshop.	MA06	20m east
CH230809 - CH448367 - CH575710_L21079_BS3_F001_060819	Chapel Lane, Knutsford	SJ72418378	Residential	Soprano pipistrelle (3)	22 August 2019, re-entry survey	Occasional	Two-storey detached modern property with a tile hipped roof and conservatory. Approximately 30 years old.	MA06	30m east
CH237195_L43894_BS2_F003_010819	Back Lane, Ashley	SJ79038401	Stables	<i>Myotis</i> species (Visual droppings ID)	1 August 2019, internal inspection	Occasional	New. brick built, painted walls, with a pitched slate tile roof. Less than 30 years old.	MA06	30m east
GM39245 9- GM45263 1_L5778_BS2_F004_190619	Roaring Gate Lane, Trafford	SJ80418662	Residential	Brown long-eared bat (Visual droppings ID)	19 June 2019, internal inspection	Occasional	Small, single-storey, former workers cottage of brick construction with pitched slate roof. Currently un-occupied.	MA06	30m east
GM39245 9- GM45263	Roaring Gate Lane, Trafford	SJ80438662	Barn	Brown long-eared bat (Visual	19 June 2019, internal	Occasional	18th/19th century brick built Victorian barn with a pitched roof and a more recent extension.	MA06	30m east

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Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
1_L5778_BS2_F002_190619				droppings ID)	inspection				
CH333422_L5796_BS3_F002_070819	Castle Mill Lane, Ashley	SJ78978412	Residential	Common pipistrelle (1)	7 August 2019, re-entry survey	Occasional	Converted farm building. Two-storey barn conversion with five differing roof levels. Multi aged based on brick bond. Approximately 18th and 19th century.	MA06	30m west
CH528227_L5822_BS3_F001_070819	Boothbank Lane, Millington	SJ72088478	Residential	Soprano Pipistrelle (1)	7 August 2019, emergence survey	Occasional	Red brick with pitched slate roof, built in the 1740s.	MA06	30m east
GM49772_8_L6023_BS3_F002_170918	Sunbank Lane, Altrincham	SJ79918438	Residential	Soprano pipistrelle (6)	17 September 2018, emergence survey	Occasional	Two-storey, brick building with slate tiles and ridge tiles. Built in the 19th century.	MA06	30m east
GM49772_8_L6023_BS3_F002_210819	Sunbank Lane, Altrincham	SJ79918438	Residential	Common Pipistrelle (1)	21 August 2019, emergence survey	Occasional	Two-storey, brick building with slate tiles and ridge tiles. Built in the 19th century.	MA06	30m east
GM49772_8_L6023_BS3_F002_210819	Sunbank Lane, Altrincham	SJ79918438	Residential	<i>Myotis</i> species (5)	21 August 2019, emergence survey	Occasional	Two-storey, brick building with slate tiles and ridge tiles. Built in the 19th century.	MA06	30m east
GM35476_2_L6041_BS2_F001_060819	Sunbank Lane, Timperley	SJ79988444	Residential	Soprano pipistrelle	6 August 2019, internal inspection	Occasional	Large, two-storey, painted brick, detached, house with a single-storey garage attached. Hipped clay tile roofs throughout. Over 50 years old. Situated	MA06	30m east

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Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
							next to a large woodland.		
CH333422_L5796_B S3_F002_0 30918	Castle Mill Lane, Ashley	SJ78978412	Residential	Soprano pipistrelle (1)	3 September 2018, emergence survey	Occasional	Converted farm building. Two-storey barn conversion with five differing roof levels. Multi aged based on brick bond. Approximately 18th and 19th century.	MA06	30m west

Table 124: Confirmed building roosts beyond 100m buffer in MA06

Ecology survey code	Location	OS grid reference	Building/ structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) from the Proposed Scheme
CH362894_L43402_BS 2_F003_17 0619	Back Lane, Ashley	SJ77668430	Garage	Brown long-eared bat (DNA analysis of droppings)	17 June 2019, internal inspection	Occasional	Relatively undisturbed, single-storey four room garage, two north facing storage shed rooms, two south facing metal roller doored garages with interlocking clay tiles for roof.	MA06	105m north-west

Roosting (woodlands)

2.4.93 This section applies to all trees subject to the surveying woodland methodology. Eleven discrete areas of woodland, comprising either single large woodland blocks or groups of smaller woodlands, were identified to be surveyed in accordance with the surveying woodland methodology.

2.4.94 The results of woodlands identified for survey and the results of an initial ground-based assessments of trees and surrounding area are summarised in Table 125. Trees with negligible potential for roosting bats were not recorded or mapped.

Table 125: Potential roosting resource within woodlands in MA06

Woodland	Number of trees with features of potential value to roosting bats			Overall suitability of woodland for bats*
	High suitability	Moderate suitability	Low suitability	
Millington Clough	7	9	8	High – mature broadleaved woodland, connected to hedgerows and smaller areas of woodland via small watercourses.
Rushy-pits Covert	1	3	7	Moderate – mature broadleaved woodland located within arable fields. Connectivity to Harpers Bank Wood and Rostherne Mere via hedgerows.
Yarwoodheath Covert	Unknown	Unknown	Unknown	Low – area of woodland, surrounded by the M56 at Junction 7.
Mere Covert	2	6	4	High – directly adjacent to Rostherne Mere Nature Reserve, providing suitable habitat with connectivity to smaller woodlands.
Hancock's Banks and Ryecroft Covert.	5	9	13	High – mature woodland with good connectivity to other woodlands and Blackburn's Brook.
Woodland south of Ashley	Unknown	Unknown	Unknown	Moderate – good connectivity along field boundaries. Sugar Brook runs through the woodland providing good foraging habitat.
Ecclesfield Wood	Unknown	Unknown	Unknown	Low – dense woodland, connected to other small woodlands via field boundaries.
Brickhill Wood	0	7	2	Moderate – good connectivity to larger woodlands and the River Bollin. Note – only a small area within the 100m buffer
Sunbank Wood	7	20	20	High – good connectivity to other woodlands. Adjacent to the River Bollin.
Woodland south-east of Hale Barns	Unknown	Unknown	Unknown	Low – isolated and adjacent to Junction 6 of the M56. Likely planted.
Flaxhigh Covert,	9	28	42	Moderate – three woodlands in

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Woodland	Number of trees with features of potential value to roosting bats			Overall suitability of woodland for bats*
	High suitability	Moderate suitability	Low suitability	
Humphreys Wood and Davenport Green Wood				proximity with connectivity to Ringway Golf Club. Timperley Brook runs through Davenport Green wood. Isolated woodlands with few high-quality trees.
Shawgreen Wood	Unknown	Unknown	Unknown	Moderate – small woodland connected to Hancock's Bank and Ryecroft Covert. Blackburn's Brook provides commuting habitat to Rostherne Mere and surrounding woodland habitats.
Birkinheath Covert and Ward's Plantation	2	0	0	Moderate – woodland adjacent to Birkin Brook with good foraging habitat. Good connectivity to Rostherne Mere and surrounding smaller woodlands.
Fish House Plantation	Unknown	Unknown	Unknown	Moderate – small woodland with good foraging habitat to the north along the River Bollin and to other connecting woodland.
The Rookery	Unknown	Unknown	Unknown	Low – strip of woodland along M56 surrounded by arable fields. Poor connectivity to potential foraging habitat.
Unnamed woodland south of Hale Barns	Unknown	Unknown	Unknown	Moderate – area of woodland with good connectivity to the west along the River Bollin towards neighbouring golf course and woodlands. M56 may provide a barrier to movement to south and east.

**based on the quality and quantity of the roost and feeding resource and ecological position of the wood*

2.4.95 Transects and static detector surveys were undertaken around each woodland where access was available in order to gain an understanding of the bat assemblage and levels of bat activity. The results of these surveys are included in the bat activity surveys section.

Bat activity surveys

2.4.96 The following 10 species have been recorded during the range of bat activity surveys conducted in MA06:

- common pipistrelle;
- soprano pipistrelle;
- *Pipistrellus* species;
- Nathusius' pipistrelle;
- brown long-eared bat;

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- noctule;
- Leisler’s bat;
- serotine;
- *Myotis* species;
- whiskered bat/Brandt’s bat;
- Daubenton’s bat; and
- Natterer’s bat.

Table 126: Bat activity surveys conducted within MA06

Ecology survey code	Transect location	Numbers of surveys conducted	First survey date	Final survey date	CA	Map reference
BT08	Southwest of Altrincham	9	11 July 2018	21 October 2020	MA06	EC-06-536b, EC-06-537
BT09	North of the River Bollin	7	11 July 2018	27 June 2019	MA06	EC-06-541, EC-06-541-R1
BT03a	East of the River Bollin	6	24 May 2018	7 August 2019	MA06	EC-06-541
BT03b	North of the River Bollin	3	24 May 2018	5 September 2018	MA06	EC-06-541/542a
BT06	North of Rostherne Mere	7	7 August 2018	25 June 2019	MA06	EC-06-537. EC-06-537-L1, EC-06-538, EC-06-538-L1
BT07	East of Rostherne Mere	7	8 August 2018	16 July 2019	MA06	EC-06-539
BT12	North-west of Manchester Airport	2	10 September 2020	8 October 2020	MA06	EC-06-541-L1
B30	Chapel Lane, Millington	3	8 August 2018	15 May 2019	MA06	EC-06-536b
B31	Millington	6	18 July 2018	15 June 2019	MA06	EC-06-536b
B31a	Millington Lane,	5	15 August 2018	15 May 2019	MA06	EC-06-536b
B32	Hope Cottage, Rostherne	3	10 August 2020	12 October 2020	MA06	EC-06-537
B33	South of the M56, Rostherne	6	24 April 2019	23 October 2019	MA06	EC-06-538
B34	Blackburn’s Brook, M56, Rostherne	3	19 June 2019	23 October 2019	MA06	EC-06-538
B35	Ryecroft covert, M56, Rostherne	6	24 April 2019	23 October 2019	MA06	EC-06-538
B36	Ashley Road, Ashley	5	24 April 2019	23 October 2019	MA06	EC-06-539
B37	Lamb Lane, Ashley	3	24 April 2019	26 June 2019	MA06	EC-06-539

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Ecology survey code	Transect location	Numbers of surveys conducted	First survey date	Final survey date	CA	Map reference
B38	Mobberley Road, Ashley	3	26 September 2018	12 October 2020	MA06	EC-06-539
B40	Brickhill Lane, Ashley	3	11 July 2018	19 September 2018	MA06	EC-06-540
B41	River Bollin, near M56	4	11 July 2018	26 June 2019	MA06	EC-06-541
B42	Warburton Green	7	18 July 2018	18 September 2019	MA06	EC-06-541
B43	Hale Road, Timperley	6	18 July 2018	26 June 2019	MA06	EC-06-541
B44	Davenport Green Wood	2	18 July 2017	13 August 2019	MA06	EC-06-542a
B45	Davenport Green Wood	1	7 August 2019	14 August 2019	MA06	EC-06-542a
B47	Millington	6	18 July 2018	26 June 2019	MA06	EC-06-536b
B48	Sunbank Wood	7	18 July 2018	26 June 2019	MA06	EC-06-541
B49	Sunbank Wood	7	18 July 2018	26 June 2019	MA06	EC-06-541
B57	North of Reddy Lane, Booth Bank	3	27 July 2020	28 September 2020	MA06	EC-06-536b-L1
B58	South of Reddy Lane, Booth Bank	3	24 August 2020	26 October 2020	MA06	EC-06-536b-L1

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Table 127: Bat activity transect survey results for Transect BT08

Ecology survey code	Transect location				Description of habitats covered by transect																	
BT08	South-west of Altrincham near the M56				The transect runs from Millington Lane, south of Little Bollington and continues to Rushy-pits Covert woodland before tracing around the edge and then entering the woodland. The transect exits the woodland and returns to where the transect began between two arable fields.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 11 July 2018	22	1	0	1	12	38	0	6	0	0	1	0	0	8	6	5	0	4	2	0	0	
Visit 2: Dusk: 7 August 2018	17	8	0	1	122	31	0	0	0	1	0	0	0	16	20	4	0	5	12	0	0	
Visit 3: Dawn: 8 August 2018	13	1	0	1	14	107	0	1	0	0	0	0	0	2	2	0	0	1	0	0	0	
Visit 4: Dusk: 10 September 2018	17	8	2	2	19	153	0	21	0	0	0	0	0	2	1	0	0	0	6	0	0	
Visit 5: Dawn: 16 October 2018	11	8	0	2	22	152	0	2	0	3	0	0	0	5	1	0	0	0	1	0	0	
Visit 6: Dusk: 25 April 2019	10	1	0	1	227	306	0	1	0	0	0	0	0	0	65	1	0	1	0	0	0	
Visit 7:	14	2	0	1	109	166	0	0	0	0	0	0	0	0	81	2	0	19	0	0	0	

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- 2.4.97 Moderate levels of common pipistrelle and high levels of soprano pipistrelle activity were recorded at this location with peaks of 227ppn and 306ppn, respectively. Moderate numbers of noctule were recorded, with a peak of 29ppn in June 2019. High levels of brown long-eared bat, Leisler's bat and *Myotis* species were recorded, with peaks of five ppn (July 2018), 12ppn (August 2018) and 81ppn (May 2019), respectively.

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Table 128: Bat activity transect survey results for Transect BT09

Ecology survey code	Transect location				Description of habitats covered by transect																	
BT09	North of the River Bollin and near Manchester Airport.				This transect zig-zags through Sunbank Wood, south of the M56 and Warburton Green. The transect circles three small ponds before ending at the corner of Sunbank Lane.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 11 July 2018	17	5	0	2	23	106	0	3	0	1	0	0	0	5	6	0	0	0	0	0	0	
Visit 2: Dusk: 8 August 2018	16	4	0	2	46	48	0	2	0	1	1	0	0	2	3	0	0	0	0	0	0	
Visit 3: Dawn: 9 August 2018	11	8	0	8	1	67	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	
Visit 4: Dusk: 10 September 2018	15	8	1	3	22	152	0	2	0	3	0	0	0	0	5	1	0	0	1	0	0	
Visit 5: Dusk: 15 October 2018	12	8	0	1	32	151	0	0	0	3	5	0	0	21	0	0	0	0	0	0	0	
April 2019 – Incomplete	N/A – Survey cancelled																					
Visit 6: Dusk: 23 May 2019	14	2	0	1	81	372	0	13	0	0	0	0	0	0	50	1	0	0	0	0	0	
Visit 7: Dusk: 27 June 2019	18	0	0	1	47	238	0	3	0	0	0	0	0	0	26	1	0	0	0	0	0	

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- 2.4.98 High levels of soprano pipistrelle and moderate to high levels of common pipistrelle activity were recorded, with a peak of 372ppn and 81ppn, respectively, in May 2019. Moderate to high levels of *Myotis* species activity were recorded, with a peak of 50ppn in May 2019. Peaks of five ppn of Natterer's bat (high levels) and three ppn of Daubenton's bat (moderate to high) were all recorded in October 2018. One ppn of brown long-eared bat was recorded in May 2019, June 2019 and September 2018 and one ppn for Leisler's bat was recorded in August and September 2018. Low levels of noctule activity were recorded, with a peak of two ppn in August 2018.

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Table 129: Bat activity transect survey results for Transect BT03a

Ecology survey code	Transect location				Description of habitats covered by transect																	
BT03a	East of the River Bollin, near Manchester Airport and M56.				This transect follows a wooded edge section of the River Bollin away from the M56, before veering away from Sunbank Wood and along Sunbank Lane back to the M56.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 24 May 2018	19	3	0	2	13	52	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	
Visit 2: Dusk: 21 June 2018	15	0	0	2	47	83	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	
July 2018 – Incomplete	Data corrupted																					
August 2018 – Incomplete	Data corrupted																					
Visit 3: Dawn: 5 September 2018	13	1	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
October 2018 – Incomplete	N/A – Access refused																					
April 2019 – Incomplete	N/A – Survey cancelled																					
May 2019	N/A – Survey completed in 2018																					
June 2019	N/A – Survey completed in 2018																					
Visit 4: Dusk: 24 July 2019	23	2	0	1	29	153	0	1	0	19	0	0	0	23	31	1	0	1	0	0	0	
Visit 5: Dusk: 6 August 2019	18	8	1	1	15	54	0	0	0	0	0	0	0	0	8	0	0	1	0	0	0	

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Ecology survey code	Transect location				Description of habitats covered by transect																				
Visit 6: Dawn: 7 August 2019	15	8	0	1	148	70	0	0	0	0	0	0	0	0	0	0	0	0	56	1	0	6	0	0	0
September 2019	N/A – Survey completed in 2018																								
October 2019 – Incomplete	N/A – Access refused																								

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- 2.4.99 Low to moderate levels of common pipistrelle activity were recorded throughout the year, with a high peak of 148ppn in August 2018. Soprano pipistrelle was recorded in increased numbers, generally at high levels peaking at 153ppn in July 2018. Moderate levels of *Myotis* species activity were recorded, with a peak of 56ppn in August 2019. Further records include high levels of whiskered/Brandt's bat and Daubenton's bat activity with a peak of 23ppn and 19ppn, respectively, in July 2019. Low to moderate levels of brown long-eared bat and noctule activity were recorded, with a peak of two ppn and six ppn, respectively, in June 2018.

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Table 130: Bat activity transect survey results for Transect BT03b

Ecology survey code	Transect location				Description of habitats covered by transect																	
BT03b	North of the River Bollin, near Manchester Airport and M56.				Transect begins at the M56 south of Altrincham and follows hedgerows around grazing pastures before cutting through Flaxhigh Covert. The transect joins Hasty Lane where it follows a hedgerow and ends back at the M56.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 24 May 2018	19	3	0	2	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Visit 2: Dusk: 21 June 2018	15	0	0	2	25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
July 2018 – Incomplete	N/A – Access refused																					
August 2018 – Incomplete	N/A – Access refused																					
Visit 3: Dawn: 5 September 2018	13	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	
April 2019 – Incomplete	N/A – Survey cancelled																					
May 2019	N/A – Survey completed 2018																					
June 2019	N/A – Survey completed 2018																					
July 2019 – Incomplete	N/A – Access refused																					
August – Incomplete	N/A – Access refused																					
September 2019	N/A – Survey completed 2018																					

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Ecology survey code	Transect location	Description of habitats covered by transect																				
October 2019 - Incomplete	N/A – Access refused																					

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- 2.4.100 Transect surveys were only completed for three months due to refused access for the remainder. Low levels of bat activity were recorded on all surveys with a peak of 25ppn of common pipistrelle recorded in June 2018. Immediately adjacent to the M56, this transect passes through agricultural land with several hedgerows. Bat numbers have been proven in many studies to decrease in proximity to major roads due to disturbance from light and vehicles.

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Table 131: Bat activity transect survey results for Transect BT06

Ecology survey code	Transect location				Description of habitats covered by transect																
BT06	North of Rostherne Mere, around the M56.				Transect moves south from Yarwoodheath Covert across the M56 north of Rostherne, following scattered trees and hedgerows bordering arable fields and grazing pastures. Transect follows hedgerows along Cherry Tree Lane until heading north where it again crosses over the M56 and continues to follow hedgerows through arable fields. The transect runs along Birkin Brook, crosses over the M56 again and ends back at Yarwoodheath Covert.																
Visit number and date	Weather conditions				Total species passes during transect survey																
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es
Visit 1: Dusk: 7 August 2018	16	8	0	1	31	51	0	2	0	0	0	0	0	9	4	0	0	0	0	0	0
Visit 2: Dawn: 8 August 2018	17	5	0	1	1	21	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Visit 3: Dusk: 3 September 2018	16	8	0	2	95	111	1	5	0	1	0	0	0	0	1	0	0	0	0	0	0
Visit 4: Dawn: 17 October 2018	11	4	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Visit 5: Dusk: 24 April 2019	11	6	1	2	42	49	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Visit 6: Dusk: 22 May 2019	13	6	0	1	29	33	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0
Visit 7: Dusk: 25 June 2019	15	8	1	1	36	137	0	0	0	0	0	0	0	0	7	0	0	2	0	0	0
July 2019 – Incomplete	N/A – Access refused																				

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- 2.4.101 Moderate to high levels of common pipistrelle and soprano pipistrelle activity were recorded, with peaks of 95ppn and in September 2018 and 137ppn in June 2019, respectively. Moderate levels of *Myotis* species activity were recorded in August 2018 comprising a peak of nine ppn of whiskered/ Brandt's bat and four *Myotis* species. Low levels of noctule activity were recorded, with two ppn recorded in June 2019.

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Table 132: Bat activity transect survey results for Transect BT07

Ecology survey code	Transect location				Description of habitats covered by transect																	
BT07	East of Rostherne Mere, around the M56.				The transect begins at a railway line west of Ashley where it follows treelines and hedgerows before following Ashley Road and then a track to the M56 and through Rycroft Covert. The transect heads south through arable fields until turning back on itself and ending at South Lodge.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 8 August 2018	16	3	0	1	26	43	0	1	0	0	1	0	0	0	5	2	0	0	3	0	0	
Visit 2: Dawn: 9 August 2018	12	7	0	0	5	79	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
Visit 3: Dusk: 3 September 2018	13	2	0	1	2	22	0	2	0	1	0	0	0	0	3	0	0	0	0	0	0	
October 2018 – Incomplete	N/A – Survey cancelled																					
Visit 4: Dusk: 25 April 2019	11	5	0	1	29	27	0	1	0	0	0	0	0	0	6	0	0	1	0	0	0	
Visit 5: Dusk: 21 May 2019	12	2	0	0	26	46	0	0	0	0	0	0	0	0	6	2	0	10	0	0	0	
Visit 6: Dusk: 27 June 2019	16	0	0	2	35	71	0	4	0	0	0	0	0	0	31	0	0	0	0	0	0	
Visit 7: Dusk: 16 July 2019	18	0	0	1	8	26	0	1	0	1	0	0	0	3	10	0	0	5	0	0	0	
August 2019	N/A – Survey completed 2018																					
September 2019	N/A – Survey completed 2018																					
October 2019	N/A – Access refused																					

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Ecology survey code	Transect location	Description of habitats covered by transect
- Incomplete		

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- 2.4.102 Low to Moderate levels of common pipistrelle (peak 35ppn in June 2019) and moderate to high levels of soprano pipistrelle (peak 79ppn in August 2018) activity were recorded. Moderate levels of *Myotis* species activity were recorded, with peaks of 31ppn in June 2019. Generally low levels of *Nyctalus* species activity were recorded, with a moderate to high peak of 10ppn in May 2019 of noctule and three ppn in August 2018 for Leisler's bat.

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Table 133: Bat activity transect survey results for Transect BT12

Ecology survey code	Transect location				Description of habitats covered by transect																
BT12	North-west of Manchester Airport, along the River Bollin, north of the M56				The transect begins along the River Bollin, north of the Hale Golf Club and proceeds south along the river on public rights of way. The transect finishes when the River Bollin meets the M56 underpass.																
Visit number and date	Weather conditions				Total species passes during transect survey																
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es
Visit 1: Dusk: 10 September 2020	13	8	0	0	44	98	0	6	0	0	0	0	0	6	0	0	1	1	0	0	
Visit 2: Dusk: 8 October 2020	11	6	0	1	8	57	0	3	0	0	0	0	4	0	0	1	0	0	0	0	

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- 2.4.103 Moderate levels of common pipistrelle (peak 44ppn in September 2020) and moderate to high levels of soprano pipistrelle (peak 98ppn in September 2020) activity were recorded. Low levels of *Myotis* species with a peak of six ppn and *Nyctalus* species and Leisler's bat were recorded, with a count of one ppn in September 2020.

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Table 134: Summary of static detector monitoring results for B30

Ecology survey code	Static location	OS grid reference	Description of habitats																
B30	Chapel Lane, Millington	SJ72398443	Edge of woodland, east of Ivy House Farm, east of Lymm.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
8 August 2018 – 15 August 2018	7	80	98	0	0	0	0	0	0	0	0	24	1	0	50	2	1	0	
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
16 April 2019 – 24 April 2019	8	118	105	0	3	0	0	0	0	0	0	38	3	0	5	1	1	0	
8 May 2019 – 15 May 2019	7	15	142	1	0	0	0	0	0	0	0	33	0	0	4	0	0	0	
June 2019 – Incomplete	Data corrupted																		
July 2019 – Incomplete	Data corrupted																		
August 2019	N/A – Survey completed 2018																		
September 2019 – Incomplete	N/A – Access refused																		
9 October 2019 – 16	N/A – Access refused																		

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Ecology survey code	Static location	OS grid reference	Description of habitats														
October 2019																	

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- 2.4.104 High levels of *Myotis* species activity were recorded over the surveys with 38ppn *Myotis* species in April 2019 and noctule with a peak of 50ppn in August 2018 but this was from limited data collections. Moderate to high levels of common pipistrelle and soprano pipistrelle activity were recorded, with a peak of 118ppn in April 2019 and 142ppn in May 2019, respectively. Three ppn of Leisler's bat and brown long-eared bat were recorded in August 2018 and April 2019, respectively, corresponding to a moderate to high level of activity for these species.

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Table 135: Summary of static detector monitoring results for B31

Ecology survey code	Static location	OS grid reference	Description of habitats																
B31	Millington	SJ72798482	Edge of arable field, east of Millington Lane, south of M56, east of Lymm.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
18 July 2018 – 25 July 2018	7	588	466	0	4	0	0	0	0	0	0	0	102	0	0	49	2	0	0
22 August 2018 – 29 August 2018	7	9	38	0	0	0	0	0	0	0	0	0	6	1	0	20	1	0	0
26 September 2018 – 3 October 2018	7	11	47	0	0	0	0	0	0	0	0	0	5	1	0	9	0	0	0
24 October 2018 – 24 October 2018	7	208	304	0	0	0	0	0	0	0	0	0	71	0	0	1	1	0	0
16 April 2019 – 23 April 2019	8	20	22	0	3	0	0	0	0	0	0	0	17	2	0	4	0	1	0
8 May 2019 – 15 May 2019	7	26	102	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
June 2019 – Incomplete	Data corrupted																		
July 2019 – Incomplete	N/A – Access refused																		

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- 2.4.105 Generally low to moderate levels of common pipistrelle, soprano pipistrelle and *Myotis* species activity were recorded, with a high peak of 208ppn, 304ppn and 71ppn in October 2018, respectively. High levels of activity were recorded for noctule with a peak of 20ppn in August 2018. Low levels of activity for brown long-eared bat with peaks of two ppn and occasional passes of Leisler's bat and serotine were recorded.

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Table 136: Summary of static detector monitoring results for B31a

Ecology survey code	Static location	OS grid reference	Description of habitats																
B31a	Millington Lane	SJ72978496	Edge of woodland (Rushy-pits Covert), south of M56, east of Lymm.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	Data corrupted																		
15 August 2018 – 22 August 2018	7	69	78	1	19	0	0	0	0	0	0	0	11	7	0	106	15	0	0
19 September 2018 – 26 September 2018	7	14	40	0	0	0	0	0	0	0	0	7	1	0	14	1	0	0	0
17 October 2018 – 24 October 2018	7	233	353	0	0	0	0	0	0	0	0	102	1	0	1	0	0	0	0
24 April 2019 – 30 April 2019	7	1479	1287	2	0	0	0	0	0	0	0	210	0	0	6	1	1	0	0
8 May 2019 – 15 May 2019	6	775	1408	0	15	0	0	0	0	0	0	864	1	0	4	0	0	0	0
June 2019 – Incomplete	Data corrupted																		

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- 2.4.106 High levels of common pipistrelle and soprano pipistrelle activity were recorded, with peaks of 1,479ppn and 1,408ppn, respectively. High levels of *Myotis* species activity were recorded, with a peak of 864ppn in May 2019. High levels of brown long-eared bat with a peak of seven ppn were recorded in August 2018. High levels of *Nyctalus* species were recorded, with peaks of 106ppn of noctule and 15ppn of Leisler's bat both in August 2018. High numbers of these species were identified during the transect surveys.

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Table 137: Summary of static detector monitoring results for B32

Ecology survey code	Static location	OS grid reference	Description of habitats																
B32	Hope Cottage, Rostherne	SJ73468508	A hedgerow junction with broadleaved trees located south of Hope Cottage off Coe Lane.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
10 August 2020 – 17 August 2020	7	82	67	0	3	0	0	0	0	0	0	58	1	0	12	0	0	4	
7 September 2020 – 14 September 2020	7	1,087	169	0	1	0	0	0	0	0	0	186	1	0	11	1	0	2	
7 October 2020 – 12 October 2020	5	12	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	

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- 2.4.107 High levels of common pipistrelle, soprano pipistrelle and *Myotis* species activity were recorded at this location with respective peaks of 1,087ppn, 169ppn and 186 ppn in September 2020. Low to moderate levels of activity were noted for brown long-eared bat, noctule, Leisler's bat and *Nyctalus/Eptesicus* species bats with peaks of one ppn, 12 ppn, one ppn and four ppn, respectively. There is a high species diversity in this location which may be due to the static location on the edge of a woodland strip.

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Table 138: Summary of static detector monitoring results for B33

Ecology survey code	Static location	OS grid reference	Description of habitats																
B33	South of the M56, Rostherne	SJ75538459	Hedgerow on edge of Hancock's Banks woodland, immediately south of M56, east of Lymm.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
24 April 2019 – 1 May 2019		7	310	210	0	4	0	0	0	0	0	0	5	0	0	1	0	0	0
15 May 2019 – 22 May 2019		7	106	141	1	2	0	0	0	0	0	0	24	3	0	17	2	6	0
19 June 2019 – 26 June 2019		7	74	93	8	2	0	0	0	0	0	0	258	1	0	7	0	1	0
10 July 2019 – 16 July 2019		7	67	64	1	0	0	0	0	0	0	0	41	1	0	9	0	0	0
August 2019 – Incomplete	N/A – Access refused																		
11 September 2019		7	259	1,8	2	0	0	0	0	0	0	0	0	2	0	2	0	0	0

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Ecology survey code	Static location	OS grid reference	Description of habitats																	
- 18 September 2019			79																	
16 October 2019 – 23 October 2019	7	18	73	1	0	0	0	0	0	0	0	0	20	0	0	1	0	2	0	

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- 2.4.108 High levels of common pipistrelle, soprano pipistrelle and Nathusius' pipistrelle activity were recorded at this location with respective peaks of 310ppn in April 2019, 1,879ppn in September 2019 and eight ppn in June 2019. High levels of activity were noted for *Myotis* species, brown long-eared bat, noctule and serotine with peaks of 258ppn, four ppn, 17ppn and six ppn, respectively. There is a high species diversity in this location.

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Table 139: Summary of static detector monitoring results for B34

Ecology survey code	Static location	OS grid reference	Description of habitats																
B34	Blackburn's Brook, M56, Rostherne	SJ75528459	Woodland edge of Hancock's Bank woodland and Blackburn's Brook, immediately south of M56, east of Lymm.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
April 2019 – Incomplete	Data corrupted																		
May 2019 – Incomplete	N/A – Survey cancelled																		
19 June 2019 – 26 June 2019		7	28	184	0	0	0	0	0	0	0	0	70	0	0	1	0	2	0
July 2019 – Incomplete	Data corrupted																		
August 2019 – Incomplete	N/A – Access refused																		
11 September 2019		7	103	341	2	0	0	0	0	0	0	0	0	1	0	2	0	0	0

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Ecology survey code	Static location	OS grid reference	Description of habitats																	
- 18 September 2019																				
16 October 2019 – 23 October 2019		7	2	889	0	2	0	0	0	0	0	0	0	31	1	0	1	0	0	0

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- 2.4.109 Only three surveys could take place at this location, primarily due to access refusal. Low to moderate levels of common pipistrelle and Nathusius' pipistrelle activity were recorded, with peaks of 103ppn and two ppn, respectively, in September 2019. High levels of soprano pipistrelle activity were recorded, with a peak of 889ppn in October 2019. High levels of activity were also recorded for *Myotis* species with the exception of September 2018, with a peak of 70ppn recorded in June 2019. Low levels of activity of brown long-eared bat, noctule and serotine were recorded, with peaks of one ppn (September and October 2019), two ppn (September 2019) and two ppn (June 2019), respectively.

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Table 140: Summary of static detector monitoring results for B35

Ecology survey code	Static location	OS grid reference	Description of habitats																
B35	Ryecroft Covert, M56, Rostherne	SJ75798448	Treeline running parallel to Birkin Brook, south of Ryecroft Covert, south of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny / Es	
July 2018 – Incomplete	N/A – Access refused																		
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
24 April 2019 – 1 May 2019		7	62	746	0	2	0	0	0	0	0	0	186	4	0	7	1	0	0
15 May 2019 – 22 May 2019		7	127	1,290	1	6	0	0	0	0	0	0	864	1	0	6	0	0	0
19 June 2019 – 26 June 2019		7	628	608	4	0	0	0	0	0	0	0	33	1	0	9	1	2	0
10 July 2019 – 16 July 2019		7	87	515	0	0	0	0	0	0	0	0	47	0	0	6	0	0	0
August 2019 – Incomplete	N/A – Access refused																		
11 September 2019		7	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Ecology survey code	Static location	OS grid reference	Description of habitats																
- 18 September 2019																			
16 October 2019 – 23 October 2019		7	21	72	1	1	0	0	0	0	0	0	20	1	0	1	0	0	

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- 2.4.110 Moderate to high levels of common pipistrelle activity were recorded, with a peak of 628ppn in June 2019. High levels of soprano pipistrelle were recorded, with a peak of 1,290ppn in May 2019. High levels of activity were also recorded for *Myotis* species with a peak of 864ppn in May 2019. Low levels of Leisler's bat and serotine activity were recorded, with peaks of one ppn in April and June 2019, and two ppn in June 2019, respectively. Brown long-eared bat and noctule were found to occur in moderate to high levels of activity, with a peak of four ppn and nine ppn, respectively.

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Table 141: Summary of static detector monitoring results for B36

Ecology survey code	Static location	OS grid reference	Description of habitats																
B36	Ashley Road, Ashley	SJ76258424	Hedgerow by Public Right of Way, south of Lamb's Covert, south of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
24 April 2019 – 30 April 2019		7	50	493	0	34	0	0	0	0	0	0	19	2	0	3	0	0	0
15 May 2019 – 21 May 2019		7	921	1,250	0	77	0	0	0	0	0	0	54	24	0	11	3	0	0
19 June 2019 – 26 June 2019		7	399	200	0	0	0	0	0	0	0	0	7	1	0	5	0	0	0
July 2019 – Incomplete	N/A – Access refused																		
August 2019 – Incomplete	N/A – Access refused																		
11 September 2019 – 17 September		7	39	180	1	0	0	0	0	0	0	0	1	4	0	4	1	0	0

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Ecology survey code	Static location	OS grid reference	Description of habitats																
2019																			
16 October 2019 – 23 October 2019		7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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- 2.4.111 High levels of common pipistrelle and soprano pipistrelle activity were recorded, with peaks of 921ppn and 1,250ppn, respectively, both in June 2019. Moderate to high levels of activity were recorded for *Myotis* species with a peak of 54ppn in May 2019. Low levels of activity were recorded for Nathusius' pipistrelle with only one ppn recorded in September 2019. Moderate levels of brown long-eared bat, noctule and Leisler's bat activity were observed with peaks in May 2019 of 24ppn, 11ppn and three ppn, respectively.

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Table 142: Summary of static detector monitoring results for B37

Ecology survey code	Static location	OS grid reference	Description of habitats																
B37	Lamb Lane, Ashley	SJ77138392	Hedgerow in corner of arable field, west of railway line, south of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
24 April 2019 – 1 May 2019		7	142	133	2	0	0	0	0	0	0	0	9	2	0	0	0	0	0
15 May 2019 – 22 May 2019		7	808	126	0	0	0	0	0	0	0	0	11	0	0	4	0	0	0
19 June 2019 – 26 June 2019		7	224	159	3	0	0	0	0	0	0	0	21	0	0	26	0	0	0
July 2019 – Incomplete	N/A – Access refused																		
August 2019 – Incomplete	N/A – Access refused																		
September 2019 – Incomplete	N/A – Access refused																		

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Ecology survey code	Static location	OS grid reference	Description of habitats																	
October 2019 – Incomplete	N/A – Access refused																			

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- 2.4.112 High levels of common pipistrelle and moderate to high soprano pipistrelle activity were recorded, with peaks of 808ppn in May 2019 and 159ppn in June 2019, respectively. Moderate to high levels of activity were recorded for Nathusius' pipistrelle, *Myotis* species, brown long-eared bat and noctule with peaks of three ppn and 21ppn in June 2019, two ppn in April 2019 and 26 in June 2019, respectively.

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Table 143: Summary of static detector monitoring results for B38

Ecology survey code	Static location	OS grid reference	Description of habitats																
B38	Mobberley Road, Ashley	SJ77498369	Hedgerow immediately adjacent to intersection of railway line and Mobberley Road, south of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
26 September 2018 – 3 October 2018	7	124	96	8	0	0	0	0	0	0	0	0	15	1	0	8	0	0	0
October 2018 – Incomplete	Data corrupted																		
April 2019 – Incomplete	Data corrupted																		
May 2019 – Incomplete	N/A – Access refused																		
June 2019 – Incomplete	N/A – Access refused																		
July 2019 – Incomplete	N/A – Access refused																		
August 2019 – Incomplete	N/A – Access refused																		
September 2019	N/A – Survey completed 2018																		
October 2019 – Incomplete	N/A – Survey cancelled																		
10 August 2020 – 24 August 2020	14	554	287	0	531	0	0	0	0	0	0	0	10	2	0	149	5	0	6

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Ecology survey code	Static location	OS grid reference	Description of habitats																	
5 October 2020 – 12 October 2020		7	85	19	0	0	0	0	0	0	0	0	0	3	3		4	0	0	0

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- 2.4.113 There is only data for September 2018, August 2020 and October 2020 static surveys due to access and data issues. Moderate to high levels of common, soprano pipistrelle, noctule and *Myotis* species bat activity were recorded. High levels of activity for common pipistrelle were recorded with peaks of 554ppn and high levels of activity for noctule were recorded with 149ppn. Moderate levels of soprano pipistrelle and *Pipistrellus* species were recorded with peaks of 287ppn and 531ppn in August 2020.

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Table 144: Summary of static detector monitoring results for B40

Ecology survey code	Static location	OS grid reference	Description of habitats																	
B40	Brickhill Lane, Ashley	SJ78918396	Hedgerow adjacent to Back Lane, south of Little Thorns Green Farm, south of Altrincham.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
11 July 2018 – 17 July 2018	6	584	210	0	9	0	0	0	0	0	0	0	35	2	0	19	6	0	0	
8 August 2018 – 15 August 2018	7	31	15	0	1	0	0	0	0	0	0	0	79	4	0	20	2	0	0	
12 September 2018 – 19 September 2018	7	1,641	2,007	78	12	0	0	0	0	0	0	0	1,068	3	0	25	1	0	0	
October 2018 – Incomplete	N/A – Access refused																			
April 2019 – Incomplete	N/A – Access refused																			
May 2019 – Incomplete	N/A – Access refused																			
June 2019 – Incomplete	N/A – Access refused																			
July 2019	N/A – Survey completed 2018																			
August 2019	N/A – Survey completed 2018																			

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Ecology survey code	Static location	OS grid reference	Description of habitats														
September 2019	N/A – Survey completed 2018																
October 2019 – Incomplete	N/A – Access refused																

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2.4.114 High levels of common and soprano pipistrelle bat activity were recorded overall with a peak of activity during September 2018 of 1,641ppn and 2,007ppn, respectively. Nathusius' pipistrelle had very low levels of activity but displayed a very high peak of 78ppn passes in September 2018. High levels of activity were also recorded for *Myotis* species which had a peak of 1,068ppn in September 2018. Moderate to high levels of activity were recorded for both noctule and brown long-eared bats with peaks of 25ppn and four ppn, respectively. Generally low levels of Leisler's bat were recorded however a high peak of six ppn was observed in July 2018.

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Table 145: Summary of static detector monitoring results for B41

Ecology survey code	Static location	OS grid reference	Description of habitats																
B41	River Bollin, near M56	SJ79488427	Treeline adjacent to River Bollin, west of Hale Bank Farm, south of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
11 July 2018 – 18 July 2018	7	574	672	0	1	0	0	0	0	0	0	0	203	1	0	24	1	0	0
8 August 2018 – 18 August 2018	10	665	2,654	0	2	0	0	0	0	0	0	0	283	1	0	27	2	0	0
September 2018 – Incomplete	Data corrupted																		
10 October 2018 – 17 October 2018	7	43	128	0	5	0	0	0	0	0	0	0	232	0	0	1	0	0	0
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		
19 June 2019 – 26 June 2019	7	475	447	0	19	0	0	0	0	0	0	0	0	4	0	17	2	0	0
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		

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Ecology survey code	Static location	OS grid reference	Description of habitats															
September 2019 – Incomplete	Data corrupted																	

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- 2.4.115 High levels of both common and soprano pipistrelle activity were recorded at this location with peaks of 665ppn and 2,654ppn in August 2018, respectively. Consistently high levels (through 2018) of *Myotis* species activity were also recorded in each month with a peak of 283ppn in August 2018. Generally low levels of activity were recorded for brown long-eared bat, with peak of four ppn in June 2019. High numbers of noctule were observed, with a peak of 27ppn in August 2018. Two ppn of Leisler's bat were recorded in August 2018, and June 2019 which is categorised as low to moderate activity levels.

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Table 146: Summary of static detector monitoring results for B42

Ecology survey code	Static location	OS grid reference	Description of habitats																
B42	Warburton Green	SJ79978477	Hedgerow directly north of M56, north-west of Keepers Cottage, east of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
18 July 2018 – 25 July 2018	7	237	794	1	0	0	0	0	0	0	0	0	22	0	0	13	0	0	0
15 August 2018 – 22 August 2018	7	22	44	0	10	0	0	0	0	0	0	0	14	1	0	25	2	0	0
September 2018 – Incomplete	N/A – Access refused																		
17 October 2018 – 24 October 2018	7	91	12	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0
24 April 2019 – 1 May 2019	7	537	275	1	0	0	0	0	0	0	0	0	7	0	0	1	0	0	0
15 May 2019 – 22 May 2019	8	136	88	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0
19 June 2019 – 26 June 2019	6	406	559	2	0	0	0	0	0	0	0	0	11	0	0	2	0	0	0
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		
11 September 2019	7	137	32	3	0	0	0	0	0	0	0	0	0	3	0	21	1	2	

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Ecology survey code	Static location	OS grid reference	Description of habitats																
- 18 September 2019																			

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- 2.4.116 Moderate to high levels of common and soprano pipistrelle activity were recorded at this location with peaks of 537ppn in May 2019 and 559ppn in June 2019, respectively. A moderate peak of three ppn of Nathusius' pipistrelle was recorded in September 2019 while generally activity was low to moderate. Low to moderate levels of *Myotis* species activity were recorded through the majority of surveys with a peak of 22ppn in July 2018. A high peak of five ppn of brown long-eared bat was recorded in October 2018 with moderate activity levels the rest of the time. Moderate numbers of noctule passes were recorded across surveys with a peak of 25ppn August 2018.

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Table 147: Summary of static detector monitoring results for B43

Ecology survey code	Static location	OS grid reference	Description of habitats																
B43	Hale Road, Timperley	SJ80208522	Treeline adjacent to Fern Cottage, adjacent to Hale Road, east of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
18 July 2018 – 25 July 2018	7	645	112	1	1	0	0	0	0	0	0	0	41	2	0	45	1	0	0
15 August 2018 – 22 August 2018	7	237	196	0	1	0	0	0	0	0	0	0	29	3	0	41	5	0	0
19 September 2018 – 26 September 2018	7	24	84	0	0	0	0	0	0	0	0	0	4	1	0	101	1	0	0
October 2018 – Incomplete	Data corrupted																		
24 April 2019 – 1 May 2019	7	90	86	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
15 May 2019 – 22 May 2019	7	338	382	2	3	0	0	0	0	0	0	0	8	1	0	8	3	0	0
19 June 2019 – 26 June 2019	7	767	192	11	0	0	0	0	0	0	0	0	33	1	0	160	1	0	0
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		
September 2019	N/A – Survey completed 2018																		
October 2019 –	N/A – Survey cancelled																		

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Ecology survey code	Static location	OS grid reference	Description of habitats														
Incomplete																	

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- 2.4.117 High levels of common and soprano pipistrelle activity were recorded, with peaks of 767ppn in June 2019 and 382 in May 2019, respectively. Low to moderate levels of Nathusius' pipistrelle activity was recorded, with high levels in June 2019 with a peak of 11ppn. Moderate to high levels of activity of *Myotis* species activity were recorded, with a peak of 41ppn in July 2018. Brown long-eared bats were recorded in moderate numbers with a peak of three ppn in August 2018. High levels of noctule and moderate levels of Leisler's bat activity were recorded, with peaks of 160ppn in June 2019 and five ppn in August 2018, respectively.

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Table 148: Summary of static detector monitoring results for B44

Ecology survey code	Static location	OS grid reference	Description of habitats																
B44	Davenport Green Wood	SJ80428585	Hedgerow south of Davenportgreen Wood, west of M56, east of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
18 July 2018 – 25 July 2018	7	529	100	0	2	0	0	0	0	0	0	21	0	0	34	2	0	0	
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		
June 2019 – Incomplete	N/A – Access refused																		
July 2019	N/A – Survey completed 2018																		
7 August 2019 – 13 August 2019	7	341	84	0	0	0	0	0	0	0	0	2	0	0	57	1	1	0	
September 2019 –	N/A – Access refused																		

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Ecology survey code	Static location	OS grid reference	Description of habitats															
Incomplete																		
October 2019 - Incomplete	N/A – Access refused																	

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- 2.4.118 Data was only gathered for two months for this location due to access issues. High levels of common pipistrelle activity were recorded across both months and moderate to high levels of activity were recorded for soprano pipistrelle with peaks of 592ppn and 100ppn in July 2018 respectively. *Myotis* species displayed varied levels of activity with moderate to high numbers with a peak of 21ppn in July 2018 and low activity in August 2019. High levels of activity were recorded for noctule and moderate to high levels for Leisler's bat with peaks of 57ppn and two ppn, respectively.

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Table 149: Summary of static detector monitoring results for B45

Ecology survey code	Static location	OS grid reference	Description of habitats																
B45	Davenport Green Wood	SJ80488600	Edge of Davenport Green Wood, west of M56, east of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
July 2018 – Incomplete	N/A – Access refused																		
August 2018 – Incomplete	N/A – Access refused																		
September 2018 – Incomplete	N/A – Access refused																		
October 2018 – Incomplete	N/A – Access refused																		
April 2019 – Incomplete	N/A – Access refused																		
May 2019 – Incomplete	N/A – Access refused																		
June 2019 – Incomplete	N/A – Access refused																		
July 2019 – Incomplete	N/A – Access refused																		
7 August 2019 – 14 August 2019		7	250	174	0	3	0	0	0	0	0	0	11	3	0	48	1	0	0
September 2019 –	N/A – Access refused																		

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Ecology survey code	Static location	OS grid reference	Description of habitats															
Incomplete																		
October 2019 - Incomplete	N/A – Access refused																	

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- 2.4.119 August was the only month survey data was collected due to access issues. High levels of both common and soprano pipistrelle were recorded this month with peaks of 250ppn and 147ppn respectively. Low to moderate levels of *Myotis* species activity was recorded with a peak of 11ppn and moderate to high levels of brown long-eared bat activity with a peak of 3ppn. High noctule activity was recorded, with a count of 48ppn. Additionally, one ppn of a Leisler's bat was recorded.

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Table 150: Summary of static detector monitoring results for B47

Ecology survey code	Static location	OS grid reference	Description of habitats																	
B47	Millington	SJ73098501	Woodland (Rushy-pits Covert), south of M56 and east of Hope Cottage, east of Lymm.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
18 July 2018 – 25 July 2018	7	845	663	1	1	0	0	0	0	0	0	0	422	14	0	68	0	8	0	
15 August 2018 – 22 August 2018	7	160	49	0	0	0	0	0	0	0	0	9	1	0	47	4	0	0	0	
19 September 2018 – 26 September 2018	7	52	105	0	5	0	0	0	0	0	0	43	4	0	8	3	0	0	0	
17 October 2018 – 24 October 2018	8	402	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
April 2019 – Incomplete	N/A – Access refused																			
15 May 2019 – 22 May 2019	7	433	447	1	2	0	0	0	0	0	0	216	1	0	78	3	0	0	0	
19 June 2019 – 26 June 2019	7	696	513	0	1	0	0	0	0	0	0	203	4	0	37	2	0	0	0	

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- 2.4.120 High levels of common and soprano pipistrelle and *Myotis* species activity were recorded at this location with peaks in July 2018 of 845ppn, 663ppn and 422ppn, respectively. High levels of brown long-eared bat activity were also recorded in July 2018 with peak of 14ppn. High levels of noctule activity were recorded, with a peak 78ppn May 2018. Moderate to high Leisler's bat activity were recorded in August 2018 with a peak of four ppn.

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Table 151: Summary of static detector monitoring results for B48

Ecology survey code	Static location	OS grid reference	Description of habitats																
B48	Sunbank Wood	SJ79948426	Within Sunbank Wood, south of Bollinbrook, south of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny / Es	
18 July 2018 – 25 July 2018	7	574	672	0	0	0	0	0	0	0	0	203	4	0	38	3	0	0	
15 August 2018 – 22 August 2018	7	300	425	0	123	0	0	0	0	0	0	34	9	0	18	7	0	0	
19 September 2018 – 26 September 2018	7	91	767	0	1	0	0	0	0	0	0	62	2	0	1	1	0	0	
17 October 2018 – 24 October 2018	7	391	1,616	0	1	0	0	0	0	0	0	381	0	0	3	0	0	0	
24 April 2019 – 1 May 2019	7	336	429	0	1	0	0	0	0	0	0	18	1	0	1	0	0	0	
15 May 2019 – 22 May 2019	7	849	1,309	0	32	0	0	0	0	0	0	4	0	0	0	0	0	0	
19 June 2019 – 26 June 2019	7	1,053	1,066	1	49	0	0	0	0	0	0	538	12	0	6	4	2	0	

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- 2.4.121 High levels of common and soprano pipistrelle activity were recorded, with peaks of 1,053ppn in June 2019 and 1,616ppn in October 2018, respectively. High levels of *Myotis* species activity were also recorded, with a peak of 538ppn in June 2019. Moderate to high levels of brown long-eared bat and noctule activity were recorded in June 2019 and July 2018 with a peak of 12ppn and 38ppn, respectively. Moderate to high levels of Leisler's bat activity were recorded, with a high peak of seven ppn in August 2018. High numbers of bats were recorded using this location and a wide assemblage of species. This was found across all the activity surveys carried out in this location (transect BT09 and statics B49 and B48).

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Table 152: Summary of static detector monitoring results for B49

Ecology survey code	Static location	OS grid reference	Description of habitats																
B49	Sunbank Wood	SJ79768416	Adjacent to drain within Sunbank Wood, south of Hale Bank Farm, south of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
18 July 2018 – 25 July 2018	7	568	716	0	68	0	0	0	0	0	0	174	1	0	8	1	0	0	
15 August 2018 – 22 August 2018	7	524	1,268	0	62	0	0	0	0	0	0	34	2	0	10	0	0	0	
19 September 2018 – 26 September 2018	7	119	1,688	0	0	0	0	0	0	0	0	170	0	0	1	1	0	0	
17 October 2018 – 24 October 2018	7	448	1,061	0	1	0	0	0	0	0	0	345	0	0	0	0	0	0	
24 April 2019 – 1 May 2019	6	276	303	0	1	0	0	0	0	0	0	14	1	0	2	0	0	0	
15 May 2019 – 22 May 2019	5	849	1,309	0	32	0	0	0	0	0	0	4	0	0	0	0	0	0	
19 June 2019 – 26 June 2019	8	1,025	696	0	5	0	0	0	0	0	0	58	0	0	4	0	1	0	

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- 2.4.122 Very high levels of common and soprano pipistrelle activity were recorded at this location with a peak of 1,025ppn in June 2019 and 1,688ppn in September 2018, respectively. High activity levels were also recorded for *Myotis* species with a peak of 345ppn in October 2018. Low to moderate levels of brown long-eared bat and noctule activity were recorded, with peaks of two ppn and 10ppn in August 2018. High numbers of bats were recorded using this location and a wide assemblage of species. This was found across all the activity surveys carried out in this location (transect BT09 and statics B49 and B48).

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Table 153: Summary of static detector monitoring results for B57

Ecology survey code	Static location	OS grid reference	Description of habitats																
B57	East of Reddy Lane, Booth Bank	SJ72498538	A hedgerow located east of Reddy Lane and north of the M56.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
27 July 2020 – 3 August 2020	7	201	301	0	0	0	0	0	0	0	0	0	118	2	0	17	1	0	4
24 August 2020 – 1 September 2020	7	170	653	0	25	0	0	0	0	0	0	0	157	0	0	12	0	0	7
21 September 2020 – 29 September 2020	7	530	1,670	1	62	0	0	0	0	0	0	0	945	1	0	6	1	0	2

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- 2.4.123 High levels of common pipistrelle and very high levels of soprano pipistrelle and *Myotis* species activity were recorded at this location with a peak of 530ppn, 1,670ppn and 945 in September 2020, respectively. Low activity levels were recorded for noctule, Nathusius' pipistrelle, brown long-eared bat, Leislars' bat and *Nyctalus/Eptesicus* bats with a peak of 17ppn in July 2020, one ppn in September 2020, two ppn in July 2020, one ppn in July and September 2020 and seven in August 2020, respectively.

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Table 154: Summary of static detector monitoring results for B58

Ecology survey code	Static location	OS grid reference	Description of habitats																	
B58	South of Reddy Lane, Booth Bank	SJ72498518	Scrub and scattered trees along Agden Brook, south of the M56.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
24 August 2020 – 1 September 2020	7	12	32	0	0	0	0	0	0	0	0	7	9	0	16	0	0	1		
21 September 2020 – 28 September 2020	7	16	65	0	8	0	0	0	0	0	0	35	12	0	58	0	0	2		
19 October 2020 – 26 October 2020	7	19	146	2	2	0	0	0	0	0	0	43	0	0	20	0	0	7		

2.4.124 Moderate levels of soprano pipistrelle, *Myotis* species and noctule activity were recorded at this location with a peak of 146ppn, 43ppn in October 2020 and 58ppn in September 2020. Low to moderate levels of common pipistrelle, brown long-eared bat and *Nyctalus/Eptesicus* bat activity were recorded, with peaks of 19ppn, 12ppn and seven ppn in October 2020. Low levels of Nathusius' pipistrelle bat activity were recorded at this location with a peak of 2ppn in October 2020.

Discussion

Bat assemblage

2.4.125 Data from field surveys and desk study records are summarised below and provide the basis for identifying bat assemblages associated with habitat within and adjoining the land required for the construction of the Proposed Scheme in MA06. These assemblages are described in the Volume 2 ES for the Hulseheath to Manchester Airport area (MA06), that are present in the following locations:

- bat assemblage associated with habitats between the M6, the M56 and the A556 within the Pickmere to Agden and Hulseheath area (MA03) and the Hulseheath to Manchester Airport area;
- bat assemblage associated with habitats between the A556 and the M56, junction 6; and
- bat assemblage associated with habitats between junction 6 of the M56 and Manchester Airport.

2.4.126 No additional bat species to those recorded during field survey were identified from desk study records.

2.4.127 Field surveys carried out in 2018, 2019 and 2020 confirmed the presence of at least 10 bat species along the route, including rarer species: whiskered/Brandt's bat, Natterer's bat, Daubenton's bat, Leisler's bat, serotine and Nathusius' pipistrelle.

2.4.128 Common and widespread species including common pipistrelle and soprano pipistrelle were the most recorded, with at least moderate levels of activity recorded on the majority of activity surveys. High levels were recorded around Rushy-pits Covert, Lymm and along the River Bollin from Sunbank Wood to Warburton Green. High levels of activity were recorded during May – June surveys, particularly along the Bollin, and this would indicate the potential for maternity roosts to be present.

2.4.129 Possible maternity roosts for *Myotis* species (11 bats) and whiskered bat (21 bats) were present at High Legh. In addition, a possible maternity roost for common pipistrelle (25 bats) was present at Altrincham.

2.4.130 Common and soprano pipistrelle was the most frequently recorded species during activity surveys in MA06 with peaks of 1,641ppn of common pipistrelle and 2,654ppn of soprano pipistrelle recorded on the static detectors along Back Lane in September 2018 and along the River Bollin, south of the M56 in August 2018.

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- 2.4.131 Woodland habitat at Rushy-pits Covert appears to be an important feature for bats and from the numbers there are likely to be maternity colonies of *Pipistrellus* and *Myotis* species. Hedgerows could be an important commuting corridor for bats following the woodland and providing a safe crossing point over the M56.
- 2.4.132 Low levels of Nathusius' pipistrelle were recorded across a few activity surveys, with a large peak of 78ppn recorded along Bank Lane, near Thorns Green in September 2018.
- 2.4.133 Brown long-eared bats were recorded sporadically across MA06; however, high levels of activity were recorded in a few areas, with a peak of 24ppn in May 2019 along a hedgerow near Ryecroft Covert. Nine occasional brown long-eared bat roosts were recorded, within buildings up to 110m from the Proposed Scheme with peaks of one bat, with seven of the roosts identified by droppings only.
- 2.4.134 Activity levels for noctule recorded overall, moderate levels of activity across all static detectors and low to moderate across all walked transects. The greatest activity was recorded at Hale Road with peak of 160ppn in June. Given the numbers of noctule and the time of year, there is potentially a maternity roost in the area.
- 2.4.135 Leisler's bats were recorded sporadically across MA06; however, high levels were recorded in a few areas, such as Rushy-pits Covert where there was a peak of 15ppn.
- 2.4.136 *Myotis* species were widespread and were present on all activity surveys, with moderate to high levels recorded throughout this area. A high number were recorded on statics adjacent to the woodland at Rushy-pits Covert, however, a peak of 1,068ppn in September 2018 was recorded on a static along Back Lane. Seven *Myotis* species roosts were recorded, within 100m of the proposed Scheme with two possible maternity roosts with a peak of 21 whiskered bats in a barn at Moss House Farm, off Thowler Lane, Legh.

Roosts

- 2.4.137 The desk-study records identified one brown long-eared bat roost approximately 800m north of the land required for the construction of the Proposed Scheme.
- 2.4.138 A *Pipistrellus* species roost, with 105 bats recorded, was identified from the desk study records. The roost was located 140m west of the construction area of the Proposed Scheme, along Shay Lane, Davenport Green.
- 2.4.139 A total of 41 roosts were identified in built structures across MA06 during field surveys.
- 2.4.140 One common pipistrelle and two soprano pipistrelle occasional roosts were identified in three trees, all are more than 50m from the land required for the construction of the Proposed Scheme. A peak of two soprano pipistrelle bats were observed emerging from an oak tree on land off Bankside, Timperley. All three roosts were found within the same area of Bankside in Timperley. One noctule roost was identified in an ash tree on Hasty Lane, Altrincham.

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- 2.4.141 The majority of roosts recorded in buildings were common and soprano pipistrelle with a total of 21 roosts for both species within 15 buildings. One roost was recorded as a possible maternity roost with a peak of 25 common pipistrelle and four soprano pipistrelle bats also within this barn on Castle Mill Lane in Altrincham within land required for construction of the Proposed Scheme. The land surrounding this roost is mainly agricultural with a stream running close by and nearby woodlands, the complex of buildings offer a good range of roosting potential with the surrounding land offering plenty of foraging opportunities. The remaining roosts are all occasional.
- 2.4.142 Eight roosts of *Myotis* species were identified within 100m of the land required for construction of the Proposed Scheme. Two roosts are possible maternity roosts located in two buildings at High Legh, one within and the other within 10m of the land required for the construction of the Proposed Scheme. A peak of 21 whiskered bats were recorded in a building on Thowler Lane.
- 2.4.143 Nine occasional roosts and two feeding perches for brown long-eared bats were recorded, with a peak of one bat found during these surveys. Three roosts are within the land required for the construction of the Proposed Scheme. Eight of the eleven roosts identified were from internal inspections, based on visual identification of the droppings.
- 2.4.144 Due to the lack of access to the Tatton Estate it is possible that roosts could have been missed in this area. Health and safety concerns meant that the interior of building containing a roost of brown long-eared bat at Castle Mill Lane could not be fully inspected.

Foraging habitat

- 2.4.145 The landscape in this area comprises several areas of broad-leaved woodland such as Sunbank Wood and Rushy-pits Covert, water bodies such as Rostherne Mere, main watercourses such as the River Bollin and several smaller watercourses such as Birkin Brook. The majority of the land is farmland comprising improved grasslands and arable land with associated hedgerows and tree lines and road network.
- 2.4.146 Walked transect around the Rushy-pits Covert woodland to the south of M56 recorded high levels of common pipistrelle, soprano pipistrelle, brown long-eared bat, noctule and Leisler's bats and *Myotis* species. Static detectors were located to the west and east of the woodland, respectively. Lower levels were recorded to the west of the woodland, but high levels overall were recorded, with peaks of 1,479ppn of common pipistrelle, 1,408ppn of soprano pipistrelle, 864ppn of *Myotis* species, 106ppn of noctule and 15ppn of Leisler's bats. From the activity surveys undertaken Rushy-pits Covert woodland is assumed to be an important area for foraging bats.
- 2.4.147 Sunbank Wood also had high levels of activity with a peak of 1,053ppn of common pipistrelle in June 2019; 1,688ppn of soprano pipistrelle in September 2018; and 538ppn of *Myotis* species in June 2019. Both statics were located within the woodland adjacent to land required for construction of the Proposed Scheme, north-east and north-west of the woodland.

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- 2.4.148 The River Bollin had high levels of soprano pipistrelle recorded foraging with a peak of 2,654ppn in August 2018 and a peak of 283ppn for *Myotis* species also recorded using the River Bollin for foraging activity. High levels of soprano pipistrelle, common pipistrelle and *Myotis* species were additionally recorded during walked transect along the River Bollin.
- 2.4.149 Given the high level of bat activity there is potential for a maternity colony to be in the area, or this is an important foraging habitat. The treeline running parallel to Birkin Brook, south of Rycroft Covert recorded high levels of common pipistrelle, soprano pipistrelle and *Myotis* species activity during the maternity period.

Commuting habitat

- 2.4.150 The River Bollin and Birkin Brook provides a suitable commuting corridor along with tree lines and hedgerow networks associated with roads and farmland with this area.
- 2.4.151 Due to high levels of bat activity, it can be assumed that the River Bollin is a key commuting corridor for bats. This is likely to be a route used by bats to commute under the M56. High levels of soprano pipistrelle were recorded foraging with a peak of 2,654ppn; and *Myotis* species also recorded, with a peak of 283ppn in August 2018. High levels of soprano pipistrelle, common pipistrelle and *Myotis* species activity were additionally recorded during walked transect along the River Bollin, further supporting that the River Bollin is a key commuting route. There are known *Myotis* species, soprano pipistrelle and brown long-eared bat roosts in the surrounding area that could potentially be using this commuting route.
- 2.4.152 The static detectors along the Birkin Brook and a hedgerow leading south from Rycroft and Lamb's Covert also recorded high levels of activity. Peaks of soprano pipistrelle of 1,290ppn and *Myotis* species of 864ppn were recorded along Birkin Brook and there were peaks of soprano pipistrelle of 1,250ppn, common pipistrelle of 921ppn and 24ppn brown long-eared bats. High levels of activity were also observed during transect surveys; therefore, it is assumed that these features are key commuting corridors for bats.
- 2.4.153 A static detector located within a line of trees on the corner of Brickhill Lane and Back Lane in Ashley to the north of the land required for construction of the Proposed Scheme recorded a high number of bats with a peak of 1,641ppn common pipistrelle, 2,007ppn of soprano pipistrelle and 1,068ppn of *Myotis* species. This area is considered to be a key commuting corridor for bats roosting in a number of confirmed roosts within the vicinity.

Davenport Green to Ardwick (MA07)

- 2.4.154 Table 155 provides a summary of bat roosts identified in MA07 from field surveys. This table should be read in conjunction with Background Information and Data, Ecology Map Book, Map Series EC-05. Survey information collected has been allocated an ecology survey code to provide a unique identification for use on mapping.

Overview of bat species status in the vicinity of MA07

- 2.4.155 There are no statutory designated sites (within 10km) or non-statutory designated sites (within 5km) of MA07 which support bats as features for their designations.
- 2.4.156 Habitats within MA07 suitable to support roosting, foraging and commuting bats include habitats associated with Withington Golf Club and Didsbury Golf Club such as small areas of broad-leaved woodland and lines of trees, the River Mersey, and various tree lined roads, residential gardens with suitable vegetation and railway lines. The majority of these habitats are located within and adjacent to the land required for the construction of the Proposed Scheme.
- 2.4.157 Field surveys and desk study recorded at least nine species of bats in MA07. All nine species were identified from field surveys. The total bat assemblage is as follows:
- common pipistrelle;
 - soprano pipistrelle;
 - *Pipistrellus* species;
 - Nathusius' pipistrelle;
 - brown long-eared bat;
 - noctule;
 - Leisler's bat;
 - serotine;
 - *Myotis* species;
 - whiskered/Brandt's bat; and
 - Daubenton's bat.
- 2.4.158 The desk-study records identified a large number of roosts within 500m of the Proposed Scheme, including maternity and hibernation roosts.

Roosting (trees)

- 2.4.159 A total of 116 trees were subject to an initial ground-based assessment and subsequent further detailed climbed surveys where appropriate in line with the methods described in the FSMS document.
- 2.4.160 Of the 116 trees that were initially assessed, the following results were obtained:
- 11 trees identified as having high potential to support roosting bats;
 - 56 trees identified as having moderate potential to support roosting bats; and
 - the remaining 49 trees were classified as having low or negligible potential to support roosting bats. These trees were subsequently scoped out of further survey.
- 2.4.161 Of the 67 trees assessed as having moderate or high potential to support roosting bats:

- a total of 10 were subject to further surveys in the form of a tree climbing inspection during which no roosts were identified;
- six were reassessed as having low to negligible potential to support roosting bats and were scoped out of further surveys; and
- no trees were subject to emergence surveys.

Roosting (buildings and structures)

- 2.4.162 A total of 23 buildings in this area were subject to initial inspections, resulting in the following:
- one building was confirmed to support one roost;
 - no roosts were confirmed via internal inspections and one roost was identified from emergence surveys;
 - one building had high potential to support bats;
 - three buildings had moderate potential to support bats;
 - eight buildings had low potential to support bats; and
 - eleven buildings had negligible potential to support bats.
- 2.4.163 Of the 12 buildings confirmed as having roosts, or assessed as having high, moderate or low potential to support bats:
- one building was subject to an internal inspection; and
 - two building were subject to a total of five emergence and re-entry surveys identifying one roost.
- 2.4.164 Details of confirmed roosts in buildings/structures in MA07 are provided in Table 155. No roosts were recorded over 100m from the land required for construction of the Proposed Scheme.

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Table 155: Confirmed roosts in buildings and structures within MA07

Ecology survey code	Location	OS grid reference	Building/structure type	Species confirmed as utilising roost and (peak)	Date of peak and nature of survey	Roost type	Roost description	CA	Approximate distance (m) and orientation from the Proposed Scheme
MAN14 3601_L8 841_BS3 _F001_1 30818	Palatine Road, Altrincham	SJ83539077	Withington Golf Club club house	Soprano pipistrelle (1)	13 August 2018, emergence Survey	Occasional	1970s brick building with slate pitched roof and likely loft space. Well-lit at night with security lighting, near busy main road.	MA07	Within the land required for construction of the Proposed Scheme.

Roosting (woodlands)

- 2.4.165 This section applies to all trees subject to the surveying woodlands methodology. Two discrete areas of woodland were identified to be surveyed in accordance with the woodland survey methodology.
- 2.4.166 The results of woodlands identified for survey and the results of an initial ground-based assessments of trees and surrounding area are summarised in Table 156. Trees with negligible potential for roosting bats were not recorded or mapped.

Table 156: Potential roosting resource within woodlands in MA07

Woodland	Number of trees with features of potential value to roosting bats			Overall suitability of woodland for bats*
	High suitability	Moderate suitability	Low suitability	
Woodland adjacent to club house of Withington Golf Club	10	31	15	Moderate – scattered trees within golf course with a small area of woodland and scrub surrounding the woodland. The River Mersey provides connectivity to Chorlton Water Park.
Blackcarr Wood	0	3	2	Low – adjacent to M56 and residential property. Immature and semi-immature trees with poor connectivity to suitable habitat in Wythenshawe Park.

**based on the quality and quantity of the roost and feeding resource and ecological position of the wood*

- 2.4.167 Transects and static detector surveys were undertaken around each woodland where access was available in order to gain an understanding of the bat assemblage and levels of bat activity. The results of these surveys are included in the bat activity surveys section.

Bat activity surveys

- 2.4.168 The following at least eight species have been recorded during the range of bat activity surveys conducted in MA07:
- common pipistrelle;
 - soprano pipistrelle;
 - Nathusius' pipistrelle;
 - *Pipistrellus* species;
 - brown long-eared bat;
 - noctule;
 - Leisler's bat;
 - *Myotis* species;
 - whiskered bat/Brandt's bat; and
 - Daubenton's bat.

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Table 157: Bat activity surveys conducted within MA07

Ecology survey code	Transect location	Numbers of surveys conducted	First survey date	Final survey date	CA	Map reference
CT01	Withington Golf Club	7	24 July 2018	4 September 2019	MA07	EC-06-545/546
C1	Newall Green	6	16 July 2018	11 September 2019	MA07	EC-06-543
C2	Ardwick Depot, Manchester	7	16 July 2018	9 October 2019	MA07	EC-06-550
C4	Withington Golf Club	7	7 August 2018	10 September 2019	MA07	EC-06-545

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Table 158: Bat activity transect survey results for Transect CT01

Ecology survey code	Transect location				Description of habitats covered by transect																	
CT01	Withington Golf Club in south Manchester.				Beginning at Withington Golf Course club house, the transect follows the edge of the golf course along woodland edges and hedgerows until it reaches the River Mersey and follows it for approximately 1km before cutting off and tracing the woodland strips, including a section which follows a woodland strip parallel with the M60.																	
Visit number and date	Weather conditions				Total species passes during transect survey																	
	Temp (oC)	Cloud (0-8)	Rain (0-5)	Wind (0-12)	Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
Visit 1: Dusk: 24 July 2018	21	5	0	0	195	204	0	0	0	7	0	0	0	2	0	1	0	30	3	0	0	
Visit 2: Dawn: 25 July 2018	15	2	0	0	119	101	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	
Visit 3: Dusk: 30 August 2018	18	3	0	0	154	130	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	
September 2018 – Incomplete	N/A – Survey cancelled																					
Visit 4: Dusk: 18 October 2018	12	0	0	1	23	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	
Visit 5: Dusk: 25 April 2019	7	0	0	2	177	71	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	
May 2019 – Incomplete	Data corrupt																					

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Ecology survey code	Transect location				Description of habitats covered by transect																	
Visit 7: Dusk: 20 June 2019	14	2	0	1	204	150	0	4	0	0	0	0	0	0	0	0	0	0	6	8	0	0
July 2019	N/A – Survey completed in 2018																					
August 2019	N/A – Survey completed in 2018																					
Visit 8: Dusk: 4 September 2019	16	4	1	6	112	158	0	10	0	2	0	0	0	0	4	0	0	0	0	0	0	0

Pp – common pipistrelle, *P py* – soprano pipistrelle, *Pn* – Nathusius' pipistrelle, *P sp.* – Pipistrellus species, *Mb* – Bechstein's bat, *Md* – Daubenton's bat, *Mn* – Natterer's bat, *Mm* – whiskered bat, *Mbr* – Brandt's bat, *Mm/Mbr* – whiskered/Brandt's bat, *M.sp* – Myotis species, *Pa* – brown long-eared bat, *Bb* – barbastelle, *Nn* – noctule, *Nl* – Leisler's bat, *Es* – serotine, *Ny/Ep* – Nyctalus/Eptesicus bat.

Cloud cover on a scale of 0 – 8 where: 0 = sky completely clear, 4 = sky half cloudy, 8 = sky completely cloudy.

Precipitation intensity on scale of 0 – 5 where: 0 = dry, 1 = light drizzle, 2 = light rain, 3 = moderate rain, 4 = heavy rain, 5 = torrential rain.

Wind speed score of 0 – 12 against Beaufort scale where: 0 = calm, 2 = light breeze, 4 = moderate breeze, 6 = strong breeze, 7 = high wind, 9 = strong gale, 12 = hurricane.

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- 2.4.169 High levels of common and soprano pipistrelle activity were recorded at this location with peaks of 204ppn in June 2019 and 204ppn in July 2018, respectively. Low to moderate numbers of *Myotis* species were recorded, with peaks of seven ppn of Daubenton's bat and two ppn of whiskered/ Brandt's bat in July 2018. One ppn of a brown long-eared bat was also recorded in July 2018. Leisler's bat and noctule were recorded in high numbers for the species during the majority of surveys with a peak of eight ppn in June 2019 and 30ppn in July 2018, respectively.

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Table 159: Summary of static detector monitoring results for C1

Ecology survey code	Static location	OS grid reference	Description of habitats																
C1	Newall Green	SJ80878679	Scrub adjacent to Fairywell Brook, east of Roaring Gate Lane, east of Altrincham.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
16 July 2018 – 23 July 2018	7	421	140	0	0	0	0	0	0	0	0	12	0	0	15	0	0	0	
14 August 2018 – 21 August 2018	7	128	136	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
September 2018 – Incomplete	N/A – Access refused																		
1 October 2018 – 8 October 2018	7	17	145	0	0	0	0	0	0	0	0	7	0	0	1	0	0	0	
April 2019 – Incomplete	Data corrupted																		
7 May 2019 – 14 May 2019	7	8	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
3 June 2019 – 9 June 2019	7	51	14	1	1	0	0	0	0	0	0	2	1	0	98	7	1	0	
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		
4 September	7	22	26	0	2	0	1	0	0	0	0	0	0	0	12	0	0	0	

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Ecology survey code	Static location	OS grid reference	Description of habitats																
2019 – 11 September 2019																			

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- 2.4.170 High levels of common and moderate to high levels of soprano pipistrelle activity were recorded, with peaks of 421ppn and 145ppn, respectively, in July and October 2018. One ppn of a Nathusius' pipistrelle, a brown long-eared bat and a serotine were recorded in June 2019. Low to moderate levels of *Myotis* species were also recorded, with peak of 12ppn. No Leisler's bat activity was recorded, apart from a high peak of seven ppn in June 2019. Overall, low to moderate levels of noctule activity were recorded, with notably high levels of activity in June 2019, with a peak of 98ppn.

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Table 160: Summary of static detector monitoring results for C2

Ecology survey code	Static location	OS grid reference	Description of habitats																
C2	Ardwick Depot, Manchester	SJ86459733	Scrub immediately adjacent to Ardwick Train Station, south of Ashton Old Road, Manchester.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
16 July 2018 – 23 July 2018	7	352	0	1	0	0	0	0	0	0	0	0	0	0	0	95	0	0	0
14 August 2018 – 21 August 2018	7	334	1	0	0	0	0	0	0	0	0	0	0	0	0	236	1	0	0
17 September 2018 – 10 September 2018	7	344	0	0	0	0	3	0	0	0	0	0	0	0	0	333	0	0	0
October 2018 – Incomplete	N/A – Survey cancelled																		
10 April 2019 – 17 April 2019	7	35	9	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0
7 May 2019 – 14 May 2019	7	45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
3 June 2019 – 10 June 2019	7	118	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July 2019	N/A – Survey completed 2018																		
August 2019	N/A – Survey completed 2018																		
September 2019	N/A – Survey completed																		

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Ecology survey code	Static location	OS grid reference	Description of habitats																	
		2018																		
2 October 2019 – 9 October 2019		7	546	0	0	0	0	0	0	0	0	0	0	0	0	0	99	3	0	0

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- 2.4.171 Generally high levels of common pipistrelle activity were recorded, with a peak of 546ppn in October 2019. Extremely low levels of soprano pipistrelle activity were recorded at this location, with the only activity being recorded in August 2018 and April 2019 at a peak of nine ppn. High levels of noctule activity were recorded overall with a peak in September 2018 of 333ppn. A peak of six ppn of Nathusius' pipistrelle and three ppn of Leisler's bats were recorded.

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Table 161: Summary of static detector monitoring results for C4

Ecology survey code	Static location	OS grid reference	Description of habitats																	
C4	Withington Golf Club	SJ83819094	Treeline on edge of Withington Golf Club golf course, east of Palatine Road, south of Manchester.																	
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																		
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es		
7 August 2018 – 14 August 2018	7	224	125	0	2	0	0	0	0	0	0	1	2	0	0	5	1	0	0	
September 2018 – Incomplete	N/A – Access refused																			
2 October 2018 – 9 October 2018	7	357	208	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	
2 April 2019 – 8 April 2019	6	111	197	0	1	0	1	0	0	0	0	0	3	0	2	0	0	0	0	
7 May 2019 – 14 May 2019	7	51	96	0	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0	
3 June 2019 – 9 June 2019	6	698	275	0	139	0	0	0	0	0	0	0	0	0	4	1	1	0	0	
2 July 2019 – 9 July 2019	7	565	656	0	0	0	2	0	0	0	0	3	1	0	6	0	0	0	0	
August 2019	N/A – Survey completed 2018																			
4 September 2019 – 10 September	7	277	473	0	8	0	1	0	0	0	0	0	0	0	7	0	0	0	0	

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Ecology survey code	Static location	OS grid reference	Description of habitats														
2019																	

2.4.172 High numbers of common pipistrelle and soprano pipistrelle were recorded, with peaks of 698ppn in June 2019 and 656ppn in July 2019, respectively. Low numbers of *Myotis* species were recorded including one ppn of a whiskered/Brandt's bat in August 2018 and a peak of two ppn of Daubenton's bat in July 2019. Low to moderate levels of noctule activity were recorded, with a peak of seven ppn in September 2019. One ppn was recorded of a Leisler's bat in June 2019 and August 2018 and a serotine in June 2019. A peak of three ppn was recorded of brown long-eared bat in April 2019.

Discussion

Bat assemblage

2.4.173 Data from field surveys and desk study records are summarised below and provide the basis for identifying bat assemblages associated with habitat within and adjoining the land required for the construction of the Proposed Scheme in (MA07). These assemblages are described in the Volume 2 ES for the Davenport Green to Ardwick area (MA07), that are present in the following locations:

- between Withington and Ardwick; and
- at Withington Golf Club.

2.4.174 No additional bat species to those recorded during field surveys were identified from desk study records.

2.4.175 Field surveys carried out in 2018 and 2019 confirmed the presence of at least nine bat species along the route, including rarer species; whiskered/Brandt's bat, Daubenton's bat, Leisler's bat and Nathusius' pipistrelle.

2.4.176 Activity of common and widespread species including common pipistrelle, soprano pipistrelle, brown long-eared bat and noctule were the most recorded, in moderate levels across MA07, with occasional records of higher activity recorded on the walked transect and static detectors in the months of July and August.

2.4.177 Common and soprano pipistrelle were the most frequently recorded species during activity surveys in MA07 with high levels of peaks of 698ppn of common pipistrelle and 656ppn of soprano pipistrelle recorded in June and July on a static detector located to the north of Withington Golf Club. Additionally, a peak of six ppn of Nathusius' pipistrelle was recorded during June on a static detector in an area of common land around Ardwick Depot, in the centre of Manchester.

2.4.178 Brown long-eared bats were recorded in very low numbers with just a peak of three ppn on a static detector north of Withington Golf Club and a peak of one ppn during on transect survey in the same location.

2.4.179 Noctule were recorded in moderate numbers on the majority of surveys with the exception for high numbers with a peak of 333ppn around Ardwick Depot.

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- 2.4.180 *Myotis* species were recorded in low numbers on the walked transect and the static detectors with a peak of 12ppn on a static detector along Fairywell Brook.
- 2.4.181 Common and soprano pipistrelle, noctule, brown long-eared bat and *Myotis* species bats were encountered on the transect and all the statics suggesting that they are widespread in the area.

Roosts

- 2.4.182 The desk-study records identified a large number of roosts within 500m of the land required for construction of the Proposed Scheme. They include a brown long-eared bat hibernation roost and small roost to the south of the land required for the construction of the Proposed Scheme. There are also common pipistrelle maternity roosts, noctule maternity roosts, soprano pipistrelle and *Myotis* species roosts at Ashfield Lodge, which is within 500m of the land required for construction of the Proposed Scheme. An unspecified number of Daubenton's bat have been recorded in a tree within 500m. There is a record for a noctule maternity bat roost in a beech tree within Withington Golf Club which recorded 43 adults in 1997, approximately 5m from the land required for the construction of the Proposed Scheme.
- 2.4.183 Within MA07, no roosts were recorded in any trees. In August 2018, during an emergence survey, one soprano pipistrelle occasional roost was recorded in Withington Golf Club house, with a peak of one bat.

Foraging habitat

- 2.4.184 The landscape in this area comprises largely urban areas with suitable habitats consisting of small areas of broad-leaved woodland and lines of trees at Withington Golf Club and Didsbury Golf Club golf courses, the River Mersey, and various tree lined roads, residential gardens with suitable vegetation and railway lines.
- 2.4.185 The walked transect at Withington Golf Club golf course recorded high levels of common and soprano pipistrelle activity and moderate numbers of *Myotis* species, brown long-eared bat and noctule. It is assumed with the lack of suitable habitat within MA07, that this is a key foraging area associated with the River Mersey, which was observed as the predominant habitat for foraging during the season.
- 2.4.186 High levels of noctule activity with a peak of 333ppn were recorded at a vegetated brownfield site of mixed habitats, adjacent to Ardwick Depot. It is therefore assumed that this is a key foraging area for noctule.

Commuting habitat

- 2.4.187 From the walked transect it can be concluded that the River Mersey is a key commuting corridor for bats which allow them to commute while foraging between the golf courses and Chorlton Water Park.

- 2.4.188 The majority of static detectors recorded moderate levels of bat activity except adjacent to Ardwick Station where high numbers of noctule were recorded. It is possible, that noctule could be using the existing railway corridor with associated suitable vegetation as a commuting corridor.

Manchester Piccadilly Station (MA08)

- 2.4.189 Surveys have been undertaken in MA08; however, no roosts have been identified.

Overview of bat species status in the vicinity of MA08

- 2.4.190 There are no statutory designated sites (within 10km) or non-statutory designated sites (within 5km) of MA08 which support bats as features for their designations.
- 2.4.191 Habitats within MA08 suitable to support roosting, foraging and commuting bats are limited due to its urban location. They include the River Medlock, the Ashton and Rochdale canals, railside habitat and small public greenspaces. The tunnels beneath Manchester Piccadilly Station provide habitat for roosting bats but there are very low numbers of suitable trees.
- 2.4.192 Desk study records recorded three species of bats in MA08. The total bat assemblage is as follows:
- common pipistrelle;
 - soprano pipistrelle; and
 - noctule.

Roosting (trees)

- 2.4.193 A total of eight trees were subject to an initial ground-based assessment.
- 2.4.194 Of the eight trees that were initially assessed, the following results were obtained:
- no trees identified as having high potential to support roosting bats;
 - one tree identified as having moderate potential to support roosting bats; and
 - the remaining seven trees were classified as having low or negligible potential to support roosting bats. These trees were subsequently scoped out of further survey.

Roosting (buildings and structures)

- 2.4.195 A total of 19 buildings in this area were subject to initial inspections, resulting in the following:
- no buildings were confirmed to support roosts;
 - no buildings had high potential to support bats;
 - eight buildings had moderate potential to support bats;
 - seven buildings had low potential to support bats; and
 - four buildings had negligible potential to support bats.

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2.4.196 Of the 15 buildings as having moderate or low potential to support bats:

- three buildings were subject to internal inspections resulting in identification of no bat roosts; and
- no buildings were subject to emergence surveys.

Roosting (woodlands)

2.4.197 This section applies to all trees subject to the surveying woodlands methodology. One discrete area of woodland was identified to be surveyed in accordance with the woodland survey methodology.

2.4.198 The results of woodlands identified for survey and the results of an initial ground-based assessments of trees and surrounding area are summarised in Table 162. Trees with negligible potential for roosting bats were not recorded or mapped.

Table 162: Potential roosting resource within woodlands in MA08

Woodland	Number of trees with features of potential value to roosting bats			Overall suitability of woodland for bats*
	High suitability	Moderate suitability	Low suitability	
Woodland along the River Medlock, City of Manchester	0	4	10	Low – located in the city of Manchester. Adjacent to the River Medlock.

**based on the quality and quantity of the roost and feeding resource and ecological position of the wood*

2.4.199 One static detector survey was undertaken around the woodland identified in order to gain an understanding of the bat assemblage and levels of bat activity. The results of this survey are included in the bat activity surveys section.

Bat activity surveys

2.4.200 The following four species have been recorded during the range of bat activity surveys conducted in MA08:

- common pipistrelle;
- soprano pipistrelle;
- *Pipistrellus* species; and
- noctule.

Table 163: Bat activity surveys conducted within MA08

Ecology survey code	Transect location	Numbers of surveys conducted	First survey date	Final survey date	CA	Map reference
C3	River Medlock, Manchester	3	27 July 2020	7 October 2020	MA07	EC-06-551b

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Table 164: Summary of static detector monitoring results for C3

Ecology survey code	Static location	OS grid reference	Description of habitats																
C3	River Medlock, Manchester	SJ854977	River Medlock running through the city from a parkland north of the route. The river goes through a number of culverts.																
Date (night monitoring commenced to night monitoring ceased)	Number of nights detector deployed	Species peak night count during monthly monitoring																	
		Pp	Ppy	Pn	P.sp	Mb	Md	Mn	Mm	Mbr	Mm/Mbr	M.sp	Pa	Bb	Nn	NI	Es	Ny/Es	
27 July 2020 – 3 August 2020	7	1,706	77	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0
23 September 2020 – 30 September 2020	8	492	29	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 October 2020 – 7 October 2020	6	748	22	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pp - common pipistrelle, *P py* - soprano pipistrelle, *Pn* - Nathusius' pipistrelle, *P sp.* - Pipistrellus species, *Mb* - Bechstein's bat, *Md* - Daubenton's bat, *Mn* - Natterer's bat, *Mm* - whiskered bat, *Mbr* - Brandt's bat, *Mm/Mbr* - whiskered/Brandt's bat, *M.sp* - Myotis species, *Pa* - brown long-eared bat, *Bb* - barbastelle, *Nn* - noctule, *NI* - Leisler's bat, *Es* - serotine, *Ny/Ep* - Nyctalus/Eptesicus bat.

- 2.4.201 Very high numbers of common pipistrelle were recorded, with peaks of 1,706ppn in July 2020. High numbers of soprano pipistrelle were recorded, with peaks of 77ppn in July 2020. Low numbers of noctule were recorded, with a peak of two ppn in July 2020.

Discussion

Bat assemblage

- 2.4.202 Data from field surveys and desk study records are summarised below and provide the basis for identifying bat assemblages associated with habitat within and adjoining the land required for the construction of the Proposed Scheme in MA08. The assemblage present in the Manchester Piccadilly Station area is described in the Volume 2 ES for the Manchester Piccadilly area (MA08).
- 2.4.203 Four bat species were identified from desk study records. These were common, soprano pipistrelle and noctule.
- 2.4.204 One field survey was carried out along the River Medlock, Manchester area.
- 2.4.205 Other than the desk study record described below, no bat roosts were recorded in MA08.

Roosts

- 2.4.206 A *Pipistrellus* species bat roost, with 100 bats was identified from the desk study records. An exact location of the roost was not provided; however, it is thought to be 125m north of the land required for the construction of the Proposed Scheme north of Manchester Piccadilly Station. Desk study records also confirmed the presence of a single common pipistrelle and two *Pipistrellus* species maternity roosts, and a single *Pipistrellus* species roost in commercial properties within the Manchester Piccadilly Station. Anecdotal evidence indicates hibernation sites are known beneath Manchester Piccadilly Station in the viaduct arches.

Foraging habitat

- 2.4.207 The landscape in this area is predominantly urban, comprising buildings and hardstanding with some smaller areas of amenity grassland and scattered trees. The existing railway lines were identified as potential foraging habitat, with one field survey carried out identifying very high numbers of common pipistrelle bats. The River Medlock within the land required for the construction of the Proposed Scheme is mainly canalised and runs under Manchester, this has limited suitable foraging habitat. Areas that fall outside of the land required for the construction of the Proposed Scheme on the River Medlock have suitable foraging areas with a tree lined river corridor running east. The Rochdale Canal Stott's Lane - Ducie Street Basin SBI and Ashton Canal (West) SBI offer some foraging for common and widespread species of bat.

Commuting habitat

- 2.4.208 Suitable commuting habitat was limited in this section due to the highly urban nature of the area. The River Medlock is canalised and runs underground within the land required for the construction of the Proposed Scheme however areas outside offer suitable commuting habitat with tree lined river corridors. The Rochdale Canal Stott's Lane - Ducie Street Basin and Aston Canal (West) SBI offer some commuting habitat for common and widespread species of bat. This is demonstrated by high levels of common and soprano pipistrelle activity.

3 References

Cheshire Wildlife Trust (2007), *Cheshire region Biodiversity Action Plan*. Available online at: <https://www.cheshirewildlifetrust.org.uk/biodiversity>.

GMLRC, Greater Manchester Local Record Centre. Available online at: <https://www.gmwildlife.org.uk/>.

High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester) *Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

Merseyside BioBank, Local Biodiversity Records centre for North Merseyside. Available online at: <http://www.MerseysideBioBank.org.uk>.

National Trust. Available online at: <http://www.nationaltrust.org.uk>.

rECOrd, *Local Biological Records Centre serving Cheshire*. Available online at: <http://www.record-lrc.co.uk>.

Staffordshire Ecological Record, *The Ecological Database for Staffordshire*. Available online at: http://www.staffs-ecology.org.uk/html2015/index.php?title=Main_Page.

The Conservation of Habitats and Species Regulations 2017. Her Majesty's Stationery Office, London.

Wildlife and Countryside Act 1981 (England and Wales) (as amended), Chapter 69. Her Majesty's Stationery Office, London.

Wray, S., Wells, D., Long, E. and Mitchell-Jones, T. (2010), *Valuing Bats in Ecological Impact Assessment*. IEEM In-Practice.

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