BLACKDOWNS 2012 BIG BAT SURVEY

Somerset Bat Group

Summary

The second Blackdown Hills Big Bat Survey was run by the Somerset Environmental Records Centre (SERC) with the help and support of the Somerset Bat Group (SBG) and the Blackdown Hills Area of Outstanding Natural Beauty (Blackdown Hills AONB). It was made possible with the generous financial support of the Blackdown Hills AONB Partnership. Without these three bodies it would not have been possible. Equally, the whole survey depended on the enthusiasm and expertise of an army of volunteers giving their time to design and walk transects, stumble about in the dark and spend hours at a computer analysing the results. The mapping and identification of bat "hot spots" was the work of SERC, namely former employee Liz Biron and former SERC trainees, in particular Hannah Montag.

The transects design was the work of Cath Shellswell, Lou Pickersgill, Liz Biron and Edward and Helen Wells. The administration and organisation of the survey was carried out by Agni Arampoglou, SERC Ecologist. The analysis of recordings was carried out by the authors of this report and Lou Pickersgill.

Acknowledgements

Special thanks to

Recorders:
Paul Kennedy, Linda Bennett, Helen Wells, Lou Pickersgill, Hannah Montag, Adrian Bayley, Matthew Marshall, Ellie Phillips, Andrew Ross, Dave Cottle, Michelle Osbourn, Harry Fox, Pete Banfield, Kiri Green and Cath Shellswell.

Other volunteers who took part in the survey:
Aisa Irvine, Ali Slade, Alison Pike, Cliff and Alison Scrase, Andrew Cooke, Ben Walsh, Carol Durrant, Caroline Ford, Carolyn George, Charlotte Furnival, Charlotte Johns, Chris Wildblood, Chryssa Brown, Colette Gibson, Conrad Barrowclough, Dan Beasley, David Durrant, David Lloyd, Denise Howe, Dion Warner, Eddie Selwyn, Edward Wells, Emma Wake, Hannah Gardner, Heather Parris, Janet Pitcher, Jill Sharland, John Godsmark, Keith Edwards, Kiff Hancock, Lauren Clarke, Lila Morris, Melanie Higgs, Mike Sparrow, Nick Richardson, Pete Grainger, Roy Hartnell, Sarah Butcher, Sarah Ranson, Sarah Sanders, Shaun Caddy, Simon Peter Briggs, Simon Richardson, Steward Rowden, Sue Edwards, Sue Simpson, Swantja Glindemann, Tim Pitcher, Tom Ranson, Val Grainger, Valerie Godsmark, Will Molyneaux, William Dommett, William Wake, Mark Anderson, Peter Anderson and Liz Biron.

All the land holders that allowed the survey to take place around their holding.

All of the people that gave comments on the text of this report.

Cover photograph: Common Pipistrelle by Paul Kennedy

Report Authors: Edward Wells and Cath Shellswell of Somerset Bat Group

1. INTRODUCTION

Whilst a number of specific bat roosts within the Blackdown Hills AONB have been known for many years, the way in which bats use the landscape of this interesting and varied part of Somerset and Devon has been only sparsely studied. Flight records have been largely anecdotal. Accordingly the AONB commissioned SERC to carry out a Batscapes study using aerial photograph interpretation and the Integrated Habitats System (IHS) to map and predict areas likely to be suitable for the various British bat species. This work produced predictive maps for a number of species based on their known habitat requirements and on the distribution of known records. There are 17 species of bat known to breed in Britain and 16 of those are recorded in Somerset. A survey for the National Bat Monitoring Programme of the Bat Conservation Trust in 2010 and 2011 revealed a number of sites for the nationally rare Bechsteins Bat (*Myotis bechsteinii*) in and near the Blackdown Hills. Clearly the area could be of great importance for bats.

It is one thing to try and predict where bats might be but another to find out if predictions are right. SERC has undertaken bat activity surveys and Anabat surveys in 2010 and 2011 at possible swarming sites. However, for flight records it was decided to use the Mendip Big Bat Survey model and encourage local people to find the bats with SERC and enjoy a largely hidden element of their local wildlife at the side of experienced bat workers. It was always envisaged that the survey should be reasonably scientific but that it should also give a lot of pleasure to those taking part. The first such survey in July 2011 attracted some 63 volunteers and this second survey was further supported by 70 volunteers enabling an additional four new routes to be included during 2012.

As bats are highly mobile, their presence is a good indicator of the status of habitats and they can be used to monitor changes in the condition of the wider landscape. Intensive land management can deplete the invertebrate population and bats will move elsewhere. The data acquired by the Mendip Big Bat Survey has already been used to support agri-environment agreements and wider landscape management. The way that the different bat species use the environment, particularly in relation to the use of linear landscape features to “commute” and feed opportunistically, is still a matter of research and debate but it can only help inform that debate to have comparative data covering a number of years showing where in the landscape bats are encountered. The Blackdown Hills represent an outstanding area in which to collect such data with their un-intensive land use and varied mosaic of habitats supported through high nature value farming and forestry.

The predictive maps were used to identify potentially good areas to survey but the actual routes used were also conditioned by their practicality. Public paths were an essential part of the transect route and public roads were avoided wherever possible. It was essential that the route prescribed should be safe and able to be negotiated within a reasonable time. It was equally essential that the surveying did not disturb or put at risk any landowners, their livestock or their crops.

The methods used in this survey, whilst providing robust and meaningful data, also provide an opportunity for a large number of people to experience the pleasure of listening for bats in the company of more experienced bat people. Local naturalists have discovered a whole new world in their own neighbourhood, a world which only comes to life when the sun has gone down. Sixteen transects were surveyed on 20th of July 2012. The volunteers, some 70 in all, were divided between those transects so that no team was less than four people. Heterodyne bat detectors were supplied to those who did not have their own. Before the survey took place Edward Wells ran a workshop on the 25th May 2012 to help inexperienced volunteers get some idea of how to interpret what they were likely to hear on such a detector. If bats do associate the noises from detectors with their own sounds, and it is unlikely that they do, they show no sign of being affected. Groups of 4 or 5 people walking the transects represent only a very slight and transient intrusion.

Much of the purpose of repeating a survey of this kind over a number of years is to try to iron out inconsistencies caused by variable factors such as weather and farming practice. The 2012 survey night was drier, slightly cooler and breezier than the night of the 2011 survey. Additionally, due to the very wet summer there were a number of pasture fields in the Blackdown Hills that had not been grazed and generally grass length was higher than in the previous year. The most obvious contrasts between the two sets of data are the far lower incidence of the “big bat” species (Noctule, Serotine and Leislers Bat) and the fact that Common Pipistrelles in particular seem to have been more active in most transects. More wind might be expected to reduce the hunting opportunities for small bats, especially at the more exposed locations, as wind can affect the distribution of small insects probably to a greater degree than larger insects. This was supported by the location in each transect that the Pipistrelles were foraging. Large species are much less affected by wind because they are stronger fliers, but also because they eat moths and beetles present in pasture which were affected by the wet conditions altering farming practices. Serotines in particular eat dung beetles and if the cattle were unable to access the wet ground there will have been fewer cowpats.

Such suggested inferences from two sets of data are purely speculative at this stage. More data in the succeeding years are needed before any robust conclusions can be reached but at least as the information builds up there is the opportunity to determine what to investigate and key foraging locations.

2. METHOD

The 2012 Blackdowns Big Bat Survey is a landscape survey to collect comparable data across the Area of Outstanding Natural Beauty:

(a) 16 predetermined routes (figure 1) were walked simultaneously comprising a series of 6 walking sections and 6 stationary points. Each team of volunteers listened to bats using heterodyne, time expansion or frequency division bat detectors and listed what they heard in each section.

(b) At the same time one person in each group undertook a continuous recording on an MP3 player or wave recorder using a frequency division Batbox Duet Bat Detector. The recordings were assigned to separate tracks for each section and then analysed to count the number of bat passes in each section and, so far as possible, assign those passes to species.

2.1 Survey

Sixteen transects were surveyed. All were completed and good frequency division sound data was collected from each route. Each walk consisted of six stops of 5 minutes and six walked sections lasting an average of about 10 minutes. The stops were chosen strategically where there were potentially significant landscape features and the walks were mainly along established footpaths for the comfort and safety of the volunteers. Each transect was walked in reverse to the route followed in 2011 to ascertain whether there were differences in bat activity depending on the time of evening. For clarity in comparing years, on the maps and tables of this report the numbering of stops and walks has been shown the same for both years and a note has been made for the years when the survey was walked in reverse. All landowners along each transect were asked for permission to access their land.

To create each route, a walk was drafted using OS Explorer Map 115, 116 and 128. The transect was subsequently checked to measure the timings of the sections at a steady walking pace and define the different habitats at the stops. The volunteers were provided with maps of the transect they were undertaking, a risk assessment and asked to walk the route in daylight for safety prior to the survey. Further information that was provided to volunteers is available from the Somerset Environmental Records Centre.

Before starting the surveys, the volunteers met for a brief health and safety talk and then travelled to the beginning of each transect. 4-6 individuals with a mixture of bat experience from beginner to very experienced were assigned to each group. One person in each group recorded the route continuously using a Batbox Duet and either an MP3 or wave recorder. The surveys started at 21:30 and finished at approximately 23:30. A chosen volunteer in each group travelled to the Cricket Pavilion at Churchinford to hand-in the recordings and survey forms.

2.2 Sound Analysis

Each transect's recordings were analysed using BatSound software with BatScan software used to confirm some less obvious species identifications. The number of bat passes made by each species or group was counted to provide a measure of bat activity along each walk section and stop section. A bat pass is a continuous stream of echolocation calls indicating a bat flying past. The number of bat passes is therefore best understood as an index of bat activity rather than the absolute number of bats in the area. Except for the bats of the genus *Myotis*, each species has a spectrogram which is usually distinctive.

2.3 Limitations of the Survey

There are several factors that may affect the results and comparison between the routes:

- Differences in the range of individual bat detectors – individual detectors of the same type can vary in range depending on factors such as local environmental conditions and battery strength. Changes in environmental conditions such as weather can be compensated by carrying out the surveys at the same time on the same night, and new batteries can be used.
- Observer error misidentifying bat passes and counting the number of bat passes – The standard procedure for counting bat passes was followed; however there is scope for error if more than one bat of

the same species / genus is passing the bat detector at one time. There is also the potential to misidentify species, particularly if the call is faint.

- Human error – possibly as a result of unclear instructions the team walking route 7 Thurlbear got lost halfway along the route and the only comparable data is therefore from the first half of the transect.
- Equipment failure – there were cases of passes heard by the surveyors that were not recorded due to the need to replace batteries and in that situation we have relied on the written notes. There is a lower level of confidence in the identification of the species "missed" in this way but given the experience of the recorders concerned we considered it appropriate to accept their identification even though it could not be subjected to objective verification by sound analysis. There is a greater danger of inaccuracies in identifying species from bat passes from heterodyne recordings, and individual bat passes are more difficult to distinguish if more than one bat is flying past the bat detector at the same time resulting in counting errors.
- Faint recordings - occasionally the echolocation on the recording was too faint to identify the bat species. Faint recordings also make it difficult to extract a peak frequency for the echolocation calls of pipistrelle species. Where the genus of bat was uncertain the recording is marked in the report as "bat species" and where there is sufficient confidence to assign a recording to the genus *Pipistrellus* but not to a species the recording is marked as "pipistrelle species".

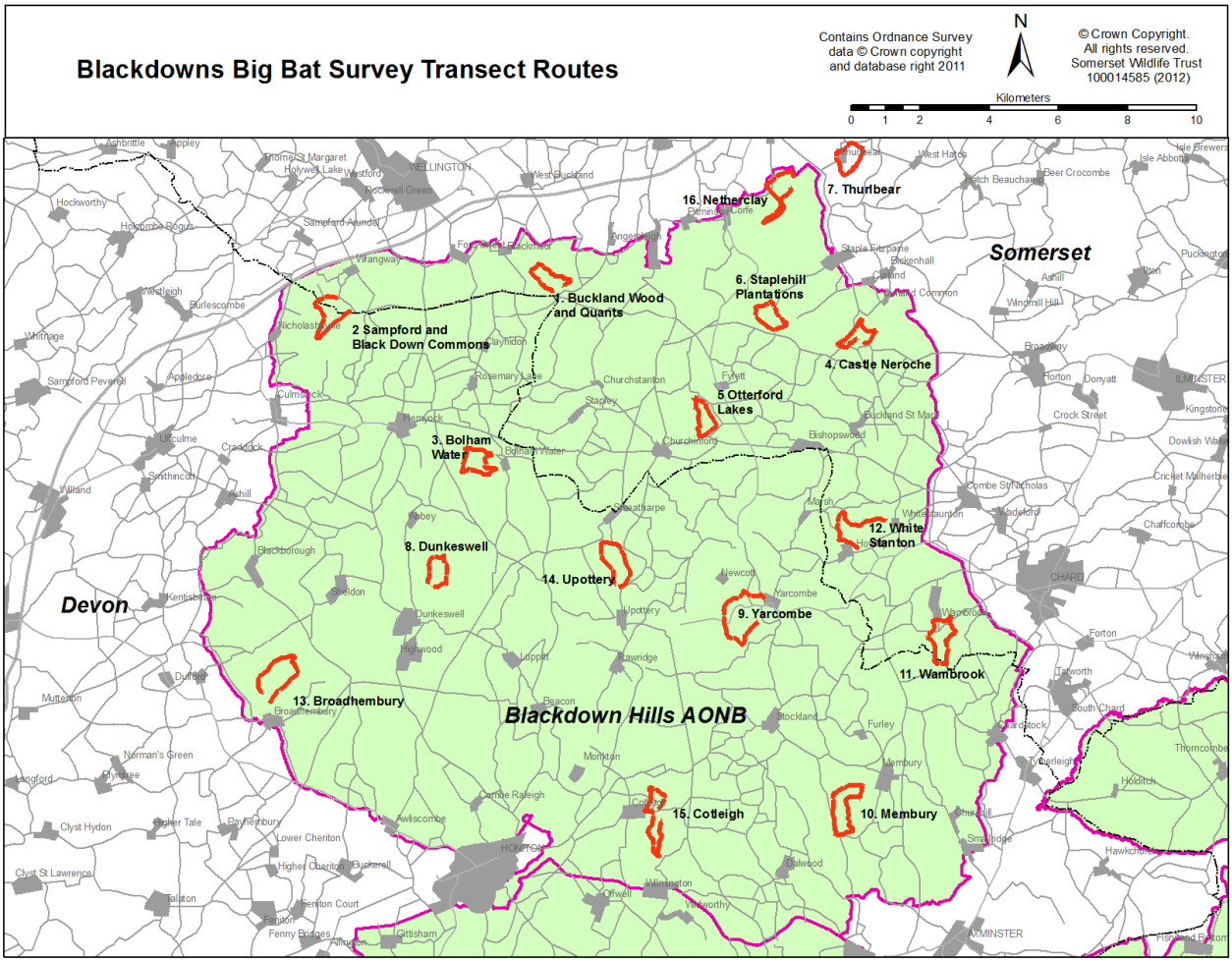

Figure 1: Map of the bat transects undertaken as part of the Blackdowns Big Bat Survey

3. RESULTS AND SOUND ANALYSIS

3.1 Overall summary

As in 2011 the most frequently recorded bat species was the Common 45 Pipistrelle. This species represented 69.9% of all bat passes recorded. *Myotis* sp. were recorded the second most frequently, and Soprano 55 Pipistrelle (*Pipistrellus pygmaeus*) was the third most frequently recorded species. The most obvious difference from the 2011 results was a very much lower representation of the "big bats". Serotines (*Eptisecus serotinus*) were once again the next most recorded species but only a total of 55 passes were found, less than half the number in 2011. Numbers of Noctule and Barbastelle passes were very much reduced and no Leislers Bats were recorded at all. The reason for this difference is hard to surmise and more data is needed to explain it. Long-eared bats *(Plecotus sp.)* are generally difficult to record due to their tendency to use passive hearing to catch prey rather than echolocation, but five passes of these species were recorded and they are known to roost across the Blackdown Hills AONB. Although the number of passes of Lesser Horseshoe Bats (*Rhinolophus hipposideros*) was the same as 2011, they were more dispersed across the landscape and present in more transects. The addition of four new transects in 2012 means that the results between the two years are not a direct comparison and it cannot be surmised that there was greater bat activity in 2012 due to the higher total of bat passes.

Table 1 shows the number of bat passes and proportion of total calls for all the species recorded, and the following maps show the cumulative presence of species recorded across the Blackdown Hills. The results only show presence of bats identified from the recordings and can not indicate the absence of a particular species as the survey does not cover the entirety of each square kilometre, and, consequently, there is the possibility that species may have been missed.

Table 1: Number and proportion of bat passes recorded for each species / group.

Species /Species Group	**2011 Bat Passes**	**2011 Total (%)**	**2012 Bat Passes**	**2012 Total (%)**
Greater horseshoe	0		0	
Lesser horseshoe	5	0.2	5	0.1
Common 45 pipistrelle	1522	64.0	2774	69.9
Soprano 55 pipistrelle	125	5.3	315	7.9
Pipistrelle sp	15	0.6	63	1.6
Serotine	125	5.3	55	1.4
Noctule	15	0.6	2	0.1
Leisler's	5	0.2	0	
Myotis sp	474	19.9	593	14.9
Long-eared Bat	3	0.1	5	0.1
Barbastelle	23	1	2	0.1
Unidentified bat species	65	2.7	153	3.9
TOTAL	**2377**	**100**	**3967**	**100**

Lesser Horseshoe Bat Passes

Lesser Horseshoe Bat Passes

Blackdown Hills AONB

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Kilometers

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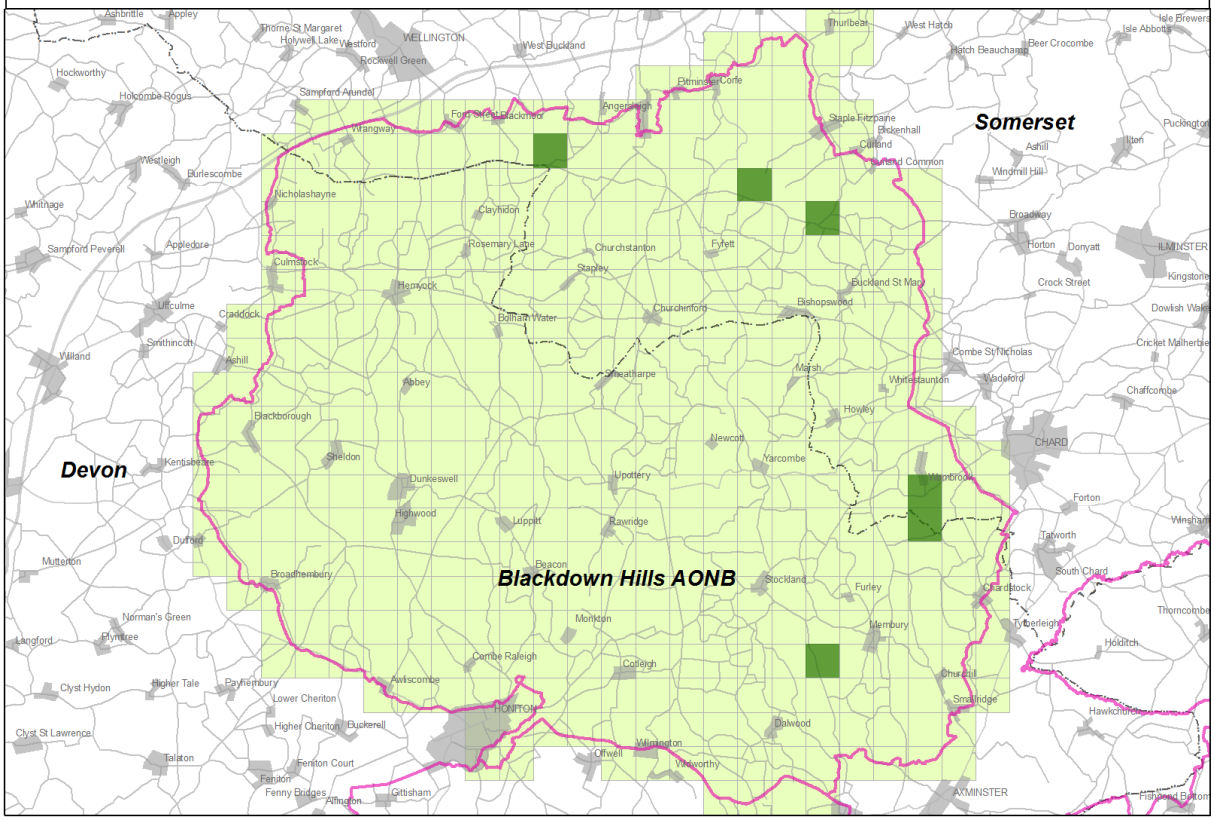

Common (45kHz) Pipistrelle Bat Passes

45 Pipistrelle Bat Passes

Blackdown Hills AONB

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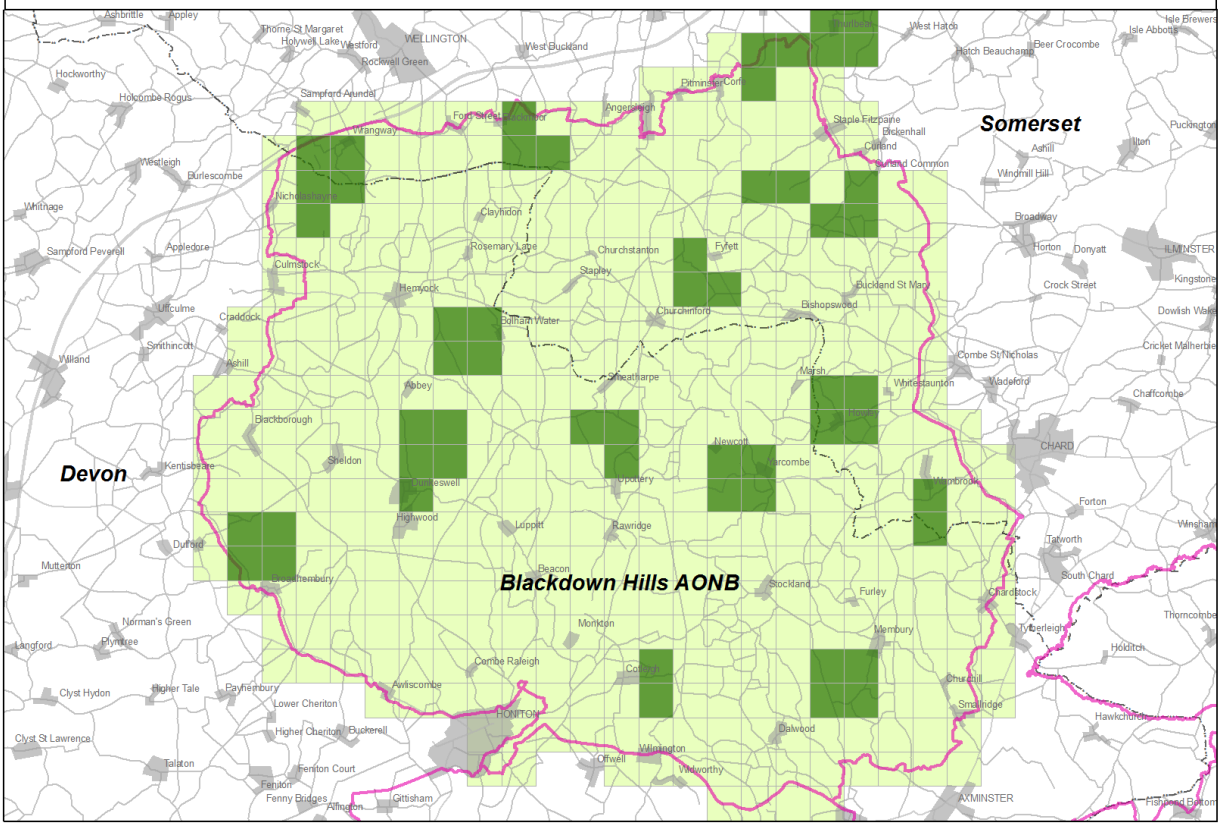

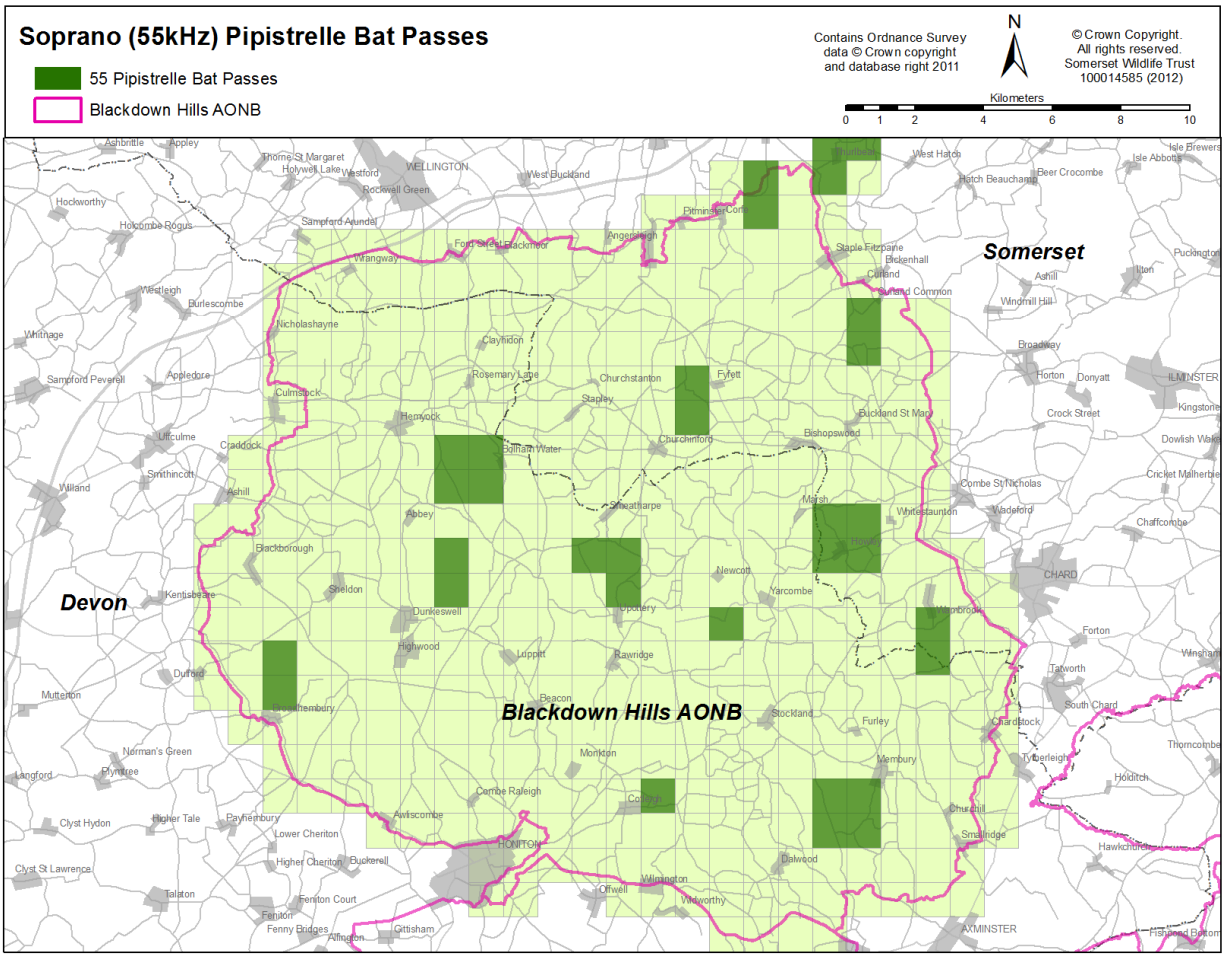
Soprano (55kHz) Pipistrelle Bat Passes
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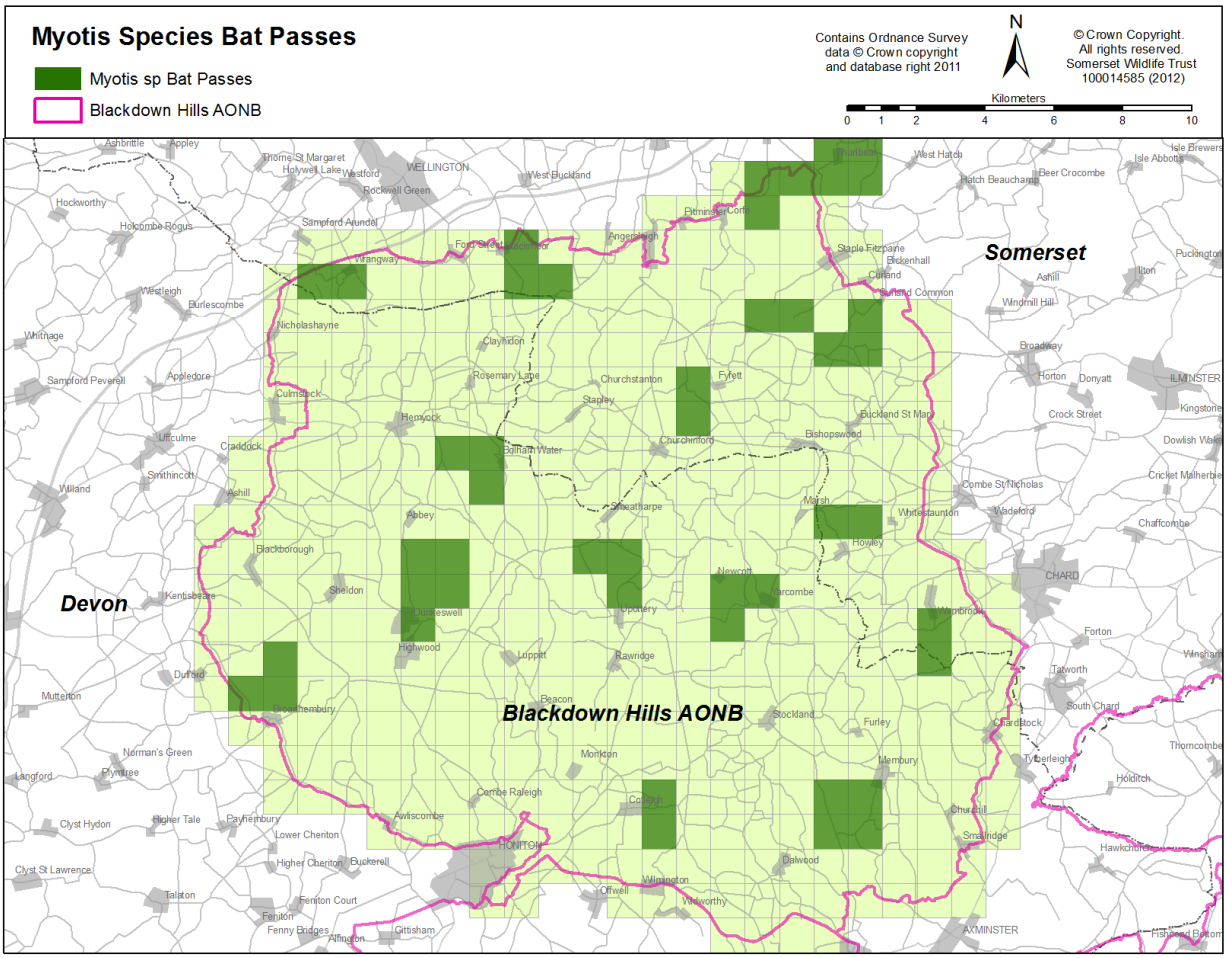
Myotis Species Bat Passes
Myotis sp Bat Passes
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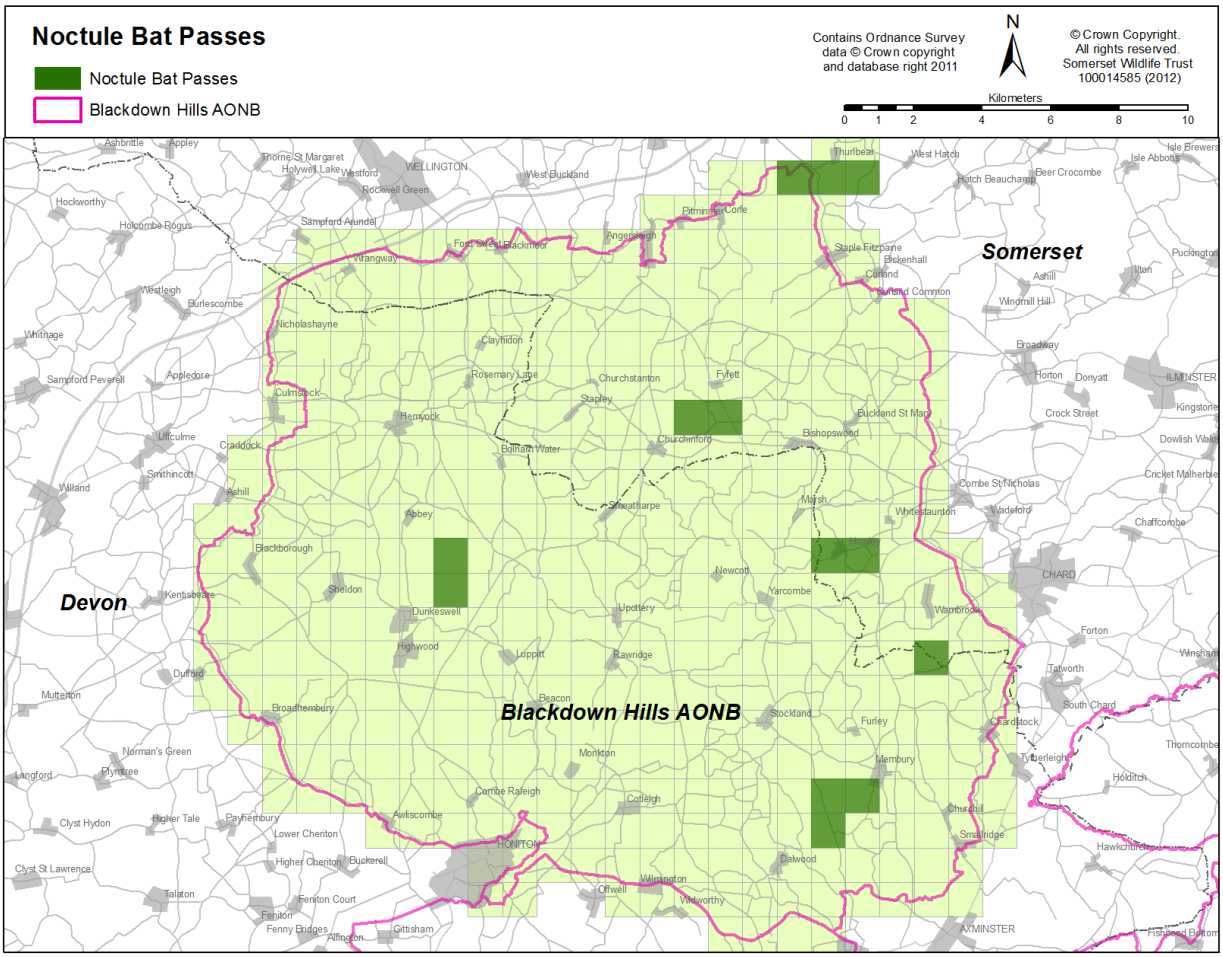
Noctule Bat Passes
Noctule Bat Passes
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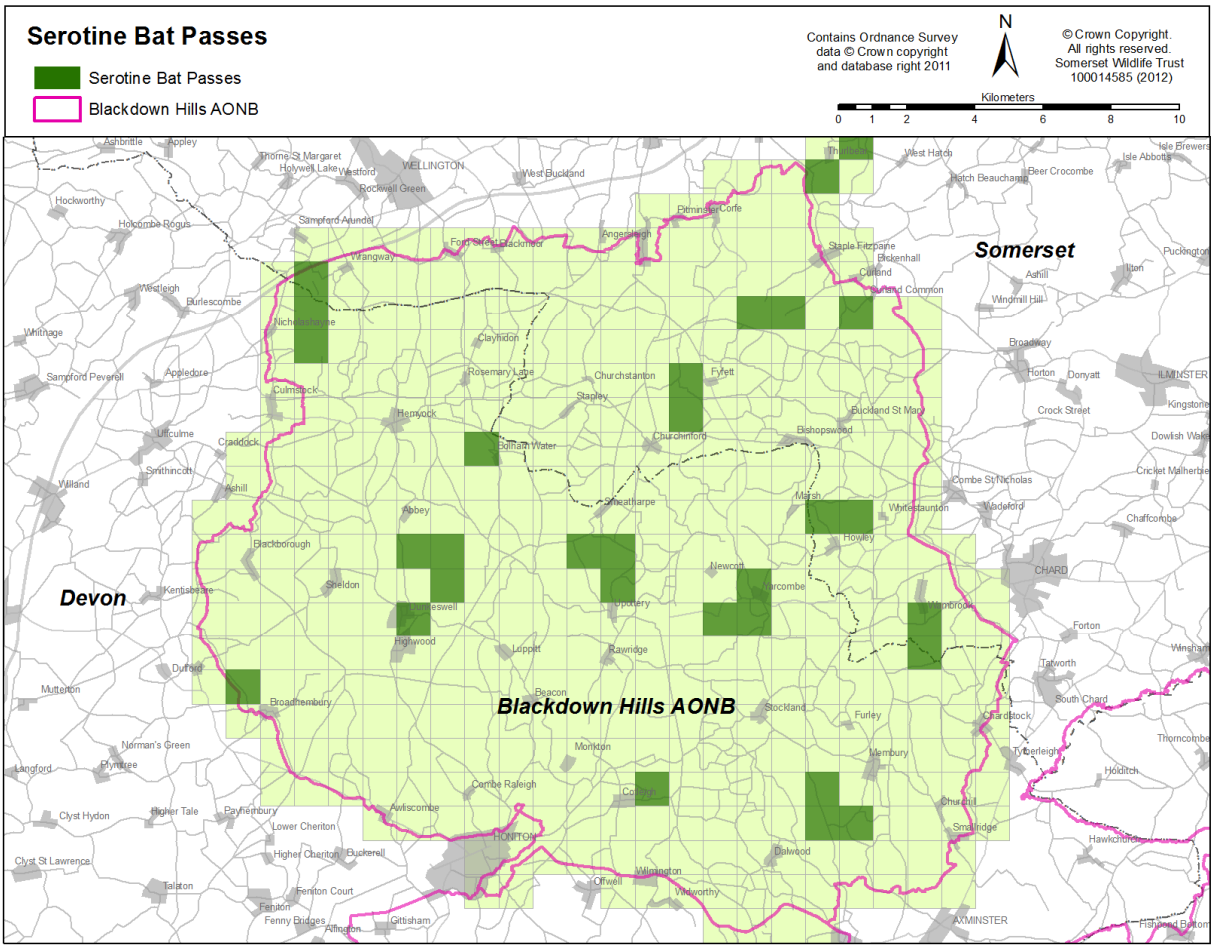
Serotine Bat Passes
Serotine Bat Passes
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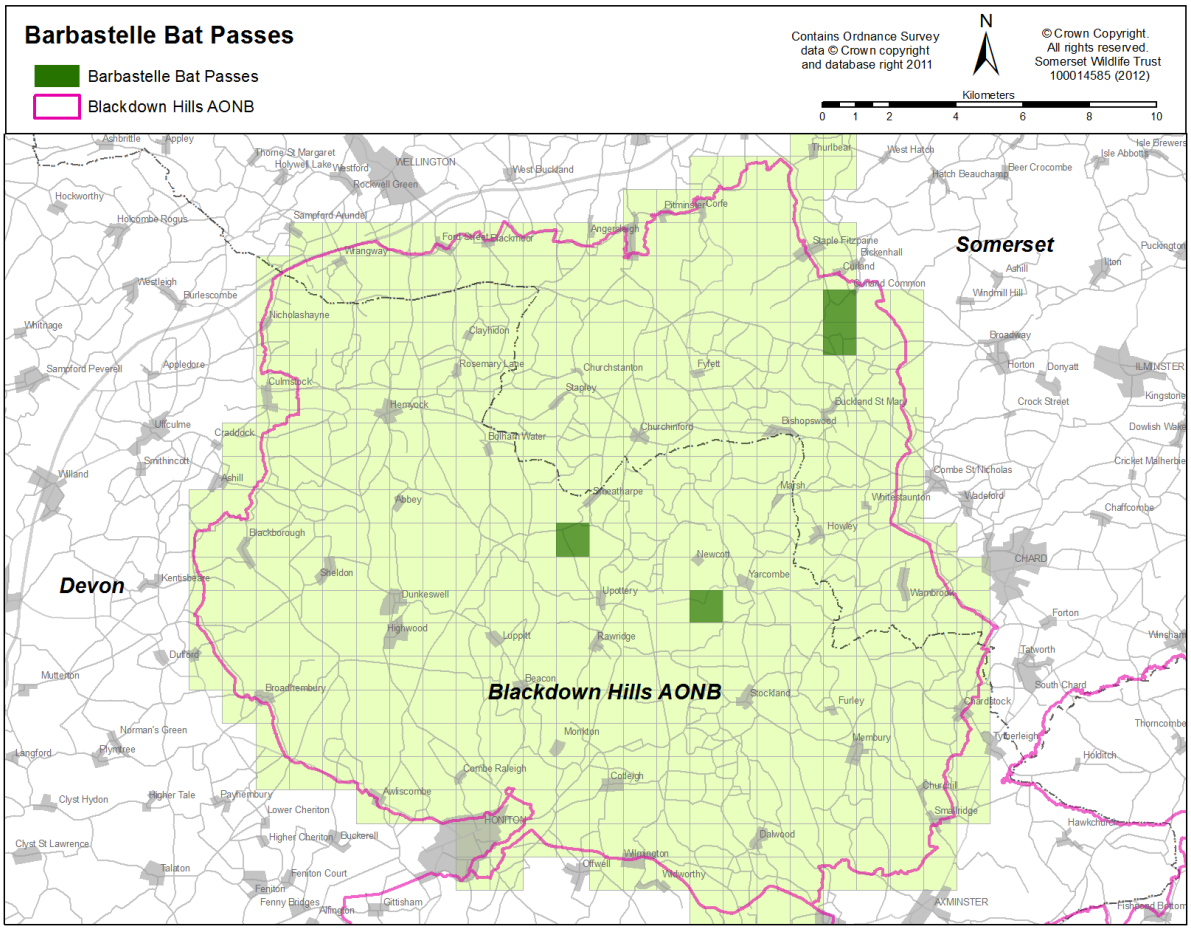


3.2 Bat passes recorded along each transect route

The recordings from each transect were analysed separately and divided into the walk and stop sections shown in the following tables and maps. It is, of course, impossible to draw any conclusions from two sets of data and the following observations must be treated with caution and can at best merely highlight possible areas of comparison for next year and the ensuing years.

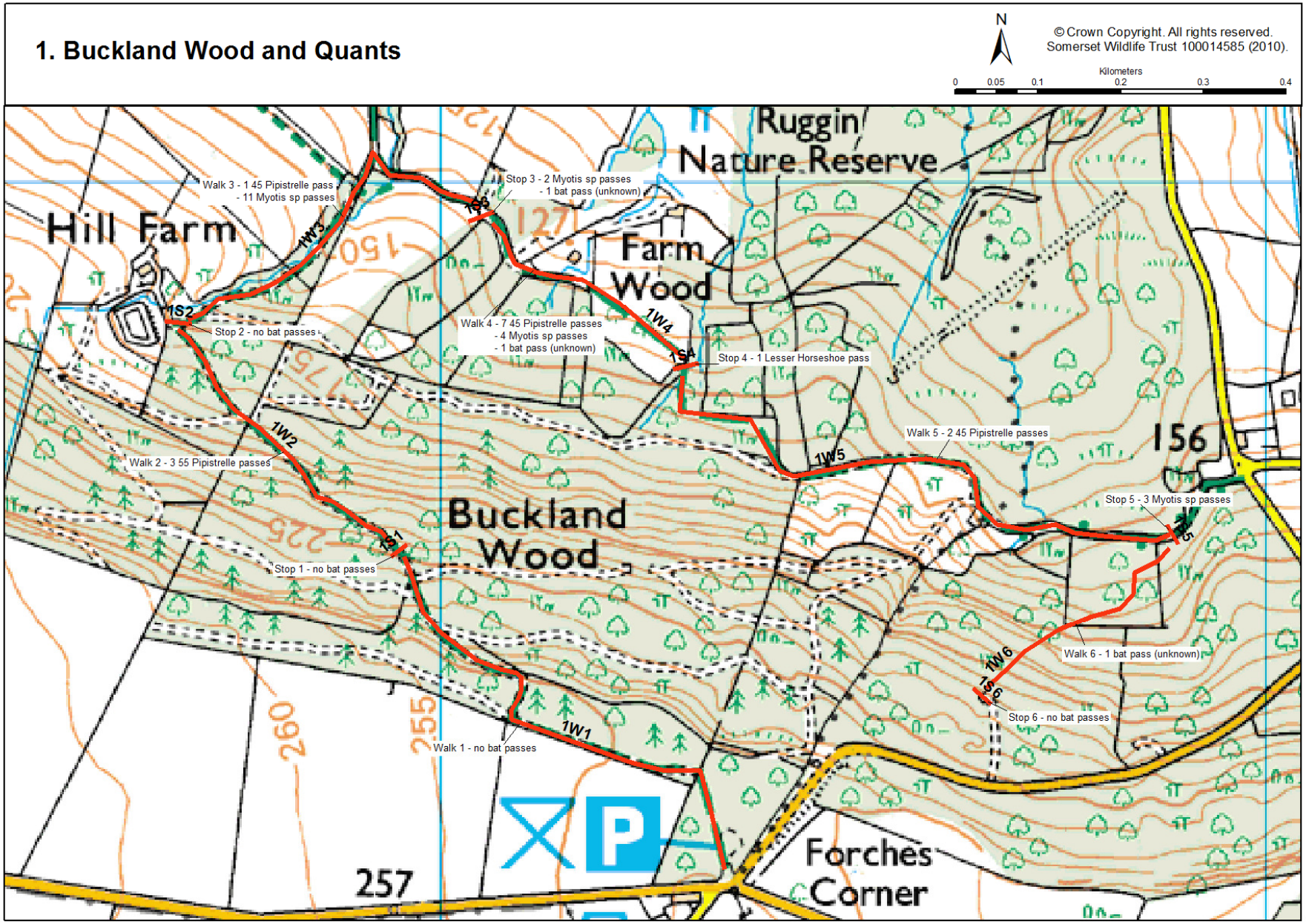
3.2.1 **Transect 1: Buckland Wood and Quants**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	9		1	21	1	19			2	7	3		42
	Myotis sp	4		3		11	16	1		4				60
	Unidentified bat passes		1											1
2012*	Lesser Horseshoe								1					1
	45 Pipistrelle			3		1		7		2				13
	Myotis sp					11	2	4			3			20
	Unidentified bat passes						1	1				1		3

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

The total passes recorded at this transect was much lower in 2012 with only 13 45 Pipistrelle passes as against 42 in 2011. As in 2011 the total for Myotis species exceeded the number for 45 Pipistrelles and the Myotis recordings were again concentrated in the middle part of the transect in Walk 3 and Stop 3. The Lesser Horseshoe at Stop 4 is a new record and a little surprising as it is not obvious habitat for this species. Lesser Horseshoe Bats are known to hibernate at SWT's reserve at Quants but this suggests that some are present throughout the year.

1. Buckland Wood and Quants



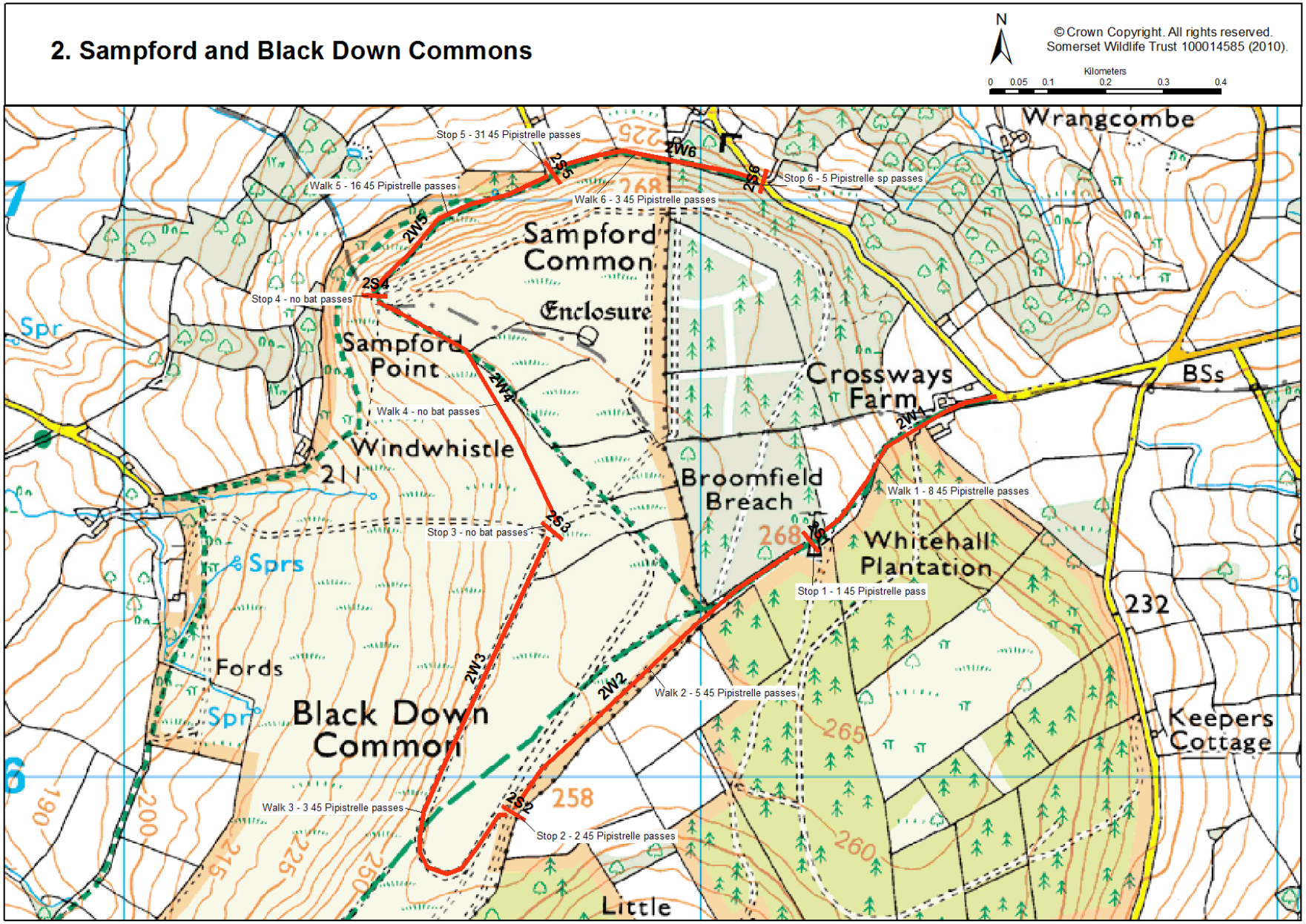
3.2.2 **Transect 2: Sampford and Black Down Commons**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	2	1	3		1	2					7	1	17
	Myotis spp.										1	1	1	3
	Serotine				1	3					5			9
	Unidentified bat passes						1	1						2
2012*	45 Pipistrelle	8	1	5	2	3				16	31	3		69
	Pipistrelle sp												5	5

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

Most of this transect is higher than 250m above sea level. The centre of the transect is particularly exposed and this is reflected in the low level of bat activity. In 2012 however there were a great many more passes recorded than in 2011 (69 Common Pipistrelle passes as against 17). Given that it is not unlikely that bats that were identified as Pipistrelles but not ascribed to a species were in fact 45 Pipistrelle (the commonest of our three Pipistrelle species) it is quite possible that all 74 passes recorded were from only one species. There were no “big bats” and no Myotis bats. The absence of Serotine in particular is surprising. Larger bats can cope with more exposed conditions and yet this transect had none in 2012.

2. Sampford and Black Down Commons



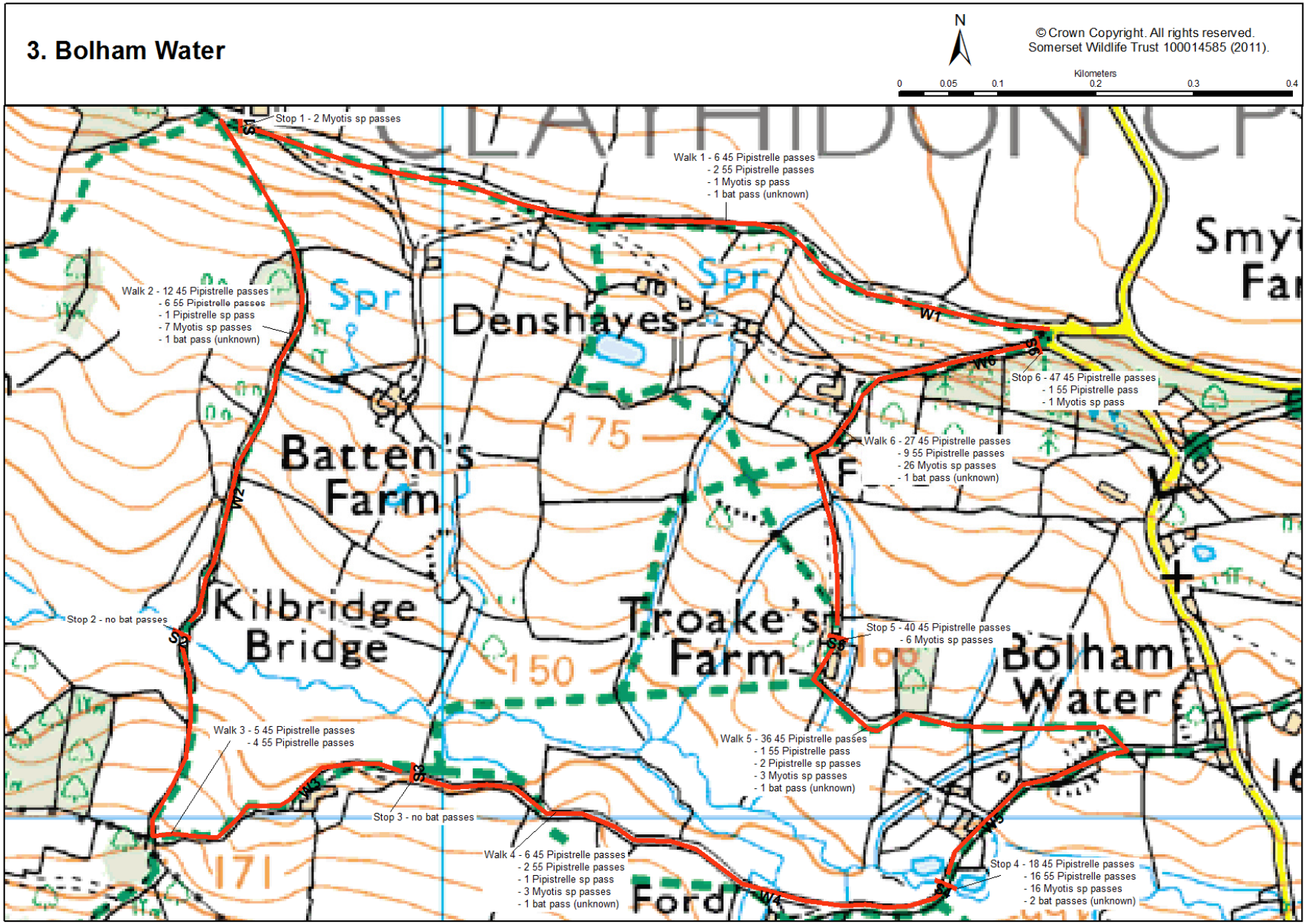
3.2.3 **Transect 3: Bolham Water**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	31	17	1		5	3	31	23	34	47	67	49	308
	55 Pipistrelle									3	1			4
	Myotis spp.	1		1	7					3		2	2	16
	Serotine									5				5
	Unidentified bat passes										1			1
2012*	45 Pipistrelle	6		12		5		6	18	36	40	27	47	197
	55 Pipistrelle	2		6		4		2	16	1		9	1	41
	Pipistrelle sp			1				1		2				4
	Myotis sp	1	2	7				3	16	3	6	26	1	65
	Unidentified bat passes	1		1				1	2	1		1		7

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

There were fewer passes than in 2011 but the totals are still impressive with 242 passes of all species of Pipistrelles and 67 Myotis bat passes. Here as with other transects there were no Serotines. In spite of the route being reversed the main centres of bat activity were very much the same. The first half of the transect accounted for 35 Pipistrelle passes, the second half had 207. The hot spots are in Walk 4 to Stop 6 particularly around Troakes Farm.

3. Bolham Water



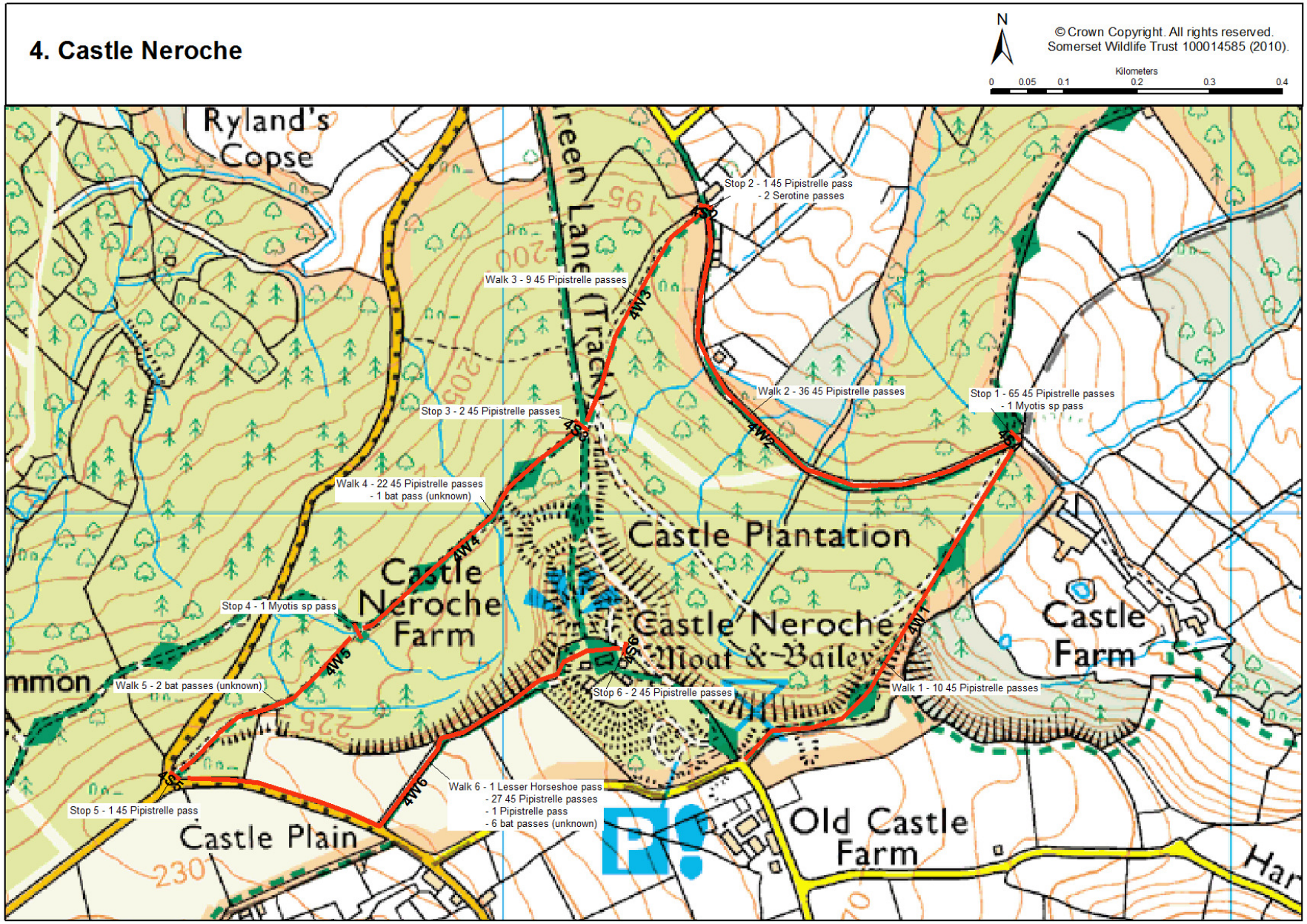
3.2.4 **Transect 4: Castle Neroche**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	Lesser Horseshoe											1		1
	45 Pipistrelle	12	4			2	11	8	25	2	1	9	2	76
	55 Pipistrelle	3				1								4
	Pipistrelle sp	1				3	3		2	2			4	14
	Myotis sp	3	1	9		3	6	9	1	6			3	42
	Barbastelle	3	3	3										9
	Unidentified bat passes	2	4		1		1	2		1		1	1	13
2012*	Lesser Horseshoe											1		1
	45 Pipistrelle	10	65	36	1	9	2	22			1	27	2	175
	Pipistrelle sp											1		1
	Myotis sp		1						1					2
	Serotine				2									2
	Unidentified bat passes							1		2		6		9

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

In contrast with the first three transects, transect 4 had more bat passes in 2012 with no less than 111 45 Pipistrelle passes in the first three sections alone. Conversely, Myotis passes were down from 42 in 2011 to a mere 2 on this occasion. It will be interesting to see how they do in 2013. There were no Barbastelle passes but there were 2 Serotine passes. The Lesser Horseshoe Bat pass in 2011 had been a bit of a surprise and was considered likely to be a bat commuting through the area but it duly appeared again this year in the same place so it would seem likely to be resident there.

4. Castle Neroche



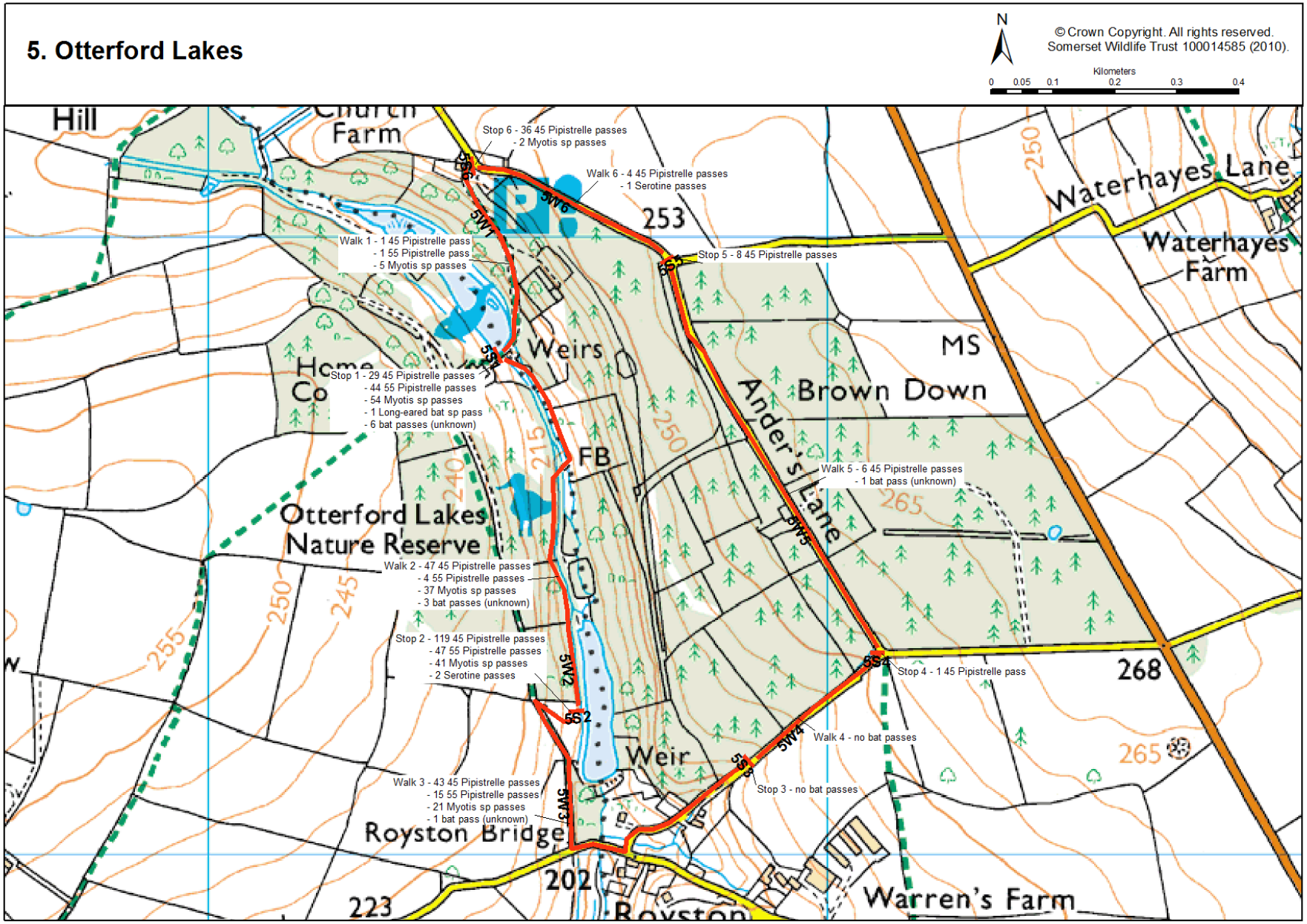
3.2.5 **Transect 5: Otterford Lakes**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	46	28	36	1	53		3		10			12	189
	55 Pipistrelle	4				3							4	11
	Myotis spp.	2	8	51	7	14	2				1		1	86
	Noctule				1	1			1					3
	Serotine			4	1	2								7
	Unidentified bat passes					1								1
2012*	45 Pipistrelle	1	29	47	119	43			1	6	8	4	36	294
	55 Pipistrelle	1	44	4	47	15								111
	Myotis sp		54	37	41	21							2	160
	Serotine				2							1		3
	Long-eared bat sp		1											1
	Unidentified bat passes		6	3		1				1				11

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

This transect is the one of the whole survey which incorporated the most significant amount of water and was bounded by woodland for most of the time on at least one side. Unsurprisingly, and as in the previous year all the activity was by the water. The totals involved were very impressive with 405 passes from the two Common Pipistrelle species. Of the 45 Pipistrelles, there were 36 passes at Stop 6 not far uphill from the lakes, 19 between Stop 3 and Walk 6 but no less than 238 in the part from Stop 1 to Walk 3. Stop 2 is something of a puzzle with 209 passes from all species in 2012 but only 10 in 2011. It is not clear why this has occurred, particularly as the walks either side of that stop were productive on both surveys. As before there were no Noctules even though there is a history of Noctules being recorded over the lower lake.

5. Otterford Lakes



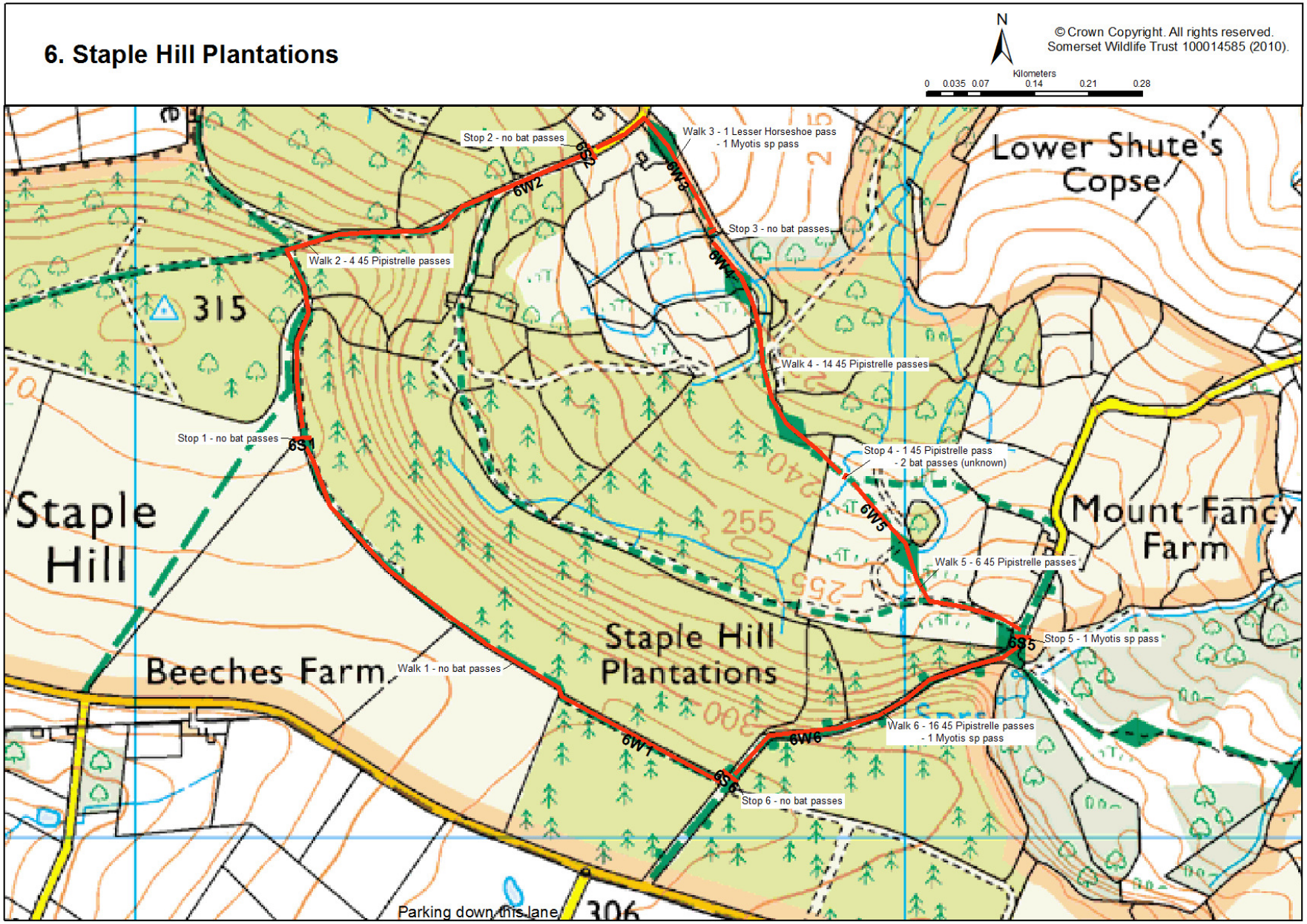
3.2.6 **Transect 6: Staple Hill Plantations**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	4							3	16	1	8	7	39
	Myotis spp.	3			4									7
	Serotine									2	3	1		6
	Unidentified bat passes				1	2								0
2012*	Lesser Horseshoe					1								1
	45 Pipistrelle			4				14	1	6		16		41
	Myotis spp.					1					1	1		3
	Unidentified bat passes								1					1

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

This transect proved as low in bat passes in 2012 as it was in 2011. The woodland is fairly dark conifer cover and quite exposed. The highest parts of the route are nearly 300 metres above sea level. Much of the little activity was in the lower lying sections of the route between Walk 4 and Walk 5. The Lesser Horseshoe Bat at Walk 1 was in the valley and unexpected. One might have expected Serotines of which there were 6 passes in 2011 but there were none recorded in 2012.

6. Staple Hill Plantations



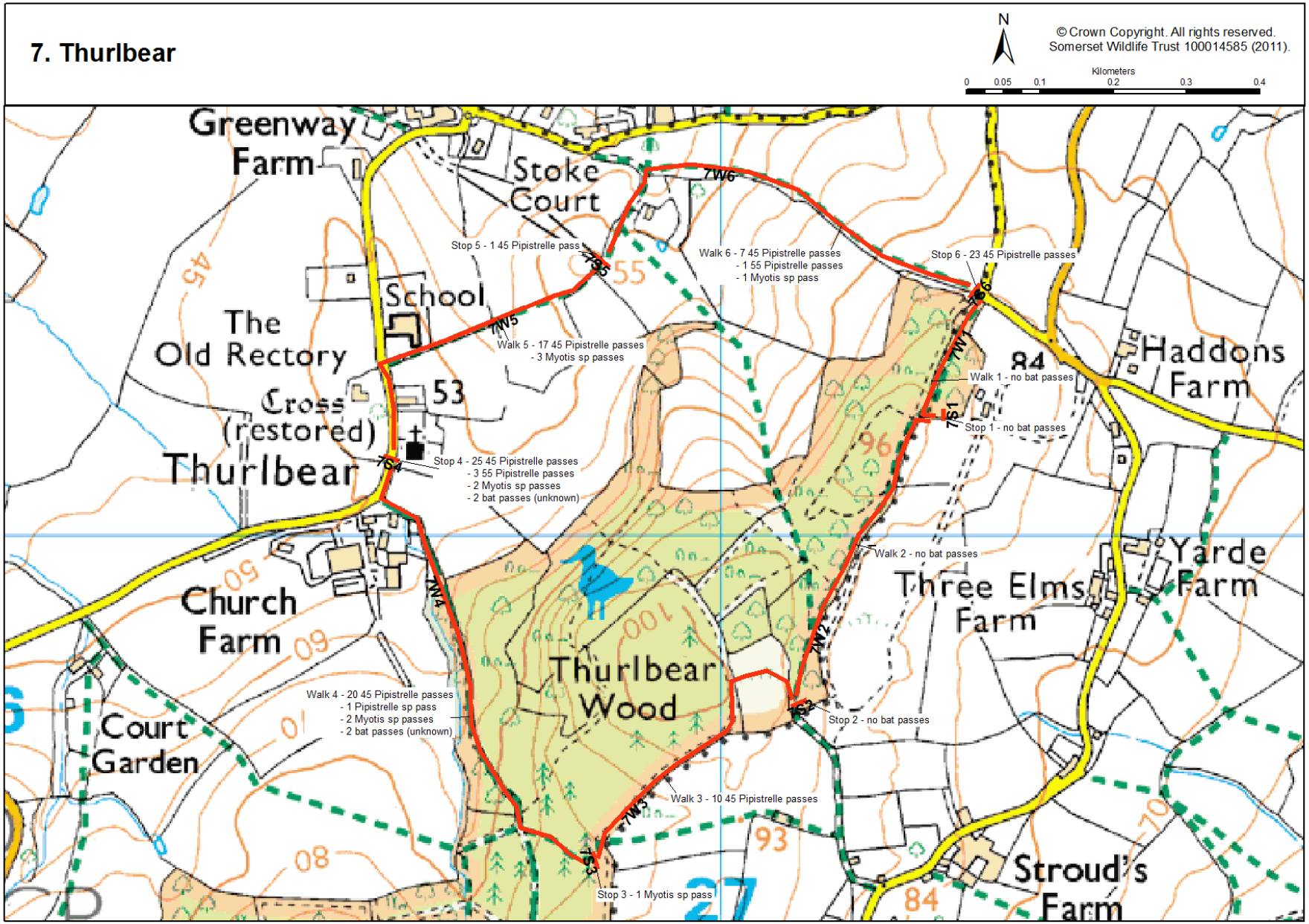
3.2.7 **Transect 7: Thurlbear**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	2				1		10	7	9	2	10	11	52
	55 Pipistrelle							4				1		5
	Pipistrelle sp							1						1
	Myotis sp			3		7	1	1		2			1	15
	Noctule					1			1					2
	Serotine							3				1		4
	Unidentified bat passes	5				2								7
2012*	45 Pipistrelle					10		20	25	17	1	7	23	103
	55 Pipistrelle								3			1		4
	Pipistrelle sp							1						1
	Myotis sp						1	2	2	3		1		9
	Unidentified bat passes							2	2					4

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

Only the first half of this transect was completed successfully. The recordings up to and including Walk 3 are included but any recordings after that were not reliably assignable to the prescribed route and cannot therefore be used as a true comparison with the recordings in 2011. The part that was completed showed many more 45 Pipistrelle passes but, in common with many other transects, no “big bats”. The part that was not completed was the more wooded section in which Noctules and Serotines would be less likely so this absence may not be significant.

7. Thurlbear


N
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Somerset Wildlife Trust 100014585 (2011).
Kilometers
0 0.05 0.1 0.2 0.3 0.4
Greenway Farm
Stoke Court
Stop 5 - 1 45 Pipistrelle pass
7S5
7W6
Walk 6 - 7 45 Pipistrelle passes
- 1 55 Pipistrelle passes
- 1 Myotis sp pass
Stop 6 - 23 45 Pipistrelle passes
7S6
School
The Old Rectory
7W5
Walk 5 - 17 45 Pipistrelle passes
- 3 Myotis sp passes
7W1
Walk 1 - no bat passes
Haddons Farm
Cross (restored)
7S1
Stop 1 - no bat passes
Thurlbear
7S4
Stop 4 - 25 45 Pipistrelle passes
- 3 55 Pipistrelle passes
- 2 Myotis sp passes
- 2 bat passes (unknown)
Walk 2 - no bat passes
Yarde Farm
Three Elms Farm
Church Farm
7W4
7W2
Thurlbear Wood
Walk 4 - 20 45 Pipistrelle passes
- 1 Pipistrelle sp pass
- 2 Myotis sp passes
- 2 bat passes (unknown)
7S2
Stop 2 - no bat passes
Court Garden
Walk 3 - 10 45 Pipistrelle passes
7W3
7S3
Stop 3 - 1 Myotis sp pass
Stroud's Farm

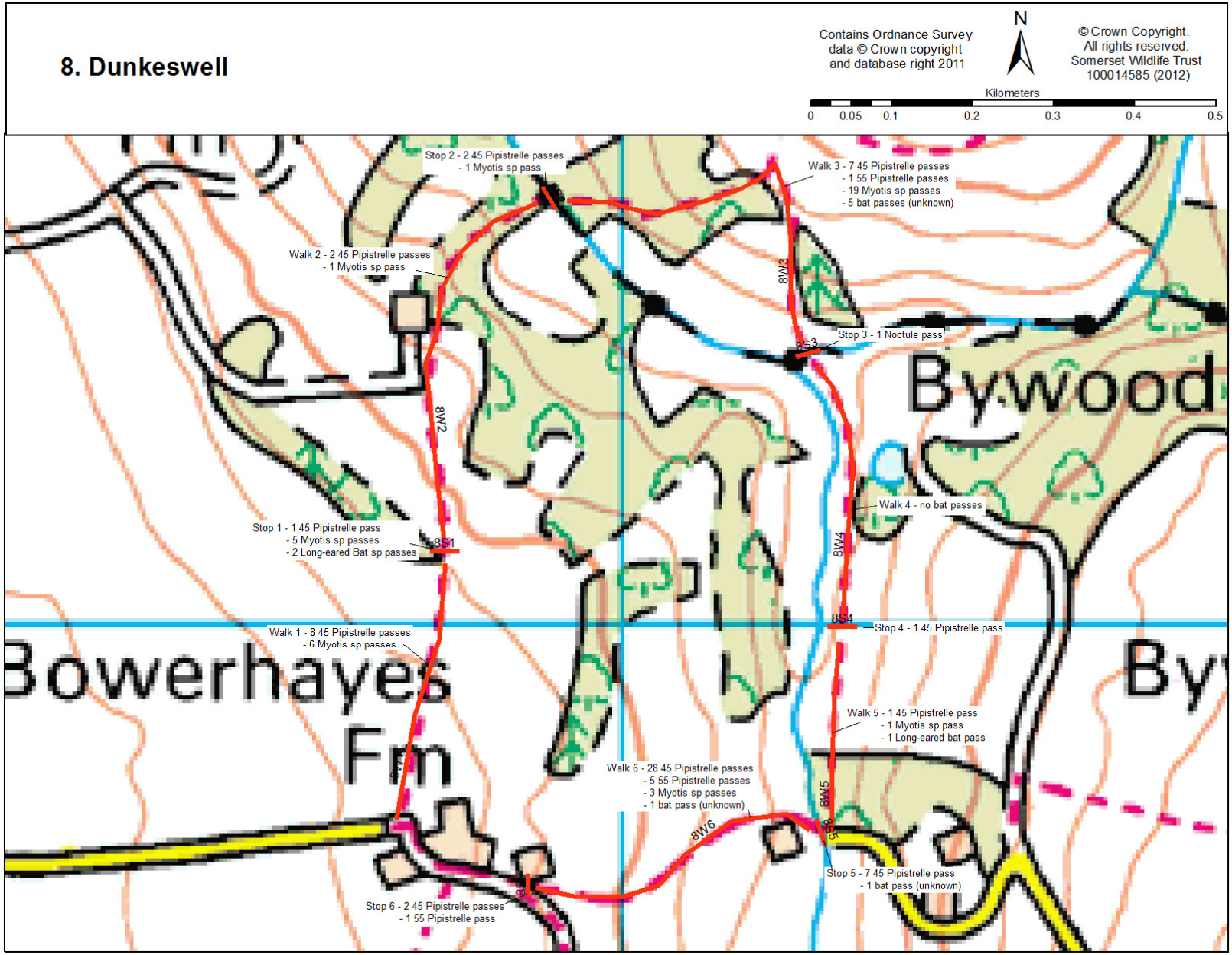
3.2.8 Transect 8: Dunkeswell

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	55	5	48	2	48	46	115	2	5		26	33	385
	55 Pipistrelle						3							3
	Myotis spp.	7		18		20	4	7		7	16	14		93
	Noctule							2						2
	Serotine	8						3				1	1	13
	Unidentified bat passes	1	6			2	1	5		1		5		21
2012*	45 Pipistrelle	8	1	2	2	7			1	1	7	28	2	59
	55 Pipistrelle				1	1						5	1	8
	Myotis spp.	6	5	1		19				1		3		35
	Noctule						1							1
	Long-eared Bat sp		2							1				3
	Unidentified bat passes					5					1	1		7

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

This transect was slightly modified between surveys to make it easier for the surveyors. Nonetheless the changes were not sufficient to invalidate a year-on-year comparison of data. In the still warm weather of 2011 it proved a far better transect for bat activity than its open un-wooded nature would suggest but in the windier conditions of 2012 the totals were substantially lower; 45 Pipistrelle passes down from 385 to 59 and Myotis species passes reduced from 93 to 35. Here again there were no “big bats” but in 2012 three passes were recorded than can be identified as Plecotus species. The two species we have of this genus are both recorded in Somerset and Devon but Brown Long-eared Bats (*Plecotus auritus)* are very much more common than Grey Long-eared Bats (*Plecotus austriacus)* so it is probable that these were Brown Long-eared Bats.

8. Dunkeswell



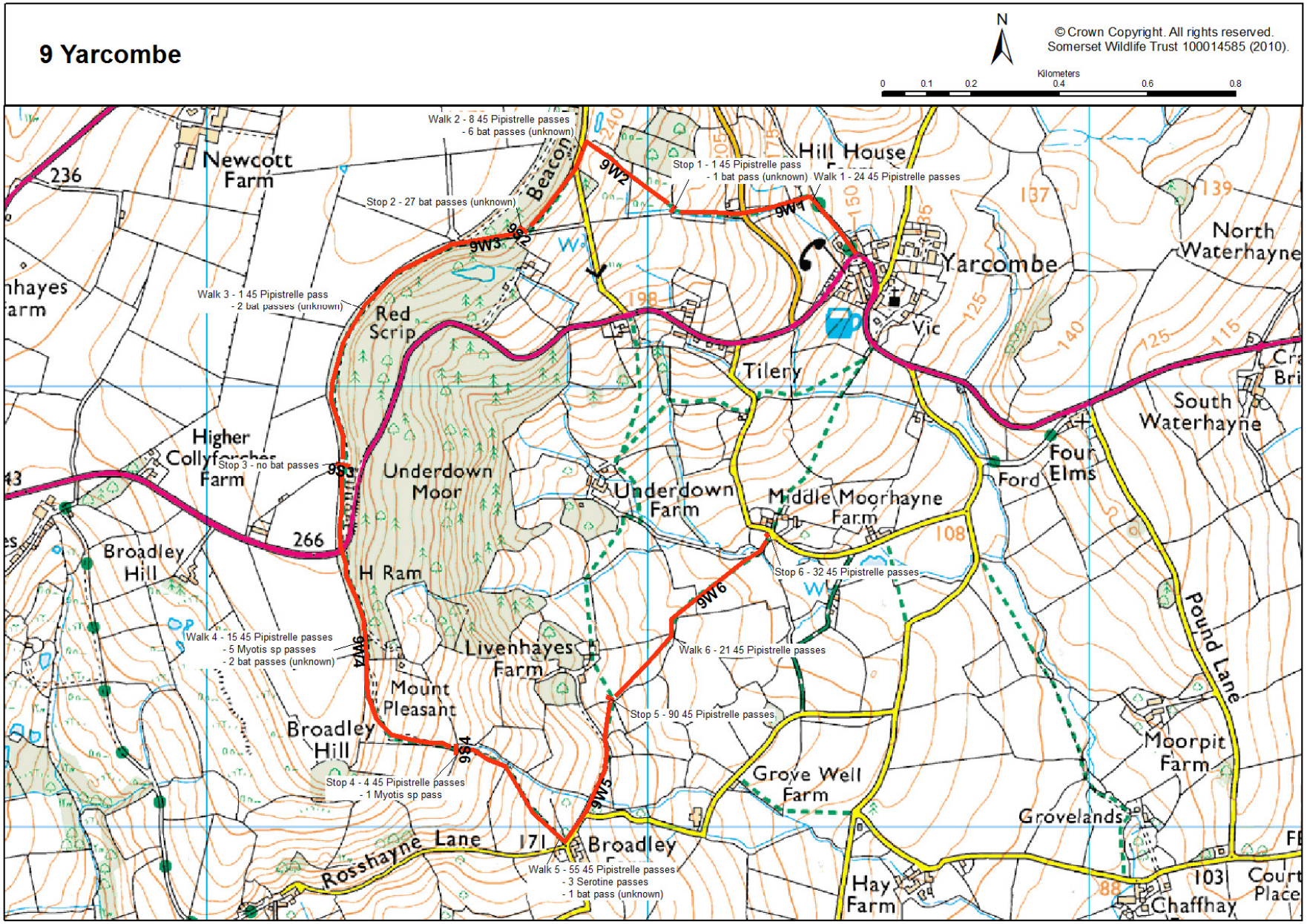
3.2.9 **Transect 9: Yarcombe**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	15	1	7	1			6		14		14	20	78
	55 Pipistrelle									3				3
	Myotis sp	25	8			13					2			48
	Serotine		1					2				2		5
	Barbastelle									14				14
	Unidentified bat passes	3				3	1	2		2				11
2012*	45 Pipistrelle	24	1	8		1		15	4	55	90	21	32	251
	Myotis sp							5	1					6
	Serotine									3				3
	Unidentified bat passes		1	6	27	2		2		1				39

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

This transect was remarkable in 2011 for no less than 14 Barbastelle (*Barbastelle barbastellus)* passes. However, none were recorded in 2012. There was a huge drop in Myotis passes from 48 passes to 6. A positive occurrence was the increase in Common Pipistrelle passes from 78 in 2011 to a massive 251 in 2012. Walk 5 and Stop 5 contributed 145 passes of this species compared to 14 in the previous year. It is not known why pipistrelles more abundant and other species so much less in evidence.

9 Yarcombe


N
© Crown Copyright. All rights reserved.
Somerset Wildlife Trust 100014585 (2010).
Kilometers
0 0.1 0.2 0.4 0.6 0.8
Walk 2 - 8 45 Pipistrelle passes
- 6 bat passes (unknown)
Stop 1 - 1 45 Pipistrelle pass
- 1 bat pass (unknown)
Walk 1 - 24 45 Pipistrelle passes
Stop 2 - 27 bat passes (unknown)
Walk 3 - 1 45 Pipistrelle pass
- 2 bat passes (unknown)
Stop 3 - no bat passes
Stop 6 - 32 45 Pipistrelle passes
Walk 6 - 21 45 Pipistrelle passes
Stop 5 - 90 45 Pipistrelle passes
Walk 4 - 15 45 Pipistrelle passes
- 5 Myotis sp passes
- 2 bat passes (unknown)
Stop 4 - 4 45 Pipistrelle passes
- 1 Myotis sp pass
Walk 5 - 55 45 Pipistrelle passes
- 3 Serotine passes
- 1 bat pass (unknown)
9W1
9W2
9W3
9W4
9W5
9W6
Newcott Farm
Beacon
Hill House
Yarcombe
Vic
North Waterhayne
South Waterhayne
Red Scrip
Tiley
Higher Collyfarcher Farm
Underdown Moor
Underdown Farm
Middle Moorhayne Farm
Four Elms
Ford
Broadley Hill
H Ram
Livenhayes Farm
Mount Pleasant
Broadley Hill
Grove Well Farm
Moorpit Farm
Grovelands
Pound Lane
Rosshayne Lane
Broadley
Hay Farm
Chaffhay
Court Place
236
266
171
103
108
137
139
125
140
115
198
240
105
175
150
88

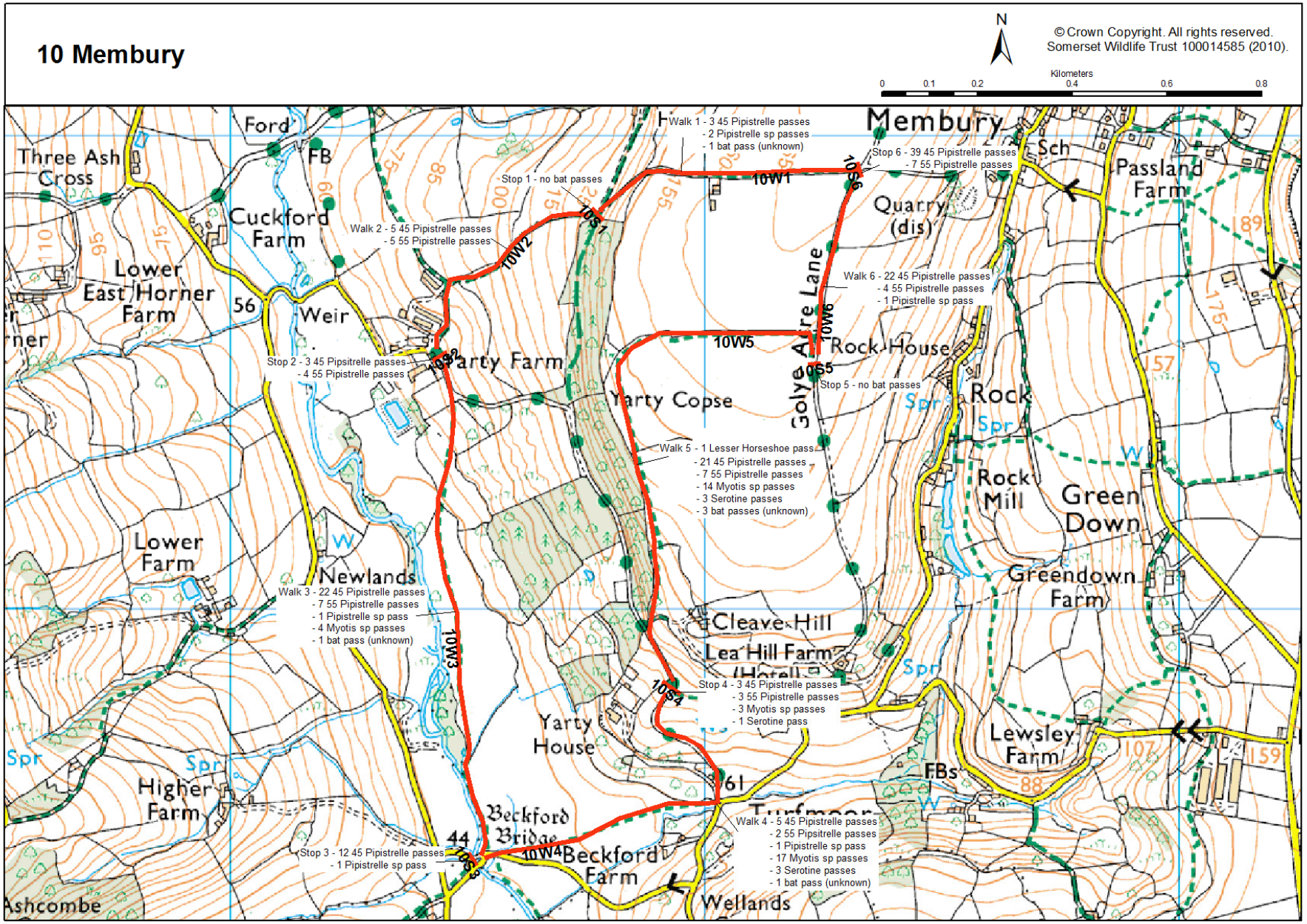
3.2.10 **Transect 10: Membury**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	7		5	1	40	47	25		1	10	3	11	150
	55 Pipistrelle					30	26	11				2		69
	Myotis spp.	3	11	2	1	9	6	21	1	5	1	22		82
	Noctule	1				2				1				5
	Leisler's					5								5
	Serotine			1		18		2		2				23
	Unidentified bat passes									1			1	2
2012*	Lesser Horseshoe									1				1
	45 Pipistrelle	3		5	3	22	12	5	3	21		22	39	135
	55 Pipistrelle			5	4	7		2	3	7		4	7	39
	Pipistrelle sp	2				1	1	1				1		6
	Myotis sp					4		17	3	14				38
	Serotine							3	1	3				7
	Unidentified bat passes	2				1		1		3				7

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

Bat passes were generally lower in 2012 compared with 2011 on this route as well and no Leislers Bats recorded this time. There was one Lesser Horseshoe Bat however. The drop in number of passes of Myotis species from 82 to 38 should be considered in relation to the reversal of direction of the transect. In 2011 they were concentrated in the second half of the route. Myotis bats tend to emerge later than other species and it is possible that the recorders simply got to the bats' favoured habitat before the bats did. If that was the case it should be apparent from future surveys.

10 Membury


N
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Somerset Wildlife Trust 100014585 (2010).
Kilometers
0 0.1 0.2 0.4 0.6 0.8
Membury
Sch
Passland Farm
Quarry (dis)
Walk 1 - 3 45 Pipistrelle passes
- 2 Pipistrelle sp passes
- 1 bat pass (unknown)
Stop 6 - 39 45 Pipistrelle passes
- 7 55 Pipistrelle passes
Stop 1 - no bat passes
10W1
10S1
10S6
Walk 2 - 5 45 Pipistrelle passes
- 5 55 Pipistrelle passes
10W2
Three Ash Cross
Ford
FB
Cuckford Farm
Lower East Horner Farm
56
Weir
Walk 6 - 22 45 Pipistrelle passes
- 4 55 Pipistrelle passes
- 1 Pipistrelle sp pass
10W6
Golye Acre Lane
10W5
Rock House
10S5
Stop 5 - no bat passes
Stop 2 - 3 45 Pipistrelle passes
- 4 55 Pipistrelle passes
10S2
Yarty Farm
Yarty Copse
Rock
Spr
Walk 5 - 1 Lesser Horseshoe pass
- 21 45 Pipistrelle passes
- 7 55 Pipistrelle passes
- 14 Myotis sp passes
- 3 Serotine passes
- 3 bat passes (unknown)
Rock Mill
Green Down
Lower Farm
Newlands
Walk 3 - 22 45 Pipistrelle passes
- 7 55 Pipistrelle passes
- 1 Pipistrelle sp pass
- 4 Myotis sp passes
- 1 bat pass (unknown)
Greendown Farm
Cleave Hill
Lea Hill Farm
10W3
10S4
Stop 4 - 3 45 Pipistrelle passes
- 3 55 Pipistrelle passes
- 3 Myotis sp passes
- 1 Serotine pass
Yarty House
Lewsley Farm
FBs
Higher Farm
61
Beckford Bridge
Turfmoor
Walk 4 - 5 45 Pipistrelle passes
- 2 55 Pipistrelle passes
- 1 Pipistrelle sp pass
- 17 Myotis sp passes
- 3 Serotine passes
- 1 bat pass (unknown)
44
Stop 3 - 12 45 Pipistrelle passes
- 1 Pipistrelle sp pass
10S3
10W4
Beckford Farm
Wellands
Ashcombe

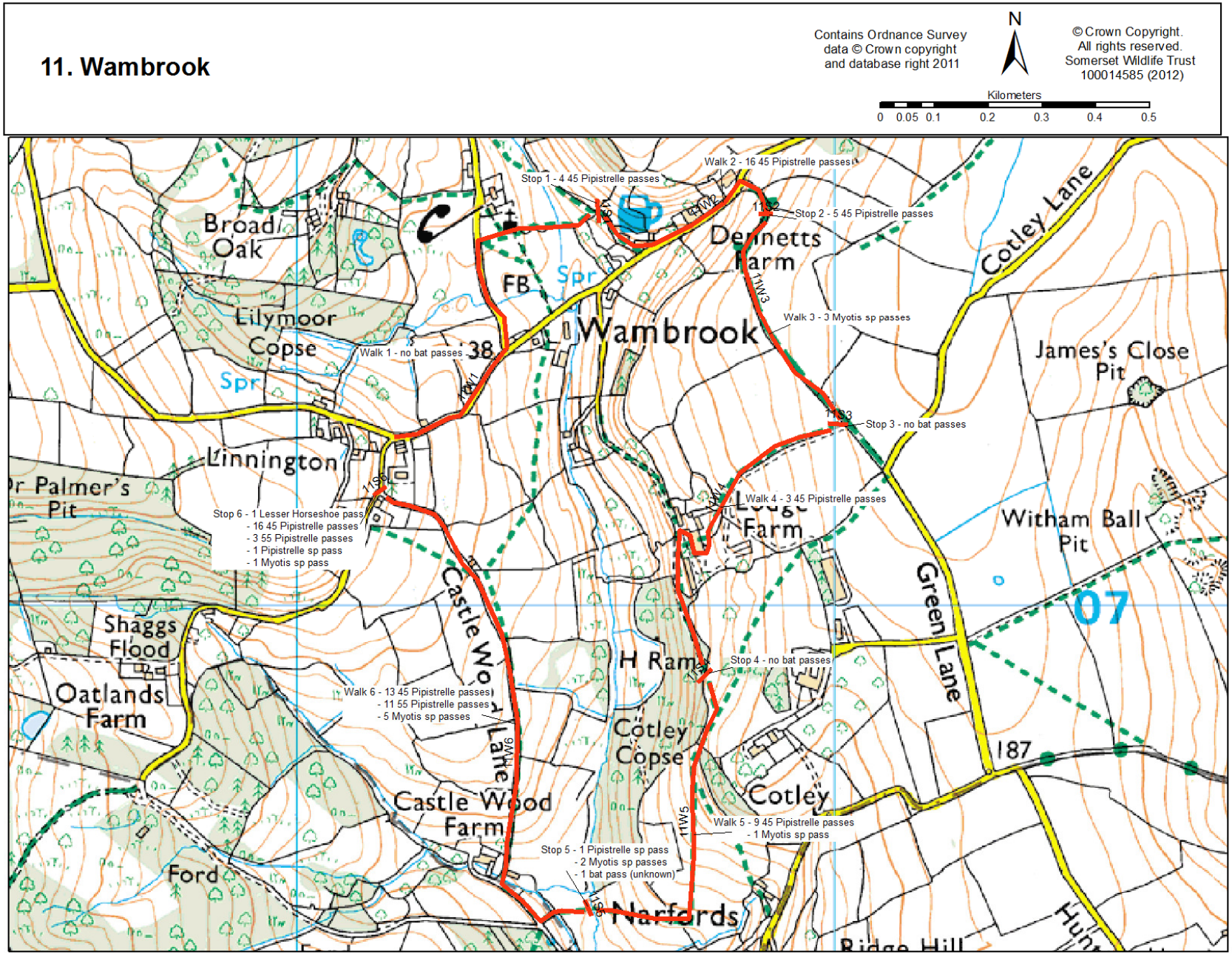
3.2.11 **Transect 11: Wambrook**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	Lesser Horseshoe											4		4
	45 Pipistrelle	16						6		3		6	20	51
	55 Pipistrelle						2	2		6	3	9	2	24
	Myotis sp	5								1		4	4	14
	Noctule											1		1
	Serotine					1				2		3		6
	Brown Long-eared Bat	3												3
	Unidentified bat passes							1					2	3
2012*	Lesser Horseshoe												1	1
	45 Pipistrelle		4	16	5			3		9		13	16	66
	55 Pipistrelle											11	3	14
	Pipistrelle sp										1		1	2
	Myotis sp					3				1	2	5	1	12
	Unidentified bat passes										1			1

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

Except for the absence of Noctules and Serotines the numbers on this transect were broadly comparable with those in 2011. The bats were, however, not in the same places particularly in the first half of the route. Stop 1 to Stop 2 provided 25 passes in 2012 and none at all in 2011. This may also be related to the direction in which the recorders were walking although the records for Walk 1 show the opposite with 24 passes in 2011 and none in 2012. More data may make it clearer what the bats are doing.

11. Wambrook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N
© Crown Copyright. All rights reserved. Somerset Wildlife Trust 100014585 (2012)
Kilometers
0 0.05 0.1 0.2 0.3 0.4 0.5
Stop 1 - 4 45 Pipistrelle passes
Walk 2 - 16 45 Pipistrelle passes
Stop 2 - 5 45 Pipistrelle passes
Walk 3 - 3 Myotis sp passes
Stop 3 - no bat passes
Walk 4 - 3 45 Pipistrelle passes
Stop 4 - no bat passes
Walk 5 - 9 45 Pipistrelle passes
- 1 Myotis sp pass
Stop 5 - 1 Pipistrelle sp pass
- 2 Myotis sp passes
- 1 bat pass (unknown)
Walk 6 - 13 45 Pipistrelle passes
- 11 55 Pipistrelle passes
- 5 Myotis sp passes
Stop 6 - 1 Lesser Horseshoe pass
- 16 45 Pipistrelle passes
- 3 55 Pipistrelle passes
- 1 Pipistrelle sp pass
- 1 Myotis sp pass
Walk 1 - no bat passes
Broad Oak
Lilymoor Copse
Spr
FB
Wambrook
Dennetts Farm
Cotley Lane
James's Close Pit
Linnington
Palmer's Pit
Witham Ball Pit
Shaggs Flood
Oatlands Farm
Castle Wood Lane
Green Lane
H Ram
Cotley Copse
Cotley
Castle Wood Farm
Ford
Narfords
Ridge Hill
187
38
07

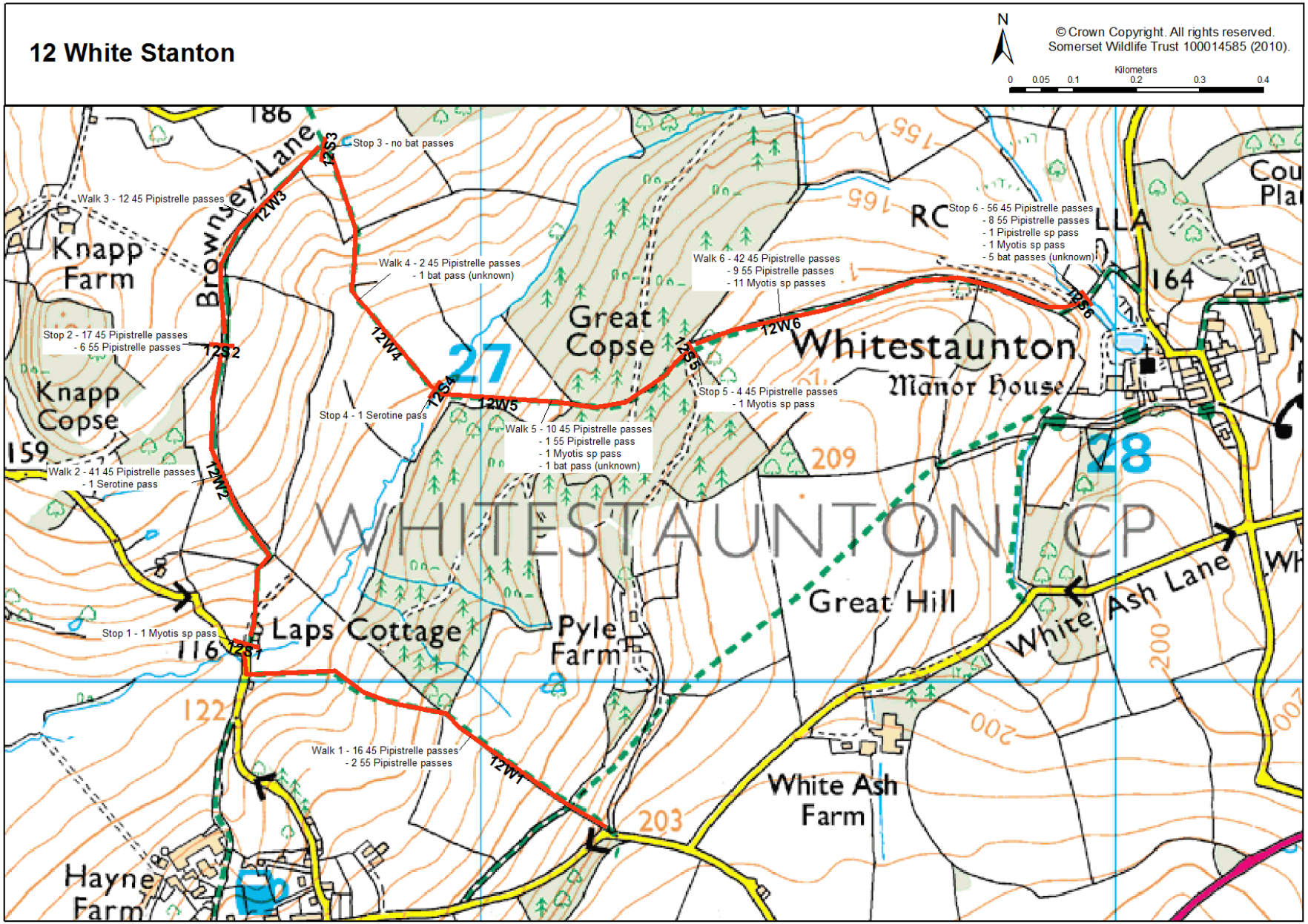
3.2.12 **Transect 12: White Staunton**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011	45 Pipistrelle	30		1				3	27	39	9	20	6	135
	55 Pipistrelle											1	1	2
	Myotis sp			1					1	1	2		3	8
	Noctule	2												2
	Serotine		1				2			5		1		9
	Unidentified bat passes	2	1											3
2012*	45 Pipistrelle	16		41	17	12		2		10	4	42	56	200
	55 Pipistrelle	2			6					1		9	8	26
	Pipistrelle sp												1	1
	Myotis sp		1							1	1	11	1	15
	Serotine			1					1					2
	Unidentified bat passes							1		1			5	7

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

More passes were recorded in 2012 than in 2011 along this transect. The first two sections walked (Stop 6 and Walk 6) yielded an impressive 98 45 Pipistrelle passes and 17 55 Pipistrelle passes. Furthermore, Myotis bat passes were almost doubled in this beginning section. However, as in so many other transects, the numbers of “big bats” was very low; only 2 Serotine passes and no Nyctalus species (Noctules and Leislers).

12 White Stanton



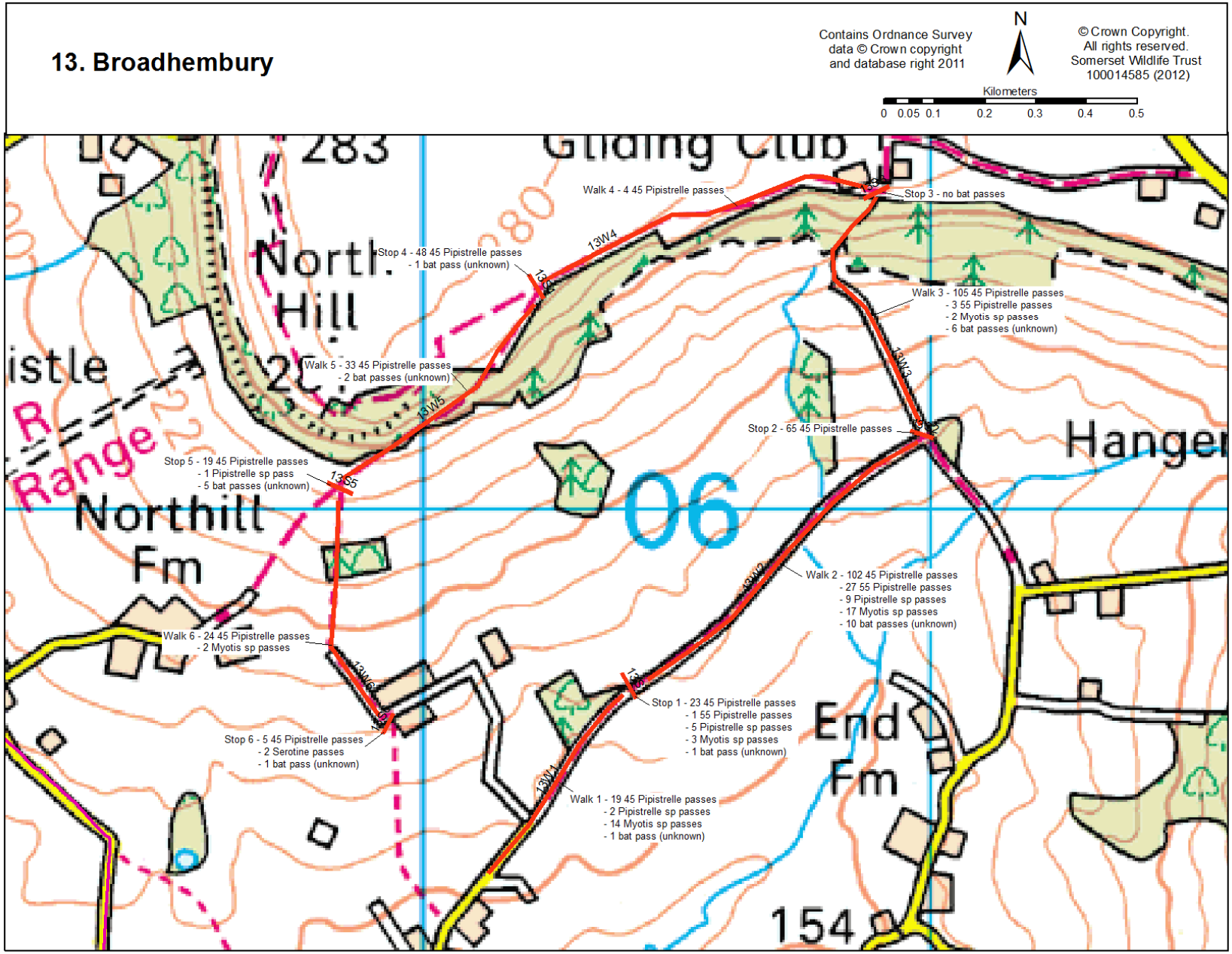
3.2.13 **Transect 13: Broadhembury**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011		This transect was not undertaken in 2011												
2012*	45 Pipistrelle	19	23	102	65	105		4	48	33	19	24	5	447
	55 Pipistrelle		1	27		3								31
	Pipistrelle sp	2	5	9							1			17
	Myotis sp	14	3	17		2						2		38
	Serotine												2	2
	Unidentified bat passes	1	1	10		6			1	2	5		1	27

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

This transect was new to the survey in 2012. The total of 447 45 Pipistrelle passes is impressively high. The route is largely along a south facing slope and might have been expected to show the greatest activity on those parts of the route which border woodland, but the most active part was the first five sections along the road. Predictably the least activity was at the top of the hill at Stop 3 and Walk 4 which only recorded 4 Common Pipistrelle passes between them. It is reasonable to presume that this is because that part is at the highest altitude and most exposed.

13. Broadhembury



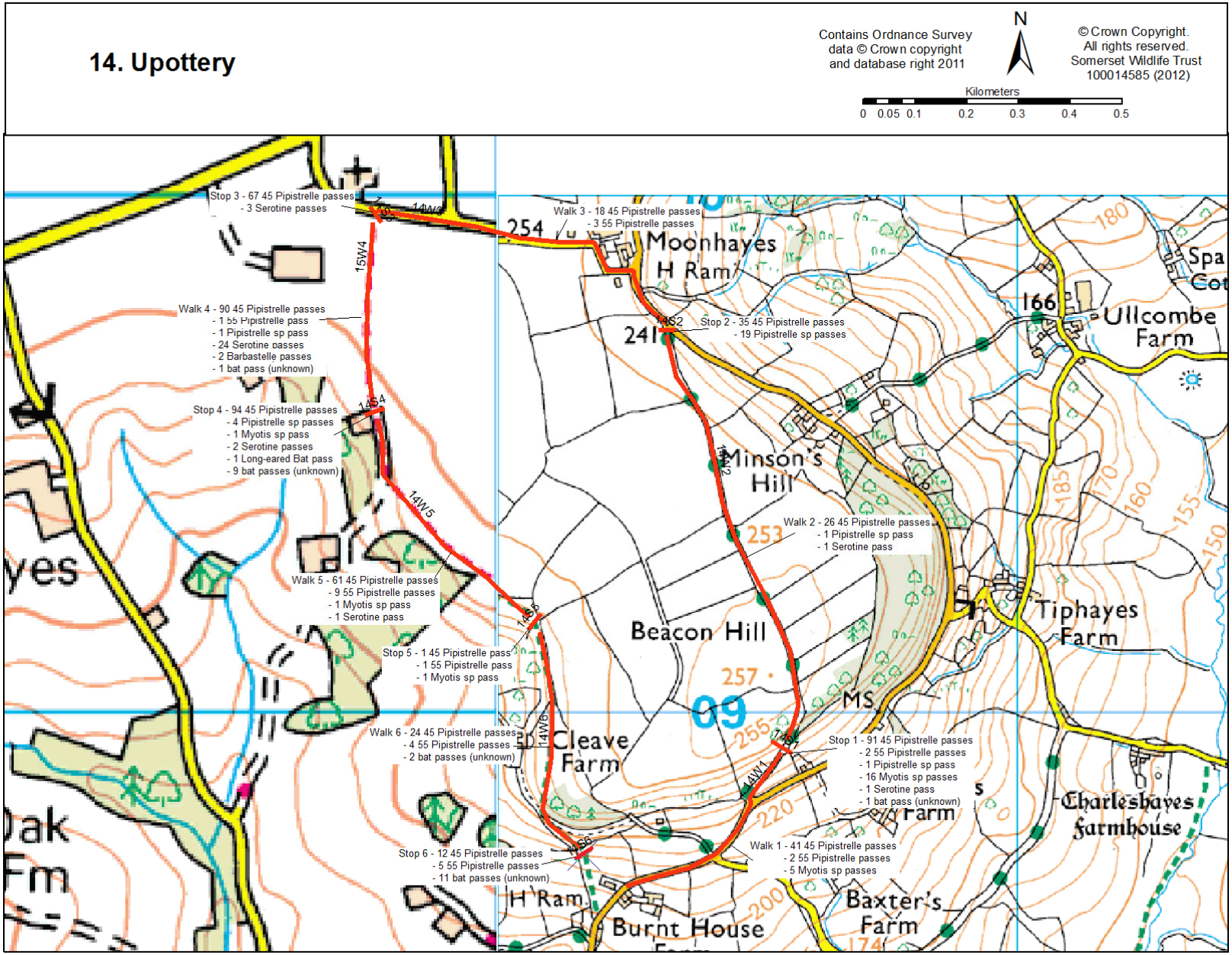
3.2.14 **Transect 14: Upottery**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011		This transect was not undertaken in 2011												
2012*	45 Pipistrelle	41	91	26	35	18	67	90	94	61	1	24	12	560
	55 Pipistrelle	2	2			3		1		9	1	4	5	27
	Pipistrelle sp		1	1	19			1	4					26
	Myotis sp	5	16						1	1	1			24
	Serotine		1	1			3	24	2	1				32
	Barbastelle							2						2
	Long-eared Bat								1					1
	Unidentified bat passes		1					1	9			2	1	24

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

This transect was also walked for the first time in 2012. It proved to be one of the best with no less than 560 passes of Common Pipistrelles, more Serotines than anywhere else and 2 passes from a Barbastelle. The Pipistrelles were spread throughout the walk with the exception of Stop 5 which was the only quiet section. The stretch from Stop 3 to Walk 5 inclusive was outstanding. This site is also a steeply sloping one with the slope facing south-east. Although there is woodland nearby only Stop 4 and Walk 5 impinge directly on woods. Walk 4 to Walk 5 inclusive did provide a massive 245 pipistrelle passes presumably of bats feeding in the lee of the trees. The 91 45 Pipistrelle passes at Stop 1 are harder to explain but that section is at the bottom of the hill and reasonably sheltered and there are farm buildings which pipistrelles often favour.

14. Upottery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N
© Crown Copyright. All rights reserved. Somerset Wildlife Trust 100014585 (2012)
Kilometers
0 0.05 0.1 0.2 0.3 0.4 0.5
Stop 3 - 67 45 Pipistrelle passes
- 3 Serotine passes
Walk 3 - 18 45 Pipistrelle passes
- 3 55 Pipistrelle passes
Walk 4 - 90 45 Pipistrelle passes
- 1 55 Pipistrelle pass
- 1 Pipistrelle sp pass
- 24 Serotine passes
- 2 Barbastelle passes
- 1 bat pass (unknown)
Stop 2 - 35 45 Pipistrelle passes
- 19 Pipistrelle sp passes
Stop 4 - 94 45 Pipistrelle passes
- 4 Pipistrelle sp passes
- 1 Myotis sp pass
- 2 Serotine passes
- 1 Long-eared Bat pass
- 9 bat passes (unknown)
Walk 2 - 26 45 Pipistrelle passes
- 1 Pipistrelle sp pass
- 1 Serotine pass
Walk 5 - 61 45 Pipistrelle passes
- 9 55 Pipistrelle passes
- 1 Myotis sp pass
- 1 Serotine pass
Stop 5 - 1 45 Pipistrelle pass
- 1 55 Pipistrelle pass
- 1 Myotis sp pass
Walk 6 - 24 45 Pipistrelle passes
- 4 55 Pipistrelle passes
- 2 bat passes (unknown)
Stop 1 - 91 45 Pipistrelle passes
- 2 55 Pipistrelle passes
- 1 Pipistrelle sp pass
- 16 Myotis sp passes
- 1 Serotine pass
- 1 bat pass (unknown)
Walk 1 - 41 45 Pipistrelle passes
- 2 55 Pipistrelle passes
- 5 Myotis sp passes
Stop 6 - 12 45 Pipistrelle passes
- 5 55 Pipistrelle passes
- 11 bat passes (unknown)
Moonhayes
H Ram
Minson's Hill
Beacon Hill
Cleave Farm
Ullcombe Farm
Tiphayes Farm
Charlesbayes Farmhouse
Baxter's Farm
Burnt House
H Ram
MS
09
254
241
166
253
257
255
220
200
180
185
170
160
155
150
15W4
14W3
14S2
14S4
14W5
14S5
14W6
14W1
14S6

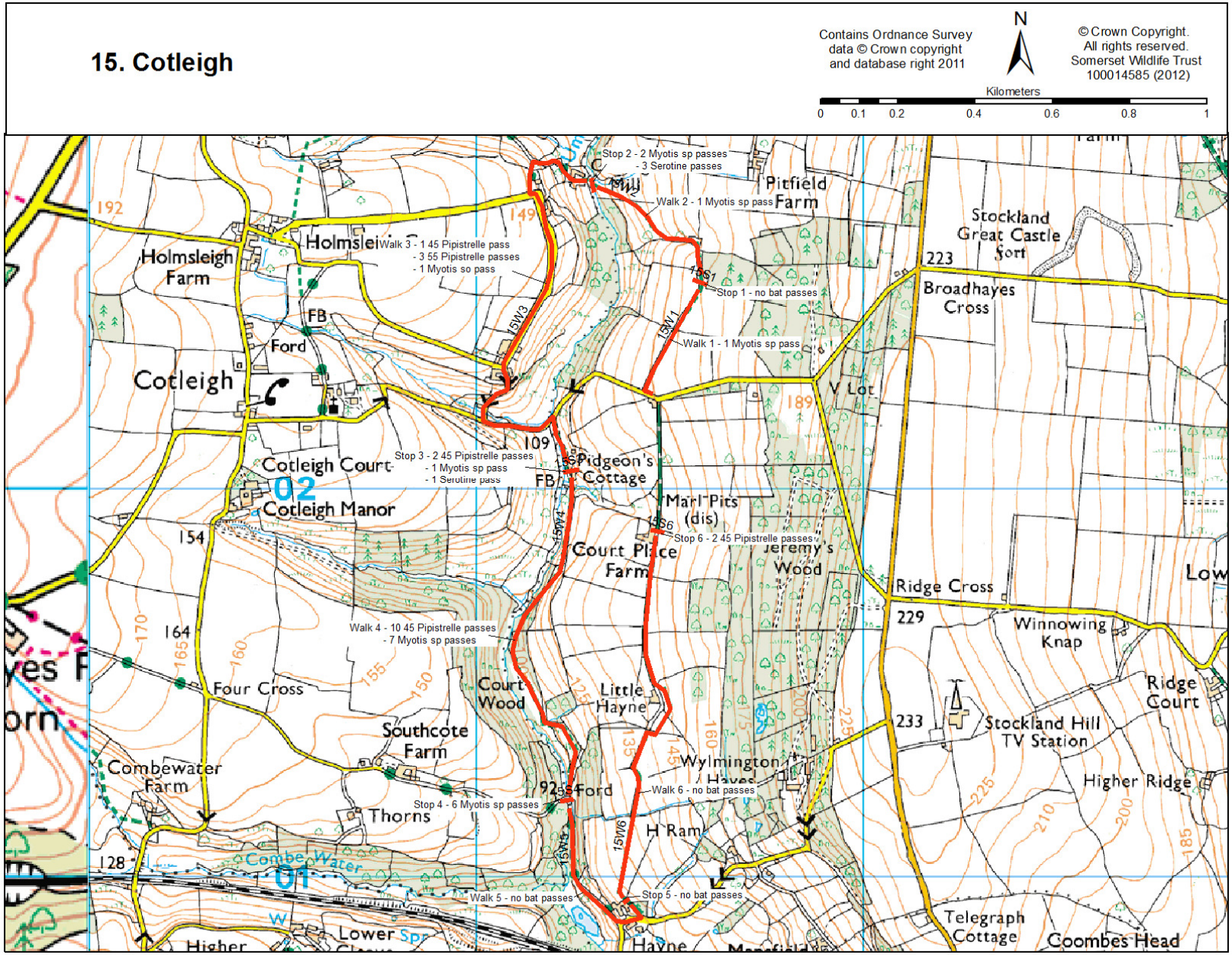
3.2.15 **Transect 15: Cotleigh**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011		This transect was not undertaken in 2011												
2012*	45 Pipistrelle					1	2	10					2	15
	55 Pipistrelle					3								3
	Myotis spp.	1		1	2	1	1	7	6					19
	Serotine				3		1							4

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

Few bat passes were recorded along transect 14. The walk is in a wooded valley with water which should be ideal for bat foraging but the survey only recorded 41 passes from all species. Almost half of those were Myotis species and the abundance of Common Pipistrelle passes was not present along this route. Transect 15 is a mystery at the moment but next year it may be completely different and it will be very interesting to find out what the surveyors find in 2013.

15. Cotleigh


Contains Ordnance Survey data © Crown copyright and database right 2011
N
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Kilometers
0 0.1 0.2 0.4 0.6 0.8 1
Stop 2 - 2 Myotis sp passes
- 3 Serotine passes
Walk 2 - 1 Myotis sp pass
Pitfield Farm
Stockland Great Castle Fort
Walk 3 - 1 45 Pipistrelle pass
- 3 55 Pipistrelle passes
- 1 Myotis so pass
Holmsleigh Farm
Stop 1 - no bat passes
Broadhayes Cross
Walk 1 - 1 Myotis sp pass
Ford
Cotleigh
V Lot
Stop 3 - 2 45 Pipistrelle passes
- 1 Myotis sp pass
- 1 Serotine pass
Cotleigh Court
Pidgeon's Cottage
Cotleigh Manor
Marl Pits (dis)
Stop 6 - 2 45 Pipistrelle passes
Court Place Farm
Jeremy's Wood
Ridge Cross
Walk 4 - 10 45 Pipistrelle passes
- 7 Myotis sp passes
Winnowing Knap
Four Cross
Court Wood
Little Hayne
Ridge Court
Stockland Hill TV Station
Southcote Farm
Wylmington Hayes
Combewater Farm
Ford
Walk 6 - no bat passes
Higher Ridge
Stop 4 - 6 Myotis sp passes
Thorns
H Ram
Combe Water
Walk 5 - no bat passes
Stop 5 - no bat passes
Telegraph Cottage
Coombes Head
Lower Spr
Hayne

3.2.16 **Transect 16: Netherclay**

Year	Bat Species	Transect Section												
		Walk 1	Stop 1	Walk 2	Stop 2	Walk 3	Stop 3	Walk 4	Stop 4	Walk 5	Stop 5	Walk 6	Stop 6	Total
2011		This transect was not undertaken in 2011												
2012*	45 Pipistrelle	29		2		14	5	5	49	17	12	14	2	149
	55 Pipistrelle					5		2	3	1				11
	Myotis spp.	17	5			14		3	62	3	40	3		147
	Noctule												1	1
	Unidentified bat passes	1	1	1						2	1			6

* The 2012 survey was completed in reverse starting at Stop 6 and finishing at Walk 1.

Transect 16 is also new and four types of bats were recorded along its route. The total of 147 Myotis passes represents the greatest number for this genus in the whole survey. 62 of those were by the fishing lake at Stop 4 which is what might be predicted but it is harder to see why Stop 5 should provide another 40 Myotis passes. It is possible that this narrow connecting strip between woods is a preferred commuting route for bats which are more reluctant than Pipistrelles to cross open country. This walk even found one of the elusive Noctules foraging over pasture at the edge of the woodland. The area of this transect has been subject to significant change over the past few years as a local conservation project, the Neroche Project, has been working to remove coniferous woodland and instigate grazing in parts of the formerly wooded habitat.

16. Netherclay