

# **Manor Woods Valley Local Nature Reserve**

## **Butterfly Report**

**2025**



Cover Photo: Common Blue

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## 1. Introduction and Methodology

Manor Woods Valley Group member, Peter Loy-Hancocks, undertook three butterfly survey visits in Manor Woods Valley Local Nature Reserve during the summer of 2025. This was the seventh consecutive survey year. In order to facilitate comparisons within and between years, seven transects were established within the site in 2019 (see figure 1). These same transects were followed in subsequent years.

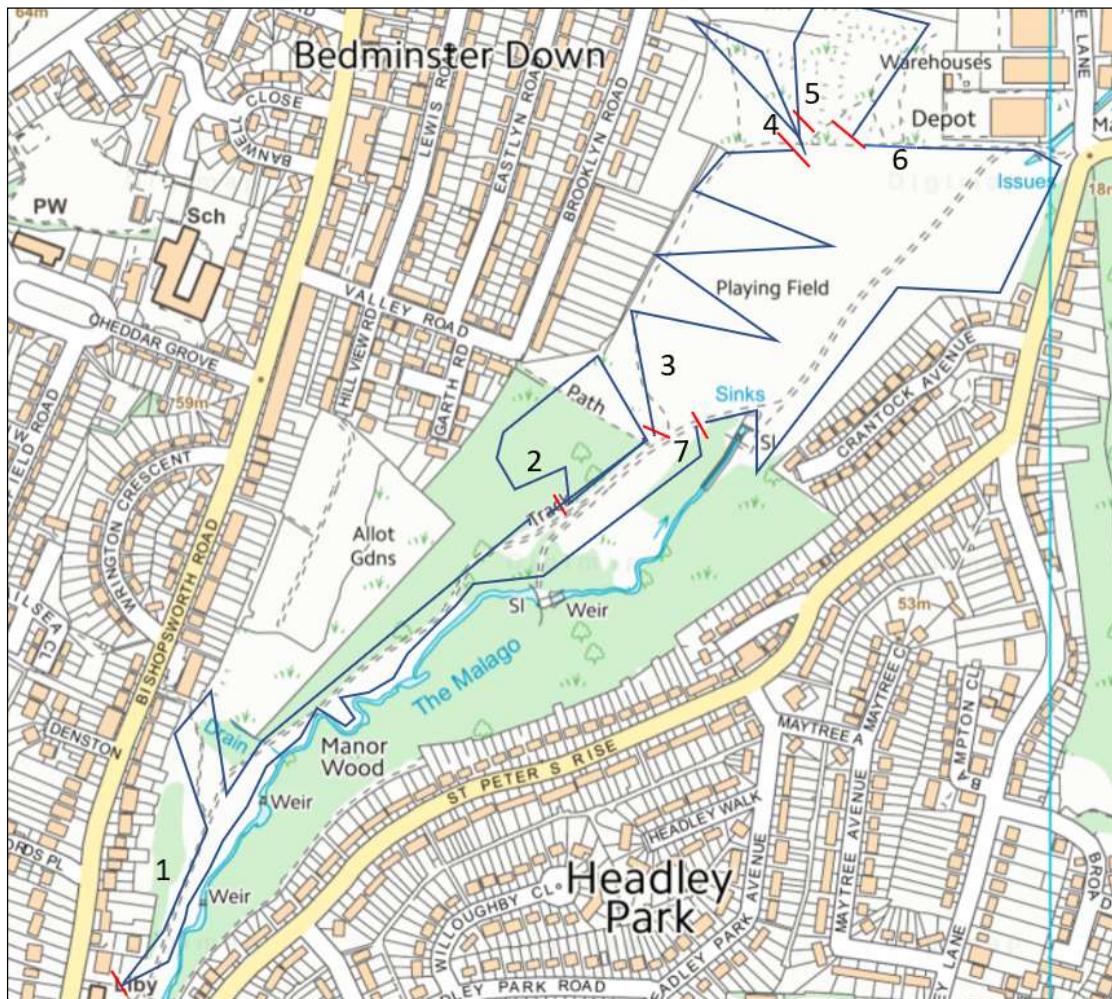


Figure 1: Butterfly survey transects within Manor Woods Valley

The numbers of each butterfly species within a ‘virtual’ approximately 6m wide and 6m long box, centred on the surveyor as they walked, were noted on to field recording forms. These records form the basis of this report. All relevant records were submitted to Bristol Regional Environmental Records Centre (BRERC).

Additional records were obtained through casual observations made by the surveyor and others at different times throughout the year.

## 2. Results

Three survey visits were made in 2025. The first was conducted around mid-day on 20<sup>th</sup> June, under a light cloudy sky, at 25°C, on a slightly breezy day. A total of 56 butterflies of nine species were recorded (see Table 1).

Species	Transect							Total
	1	2	3	4	5	6	7	
Large White	1					4	3	8
Red Admiral					1			1
Comma	1						1	2
Marbled White			1	1	2			4
Meadow Brown	2		13	1		5	2	23
Ringlet			1	3	5		2	11
Speckled Wood					1			1
Small/Essex Skipper			1	1				2
Large Skipper			1			2	1	4
	4	0	17	6	9	11	9	56

Table 1: Butterfly counts on 20 June 2025

The second survey was conducted in mid-morning on 14th July, under a cloudy sky and at a temperature of 23°C with a light breeze. A total of 73 butterflies of ten species were recorded (see Table 2).

Species	Transect							Total
	1	2	3	4	5	6	7	
Large White	1		1			4	7	13
Small White		1	2			1	2	6
Green-veined White							1	1
Common Blue			10					10
Comma							3	3
Meadow Brown	2	1	10	1	2	3	2	21
Gate Keeper			1	4	4			9
Ringlet			2		1			3
Speckled Wood	1	1			1	3		6
Small/Essex Skipper				1				1
	4	3	26	6	8	11	15	73

Table 2: Butterfly counts on 14 July 2025

The third survey was conducted around mid-day on 19<sup>th</sup> August, under 8/10 cloudy sky, in light gusty breeze and at 23°C. A total of 36 butterflies of six species were recorded (see Table 3).

Species	Transect							Total
	1	2	3	4	5	6	7	
Large White	5				1	3	4	13
Small White	2							2
Green-veined White	1							1
Small Copper			1	1	1			3
Meadow Brown		1	7	2			3	13
Speckled Wood						4		4
	8	1	8	3	2	7	7	36

Table 3: Butterfly counts on 25 August 2025

The overall total, of fourteen species, of butterflies recorded during the 2025 survey was 165 (see Table 4).

Species	20-Jun	14-Jul	19-Aug	Total
Large White	8	13	13	34
Small White	0	6	2	8
Green-veined White	0	1	1	2
Small Copper	0	0	3	3
Common Blue	0	10	0	10
Red Admiral	1	0	0	1
Comma	2	3	0	5
Marbled White	4	0	0	4
Meadow Brown	23	21	13	57
Gate Keeper	0	9	0	9
Ringlet	11	3	0	14
Speckled Wood	1	6	4	11
Small/Essex Skipper	2	1	0	3
Large Skipper	4	0	0	4
	58	73	36	165

Table 4: Total butterflies in each transect 2025

Brimstones, Orange Tips and Holly Blues were note earlier in the year, before the monitoring visits took place.

### 3. Discussion

As a mostly highly visible group of insects, with a limited range of UK species, butterflies are relatively easy to identify and count. Their numbers can vary greatly from year to year, but when monitored over a number of years, general population trends can be determined. In this context, butterflies are a good way of monitoring the general heath of the natural environment.

The 'all-species' butterflies index for the UK shows significant declines in both the long and short term of 15% and 2% respectively. This assessment of change is made on an analysis of the smoothed trend; long-term (1976 to 2022) and short-term (2017 to 2022). Since 1976, the smoothed trend for habitat specialist butterflies in the UK has declined significantly by 30%. Over the same

period, the smoothed trend for species of the wider countryside shows no significant change. Since 2017, both short-term trends show no significant change. This indicator is comprised of two multi-species indices compiled by Butterfly Conservation (BC) and the UK Centre for Ecology & Hydrology (UKCEH) from data collated through the UK Butterfly Monitoring Scheme (UKBMS) including from the Wider Countryside Butterfly Survey (WCBS).

In 2022 scientists from Butterfly Conservation published the new Red List, which assesses all the butterfly species that have bred regularly in Great Britain against the rigorous criteria of extinction risk set out by the International Union for Conservation of Nature (IUCN). Of the 62 species assessed, four were noted as being extinct in Britain (Black-veined White, Large Tortoiseshell, Large Copper, and Mazarine Blue) with 24 (41% of the remaining species) classed as threatened (8 Endangered, 16 Vulnerable) and a further five (9%) as Near Threatened.

With nearly 1500 recorded butterfly sightings, over a seven-year period, it's possible to draw some conclusions about butterfly habitat preferences, numbers and species compositions in Manor Woods Valley.

The first survey year, 2019, was a particularly good year for butterflies in Manor Woods Valley; with 443 being recorded in that year compared with 202 (adjusted for three visits) in 2020, 219 in 2021, 170 in 2022, 195 in 2023, a meagre 96 in 2024 and 165 in the current year (see Table 5).

Butterflies	Transect							
	1	2	3	4	5	6	7	
Year								Total
<b>2019</b>	42	19	236	29	55	35	27	443
<b>2020*</b>	46	7	40	31	37	30	9	200
<b>2021</b>	36	19	69	20	33	28	14	219
<b>2022</b>	19	13	35	34	34	14	21	170
<b>2023</b>	18	11	96	31	18	9	12	195
<b>2024</b>	4	2	61	11	7	7	4	96
<b>2025</b>	16	4	51	15	19	29	31	165
<b>Total</b>	161	69	476	145	177	116	83	1488
<b>Transect length (m)</b>	675	350	700	160	235	650	750	3520
<b>Butterflies/100m</b>	24	20	68	91	75	18	11	42

Table 5: Butterfly counts per transect per year, and per 100m length of transect

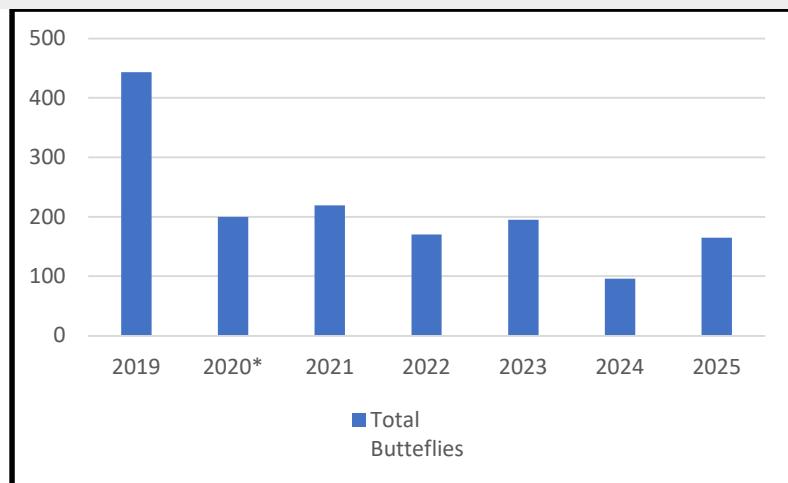
The relatively low number of butterflies recorded in 2022 and 2025 are likely to be due to the early senescence of adult and caterpillar food plants due to the exceptional dry conditions that prevailed in both of those summers. Total numbers recovered slightly in 2023, possibly due to the more normal, summer growing season, allowing meadow grasses and flowers to remain green, and therefore available as food plants for caterpillars, for a longer period.

According to [bristolweather.org](https://www.bristolweather.org/weather1.htm) (<https://www.bristolweather.org/weather1.htm>), that has been running a weather station in nearby Totterdown for over 30 years, was the 10<sup>th</sup> wettest year since data for Bristol started in 1853, with 126% of the average rainfall; however, the summer was still the equal 4<sup>th</sup> warmest since Bristol temperature records started in 1891. It was the dullest year from records starting in 2005 with only 37% of the maximum sunshine recorded.

As a result of the wet, warm and dull conditions, 2024 was generally recognised as a particularly poor year for butterflies. In July 2024 Butterfly Conservation stated that "...annual Big Butterfly Count. On average participants are seeing just over half the number of butterflies they were spotting this time last year. The unusually wet and windy spring, coupled with the colder than usual temperatures so far this summer could be contributing to the lack of butterflies. While there is a chance of a later emergence of the insects if there is a prolonged sunny spell, numbers are currently the lowest recorded in the 14-year history of Butterfly Conservation's Big Butterfly Count." It later became obvious that there was no subsequent "long sunny spell" and that butterfly numbers did not recover. The observations made in Manor Woods Valley in 2024 were therefore in-line with those reported by Butterfly Conservation.

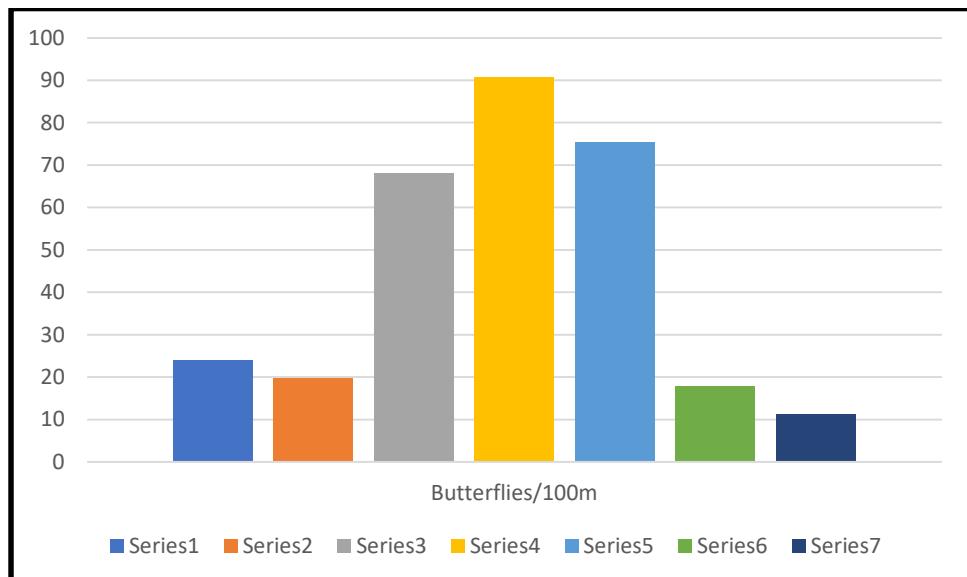
The weather in 2025 was very different to that of the previous year. Spring was the warmest since the data started for the city in 1891 and was the 5<sup>th</sup> driest out of 144 years of data. July 2025 was the 5<sup>th</sup> warmest July since continuous data started in Bristol in 1891 and rainfall was only 38.8% of the 30-year average for the month. During the period December 2024 to July 2025 inclusive, the total rainfall was only 74% of the 0-year average for this period.

This 'good butterfly weather' in 2025 resulted in a remarkable recovery in overall butterfly numbers - to something like the level of the four years prior to 2024 (see Graph 1).



Graph 1: Total butterfly counts for each survey year

The survey transects vary in length; when this is factored-in and the number of butterflies per 100m of transect length is calculated, it is evident that across the period 2019 to 2025, overall transects 3, 4 and 5 are significantly more attractive to butterflies than the other transects (see Graph 2). These three transects cover the Wildflower Meadow, Rabbit Field and Manor Woods Orchard respectively, and demonstrate the importance of sunny flower-rich meadows to butterflies.



Graph 2: Butterfly counts per 100m of each transect over all survey years

Over the six-year period 2019-2025, transects 1, 2 and 6 have broadly similar relative butterfly levels. These cover predominantly woodland edges combined with regularly mown amenity grassland.

The particularly lower average count in transect 7 across the six survey years is probably due to the predominance of regularly mown amenity grass and a north-facing aspect along the transect.

There are 57 resident butterfly species in the UK, several of these have a limited geographical distribution. There are also 3 migrant species that occur often, but do not establish self-sustaining populations. 38 species have been recorded in the Bristol region since 2014 and reported to the BRERC online database. A new to Manor Woods Valley species, namely Small Heath, was recorded during 2024; therefore, 20 of the 38 locally occurring species - including one migrant, Painted Lady, have been recorded in Manor Woods Valley during the butterfly monitoring surveys (see Table 6).

Species	Year					2024	2025	Total
	2019	2020*	2021	2022	2023			
<b>Large White</b>	19	33	34	20	18	10	34	168
<b>Small White</b>	15	9	1	11	5	0	8	49
<b>Green-veined White</b>	4	0	0	0	0	0	2	6
<b>Small Copper</b>	0	0	2	1	0	0	3	6
<b>Holly Blue</b>	0	2	0	1	0	0	0	3
<b>Brown Argus</b>	5	0	0	1	1	0	0	7
<b>Common Blue</b>	25	9	8	16	26	0	10	94
<b>Peacock</b>	5	2	0	0	3	0	0	10
<b>Red Admiral</b>	4	4	5	5	5	0	1	24
<b>Painted Lady</b>	1	0	0	2	0	0	0	3
<b>Comma</b>	2	2	12	2	0	0	5	23
<b>Small Tortoiseshell</b>	2	2	4	2	0	0		10
<b>Marbled White</b>	40	26	10	2	0	1	4	83
<b>Meadow Brown</b>	189	37	85	48	101	75	57	592
<b>Gatekeeper</b>	25	0	6	12	8	3	9	63
<b>Small Heath</b>	0	0	0	0	0	1	0	1
<b>Ringlet</b>	54	45	24	16	2	1	14	156
<b>Speckled Wood</b>	5	9	13	13	19	3	11	73
<b>Small/Essex Skipper</b>	27	18	8	12	4	1	5	75
<b>Large Skipper</b>	21	4	7	6	2	1	4	45
<b>Fritillary</b>	0	0	0	0	1	0	0	1
	443	202	219	170	195	96	167	1492
<b>* adjusted for 3 visits</b>								

Table 6: Butterfly counts for all survey years

Two resident species, Brimstone and Orange Tip, occur frequently in Manor Woods Valley, but their peak numbers tend to pass before the summer survey window opens. An additional migrant species, the Clouded Yellow, has been recorded outside of the survey window. Therefore, a total of 23 of our 38 locally occurring resident or regular migrant butterfly species are confirmed as having been recorded in Manor Woods Valley since 2019.

On one occasion in each of two of the survey years a large orange butterfly was seen to fly across the transect route, near the interceptor. These were probably Silver-washed Fritillaries. Further survey work may reveal a colony on the site.

There are a few butterfly species that have not been recorded in Manor Woods (since 2014), but which could occur. These include the Wall which favour open habitats, and various Hairstreaks which favour woodlands and woodland edges.

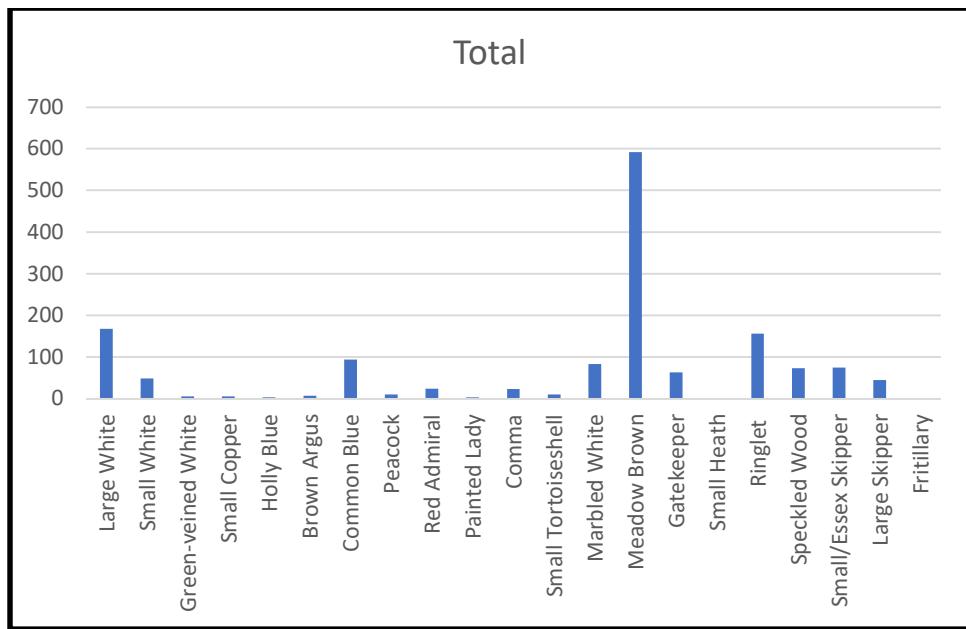
A dedicated Purple Hairstreak Survey carried out in August 2021 failed to find any of this species.

A third of the butterfly species that have been recorded in Manor Woods Valley have no particular habitat preferences, a third are grassland specialists and a third are scrub or hedgerow (including woodland edge) specialist. Only one recorded species, the Speckled Wood, actively prefers woodlands. This breakdown reflects the range of habitats that occur on the site and likely under-recording of woodland specialist species (see Table 7).

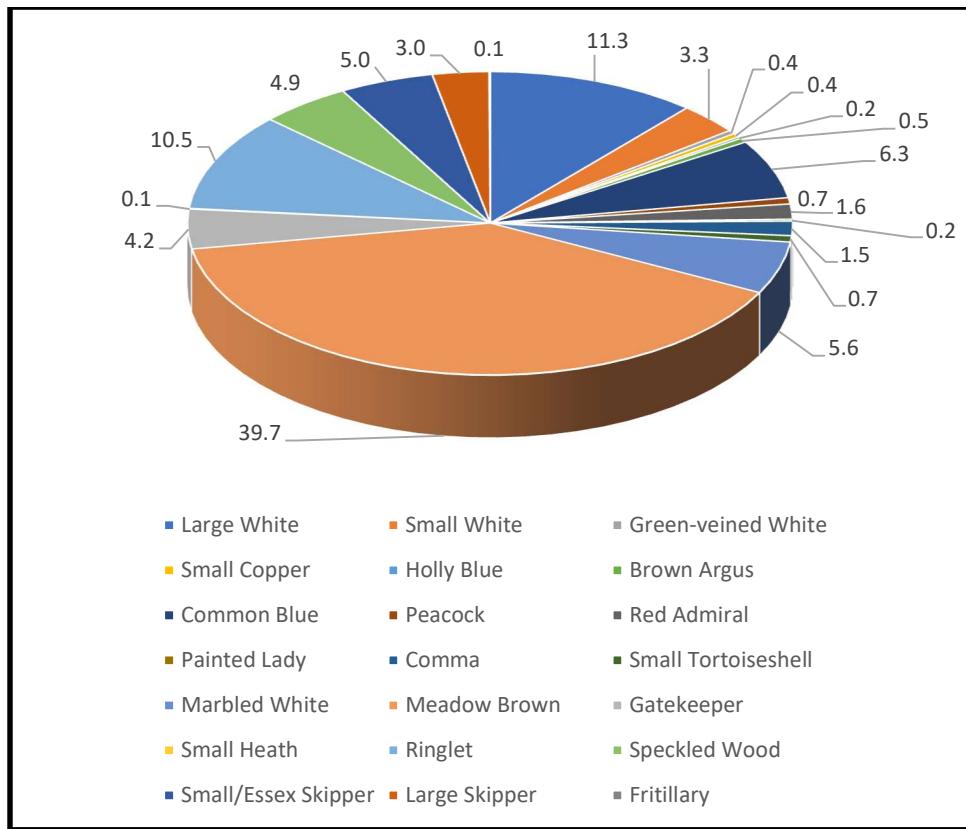
Species	Habitat			
	Flowery Grassland	Scrub/ Hedges	Woods	All
<b>Large White</b>				✓
<b>Small White</b>				✓
<b>Green-veined White</b>				✓
<b>Small Copper</b>			✓	
<b>Holly Blue</b>			✓	
<b>Brown Argus</b>	✓			
<b>Common Blue</b>	✓			
<b>Peacock</b>				✓
<b>Red Admiral</b>				✓
<b>Painted Lady</b>				✓
<b>Comma</b>		✓		
<b>Small Tortoiseshell</b>			✓	
<b>Marbled White</b>	✓			
<b>Meadow Brown</b>	✓			
<b>Gatekeeper</b>			✓	
<b>Small Heath</b>	✓			
<b>Ringlet</b>			✓	
<b>Speckled Wood</b>				✓
<b>Small/Essex Skipper</b>	✓			
<b>Large Skipper</b>	✓			
<b>Fritillary</b>	7	6	1	6

Table 7: Butterfly species habitat preferences

A comparison of the numbers of each butterfly species recorded each year demonstrates the abundance of Meadow Browns on the site (see Graph 3). The aforementioned species composes nearly 40% of all butterfly records for the site (see Graph 4).



Graph 3: Total butterflies of each species recorded during 2019-25 incl.



Graph 4: Total butterflies species composition 2019-25 incl.

There is likely to have been a reduction in Meadow Browns and other grassland species during the August 2024 survey as the large Wildflower Meadow had been mown a few days before the survey; however, a significant strip along the northwestern edge of the meadow had not been mown (see Photo 1). This was left uncut at the instruction of the Parks Department. It is hoped that leaving this

area along the edge of the meadow should increase the survival rate of overwintering butterflies and other invertebrates. It is anticipated that, to prevent scrub encroachment, this area will be mown later in 2025, with another area being left unmown.



Photo 1: Unmown area along northwest edge of the Wildflower Meadow in 2024