

# Addingham Environment Group



## Bumblebee and Butterfly Observations - 2024 Season

### Data Analysis Report

The AEG Bee and Butterfly Team

#### Contents

Introduction .....	2
Transects .....	2
Methods .....	4
Results .....	4
Transect 1: Main St and Pocket Gardens .....	5
Transect 2: Sidebeck and School Perimeter .....	6
Transect 3: Old First School Site, Methodist Graveyard and Craven Crescent .....	7
Transect 4: School and Wetlands .....	8
Transect 5: Marchup, Crossbank Road and Silsden Road Allotments .....	9
Transect 6: Old Station Way, Newtown Allotments and Memorial Recreational Field .....	10
Transect 7: Church Field and Hoffman Wood Field .....	11
Transect 8: Low Mill Lane & Low Mill .....	12
Transect 9: Golf Course and Skipton Road Bank .....	13
Transect 10: Southfield, The Street, Stegholes and Lumb Ghyll .....	14
Abundance and diversity .....	15
Distribution amongst transects by year from 2022 .....	16
Distribution over the season .....	17
Host plants .....	19
AEG wildflower sites through the years .....	19
Authors .....	22
Appendix A: Primary data .....	22

# AEG 2024 Bumblebee and Butterfly Season End Report

## Introduction

The AEG began recording bees and butterflies along defined village transects in July 2019. The transects were designed not only to document the abundance and diversity of bees and butterflies generally in the village but also to assess the effectiveness of efforts being made to increase wildflower populations in village green spaces as a means of enhancing their attractiveness for pollinators.

This is our data analysis report for the 2024 season. It summarises the results of the season's observations transect by transect. All primary data that form the basis of the report are contained in a comprehensive interactive spreadsheet, available to [download here](#).

For the 2024 season transects were walked once a month from 1<sup>st</sup> May through to 30<sup>th</sup> September, and the number of zones within each transect have been reduced to those with the historically highest abundancies and the ones which can most effectively be managed by the AEG to make a difference.

## Transects

There are ten transects - see map below - and all except Transect 1 were walked during 2024, although not all were walked every month. Some modifications were made to individual transects based on the experiences from the previous year. These have been kept to a minimum to ensure comparability between years and between zones. Where relevant the changes are described below in the notes for each transect.



## Bees and Butterflies

### All Transects

T1 : Main Street (Stewart Taylor)

T2 : Sidebeck (Julia Tomlinson)

T3 : Old First School (Peter Miller)

T4: Garth and School (Melanie Taylor)

T5 : Marchup (Mick Dunne)

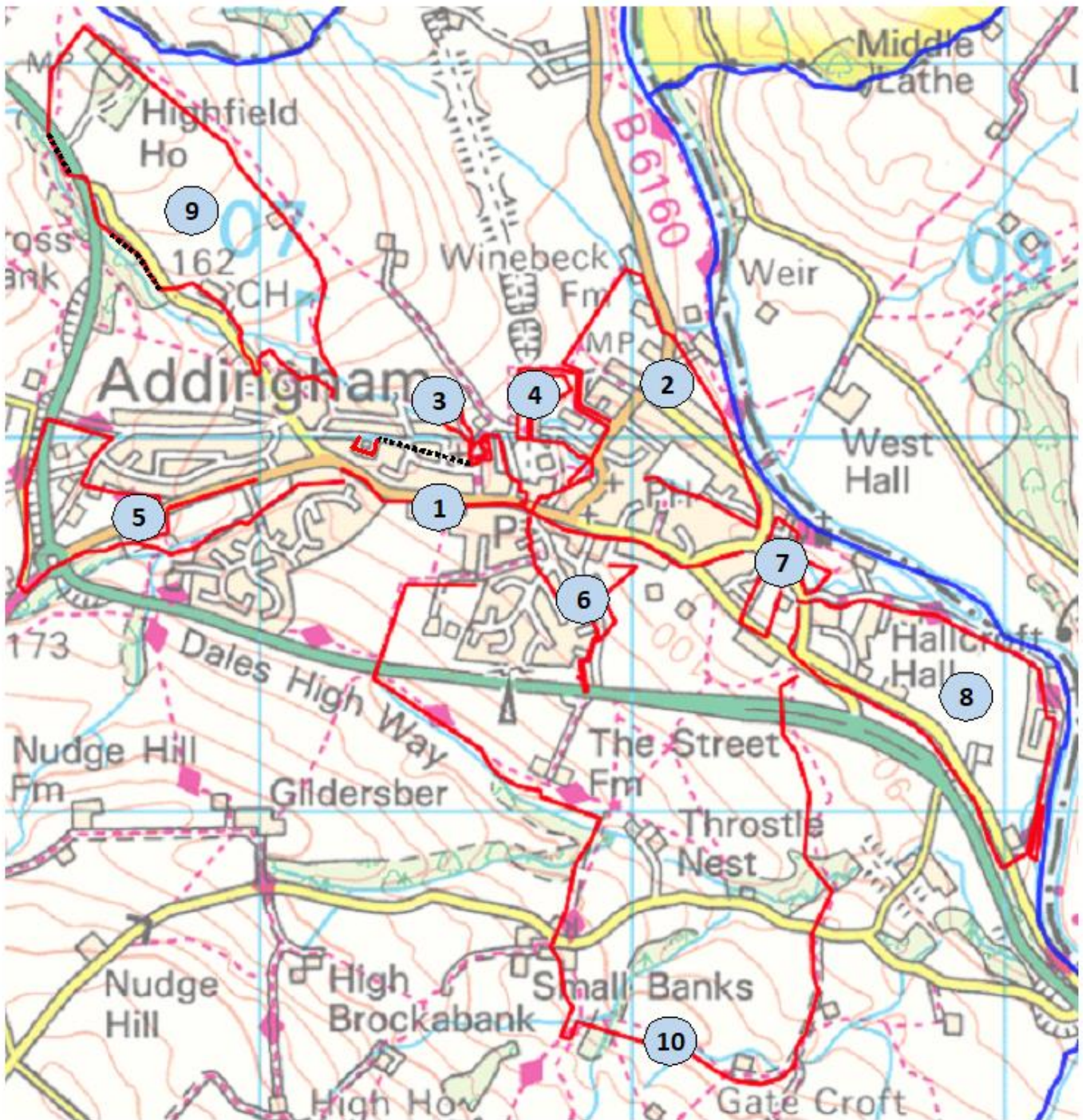
T6 : Old Station Way (Jessica Penrose)

T7 : Hoffman Wood (Margaret Longden)

T8 : Low Mill (Patricia Breen)

T9: Skipton Road Wildflower Site and Golf Club (Sue Penny)

T10 : The Street and Stegg Hole (Ian and Sue Grant)



*Addingham bee and butterfly transects*

## AEG 2024 Bumblebee and Butterfly Season End Report

### Methods

Each transect is sub-divided into zones, each zone representing a different habitat. Observers are provided with a proforma on which to record their sightings on a zone-by-zone basis. As far as possible transect walks were made once every month during the season defined newly defined 1<sup>st</sup> May to 30<sup>th</sup> September

The method of recording observations follows the guidance provided by the Yorkshire Dales Millennium Trust in 2019.

Advisers Maurice White (Bees) and Nyree Fearnley (Butterflies) provided help with identification. Separate WhatsApp groups for bees and butterflies were set up and moderated by Maurice and Nyree respectively to confirm IDs and share photographs.

For data entry an online spreadsheet mirroring the recording forms was used, one for each transect. Observers without online access handed in their field proformas to the recording co-ordinator who entered the data on their behalf. Numerical analysis was carried out in Excel (see below Appendix A for details).

### Results

Here we summarise the results transect by transect. The transect maps show the route walked and the division of the transects into zones. The tables summarise the abundance of different species of bees and butterflies recorded in each zone.

Transect 1: Main St and Pocket Gardens

Not walked in 2024



Bees and Butterflies

Transect 1: Main Street & Garden Friends



Figure 1: Transect 1

Table 1: Number of individuals observed in Transect 1 by zone

**NOTE :** There are no data for this year 2024

Transect 2: Sidebeck and School Perimeter

Observer - Julia Tomlinson

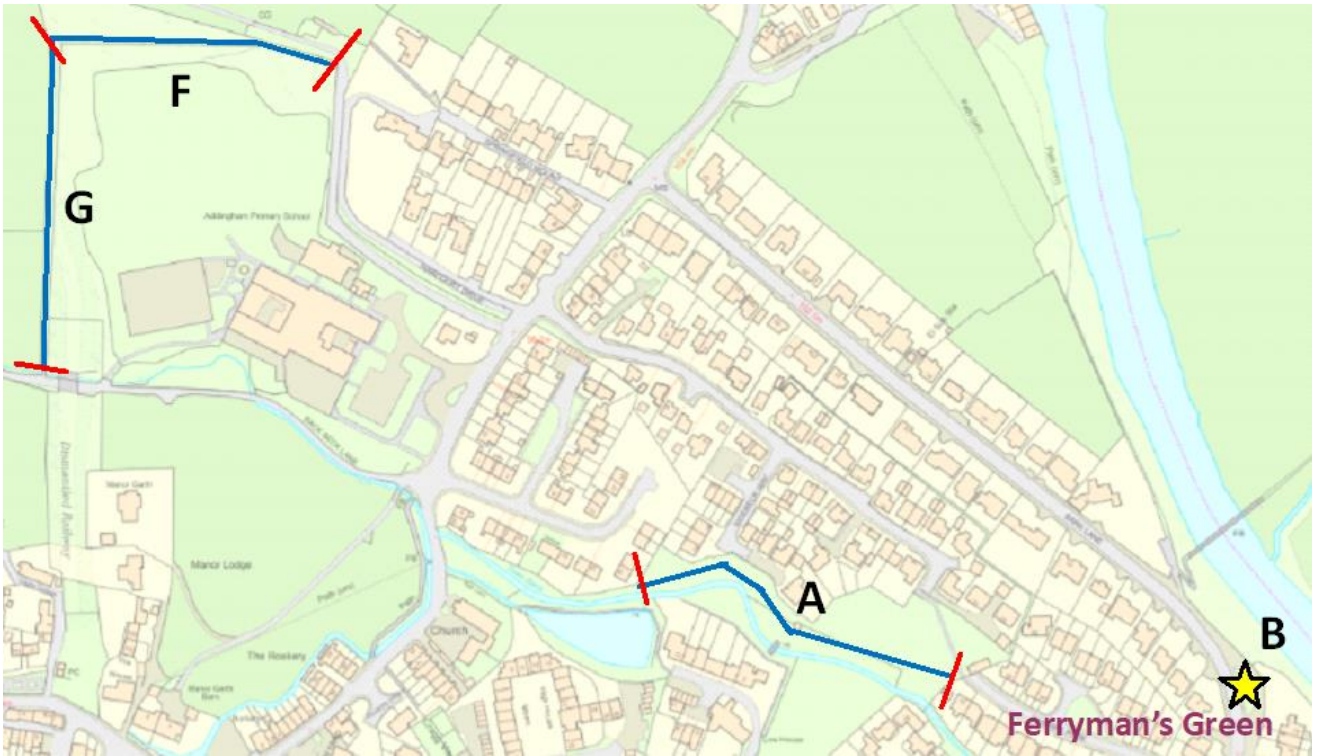


Figure 2: Transect 2

Julia writes:

Transect: 2	Zones .....				
Bees	Total	A	B	F	G
Total	53	10	27	11	5
Buff-tailed	22	8	13	1	
Common carder	19		10	5	4
Tree	5		2	3	
Unknown	3	1		1	1
White/Buff-tailed	2		2		
Red-tailed	1	1			
White-tailed	1			1	

Transect: 2	Zones .....				
Butterflies	Total	A	B	F	G
Total	16	3	2	10	1
Orange-tip	7		1	6	
Ringlet	3	2			1
Speckled Wood	3			3	
Large White	2	1	1		
Meadow Brown	1			1	

Table2: Number of individuals observed in Transect 2 by zone

## AEG 2024 Bumblebee and Butterfly Season End Report

### Transect 3: Old First School Site, Methodist Graveyard and Craven Crescent

Observer: Peter Miller

Peter writes:



Figure 3: Transect 3

Transect: 3	Zones .....			
Bees	Total	C	E	F
Total	53	25	11	17
White/Buf-tailed	21	15	4	2
Tree	11	3	3	5
Common carder	7	4		3
White-tailed	7		4	3
Buff-tailed	3	2		1
Red-tailed	3			3
Unknown	1	1		

Transect: 3				
Butterflies	Total	C	E	F
Total	29	27	2	
Ringlet	9	9		
Small White	8	8		
Meadow Brown	7	5	2	
Peacock	2	2		
Speckled Wood	2	2		
Orange-tip	1	1		

Table 3: Number of individuals observed in Transect 3 by zone

Transect 4: School and Wetlands

Observer – Melanie Taylor

Melanie writes :

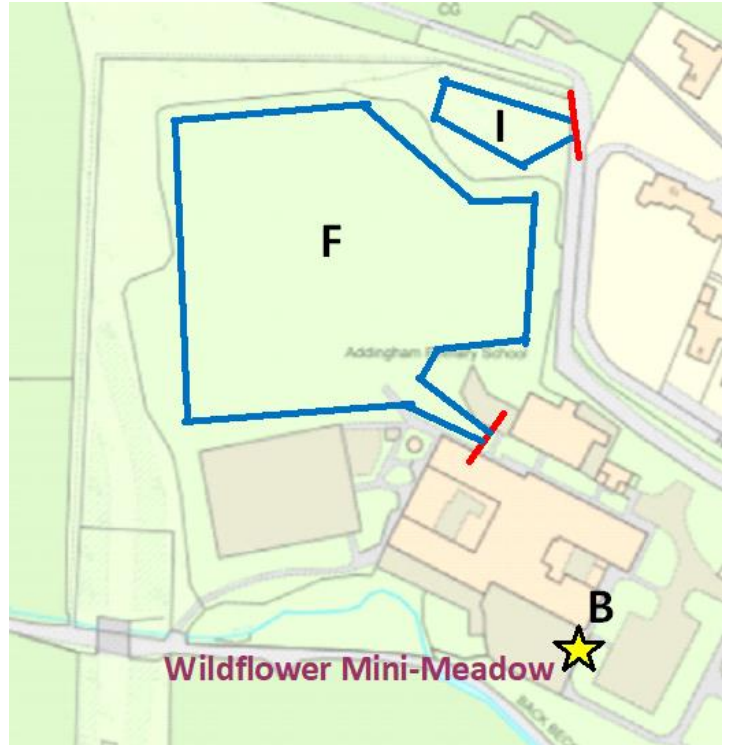


Figure 4: Transect 4

Transect: 4	Zones .....			
Bees	Total	B	F	I
Total	13	8	1	4
Common carder	5	5		
White/Buff-tailed	5	3		2
Tree	2			2
White-tailed	1		1	

Transect: 4	Zones .....			
Butterflies	Total	B	F	I
Total	13	1	6	6
Orange-tip	6		4	2
Peacock	3	1	2	
Red Admiral	2			2
Large White	1			1
Ringlet	1			1

Table 4: Number of individuals observed in Transect 4 by zone



AEG 2024 Bumblebee and Butterfly Season End Report

Transect 5: Marchup, Crossbank Road and Silsden Road Allotments

Observer: Mick Dunne

Mick writes:

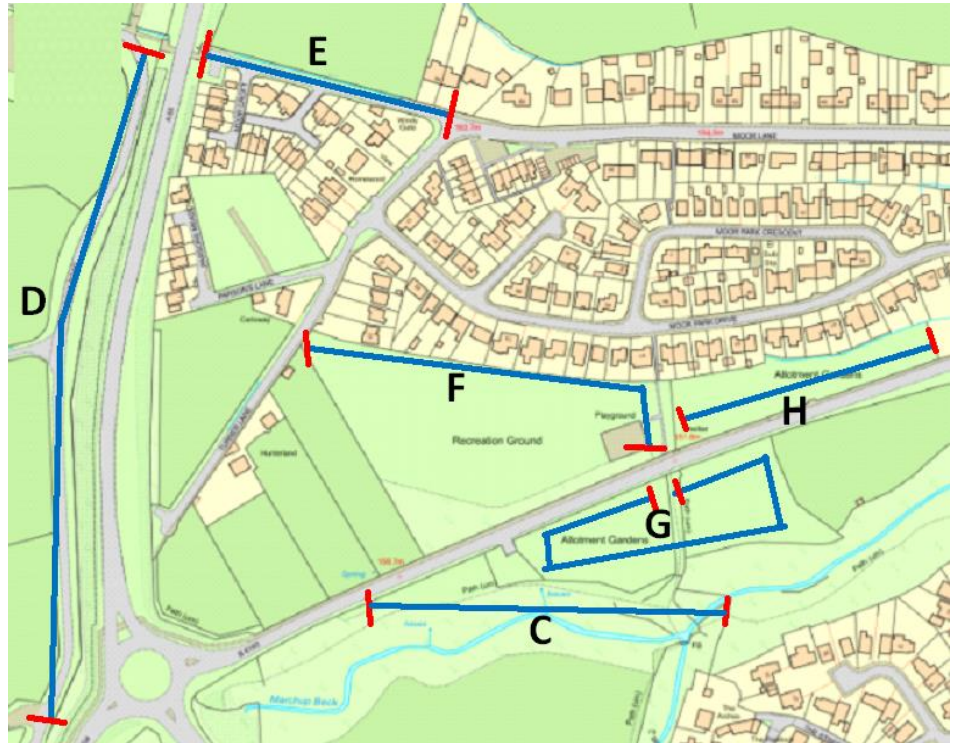


Figure 5: Transect 5

Transect: 5	Zones .....						
Bees	Total	C	D	E	F	G	H
Total	93	3	23	24	4	27	12
Buff-tailed	23	1	5	7	1	6	3
Tree	20		5	5	1	7	2
White-tailed	17		3	6		6	2
Common carder	14	2	4	3	1	1	3
White/Buff-tailed	8		2	3		2	1
Unknown	7		4			3	
Early	2					2	
Red-tailed	2				1		1

Transect: 5	Zones .....						
Butterflies	Total	C	D	E	F	G	H
Total	57	8	17	5	5	16	6
Large White	19	1	1	3	2	7	5
Red Admiral	7		3	2		2	
Small White	6	1	2		1	1	1
Speckled Wood	6	2	3			1	
Meadow Brown	5	1	4				
Peacock	5				2	3	
Green-veined White	4	2	2				
Orange-tip	2	1				1	
Ringlet	2		2				
Comma	1					1	

Table 5. Numbers of individuals in Transect 5 by zone

AEG 2024 Bumblebee and Butterfly Season End Report

Transect 6: Old Station Way, Newtown Allotments and Memorial Recreational Field

Observer: Jessica Penrose

Jessica writes:

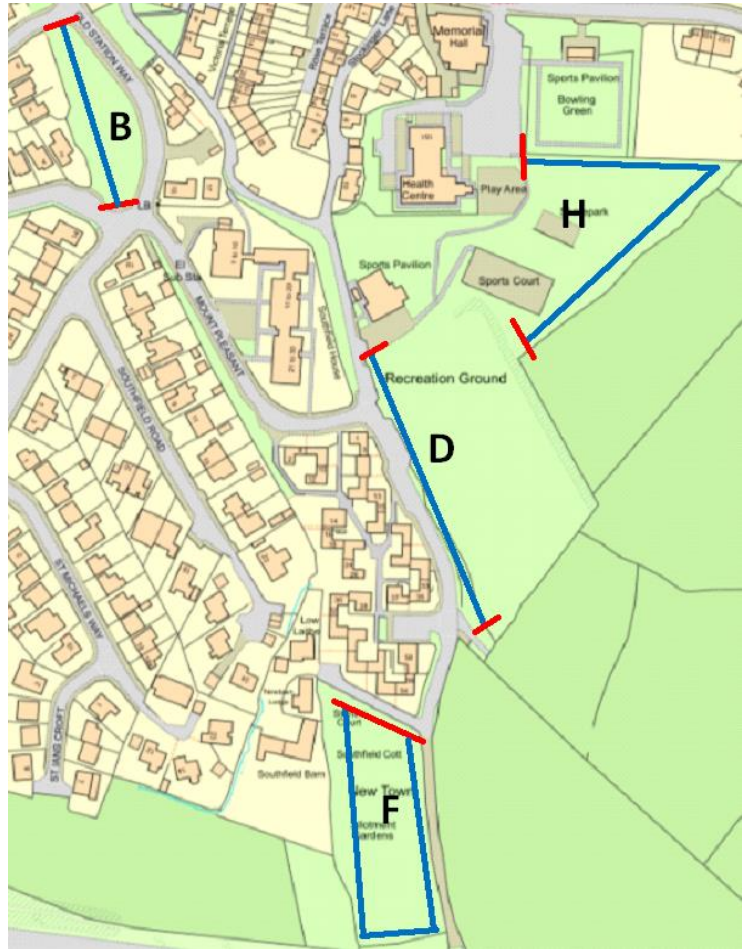


Figure 6: Transect 6

Transect: 6	Zones .....				
Bees	Total	B	D	F	H
Total	66	27	4	30	5
White/Buf-tailed	39	18	2	15	4
Common carder	27	9	2	15	1

Transect: 6	Zones .....				
Butterflies	Total	B	D	F	H
Total	23	6	2	11	4
Large White	15	5	1	7	2
Speckled Wood	4		1	2	1
Comma	1			1	
Orange-tip	1	1			
Peacock	1			1	
Ringlet	1				1

Table 6. Numbers of individuals in Transect 6 by zone

AEG 2024 Bumblebee and Butterfly Season End Report

Transect 7: Church Field and Hoffman Wood Field

Observer: Margaret Longden

Margaret writes:

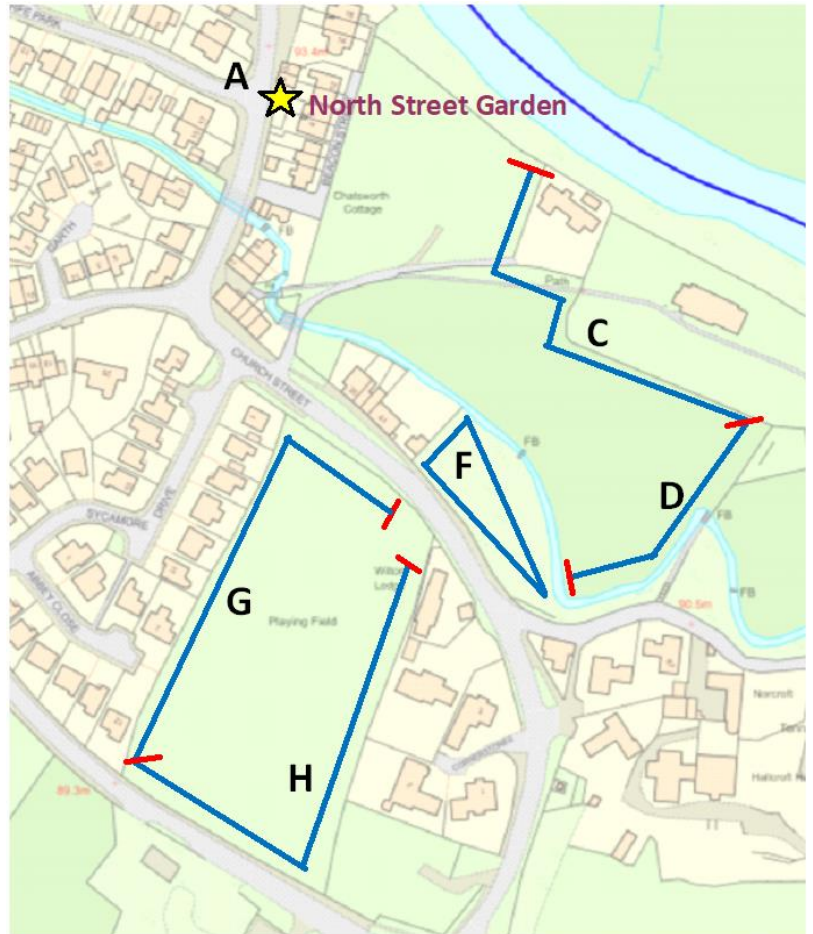


Figure 7: Transect 7

Transect: 7	Zones .....						
Bees	Total	A	C	D	F	G	H
Total	14	3	9	1		1	
White/Buff-tailed	8		8				
Early	3	3					
Tree	2		1	1			
Unknown	1					1	

Transect: 7	Zones .....						
Butterflies	Total	A	C	D	F	G	H
Total	6	2		1	3		
Small White	3	2		1			
Large White	1				1		
Orange-tip	1				1		

Table 7. Numbers of individuals in Transect 7 by zone

AEG 2024 Bumblebee and Butterfly Season End Report

Transect 8: Low Mill Lane & Low Mill

Observer: Patricia Breen

Patricia writes:

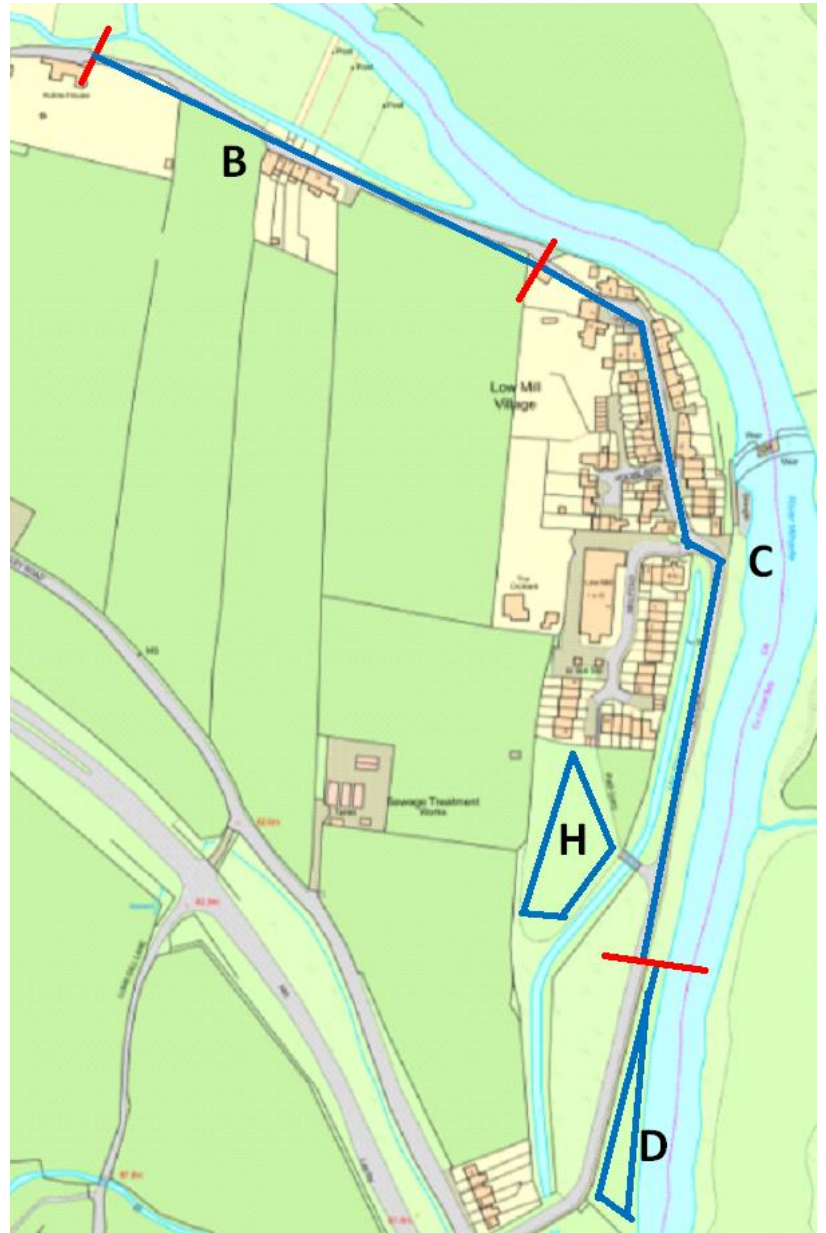


Figure 8: Transect 8

Transect: 8	Zones .....				
Bees	Total	B	C	D	H
Total	99	17	10	26	46
Common carder	60	11	1	13	35
Buff-tailed	37	5	8	13	11
Garden	2	1	1		

Transect: 8	Zones .....				
Butterflies	Total	B	C	D	H
Total	20	3	1	13	3
Orange-tip	8	3		5	
Small White	5			3	2
Ringlet	1			1	

Table 8. Numbers of individuals in Transect 8 by zone

AEG 2024 Bumblebee and Butterfly Season End Report

Transect 9: Golf Course and Skipton Road Bank

Observer: Sue Penny

Sue writes:

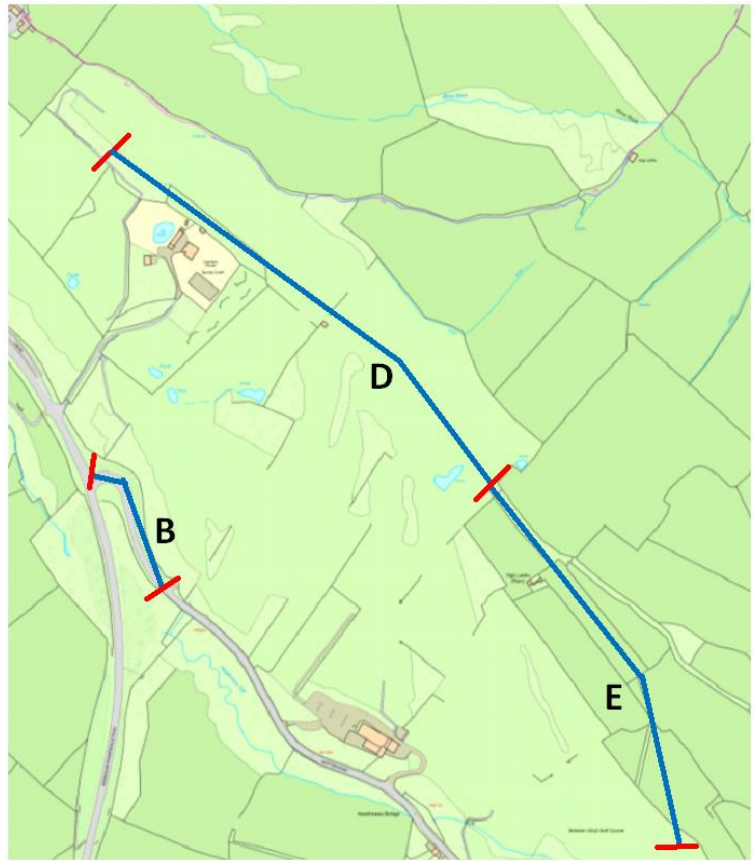


Figure 9: Transect 9

Transect: 9	Zones .....			
Bees	Total	B	D	E
Total	43	21	9	13
Unknown	23	13	5	5
White/Buff-tailed	10	5	3	2
White-tailed	7	1	1	5
Common carder	2	2		
Tree	1			1

Transect: 9	Zones .....			
Butterflies	Total	B	D	E
Total	40	16	16	8
Speckled Wood	8	5	2	1
Meadow Brown	5		2	3
Small White	5	4	1	
Large White	4	2		2
Orange-tip	2	1	1	
Red Admiral	1		1	

Table 9. Numbers of individuals in Transect 9 by zone

## AEG 2024 Bumblebee and Butterfly Season End Report

### Transect 10: Southfield, The Street, Stegholes and Lumb Ghyll

Observers: Ian and Sue Grant

Sue and Ian write :

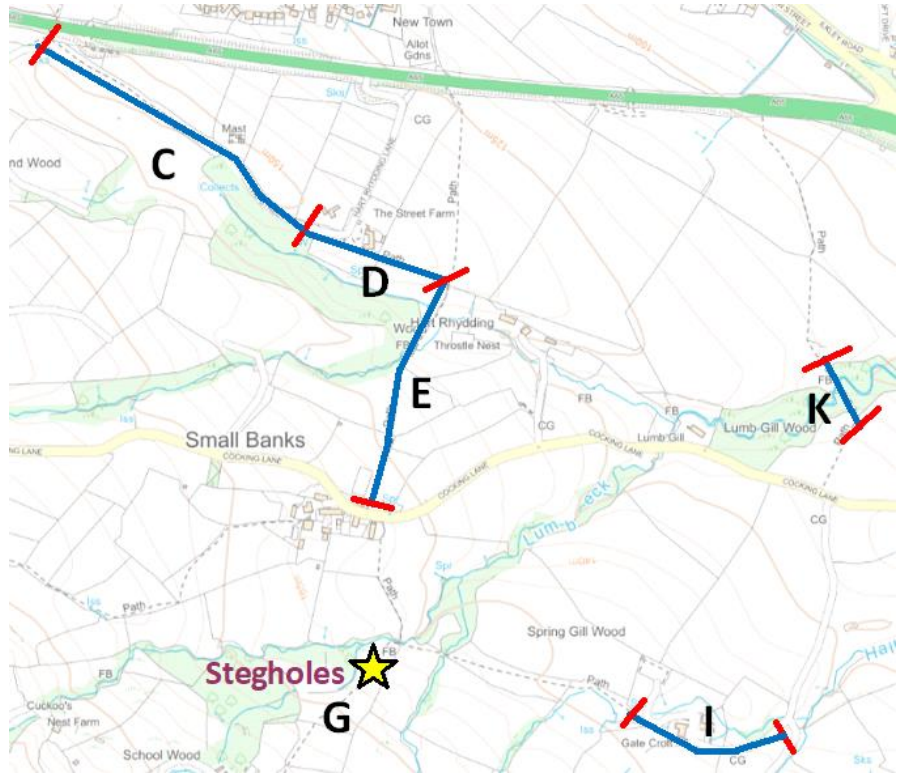


Figure 10: Transect 10

Transect: 10	Zones .....						
Bees	Total	C	D	E	G	I	K
Total	18		2	14		2	
Early	11			11			
Buff-tailed	3			3			
White-tailed	2		1			1	
Common carder	1		1				
Red-tailed	1					1	

Transect: 10	Zones .....						
Butterflies	Total	C	D	E	G	I	K
Total	27	6	9	4	5		3
Ringlet	7	2	2	1	2		
Speckled Wood	7	4	2	1			
Large White	6		1	2			3
Meadow Brown	4		4				
Peacock	2					2	
Small Copper	1				1		

Table 10. Numbers of individuals in Transect 10 by zone

Abundance and diversity

<b>Bees (8 species)</b>	<b>No.</b>	<b>Butterflies (11 species)</b>	<b>No.</b>
Common carder	135	Large White	48
White/Buff-tailed	93	Speckled Wood	30
Buff-tailed	88	Orange-tip	28
Tree	41	Small White	27
White-tailed	35	Ringlet	24
Early	16	Meadow Brown	22
Red-tailed	7	Peacock	13
Garden	2	Red Admiral	10
		Green-veined White	4
		Comma	2
		Small Copper	1

Table 11. Abundance of species recorded

## AEG 2024 Bumblebee and Butterfly Season End Report

### Distribution amongst transects by year from 2022

Observed per walk										
<b>Bees 2024</b>					<b>Butterflies 2024</b>					
BY TRANSECTS .....										
Observed per walk	1	2	3	4	5	6	7	8	9	10
April										
May	5.1	2.5	1		17	1	4		7	11
June	15.1	11	24	4	19	31	9	20	17	5
July	13.6	2	15	5	35	7	1	42		2
August	10.6	12	10	3	22	16		27	5	
September	5.3	12	3	1		11		10		
Totals	10.2	7.6	11	3.3	23	13	2.8	20	9.7	3.6
<b>Bees 2023</b>					<b>Butterflies 2023</b>					
BY TRANSECTS .....										
Observed per walk	1	2	3	4	5	6	7	8	9	10
April	4.8	2	6		6	4		6	3	11
May	2.5	3.5	1	4	7	3		0.5	2.3	1
June	33.7	30	14	46	54		24	70	5	31
July	38.7		29	25	69	55	6	113	4	28
August	14.1	14	4	13	26	15		38	2	1
September	4.9	9	2			8	1	9		
Totals	16.0	13	9.3	18	32	23	5.3	34	3.1	12
<b>Bees 2022</b>					<b>Butterflies 2022</b>					
BY TRANSECTS .....										
Observed per walk	1	2	3	4	5	6	7	8	9	10
April	5.3	6	4		8		15		2	2
May	2.3	6	2			3		2	1	1
June	28.2	14	13	2	82	79	30			11
July	22.0	45	27	21	1	37	30	12	56	4.5
August	18.1	49	28	8		59	9	7	19	4
September	30.3	17	39	12		13	15	54	62	
Totals	18.7	37	21	10	1.5	40	27	25	28	3.2
<b>Butterflies 2022</b>					<b>Butterflies 2022</b>					
BY TRANSECTS .....										
Observed per walk	1	2	3	4	5	6	7	8	9	10
April	7.6	7	8		1		17	1	5	17
May	4.7	7	7			3		3		4
June	6.5	3	3	1	12		5.5			11
July	14.2	13	7.5	36		20	16	17	20	16
August	9.1	10	9	9		10	12	16	4	5
September	9.9	12	12	15		6	5	27	2	
October	0.1									1
Totals	8.1	8.8	7.6	11	0.5	8.2	6	13	5	6.9

Table 13. Average numbers observed per walk by transect, month, and total for the season



# AEG 2024 Bumblebee and Butterfly Season End Report

## Distribution over the season

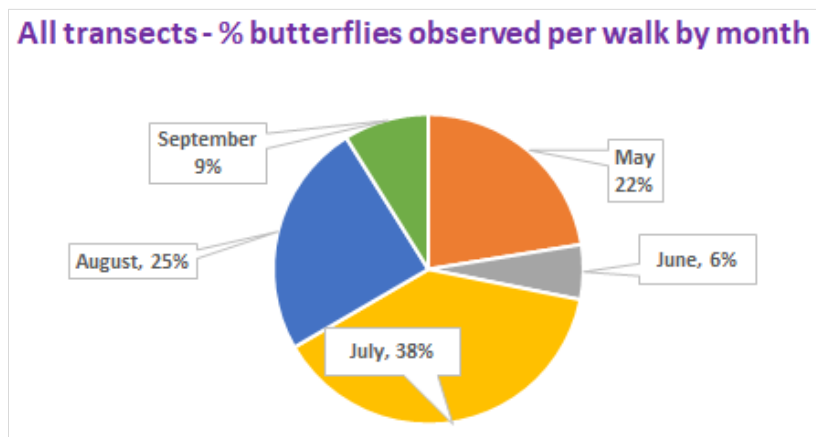
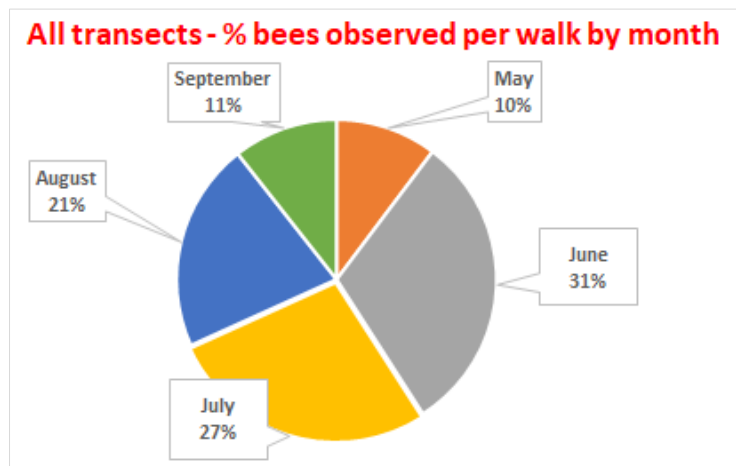
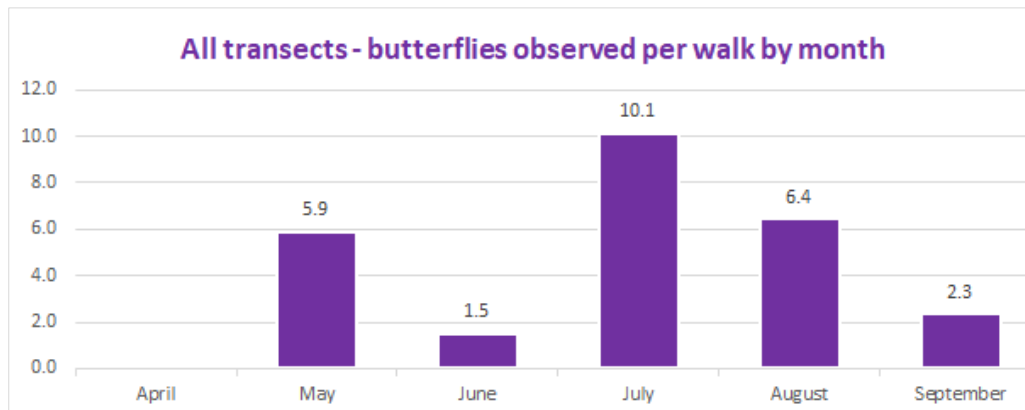
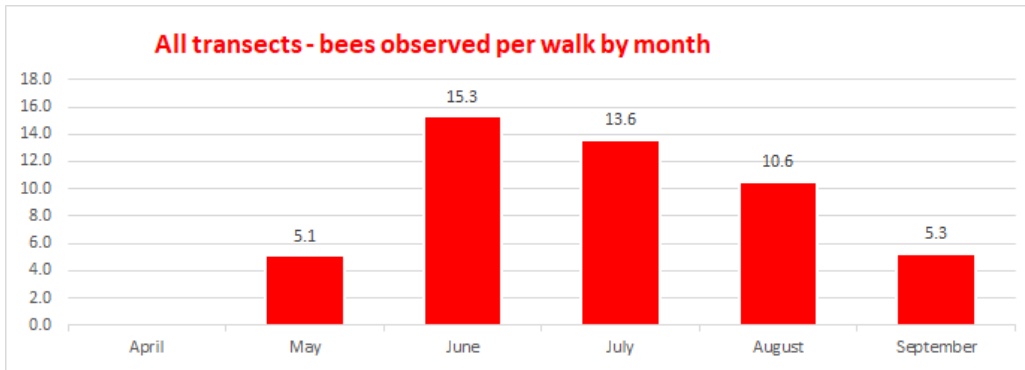


Figure 12. Average numbers and percentages observed on all transects per walk by month.

AEG 2024 Bumblebee and Butterfly Season End Report

Photographs by observers on their transects during 2024



Chris Acomb.jpg



Ian and Sue Grant (2).jpg



Ian and Sue Grant (3).jpg



Ian and Sue Grant (5).jpg



Julia Tomlinson (2).jpg



Julia Tomlinson.jpg



Melanie Taylor.jpg



Mick Dunne.jpg



Moire O'Donnell (3).jpg



Moire O'Donnell (6).jpg



Patricia Breen 3.jpg



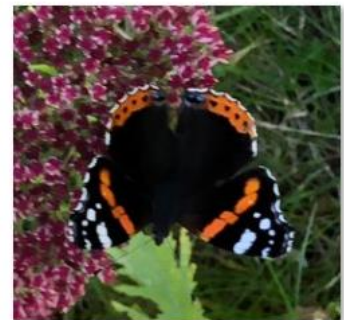
Patricia Breen 4.jpg



Patricia Breen.jpg



Sue Grant 1.jpg



Sue Grant 2.jpg

## Host plants

<b>Bees</b>		<b>Butterflies</b>	
<b>Unique flowers</b>	<b>Instances</b>	<b>Unique flowers</b>	<b>Instances</b>
Bramble	31	Bramble	12
Clover, Red	17	Grasses	6
Comfrey	17	Buttercup	3
Lavender	13	Clover, Red	3
Knapweed, Common	11	Lavender	3
Vetch, Common	8	Thistle	3
Scabious	7	Broad bean	2
Ragwort, Common	6	Knapweed	2
Willowherb, Rosebay	6	Scabious	2
Chives	5	Willowherb	2

<b>Bees &amp; Butterflies</b>	<b>All</b>
<b>Unique flowers</b>	<b>Instances</b>
Bramble	43
Clover, Red	20
Lavender	16
Knapweed	13
Scabious	9
Willowherb	8
Grasses	6
Buttercup	3
Thistle	3
Broad bean	2

Table 14. The ten most visited plant species for bees and butterflies

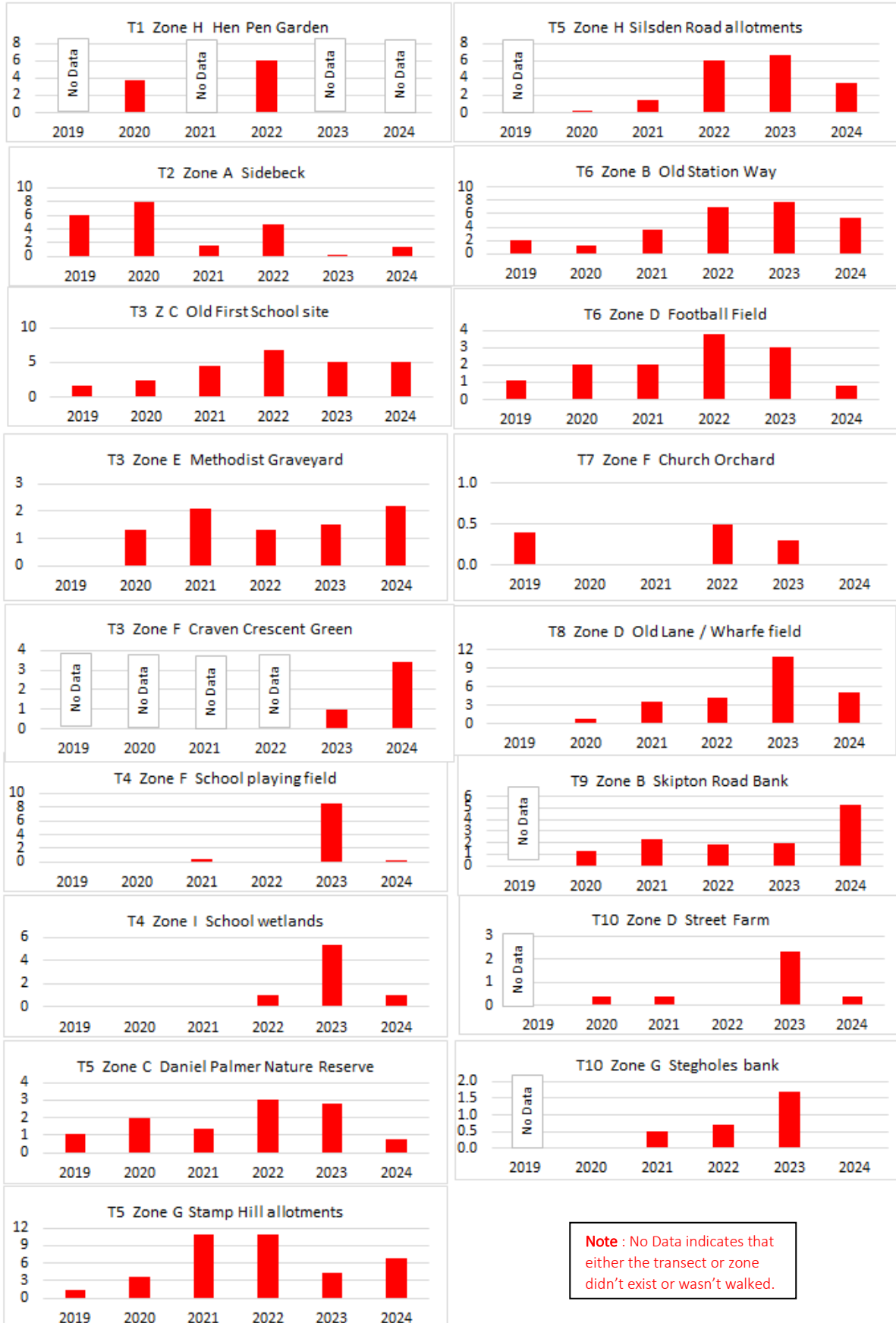
## AEG wildflower sites through the years

The AEG manages several wildflower sites in the village. As one of our aims is to increase the number of pollinators visiting these sites they have all been incorporated as zones in one or more of the pollinator transects (Table 15).

# AEG 2024 Bumblebee and Butterfly Season End Report

## Bees – Zone Hotspots

### Average number of bees / walk



**Note :** No Data indicates that either the transect or zone didn't exist or wasn't walked.

# AEG 2024 Bumblebee and Butterfly Season End Report

## Butterflies – Zone Hotspots Average number of butterflies / walk



Note : No Data indicates that either the transect or zone didn't exist or wasn't walked.

Table 15. Pollinators abundance in the Hot Spot zones

## AEG 2024 Bumblebee and Butterfly Season End Report

### Authors

**Malcolm Secrett\***, Rick Battarbee, Ian and Sue Grant, Jessica Penrose, Julia Tomlinson, Margaret Longden, Maurice White, Melanie Taylor, Nyree Fearnley, Mick Dunne, Patricia Breen, Peter Miller, Sue Penny

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### Appendix A: Primary data

All primary data are contained in a comprehensive interactive spreadsheet which can be requested by clicking here [Request for the bumblebee and butterfly 2024 season end analysis spreadsheet](#). Guidance on using the spreadsheet is contained within it.

The spreadsheet includes:

- Overall analysis of numbers and species with averages per transect walk.
- Analysis of numbers observed, the number of walks by month and the average numbers observed by walk and month.
- Numbers observed by species in each zone of each transect.
- The plants pollinators were visiting at the time of the observation.
- Transect dashboard in which numbers and species observed are shown.
- Zone dashboard with numbers of species by transect zones.
- Both of the dashboards have links to the transect maps, together with other resources.

End