

BioBlitz Report

St Aldhelm's Mead, Malmesbury

5th July 2026, 9.00am – 12.00pm

Malmesbury and District Natural History Society



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Background

In the summer of 2025 the then Town Councillor, Campbell Ritchie approached Malmesbury and District Natural History Society (MDNHS) Chair, Miranda Shirnia with the request that the Society carry out a BioBlitz on behalf of the Town Council in St Aldhelm's Mead in Malmesbury. The Society's Committee was more than happy to do this as a way of supporting the town and the natural environment locally. Please read this document alongside the document created by the Malmesbury and District Natural History Society suggesting ways in which to maximise the land at Daniel's Well for the benefit of both people and wildlife: [Daniel's Well proposal – initial thoughts and ideas](#). Many of the suggestions in that document coincide with and complement suggestions in this report.

Executive Summary

Overview & Ecological Baseline

On July 5, 2026, the Malmesbury and District Natural History Society conducted a comprehensive BioBlitz survey at St Aldhelm's Mead in Malmesbury, Wiltshire (09:00–12:00). The survey audited ten key biological groups: trees and shrubs, herbaceous plants, insects and invertebrates, birds, mammals, reptiles and amphibians, crustacea, fish, lichens, and fungi.

The main BioBlitz took place on the morning of the 5th of July; 25 members of the public attended as well as 7 members of the MDNHS Committee making a total of 32 people searching St Aldhelm's Mead for nature living there. Additionally, an event took place on Thursday the 2nd of July designed to provide a snapshot of which bats and moths were in the location too which could not be done during the day. This 'Dusk Detectives' event was attended by 26 members of the public and 3 MDNHS Committee members making a grand total of 61 people involved in the whole project.

The aim of the BioBlitz was to survey St Aldhelm's Mead over the period of one morning and make as many records as possible of natural phenomena during that timeframe. It is important to note that a BioBlitz, by its nature is only a snapshot of the biological diversity to be found at a location during a limited timeframe. Plants and animals not recorded on the day may still be present but not seen on that occasion and might also be present at other times of the year. This report is by no means a comprehensive picture of all the natural phenomena to be found in St Aldhelm's Mead.

Records of Note Outside of the BioBlitz

Species that have been recorded outside of the BioBlitz which are of particular note and interest include:

1. Little Egret – frequently seen next to the bridge and in Daniel’s Well. They simply were not present on the day.
2. Daubenton’s bats – recorded by MDNHS in St Aldhelm’s Mead in 2024 and 2023 near the Station Road car park at two different bat walks. It is likely that they are present at St Aldhelm’s Mead but that we did not stay out late enough to record them on this occasion.
3. Dipper – this little bird that specialises in clean rivers has been seen several times this year close to St Aldhelm’s Mead. It is new to Malmesbury and whether it settles here depends on the water quality remaining high.
4. Beaver – these mammals have been photographed / filmed and signs of their presence have been seen in and around Malmesbury since 2023. The most recent sighting was in July 2026 shortly after the BioBlitz and the record was very close by. No beaver seem to have established territories in the area to date but this may change shortly.

Here is a summary of the records collected at the BioBlitz:

Group	Number of records	
Trees and Shrubs	23	
Plants	61	
Insects	56	
Birds	22	
Mammals	7	
Reptiles	1	
Crustacea	1	
Fish	1	
Fungi	2	
Lichen	2	
TOTAL	176	

The findings reveal a vibrant, multi-layered lowland river corridor along the Bristol Avon. The site currently supports high-value aquatic flagships—including foraging **Otters**,

nesting **Kingfishers**, clean-water riverflies (**Mayflies, Caddisflies, Blue-winged Olives**), and clean-air indicator lichens (**Powdered Ruffle Lichen**).

However, the survey also identified significant ecological pressures, structural gaps, and invasive non-native species (INNS) that limit the site's full potential.

Key Findings by Category

- **Riparian Canopy & Scrub:** There is a strong core of native trees (**Alder, Crack Willow, Hawthorn, Oak**). However, non-native species (**Sycamore, Cypress**) shade out light-demanding bank flora, while invasive **Snowberry** and **Privet Honeysuckle** smother understory ground layer.
- **Meadow & Bankside Flora:** Highlights include **Meadowsweet, Purple Loosestrife, Yellow Flag Iris**, and **Knapweed**. However, rank, nutrient-loving species (**Nettles, Thistles, Rye Grass**) need controlling. Additionally, the presence of **Himalayan Balsam** is a concern and needs to be removed. MDNHS reported the Himalayan Balsam on the INNS Mapper app for invasive species. However, this app is designed primarily for awareness and does not automatically lead to a process of removal. It is important that the Town Council discuss how to tackle this problem with MDNHS as a matter of urgency.
- **Invertebrates:** There is an exceptional diversity of aquatic emergents (**Banded/Beautiful Demoiselles**) and pollinators (**Bumblebees, Hoverflies**, native **Ladybirds**). **Harlequin Ladybirds** are also present and pose a competitive threat to native species. However, this is a national issue and needs a national response to have any chance of successful removal.
- **Avian & Mammalian Wildlife:** The invertebrates provide high foraging value for aerial insectivores (**Swifts, Swallows, Martins**) and bats (**Common/Soprano Pipistrelles, Noctule**). However, crucial missing baseline species include **Water Vole, Badger, Reed Bunting**, and **Grey/Pied Wagtails**.
- **Herpetofauna & Aquatic Life:** A **Grass Snake** swimming in the Leat was a major highlight, but complete absence of recorded common amphibians (**Frogs, Toads, Newts**) indicates a lack of still-water breeding pools. The aquatic ecosystem is heavily threatened by invasive **Signal Crayfish**, though Otter predation is actively suppressing adult numbers. Low fish diversity (only **Chub** recorded) highlights a need for improved gravel spawning beds and instream refuge.

Priority Management Recommendations

To transition St Aldhelm's Mead into a resilient, highly biodiverse floodplain habitat, management over the next 5 years should focus on four core pillars:

1. **Invasive Species Control (Immediate Action):** Annual community eradication of **Himalayan Balsam** before seed-set (May–June), alongside targeted removal of **Snowberry**, **Virginia Creeper**, and **Privet Honeysuckle**. Strict biosecurity ("Check, Clean, Dry") must be enforced for water activities to contain Crayfish Plague.
2. **Meadow & Riparian Margin Restoration:** Shift to a late-summer (July/August) hay-cut regime with all arisings removed to reduce soil nutrients (put these in dead hedges or compost areas). Establish un-mown 3–5m buffer strips along the riverbank to filter runoff, shelter breeding insects, and protect bank stability.
3. **Habitat Diversification & Micro-Features:** Excavate shallow, un-shaded floodplain scrapes/backwaters off the main river/Leat to create amphibian breeding sites. Construct **Grass Snake egg-laying compost heaps** and raised **hibernacula** along sunny meadow edges.
4. **Instream & Canopy Enhancement:** Introduce Large Woody Debris (LWD) and clean gravel riffles to improve fish nursery habitat. Implement rotational pollarding of Crack Willows and plant missing keystone species including **Goat Willow**, **Gelder Rose**, **Yellow Rattle**, **Water Crowfoot**, and **Marsh-marigold**.

Survey Methods Employed

Many of the records gathered during the BioBlitz were collected using personal observations. On the day of the BioBlitz, MDNHS Committee members and the general public searched the various habitats and noted what was found. Records were written down, photographs were taken, reference books were utilized and so were 'apps' such as Merlin, for bird identification, and Obsidentify for any other unknown observation. Records were checked with knowledgeable people present and only kept as records if there was a high confidence of them being correct. Other methods used included:

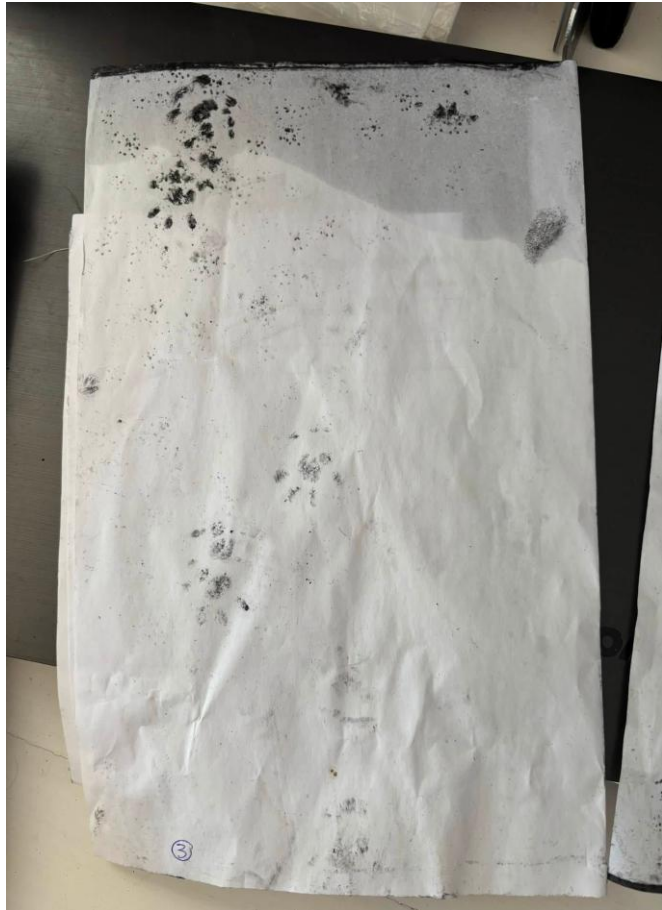
Trail cameras – 3 trail cameras were installed 11 days before the BioBlitz. More than 3,000 film clips were recorded. Bird song was heard on the clips but little else was found other than some Coots and a Mallard with 2 chicks.

Dormouse footprint tunnels – 10 were erected in the hedges along the river and Leat sides of the site 11 days before the BioBlitz. No footprints were found in any of the tunnels. While Dormouse footprints were not expected, no footprints of any mouse species was a surprise. While mice have value in themselves dispersing plant seeds

and aerating the soil, they also provide a valuable food source for many other animals such as foxes, stoats, weasels, owls and Kestrels. Increased long grass would encourage more mice and improve the biodiversity in the Mead considerably.

Hedgehog footprint tunnels – 3

Hedgehog footprint tunnels were installed along the river side of the site 11 days before the BioBlitz. These were baited with dry kitten food (recommended for feeding hedgehogs) and produced hedgehog footprints after the first night of being set in place. One of the tunnels was taken apart on the first night and a cat appeared to be the culprit. This is unsurprising given that cat food was used for bait. However, it does



Hedgehog and Wood Mouse footprints

highlight the issue that wildlife in the surrounding area is subject to the presence of domestic cats and the dangers they present. Interestingly, mouse footprints were found in the hedgehog tunnels even if they were not found in those intended for them. The footprints were most likely made by Wood mice. They could have been made by Yellow-necked mice as it is very hard to differentiate their footprints from each other but, given the habitat, Wood mice are the most likely option.

Reptile mats – 4 reptile mats were placed 11 days before the BioBlitz. No reptiles were found to be using them as a refuge on the morning of the 5th of July. However, reptiles are more likely to use these mats when temperatures are low as a means of warming themselves up in the morning. When it is warmer they have less use for them. Therefore, there may be more reptiles present on the site which we did not observe.

Kick Sampling – on the day of the BioBlitz two members of the MDNHS Committee used a kick sampling net to take samples of river life by the bridge next to St Aldhelm's Mead. This provided information about the presence of invertebrates like Blue-winged Olives, Caddisfly and Mayfly lava.

Bat Detectors – a variety of bat detectors were used at the ‘Dusk Detectives’ event on July the 2nd to identify which bats were present. Bats were also seen and it was possible therefore to do some of the identification by sight.

Moth Trap – moths are attracted to UV light. Therefore, a large moth ‘trap’ was constructed on the 2nd of July to attract them so that they could be recorded. Although the word ‘trap’ is used, moths are not hurt by this but are merely attracted to one point where they can be observed and photographed.



Setting up the moth trap for the Dusk Detectives event

Analysis of Records by Species / Group

The following section takes each species / group in turn. The records collected at the BioBlitz are compared to what a healthy example of a British lowland river corridor should look like in an ideal world and suggests ways in which St Aldhelm’s Mead might be improved in order to achieve that.

Trees and Shrubs

An ideal lowland British river corridor like the Avon at St Aldhelm’s Mead should feature a dynamic, semi-natural woodland structure: damp-tolerant trees stabilizing the riverbanks, a diverse scrub layer, and canopy trees in the floodplain.

The list of trees and shrubs identified during the BioBlitz contains a strong core of native woody species, alongside a few garden escapes and non-native trees that would benefit from management.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
Ideal Native Riparian Trees	Alder, Crack Willow	Essential. Alder root systems stabilize bank walls and host nitrogen-fixing bacteria, while Crack Willow supports hundreds of insect species and provides deadwood habitat over water.
Native Scrub & Understory	Alder Buckthorn, Blackthorn, Bird Cherry, Dogwood, Elder, Hawthorn, Holly, Honeysuckle, Wayfaring Tree, Wild Plum/Bullace	High Value. Provides excellent structural diversity, early spring nectar (Blackthorn, Hawthorn), and autumn berry crops for birds. Alder Buckthorn is notably the primary larval food plant for the Brimstone butterfly.
Native Canopy Trees	Common Oak, Ash, Silver Birch	High Value. Oak provides unmatched invertebrate biodiversity. Ash is valuable for light canopy, though Ash Dieback (<i>Hymenoscyphus fraxineus</i>) requires monitoring.
Undesirable / Invasive Escapes	Snowberry, Privet Honeysuckle (<i>Lonicera nitida</i>)	Remove / Control. Both are invasive non-native garden escapes. Snowberry forms dense thickets via suckers, completely shading out native ground flora along riverbanks.

Species Category	Recorded Species	Ecological Context & Value
Non-Native / Introduced Species	Cypress, Lilac, Purple Cherry, Sycamore	Low to Moderate Value. Cypress and Lilac offer minimal value to local fauna. Sycamore supports aphids (a food source for birds), but its shade-casts heavily and can outcompete native saplings like Oak and Alder.

What a "Healthy" Lowland River Area Should Ideally Feature

To gauge the health of St Aldhelm's Mead, look for these key structural and floristic elements:

- **Overhanging Riparian Canopy:** A mix of young, mature, and decaying Alders and Willows leaning over the water to create shaded, cool water zones (crucial for fish during summer heatwaves) and root crevices for otters and water voles.
- **Complex Deadwood:** Submerged deadwood (woody debris) in the water for aquatic invertebrates and standing dead trees on the banks for woodpeckers and bats.
- **Absence of Invasive Shading:** Unshaded sections of bank that allow native tall herb vegetation (e.g., Purple-loosestrife, Meadowsweet, Water Mint) to thrive without being blanketed by species like Snowberry or non-native Himalayan Balsam.

Recommendations for Improvement

1. **Target Invasive Non-Natives:** Prioritize the removal of **Snowberry** and **Privet Honeysuckle**. Removing these will free up bankside light for native wetland wildflowers and ground flora.
2. **Selective Sycamore & Cypress Management:** Consider halo-thinning (removing trees or vegetation surrounding a mature tree to reduce competition for resources) or managing young Sycamore and Cypress trees where they directly shade out native Oak, Alder, or light-demanding bankside vegetation.

3. **Coppicing & Pollarding Cycle:** Utilise rotational pollarding for the Crack Willows and coppicing for Hazel/Dogwood/Elder along the meadow margins to maintain a diverse structure of light and shade along the water's edge.
4. **Leave Deadwood *in situ*:** Unless it poses an immediate flood risk to infrastructure, leave fallen wood or standing dead timber (especially Alder/Willow) near the riverbank. If there are concerns about wood falling on the public, remove upper parts of the tree and leave a 'monolith' as shown below.



Dead Black Poplar turned into a Monolith rather than removing it

There are a few key native species missing from the BioBlitz list that we would typically expect—and hope to see—in a thriving, ecologically diverse lowland river and floodplain meadow like St Aldhelm's Mead.

Adding or encouraging these missing trees and shrubs would plug specific ecological gaps, particularly for specialized insects, edge-structure, and bank stability.

Key Wetland & Riparian Trees Missing

- **Goat Willow / Pussy Willow (*Salix caprea*) & Grey Willow (*Salix cinerea*)**
 - **Why they matter:** Crack Willow was recorded, but the smaller bushier willows (*S. caprea* and *S. cinerea*) are vital for a healthy river edge. Goat Willow blossoms very early in spring, providing one of the single most

critical early nectar sources for queen bumblebees and emerging solitary bees. It is also a primary food plant for the caterpillars of the Purple Emperor butterfly.

- **White Willow (*Salix alba*)**

- **Why it matters:** A classic feature of British riverbanks. It grows larger than Grey/Goat willow, takes exceptionally well to pollarding, and provides deep, fibrous root mats submerged in the water margin that offer refuge for fish fry and aquatic invertebrates.

- **Native Black Poplar (*Populus nigra* subsp. *betulifolia*)**

- **Why it matters:** A hybrid poplar was recorded, but Britain's native Black Poplar is one of our rarest native timber trees, traditionally found on river floodplains. Reintroducing a true native specimen would be a major conservation win for the site.

Key Understory & Wetland Edge Shrubs Missing

- **Guelder Rose (*Viburnum opulus*)**

- **Why it matters:** A classic, high-value wetland shrub. It thrives in damp soils along riverbanks and marshy woodland edges. Its large flat heads of white flowers attract hoverflies and bees, while mistle thrushes and bullfinches favour its translucent, bright red autumn berries.

- **Spindle (*Euonymus europaeus*)**

- **Why it matters:** Excellent for transitional scrub zones between the wet river margin and dry meadow. It supports a wide variety of aphids (which feed ladybirds and hoverfly larvae) and hosts the caterpillars of the Magpie moth.

- **Hazel (*Corylus avellana*)**

- **Why it matters:** While often associated with drier woods, Hazel is a fundamental component of the dynamic scrub layer on floodplain edges. If managed via coppicing, it creates varied light levels on the ground and provides hazelnuts for small mammals (wood mice, dormice) and birds like nuthatches.

- **Field Maple (*Acer campestre*)**

- **Why it matters:** Britain's only native maple. It handles damp soils well and provides a much better ecological alternative to Sycamore. Its leaves

produce high-nutrient leaf litter that breaks down quickly, enriching the riparian soil and feeding terrestrial invertebrates.

- **Dog Rose (*Rosa canina*) & Field Rose (*Rosa arvensis*)**
 - **Why it matters:** Scrambling wild roses add physical structural complexity to Blackthorn and Hawthorn scrub margins. They provide summer flowers for pollinators and winter rosehips for greenfinches and small mammals.

Ecological Impact of Bringing Them In

If you choose to plant or manage for these missing species, prioritize **Goat Willow** and **Guelder Rose** near the water's edge, and **Hazel** or **Field Maple** set slightly back on the higher meadow banks. This will widen the blossom/nectar window from early March (Goat Willow) through late summer, while significantly diversifying the winter berry supply.

Plants

The recorded plant flora shows a strong baseline of classic wetland species and valuable native meadow herbs, alongside a notable presence of nutrient-loving (nitrophilous) plants and a few high-priority invasive non-natives.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
High-Value Wetland & Riparian Flora	Meadowsweet, Purple Loosestrife, Water Forget-me-not, Water Mint, Wild Angelica, Yellow Flag Iris, Pendulous Sedge, Unspecified Sedge	Essential. Excellent structural and nectar diversity for pollinators and aquatic fauna. Water Mint, Purple Loosestrife, and Meadowsweet provide crucial long-season forage and stabilize soft bank edges.
Floodplain Meadow &	Black Medick, Brown Knapweed, Common Knapweed, Common Bent	Moderate to High Value. Brown and Common Knapweed, Red Campion, and Oxeye Daisy are

Species Category	Recorded Species	Ecological Context & Value
Grassland Species	Grass, Common Comfrey, Cocksfoot, Meadow Fescue, Oxeye Daisy, Red Campion, Self-heal, White Clover	flagship meadow perennials that support bees, hoverflies, and butterflies.
Shade & Woodland Edge Plants	Enchanter's Nightshade, Garlic Mustard, Ground Ivy, Herb Robert, Wild Geum (Wood Avens), Wood Dock, Silky Wall Feather Moss	Good Understory Value. Garlic Mustard is the primary larval food plant for the Orange-tip butterfly. Herb Robert and Ground Ivy offer good spring ground cover under tree canopies.
Nutrient-Rich / Ruderal Competitors	Blackberry/Bramble, Bristly Ox-tongue, Cleavers, Creeping Buttercup, Creeping Thistle, False Brome, False Oat Grass, Hogweed, Nettle, Perennial Rye Grass, Spear Thistle, Yorkshire Fog	Indicators of Disturbance/High Nutrients. These species thrive in high-phosphate/nitrate soils and heavily managed or compacted ground which is an accurate description of St Aldhelm's Mead at present. While Nettle and Bramble have high wildlife value, they easily smother delicate meadow flowers if uncontrolled.
High-Priority Invasive Escapes	Himalayan Balsam, Virginia Creeper	Remove / Eradicate Immediately. Himalayan Balsam is a Schedule 9 invasive species that rapidly smothers native riverbank flora and leaves banks bare and vulnerable to winter erosion.

Species Category	Recorded Species	Ecological Context & Value
		Virginia Creeper suppresses native ground flora along wood margins.
Minor Garden Escapes / Weeds	Lemon Balm, Pineappleweed, Petty Spurge, Slender Speedwell	Low Priority Control. Non-native garden escapes or urban weeds typical of high foot-traffic sites. They generally present low ecological risk compared to Balsam.

What a "Healthy" Lowland River Flora Should Ideally Feature

- **Zoned Riparian Margins:** A clear transition from true aquatic in-stream vegetation (e.g., Water Crowfoot) to lush, tall emergent herbs (Water Mint, Meadowsweet) on wet margins, free from dominant invasive monocultures like Himalayan Balsam.
- **Low-Nutrient Meadow Turf:** A high diversity of fine-leaved grasses (Sweet Vernal-grass, Common Bent) intermixed with lower-growing herbs (Bird's-foot Trefoil, Yellow Rattle), rather than dense stands of coarse Perennial Rye Grass, Nettles, and Thistles.
- **Complex Margin Habitat:** Patchy stands of native Bramble and Nettle kept back from the main meadow to provide caterpillar food plants and cover without swamping light-demanding wildflowers.

Recommendations for Site Improvement

1. **Prioritize Himalayan Balsam Control:** Organize a dedicated community "balsam bash" in late May/June (before the seed pods explode). Pulling this shallow-rooted plant before it sets seed is the single most urgent action to protect riverbank biodiversity at St Aldhelm's Mead.

2. **Implement a Late-Summer Hay-Cut Regime:** Rather than constantly mowing the area to a low level, allow the grass to grow and cut paths through it for the public to enjoy. It will increase the butterfly population which will delight the public. Design the paths to lead, occasionally, to the river's edge providing the public with the opportunity to get close to the river but leaving most of the riverbank 'out of reach' which will encourage wildlife that is wary of human presence.

Then, in order to reduce soil nutrients and suppress competitive rank grasses (False Oat Grass, Rye Grass) and Nettles, cut the meadow areas in late July/August after seeds have set. Always **remove the arisings**

(cuttings) to prevent soil enrichment. The cuttings could be put into compost areas so that any benefits from the plants are not lost.

It also means that there is no additional cost to the Council of taking cuttings away.



Meadowsweet. Credit Imelda Bell.

3. **Establish Bankside Buffer Strips:** Stop rotational mowing within 3 to 5 meters of the water's edge. Allow native marginal species like Water Mint, Yellow Flag Iris, and Purple Loosestrife to establish natural, un-mown fringes that filter runoff and shelter wildlife.
4. **Targeted Bramble and Thistle Scrub Management:** Retain small, rotational patches of Bramble and Nettle along hedgerows for larvae and nesting birds, but clear invasive encroaching patches from the main open grassland.

Key Missing Flora to Enhance Ecological Diversity

Adding these missing native species via green hay (a donation from an existing species-rich hay meadow of hay just before the seeds drop), native seed mixes, or plug planting would significantly raise the botanical quality and ecological capacity of the site:

In-Stream & Wet Bank Species

- **Stream Water-crowfoot (*Ranunculus fluitans*) / Common Water-crowfoot:** Essential submerged plant in clean Avon river stretches, providing critical nursery habitat for fish fry and river invertebrates.
- **Marsh-marigold (*Caltha palustris*):** Provides brilliant early-spring nectar (March–May) along wet banks before most other plants bloom. This may exist, the BioBlitz took place in July, out of the Marsh marigold season, but it is worth mentioning in case this plant is missing because it would be a valuable addition.
- **Water Forget-me-not (*Myosotis scorpioides*) / Water Speedwell (*Veronica anagallis-aquatica*):** Low-growing edge stabilizers that cover muddy, exposed banks.
- **Brooklime (*Veronica beccabunga*):** Forms dense creeping mats in shallow margins, trapping sediment and providing cover for aquatic insects.

Floodplain Meadow & Grassland Species

- **Yellow Rattle (*Rhinanthus minor*):** Known as the "meadow maker." It is a hemi-parasite on coarse grasses (like Rye Grass and Cocksfoot), weakening them and allowing wildflowers like Knapweed and Oxeye Daisy to expand.
- **Bird's-foot Trefoil (*Lotus corniculatus*):** One of the most important larval food plants in the UK (supporting Common Blue butterflies) and a primary nectar source for bumblebees.
- **Ragged-Robin (*Silene flos-cuculi*):** A classic British damp meadow flower that thrives in floodplain soils and attracts long-tongued pollinators. This can be seen growing beside the car park at Aldi in Malmesbury so should be present at St Aldhelm's Mead!
- **Lady's Bedstraw (*Galium verum*) & Field Scabious (*Knautia arvensis*):** Excellent dry-ridge meadow species that widen the flowering window late into July and August.



Common Carder bumblebee on Common Comfrey

Insects

The list of insect and invertebrate records is exceptionally strong and paints a picture of a vibrant, multi-layered habitat. The presence of sensitive aquatic larvae alongside a rich diversity of meadow butterflies, predatory beetles, and pollinators indicates that St Aldhelm's Mead is currently supporting a complex trophic web.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
High-Value Aquatic & Riparian Indicators	Banded Demoiselle, Beautiful Demoiselle, Azure & Blue-tailed Damselflies, Blue-winged Olive, Mayfly, Caddisfly larvae, Pond Skater, Water mite	Excellent. Mayflies, Blue-winged Olives, and Caddisflies are classic indicators of clean, well-oxygenated water. Demoiselles require unpolluted flowing water and tall emergent bankside vegetation to complete their life cycles.
Meadow & Grassland Specialists	Meadow Brown, Ringlet, Gatekeeper, Small Skipper, Roesel's Bush Cricket, Meadow Plant Bug, Grass-veneer Moths	High Value. This assemblage proves there are good patches of tall, native, uncut grasses (like Cocksfoot and Meadow Fescue from the plant list) which these species rely on for breeding and larval food although these might be on the opposite bank of the river rather than in St Aldhelm's Mead.
Pollinators & Predators (Beneficials)	Bumblebees (Common Carder, Early, Red-tailed), Native Ladybirds (6, 7, 22-spot, Cream-spot), Hoverflies (Marmalade, Drone fly), Common Red Soldier	Essential. A highly diverse predatory guild (ladybirds, assassin bugs, parasitic wasps) naturally controls aphid/caterpillar populations. The

Species Category	Recorded Species	Ecological Context & Value
	Beetle, Assassin Bug, Ichneumonid wasp	bumblebees and hoverflies indicate a healthy nectar supply.
Woodland Edge & Scrub Species	Brimstone, Speckled Wood, Peacock, Red Admiral, Blue & Red-legged Shield Bugs, Alder Leaf Beetle, Smooth Spangle Gall Wasp	High Value. These indicate good transitional zones. The Brimstone relies entirely on the Alder Buckthorn recorded, while Red Admirals and Peacocks rely on sunny patches of Nettle.
Invasive Non-Native Species	Harlequin Ladybird	Undesirable. A highly invasive predator that outcompetes and actively preys upon the larvae of native ladybird species (like the 7-spot and Cream-spot). However, it may not be possible to do anything about these in isolation.

What a "Healthy" Lowland River Insect Community Should Ideally Feature

- **Riverfly "EPT" Abundance:** A healthy Avon stretch should teem with Ephemeroptera (Mayflies), Plecoptera (Stoneflies), and Trichoptera (Caddisflies). These are the bedrock of the aquatic food chain for fish, Grey Wagtails, and Daubenton's bats. Members of MDNHS have recently undertaken training in how to survey for these and will be setting up a testing zone at Daniel's Well nearby. This will lead to regular monitoring of the presence and health of these aquatic species.
- **Complex Margin Architecture:** Emergent plants (like the sedges and Purple Loosestrife) standing tall out of the water. Damselfly and dragonfly nymphs physically need these stems to climb out of the water to emerge into adults.

- **Structural Grassland Mosaics:** A mix of short turf for ground-hunting spiders/beetles, alongside dense tussocky grass that provides overwintering sites for bumblebee queens and bush crickets.
- **Bare Earth and Deadwood:** Un-vegetated, sunny banks for solitary mining bees to burrow into, and rotting wood for saproxylic (deadwood-eating) beetles. There are banks close to the football pitch which might be ideal for this purpose.

Recommendations for Site Improvement

1. **Protect Emergent Bankside Vegetation:** Ensure that any riverbank strimming or management leaves dense, uncut fringes of sedges and rushes right at the water's edge. Trimming these to the ground destroys the emergence pathways for demoiselles and damselflies.
2. **Leave "Messy" Overwintering Refuges:** Roesel's Bush Crickets and many butterfly caterpillars overwinter deep inside grass tussocks. Ensure at least 20-30% of the meadow margins are left completely uncut over winter on a rotational basis. Additionally, gather cut grass and other woody trimmings into compost areas and dead hedges to provide places for these species to spend the winter in.



Roesel's Bush-cricket

3. **Retain Sunlit Nettle Patches:** The Red Admirals and Peacocks need nettles to breed, but they prefer them in full sun rather than deep shade. Keep some nettle patches in warm, sheltered, south-facing spots. The public tend to consider this messy and are concerned about getting stung. Signage calling the area a 'Butterfly Nursery' might help to educate the public about their value.
4. **Monitor Harlequin Ladybirds:** While eradication is impossible, observing their numbers during future BioBlitzes will help track their impact on the site's impressive native ladybird diversity.

Key Missing Insects to Enhance Ecological Diversity

While the list gathered at the BioBlitz is fantastic, the absence of a few classic groups suggests areas where habitat could be subtly improved to draw them in:

- **True Dragonflies (Anisoptera):** (e.g., Broad-bodied Chaser, Southern Hawker, Emperor Dragonfly). Damselflies and Demoiselles tolerate flowing water well, but large dragonflies often prefer stiller, deeper backwaters, pools, or a nearby pond. Creating a small scrape or backwater bypass on the floodplain could attract them. MDNHS proposed ways in which the newly acquired, Daniel's Well area might be improved for wildlife and public enjoyment and one of the suggestions was the addition of a pond. This would be a good start but maybe more than one pond could be added in time.
- **Stoneflies (Plecoptera):** The missing "P" in the EPT riverfly triad. They are extremely sensitive to pollution and low oxygen. Improving in-stream flow diversity (using woody debris to create riffles) can help encourage them.
- **Solitary Bees (Mining & Leafcutter Bees):** A number of social bumblebees were recorded, but solitary bees make up the vast majority of UK bee species. Creating south-facing, sparsely vegetated "bee banks" (scraped back to bare soil) will attract species like the Red Mason Bee or Ashy Mining Bee.
- **Orange-tip Butterfly & Cinnabar Moth:** The site has Garlic Mustard (Orange-tip food plant) and Ragwort (Cinnabar food plant). If these plants are allowed to flourish in sunny spots without being mown down too early, it should be easy to attract these striking native species next spring and summer. It is also important for Ragwort to be allowed to flourish in places like St Aldhelm's Mead where horses are not grazing. Ragwort is dangerous for horses when eaten and consequently is removed in many places. Therefore, where horses are not grazing, it is helpful to the ecosystem in general for these plants to be allowed to thrive.

Birds

The avian records collected at the BioBlitz present an interesting combination of classic British river specialists, summer migratory insectivores, and adaptable edge-of-town woodland species. The presence of apex aquatic predators like the Kingfisher alongside aerial feeders like Swifts, Swallows, and House Martins confirms that St Aldhelm's Mead provides high-quality foraging habitat across both the water channel and open skies.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
High-Value Riparian Specialists	Kingfisher, Mallard, Moorhen, Coot	Essential Flagships. The Kingfisher relies on clean, clear water with healthy populations of small fish (like bullheads and minnows) and overhanging bankside perches. Moorhens and Coots utilize dense emergent margin plants (Yellow Flag Iris, Sedges) for nesting cover.
Summer Migrants & Aerial Insectivores	Swift, Barn Swallow, House Martin, Blackcap, Chiffchaff	High Conservation Value. Swifts, Swallows, and Martins depend heavily on the massive emergent insect hatches (mayflies, caddisflies) over the Avon. Blackcaps and Chiffchaffs thrive in the dense Blackthorn and Hawthorn scrub for nesting and foraging.
Meadow & Scrub Specialists	Linnet, Song Thrush, Dunnock, Goldfinch, Wren	High Value. Linnet and Song Thrush are UK Red/Amber-listed species of conservation concern. Linnets rely on seed-bearing meadow herbs and dense scrub, while Song Thrushes feed heavily on snails and earthworms in damp soils.

Species Category	Recorded Species	Ecological Context & Value
Woodland Edge & Garden Birds	Blackbird, Blue Tit, Long-tailed Tit, Robin, House Sparrow, Collared Dove, Wood Pigeon	Good Baseline Diversity. Long-tailed Tits and Blue Tits rely on native canopy trees (Oak, Willow, Alder) for caterpillars. House Sparrows benefit from the meadow's insect supply during their chick-rearing season.
Generalists, Corvids & Raptors	Carrion Crow, Jackdaw, Magpie, Red Kite	Top Predators & Scavengers. Red Kites indicate good open floodplain foraging. Corvids play an important natural cleanup role, though high corvid densities can sometimes pressure small songbird nests in exposed scrub.

What a "Healthy" Lowland River Avian Community Should Ideally Feature

- **Nesting & Perching Bank Architecture:** Steep, un-trampled earthen riverbanks suitable for Kingfisher nest burrows, paired with low, horizontal branches (overhanging Alder/Willow) to act as hunting perches over shallow riffles.
- **Continuous Scrub-to-Grassland Margins:** Thick, un-mown scrub corridors (Hawthorn, Bramble, Blackthorn) that allow skulking species like Dunnocks, Wrens, and Warblers to nest and move safely away from domestic cats and dogs.
- **Abundant Aerial Prey Production:** Intact river channel hydraulics (how water moves through the natural open air water channels) that sustain massive summer hatches of aquatic insects, sustaining Swifts, Swallows, and Martins throughout their critical breeding cycles.

Recommendations for Site Improvement

1. **Protect Kingfisher Nesting Banks:** Identify any steep, sandy vertical bank sections along the Avon stretch at St Aldhelm's Mead and ensure they are fenced or screened from dog access to prevent disturbance during their breeding season (March–August).

2. **Install Artificial Nest Features:** Consider placing an artificial Kingfisher nesting bank. MDNHS is installing Swift nest boxes on nearby local buildings and offering advice to those with Swift nests in their homes close to the Mead to support aerial insectivore populations.
3. **Enhance Winter Seed Provisions:** Leave sections of the meadow uncut over winter (especially seed-rich plants like Knapweed, Thistles, and Teasel) to provide critical winter food for Linnets, Goldfinches, and wintering finches.
4. **Manage Scrub Edge for Song Thrushes:** Retain damp, leaf-littered ground under thickets of Hawthorn and Hazel to provide cool, moist foraging ground for Song Thrushes to hunt for snails during dry summer months.

Key Missing Birds to Enhance Ecological Diversity

While the BioBlitz bird list is strong, adding or managing for these classic missing lowland river specialists would elevate the site's ecological status even further:

River & Wetland Specialists

- **Grey Wagtail (*Motacilla cinerea*):** A striking UK Amber-listed bird that nests exclusively along fast-flowing rivers with exposed shingle or stony margins, feeding on emerging aquatic flies. This bird is seen along the Avon in Malmesbury from time to time but really should be a common sight.
- **Pied Wagtail (*Motacilla alba*):** Common along wet meadow edges and riverbanks where short, grazed or cut turf meets the water's edge.
- **Dipper (*Cinclus cinclus*):** Though more typical of upland streams, Dippers do occur on clean, stony stretches of the Wiltshire Avon system where good riffle-pool sequences exist. Dippers have been seen recently (it may be the same one) near The Spice Merchant and The Bowls Club. It would be fabulous to provide the right conditions for this bird to become a Malmesbury resident.
- **Reed Warbler (*Arocephalus scirpaceus*) & Sedge Warbler (*Acrocephalus schoenobaenus*):** Summer migrants that nest in tall, dense stands of Common Reed (*Phragmites australis*) or large Sedge beds along river margins.
- **Reed Bunting (*Emberiza schoeniculus*):** A Red-listed seed-eater that uses damp meadow scrub for nesting in summer and relies on seed-bearing plants (like Thistles, Knapweed, and Sedges) left standing over winter. Leaving 20–30% of the meadow margins uncut over winter would be the single best management action to attract and support Reed Buntings at St Aldhelm's Mead.

Floodplain & Woodland Edge Birds

- **Bullfinch (*Pyrrhula pyrrhula*):** A shy, Red-listed species that relies heavily on mature Blackthorn/Hawthorn scrub for spring buds and autumn berries (such as the Guelder Rose and Spindle suggested under plant additions).
- **Kestrel (*Falco tinnunculus*):** An Amber-listed raptor that hunts voles and mice over tussocky meadow grassland. Creating un-mown grass tussock zones would directly support their hunting territory. Also adding a Kestrel nest box would support their reproduction. MDNHS has been installing Kestrel, Barn owl, Tawny owl and Little owl boxes in the area in 2026 and therefore has the expertise to help with this.
- **Barn Owl (*Tyto alba*):** A flagship species of UK floodplain meadows. Installing a dedicated Barn Owl nest box on the boundary edge of St Aldhelm's Mead—overlooking un-mown rough grassland rich in Field Voles—would be an outstanding conservation initiative.

Mammals

The recorded mammal list provides important insights into the ecosystem of St Aldhelm’s Mead. The confirmed presence of three bat species foraging along the river corridor, alongside field signs of an Otter, demonstrates that the Avon channel and its immediate air space are actively supporting top aquatic and aerial predators.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
High-Value Aquatic Apex Predator	Otter (<i>Lutra lutra</i>)	Flagship Species. Protected species under UK law. The presence of feeding remains (predated crayfish) confirms the river provides suitable foraging grounds. Otters require clean water, healthy fish/crayfish stocks, and undisturbed riverbank cover for holts and couches (an otter’s ‘day bed’ made in the riverside vegetation).

Species Category	Recorded Species	Ecological Context & Value
Aerial Insectivores (Bats)	Common Pipistrelle, Soprano Pipistrelle, Noctule	High Conservation Value. All UK bats are strictly protected. Soprano Pipistrelles specialize in wetland foraging (feeding heavily on midge and caddisfly hatches over water). Noctules rely on mature trees (Oak, Ash, Poplar) for roosting and hunt high over open meadow spaces.
Native Small Mammals	Wood Mouse / Yellow-necked Mouse West European Hedgehog	Essential prey base. Key seed dispersers that support local predators (owls, kestrels, foxes). Please note the footprints found are most likely to be from Wood mice and not Yellow-necked mice but it is not possible to differentiate based upon footprints. High Conservation Value. West European Hedgehog (<i>Meles meles</i> / <i>Erinaceus europaeus</i>) is a UK Red-listed mammal (Vulnerable). Floodplain meadows and hedgerow margins provide vital foraging grounds for beetles, caterpillars, and earthworms.
Invasive Non-Native Species	Grey Squirrel	High-Impact Competitor. Introduced species that outcompetes native Red Squirrels, strips bark from young broadleaf trees (particularly Sycamore, Oak, and Beech), and preys on songbird eggs and nestlings.

What a "Healthy" Lowland River Mammal Community Should Ideally Feature

- **Continuous Unbroken Riparian Corridors:** Dense bankside vegetation (brambles, tall sedges, overhanging roots) that allows Otters, Water Voles, and shrews to navigate the river edge safely without crossing open, exposed ground.
- **Complex Ground Architecture:** Tussocky, un-mown grass, log piles, and leaf litter that create a "sub-nival" matrix of tunnels for voles, mice, and shrews, away from light pollution and domestic pets.
- **Mature Roosting Trees & Dark Corridors:** Old, cavity-bearing trees (standing deadwood, mature Willows/Oaks) that provide bat roosts, coupled with minimal artificial lighting along the watercourse to protect light-sensitive bat species. Artificial Light At Night (ALAN) is damaging to a range of wildlife apart from bats such as moths, hedgehogs, badgers and owls. This is a genuine issue which should be addressed.

Recommendations for Site Improvement

1. **Protect and Monitor Otter Holts/Couches:** Ensure riverbank areas where Otter signs were found remain screened by dense scrub (like Blackthorn or Willow thickets) to prevent disturbance by loose dogs and foot traffic.
2. **Protect Mature Trees & Retain Deadwood:** Maintain cavity-rich trees (such as old Willows, Oaks, and Ash) for bat roosts. Avoid artificial lighting (ALAN) along the river channel, as light spill disrupts bat foraging routes.
3. **Build Habitat Piles / Hibernacula:** Stack logs, timber arisings, and cut brush along woodland and meadow edges to provide shelter and overwintering sites for small mammals and hedgehogs.
4. **Develop Rough Grassland Buffers:** Leaving 3 to 5-meter un-mown strips along hedgerows and the riverbank creates the dense cover needed by Field Voles and Shrews.

Key Missing Mammals to Enhance Ecological Diversity

While the bat, otter and hedgehog records are excellent, several classic British lowland river and floodplain mammals are missing from the BioBlitz findings:

Wetland & River Specialists

- **Water Vole (*Arvicola amphibius*):** Britain's fastest-declining wild mammal. They require steep, earthy banks for burrowing and dense herbaceous bankside cover (like Yellow Flag Iris, Water Mint, and Sedges) for food and protection against Mink. Malmesbury used to have many Water voles but MDNHS has spent 6

months monitoring the waterways using trail cameras and has found no sign of Water voles at all. Unfortunately, MDNHS has evidence that American Mink are present in the area (footprint and dead animal found near Cow Bridge) and Mink are the main reason for the decline in the UK's Water vole population. The only way to encourage Water voles back into our local waterways is to remove the American Mink.

- **Daubenton's Bat (*Myotis daubentonii*):** Known as the "water bat." It skim-hunts inches above the water surface to catch emerging caddisflies and midges. It is a key indicator species for clean, calm river reaches with tree-lined banks. Despite not recording Daubenton's bats during this BioBlitz, MDNHS has recorded them in Malmesbury before. It is likely that they are present along the river in St Aldhelm's Mead but that MDNHS were not out late enough to detect them on this occasion.
- **Water Shrew (*Neomys fodiens*):** Britain's largest shrew, featuring venomous saliva to hunt freshwater shrimp, caddis larvae, and water beetles in clean, oxygenated streams.

Meadow, Woodland & Edge Specialists

- **Field Vole (*Microtus agrestis*):** The primary prey for Barn Owls, Kestrels, and Weasels. They rely entirely on thick, tussocky, un-mown grassland where they build grass-lined runways.
- **Pygmy Shrew (*Sorex minutus*) & Common Shrew (*Sorex araneus*):** Essential insectivores that hunt through damp leaf litter and grass bases for spiders, beetles, and woodlice.
- **Stoat (*Mustela erminea*) & Weasel (*Mustela nivalis*):** Native small carnivores that keep rodent populations balanced and utilize linear scrub corridors and stone walls for hunting.
- **Badger (*Meles meles*):** While Badgers usually dig their setts in drier, elevated ground (such as sloped woodland edges or hedgerows surrounding Malmesbury), damp alluvial meadows like St Aldhelm's Mead represent **prime foraging territory**. Up to 60–80% of a Badger's diet consists of earthworms (*Lumbricus terrestris*). They rely heavily on damp, nutrient-rich riverside soils where worms come to the surface on wet or humid nights. As they snuffle through the topsoil for worms, leatherjackets, and roots, their digging creates small patches of disturbed, bare earth. In a meadow setting, these micro-disturbances give wildflower seeds (like Yellow Rattle or Oxeye Daisy) a place to germinate, preventing rank grasses from forming a solid turf carpet. Like many

nocturnal animals, Artificial Light At Night (ALAN) is a threat to their success. It is important to keep night-time light spill low along the Mead, as bright artificial lighting can disrupt their established foraging paths.

- **Beaver (*Castor fiber*):** No records were found of Beaver during the BioBlitz but MDNHS has found evidence of their presence in recent years in and close to Malmesbury. A juvenile beaver was captured on camera in 2023. Beaver signs were found close to the bypass in January 2024 and another beaver was photographed in Malmesbury in late July 2026 – not long after the BioBlitz. While there is no evidence that they have established territories in the area, it seems clear that this animal will be populating Malmesbury’s waterways before too long. Given their ability to retain water in the landscape and improve environmental conditions for themselves and other animals, these animals may well become a welcome addition.

Reptiles and Amphibians

The single record of a **Grass Snake (*Natrix helvetica*)** swimming along the Leat was a fantastic highlight for the St Aldhelm’s Mead BioBlitz. As semi-aquatic top predators within the UK reptile/amphibian hierarchy, Grass Snakes rely on clean, interconnected river systems, damp meadows, and thriving amphibian populations to survive.

However, recording *only* one herpetofauna species strongly indicates that the site is missing critical breeding and sheltering habitats needed to sustain amphibians and other reptiles.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
High-Value Aquatic Reptile	Grass Snake (<i>Natrix helvetica</i>)	Flagship & Protected Species. Non-venomous and heavily reliant on wetlands. They are exceptional swimmers that hunt amphibians (frogs, toads, newts) and small fish in slow-moving water, Leats, and ditches. They require warm, rotting vegetation heaps (like compost or reed piles) to lay their eggs.

What a "Healthy" Lowland River Herpetofauna Community Should Ideally Feature

- **Clean, Still Aquatic Breeding Sites:** Shallow, sunlit backwaters, ponds, or ditch systems adjacent to the main river channel where water movement is slow enough for amphibians to lay spawn without it being washed away by high currents.
- **Warm Hibernacula & Basking Spots:** South-facing log piles, dry-stone structures, or raised earth banks close to water where cold-blooded species can safely absorb heat in the morning and hibernate frost-free over winter.
- **Egg-Laying & Nesting Compost:** Deep, decomposing organic piles (leaf litter, grass cuttings, reed arisings) situated in warm, undisturbed spots above the flood line, which are essential for Grass Snake egg incubation.

Recommendations for Site Improvement

1. **Construct Grass Snake Egg-Laying Piles:** Create large, dedicated composting heaps (at least 1m × 1m × 1m) using meadow arisings, woodchips, and leaf litter in sunny, un-flooded corners near the Leat. These provide the warm, humid conditions (21°C–28°C) Grass Snakes need to incubate their soft-shelled eggs.
2. **Build Hibernacula along Meadow Edges:** Construct raised hibernacula using rubble, timber logs, and soil capped with turf along dry, south-facing woodland or hedgerow margins. This gives reptiles and amphibians safe, frost-free shelter during winter.
3. **Establish a Floodplain Scrape / Off-River Pond:** Dig a shallow, un-shaded, ground-water-fed scrape or backwater off the main river/Leat. Still water with abundant aquatic vegetation (like Water Mint and Water Forget-me-not) will create an ideal breeding habitat for frogs and newts, which in turn strengthens the food chain for the Grass Snake.

Key Missing Amphibians & Reptiles to Enhance Ecological Diversity

To build a resilient herpetofauna community at St Aldhelm's Mead, managing the habitat to encourage these missing native species is essential:

Amphibians (The Core Food Web)

- **Common Frog (*Rana temporaria*):** A foundational wetland species that spawns in shallow, sunlit still water. They are the primary food source for adult Grass Snakes and keep slug/pest populations in check across damp meadows.
- **Common Toad (*Bufo bufo*):** UK Priority Species. Toads prefer deeper, permanent water bodies for breeding (often wrapping spawn strings around submerged

plant stems) and hunt through damp, tussocky grassland for beetles and worms at night.

- **Smooth Newt (*Lissotriton vulgaris*), Palmate Newt (*Lissotriton helveticus*) and Great Crested Newt (*Triturus cristatus*):** Native newts that rely on weed-rich still water for egg-laying (wrapping individual eggs in leaves of plants like Water Forget-me-not) and spend their terrestrial phase under damp logs, stone piles, and leaf litter. Great Crested Newts are generally rare throughout the country but are relatively successful in this area. A dead GCN was found on the path from the Backbridge Farm development towards the Tennis Club showing that they are living in the town. It should therefore be possible to encourage them to thrive in St Aldhelm's Mead and Daniel's Well if the correct habitat is provided.

Reptiles

- **Slow-worm (*Anguis fragilis*):** A legless lizard (and UK Protected Species) that thrives in transitional scrub edges, tall un-mown meadow grass, and compost heaps. They are harmless, beneficial garden/meadow allies that feed almost exclusively on slugs and soft invertebrates.
- **Common Lizard (*Zootoca vivipara*):** Relies on sunny, open, south-facing grassy banks, fallen timber, and deadwood monoliths for basking, intermixed with dense cover to escape avian predators like kestrels and crows.

Crustacea

The presence of **Signal Crayfish (*Pacifastacus leniusculus*)**—evidenced by otter predation remains—highlights one of the single greatest ecological challenges facing the river system at St Aldhelm's Mead.

While the Otter is putting the invasive crayfish to good use as a rich food source, the Signal Crayfish itself causes severe, long-term degradation to both riverbanks and native aquatic biodiversity.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
High-Impact Invasive Non-Native	Signal Crayfish (<i>Pacifastacus leniusculus</i>)	Severe Ecological Threat. Listed under Schedule 9 of the Wildlife and Countryside Act. Outcompetes native aquatic life, consumes massive quantities of fish eggs

Species Category	Recorded Species	Ecological Context & Value
Species (INNS)		and invertebrates, and burrows heavily into riverbanks—causing extensive bank collapse, siltation, and erosion. It is also the carrier of crayfish plague (<i>Aphanomyces astaci</i>).
Native Aquatic Predator (Implicit)	Otter (<i>Lutra lutra</i>)	High Conservation Value. Otters are one of the few native predators capable of preying on adult Signal Crayfish. While they cannot eradicate the invasive population, their predation provides a natural biological control pressure.

What a "Healthy" Lowland River Crustacean & Macroinvertebrate Community Should Ideally Feature

- **Native White-Clawed Crayfish Population:** Clean, stony river reaches with abundant underwater hideaways (submerged roots, large cobbles) supporting native crayfish free from crayfish plague.
- **Abundant Native Freshwater Shrimps & Isopods:** Thick submerged beds of moss (*Fontinalis*) and water-crowfoot supporting millions of native freshwater shrimps (*Gammarus*), which break down leaf litter and feed trout, bullheads, and wagtails.
- **Stable, Non-Eroded Riverbanks:** Bank structures stabilized by deep live root systems (Alder, Willow) rather than honeycombed and weakened by invasive crayfish burrows.

Recommendations for Site Improvement & Biosecurity

1. **Strict Biosecurity ("Check, Clean, Dry"):** Signal Crayfish transmit the fungal spores of **crayfish plague** on wet boots, nets, and sampling equipment. Ensure all volunteers and visitors working in the river at St Aldhelm's Mead follow strict biosecurity protocols—drying equipment completely or treating it with disinfectant before moving between watercourses.

2. **Promote In-Stream Gravel & Woody Debris:** Signal Crayfish prefer soft, muddy, undercut banks for burrowing. Introducing woody debris and gravel riffles increases water velocity and creates stony riverbed habitat, which helps native invertebrates while making bank burrowing harder. These measures would need to be agreed with the Environment Agency and would probably require the engagement of professionals to implement them.
3. **Protect Otters as Natural Control:** Maintain dense, undisturbed scrub cover along the riverbanks to encourage otters to continue using St Aldhelm's Mead as a primary foraging territory.
4. **Avoid Unlicensed Trapping:** Trapping Signal Crayfish often backfires because traps selectively remove large adults, which leads to a population explosion of smaller, faster-growing juveniles (and requires specific Environment Agency permits).

Key Missing Crustacea to Enhance Ecological Diversity

The following native species represent the benchmark for a healthy Avon river stretch:

- **White-Clawed Crayfish (*Austropotamobius pallipes*):** Britain's only native freshwater crayfish, now endangered due to Signal Crayfish competition and plague. If absent from this stretch (which is likely given the Signal Crayfish presence), protecting isolated upstream tributaries as "ark sites" is critical.
- **Freshwater Shrimp (*Gammarus pulex*):** The vital workhorse of the British riverbed. It feeds on decaying autumn leaves and detritus, converting plant material into animal protein for fish, birds, and predatory insect larvae.
- **Water Hoglouse (*Asellus aquaticus*):** A native freshwater isopod that inhabits soft sediments and slow-moving reaches, playing an essential role in breaking down organic matter along shallow edges and leats.

Fish

Recording a **Chub (*Squalius cephalus*)** during the BioBlitz confirms that the river corridor at St Aldhelm's Mead retains deep pools and water quality sufficient to support large, predatory coarse fish. Chub are tough, adaptable fish that thrive in river reaches with overhanging trees, leaning roots, and variable water velocities.

However, recording *only* one fish species highlights a major sampling or habitat limitation. A healthy stretch of the Bristol Avon should support a diverse, multi-layered fish community spanning small benthic species, migratory salmonids, and classic lowland coarse fish.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
High-Value Native Coarse Fish	Chub (<i>Squalius cephalus</i>)	Indicator of Pool Habitat. Chub require dynamic river structure: deep, slow pools with overhanging trees (for cover and falling terrestrial insects) paired with clean gravel riffles upstream for spawning. Large adult Chub act as top aquatic predators alongside Otters and Kingfishers.

What a "Healthy" Lowland River Fish Community Should Ideally Feature

- **Riffle-Pool-Glide Sequences:** A diverse riverbed topography. Deep pools provide refuge for large fish during summer low flows, while shallow, fast-flowing gravel riffles supply the high oxygen and clean substrates required for spawning.
- **Submerged Aquatic Vegetation & Woody Debris:** Dense beds of Water-crowfoot (*Ranunculus*) and submerged tree roots that give young fish fry safe shelter from currents and visual predators like Kingfishers and Pike.
- **Unobstructed Migratory Routes:** Free passage up and down the river system without impassable weirs, culverts, or severe sluices that block seasonal spawning movements.

Recommendations for Site Improvement

1. **Introduce Large Woody Debris (LWD):** Secure fallen tree limbs or pinned log deflectors along the margins. LWD creates complex flow patterns, scours out deep holding pools for adult Chub, and provides nursery cover for fish fry.
2. **Clean and Restore Gravel Spawning Beds:** Signal Crayfish activity and bank erosion cause fine silt to smother riverbed gravels. Restoring clean gravel riffles allows salmonids and coarse fish to spawn successfully.
3. **Enhance Overhanging Cover:** Retain leaning Alders and Crack Willows along the banks. Overhanging canopies drop terrestrial insects (caterpillars, beetles) directly into the water, providing a primary summer food source for Chub.

4. **Identify and Remedy Passage Barriers:** Assess any local sluices or weirs near the Mead/Leat to ensure fish can migrate freely upstream and downstream during variable flow conditions.

Key Missing Fish to Enhance Ecological Diversity

A healthy lowland reach of the Bristol Avon should ideally support these native species:

Benthic & Small Indicator Species

- **Bullhead (*Cottus gobio*):** A UK Annex II species of high conservation value. They live under large stones in clean, well-oxygenated gravel riffles and are a primary food source for Kingfishers.
- **Stone Loach (*Barbatula barbatula*):** A sensitive bottom-dweller that hunts small aquatic invertebrates in clean, stony riverbeds at night. A Stone-Loach was caught in the river next to the Bowls Club during MDNHS Riverfly Training which means that they are present nearby and may be in the river at St Aldhelm's Mead.
- **Minnow (*Phoxinus phoxinus*):** Form large shoals in shallow glides and margins, providing the core prey base for Kingfishers, Grey Wagtails, and larger fish.

Migratory & Game Fish

- **Brown Trout (*Salmo trutta*):** Thrives in cold, fast-flowing, highly oxygenated water with clean gravels for spawning (redds). Their presence is the gold standard for high river health.

Classic Lowland Coarse Fish

- **Dace (*Leuciscus leuciscus*):** Fast-swimming shoaling fish that inhabit bright, open, gravelly currents alongside Chub.
- **Roach (*Rutilus rutilus*):** Prefers slower glides and weed-rich pools, feeding on algae, crustaceans, and insect larvae.
- **Pike (*Esox lucius*):** The apex ambush predator of lowland rivers, relying on dense stands of submerged weeds (like Yellow Flag Iris roots and pondweeds) to stalk prey.
- **Eel (*Anguilla anguilla*):** Critically Endangered worldwide. European Eels migrate thousands of miles from the Sargasso Sea to live in UK rivers, requiring clean channels and soft substrate to mature.

Fungi

The inclusion of **Inkcap (*Coprinopsis* / *Coprinus* species)** and **Southern Bracket (*Ganoderma australe*)** provides a key look into the nutrient recycling processes and wood decay dynamics operating at St Aldhelm's Mead. Fungi are the principal decomposers of terrestrial ecosystems, responsible for breaking down complex organic matter (lignin and cellulose) and unlocking soil nutrients for plants and trees.

It is worth noting that, while fungi appear throughout the year, they are most common in the autumn. The BioBlitz took place in the summer and therefore, it may not be showing St Aldhelm's Mead in its best light where fungi are concerned.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
Saprobic Soil & Turf Decomposer	Inkcap (<i>Coprinus</i> / <i>Coprinopsis spec.</i>)	High Soil-Recycling Value. Fast-growing saprobic fungi that break down rich organic matter, decaying grass roots, and leaf litter in damp meadow soils. As they mature, their caps deliquesce ("melt") into a black, ink-like liquid that drops spores to the ground.
Wood-Decaying Bracket Fungus	Southern Bracket (<i>Ganoderma australe</i>)	Essential Deadwood & Cavity Creator. A large, perennial, woody bracket fungus that grows on broadleaf trees (especially Beech, Oak, Ash, and Poplar). It causes white rot, slowly softening the heartwood of mature trees to create heart-rot cavities that become prime roosting sites for bats and nesting hollows for birds like the Song Thrush and Woodpeckers.

What a "Healthy" Lowland River Fungal Community Should Ideally Feature

- **Standing & Fallen Deadwood Continuity:** A continuous supply of decaying timber across various stages of decay—from newly fallen branches to ancient, crumbling logs—supporting specialized wood-decaying fungi.
- **Undisturbed Soil Mycorrhizal Networks:** Healthy underground fungal networks (mycorrhizae) that form symbiotic relationships with tree roots (Oak, Birch, Alder) to exchange water and minerals for tree sugars.
- **Un-fertilized Grassland Fungi:** Diverse fungal communities (such as Waxcaps) inhabiting low-nutrient meadow turf that has not been treated with artificial fertilizers or fungicides.

Recommendations for Site Improvement

1. **Retain Deadwood *in situ*:** Leave fallen tree limbs, stump bases, and log piles undisturbed along the river corridor and hedgerows. Fungi rely on sustained moisture and stable microclimates provided by decaying wood.
2. **Avoid Chemical Inputs:** Ensure no synthetic fertilizers, herbicides, or fungicides are applied to the meadow areas, as chemical inputs destroy sensitive soil mycorrhizal networks and suppress wild fungal fruiting.
3. **Protect Veteran Trees with Brackets:** Rather than felling trees displaying Southern Bracket, manage them safely (e.g., retrenchment pruning or creating standing monoliths) to preserve the internal cavities they create for wildlife.

Key Missing Fungi to Enhance Ecological Diversity

To establish a comprehensive baseline for macrofungi, a thriving lowland river habitat with damp woodland margins should support these native indicator species:

Riparian & Damp Wetland Specialists

- **Alder Bracket (*Inonotus radiatus*):** Grows specifically on mature or decaying Alder trees along riverbanks, playing a significant role in creating natural nest holes.
- **Scarlet Elfcup (*Sarcoscypha austriaca*):** Vibrant ruby-red cups found in early spring on damp, fallen hardwood twigs buried under riverbank leaf litter.
- **King Alfred's Cakes / Cramp Balls (*Daldinia concentrica*):** Hard, black, ball-like fungi found almost exclusively on dead Ash timber, providing food for specialized fungus-eating beetles.

Mycorrhizal & Grassland Specialists

- **Fly Agaric (*Amanita muscaria*) / Birch Bolete (*Leccinum scabrum*):** Classic mycorrhizal partners of Silver Birch trees that assist sapling establishment in nutrient-poor soils.

Practical & Realistic Fungi Alternatives for St Aldhelm's Mead

Rather than ancient grassland specialists, these species are far more achievable for the site's ongoing recovery:

Floodplain Meadow & Turf Decomposers

- **Field Mushroom (*Agaricus campestris*):** A classic, native grassland decomposer that colonizes un-fertilized turf quickly. It breaks down organic matter, enriches the soil naturally, and provides food for insects.
- **Meadow Coral (*Clavulinopsis corniculata*) / Yellow Club Fungus:** While related to the broader grassland conservation group, these small yellow coral-like fungi colonize recovering, un-fertilized grasslands much faster than true Waxcaps, serving as a realistic medium-term indicator of soil recovery.
- **Parasol Mushroom (*Macrolepiota procera*):** A striking, large species that thrives in rank, tussocky meadow margins and un-mown tall grassland, decomposing coarse plant stems and grass thatch.

Riparian & Damp Scrub Decomposers

- **Candlesnuff Fungus (*Xylaria hypoxylon*):** Extremely common and fast to establish on dead broadleaf stumps and fallen twigs (Hawthorn, Elder, Willow). It accelerates timber decay and creates micro-habitats for ground beetles.
- **Jelly Ear (*Auricularia auricula-judae*):** Found almost universally on mature or decaying Elder bushes—a shrub present in good numbers at St Aldhelm's Mead. It retains moisture during dry spells, supporting localized humidity for small insects.
- **Velvet Shank (*Flammulina velutipes*):** A winter-fruiting fungus that grows in clusters on decaying broadleaf stumps (especially Willow and Poplar) along damp riverbanks, providing a crucial winter food source for invertebrates when little else is active.

Lichen

The presence of **Maritime Sunburst Lichen (*Xanthoria parietina*)** and **Powdered Ruffle Lichen (*Parmotrema perlatum*)** provides a fascinating biological reading of the

air quality and microclimates at St Aldhelm's Mead. Lichens are exceptionally sensitive bioindicators that directly mirror ambient atmospheric conditions, nutrient levels, and bark chemistry.

Species Analysis: What You Have vs. Ecological Value

Species Category	Recorded Species	Ecological Context & Value
Nitrogen-Tolerant (Nitrophilous) Indicator	Maritime Sunburst Lichen (<i>Xanthoria parietina</i>)	Nutrient Enrichment Indicator. A striking bright yellow-orange crustose/foliose lichen. While naturally found on coastal rocks, inland it is a classic indicator of elevated atmospheric nitrogen (ammonia/nitrates) from agricultural runoff, livestock, or urban vehicle emissions.
Clean Air & High Humidity Indicator	Powdered Ruffle Lichen (<i>Parmotrema perlatum</i>)	High Conservation Value. A large, attractive silver-grey leafy (foliose) lichen with delicate frilly margins. It is highly sensitive to sulphur dioxide pollution but thrives in areas with clean, moist air and high relative humidity—making the damp riparian corridor along the Avon ideal.



Maritime Sunburst Lichen

What a "Healthy" Lowland River Lichen & Fungal Community Should Ideally Feature

- **Diverse Epiphytic Zones:** Mature, ancient trees (Oaks, Willows, Ash, Alders) with varied bark pH levels (from acid Oak bark to basic Elder bark) supporting distinct lichen communities.
- **Old-Growth Continuity:** Standing deadwood, mature bark crevices, and undisturbed damp microclimates that allow slow-growing crustose and beard lichens to establish over decades.
- **Rich Mycorrhizal Network:** A diverse subterranean fungal network in undisturbed floodplain soils, linking tree roots and facilitating nutrient exchange across the meadow.

Recommendations for Site Improvement

1. **Protect Old Bark & Standing Trees:** Retain mature, bark-rough trees (especially mature Ash, Willow, and Oak) and standing deadwood monoliths. Avoid unnecessary tree surgery or scrub clearing that removes shaded, humid trunk zones.
2. **Establish Air Quality Buffers:** Plant native hedgerows and dense understory trees (like Hawthorn, Hazel, and Guelder Rose) along road boundaries and agricultural edges to trap airborne nitrogen dust before it reaches the main meadow.

3. **Minimize Soil & Root Disturbance:** Avoid heavy machinery compaction near mature tree drip-lines to preserve the vital mycorrhizal fungal networks in the soil that support tree health and lichen hosts.

Key Missing Lichens & Fungi to Enhance Ecological Diversity

To establish a comprehensive baseline for lower plants and fungi, a thriving lowland river habitat with damp woodland margins should support these native indicator species:

Clean Air & Epiphytic Lichens

- **Oakmoss Lichen (*Evernia prunastri*):** A tufted, bushy lichen that grows on tree branches in clean air, providing essential nesting material for long-tailed tits and camouflage for caterpillars.
- **Fiscus/Cartilage Lichens (*Ramalina farinacea* / *Ramalina fastigiata*):** Bushy, strap-like epiphytes that thrive on sunlit branches in clean, humid river valleys.
- **Graphis / Script Lichens (*Graphis scripta*):** Crustose lichens that look like ancient writing on smooth bark (such as Hazel, Alder, and young Rowan), indicating stable, long-established humid woodland microclimates.

Suggestions

St Aldhelm's Mead: 5-Year Ecological Enhancement Strategy (2026–2031)

This strategy sets out a phased, realistic roadmap to significantly increase biodiversity at St. Aldhelm Mead in Malmesbury while enriching the site's value as a cherished public park.

By designing habitat improvements that align with community access, the public can actively watch wildlife return—turning the park into an outdoor classroom and a living example of river corridor restoration.

Strategic Core: "Multi-Benefit" Key Actions

To maximize resource efficiency and deliver the greatest ecological return, these multi-benefit interventions form the core of the strategy. Each action simultaneously addresses multiple biological groups recorded in the BioBlitz.

Multi-Benefit Habitat Actions

Action	Species & Biological Groups Benefited	Ecological Impact
1. Un-mown 3–5m Riverbank Buffer Strip	Flora, Insects, Birds, Mammals, Herpetofauna	High Impact. Protects marginal wildflowers (<i>Purple Loosestrife</i> , <i>Meadowsweet</i>), provides emergence stems for Damselflies and Demoiselles, creates sheltered foraging cover for Kingfishers and Sedge Warblers, and establishes safe movement corridors for Otters, Water Voles, and Grass Snakes.
2. Floodplain Scrape & Off-River Backwater Pool	Amphibians, Insects, Birds, Herpetofauna, Flora	High Impact. Solves the critical site deficit of still-water aquatic habitat. Provides essential spawning grounds for Common Frogs, Toads, and Newts, attracts breeding Dragonflies, supplies primary feeding territory for Grass Snakes, and creates habitat for <i>Marsh-marigold</i> and <i>Water Crowfoot</i> .
3. Grass Snake Egg-Laying & Habitat Compost Heaps	Herpetofauna, Insects, Fungi, Small Mammals	Targeted Impact. Generates the core heat (21°C–28°C) required to incubate Grass Snake eggs, provides overwintering shelter for Slow-worms and beetle larvae, creates a nutrient-rich substrate for saprobic fungi (<i>Field & Parasol Mushrooms</i>), and offers nesting cover for Hedgehogs.
4. Yellow Rattle Seeding &	Flora, Insects, Birds, Mammals	Transformative Impact. Yellow Rattle suppresses competitive coarse grasses (<i>Rye Grass</i> , <i>Cocksfoot</i>), opening space for

Action	Species & Biological Groups Benefited	Ecological Impact
Late-Summer Hay-Cut		wildflowers. Removing cuttings lowers soil nutrients over time, expanding nectar sources for pollinators, winter seed heads for finches/buntings, and grass-tussock habitat for Field Voles.
5. Large Woody Debris (LWD) & Gravel Riffles	Fish, Insects, Birds, Crustacea	High In-Stream Impact. Pinning logs and adding gravel creates flow variation, scours out deep holding pools for adult Chub, and cleans spawning beds for Bullheads and Trout. Boosts riverfly larvae (<i>Mayflies</i> , <i>Caddisflies</i>), provides Kingfisher hunting perches, and increases flow dynamics.

Year 1: Quick Wins & Visible Community Impact (0–12 Months)

Focus: Fast, highly visible improvements that control threats, engage local volunteers, and establish clear community amenity zones.

Biodiversity Actions

- **Community "Balsam Bashes":** Mobilize volunteers and youth groups in May and June to pull **Himalayan Balsam** along the riverbank before seed pods burst. This immediately frees up light for native marginal flowers.
- **Establish Riverbank Buffer Zones:** Cease mowing within 3–5 metres of the river's edge (except at designated, stable river viewing points). Allow native plants like Water Mint, Meadowsweet, and Yellow Flag Iris to flower naturally.
- **Construct Grass Snake Egg-Laying Piles:** Build two 1.5m × 1.5m organic composting heaps using meadow cuttings, woodchips, and leaf litter in sunny, un-flooded corners near the Leat.

- **Target Invasive Escapes:** Dig out patches of **Snowberry**, **Virginia Creeper**, and **Privet Honeysuckle** along the woodland edge to prevent ground flora suppression.
- **Install Bird & Bat Boxes:** Erect Swift / House Martin nest boxes on nearby buildings and install bat boxes (targeting Pipistrelles and Noctules) on mature Oaks and Poplars along the park boundary.

Public & Community Integration

- **Clear Amenity Paths:** Maintain mown pathways (2–3m wide) through the meadow areas so visitors, dog walkers, and families can walk comfortably without trampling delicate floral margins.
- **Interpretive Signage:** Install a welcoming, illustrated "BioBlitz Discoveries" board near the entrance explaining the habitat improvements, showcasing key species (Kingfisher, Otter, Grass Snake), and inviting public participation.
- **River Access Points:** Clear 2–3 formalized, safe river access gaps with gravel/timber steps to prevent bank erosion elsewhere and give children safe places for river dipping.

Years 2–3: Medium-Term Structural Enhancement (12–36 Months)

Focus: Habitat diversification, soil nutrient reduction, and active species reintroductions.

Biodiversity Actions

- **Yellow Rattle Seeding & Hay-Cut Regime:** Introduce **Yellow Rattle** (*Rhinanthus minor*) into selected meadow zones in autumn after a hard scarification. Shift to a late-summer (August) hay-cut, ensuring **all cuttings are removed** to lower soil nutrient levels over time.
- **Excavate Floodplain Scrape / Off-River Pond:** Dig a shallow, un-shaded, groundwater-fed scrape or backwater bypass off the Leat or main channel. This will establish the missing still-water breeding habitat for Common Frogs, Toads, and Newts.
- **Instream Woody Debris & Gravel Riffles:** Work with the Environment Agency and local river trusts to pin Large Woody Debris (LWD) along river edges and clean gravel beds to improve spawning habitat for Bullheads, Minnows, and Trout.

- **Woody Species Enrichment Planting:** Plug-plant missing native shrubs along hedgerows and woodland margins, prioritizing **Goat Willow** (early bee nectar), **Guelder Rose** (berries for thrushes), **Hazel**, and **Spindle**.
- **Rotational Pollarding & Deadwood Monoliths:** Begin a rotational pollarding cycle on Crack Willows along the riverbank. Retain standing deadwood timber with Coronet cuts on select Ash trees affected by dieback.

Public & Community Integration

- **Dip Platform at the New Scrape:** Install a timber dipping platform or boardwalk edge at the new floodplain scrape, creating a safe location for local schools and families to study pond life.
- **Guided Nature Walks & Citizen Science:** Host seasonal events run by the Society (e.g., "Dawn Chorus Walks", "Moth & Bat Nights", and "River Dipping Days") to share progress with residents.
- **Natural Play & Seating:** Place rustic benches made from on-site fallen timber (such as Sycamore or Ash) along path edges facing key wildlife zones.

Years 4–5: Long-Term Habitat Resilience & Maturity (36–60 Months)

Focus: Achieving full structural complexity, establishing rare species, and embedding long-term community stewardship.

Biodiversity Actions

- **High-Grade Wildflower Meadow Emergence:** With soil nutrients lowered by yearly hay removals, oversow meadow areas with species like **Bird's-foot Trefoil**, **Ragged-Robin**, **Field Scabious**, and **Lady's Bedstraw**.
- **Black Poplar & Native Tree Continuity:** Plant genuine native **Black Poplar** (*Populus nigra* subsp. *betulifolia*) saplings in the wet floodplain zone to contribute to national conservation efforts for this rare native tree.
- **Establishment of Rare Specialists:** Monitor for the natural return or expansion of sensitive species, including **Water Voles** (utilizing the dense, un-mown banks), **Reed Buntings**, **Grey Wagtails**, and **Dragonflies**.
- **Tree Canopy Halo-Thinning:** Selectively thin young Sycamore and Cypress trees where they directly shade native Oak, Alder, or high-value aquatic vegetation zones.

Public & Community Integration

- **5-Year Repeat BioBlitz (2031):** Conduct a comprehensive repeat survey to measure biodiversity gains against the 2026 baseline, publishing the results for the Malmesbury town community.
- **Volunteer "Friend of St Aldhelm's Mead" Group:** Formalize a local volunteer stewardship group working alongside the Society and Town Council to maintain path cuts, check nest boxes, and manage the annual Balsam control.
- **Educational Wildlife Trail:** Create a self-guided trail (possibly with QR codes if security concerns can be allayed) linked to short audio clips or identification guides detailing the history, trees, river life, and wildlife of the Mead.

Summary Timeline Matrix

Phase	Ecological Improvement	Community & Access Enhancement
Year 1 <i>(Quick Wins)</i>	• Conduct volunteer Himalayan Balsam & non-native weeding. • Establish an un-mown 3–5m riverbank buffer strip. • Build Grass Snake egg-laying compost heaps. Plus the same for Slow worms. • Install bat and bird boxes on mature trees and buildings.	• Establish a clear, mown path network through the meadow. • Install an educational welcome & BioBlitz board. • Formalize 2–3 safe, gravelled river access points.

Phase	Ecological Improvement	Community & Access Enhancement
	• Discontinue all use of insecticides and herbicides.	
Years 2–3 <i>(Medium-Term)</i>	• Sow Yellow Rattle; shift to late hay-cut with arisings removed. • Excavate a shallow floodplain scrape/backwater pool/pond. • Install Large Woody Debris and clean gravel riffles. • Enrich margins with Goat Willow, Guelder Rose, and Hazel. • Investigate the removal / modification of lighting in St Aldhelm's Mead to reduce the negative impact of ALAN.	• Build a timber pond-dipping platform at the new scrape. • Host guided bat, moth, bird, and glow-worm walks. • Place rustic timber seating along key path edges.
Years 4–5	• Allow low-nutrient wildflower meadow turf to mature.	• Conduct the 5-Year Repeat BioBlitz survey (2031).

Phase	Ecological Improvement	Community & Access Enhancement
<i>(Long-Term)</i>	• Plant native Black Poplars in the floodplain zone. • Monitor for Water Vole, Reed Bunting, and Dragonfly recovery. • Halo-thin young Sycamore and Cypress canopy trees.	• Launch a self-guided wildlife & history trail. • Formalize a "Friends of St Aldhelm's Mead" volunteer group.

Disclaimer

Malmesbury and District Natural History Society is a group of people with a combination of professional and lay knowledge of wildlife and nature. The advice is relevant to the site and employs up-to-date ideas and methods of improving a habitat. However, this report has not been produced by a professional organisation.

Thanks

Many people helped to make the BioBlitz and 'Dusk Detectives' event a success. From preparation beforehand; putting out trail cameras, footprint tunnels and reptile mats to surveying the plant life in advance.

At the BioBlitz friends and family helped to set up, host and clear away and specialists joined us to lend their particular knowledge. MDNHS is grateful to you all. We would like to say a special thank you to:

- Imelda Bell for her wonderful photography
- Jason Smith for his specialist knowledge of caterpillars
- Alison Wadsworth for sharing her knowledge of moths after a very long day!

APPENDIX

Please see below for a complete list of records made at the BioBlitz:

Trees and Shrubs

1. Alder
2. Alder buckthorn
3. Ash
4. Blackthorn
5. Cherry – bird
6. Cherry – purple
7. Common Oak
8. Crack willow
9. Cypress
10. Dogwood
11. Elder
12. Hawthorn
13. Holly
14. Honeysuckle
15. Lilac
16. Poplar – hybrid, black
17. Privet
18. Privet honeysuckle (garden escape)
19. Silver birch
20. Snowberry (garden escape)
21. Sycamore
22. Wayfaring tree
23. Wild plum / Bullace

Plants

1. Black medick
2. Blackberry / bramble
3. Bristly ox-tongue
4. Brown knapweed
5. Cinquefoil
6. Cleavers / Goose grass
7. Cocksfoot
8. Comfrey
9. Common bent grass
10. Common daisy

11. Common knapweed
12. Common ragwort
13. Creeping buttercup
14. Creeping thistle
15. Cut-leaved cranesbill
16. Dandelion
17. Enchanter's nightshade
18. False brome
19. False oat grass
20. Fool's parsley
21. Garlic mustard (Jack-by-the-hedge)
22. Greater burdock
23. Greater plantain
24. Greater willowherb
25. Ground ivy
26. Hawkweed
27. Hedge bindweed
28. Hedge mustard
29. Hemlock
30. Herb Robert
31. Himalayan balsam (garden escape and invasive non-native species)
32. Hogweed
33. Ivy
34. Lemon balm (garden escape)
35. Meadow fescue
36. Meadowsweet
37. Nettle
38. Nipplewort
39. Oxeye daisy
40. Pendulous sedge
41. Perennial rye grass
42. Petty spurge
43. Pineappleweed
44. Purple loosestrife
45. Red campion
46. Sedge
47. Self-heal
48. Silky wall feather moss
49. Slender speedwell

50. Sow thistle
51. Spear thistle
52. Virginia creeper (garden escape & invasive non-native species)
53. Water forget-me-not
54. Water mint
55. White clover
56. White dead-nettle
57. Wild angelica
58. Wild Geum / herb bennet / wood avens
59. Wood dock
60. Yellow flag iris
61. Yorkshire fog grass

Insects

1. 6-spot ladybird
2. 7-spot ladybird
3. 22-spot ladybird
4. Alder leaf beetle
5. Altica spec.
6. Anthomyia procellaris
7. Azure damselfly
8. Banded comb-footed spider
9. Banded demoiselle
10. Beautiful demoiselle
11. Blue shield bug
12. Blue-tailed damselfly
13. Blue-winger olive
14. Brimstone butterfly
15. Caddisfly larvae
16. Chrysoteuchia culmella
17. Common aerial yellowjacket
18. Common carder bumblebee
19. Common drone fly
20. Common pondskater
21. Common red soldier beetle
22. Cream-spot ladybird
23. Dingy footman moth
24. Early bumblebee
25. Garden grass-veneer moth

26. Gatekeeper butterfly
27. German wasp
28. Green dock beetle
29. Green-veined white butterfly
30. Harlequin ladybird
31. Hoverfly
32. Ichneumonid wasp
33. Large white butterfly
34. Least carpet moth
35. Little snipe fly
36. Lucilla spec.
37. Marmalade hoverfly
38. Mayfly
39. Meadow brown butterfly
40. Meadow plant bug
41. Oedemera beetle
42. Pale green assassin bug
43. Peacock butterfly
44. Plant bug
45. Red admiral caterpillar
46. Red-legged shield bug
47. Red-sided Eriothrix
48. Red-tailed bumblebee
49. Ringlet butterfly
50. Roesel's bush cricket
51. Silver Y moth
52. Small crane fly
53. Small skipper butterfly
54. Small white butterfly
55. Smooth spangle gall wasp
56. Speckled wood butterfly
57. Tachinidae fly
58. Water mite

Birds

1. Barn Swallow *
2. Blackbird
3. Blackcap
4. Blue Tit

5. Carrion Crow
6. Chiffchaff *
7. Collared Dove
8. Coot *
9. Dunnock
10. Goldfinch
11. House Martin
12. House Sparrow
13. Jackdaw
14. Kingfisher
15. Linnet
16. Long-tailed Tit *
17. Mallard *
18. Magpie
19. Moorhen
20. Red Kite
21. Robin
22. Song Thrush
23. Swift
24. Wood Pigeon
25. Wren

Mammals

1. Grey Squirrel
2. Common Pipistrelle bat
3. Grey Squirrel
4. Soprano Pipistrelle bat
5. Noctule bat
6. Otter (field signs of Otter predating crayfish found on riverbank)
7. Wood Mouse / Yellow-necked Mouse

Reptiles and Amphibians

1. Grass Snake

Crustacea

1. American Signal Crayfish (invasive non-native species remains found)

Fish

1. Chub

Fungi

1. Inkcap
2. Southern bracket

Lichen

1. Maritime Sunburst Lichen
2. Powdered Ruffle Lichen