

**NEW MILTON TOWN COUNCIL  
and  
FRIENDS OF BALLARD WATER MEADOW**

**BALLARD MEADOW AND  
WOODLAND**

**5-YEAR  
MANAGEMENT PLAN**

**(FINAL)**

**(1 January 2025 - 31 March 2030)**

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(Chairman, Friends of Ballard water Meadow) October 2024.

Distributed to: New Milton Town Council officers and Members of the Amenities Committee, the Town  
Council's website and available for public comment.

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## 1. Introduction

This Management Plan is not a brand-new plan with an altered vision. It is a revision of the first plan (2020-2024)<sup>1</sup> and, in the main, follows the principles techniques, agreed policies and vision for management of the site set out in the original document.

A great deal of the information provided in the first plan has not changed; some of the sub-sections in Section 2 – Description, for example. This will not be repeated in its entirety in this plan. However, where changes have come to light; where new information has been collected (plant records, for example) or where management has not been undertaken as originally perceived, these will be presented here under the relevant section headings.

One major change to impact the management of the site, has been the annual reduction of Higher Level Stewardship (HLS) payments since September 2023, to New Milton Town Council (NMTC) by Government, administered through Natural England. New schemes to reward landowners for managing and restoring land sympathetically for wildlife, people and general biodiversity increase have been promised but, as yet, have failed to materialise.

The long-term vision for the habitats, access provision, education and demonstration follow those already in place, thus the basic principles and long-term management prescriptions for the meadow, woodland and stream remain – no major changes are envisaged here.

A plan of the site showing compartments is shown at **Appendix 1**

## 2. Description

### 2.1 Biological Features

#### 2.1.1 Plants

Each year the Friends of Ballard Water Meadow (FBWM) record plants within each of the compartments. A summary of species found is available in the documents attached to this plan.

#### 2.1.2 Invertebrates

Since the original plan was written, The FBWM jointly with NMTC have contracted an entomologist to undertake a general survey of the insects present in the Meadow and Woodland.

A Butterfly Transect, one of the New Forest Recording Group's recording sites, has been established, and results for this survey are fed into the UK Butterfly Monitoring Scheme – a national record of the health of the nation's butterfly population.

The butterfly transect route also doubles as a Bumblebee Transect, which has been undertaken since 2022.

#### 2.1.3 Birds Mammals and other Vertebrates

In 2020 the first Common Bird Census was undertaken. This has been repeated each year. This census aims to record the number of territories of likely breeding birds during the main bird nesting season.

A summary of all the current data sets for species or groups is shown in **Appendix 3** as stand-alone documents.

## **2.2 Cultural Features**

### **2.2.1 Land Use History**

It is hoped that during the next few years, New Milton Heritage Society will be able to research the history of Great Ballard and the land attached to the property, in order to provide a documented history of the site.

### **2.2.2 Education, Research and Demonstration**

Links have been established with Paul Brockman BEM, who liaises with local schools and teaches students woodland management practices and the skills required to work in this habitat. Ballard Meadow and Woodland is one of a number of sites where students enjoy practical woodland management, putting skills learned into practice. Students from schools in Lymington and Ringwood have been involved. On two occasions, older students from 6<sup>th</sup> form college and university have helped, as part of their work placements.

Through Conservation Connection (New Forest South) – a loose association of wildlife, conservation and greening groups from the area, a few of the protagonists have visited Ballard Meadow and Woodland, to see the work being done.

The research and survey work has been successful, as well as providing a site for education and training. It is hoped that throughout the life of this new plan, such activities continue.

## **2.3 Access and Visitor Facilities**

The infrastructure on-site (fencing, gates, bridges, water etc), its provision and maintenance, lies with the landowner, NMTC. However, from time-to-time tasks that require little in the way of specialist equipment or machinery, where resources are available, are undertaken by the FBWM. One such task is the maintenance of the gravel track through the woodland. The material is provided by NMTC and the volunteers create or repair the new or upgraded public access. There is one more small section to do and it is hoped to complete the work in May 2025.

## **3. Review of Management 2020-2024**

### **Meadow**

The meadow is divided into 12 compartments. It was planned to cut two sections each year and remove the cuttings. Ideally a third of the meadow should be cut each year as this allows many invertebrates with a longer life-cycle to succeed. However, with resource constraints and the availability of equipment, there has been a compromise. Each compartment of the meadow is cut on a six-year rotation (two of the 12 compartments each year). The cutting and removing of the arisings is a perfect way of removing nutrient from the grassland (treating the sections as small hay meadows) and, if followed-up by aftermath grazing, creates conditions where grassland/meadow wild flowers thrive.

The annual cutting programme has not been followed as planned. The planned management started well in 2020 as borrowed machinery to cut two compartments was available for use. The two compartments planned for cutting in 2021 had some of the Hemlock Water-dropwort removed, but only a small section of compartment M9 was tackled with a borrowed machine. In 2022, two compartments (M5 and M11) had Hemlock Water-dropwort flower heads cut in May and June and this was followed-up by a flail (topper) cut in early August. This cutting method removed only the top of the vegetation, cutting high rather than low. The two compartments planned for cutting in 2023 had most of the Hemlock Water-dropwort flower heads cut in May/June, but no equipment was available for cutting in July/August, so was not done.

In 2024 compartment M4 had all the Hemlock Water-dropwort flowering heads cut, but in M12, only about two-thirds was done. Compartment M4 was cut using a powered mower in September, but M12 was not cut. On a more positive note, machinery to cut the meadow is now available, so barring any machine failures, the meadow will be cut more regularly, and to plan, in future.

The other essential tool for ensuring the meadow remains wild flower-rich is grazing. Each year the meadow has been grazed. The cattle are Dexters, usually between four-six animals, and are re-introduced each September and graze through the winter. Their removal in late winter/early spring varies depending on ground conditions. This will continue.

At the eastern end of the meadow in M12 is a small willow grove. Older trees have been pollarded, with limited success, and from time to time, as is their nature, one or two collapse. In doing so, where branches touch the wet ground, they grow roots and begin to form into new trees, away from the parent plant. In order for the meadow not to be reduced in size, these willows have been cut back and re-growth has occurred from the cut stumps. There is more to do and this management will continue during the life of this plan. There is a dedicated fire-site here to burn brash.

## Woodland

Like the meadow, the woodland is divided into 12 compartments. Each year a compartment is selected for coppice management. Two compartments (W4 and W11) are permanent glades, cut and cleared each October/November and the remaining 10 compartments are cut on rotation – a 10-year coppice cycle. Coppice cycles can vary, and in the past were determined by the timber produce required. Longer sequences provided heavier timber for charcoal for example, and shorter sequences provided thinner spars for thatching and hurdle making. A 10-year cycle seems a reasonable compromise, as the “product” is not required in any commercial sense. Hazel is fairly short-lived; cutting regularly maintains a healthy plant.

Coppice management of the oak/hazel Ancient Semi-natural Woodland in southern England has been the traditional woodland management for Centuries. Much of Woar Copse (and Great Woar Copse to the north) has been managed in this way in the past. The planned coppice management sequence (clear of bramble, cut understorey, re-plant) has been followed, and is to continue throughout the life of this new plan.

Keeping with the Agreed Management Policy, the number of standard trees (eg oak, beech, ash) ideally should be reduced to around 20-25 per hectare. Their age should vary between young (40-120 years old), and those over 100 years old with a couple of older, veteran trees. Any agreed felling is to be very long-term, looking at 20-50 years before the ideal number of standards is arrived at. It is proposed to either fell trees or remove only the crowns, every few years, managing two trees each time. For the life of this Plan therefore, over five years, a maximum of four trees should be managed this way. However, any trees which fall naturally or through storm damage, will also count towards this total, requiring less intervention. Trees selected to be managed will be on the southern boundaries of glades or recently coppiced areas, thus reducing shade cast and increasing the amount of light and warmth falling onto the woodland floor. Before any felling takes place, all mature trees will be checked for bat roost sites, ensuring compliance with protected species requirements.

As the incentive is on nature conservation and not commercial gain, where crown removal is chosen, the bole of the tree (up to 3-4m) should be left in situ to decompose naturally over time. This action will ensure a more open canopy, allowing light to the woodland floor which will benefit ground flora and its associated wildlife. It will also encourage the coppice stools to regenerate more rapidly and, if there is long-dormant seed of woodland indicator plant species, these may also regenerate. Some saplings will continue to be protected and others thinned in order to continue the natural regeneration cycle and an uneven-age distribution.

As mentioned elsewhere, other agencies are involved in the management of the site. In 2020/21 following the cutting and re-planting in compartment W1, contractors felled some standing dead timber and removed an ash (with suspected die-back), just after the volunteer group had planted new hazel saplings. In doing so, many of the newly planted saplings were destroyed. Similarly, in the same compartment, in 2023 an ash was removed along with some hanging oak branches. Machinery used to access the trees has damaged the re-growing hazel coppice stools. Hopefully they will recover.

In 2022/23 compartment W12 was cut, cleared and re-planted. Unfortunately, the hazel saplings planted in February 2023 did not take, with only a handful of the 150 planted surviving. This compartment was re-planted in November 2023 and to date, all are growing well.

The limit of new planting in the compartments being worked, begins about 1-1.5m in from the gravel track (The Green Way). This leaves a margin, and over time this will connect-up throughout the length of the woodland on both sides of the pathway. This margin will be cut and cleared each October and November and it will create a linear grassy/wild flower strip between the gravel and the line of new (and old) shrubs and trees. In effect this will be akin to the woodland rides present in many woodlands and are known to be excellent corridors for wildlife, particularly woodland butterflies and other insect pollinators in search of nectar. Already, after one or two cuts, this strip is developing a mix of woodland flowers and grasses.

Cutting and clearing the compartments generates a huge amount of material which has to be disposed of. We have dedicated fire-sites in W4, W12 and M12 where woody material (lop and top/brush) is burnt as and when required. We also have a repository for the material that cannot be burned, near the access gate and the FBWM are grateful to NMTC for arranging the collection and disposal of this material.

New gravel paths have been installed, connecting the northern end of Woar Copse to the northern end of the meadow. These paths were very muddy and becoming wider and wider. As they spread, bluebells and wood anemones were being trampled and prevented from growing, so it was decided to install a dedicated, hard-surface and narrower track, which has been successful and over time, marginal vegetation will return.

#### **4. Annual Work Programme and Annual Work Plans (January 2025-March 2030)**

The FBWM generate and plans the management tasks month-by-month. These are carried out at the most wildlife-friendly or benign time in the year or, in the case of tackling invasive species, at the right time to control their spread. This work is repeated year-on-year and is dictated by seasons and resources available to the FBWM.

Of the three main habitats present on-site meadow, woodland and stream, only the latter requires minimal intervention. There is an obligation on the landowner to maintain an unimpeded flow, however small debris dams are acceptable and are very beneficial to stream inhabitants as they create temporary deeper pools. Any larger blockages, which have the potential to divert stream water across the meadow, are removed.

The work of the FBWM is therefore concentrated in the meadow and woodland and follows the pattern of work already in place. **Table 1** shows the Annual Work Programme, giving an outline of the seasonal nature of the work required and the location where this takes place.

**Table 1:** Annual Work Programme

Timing	Task	Location
Early May	Check and repair gravel path	Woodland
Late May-early June	Begin cutting and removing Hemlock Water-dropwort before seed-set	Meadow
Mid July	Cut and clear any bramble and bracken	Meadow
Late July-early August	Cut and clear vegetation	Meadow
Early September	Cut and clear Fawn Gardens	Fawn Gardens
October	Cut and clear glades and ride sides. Begin bramble removal. Cut and clear Hazelwood entrance	Woodland Hazelwood Road
November	Continue bramble removal. Begin coppicing. Sapling planting (if required)	Woodland
December	Continue coppicing	
January	Large scale felling or crown removal	Woodland
February	Sapling planting	Woodland
March	Cut back and clear main ride	Woodland

This gives a broad outline (prescription) of the work to be done. This has to be provisional as often circumstances beyond the control of the landowner or the FBWM can alter the nature and timing of the work programme shown. Other agencies are often involved who carry out work independently of the programme (eg when a storm causes a tree to shed or hang limbs). The landowner is in favour of dealing with any issues immediately with Health and Safety of the public using the site in mind. Sometimes during the works, any debris generated is left on-site to be cleared by volunteers and may cause the planned work to change.

**Table 2** takes the prescription above and breaks the seasonal work down in more detail and becomes the Annual Work Plan (refer to the compartment (Cpt) map attached at **Appendix 1** where M compartments are meadow and W compartments are woodland).

Please note that there is no work done in April to allow the wildlife to get on with things with little or no disturbance.

Only Year 1 is set out in detail and, subject to outside contractors, equipment availability or emergency work, every year for the life of this plan will follow the same pattern of management. A summary table is shown at **Table 3**.

**Table 2: Annual Work Plan (only Year 1 shown in detail)****Plan Year 1 (1 January 2025 – 31 March 2026)**

Month	Cpt(s)	Task(s)	Notes and Rationale
January 2025	W6/W4	Coppice hazel and other shrubs in the understorey. Take brash to the fire-site (W4) and burn-up. Larger logs to the wood-walls. Outside contractors to fell/remove crowns. Mark positions for new plants in the gaps.	Finish coppicing this month, leaving the ground clear. Felling/crown removal of older trees to be done with clear ground. Mark positions for gapping-up with new hazel saplings. Larger logs left on-site to rot down as wood-walls which also double as compartment boundaries.
February	W6/W4	Clear any debris from felling/crown removal and burn brash. Plant hazel saplings.	February is a good time to plant when all work in the cpt has finished.
March	W	Cut back ride sides and remove any logs.	Cut and clear encroaching bramble. Any exposed logs can be cut for wood-walls.
May	M2/M10	Begin cutting Hemlock Water-dropwort. All material to dump site.	Timing important to cut and remove just before seed-set. The plant will not re-grow this season.
June	M2/M10	Finish cutting and clearing the H W-d.	
July	M2/M10	Cut and clear any large bramble clumps, digging out crowns. At end of the month cut all vegetation in the cpts and clear-up.	After the bird nesting season any large bramble clumps in the cpt(s) to be cut can be removed.  All arisings to dump site.
August	M2/M10	Cut all vegetation and clear to dump site.	All arisings to dump site.
September	Fawn Gdns	Cut half the small meadow.	Rake-up and bag arisings ready for the NMTC to remove. By cutting half the meadow, invertebrates with longer life cycles can be left undisturbed.



**Plan Year 1 (1 January 2025 – 31 March 2026) - continued**

Month	Cpt(s)	Task(s)	Notes and Rationale
October	W10 W4/W11 W Hazelwood	Begin clearing bramble and take to dump beside the gate. Cut and clear glades. Cut and clear ride sides. Cut and clear Hazelwood access.	Take cut material to dump site rather than burn. Any arisings close to W4 can be taken to the fire-site.
November	W10/W12 W6	Finish clearing bramble. Cut hazel and understorey shrubs. Re-planting (if necessary).	Brash to small fire-site in W12 and burn. Check condition of saplings planted in February. Replace any losses.
December	W10/W12	Coppicing.	Brash to fire-site in W12.
January 2026	W10/W12	Coppicing. Any felling or crown removal required done now. Clear-up any brash generated. Mark positions in W10 for new saplings to be planted.	Brash to the fire-site in W12.
February	W10	Plant hazel saplings	
March	W	Cut back ride sides and remove any logs.	Cut and clear encroaching bramble. Any exposed logs can be cut for wood-walls.

Each year the compartments to be worked will change and these are shown in the table below and on the Compartment Map (**Appendix 1**).

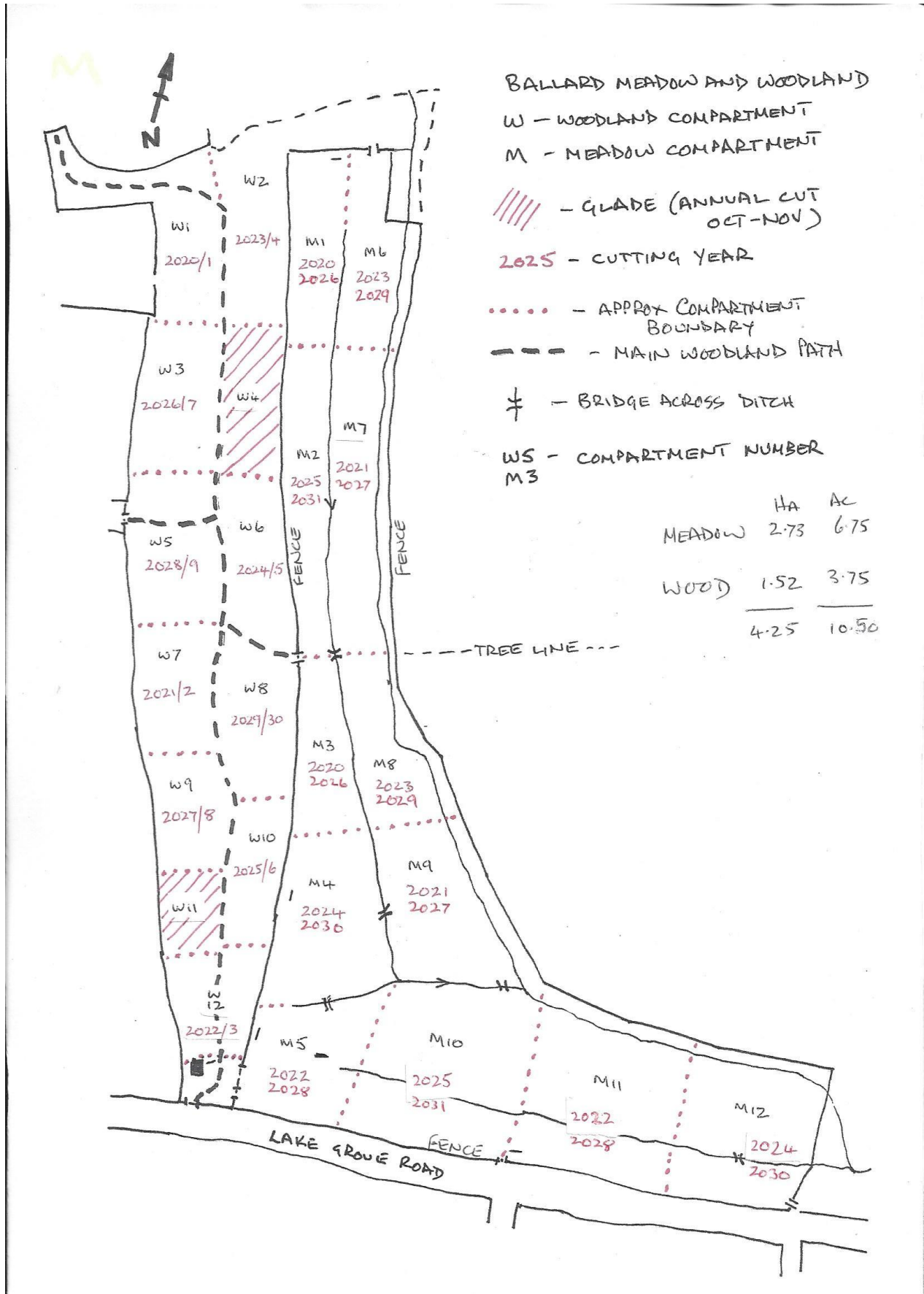
**Table 3: Work Plans (Years 2-5)**

The table below shows the compartments which will be worked in years 2-5 (1<sup>st</sup> May 2026-31<sup>st</sup> March 2030).

Plan Year	Meadow Compartments	Woodland Compartment	Notes
2. (2026-2027)	M1 and M3	W3	
3. (2027-2028)	M7 and M9	W9	
4. (2028-2029)	M5 and M11	W5	
5. (2029-2030)	M6 and M8	W8	

### 5. Appendices

#### Appendix 1: Compartment Map and Cutting/Clearing Schedule



## **Appendix 2: References**

1. Lord, Bob (2020); New Milton Town Council and The Friends of Ballard Water Meadow, Ballard Meadow and Woodland 5-year Management Plan, 1<sup>st</sup> January 2020-31<sup>st</sup> December 2024. Unpublished.

## **Appendix 3: Updated Records - Summary**

Appendix 3.1 Plant Data

Appendix 3.2 Insects

Appendix 3.3 Common Bird Census

Appendix 3.4 Stream Sampling Data

**NEW MILTON TOWN COUNCIL  
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**BALLARD MEADOW AND WOODLAND**

**5 YEAR  
MANAGEMENT PLAN**

**(1 January 2025 - 31 March 2030)**

**APPENDIX 3**

**BIOLOGICAL INFORMATION**

**APPENDIX 3.1 – PLANT DATA**

**APPENDIX 3.2 – INSECTS (summary from contract surveys)**

Family	Group	Species	2020	2021	2022	2024	
Mecoptera	Scorpion Flies	<i>Panorpa communis</i>	X				
Neuroptera	Lacewings	<i>Chrysopa perla</i>	X		X		
		<i>Chrysoperla carnea</i>	X		X		
Odonata	Damselflies	<i>Coenagrion puella</i>				X	
		<i>Ischnura elegans</i>				X	
		<i>Enallagma cyathigerum</i>		X			
	Dragonflies	<i>Aeshna cyanea</i>					X
		<i>Aeshna mixta</i>	X				
		<i>Brachytron pratense</i>	X				X
		<i>Cordulegaster boltonii</i>	X				
		<i>Libellula quadrimaculata</i>		X			
		<i>Sympetrum striolatum</i>		X		X	
Orthoptera	Bush Crickets Grasshoppers	<i>Pholidoptera griseoaptera</i>				X	
		<i>Roeseliana roselii</i>			X	X	
		<i>Conocephalus discolor</i>	X	X	X	X	
		<i>Conocephalis dorsalis</i>		X			
		<i>Chorthippus albomarginatus</i>	X	X			
		<i>Chorthippus brunneus</i>	X	X	X	X	
		<i>Leptophytes punctatissima</i>		X	X	X	
		<i>Pseudochorthippus parallelus</i>			X		
Dictyoptera	Cockroaches	<i>Ectobius lapponicus</i>		X			
Dermaptera	Earwigs	<i>Forficula auricularia</i>	X	X			
Heteroptera	True Bugs	<i>Gerris lacustris</i>			X		
		<i>Deraeocoris ruber</i>		X			
		<i>Calocoris roseomaculatus</i>		X			
		<i>Closterostomus norvegicus</i>	X	X	X	X	
		<i>Capsus ater</i>			X	X	
		<i>Dicyphus epilobi</i>		X		X	

Family	Group	Species	2020	2021	2022	2024
Heteroptera	True Bugs (contd)	<i>Apolygus lucorum</i>		X	X	X
		<i>Apolygus spinolae</i>	X			
		<i>Lygocoris pabulinus</i>	X		X	
		<i>Lygus rugulipennis</i>	X	X		X
		<i>Liocoris tripustulatus</i>	X			
		<i>Orthops basalis</i>			X	
		<i>Orthops campestris</i>			X	X
		<i>Stenotus binotatus</i>	X	X	X	X
		<i>Leptopterna dolobrata</i>	X	X	X	X
		<i>Macrotylus solitarius</i>	X	X	X	
		<i>Notostira elongata</i>	X	X	X	X
		<i>Pithanus maerkelii</i>		X		X
		<i>Stenodema calcarata</i>	X	X	X	
		<i>Stenodema laevigata</i>		X	X	
		<i>Trignotylus ruficornis</i>	X		X	
		<i>Heterotoma planicornis</i>	X	X	X	
		<i>Plagiognathus arbustorum</i>	X	X	X	
		<i>Plagiognathus chrysanthemi</i>			X	
		<i>Acanthosoma haemorrhoidale</i>		X		
		<i>Anthocoris nemorum</i>				X
		<i>Rhopalus subrufus</i>	X			
		<i>Nabis flavomarginatus</i>	X			
		<i>Scolopostethus decoratus</i>		X		
		<i>Myrmus miriformis</i>	X			
		<i>Aelia acuminata</i>	X	X	X	
		<i>Kleidocerys resedae</i>				X
		<i>Coreus marginatus</i>	X	X	X	X
		<i>Eurygaster testudinaria</i>	X	X	X	
		<i>Dolycoris baccarum</i>	X			
		<i>Psallus quercus</i>	X			
		<i>Piezodorus lituratus</i>	X		X	
		<i>Palomena prasina</i>	X	X	X	
		<i>Podops inuncta</i>	X			
<i>Zicrona caerulea</i>	X					



Family	Group	Species	2020	2021	2022	2024
Lepidoptera	Butterflies	<i>Thymelicus sylvestris</i>			X	X
		<i>Thymelicus lineola</i>		X	X	
		<i>Ochlodes sylvanus</i>	X			X
		<i>Ochlodes venata</i>	X			
		<i>Gonepteryx rhamni</i>			X	X
		<i>Pieris brassicae</i>	X	X	X	X
		<i>Pieris rapae</i>	X	X	X	X
		<i>Pieris napi</i>			X	X
		<i>Anthocharis cardamines</i>	X			X
		<i>Lycaena phlaeus</i>	X	X		
		<i>Polyommatus icarus</i>	X			X
		<i>Neozephyrus quercus</i>	X			
		<i>Aglais io</i>	X			
		<i>Melanargia galathea</i>		X		X
		<i>Argynnis paphia</i>				X
		<i>Celastrina argiolus</i>	X		X	
		<i>Vanessa atalanta</i>	X	X	X	X
		<i>Vanessa cardui</i>		X		
		<i>Polygonum c-album</i>	X		X	
		<i>Pararge aegeria</i>	X	X	X	X
<i>Pyronia tithonus</i>	X	X	X	X		
<i>Maniola jurtina</i>	X	X	X	X		
		<i>Aphantopus hyperantus</i>				X
Trichoptera	Caddisflies	<i>Limnephilus lunulatus</i>	X			
		<i>Limnephilus affinis</i>		X		
		<i>Limnephilus auricula</i>			X	
		<i>Limnephilus centralis</i>			X	
		<i>Limnephilus hirsutus</i>			X	
Diptera	Hoverflies	<i>Baccha elongata</i>	X			X
		<i>Cheilosia albitarsus</i>	X		X	X
		<i>Cheilosia illustrata</i>	X		X	

Family	Group	Species	2020	2021	2022	2024	
Diptera	Hoverflies (contd)	<i>Cheilosia pagana</i>	X		X		
		<i>Cheilosia proxima</i>				X	
		<i>Chrysotoxum bicinctum</i>				X	
		<i>Dasysyrphus albostrigatus</i>	X				
		<i>Episyrphus balteatus</i>	X	X	X	X	
		<i>Epistrophe eligans</i>	X				
		<i>Eristalis arbustorum</i>	X	X		X	
		<i>Eristalis intricarius</i>	X			X	
		<i>Eristalis nemorum</i>				X	
		<i>Eristalis pertinax</i>	X		X	X	
		<i>Eristalis tenax</i>	X	X		X	
		<i>Eumerus funeralis</i>	X	X	X	X	
		<i>Eumerus strigatus</i>		X	X		
		<i>Eupeodes corollae</i>	X	X		X	
		<i>Eupeodes latifasciatus</i>				X	
		<i>Eupeodes luniger</i>	X	X			
		<i>Helophilus pendulus</i>	X	X	X	X	
		<i>Heliphilus trivittatus</i>		X		X	
		<i>Melanostoma mellinum</i>	X	X	X		
		<i>Malanostoma scalare</i>	X	X	X		
		<i>Merodon equestris</i>	X			X	
		<i>Myathropa florea</i>	X			X	
		<i>Paragus haemorrhous</i>	X				
		<i>Pipizia noctiluca</i>				X	X
		<i>Platycheirus albimanus</i>	X	X	X	X	
		<i>Platycheirus clypeatus</i>			X	X	
		<i>Platycheirus rosarum</i>	X	X	X	X	
		<i>Scaeva selentica</i>			X		
		<i>Scaeva pyraustri</i>	X				
		<i>Sphaerophoria scripta</i>	X	X	X	X	
		<i>Syritta pipiens</i>	X	X	X	X	
		<i>Syrphus ribesii</i>	X	X	X	X	
		<i>Syrphus torvus</i>				X	

Family	Group	Species	2020	2021	2022	2024	
Diptera	Hoverflies (contd)	<i>Syrphus vitripennis</i>	X				
		<i>Volucella pellucens</i>		X		X	
		<i>Volucella zonaria</i>		X			
		<i>Xanthogramma pedissequum</i>				X	
		<i>Xylota segnis</i>		X			
		<i>Xylota sylvarum</i>			X	X	
		<i>Melanogaster hirtella</i>		X			
		<i>Rhingia capestris</i>		X			
	Larger Brachycera	<i>Beris vallata</i>			X	X	
		<i>Bombylius major</i>					X
		<i>Chrysopilus asiliformis</i>	X				X
		<i>Chrysopilus cristatus</i>	X	X	X	X	X
		<i>Rhagio lineola</i>		X			
		<i>Chorisops tibialis</i>		X			
		<i>Machimus atricapillus</i>		X			
		<i>Machimus cingulatus</i>	X				
		<i>Microchrysa flavicornis</i>			X		
		<i>Oxycara rara</i>		X			
		<i>Rhagio scolopaceus</i>	X	X	X	X	X
		<i>Rhagio tringarius</i>		X	X	X	X
		<i>Tabanus sudeticus</i>			X		
		<i>Chloromyia formosa</i>	X	X	X	X	X
		<i>Leptogaster cylindrica</i>	X	X	X	X	X
		<i>Sargus bipunctata</i>		X			
		<i>Sargus flavipes</i>	X				
		<i>Dioctria linearis</i>		X			
	Snail-killing Flies	<i>Pherbellia ventralis</i>			X		X
		<i>Pherbellia cinerella</i>					X
		<i>Tetanocera arrogans</i>	X			X	X
		<i>Elgiva cucularia</i>		X			
		<i>Hydromya dorsalis</i>			X		
		<i>Ilione albisetata</i>	X	X	X		
<i>Limnia unguicornis</i>			X				

Family	Group	Species	2020	2021	2022	2024
Diptera	Picture-winged Flies	<i>Chaetostomella cylindrica</i>	X			
		<i>Tephritis bardanae</i>		X		
		<i>Tephritis neesii</i>		X		
		<i>Urophora cardui</i>				X
		<i>Urophora jaceana</i>		X		
		<i>Terellia colon</i>	X			
		<i>Terellia ruficauda</i>			X	X
		<i>Herina frondescentia</i>				X
		<i>Euleia heraclei</i>		X	X	X
		<i>Xyphosia miliaria</i>	X			
	Conopid Flies	<i>Conops ceriaeformis</i>		X		
		<i>Conops flavus</i>			X	
		<i>Conops quadrifasciatus</i>		X		
		<i>Physocephala rufipes</i>		X		
		<i>Leopoldius signatus</i>		X		
		<i>Sicus ferrugineus</i>		X		
	Tachinid Flies	<i>Alophora hemiptera</i>				X
		<i>Eriothrix rufomaculata</i>	X	X	X	X
		<i>Thelaira nigriceps</i>			X	
<i>Phasia obesa</i>		X				
Hymenoptera	Ants	<i>Lasius flavus</i>			X	X
		<i>Lasius niger</i>	X	X	X	X
		<i>Myrmica rubra</i>			X	
		<i>Myrmica ruginoides</i>				X
	Spider Wasps	<i>Anoplius nigerrimus</i>		X		X
	Social Wasps	<i>Vespa crabro</i>				X
		<i>Vespula vulgaris</i>	X	X	X	X
		<i>Dolichvespula media</i>	X			
		<i>Vespula germanica</i>	X			
		<i>Vespula rufa</i>	X			

Family	Group	Species	2020	2021	2022	2024
Hymenoptera	Solitary Wasps	<i>Ectemnius cephalotes</i>		X		
		<i>Ectemnius continuus</i>			X	
		<i>Pemphredon lugubris</i>		X		
		<i>Rhopalum inornata</i>			X	
		<i>Trypoxylon figulus</i>	X			
		<i>Nysson spinosus</i>	X			
	Solitary Bees	<i>Hylaeus communis</i>	X	X	X	X
		<i>Hylaeus confusus</i>	X			
		<i>Andrena bicolor</i>				X
		<i>Andrena dorsata</i>	X			
		<i>Andrena flavipes</i>		X		
		<i>Andrena fulva</i>				X
		<i>Andrena haemorrhoea</i>	X		X	
		<i>Andrena nigroaenea</i>	X			
		<i>Andrena nitida</i>		X		X
		<i>Andrena semilaevis</i>			X	
		<i>Andrena subopaca</i>	X	X	X	X
		<i>Andrena scotica</i>	X	X		X
		<i>Andrena wilkella</i>		X		X
		<i>Anthophora plumipes</i>				X
		<i>Halictus tumulorum</i>				X
		<i>Lasioglossum albipes</i>	X			X
		<i>Lasioglossum calceatum</i>	X	X	X	X
		<i>Lasioglossum pauxillum</i>			X	X
		<i>Lasioglossum morio</i>		X	X	X
		<i>Lasioglossum leucozonium</i>		X		
		<i>Lasioglossum minutissimum</i>	X			
		<i>Lasioglossum punctatissimum</i>		X		
		<i>Lasioglossum villosulum</i>		X		
		<i>Megachile willughbiella</i>	X			X
		<i>Osmia bicornis</i>		X		X
		<i>Osmia laeiana</i>				X
		<i>Osmia spinulosa</i>	X			

Family	Group	Species	2020	2021	2022	2024
Hymenoptera	Solitary Bees (contd)	<i>Chelostoma floristomne</i>			X	
		<i>Nomada goodeniana</i>			X	X
		<i>Nomada fabriciana</i>		X		
		<i>Nomada flava</i>	X			
		<i>Nomada flavoguttata</i>	X			
		<i>Nomada striata</i>			X	
		<i>Sphecodes ephippius</i>		X		
		<i>Sphecodes geofrellus</i>	X			
	Social Bees	<i>Bombus hortorum</i>	X		X	X
		<i>Bombus hypnorum</i>	X			
		<i>Bombus jonellus</i>	X			
		<i>Bombus lapidarius</i>	X	X		
		<i>Bombus leucorum/terrestris</i>	X	X	X	X
		<i>Bombus pascuorum</i>	X	X	X	X
		<i>Bombus pratorum</i>	X	X	X	X
		<i>Bombus sylvestris</i>	X			
		<i>Bombus terrestris</i>	X	X	X	X
		<i>Bombus vestalis</i>	X	X		X
		<i>Apis mellifera</i>	X	X	X	X
Coleoptera	Soldier Beetles	<i>Cantharis flavilabris</i>	X	X	X	X
		<i>Cantharis nigricans</i>	X			
		<i>Cantharis pallida</i>		X	X	X
		<i>Cantharis rustica</i>	X	X	X	X
		<i>Rhagonycha fulva</i>	X	X	X	X
		<i>Rhagonycha testacea</i>			X	
		<i>Cantharis nigra</i>	X			
	Malachite Beetles	<i>Malachius bipustulatus</i>	X	X	X	X
		<i>Malthodes marginalis</i>			X	
	Click Beetles	<i>Agriotes pallidulus</i>		X		
		<i>Ampedus quercicola</i>			X	
		<i>Stenagostus rhombeus</i>		X		

Family	Group	Species	2020	2021	2022	2024
Coleoptera	Ladybirds	<i>Calvia 14-guttata</i>				X
		<i>Harmonia axyridis</i>				X
		<i>Propylea 14-punctata</i>	X	X	X	
		<i>Coccinella 7-punctata</i>	X	X	X	
		<i>Tytthaspis 16-punctata</i>	X			
		<i>Subcoccinella 24-punctata</i>	X			
	Longhorn Beetles	<i>Grammoptera ruficornis</i>	X			
		<i>Rutpela maculata</i>	X			
		<i>Paracorymbia fulva</i>		X		
		<i>Stenurella melanura</i>			X	
		<i>Stictoleptura scutellata</i>		X		
	Cardinal Beetles	<i>Clytus arietis</i>		X		
		<i>Pyrochroa coccinea</i>				X
	Chafers	<i>Lucanus cervus</i>				X

Numbers recorded by compartment:

Survey Section				Number of Species		
	2020	2021	2022	2024		
				Prev	New	Total
South Meadow	97	107	97	65	6	71
Middle Meadow	77	98	91	53	5	58
North Meadow	63	85	79	40	3	43
North Woodland	30	20	18	18	2	20
Middle Woodland	29	11	19	10		10
South Woodland	18	17	18	17	2	19
Total	314	338	322	221		

**APPENDIX 3.2 – INSECTS CONTD. (Butterfly Transect summary)**

Transect data (excluding Pond Copse/Ballard Lake section)

<b>Species</b>	<b>Common Name</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<i>Thymelicus sylvestris</i>	Small Skipper	1						
<i>T. lineola</i>	Essex Skipper			1				
<i>T. sylestris/lineola</i>	Small/Essex Skipper	4	27	34	15	38		
<i>Ochlodes sylvanus</i>	Large Skipper			1	1	8		
<i>Gonepteryx rhamni</i>	Brimstone	7	1	13	4	5		
<i>Pieris brassicae</i>	Large White	36	73	52	24	75		
<i>P. rapae</i>	Small White	55	34	82	63	51		
<i>P. napi</i>	Green-veined White	19	41	8	1	8		
<i>Anthocharis cardamines</i>	Orange Tip	5	2	5	9	9		
<i>Neozephyrus quercus</i>	Purple Hairstreak		1					
<i>Lycaena phlaeas</i>	Small Copper	3	5	10	4	10		
<i>Aricia agestis</i>	Brown Argus	4						
<i>Polyommatus icarus</i>	Common Blue	47	49	13	35	37		
<i>Celastrina argiolus</i>	Holly Blue	1	4		5	20		
<i>Vanessa atalanta</i>	Red Admiral	12	8	24	9	22		
<i>V. cardui</i>	Painted Lady	4	1	1	1			
<i>Inachis io</i>	Peacock	4	2	1	3	3		
<i>Aglais urticae</i>	Small Tortoiseshell				1			
<i>Polygonia c-album</i>	Comma		3	1	5	3		
<i>Pararge aegeria</i>	Speckled Wood	39	29	28	31	102		
<i>Melanargia galathea</i>	Marbled White			1	3	1		
<i>Aphantopus hyperantus</i>	Ringlet				1	2		
<i>Pyronia tithonus</i>	Gatekeeper	89	52	68	73	140		
<i>Maniola jurtina</i>	Meadow Brown	249	215	256	154	267		
<i>Coenonympha pamphilus</i>	Small Heath					3		

Data extracted from: UKBMS Ballard Water Meadows and New Forest Transect Group annual reports  
Ballard Meadow and Woodland Annual Reports/Casual records from known observers

Observers: Ann Gorman, Pam Petherbridge, Rosemary Devereux-Jones, Steve Love, Rhona Copp



**APPENDIX 3.2 – INSECTS CONTD. (Moths)**

Page number refers to: Manley, C. British and Irish Moths - A Photographic Guide (Third Edition: 2021)

Family	Page	Common Name	Scientific Name	2023	2024
HEPIALIDAE	22	Orange Swift	<i>Triodia sylvina</i>	X	
	22	Common Swift	<i>Korscheltellus lupulina</i>		X
CRAMBIDAE	250	Mother of Pearl	<i>Pleuroptya ruralis</i>		X
	252	Box-tree Moth	<i>Cydalima perspectalis</i>	X	X
DREPANIDAE	262	Scalloped Hook-tip	<i>Falcaria lacertinaria</i>	X	
	262	Oak Hook-tip	<i>Watsonalla binaria</i>		X
GEOMETRIDAE	286	Common Carpet	<i>Epirrhoe alternata</i>		X
	314	Brimstone Moth	<i>Opisthograptis luteolata</i>		X
	314	September Thorn	<i>Ennomos erosaria</i>	X	
	320	Willow Beauty	<i>Peribatodes rhomboidaria</i>	X	
	324	Engrailed	<i>Ectropis crepuscularia</i>		X
EREBIDAE	344	Ruby Tiger	<i>Phragmatobia fuliginosa</i>		X
	346	Jersey Tiger	<i>Euplagia quadripunctaria</i>		X
NOCTUIDAE	372	Vine's Rustic	<i>Hoplodrina ambigua</i>	X	
	396	Black Rustic	<i>Aporophyla nigra</i>	X	
	408	L-album Wainscot	<i>Mythimna l-album</i>	X	
	412	Heart and Club	<i>Agrotis clavis</i>		X
	414	Flame Shoulder	<i>Ochropleura plecta</i>		X
	416	Large Yellow Underwing	<i>Noctua pronuba</i>	X	
	418	Lesser Yellow Underwing	<i>Noctua comes</i>	X	
	418	Lesser Broad-bordered Yellow Underwing	<i>Noctua janthe</i>	X	
	420	Square-spot Rustic	<i>Xestia xanthographa</i>	X	
420	Setaceous Hebrew Character	<i>Xestia c-nigrum</i>	X		
NOLIDAE	424	Green Silver-lines	<i>Pseudoips prasinana</i>		X

1 visit in 2023, 3 visits in 2024.

**APPENDIX 3.3 – COMMON BIRD CENSUS**

<b>Common Name</b>	<b>Scientific Name</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
Stock Dove	<i>Columba oenas</i>	1 (2)	4 (5)	5 (6)	4	4	
Woodpigeon	<i>Columba palumbus</i>	10 (12)	15 (16)	18 (19)	13 (14)	13	
Great Spotted Woodpecker	<i>Dendrocopos major</i>	3 (4)	1 (2)	2 (3)	3	3	
Green Woodpecker	<i>Picus viridis</i>	1					
Jay	<i>Garrulus glandarius</i>	1	1	1 (2)			
Magpie	<i>Pica pica</i>			1 (2)		2	
Jackdaw	<i>Coloeus monedula</i>	1		2 (3)	1 (2)	3	
Carrion Crow	<i>Corvus corone</i>			3	4	1(2)	
Raven	<i>Corvus corax</i>					1	
Coal Tit	<i>Pariparus ater</i>	2	3 (4)	4 (5)	1		
Blue Tit	<i>Cyanistes caeruleus</i>	12	14 (15)	14 (15)	13	13	
Great Tit	<i>Parus major</i>	12 (14)	8 (9)	6 (7)	11	9	
Long-tailed Tit	<i>Aegithalus caudatus</i>		1 (2)	2	3	1(2)	
Chiffchaff	<i>Phylloscopus collibita</i>	1 (2)	4	4 (5)	5	4(5)	
Blackcap	<i>Sylvia atricapilla</i>	2 (3)	4 (5)	5	3	4	
Goldcrest	<i>Regulus regulus</i>	7	2 (3)	3	5	1(2)	
Wren	<i>Troglodytes troglodytes</i>	14	11 (12)	15	16	18	
Nuthatch	<i>Sitta europaea</i>	5	4 (5)	4 (5)	9 (10)	6	
Treecreeper	<i>Certhia familiaris</i>		1			1	
Starling	<i>Sturnus vulgaris</i>		2 (3)	2 (3)		1	
Blackbird	<i>Turdus merula</i>	10	15 (16)	15 (17)	9 (10)	13	
Song Thrush	<i>Turdus philomelos</i>	4 (5)	4	2 (3)	2	1(2)	
Robin	<i>Erithacus rubecula</i>	10	14 (15)	15 (17)	9 (10)	13	
House Sparrow	<i>Passer domesticus</i>		1 (2)	1	3	1	
Dunnock	<i>Prunella modularis</i>	9	8 (9)	10	6	8	
Chaffinch	<i>Fringilla coelebs</i>	2	4	5 (6)	3	4(5)	
Greenfinch	<i>Chloris chloris</i>			3			
Goldfinch	<i>Carduelis carduelis</i>	4	4 (5)	4 (5)	6 (7)	1(2)	

Order follows that of the BOU maintained British List (Nov 2021). Numbers in parentheses are maxima.

**APPENDIX 3.4 – STREAM SAMPLING DATA**

Species recorded	2021	2024
<i>Freshwater Shrimp</i>	X	X
<i>Olive Mayfly</i>	X	X
<i>Water Beetles</i>	X	X
<i>Aquatic Worms</i>	X	X
<i>Leeches</i>	X	X
<i>Water Hoglouse</i>	X	X
<i>Flatworms (Planaria sp)</i>	X	
<i>Non-biting Midges</i>		X
<i>Cranefly larva</i>		X
<i>Stonefly</i>		X
<i>Water Snail eggs</i>		X
<i>Newt (eft)</i>	X	
<i>Cased Caddisfly</i>		X
<i>Blackfly larva</i>		X

8 visits in 2021, 1 visit in 2024.