



Eve Tigwell Consultancy Ltd

Rodden Nature Reserve (ASDA)

Ten-Year Report

**ASDA Walmart Supermarket, Frome
Frome Area Wildlife Group**

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1.0 Summary

Rodden Nature Reserve has increased in species richness of all taxa since its creation; this rate of increase has slowed over time, as would be expected.

One of the notable extant species was Water Vole (*Arvicola amphibius*); occasional sightings and field signs have been recorded over the last five years.

A major change in the area has been the granting of planning permission for a large housing estate (450 units) adjacent to the Reserve. Construction started on phase 1 (200 units) in 2017; possible effects on the Reserve are being monitored.

2.0 Introduction

Rodden Nature Reserve was created in 2004 by the supermarket chain ASDA Walmart, under an S106 Agreement, on agricultural land adjacent to the A362 (Warminster Road) in Frome. The extensive work included: re-profiling a hill; diverting Rodden Brook; re-routing a private road; and creating two main pool areas. This resulted in an 8.7hectare wetland and grassland habitat, which is part of the Flood Mitigation Scheme for Frome. During this work various plantings were made of tree, shrub, herbaceous, grassland, and aquatic species.

A map of the Reserve, it's sections and the adjacent areas is in Appendix 9.1.

Few scheduled species were found to be using the area prior to construction. However, Water Voles were found on Rodden Brook, which was re-routed during construction of the supermarket; an unknown number of animals was trapped under licence and re-located.

The Reserve is open to the public from 1st August to 1st February; otherwise access is restricted to the field adjacent to the A362 (North Meadow) in order to reduce disturbance in the breeding season on the main part of the Reserve.

The Reserve is managed by Frome Area Wildlife Group (FAWG), whilst remaining the property of ASDA Walmart. FAWG is made up of local naturalists, ecological managers, and volunteers who undertake maintenance and monitoring work. Professional maintenance work and surveys are commissioned when required. The management of the Reserve is guided by a series of plans (Rutty, 2006, Tigwell, 2008 - 2017). The main aims of these plans have been to:

- Maintain the area such that it continues to serve its role in the Flood Mitigation Scheme for Frome
- Encourage species diversity
- Encourage the return of previously resident species, such as Water Voles
- Provide a link between other wildlife sites
- Provide a resource for the community

The site includes two of the UK priority habitats which occur in Somerset:

- Lowland mixed deciduous woodland
- Lowland meadows

There is no intent here to repeat the detailed information about the site that was provided in the original management plan (Rutty, 2006), and which is still available for reference.

The construction of a housing estate to the east and south of the Reserve began in 2017. The first phases involves 200 dwellings, whilst the second will take the total to 450 dwellings and a school. The effects of this estate are noted in the body of the report.

This report sets out the development of the Reserve over the last 10 years, highlighting particular changes that have occurred in the last five years (i.e. since the previous report: Tigwell, 2012).

3.0 Survey Inputs

There was no detailed initial survey before the Reserve was created. A management programme for the Rodden Brook Flood Mitigation Scheme was part of the S106 Agreement for the site; this mainly guided the construction of the Reserve, with some indications of longer-term tasks. Wessex Ecological Consultancy (Lawrence, 2000) put forward a more detailed management plan, as part of the Frome Flood Mitigation Scheme, providing some information on the existing flora and fauna.

Somerset Environmental Records Centre (SERC) provided a list of notable species recorded within 1km of the site.

Volunteers surveyed the flora and fauna in 2006 for the initial FAWG management plan (Rutty, 2006).

Since 2006 various taxa have been surveyed both professionally and by volunteers. The majority of species is listed on the website: (www.roddeennaturereserve.org.uk) along with photographs and videos.

Professional surveys of some taxa of invertebrates were commissioned (Pinchen, 2013, 2014, 2016, 2017), along with an aquatic invertebrate survey (Pinchen, 2013, 2014, 2016); a macro-moth survey (Pinchen, 2014, 2016); and a micro-moth survey (Vickers, 2017). A full survey of the flora was carried out (Tigwell, 2008) with ongoing up-dates.

A professional survey for Water Voles was conducted in 2013 (Sperring, 2013). Camera traps were also used to monitor mammal activity in various parts of the site, supported by Longworth trapping for small mammals.

4.0 Management Activities

The original management plan (Lawrence, 2000) has been used as the basis of the management plans and activities to date (Rutty, 2006, Tigwell, 2008 - 2017). Results of the various surveys were fed into these management plans and have led to modifications.

4.1 Original Management Plan Aims:

- Maintain and enhance the wetland areas, so that they become and remain capable of supporting a wide range of aquatic and riparian species
- Maintain and enhance the Water Vole population
- Maintain and enhance the populations of other protected species
- Maintain and enhance the areas of damp and dry grassland, so that they become, and remain capable of, supporting a wide range of plants, invertebrates and other animals
- Maintain and enhance the areas of woodland, so that they become, and remain capable of, supporting a wide range of secondary woodland species
- Monitor colonisation by all taxa, so as to enable adjustments to be made to the management plan, where necessary
- Accommodate controlled public access for quiet enjoyment of the wildlife and natural surroundings of the site.

All the management plans have provided prescriptions for the various sections of the site. A site map is given in Appendix 1 and should be referred to as necessary.

4.2 2006 Management Plan Aims:

- Manage the wet and dry grassland to maintain and enhance floral diversity to encourage diversity and abundance of invertebrates and other taxa
- Minimise spread and dominance of invasive native and non-native species
- Maintain and encourage submerged aquatic vegetation, marginal vegetation and reed bed fringes around the pools and along the riparian habitat
- Maintain the hedges and woodland patches to encourage invertebrates, general fauna and nesting birds on the site
- Create and maintain areas of low, dense scrub to encourage passerine bird species, but minimise further scrub encroachment
- Maintain suitable water levels in the pools throughout the year
- Enhance the habitat at the site for mammals, especially bats and Water Voles
- Carry out regular botanical, invertebrate, and fauna species' monitoring to inform the effectiveness of the detailed management plans
- Create and enhance habitats within the field to the north of the site (North Meadow)
- Involve the local community and educational groups in management and educational activities.

Included in the original management plan, and that of 2006, were prescriptions for grazing. These have not been carried out due to difficulties in obtaining suitable grazing animals which could be moved on and off site with sufficient flexibility. However, un-authorised grazing by up to five horses has taken place at various times, mainly on the North Meadow, but also on the main Reserve and the Upper Area. ASDA has proved very efficient and effective in having these animals removed.

4.3 Management Activities on Reserve:

The management activities for the site fall into two categories: those which are single-occurrence and those which are ongoing; although not necessarily taking place every year.

4.3.1 Single-occurrence Management Activities

- Gravel added to the island to attract bare-ground nesting birds. However, the gap between the island and the main body of the Large Pool was too shallow, so the island has now been colonised by Common Reed (*Phragmites australis*); efforts continue to maintain this area tree-free
- Hedge planted to increase privacy for the house immediately adjacent to the North Meadow (initially damaged by fly-grazing by horses; now a patchy hedge)
- Hedge and trees planted along the North Meadow side of Rodden Brook to provide a visual screen between the North Meadow and the more sensitive wildlife area (completed)
- Groups and individual trees planted in the North Meadow. This was recommended in the Insect Survey as a means of increasing the diversity of the North Meadow (completed)
- Blackthorn (*Prunus spinosa*) hedging planted, deterring human access to the weir from the Reserve (completed, supported by Bramble, *Rubus fruticosus* agg.)
- Fencing removed from around the copse plantations in the Upper Grassland. Some fence posts were left in place and holes drilled to increase the invertebrate breeding habitat (completed – many holes are clearly being used)
- Mixed native hedge and individual trees planted around the road and field edges of the Upper Grassland. Some further trees have been planted due to loss of original trees due to construction of the housing estate (completed)
- The scrape was enlarged to provide shallow water for a longer period of time (completed)
- A second screen was constructed and then enlarged, allowing visitors to view the bird feeding area during the open period (completed; regular maintenance)
- Tree and hedge guards have been removed
- Two otter holts were constructed
- A second beetle bank was constructed (from the material from the new scrape)
- A large floating island was installed
- Emergent poles were installed in the Large Pool (due for replacement)
- The hedge along the road-edge of the North Meadow, including the suckering Common Elms (*Ulmus procera*), was laid
- Other hedges will be laid once they are of a sufficient size

4.3.2 On-going Management Activities:

- Close the Western Pool and Upper Grassland areas for public access from the beginning of February to the beginning of August (i.e. the main breeding season)
- Maintain signs which aim to deter dog-walkers, fishermen, fly-grazers, etc.
- Inform ASDA of the occurrence of fly-grazing or other invasions of the Reserve
- Keep the Eastern Pools area closed at all times
- Maintain fencing, gates, bridges and the dam

- Thin and/or coppice woodland areas. These plants developed well and areas were becoming overgrown. All cut material is left on-site as additional habitat for invertebrates
- Maintain a path, clear of trees and shrubs, under electricity wires
- Maintain two uneven gaps in the hedge in the Upper Grassland to enable insects to move more freely between the two sections
- Remove tree seedlings as necessary from the edges of the pools, Rodden Brook and River Frome, and from grassland areas where they create undesirable habitat changes
- Mow the North Meadow and Upper Grassland occasionally to reduce the vigour of the agricultural grasses and some invasive native plants
- Bale mowings and leave, unwrapped, on site. This creates extra habitats especially for small mammals and reptiles
- Remove invasive and unwanted plants as necessary. Himalayan Balsam (*Impatiens glandulifera*) has been removed regularly, especially from along the River Frome. Orange Balsam (*Impatiens capensis*) appeared in 2010 and was also removed. The following are also controlled as necessary, retaining sufficient plants to benefit the wildlife: Common Nettle (*Urtica dioica*), Creeping Thistle (*Cirsium arvense*), rushes (*Juncus* spp.) and ragwort (*Senecio* spp.)
- Top up brush in screens as necessary, using on-site materials if possible
- Mow access paths as necessary
- Erect, maintain and monitor nest boxes (hole-nesting, open-fronted, kestrel and owl boxes)
- Install bird feeders. The feeding area can be viewed through one of the screens in the open season: feed is topped up on a regular basis and the vegetation trimmed to allow access for this purpose
- Strip-strim the more vigorous vegetation around the Western Pools: alternate strips each year
- Regular litter removal and disposal.

5.0 Base-line Data

5.1 2000 Data

The Wessex Ecological Consultancy (Lawrence, 2000) report indicated that the existing fields were all improved pasture, but with some increase in the species-richness on the upper slope and the then-existing floodplain. The species noted in this report were:

5.1.1 Plants

Species	Common Name
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Rumex acetosa</i>	Common Sorrel
<i>Persicaria hydropiper</i>	Water-pepper
<i>Rorippa palustris</i>	Marsh Yellow-cress
<i>Rubus fruticosus</i> agg.	Bramble
<i>Conopodium majus</i>	Pignut
<i>Oenanthe pimpinelloides</i>	Corky-fruited Water-dropwort
<i>Veronica beccabunga</i>	Brooklime
<i>Alnus glutinosa</i>	Alder
<i>Prunus spinosa</i>	Blackthorn
<i>Salix fragilis</i>	Crack Willow
<i>Sambucus nigra</i>	Elder
<i>Crataegus monogyna</i>	Hawthorn
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Juncus inflexus</i>	Hard Rush

5.1.2 Birds

Species	Common Name	Comments
<i>Alcedo atthis</i>	Kingfisher	Transient

5.1.3 Mammals

Species	Common Name	Comments
<i>Meles meles</i>	Badger	Transient
<i>Lutra lutra</i>	Otter	Transient
<i>Arvicola terrestris</i>	Water Vole	Resident

5.2 SERC Data

Somerset Environmental Records Centre (SERC) provided a list of notable species recorded within 1km of the site from 1989 to 2002. These were:

5.2.1 Reptiles

Species	Common Name	Recorded Location
<i>Anguis fragilis</i>	Slow Worm	N.E. Frome

Slow Worms were also introduced to the Reserve in 2007. This was a translocation exercise from another site in Frome; probably the site listed above.

5.2.2 Mammals

Species	Common Name	Recorded Location
<i>Lutra lutra</i>	Otter	Frome town
<i>Pipistrellus pipistrellus</i>	Pipistrelle Bat	Frome town
<i>Arvicola terrestris</i>	Water Vole	Resident

5.2.3 Birds

Species	Common Name	Recorded Location
<i>Alcedo atthis</i>	Kingfisher	Resident
<i>Falco peregrinus</i>	Peregrine	Over Frome
<i>Milvus milvus</i>	Red Kite	Over Frome
<i>Passer montanus</i>	Tree Sparrow	In Frome

5.3 Planted Species

A wide range of species was planted when the Flood Mitigation Schemes were created. These are listed in Appendix 9.2.

5.4 2006 Surveys

The 2006 Management Plan (Rutty, 2006) contained records from a combination of professional and volunteer surveys carried out during that year.

This report did not include full records from a survey of vascular plants, although three species of note for Somerset were listed:

Species	Common Name	Comments
<i>Juncus subnodulosus</i>	Blunt-flowered Rush	Rare: recorded in 5% or fewer of tetrads
<i>Veronica anagallis-aquatica</i>	Blue water-speedwell	Uncommon: recorded in 5 – 20% of tetrads
<i>Viola tricolor</i>	Wild Pansy	Rare: recorded in 5% or fewer of tetrads

Whilst none of these species were planted on the site during construction it is most probable that, due to their rarity status, they were already present on or near the site. The first two are likely to be associated with the River Frome; Wild Pansy could have occurred in the agricultural land.

The majority of insect records were of butterflies. The species of note were one butterfly, one demoiselle and three dragonflies:

Species	Common Name	Comments
<i>Aricia agestis</i>	Brown Argus	Somerset Notable
<i>Calopteryx splendens</i>	Banded Demoiselle	Somerset Notable
<i>Orthetrum cancellatum</i>	Black Tailed Skimmer	Somerset Notable
<i>Aeshna juncea</i>	Common Hawker	Somerset Notable
<i>Sympetrum sanguineum</i>	Ruddy Darter	Nationally Scarce

A full list of the butterflies and moths recorded on the site in 2006 is given in Appendix 9.6.

Some of the insect species with aquatic life-stages could have been visiting the site previously, using the River Frome and Rodden Brook as their main habitats. However, it is unlikely that the site supported such a wide range of butterfly species.

Other taxa were recorded on an *ad hoc* basis. These records are provided in the Appendices.

Bird species were recorded on a regular basis by several volunteers, therefore the list provided in Appendix 9.18 can be regarded as comprehensive for 2006. No information was collected on breeding status. Clearly many of these species could have been visiting the site whilst it was still agricultural land, with Rodden Brook flowing through and the River Frome along one side. Those that are linked to wetland habitats are therefore most likely to have moved onto the site as a result of the habitat changes are marked.

6.0 Changes to Flora & Fauna over the Ten-year Period

Informal records of species from a range of taxa were gathered in 2007 onwards. Formal surveys and record collection began in 2008 with both vascular plants (Tigwell, 2008, 2012 and ongoing) and invertebrates (Pinchen, 2008 – 2011, 2013, 2014, 2016, 2017) being fully surveyed. Aquatic invertebrates were also surveyed (Thomas, 2010, Pinchen, 2013, 2014, 2016); macro-moths were surveyed (Pinchen, 2014, 2016), as were micro-moths (Vickers, 2017).

6.1 Plants

A full plant survey was carried out in 2008 (Tigwell): additions were made to this list in 2009, 2012 and 2017, with casual records in all other years.

As a result of recommendations in the original management plans, species additional to those on the initial planting list were introduced to the site. This was mainly to increase the range of nectar and larval food-plants for invertebrates:

Species	Common Name
<i>Stachys officinalis</i>	Betony
<i>Clinopodium vulgare</i>	Wild Basil
<i>Rhinanthus minor</i>	Yellow Rattle
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Centaurea scabiosa</i>	Greater Knapweed

These plants have continued to be recorded on the Reserve.

The plants recorded on the Reserve are listed in Appendix 9.3. This includes those plants known to have been planted or presumed to have been extant on the site (e.g. Alder) these species are highlighted in the list in order to identify those that have colonised the site naturally since 2005.

Several rare or uncommon plant species are now frequently recorded on the Reserve; the majority of which have occurred naturally, including the orchid species. The most important plant for the area is the Corky-fruited Water Dropwort: this was present in 2000 and continues to be found on the site. Originally it was mainly recorded in an

area to the south of the pools, but was probably shaded out by some Alder seedlings (since coppiced). In 2011 it was first noted in the North Meadow, where it was the dominant flowering plant in 2012 and most years since. This latter abundance was probably due to an increase in fly-grazing by horses. The plant is noted for its preference for this type of grazing.

The increase in the number of plant species on the Reserve, especially in the first five years, is excellent and has undoubtedly added to the overall biodiversity of the site, especially for invertebrate species and their predators.

Fewer plant species have colonised in the last five years, which is to be expected. The latest colonists are listed here:

Botanical Name	Common Name
<i>Ranunculus ficaria</i>	Lesser Celandine
<i>Hypericum androsaemum</i>	Tutsan
<i>Fragaria vesca</i>	Wild Strawberry
<i>Geranium molle</i>	Dovesfoot Cranesbill
<i>Odontites vernus</i>	Red Bartsia
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell
<i>Aster x salignus</i>	Michaelmas Daisy
<i>Senecio erucifolius</i>	Hoary Ragwort
<i>Senecio aquaticus</i>	Marsh Ragwort
<i>Solidago canadensis</i>	Canadian Goldenrod
<i>Eupatorium cannabinum</i>	Hemp Agrimony
<i>Pilosella aurantiaca</i>	Fox-and-cubs
<i>Nuphar lutea</i>	Water-lily
<i>Dactylorhiza fuchsii</i>	Common Spotted Orchid
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid R
<i>Ophrys apifera</i>	Bee Orchid U
<i>Arum maculatum</i>	Lords-and-Ladies
<i>Potamogeton crispus</i>	Curled Pondweed U
Sedges	
<i>Carex otrubae</i>	False Fox-sedge
<i>Carex flacca</i>	Glaucous Sedge
<i>Carex pendula</i>	Pendulous Sedge
Ferns & Horsetails	
<i>Phyllitis scolopendrium</i>	Hartstongue Fern
<i>Dryopteris felix-mas</i>	Male Fern
<i>Equisetum arvense</i>	Field Horsetail



Lesser Celandine
Ranunculus ficaria



Pyramidal Orchid
Anacamptis pyramidalis

6.2 Fungi and Algae

A few species of fungi and algae have been recorded on the Reserve. They are listed in Appendices 9.4 and 9.5 respectively.

6.3 Butterflies & Moths

Several volunteers have gathered casual records of terrestrial invertebrates: mainly of butterflies, moths, damselflies and dragonflies. Occasional moth trapping was carried out in 2010 and 2011, with professional surveys (Pinchen, 2014, 2016). A list of species recorded by these volunteers in 2006 is in Appendix 9.6. The list of butterfly and moth species recorded in the surveys is in Appendix 9.7.

Two surveys of micro-moths have been carried out (Vickers, 2017), which revealed a range of species, many of which are categorised as Local (national records) or Occasional & Local (County records). There was one Nationally Scarce B species (*Parectopa ononidis*). A list of species, with their national and county status, is in Appendix 9.9.



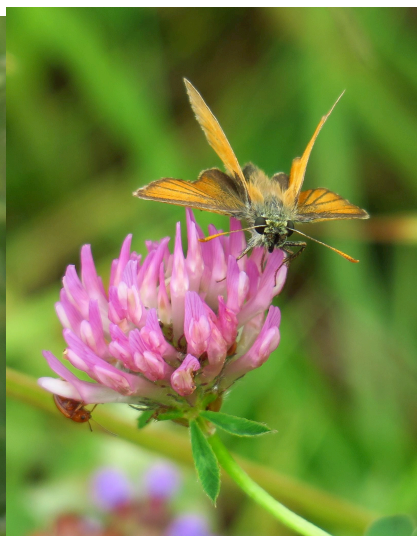
Six-spot Burnet
Zygaena filipendulae



Gatekeeper
Pyronia tithonus



Marbled White
Melanargia galathea



Small Skipper
Thymelicus sylvestris

6.4 Aquatic Invertebrates

An initial aquatic invertebrate survey proved to be unsatisfactory, partly due to weather constraints (Thomas 2010). Further professional surveys were commissioned (Pinchen, 2013, 2014, 2016). The species identified are listed in Appendix 9.10. The results from it suggested that the only means by which species richness and abundance could be increased would be through drastically increasing the vegetation in the Large Pool: this would be in contravention of the Environment Agency's requirement for open water as a means of flood mitigation.

With no base-line data for aquatic invertebrates it is difficult to estimate which species may have already been extant on the site, using Rodden Brook and the River Frome. The species list, especially when combined with that for Odonata, is extensive, and includes some species that require still water.



Four-spotted Chaser
Libellula quadrimaculata



Beautiful Demoiselle
Calopteryx virgo

6.5 Terrestrial Invertebrates

The series of terrestrial invertebrate surveys (Pinchen, 2008 – 2011, 2013, 2014, 2016, 2017) has shown that a remarkable range of species is using the Reserve, with

an increase in species richness over the years. Species were recorded by the area of the Reserve that they were using at the time of the survey. By the end of 2011 there were 365 species had been recorded, of which 21 species were either Red Data Book or Nationally Scarce, with several being first records for Somerset or for East Somerset.

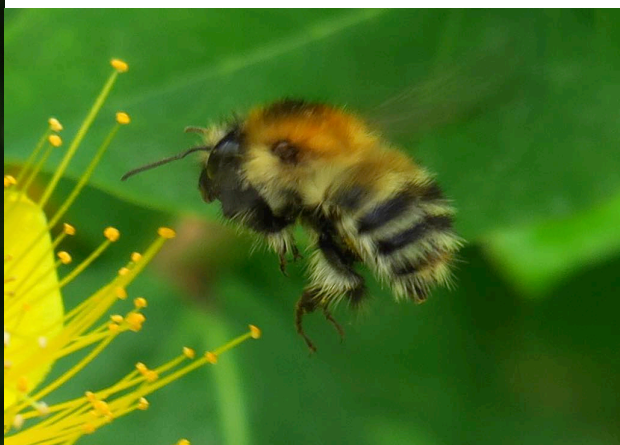
The full list of invertebrate species, by year, is given in Appendix 9.11. The presence of individuals of other taxa was noted; these records have been incorporated into the overall database for the Reserve.

The information from these surveys was used to guide the annual management plans, within the constraints of working with owners of the adjacent farmland, and subsequently the housing estate.

With no base-line data for invertebrates, except butterflies and one moth species, it is difficult to estimate the effect of creating the Reserve on these taxa. However, with species richness increasing every year and with so many of the species being specialists, it has to be concluded that the majority would not have been present previously. It must be concluded that the creation of Rodden Nature Reserve has greatly contributed to the diversity of invertebrate species in the Frome and East Somerset areas.



Thick-legged Flower Beetle
Oedemera nobilis



Common Carder Bumblebee
Bombus pascuorum

6.6 Spiders

Spiders have not been recorded systematically on the Reserve. In 2016 several Wasp Spiders (*Agriope bruennichi*) were located; these were breeding. Other casual records were of Angular Orbweb Spider (*Araneus angulatus*), Garden Spider (*Araneus diadematus*), and *Araneus marmoreus* var. *pyramidatus*, Crab Spider (*Misumen vatia*), and Harvestman (*Leiobunum rotundatum/blackwalli*).



Wasp Spider
Agriope bruennichi



Crab Spider
Misumena vatia

6.7 Molluscs

Similarly, molluscs have not been recorded systematically on the Reserve. The most notable species is the Swan Mussel (*Anodonta cygnea*), the shells of which are seen regularly across the Reserve. These will have been predated by either Grey Heron (*Ardea cinerea*) or Otter (*Lutra lutra*), and are a useful means of recording the presence of the latter.

All species of molluscs recorded on the Reserve are given in Appendix 9.13.



Swan Mussel (predated)
Anodonta cygnea

6.8 Amphibians & Reptiles

Of the amphibian and reptile species recorded over the last five years (Appendices 9.14 & 9.15), it is possible that all were present before the construction of the Reserve. With no base-line data it has not proved possible to monitor any changes in abundance, but it is very likely that they are more common in the increasingly wet and complex habitats that are now available on the site.

Frog spawn is seen most years at various sites around the Reserve, but mainly in the Small Pool and the adjacent wet areas under the road bridge. Froglets and adults are

also noted during the year. Toad spawn is seen less frequently, but toadlets and adults are seen most years.

Slow Worms were introduced to the site in 2007, and have been known to breed; which could indicate an increase in this species.

6.9 Fish

On Thursday 12th May 2016 there was a slurry-pollution incident on the River Frome several kilometres up-stream from the Reserve. The most immediate result on the Reserve was the appearance of a large number of dead fish and a few Signal Crayfish (*Pacifastacus leniusculus*), the majority of which had been at least partly eaten. The Environment Agency (EA) were informed and proved to be very helpful. The slurry (from a local farm) had reduced the dissolved oxygen levels in the River Frome to near-zero; this was treated by the EA with hydrogen peroxide, such that levels returned to normal in just over 24 hours. The overall result was that the majority of animals in the River Frome was killed.

Dead fish were collected from a stretch of the River Frome by the EA; these amounted to 1,704, but this is accepted as an under-representation of the total loss. An invertebrate survey was carried out and also recorded very high losses.

The EA rated this as a Category 1 incident; the most serious. At the request of the EA, two members of the FAWG committee made statements regarding the effect of the incident on the Reserve. The perpetrator of the incident was prosecuted and fined.

A positive outcome was that the EA recorded the species and sizes of the dead fish. This provided a much better estimate of the species of fish that were potentially using the Reserve. This list is provided in Appendix 9.17.

As a result of this incident, Pinchen was commissioned to carry out an extra aquatic invertebrate survey (2016). The results indicated that the pollutant had not entered the Large Pool any extent, and that there was no obvious harm to the Reserve. The dead fish that were found on the Reserve had probably been removed from the river by predators, for consumption on the adjacent dry land.



Pike
Esox lucius



Perch
Perca fluviatilis

6.10 Birds

Birds were recorded by sight or sound by several volunteers; the British Trust for Ornithology provided further data. Breeding status was recorded where possible. A list of those species recorded since 2006 are in Appendix 9.19: those new since 2012 are highlighted. The national designations for bird species are included.

Many of the bird species recorded in 2006 and the majority of the 28 new bird-species recorded since then require a wetland habitat: whether this is a large body of open water, or marshy areas. It is very unlikely that many of them would have been recorded in the absence of the Reserve; certainly they would not have been recorded as breeding.

There have been no further sightings of Bitterns (*Botaurus stellaris*); although this secretive reedbed specialist could be visiting the Reserve on passage to a breeding site. Cetti's Warbler (*Cettia cetti*) is also linked strongly to reedbeds, as are Reed and Sedge Warblers (*Acrocephalus scirpaceus* and *A.schoenobaenus* respectively) along with Reed Buntings (*Emberiza schoeniclus*). The latter three breed regularly with a maximum of seven singing Reed Warblers in 2017.

Moorhen (*Gallinula chloropus*), Kingfisher (*Alcedo atthis*) and Goosander (*Mergus merganser*) are linked to areas of open water, so are clearly additions to the area due to the creation of the Reserve. The former is a regular breeding species, whilst Kingfishers are seen frequently feeding on the Reserve; they probably breed nearby. Up to three Goosander are seen most winters, but they do not stay to breed.

Mute Swans (*Cygnus olor*) are recorded regularly on the Reserve, with up to three birds at any one time. Aggressive encounters between adult males have been observed, and a pair attempted to breed in 2017, but no cygnets were seen.

The presence of both Barn Owl (*Tyto alba*) and Kestrel (*Falco tinnunculus*) is probably due to the areas of rough grassland that have allowed populations of small mammals to build up to such a level as to attract these predators. Nest boxes have been provided for both these species; the former has bred successfully in the relevant box, whilst the latter is known to breed locally.

The addition of bird feeders has probably driven the increase in the presence of the smaller passerines; whilst the addition of nest boxes has meant that Blue and Great Tits (*Parus caeruleus* and *P.major* respectively) both breed on the Reserve. Other breeding records are given in Appendix 9.19.

It is of note that over half of the bird species recorded have an Amber or Red designation: i.e. they are Birds of Conservation Concern. Their presence since the creation of the Reserve is therefore very important in terms of conservation.



Goldfinches on Teasel
Carduelis carduelis



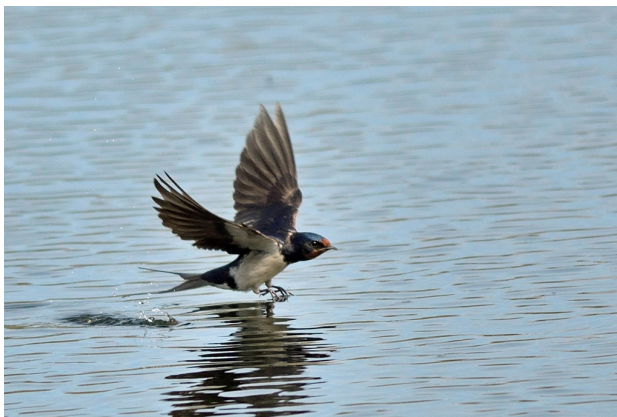
Reed Warbler (R.Downes)
Acrocephalus scirpaceus



Mute Swan
Cygnus olor



Aggression between males



Swallow (R.Downes)
Hirundo rustica



Little Egrets
Egretta garzetta

6.11 Mammals

Mammals were recorded by a combination of sightings, tracks, other field signs (e.g. spraints for Otter), checking under sheets of corrugated iron and roofing felt, and through the use of Longworth traps. Bat species were recorded using a Bat Box detector. Breeding status was recorded where possible. A list of those species recorded since 2006 are in Appendix 9.20: those new since 2012 are highlighted.

The number of mammal species recorded has increased. Of the Red Data Book species, both Otter and Badger (*Meles meles*) continue to be recorded, whilst Water Shrew (*Neomys fodiens*) is an addition. Some of the species listed as 'new' would almost undoubtedly have been present before the creation of the Reserve: e.g. Rabbit (*Oryctolagus cuniculus*) and Roe Deer (*Capreolus capreolus*), which are both very common in the area.

The Five-year Report (2012) noted that "Despite extensive searches, no evidence of Water Voles (*Arvicola amphibius*) has been found since the construction of the Reserve". A full survey of the Reserve was commissioned in 2013 (Sperring, 2013), which revealed feeding signs and a few bankside holes on Rodden Brook. There was no evidence of Water Voles on the River Frome as it passed the Reserve, there was evidence of their presence further upstream. The use of camera traps revealed Water Voles using Rodden Brook at night. Further checks confirm a small and variable population on site.

7.0 Comments & Recommendations

7.1 Comments

The management of Reserve has continued to maintain the balance of habitats such that the area retains its primary function as part of the Flood Amelioration Scheme. It has also continued to increase species richness on the Reserve. The presence of a small population of Water Voles is encouraging, whilst the use of the Reserve by other Red Data Book species is a bonus.

The start of construction for a large housing estate adjacent to the Reserve caused major disruption by machinery and workers in 2017; this work will continue until the whole estate is completed (date to be confirmed). Encouragingly the majority of workers were careful to avoid damage to the Reserve itself, some showing an interest in the site. Interestingly the amount of litter on the Reserve decreased whilst the work was being carried out nearby; it has increased again now that the work site has moved further into the estate site.

A positive side-effect of the housing estate is that a group of residents has indicated an interest in the Reserve. Several people have taken part in organised walks and litter-picks. Attempts will be made to recruit more individuals to this group, with more activities and more eyes to check the Reserve, especially when it is closed.

There has been plenty of disruption to the Reserve over the past five years. The majority of this has been due to fly-grazing; mainly on the North Meadow, but also on other areas and the Reserve itself. The North Meadow and Upper Area were also taken over by people with caravans; again ASDA had them removed swiftly before too much damage was caused. These events resulted in major litter collections.

Other human-caused problems have included BBQs and camping on the Reserve, a burnt-out caravan on the turning area, and several people insisting on running or walking through the Reserve whilst it was closed.

Over the last five years the Reserve has flooded several times, and has been covered in snow and ice. There have been few periods of drought. Ash Die-back (*Chalara fraxinea*) arrived in the area during 2015; the majority of Ash trees on the Reserve appear to be suffering from this disease. Removal is not recommended, so the affected trees will not be felled, but allowed to die *in situ* and will add to the dead-wood habitats on the Reserve.

During 2016 it was noticed that the footboards on the bridge over the inlet between the River Frome and the Large Pool Major were rotting; several were placed. However, more rot was discovered and it became necessary to close the bridge. It is currently in the process of being replaced with a metal bridge, which will be more resilient in the face of repeated immersion.

7.2 Recommendations

The current management regime appears to be improving species richness on the site; consequently no major changes are recommended.

The key factors in the management of this Reserve are to:

- Control alien invasive plants: e.g. Himalayan Balsam
- Reduce the impact of potentially dominant native species: e.g. coarse grasses, Alder, Common Nettle, rushes, ragwort, Creeping Thistle
- Close the Reserve between 1st February and 1st August
- Maintain, increase and monitor bird boxes
- Continue the provision of a bird-feeding area
- Maintain areas of rough grass for mammals and their predators
- Retain mowings on-site to provide small mammal habitat
- Maintain wetland and open-water areas for a range of species
- Manage the habitat for Corky-fruited Water-dropwort and other important plant species
- Increase the floral diversity to the benefit of invertebrate species
- Maintain areas of bare ground for certain invertebrates

In order to continue to monitor the Reserve, the following are recommended:

- Terrestrial invertebrate surveys – biennial
- Aquatic invertebrate surveys – biennial
- Flora surveys - biennial
- Monitoring nocturnal species (principally moths and bats) - biennial
- Monitoring bird species – annual
- Monitoring mammal, amphibian and reptile species – annual

8.0 Acknowledgements

The management, maintenance and monitoring of the Rodden Nature Reserve is a success due to the dedication of members of the Frome Area Wildlife Group; especially John Fisher, Carl Griffin, Charles Nevin, Mick and Val Ridgard, Jim Rosser, and Jenny Vickers. Bruce Douglas and Bruce Taylor are past members of the Group.

The existence of and funding for the Reserve is due to ASDA Walmart and we thank them for their support, especially the various Store Managers in Frome.

Many members of the FAWG have provided the records cited in this report, whilst Bryan Pinchen has carried out the professional surveys and provided expert advice on an *ad hoc* basis.

All photographs taken on-site and are copyright © Eve Tigwell, except where indicated.

In memoriam: Peter Bardgett (1936 - 2013) who provided much valued support and advice to FAWG until 2012.

9.0 Appendices

9.1 Site Layout



9.2 Planting List

Plants introduced to the site in 2004/05.

Species	Common Name
<i>Caltha palustris</i>	Marsh Marigold
<i>Rorippa nasturtium-aquaticum</i>	Watercress
<i>Lythrum salicaria</i>	Purple Loosestrife
<i>Rosa canina</i>	Dog Rose
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Oenanthe</i> species	Water Dropwort *
<i>Apium nodiflorum</i>	Fool's Watercress
<i>Berula erecta</i>	Lesser Water Parsnip
<i>Myosotis</i> species	Water Forget-me-not **
<i>Mentha aquatica</i>	Water Mint
<i>Lycopus europaeus</i>	Gipsywort
<i>Veronica beccabunga</i>	Brooklime
<i>Iris pseudacorus</i>	Yellow Iris
<i>Alisma plantago-aquatica</i>	Water Plantain
<i>Sparganium erectum</i>	Branched Bur-reed
<i>Myriophyllum spicatum</i>	Spiked Water Milfoil
<i>Ceratophyllum demersum</i>	Rigid Hornwort
<i>Utricularia</i> species	Bladderwort ***
<i>Callitriche truncata</i>	Water Starwort
Trees & Shrubs	
<i>Corylus avellana</i>	Hazel
<i>Betula pendula</i>	Silver Birch
<i>Prunus avium</i>	Wild Cherry
<i>Prunus spinosa</i>	Blackthorn
<i>Malus pumila</i>	Apple ****
<i>Viburnum lantana</i>	Wayfaring-tree
<i>Ligustrum vulgare</i>	Wild Privet
<i>Fraxinus excelsior</i>	Ash
<i>Sambucus nigra</i>	Elder
<i>Quercus robur</i>	Pedunculate Oak
<i>Crataegus monogyna</i>	Hawthorn
<i>Viburnum opulus</i>	Guelder-rose
<i>Acer campestre</i>	Field Maple
<i>Hedera helix</i>	Ivy
<i>Ilex aquifolium</i>	Holly
Grasses, Sedges & Rushes	
<i>Poa trivialis</i>	Rough-stalked Meadow-grass
<i>Festuca pratensis</i>	Meadow Fescue
<i>Agrostis capillaris</i>	Common Bent
<i>Phragmites australis</i>	Common Reed
<i>Festuca rubra</i>	Red Fescue
<i>Deschampsia cespitosa</i>	Tufted Hair-grass
<i>Holcus lantana</i>	Yorkshire Fog

<i>Juncus inflexus</i>	Hard Rush
<i>Anthoxanthum odoratum</i>	Scented Vernal-grass
<i>Cynosurus cristatus</i>	Crested Dog's Tail
<i>Juncus effusus</i>	Soft Rush

- * Water Dropwort: *Oenanthe crocata*?
 ** Water Forget-me-not: *Myosotis scorpioides*?
 *** Greater Bladderwort: *Utricularia vulgaris*?
 **** Apple: *Malus sylvestris* or *domestica*?

9.3 Plant Records to 2017

Species	Common Name
<i>Ranunculus acris</i>	Meadow Buttercup *
<i>Ranunculus repens</i>	Creeping Buttercup *
<i>Ranunculus ficaria</i>	Lesser Celandine
<i>Caltha palustris</i>	Marsh Marigold *
<i>Papaver rhoeas</i>	Common Poppy
<i>Urtica dioica</i>	Common Nettle
<i>Urtica galeopsifolia</i>	Stingless Nettle
<i>Chenopodium album</i>	Fat Hen
<i>Silene dioica</i>	Red Campion
<i>Lychnis flos-cuculi</i>	Ragged Robin
<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cerastium glomeratum</i>	Sticky Mouse-ear
<i>Cerastium arvense</i>	Field Mouse-ear R
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Rumex crispus</i>	Curled Dock
<i>Rumex acetosa</i>	Common Sorrel *
<i>Persicaria bistorta</i>	Common Bistort U
<i>Persicaria amphibia</i>	Amphibious Bistort
<i>Persicaria hydropiper</i>	Water-pepper *
<i>Hypericum perforatum</i>	Perforate St John's Wort
<i>Hypericum tetrapterum</i>	Square-stalked St John's Wort
<i>Hypericum androsaemum</i>	Tutsan
<i>Rorippa palustris</i>	Marsh Yellow-cress *
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Rorippa nasturtium-aquaticum</i>	Watercress *
<i>Cardamine flexuosa</i>	Wavy Bittercress
<i>Capsella bursa-pastoris</i>	Shepherd's Purse
<i>Cardamine pratensis</i>	Lady's Smock (Cuckoo Flower)
<i>Primula vulgaris</i>	Primrose
<i>Primula veris</i>	Cowslip
<i>Lysimachia nummularia</i>	Creeping Jenny
<i>Lythrum salicaria</i>	Purple Loosestrife *
<i>Rosa canina</i>	Dog Rose *
<i>Rubus fruticosus</i> agg.	Bramble *
<i>Filipendula ulmaria</i>	Meadowsweet *
<i>Potentilla anserina</i>	Silverweed
<i>Potentilla erecta</i>	Tormentil

<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Fragaria vesca</i>	Wild Strawberry
<i>Geum rivale</i>	Water Avens
<i>Geum urbanum</i>	Herb Bennet
<i>Vicia sativa</i>	Common Vetch
<i>Vicia hirsuta</i>	Hairy Tare
<i>Lotus corniculatus</i>	Bird's-foot Trefoil
<i>Lotus pedunculatus</i>	Greater Trefoil
<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Medicago lupulina</i>	Black Medick
<i>Trifolium dubium</i>	Lesser Trefoil
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Vicia cracca</i>	Tufted Vetch
<i>Melilotus altissima</i>	Golden Melilot
<i>Epilobium hirsutum</i>	Great Willowherb *
<i>Epilobium montanum</i>	Broad-leaved Willowherb
<i>Epilobium ciliatum</i>	American Willowherb
<i>Linum usitatissimum</i>	Flax (cultivated)
<i>Geranium pratense</i>	Meadow Cranesbill
<i>Geranium robertianum</i>	Herb Robert
<i>Geranium pyrenaicum</i>	Hedgerow Cranesbill
<i>Geranium molle</i>	Dovesfoot Cranesbill
<i>Geranium dissectum</i>	Cut-leaved Cranesbill
<i>Impatiens glandulifera</i>	Himalayan Balsam
<i>Impatiens capensis</i>	Orange Balsam
<i>Heracleum sphondylium</i>	Hogweed
<i>Conium maculatum</i>	Hemlock
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Torilis japonica</i>	Hedge Parsley
<i>Daucus carota</i>	Wild Carrot
<i>Conopodium majus</i>	Pignut *
<i>Angelica sylvestris</i>	Angelica
<i>Oenanthe crocata</i>	Hemlock Water Dropwort
<i>Oenanthe pimpinelloides</i>	Corky-fruited Water Dropwort * X
<i>Apium nodiflorum</i>	Fool's Watercress*
<i>Berula erecta</i>	Lesser Water Parsnip* U
<i>Centaureum erythraea</i>	Common Centaury
<i>Solanum dulcamara</i>	Bittersweet
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Symphytum officinale</i>	Comfrey
<i>Myosotis scorpioides</i>	Water Forget-me-not *
<i>Lamium album</i>	White Dead-nettle
<i>Lamium purpureum</i>	Red Dead-nettle
<i>Glechoma hederacea</i>	Ground Ivy
<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Stachys palustris</i>	Marsh Woundwort
<i>Stachys officinalis</i>	Betony *
<i>Clinopodium vulgare</i>	Wild Basil *
<i>Prunella vulgaris</i>	Self-heal
<i>Mentha aquatica</i>	Water Mint *

<i>Lycopus europaeus</i>	Gipsywort *
<i>Scrophularia nodosa</i>	Common Figwort
<i>Rhinanthus minor</i>	Yellow Rattle * U
<i>Odontites vernus</i>	Red Bartsia
<i>Veronica officinalis</i>	Heath Speedwell
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell
<i>Veronica beccabunga</i>	Brooklime *
<i>Veronica anagallis-aquatica</i>	Water Speedwell U
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago media</i>	Hoary Plantain
<i>Galium aparine</i>	Cleavers
<i>Galium mollugo</i>	Hedge Bedstraw
<i>Galium verum</i>	Lady's Bedstraw
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Centranthus ruber</i>	Red Valerian
<i>Dipsacus fullonum</i>	Wild Teasel
<i>Knautia arvensis</i>	Field Scabious
<i>Bellis perennis</i>	Daisy
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Achillea millefolium</i>	Yarrow
<i>Erigeron acer</i>	Blue Fleabane
<i>Aster x salignus</i>	Michaelmas Daisy
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio erucifolius</i>	Hoary Ragwort
<i>Senecio aquaticus</i>	Marsh Ragwort
<i>Tussilago farfara</i>	Coltsfoot
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Solidago canadensis</i>	Canadian Goldenrod
<i>Tanacetum vulgare</i>	Tansy
<i>Bidens tripartita</i>	Trifid Bur-marigold
<i>Senecio vulgaris</i>	Groundsel
<i>Artemisia vulgaris</i>	Mugwort
<i>Centaurea nigra agg.</i>	Common Knapweed
<i>Centaurea scabiosa</i>	Greater Knapweed* U
<i>Arctium lappa</i>	Greater Burdock
<i>Eupatorium cannabinum</i>	Hemp Agrimony
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cirsium palustre</i>	Marsh Thistle
<i>Taraxacum officinale</i>	Dandelion
<i>Tragopogon pratensis</i>	Goatsbeard
<i>Hypochaeris radicata</i>	Catsear
<i>Lapsana communis</i>	Nipplewort
<i>Picris echioides</i>	Bristly Ox-tongue
<i>Pilosella aurantiaca</i>	Fox-and-cubs
<i>Sonchus oleraceus</i>	Smooth Sow-thistle
<i>Sonchus arvensis</i>	Corn Sow-thistle
<i>Cichorium intybus</i>	Chicory
<i>Nuphar lutea</i>	Water-lily
<i>Allium ursinum</i>	Ramsons
<i>Iris pseudacorus</i>	Yellow Iris *

<i>Iris foetidissima</i>	Stinking Iris
<i>Dactylorhiza fuchsii</i>	Common Spotted Orchid
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid R
<i>Ophrys apifera</i>	Bee Orchid U
<i>Alisma plantago-aquatica</i>	Water Plantain *
<i>Alisma lanceolata</i>	Narrow-leaved Water-plantain
<i>Arum maculatum</i>	Lords-and-Ladies
<i>Sparganium erectum</i>	Branched Bur-reed *
<i>Typha latifolia</i>	Bulrush
<i>Potamogeton crispus</i>	Curled Pondweed U
<i>Myriophyllum spicatum</i>	Spiked Water Milfoil *
<i>Ceratophyllum demersum</i>	Rigid Hornwort * U
<i>Utricularia</i> species	Bladderwort *
<i>Callitriche stagnalis</i>	Common Water Starwort *
<i>Callitriche truncata</i>	Short-leaved Water Starwort R
Trees & Shrubs	
<i>Corylus avellana</i>	Hazel *
<i>Alnus glutinosa</i>	Alder *
<i>Betula pendula</i>	Silver Birch*
<i>Populus tremula</i>	Aspen *
<i>Populus alba</i>	White Poplar *
<i>Carpinus betulus</i>	Hornbeam *
<i>Prunus avium</i>	Wild Cherry *
<i>Prunus spinosa</i>	Blackthorn *
<i>Malus pumila</i>	Apple *
<i>Cornus sanguinea</i>	Dogwood *
<i>Euonymus europaeus</i>	Spindle *
<i>Rhamnus cathartica</i>	Buckthorn *
<i>Viburnum lantana</i>	Wayfaring-tree *
<i>Salix fragilis</i>	Crack Willow *
<i>Salix alba</i>	White Willow *
<i>Salix viminalis</i>	Osier Willow *
<i>Salix caprea</i>	Goat Willow *
<i>Ulmus hybrid</i>	Hybrid Elm *
<i>Ligustrum vulgare</i>	Wild Privet*
<i>Buddleia davidii</i>	Buddleia
<i>Fraxinus excelsior</i>	Ash *
<i>Sorbus aucuparia</i>	Rowan *
<i>Sambucus nigra</i>	Elder *
<i>Quercus robur</i>	Pedunculate Oak *
<i>Crataegus monogyna</i>	Hawthorn *
<i>Viburnum opulus</i>	Guelder-rose *
<i>Acer campestre</i>	Field Maple *
<i>Hedera helix</i>	Ivy *
<i>Ilex aquifolium</i>	Holly *
Grasses, Sedges & Rushes	
<i>Poa trivialis</i>	Rough Meadow-grass *
<i>Festuca pratensis</i>	Meadow Fescue *

<i>Agrostis stolonifera</i>	Creeping Bent
<i>Agrostis capillaris</i>	Common Bent *
<i>Phragmites australis</i>	Common Reed *
<i>Glyceria maxima</i>	Reed Sweet-grass
<i>Festuca rubra</i>	Red Fescue *
<i>Bromus ramosus</i>	Hairy Brome
<i>Deschampsia flexuosa</i>	Tufted Hair-grass *
<i>Juncus subnodulosus</i>	Blunt-flowered Rush R
<i>Holcus lanatus</i>	Yorkshire-fog *
<i>Juncus inflexus</i>	Hard Rush *
<i>Alopecurus pratensis</i>	Meadow Foxtail
<i>Phleum pratense</i>	Timothy
<i>Anthoxanthum odoratum</i>	Scented Vernal-grass
<i>Hordeum murinum</i>	Wall Barley
<i>Carex otrubae</i>	False Fox-sedge
<i>Lolium perenne</i>	Perennial Ryegrass *
<i>Cynosurus cristatus</i>	Crested Dog's-tail *
<i>Carex flacca</i>	Glaucous Sedge
<i>Carex pendula</i>	Pendulous Sedge
<i>Dactylis glomerata</i>	Cocksfoot
<i>Carex flava</i>	Large Yellow Sedge
<i>Juncus effusus</i>	Soft Rush *
Ferns & Horsetails	
<i>Phyllitis scolopendrium</i>	Hartstongue Fern
<i>Dryopteris filix-mas</i>	Male Fern
<i>Equisetum arvense</i>	Field Horsetail

* Introduced or extant on the site

R Rare: recorded in 5% or fewer of Somerset tetrads

U Uncommon: recorded in 5 – 20% of Somerset tetrads

X Locally common, restricted to Devon, Dorset, Hampshire and Somerset

9.4 Fungi (since 2006)

Species	Common Name
<i>Polyporaceae</i> species	Bracket Fungus on Willow

9.5 Algae (since 2006)

Species	Common Name
<i>Oedogonium</i> species	Filamentous alga
<i>Zygnema</i> species	Filamentous alga
<i>Spirogyra</i> species	Filamentous alga

9.6 Butterfly & Moth Records - 2006

Species	Common Name
<i>Thymelicus sylvestris</i>	Small Skipper
<i>Ochlodes venata</i>	Large Skipper
<i>Colias croceus</i>	Clouded Yellow
<i>Pieris brassicae</i>	Large White
<i>Pieris rapae</i>	Small White
<i>Lycaena phlaeas</i>	Small Copper
<i>Aricia agestis</i> *	Brown Argus
<i>Polyommatus icarus</i>	Common Blue
<i>Vanessa atalanta</i>	Red Admiral
<i>Cynthia (Vanessa) cardui</i>	Painted Lady
<i>Aglaia urticae</i>	Small Tortoiseshell
<i>Inachis io</i>	Peacock
<i>Pararge aegeria</i>	Speckled Wood
<i>Lasiommata megera</i>	Wall
<i>Melanargia galathea</i>	Marbled White
<i>Pyronia tithonus</i>	Gatekeeper
<i>Maniola jurtina</i>	Meadow Brown
<i>Aphantopus hyperantus</i>	Ringlet
<i>Deilephila porcellus</i>	Small Elephant Hawkmoth

* Somerset Notable Species

9.7 Butterfly & Day-flying Moth Records 2008 – 2012 & 2013 – 2017

		2008 – 2012	2013 – 2017
Species	Common Name		
<i>Thymelicus sylvestris</i>	Small Skipper	Y	Y
<i>Thymelicus lineola</i>	Essex Skipper	Y	Y
<i>Ochlodes venata</i>	Large Skipper	Y	Y
<i>Colias crocea</i>	Clouded Yellow		Y
<i>Gonepteryx rhamni</i>	Brimstone	Y	Y
<i>Pieris brassicae</i>	Large White	Y	Y
<i>Pieris rapae</i>	Small White	Y	Y
<i>Pieris napi</i>	Green-veined White	Y	Y
<i>Anthocharis cardamines</i>	Orange-tip	Y	Y
<i>Lycaena phlaeas</i>	Small Copper	Y	Y
<i>Aricia agestis</i> *	Brown Argus	Y	
<i>Polyommatus icarus</i>	Common Blue	Y	Y
<i>Celastrina argiolus</i>	Holly Blue	Y	
<i>Aglaia urticae</i>	Small Tortoiseshell	Y	Y
<i>Inachis io</i>	Peacock	Y	Y
<i>Polygonia c-album</i>	Comma	Y	Y
<i>Vanessa atalanta</i>	Red Admiral	Y	Y
<i>Cynthia cardui</i>	Painted Lady	Y	Y
<i>Pararge aegeria</i>	Speckled Wood	Y	Y
<i>Lasiommata megera</i>	Wall	Y	
<i>Melanargia galathea</i>	Marbled White	Y	Y

<i>Pyronia tithonus</i>	Gatekeeper	Y	Y
<i>Maniola jurtina</i>	Meadow Brown	Y	Y
<i>Aphantopus hyperantus</i>	Ringlet	Y	Y
<i>Coenonympha pamphilus</i>	Small Heath	Y	Y
<i>Callimorpha dominula</i>	Sacrlot Tiger		Y
<i>Zygaena filipendulae</i>	Six-spot Burnet Moth		Y
<i>Autographa gamma</i>	Silver Y		Y

* Somerset Notable Species

9.8 Moth Surveys: 2014 & 2016

Species	Common Name (where available)	2014	2016
Macro-moths			
	Hepialidae		
<i>Hepialus humuli</i>	Ghost Moth	Y	Y
<i>Hepialus sylvina</i>	Orange Swift	Y	Y
<i>Hepialus lupulinus</i>	Common Swift	Y	Y
Gracillariidae			
<i>Caloptilia semifacia</i>			Y
<i>Aspilapteryx tringipennella</i>			Y
Yponomeutidae			
<i>Paraswammerdamia albicapitella</i>			Y
Ypsolophidae			
<i>Ypsolopha dentelle</i>	Honeysuckle Moth		Y
Plutellidae			
<i>Plutella xylostella</i>	Diamond-back		Y
Depressariidae			
<i>Agonopterix alstomeriana</i>			Y
Gelechiidae			
<i>Helcystogramma rufescens</i>			Y
<i>Bryotropha terrella</i>			Y
	Lasiocampidae		
<i>Lasiocampa ripart</i>	Oak Eggar	Y	
<i>Trichiura crataegi</i>	Pale Eggar		Y
<i>Euthrix potatoria</i>	The Drinker	Y	Y
Drepanidae	Drepaninae		
<i>Watsonalla binaria</i>	Oak Hook-tip	Y	
<i>Drepana falcata</i>	Pebble Hook-tip	Y	Y
<i>Cilix glaucata</i>	Chinese Character	Y	
Thyatiridae			
<i>Thyatira batis</i>	Peach Blossom	Y	
<i>Habrosyne pyritoides</i>	Buff Arches	Y	Y
Geometridae			
<i>Geometra papilionaria</i>	Large Emerald	Y	
<i>Hemithea aestivaria</i>	Common Emerald	Y	Y
<i>Idaea dimidata</i>	Single-dotted Wave		Y
<i>Idaea biselata</i>	Small Fan-footed Wave		Y

<i>Cyclophora linearia</i>	Clay Triple-lines	Y	
<i>Timandra comae</i>	Blood-vein	Y	Y
<i>Rhometra sacraria</i>	Vestal		Y
<i>Scotopteryx cretat</i>	Shaded Broad-bar		Y
<i>Xanthorhoe spadicearia</i>	Red Twin-spot Carpet		Y
<i>Scopula immutata</i>	Lesser Cream Wave	Y	
<i>Idaea aversata</i>	Riband Wave	Y	
<i>Xanthorhoe uctuata</i>	Garden Carpet	Y	
<i>Epirrhoe ripartit</i>	Common Carpet	Y	
<i>Camptogramma bilineata</i>	Yellow Shell	Y	Y
<i>Anticlea badiata</i>	Shoulder-stripe	Y	
<i>Lampropteryx suffumata</i>	Water Carpet	Y	
<i>Dysstroma truncata</i>	Common Marbled Carpet	Y	Y
<i>Hydriomena ripart</i>	July Highflyer	Y	
<i>Horisme vitalbata</i>	Small Waved Umber	Y	
<i>Perizoma alchemillata</i>	Small Rivulet	Y	
<i>Eupithecia tenuiata</i>	Slender Pug	Y	Y
<i>Eupithecia absinthiata</i>	Wormwood Pug		Y
<i>Eupithecia pulchellata</i>	Foxglove Pug	Y	
<i>Eupithecia centaureata</i>	Lime-speck Pug	Y	
<i>Eupithecia vulgate</i>	Common Pug	Y	Y
<i>Eupithecia tripunctaria</i>	White-spotted Pug	Y	
<i>Pasiphila rectangulata</i>	Green Pug	Y	Y
<i>Gymnoscelis ru fasciata</i>	Double-striped Pug	Y	
<i>Abraxas grossulariata</i>	The Magpie	Y	
<i>Lomaspilis marginata</i>	Clouded Border	Y	
<i>Macaria notate</i>	Peacock Moth	Y	
<i>Opisthograptis luteolata</i>	Brimstone Moth	Y	Y
<i>Ennomos alniaria</i>	Canary-shouldered Thorn		Y
<i>Ennomos fuscantaria</i>	Dusky Thorn	Y	Y
<i>Selenia dentaria</i>	Early Thorn	Y	
<i>Crocallis elinguaris</i>	Scalloped Oak		Y
<i>Ourapteryx sambucaria</i>	Swallow-tailed Moth	Y	Y
<i>Biston betularia</i>	Peppered Moth		Y
<i>Peribatodes rhomboidaria</i>	Willow Beauty	Y	
<i>Alcis repandata</i>	Mottled Beauty	Y	Y
<i>Epione repandaria</i>	Bordered Beauty		Y
<i>Apeira syringaria</i>	Lilac Beauty		Y
<i>Ectropis bistortata</i>	The Engrailed	Y	
<i>Cabera pusaria</i>	Common White Wave	Y	
<i>Lomographa temerata</i>	Clouded Silver	Y	Y
<i>Campaea margaritata</i>	Light Emerald	Y	Y
<i>Cleorodes lichenaria</i>	Brussels Lace		Y
Sphingidae	Hawkmoths		
<i>Sphinx ligustri</i>	Privet Hawk-moth	Y	
<i>Smerinthus ocellata</i>	Eyed Hawk-moth	Y	
<i>Mimas tiliae</i>	Lime Hawkmoth		Y

<i>Laothoe populi</i>	Poplar Hawk-moth	Y	Y
<i>Deilephila elpenor</i>	Elephant hawk-moth	Y	Y
<i>Deilephila porcellus</i>	Small Elephant hawk-moth	Y	
Notodontidae			
<i>Furcula bi da</i>	Poplar Kitten	Y	
<i>Notodonta ripartite</i>	Iron Prominent	Y	Y
<i>Notodonta ziczac</i>	Pebble Prominent	Y	
<i>Pheosia tremula</i>	Swallow Prominent	Y	
<i>Ptilodon capucina</i>	Coxcomb Prominent	Y	
<i>Pterostoma palpina</i>	Pale Prominent	Y	
<i>Phalera bucephala</i>	Buff-tip	Y	Y
<i>Calliteara pudibunda</i>	Pale Tussock	Y	Y
<i>Diaphora mendica</i>	Muslin Moth		Y
<i>Euproctis similis</i>	Yellow-tail	Y	Y
Arctiidae			
<i>Miltochrista miniata</i>	Rosy Footman	Y	Y
<i>Eilema complana</i>	Scarce Footman	Y	Y
<i>Eilema lurideola</i>	Common Footman	Y	Y
<i>Eilema depressa</i>	Buff Footman		Y
<i>Lasperyia flexula</i>	Beautiful Hooktip		Y
<i>Arctia caja</i>	Garden Tiger	Y	Y
<i>Spilosoma lubricipeda</i>	White Ermine	Y	
<i>Spilosoma luteum</i>	Buff Ermine	Y	
<i>Phragmatobia fuliginosa</i>	Ruby Tiger	Y	Y
<i>Callimorpha dominula</i>	Scarlet Tiger		Y
<i>Tyria jacobaeae</i>	The Cinnabar	Y	
Noctuidae			
<i>Agrotis exclamationis</i>	Heart & Dart	Y	Y
<i>Agrotis clavis</i>	Heart & Club		Y
<i>Agrotis ipsilon</i>	Dark Sword-grass	Y	
<i>Agrotis puta</i>	Shuttle-shaped Dart	Y	
<i>Axylia putris</i>	Flame		Y
<i>Ochropleura plecta</i>	Flame Shoulder	Y	Y
<i>Noctua pronuba</i>	Large Yellow Underwing	Y	Y
<i>Noctua comes</i>	Lesser Yellow Underwing	Y	
<i>Noctua mbriata</i>	Broad-bordered Yellow Underwing	Y	Y
<i>Noctua janthe</i>	Lesser Broad-bordered Yellow Underwing	Y	
<i>Callistige mi</i>	Mother Shipton	Y	
<i>Eugnorisma glareosa</i>	Autumnal Rustic	Y	
<i>Diarsia mendica</i>	Ingrailed Clay	Y	
<i>Diarsia rubi</i>	Small Square-spot	Y	Y
<i>Xestia c-nigrum</i>	Setaceous Hebrew Character	Y	Y
<i>Xestia xanthographa</i>	Square Spot Rustic		Y
<i>Xestia sexstrigata</i>	Six-striped Rustic	Y	Y

<i>Xestia Triangulum</i>	Double-square Spot		Y
<i>Melanchra persicariae</i>	Dot Moth	Y	
<i>Lacanobia w-latinum</i>	Light Brocade	Y	
<i>Lacanobia oleracea</i>	Bright-line Brown-eye	Y	Y
<i>Hecatera bicolorata</i>	Broad-barred White		Y
<i>Melanchra pisi</i>	Broom Moth	Y	
<i>Orthosia cerasi</i>	Common Quaker	Y	
<i>Orthosia gracilis</i>	Powdered Quaker		Y
<i>Orthosia incerta</i>	Clouded Drab	Y	Y
<i>Orthosia gothica</i>	Hebrew Character	Y	Y
<i>Mythimna ripar</i>	Smoky Wainscot	Y	
<i>Mythimna pallens</i>	Common Wainscot	Y	Y
<i>Mythimna comma</i>	Shoulder-striped Wainscot	Y	
<i>Polymixis avicineta</i>	Large Ranunculus	Y	Y
<i>Conistra vaccinii</i>	The Chestnut	Y	Y
<i>Agrochola lychnidis</i>	Beaded Chestnut	Y	
<i>Omphaloscelis lunosa</i>	Lunar Underwing	Y	Y
<i>Xanthia aurago</i>	Barred Sallow	Y	
<i>Xanthia icteritia</i>	The Sallow	Y	
<i>Acronicta megacephala</i>	Poplar Grey	Y	
<i>Acronicta riparti</i>	Miller	Y	
<i>Acronicta alni</i>	Alder Moth	Y	
<i>Craniophora ligustri</i>	The Coronet	Y	Y
<i>Amphipyra pyramidea</i>	Copper Underwing		Y
<i>Amphipyra berbera</i>	Svensson's Copper Underwing	Y	
<i>Phlogophora meticulosa</i>	Angle Shades	Y	Y
<i>Cosmia trapezina</i>	The Dun-bar	Y	Y
<i>Atethmia centrargo</i>	Centre-barred Sallow		Y
<i>Aporophyla nigra</i>	Black Rustic		Y
<i>Apamea monoglypha</i>	Dark Arches	Y	Y
<i>Apamea lithoxylaea</i>	Light Arches	Y	
<i>Apamea ophiogramma</i>	Double Lobed	Y	Y
<i>Oligia strigilis</i>	Marbled Minor	Y	Y
<i>Oligia versicolor</i>	Rufous Minor	Y	
<i>Oligia latruncula</i>	Tawny Marbled Minor	Y	Y
<i>Mesapamea secalis</i>	Common Rustic	Y	Y
<i>Mesologia furuncula</i>	Cloaked Minor		Y
<i>Agrochola litura</i>	Brown-spot Pinion		Y
<i>Chortodes pygmina</i>	Small Wainscot	Y	
<i>Eremobia ochroleuca</i>	Ducky Sallow	Y	
<i>Hydraecia micacea</i>	Rosy Rustic	Y	Y
<i>Luperina testacea</i>	Flunced Rustic		Y
<i>Nonagria typhae</i>	Bulrush Wainscot	Y	Y
<i>Charanyca trigrammica</i>	Treble Lines	Y	
<i>Hoplodrina alsines</i>	The Uncertain	Y	Y
<i>Hoplodrina blanda</i>	The Rustic	Y	Y

<i>Chilodes maritima</i>	Silky Wainscot		Y
<i>Mormo maura</i>	Old Lady		Y
<i>Caradrina clavipalpis</i>	Pale Mottle Willow	Y	
<i>Caradrina Morpheus</i>	Mottled Rustic		Y
<i>Heliothis peltigera</i>	Bordered Straw	Y	
<i>Colocasia coryli</i>	Nut-tree Tussock	Y	Y
<i>Diachrysia chrysitis</i>	Burnished Brass	Y	Y
<i>Autographa gamma</i>	Silver Y	Y	Y
<i>Autographa jota</i>	Plain Golden Y	Y	
<i>Abrostola tripartita</i>	The Spectacle	Y	Y
<i>Scoliopteryx libatrix</i>	The Herald	Y	
<i>Rivula sericealis</i>	Straw Dot	Y	Y
<i>Hypena proboscidalis</i>	The Snout	Y	Y
<i>Herminia grisealis</i>	Small Fan-foot	Y	
Micro-moths			
Gracillariidae			
<i>Caloptilia semifacia</i>			Y
<i>Aspilapteryx tringipennella</i>			Y
Yponomeutidae			
<i>Paraswammerdamia albicapitella</i>			Y
<i>Yponomeuta padella</i>	Orchard Ermine	Y	
Ypsolophidae			
<i>Ypsolopha dentelle</i>	Honeysuckle Moth		Y
Plutellidae			
<i>Plutella xylostella</i>	Diamond-back		Y
Depressariidae			
<i>Agonopterix alstomeriana</i>			Y
Gelechiidae			
<i>Helcystogramma rufescens</i>			Y
<i>Bryotropha terrella</i>			Y
Tortricidae			
<i>Pandemis heparana</i>	Dark Fruit-tree Tortrix	Y	
<i>Pandemis cerasana</i>	Barred Fruit-tree Tortrix		Y
<i>Archips podana</i>	Large Fruit-tree Tortrix	Y	Y
<i>Ditula angustiorana</i>	Red-barred Tortrix		Y
<i>Clepsis spectrana</i>	Cyclamen Tortrix		Y
<i>Clepsis consimilana</i>			Y
<i>Epiphyas postvittana</i>	Light Brown Apple Moth		Y
<i>Acleris forsskalleana</i>		Y	Y
<i>Acleris emargana</i>		Y	
<i>Acleris laterana</i>			Y
<i>Phtheuchroa inopiana</i>			Y
<i>Agapeta hamana</i>			Y
<i>Orthotaenia undulana</i>			Y
<i>Hedya nubiferana</i>	Marbled Orchard		Y

	Tortrix		
<i>Hedya pruniana</i>	Plum Tortrix		Y
<i>Celypha striana</i>			Y
<i>Celypha lacunana</i>			Y
<i>Bactra lancealana</i>			Y
<i>Ancylis badiana</i>			Y
<i>Epinotoa nisella</i>			Y
<i>Eucosma cana</i>			Y
<i>Cydia splendana</i>			Y
<i>Lathronympha strigana</i>			Y
Crambidae			
<i>Anania hortulana</i>	Small Magpie	Y	Y
<i>Udea ferrugalis</i>	Rusty-dot Pearl		Y
<i>Udea prunalis</i>			Y
<i>Pleuroptya ruralis</i>	Mother of Pearl	Y	Y
<i>Eudonia lacustrata</i>			Y
<i>Eudonia angustea</i>			Y
<i>Eudonia Mercurella</i>			Y
<i>Eudonia pallida</i>			Y
<i>Chrysoteuchia culmella</i>	Garden Grass Veneer		Y
<i>Crambus perlella</i>			Y
<i>Agriphila tristella</i>			Y
<i>Agriphila selasella</i>			Y
<i>Elophila nymphaeata</i>	Brown China-mark	Y	Y
<i>Acentria ephemerella</i>	Water Veneer		Y
<i>Parapoynx stratiotata</i>	Ringed China-mark		Y
<i>Nymphula nitidulata</i>	Beautiful China-mark		Y
Pyralidae			
<i>Euzophera pinguis</i>			Y

9.9 Micro-Moth Survey

Species	Plant Species	National Status	County Status
Eriocraniidae			
<i>Eriocrania unimaculella</i>	<i>Betula pendula</i>	Local	Rare and very local
<i>Eriocrania semipurpurella</i>	<i>Betula pendula</i>	Common	Rare and very local
Nepticulidae			
<i>Stigmella cathartica</i>	<i>Rhamnus cathartica</i>	Rare and very local	Rare and very local
<i>Stigmella hybnerella</i>	<i>Crataegus monogyna</i>	Common	Occasional and local
<i>Stigmella floslactella</i>	<i>Corylus avellana</i>	Common	Occasional but generally distributed
<i>Stigmella salicis</i>	<i>Salix caprea</i>	Common	Occasional and local
<i>Stigmella obliquella</i>	<i>Salix fragilis</i>	Local	Rare and very local
<i>Stigmella trimaculella</i>	<i>Populus</i> sp.	Common	Rare and very local
<i>Stigmella aurella</i>	<i>Rubus fruticosus</i> agg.	Common	Frequent and widespread
<i>Stigmella ruficapitella</i>	<i>Quercus robur</i>	Common	Occasional and local
<i>Ectoedemia lousella</i>	<i>Acer campestre</i>	Local	Rare and very local
<i>Ectoedemia septembrella</i>	<i>Hypericum</i> sp.	Common	Rare and very local
<i>Ectoedemia intimella</i>	<i>Salix</i> sp.	Local	Rare and very local
Heliozelidae			
<i>Heliozela resplendella</i>	<i>Alnus glutinosa</i>	Local	Rare and very local
Tischeriidae			
<i>Coptotriche marginea</i>	<i>Rubus fruticosus</i> agg.	Common	Occasional but generally distributed
Bucculatricidae			
<i>Bucculatrix nigricomella</i>	<i>Leucanthemum vulgare</i>	Local	Occasional and very local
<i>Bucculatrix bechsteinella</i> -	<i>Crataegus monogyna</i>	Local	Rare and very local
Gracillariidae			
<i>Parectopa ononidis</i>	<i>Trifolium</i> sp.	Nationally Scarce B	1 record
<i>Caloptilia stigmatella</i>	<i>Salix fragilis</i>	Common	Frequent and generally distributed
<i>Caloptilia semifascia</i>	<i>Acer campestre</i>	Local	Occasional and local
<i>Aspilapteryx tringipennella</i>	<i>Plantago lanceolata</i>	Common	Occasional and local
<i>Parornix anglicella</i>	<i>Crataegus monogyna</i>	Common	Frequent and generally distributed
<i>Parornix scoticella</i>	<i>Malus</i> sp.	Common	Rare and very local
<i>Parornix finitimella</i>	<i>Prunus spinosa</i>	Common	Occasional and very local
<i>Phyllonorycter oxyacanthae</i>	<i>Crataegus monogyna</i>	Common	Occasional but generally distributed

<i>Phyllonorycter spinicolella</i>	<i>Prunus spinosa</i>	Common	Occasional and local
<i>Phyllonorycter cerasicolella</i>	<i>Prunus</i> sp.	Local	Rare and very local
<i>Phyllonorycter coryli</i>	<i>Corylus avellana</i>	Common	Frequent and generally distributed
<i>Phyllonorycter rajella</i>	<i>Alnus glutinosa</i>	Common	Occasional and local
<i>Phyllonorycter ulmifoliella</i>	<i>Betula pendula</i>	Common	Occasional and local
<i>Phyllonorycter stettinensis</i>	<i>Alnus glutinosa</i>	Common	Occasional and very local
<i>Phyllonorycter nicellii</i>	<i>Corylus avellana</i>	Common	Occasional but generally distributed
<i>Phyllonorycter kleemannella</i>	<i>Alnus glutinosa</i>	Common	Occasional and local
<i>Phyllonorycter acerifoliella</i>	<i>Acer campestre</i>	Common	Occasional and local
<i>Cameraria ohridella</i>	<i>Aesculus hippocastanum</i>	Common	Widely distributed
<i>Phyllocnistis saligna</i>	<i>Salix fragilis</i>	Local	1 recent record
Yponomeutidae			
<i>Yponomeuta cagnagella</i>	<i>Euonymus europaeus</i>	Common	Occasional and local
<i>Yponomeuta plumbella</i>	<i>Euonymus europaeus</i>	Local	Frequent but local
Glyphipterigidae			
<i>Glyphipterix simpliciella</i>	Adults	Common	Occasional but generally distributed
<i>Digitivalva pulicariae</i>	<i>Pulicaria dysenterica</i>	Local	Occasional and very local
Lyonetiidae			
<i>Lyonetia clerkella</i>	<i>Prunus spinosa</i>	Common	Common and generally distributed
Elachistidae			
<i>Luquetia lobella</i>	<i>Prunus spinosa</i>	Local	Occasional and very local (no records in VC6)
Cosmopterigidae			
<i>Limnaecia phragmitella</i>	<i>Typha latifolia</i>	Common	Occasional and local
Gelechiidae			
<i>Apodia bifractella</i>	<i>Pulicaria dysenterica</i>	Local	Occasional and local
Coleophoridae			
<i>Coleophora serratella</i>	<i>Betula pendula</i>	Common	Occasional and local
<i>Coleophora glaucicolella</i>	<i>Juncus</i> sp.	Common	Rare and very local
<i>Coleophora argentula</i>	<i>Achillea millefolium</i>	Common	Occasional and local
Momphidae			
<i>Mompha epilobiella</i>	<i>Epilobium hirsutum</i>	Common	Occasional and local
Pterophoridae			
<i>Pterophorus pentadactyla</i>	Adult	Common	Frequent and generally distributed

<i>Adaina microdactyla</i>	<i>Eupatorium cannabinum</i>	Common	Occasional and local
Choreutidae			
<i>Anthophila fabriciana</i>	Adults	Common	Frequent and generally distributed
Tortricidae			
<i>Celypha lacunana</i>	Adult	Common	Common and widespread
<i>Endothenia gentianaeana</i>	<i>Dipsacus fullonum</i>	Common	Frequent but local
<i>Epinotia tenerana</i>	Adult	Common	Occasional and local
<i>Gypsonoma dealbana</i>	<i>Acer campestre</i>	Common	Occasional and local
<i>Notocelia cynosbatella</i>	Adult	Common	Frequent and generally distributed
<i>Dichrorampha petiverella</i>	Adult	Common	Rare and local
<i>Lathronympha strigana</i>	Adult	Common	Frequent but local
<i>Grapholita compositella</i>	Adult	Common	Rare and local
Crambidae			
<i>Pyrausta purpuralis</i>	Adult	Common	Frequent and widespread
<i>Chrysoteuchia culmella</i>	Adult	Common	Common and widespread
<i>Crambus perlella</i>	Adult	Common	Common and Widespread
<i>Agriphila selasella</i>	Adult	Local	Frequent but local

9.10 Aquatic Invertebrate Survey: 2010, 2013, 2014 & 2016*:

* This single visit survey was undertaken in the Large Pool only, in response to a pollution incident in May 2016 (see main report for details).

Species	Common Name (where available)	2010	2013	2014	2016
Heteroptera	True Bugs				
<i>Hydrometera stagnorum</i>	Water Measurer		Y	Y	
<i>Gerris thoracicus</i>	Pondskater		Y		
<i>Gerris argentatus</i>	Pondskater			Y	
<i>Gerris lacustris</i>	Pondskater		Y	Y	
<i>Gerris odontogaster</i>	Pondskater		Y	Y	
<i>Gerris sp.</i>	Pondskater nymphs only				Y
<i>Ranatra linearis</i>	Water Stick Insect		Y	Y	
<i>Ilyocoris cimicoides</i>	Saucer Bug		Y	Y	Y
<i>Notonecta glauca</i>	Common Backswimmer		Y	Y	Y
<i>Plea minutissima</i>	Lesser Backswimmer		Y	Y	Y
<i>Cymatia coleoptera</i>			Y	Y	Y
<i>Corixa dentipes</i>	Water Boatman		Y		
<i>Corixia punctata</i>	Water Boatman			Y	
<i>Corixa panzeri</i>	Water Boatman		Y		Y
<i>Hesperocorixa linnaei</i>			Y		
<i>Hesperocorixa sahlbergi</i>				Y	
<i>Sigara distincta</i>			Y		
<i>Sigara dorsalis</i>			Y	Y	Y
<i>Sigara falleni</i>			Y	Y	
<i>Sigara lateralis</i>			Y	Y	Y
<i>Sigara fossarum</i>			Y	Y	
<i>Sigara nigrolineata</i>			Y		
Coleoptera	Beetles				
<i>Haliphus confinis</i>			Y	Y	
<i>Haliphus immaculatus</i>			Y	Y	
<i>Haliphus laminatus</i>			Y	Y	
<i>Haliphus lineolatus</i>			Y	Y	

<i>Haliphus ruficollis</i>			Y		
<i>Noterus clavicornis</i>			Y	Y	Y
<i>Hygrobia hermanni</i>			Y	Y	
<i>Agabus bipustulatus</i>				Y	
<i>Hygrotus confluens</i>			Y		
<i>Hygrotus inaequalis</i>			Y	Y	Y
<i>Laccophilis minutus</i>				Y	
<i>Hyphydrus ovatus</i>			Y		
<i>Dytiscus marginalis</i>	Great Diving Beetle		Y		
Other Invertebrates					
Damselfly nymph			Y	Y	Y
Dragonfly nymph			Y	Y	
Cased Caddis larvae			Y	Y	Y
Caseless Caddis larvae			Y	Y	
Diving Beetle larvae			Y	Y	Y
<i>Asellus</i> species	Water Hoglice		Y	Y	Y
<i>Ceriodaphnia</i> species	Daphnia	Y			
<i>Cyclops</i> species	Copepod	Y			
<i>Daphnia</i> species	Daphnia	Y			
<i>Gammarus</i> species	Freshwater Shrimp		Y	Y	Y
<i>Hydracarina</i> species	Water Mite		Y	Y	Y
<i>Hirudinae</i> species	Leeches		Y	Y	Y
<i>Lymnaea auricularia</i>	Ear Pond Snail	Y			
<i>Lymnaea stagnalis</i>	Great Pond Snail	Y			
<i>Lymnaeidae</i> species	Whorl Snail		Y	Y	Y
<i>Navicula</i> species	Diatom	Y			
<i>Nitzschia</i> species	Diatom	Y			
<i>Piscicola geometra</i>	Fish Leech	Y			
<i>Pisidium</i> species	Pea Mussel		Y	Y	Y
<i>Planorbidae</i> species	Ramshorn Snail		Y	Y	Y
<i>Polyphemus</i> species	Polyphemus				
<i>Prostoma graecense</i>	Ribbon Worm	Y			
<i>Tubificidae</i> species	Tubifex Worm		Y	Y	Y

Vertebrates					
<i>Rana temporaria</i>	Frog tadpoles & froglets		Y	Y	
<i>Bufo bufo</i>	Toad tadpoles		Y		
<i>Gasterosteus / Pungitius</i>	Stickleback		Y		
Various	Fish fry				
<i>Scardinius eurythrophalmus</i>	Rudd			Y	
<i>Esox lucius</i>	Pike				
<i>Perca fluviatilis</i>	Perch			Y	

9.11 Terrestrial Invertebrates (2008 – 2017)

The main invertebrate surveys produced an excellent list of species, some of which were Red Data Book, Nationally Scarce or Somerset Notable species: these are marked in the table below.

Species	Common Name (where available)	2008 – 2012	2013 - 2017
Mecoptera			
	Scorpion Flies		
<i>Panorpa cognata</i>		Y	
<i>Panorpa communis</i>	Common Scorpion Fly	Y	Y
<i>Panorpa germanica</i>		Y	
Neuroptera			
	Lacewings		
<i>Chrysopa perla</i>		Y	Y
<i>Chrysoperla carnea</i>	Green Lacewing	Y	Y
<i>Sialis lutarius</i>			Y
<i>Chrysopidia ciliata</i>		Y	
<i>Dichochrysa prasina</i>		Y	
<i>Micromus variegatus</i>		Y	

Odonata			
	Damselflies		
<i>Calopteryx virgo</i> **	Beautiful Demoiselle	Y	Y
<i>Calopteryx splendens</i> **	Banded Demoiselle	Y	Y
<i>Lestes sponsa</i>	Emerald Demoiselle	Y	Y
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	Y	Y
<i>Platycnemis pennipes</i> *	White-legged Damselfly	Y	Y
<i>Coenagrion puella</i>	Azure Damselfly	Y	Y
<i>Coenagrion pulchellum</i> *	Variable Damselfly	Y	Y
<i>Enallagma cyathigerum</i>	Common Blue Damselfly	Y	Y
<i>Ischnura elegans</i>	Blue-tailed Damselfly	Y	Y
<i>Erythromma najas</i> **	Red-eyed Damselfly	Y	Y
<i>Erythromma viridulum</i>	Small Red-eyed Damselfly		Y
	Dragonflies		
<i>Aeshna juncea</i> **	Common Hawker	Y	Y
<i>Aeshna cyanea</i>	Southern Hawker	Y	Y
<i>Aeshna mixta</i>	Migrant Hawker		Y
<i>Aeshna grandis</i>	Brown Hawker	Y	Y
<i>Anax imperator</i>	Emperor Dragonfly	Y	Y
<i>Libellula quadrimaculata</i>	Four-Spotted Chaser		Y
<i>Libellula depressa</i>	Broad-bodied Chaser	Y	Y
<i>Libellula fulva</i> *	Scarce Chaser		Y
<i>Orthetrum cancellatum</i> **	Black-tailed Skimmer		Y
<i>Sympetrum striolatum</i>	Common Darter	Y	Y
<i>Sympetrum sanguineum</i> *	Ruddy Darter	Y	Y
Plecoptera	Stoneflies		
<i>Nemoura cineraria</i>			Y
Orthoptera			
	Bush-crickets		
<i>Conocephalus discolor</i> *	Long-winged Conehead	Y	Y
<i>Conocephalus dorsalis</i>	Short-winged Conehead	Y	Y

<i>Meconema thalassinum</i>	Oak Bush-cricket		Y
<i>Pholidoptera griseoptera</i>	Dark Bush-cricket	Y	Y
<i>Leptophyes punctatissima</i>	Speckled Bush-cricket	Y	Y
<i>Metrioptera roeselii</i> *	Roesel's Bush-cricket		Y
	Groundhoppers		
<i>Tetrix subulata</i> **	Slender Groundhopper	Y	Y
<i>Tetrix undulata</i>	Common Groundhopper	Y	Y
	Grasshoppers		
<i>Omocestus viridulus</i>	Common Green Grasshopper	Y	Y
<i>Chorthippus brunneus</i>	Common Field Grasshopper	Y	Y
<i>Chorthippus parallelus</i>	Meadow Grasshopper	Y	Y
Dermaptera			
	Earwigs		
<i>Forficula auricularia</i>	Common Earwig	Y	Y
<i>Forficula lesnei</i> *	Lesne's Earwig	Y	Y
Heteroptera			
	True Bugs		
<i>Loricula pselaphiformis</i>			Y
<i>Saldula c-album</i>		Y	
<i>Saldula saltatoria</i>			Y
<i>Tingis ampliata</i>		Y	
<i>Tingis cardui</i>		Y	
<i>Dicyphus epilobii</i>		Y	Y
<i>Dicyphus errans</i>		Y	Y
<i>Deraeocoris ruber</i>		Y	Y
<i>Adelphocoris lineola</i>		Y	
<i>Adelphocoris lineolatus</i>		Y	
<i>Calocoris roseomaculatus</i>		Y	Y
<i>Calocoris norvegicus</i>	Potato Capsid	Y	Y
<i>Calocoris stysi</i>			Y

<i>Capsus ater</i>		Y	Y
<i>Liocoris tripustulatus</i>		Y	Y
<i>Lygocoris lucorum</i>		Y	Y
<i>Lygocoris spinolae</i>		Y	Y
<i>Lygocoris pabulinus</i>	Common Green Capsid	Y	Y
<i>Lygocoris contaminatus</i>		Y	
<i>Lygocoris viridis</i>		Y	
<i>Lygus rugulipennis</i>	Tarnished Plant Bug	Y	Y
<i>Miris striatus</i>			Y
<i>Miridius quadrivirgatus</i>		Y	
<i>Orthops campestris</i>		Y	Y
<i>Pantilius tunicatus</i>		Y	Y
<i>Phytocoris varipes</i>		Y	Y
<i>Polymerus unifasciatus</i>			Y
<i>Stenotus binotatus</i>		Y	Y
<i>Leptopterna dolabrata</i>		Y	Y
<i>Leptopterna ferrugata</i>			Y
<i>Notostira elongata</i>		Y	Y
<i>Pithanus maerkelii</i>			Y
<i>Stenodema calcarata</i>		Y	Y
<i>Stenodema laevigata</i>		Y	Y
<i>Heterotoma planicornis</i>		Y	Y
<i>Trignotylus ruficornis</i>		Y	Y
<i>Orthotylus marginalis</i>			Y
<i>Blepharidopterus angulatus</i>	Black-kneed Capsid	Y	
<i>Megalocoleus molliculus</i>			Y
<i>Macrotylus solitarius</i>			Y
<i>Plagiognathus arbustorum</i>		Y	Y
<i>Plagiognathus chrysanthemi</i>		Y	Y
<i>Psallus salicis</i>			Y
<i>Psallus betuli</i>			Y
<i>Himacerus apterus</i>		Y	Y
<i>Nabis flavomarginatus</i>		Y	Y

<i>Nabis ferus</i>			Y
<i>Nabis rugosus</i>	Common Damsel Bug	Y	Y
<i>Anthocoris nemoralis</i>		Y	Y
<i>Anthocoris nemorum</i>	Common Flower Bug	Y	Y
<i>Brachysteles parvicornis</i>		Y	
<i>Heterogaster urticae</i>		Y	Y
<i>Kleidocerys resedae</i>		Y	
<i>Cymus melanocephalus</i>		Y	Y
<i>Cymus glandicolor</i>			Y
<i>Cymus clavicolus</i>			Y
<i>Ischnodemus sabuleti</i>	European Chinchbug	Y	
<i>Chilacis typhae</i>		Y	Y
<i>Scolopostethus thomsoni</i>		Y	
<i>Trapezonotus arenarius</i>		Y	
<i>Taphropeltus contractus</i>		Y	
<i>Coreus marginatus</i>	Squash Bug	Y	Y
<i>Coriomerus denticulatus</i>			Y
<i>Corizus hyoscyami</i> *		Y	Y
<i>Rhopalus subrufus</i>		Y	Y
<i>Myrmus miriformis</i>		Y	
<i>Stictopleurus punctatonevrosus</i>		Y	
<i>Scolopostethus affinis</i>		Y	Y
<i>Peritrechus geniculatus</i>		Y	
<i>Sehirus bicolor</i>	Pied Shieldbug	Y	
<i>Eurygaster testudinaria</i>		Y	Y
<i>Podops inuncta</i>		Y	
<i>Aelia acuminata</i>	Bishop's Mitre	Y	Y
<i>Dolycoris baccarum</i>		Y	Y
<i>Elasmucha grisea</i>			Y
<i>Eysarcoris fabricii</i>		Y	
<i>Palomena prasina</i>	Green Shieldbug	Y	Y
<i>Piezodorus lituratus</i>	Gorse Shieldbug	Y	Y
<i>Pentatoma rufipes</i>	Forest Bug	Y	Y

<i>Picromerus bidens</i>		Y	Y
<i>Troilus luridus</i>		Y	Y
<i>Acanthosoma haemorrhoidale</i>	Hawthorn Shieldbug	Y	Y
<i>Elasmotethus interstinctus</i>		Y	Y
<i>Eurydema oleracea</i>		Y	Y
<i>Zicrona caerulea</i>	Blue Bug	Y	Y
Trichoptera	Caddisflies		
<i>Cyrnus trimaculatus</i>			Y
<i>Glyptotendipes pallidus</i>			Y
<i>Limnephilus decipiens</i>			Y
<i>Limnephilus griseus</i>			Y
<i>Mystacides longicornis</i>			Y
Diptera			
	Hoverflies		
<i>Anasimyia contracta</i>		Y	Y
<i>Anasimyia transfuga</i>		Y	
<i>Baccha elongata</i>			Y
<i>Cheilosia albitarsus</i>		Y	Y
<i>Cheilosia antiqua</i>			Y
<i>Cheilosia bergenstammi</i>		Y	Y
<i>Cheilosia lasiopa</i>		Y	Y
<i>Cheilosia illustrata</i>		Y	Y
<i>Cheilosia mutabilis</i> *		Y	Y
<i>Cheilosia impressa</i>			Y
<i>Cheilosia pagana</i>		Y	Y
<i>Cheilosia scutellata</i>			Y
<i>Cheilosia variabilis</i>		Y	Y
<i>Cheilosia proxima</i>		Y	
<i>Cheilosia vernalis</i>		Y	Y
<i>Chrysogaster solstitialis</i>			Y
<i>Chrysogaster cemiteriorum</i>		Y	Y
<i>Chrysotoxum bicinctum</i>		Y	Y

<i>Criorhina ranunculii</i> *		Y	
<i>Chrysotoxum festivum</i>		Y	
<i>Chrysotoxum cautum</i>		Y	
<i>Epistrophe eligans</i>		Y	Y
<i>Episyrphus balteatus</i>		Y	Y
<i>Eristalis arbustorum</i>		Y	Y
<i>Eristalis interrupta</i>		Y	Y
<i>Eristalis intricarius</i>		Y	Y
<i>Eristalis pertinax</i>		Y	Y
<i>Eristalis tenax</i>	Drone-fly	Y	Y
<i>Eumerus strigatus</i>		Y	
<i>Eumerus funeralis</i>		Y	Y
<i>Eupeodes corollae</i>		Y	Y
<i>Eureodes luniger</i>		Y	Y
<i>Helophilus hybridus</i>		Y	Y
<i>Helophilus pendulus</i>		Y	Y
<i>Helophilus trivittatus</i>		Y	Y
<i>Lejogaster metallina</i>		Y	Y
<i>Leucozona laternaria</i>		Y	Y
<i>Leucozona leucorum</i>		Y	
<i>Melanogaster hirtella</i>		Y	Y
<i>Melanostoma mellinum</i>		Y	Y
<i>Melanostoma scalare</i>		Y	Y
<i>Meliscaeva auricollis</i>		Y	
<i>Meliscaeva cinctella</i>		Y	Y
<i>Merodon equestris</i>	Narcissus-fly	Y	Y
<i>Myathropa florea</i>		Y	Y
<i>Neoascia meticulosa</i>		Y	Y
<i>Neoascia podagrica</i>		Y	Y
<i>Neoascia tenur</i>		Y	Y
<i>Paragus haemorrhous</i>		Y	Y
<i>Pipizia viduata</i>		Y	Y
<i>Pipizia noctiluca</i>		Y	Y
<i>Pipizella viduata</i>			Y

<i>Parasyrphus lineola</i>		Y	
<i>Parhelophilus versicolor</i>		Y	Y
<i>Platycheirus albimanus</i>		Y	Y
<i>Platycheirus ambiguus</i>			Y
<i>Platycheirus clypeatus</i>		Y	Y
<i>Platycheirus granditarsus</i>		Y	Y
<i>Platycheirus manicatus</i>		Y	Y
<i>Platycheirus occultus</i>		Y	
<i>Platycheirus peltatus</i>		Y	Y
<i>Platycheirus rosarum</i>		Y	Y
<i>Rhingia campestris</i>		Y	Y
<i>Ripponensia splendens</i>		Y	
<i>Scaeva pyrastris</i>		Y	Y
<i>Sphaerophoria interrupta</i>		Y	Y
<i>Sphaerophoria scripta</i>		Y	Y
<i>Syritta pipiens</i>		Y	Y
<i>Syrphus ribesii</i>		Y	Y
<i>Syrphus vitrepennis</i>		Y	Y
<i>Trichopsomyia flavitarsis</i>		Y	Y
<i>Tropidia scita</i>			Y
<i>Volucella bombylans</i>	Bumblebee Mimic	Y	Y
<i>Volucella inanis</i> *			Y
<i>Volucella pellucens</i>		Y	Y
<i>Volucella zonaria</i> *		Y	Y
<i>Xanthogramma pedissequum</i>		Y	Y
<i>Xylota segnis</i>			Y
	Larger Brachycera		
<i>Atherix ibis</i>			Y
<i>Chrysopilus asiliformis</i>		Y	Y
<i>Chrysopilus cristatus</i>		Y	Y
<i>Rhagio scolopaceus</i>	Snipe Fly	Y	Y
<i>Rhagio tringarius</i>		Y	Y
<i>Haematopota crassicornis</i>		Y	Y

<i>Haematopota pluvialis</i>		Y	Y
<i>Beris chalybata</i>		Y	Y
<i>Beris geniculata</i>		Y	
<i>Beris vallata</i>		Y	Y
<i>Oxycera morrisii</i> *		Y	
<i>Oxycera nigricornis</i>			Y
<i>Oxycera rara</i>		Y	Y
<i>Oxycera trilineata</i>		Y	
<i>Vanoyia tenuicornis</i> *		Y	Y
<i>Nemotelus pantherinus</i>		Y	Y
<i>Pachygaster atra</i>		Y	
<i>Pachygaster leachii</i>		Y	Y
<i>Chorisops tibialis</i>			Y
<i>Chloromyia formosa</i>		Y	Y
<i>Odontomyia argentata</i> *		Y	Y
<i>Oplodontha viridula</i>		Y	Y
<i>Microchrysa flavicornis</i>		Y	Y
<i>Microchrysa polita</i>		Y	Y
<i>Microchrysa cyaneiventris</i>			Y
<i>Machimus atricapillus</i>	Robber Fly	Y	Y
<i>Leptogaster cylindrica</i>		Y	Y
<i>Sargus bipunctatus</i>			Y
<i>Stratommys potamida</i> *	Soldier Fly	Y	Y
<i>Bombylius major</i>	Bee-fly	Y	Y
<i>Dioctria atricapilla</i>		Y	Y
<i>Dioctria linearis</i>		Y	
<i>Leptogaster cylindrica</i>			Y

	Snail-killing Flies		
<i>Pherbellia cinerella</i>		Y	Y
<i>Pherbellia griseola</i> *		Y	Y
<i>Pherbellia nana</i> *		Y	

<i>Pherbellia schoenherri</i>		Y	Y
<i>Pherbellia ventralis</i>		Y	Y
<i>Coremacera marginata</i>		Y	Y
<i>Dichetophora oblitterata</i>		Y	Y
<i>Elgiva cucularia</i>		Y	Y
<i>Hydromya dorsalis</i>		Y	Y
<i>Ilione albiseta</i>		Y	Y
<i>Limnia unguicornis</i>		Y	Y
<i>Pherbina coryleti</i>		Y	Y
<i>Sepedon spegea</i>		Y	Y
<i>Sepedon spinipes</i>			Y
<i>Tetanocera arrogans</i>		Y	Y
<i>Tetanocera elata</i>		Y	Y
<i>Tetanocera hyalipennis</i>			Y
<i>Tetanocera ferruginea</i>		Y	
<i>Tetanocera punctifrons</i> *		Y	
<i>Trypetoptera punctulata</i>		Y	Y
	Picture-winged Flies		
<i>Myopites inulaedyssentericae</i> *			Y
<i>Urophora cardui</i>		Y	Y
<i>Urophora jaceana</i>		Y	Y
<i>Urophora stylata</i>		Y	Y
<i>Dioxyna bidentis</i> *		Y	
<i>Sphenella marginata</i>		Y	Y
<i>Merzomyia westermanni</i> *		Y	
<i>Tephritis bardanae</i>		Y	Y
<i>Tephritis cometa</i>		Y	Y
<i>Tephritis leontodontis</i>		Y	
<i>Tephritis hyoscyani</i>			Y
<i>Tephritis neesii</i>		Y	Y
<i>Tephritis vespertina</i>			Y
<i>Tephritis formosa</i>		Y	
<i>Tephritis serratulae</i>			Y

<i>Chaetostomella cylindrica</i>			Y
<i>Terellia colon</i>		Y	Y
<i>Terellia longicauda</i>		Y	
<i>Terellia ruficauda</i>		Y	Y
<i>Terellia serratulae</i>		Y	Y
<i>Terellia tussilaginis</i>		Y	
<i>Xyphosia miliaria</i>		Y	Y
<i>Anomoia permunda</i>		Y	Y
<i>Euleia heracleii</i>		Y	
<i>Herina frondescentiae</i>		Y	Y
<i>Herina lugubris</i>		Y	Y
	Conopid Flies		
<i>Conops ceriaeformis</i>		Y	
<i>Conops quadrifascitatus</i>			Y
<i>Physocephala rufipes</i>		Y	Y
<i>Myopa extricata</i> *		Y	Y
<i>Thecophora atra</i>			Y
<i>Sicus ferrugineus</i>		Y	Y
	Tachinid Flies		
<i>Eriothrix rufomaculata</i>		Y	Y
<i>Cistogaster globosa</i> *		Y	
<i>Alophora hemiptera</i>			Y
<i>Phasia pusilla</i>		Y	Y
<i>Phasia obesa</i>		Y	Y
<i>Dexiosoma caninum</i>		Y	Y
<i>Tachina fera</i>		Y	Y
<i>Nowickia ferox</i>		Y	
Aculeate Hymenoptera			
	Jewel Wasps		
<i>Chrysis ignita</i> agg.	Ruby-tailed Wasp	Y	
<i>Trichrysis cyanea</i>		Y	

	Ants		
<i>Myrmica rubra</i>	Red Ant	Y	Y
<i>Myrmica ruginodis</i>	Red Ant	Y	Y
<i>Lasius niger</i>	Black Ant	Y	Y
	Spider-hunting Wasps		
<i>Anoplius nigerrimus</i>		Y	
	Potter Wasps		
<i>Gymnomerus laevipes</i>		Y	Y
<i>Ancistrocerus gazella</i>		Y	Y
<i>Ancistrocerus parietum</i>		Y	Y
<i>Symmorphus gracilis</i>			Y
	Social Wasps		
<i>Dolichovespula media</i>		Y	
<i>Dolichovespula sylvestris</i>	Tree Wasp	Y	
<i>Vespa crabro</i>	Hornet		Y
<i>Vespula rufa</i>	Red Wasp	Y	
<i>Vespula germanica</i>	German Wasp	Y	Y
<i>Vespula vulgaris</i>	Common Wasp	Y	Y
	Solitary Wasps		
<i>Trypoxylon attenuatum</i>			
<i>Trypoxylon figulus</i>		Y	Y
<i>Crossocerus annulipes</i>		Y	
<i>Cerceris rybyensis</i>			Y
<i>Crossocerus podagricus</i>		Y	Y
<i>Rhopalum coarctatus</i>			Y
<i>Ectemnius cavifrons</i>		Y	Y
<i>Ectemnius cephalotes</i>		Y	Y
<i>Ectemnius continuus</i>		Y	
<i>Ectemnius lituratus</i>		Y	Y

<i>Pemphredon lugubris</i>			Y
<i>Psenulus pallipes</i>			Y
<i>Gorytes quadrifasciatus</i>			Y
	Solitary Bees		
<i>Hylaeus pictipes</i> *		Y	
<i>Hylaeus confusus</i>		Y	Y
<i>Hylaeus communis</i>		Y	Y
<i>Hylaeus cornutus</i> *			Y
<i>Colletes hederæ</i>			Y
<i>Andrena barbilabris</i>		Y	
<i>Andrena bicolor</i>		Y	
<i>Andrena chrysosceles</i>		Y	Y
<i>Andrena cineraria</i>		Y	Y
<i>Andrena flavipes</i>		Y	Y
<i>Andrena fulva</i>	Tawny Mining Bee	Y	Y
<i>Andrena haemorrhoa</i>		Y	Y
<i>Andrena nigroenaea</i>		Y	
<i>Andrena pubescens</i>		Y	
<i>Andrena semilaevis</i>		Y	
<i>Andrena scotica</i>			Y
<i>Andrena subopaca</i>		Y	Y
<i>Andrena thoracica</i>		Y	
<i>Andrena varians</i> *		Y	
<i>Andrena wilkella</i>		Y	Y
<i>Halictus tumulorum</i>		Y	Y
<i>Lasioglossum albipes</i>		Y	Y
<i>Lasioglossum calceatum</i>		Y	Y
<i>Lasioglossum morio</i>		Y	Y
<i>Lasioglossum pauxillum</i> *		Y	
<i>Lasioglossum parvulum</i>		Y	
<i>Sphecodes ephippius</i>		Y	
<i>Sphecodes geofrellus</i>		Y	Y
<i>Nomada fabriciana</i>		Y	Y

<i>Nomada flava</i>		Y	Y
<i>Nomada fucata</i> *		Y	
<i>Nomada goodeniana</i>		Y	
<i>Nomada sheppardana</i>		Y	
<i>Nomada flavoguttata</i>		Y	Y
<i>Nomada lathburiana</i> *		Y	
<i>Nomada panzeri</i>		Y	Y
<i>Nomada ruficornius</i>			Y
<i>Nomada striata</i>			Y
<i>Megachile centuncularis</i>	Leaf-cutter Bee	Y	
<i>Megachile versicolor</i>		Y	Y
<i>Megachile willughbiella</i>		Y	Y
<i>Osmia leaiana</i>		Y	Y
<i>Osmia rufa</i>		Y	Y
<i>Anthophora plumipes</i>	Flower Bee	Y	Y
	Social Bees		
<i>Bombus barbutellus</i>	Barbut's Cuckoo-bee		Y
<i>Bombus hortorum</i>	Garden Bumblebee	Y	Y
<i>Bombus hypnorum</i> *	Tree Bumblebee	Y	Y
<i>Bombus jonellus</i>	Small Heath Bumblebee		Y
<i>Bombus lapidarius</i>	Red-tailed Bumblebee	Y	Y
<i>Bombus lucorum</i>	White-tailed Bumblebee	Y	Y
<i>Bombus pascuorum</i>	Common Carder Bumblebee	Y	Y
<i>Bombus pratorum</i>	Early Bumblebee	Y	Y
<i>Bombus ruderarius</i>	Red-shanked Carder Bee	Y	
<i>Bombus rupestris</i> *	Hill Cuckoo Bee	Y	Y
<i>Bombus terrestris</i>	Buff-tailed Bumblebee	Y	Y
<i>Bombus vestalis</i>	Vestal Cuckoo Bumblebee	Y	Y
<i>Apis mellifera</i>	Honey Bee	Y	Y
Coleoptera			
	Flower Beetles		
<i>Oedemera nobilis</i>	Thick-legged Flower Beetle		Y

	Ladybirds		
<i>Coccidula rufa</i>		Y	Y
<i>Calvia 14-guttata</i>	Cream 14-spot Ladybird	Y	
<i>Propylea 14-punctata</i>	14-spot Ladybird	Y	Y
<i>Harmonia axyridis</i> *	Harlequin Ladybird	Y	Y
<i>Adalia 2-punctata</i>	2-spot Ladybird	Y	
<i>Adalia 10-punctata</i>	10-spot Ladybird	Y	Y
<i>Coccinella 7-punctata</i>	7-spot Ladybird	Y	Y
<i>Coccinella 11-punctata</i>	11-spot Ladybird	Y	
<i>Anisosticta 19-punctata</i>	Water Ladybird	Y	Y
<i>Psyllobora 22-punctata</i>	22-spot Ladybird	Y	Y
<i>Adonia variegata</i>	Adonis Ladybird	Y	Y
<i>Tytthaspis 16-punctata</i>	16-spot Orange Ladybird	Y	
<i>Chilocorus renipustulatus</i>	Kidney-spot Ladybird	Y	
<i>Subcoccinella 24-punctata</i>	24-spot Ladybird	Y	Y
	Leaf Beetles		
<i>Donacia aquatica</i>			Y
<i>Donacia marginata</i>			Y
<i>Donacia simplex</i>			Y
	Longhorn Beetles		
<i>Grammoptera ruficornis</i>		Y	
<i>Leptura melanura</i>		Y	
<i>Phytoecia cylindrica</i> *	Umbellifer Longhorn		Y
<i>Agapanthia villosa viridescens</i> *	Golden-bloomed Grey Longhorn		Y
<i>Rutpela maculate</i>			Y
<i>Stenocoris meridianus</i>			Y
<i>Clytus arietis</i>			Y

	Soldier Beetles		
<i>Cantharis cryptica</i>			Y
<i>Cantharis lateralis</i>			Y
<i>Cantharis livida</i>			Y
<i>Cantharis nigra</i>			Y
<i>Cantharis nigricans</i>			Y
<i>Cantharis pallida</i>			Y
<i>Cantharis rufa</i>			Y
<i>Cantharis rustica</i>			Y
<i>Cantharis pellucida</i>			Y
<i>Cantharis thoracica</i>			Y
<i>Rhagonycha fulva</i>			Y
<i>Rhagonycha lignosa</i>			Y
Malthininae			
<i>Malthinus flaveolus</i>			Y

* Red Data Book or Nationally Scarce species

** Somerset Notable species

9.12 Spiders (since 2006)

Species	Common Name
<i>Araneus diadematus</i>	Garden Spider
<i>Araneus quadratus</i>	Four-spot Orb-spider
<i>Araneus marmoreus</i> var. <i>pyramidatus</i>	Orbweb Spider
<i>Misumena vatia</i>	Crab Spider
<i>Leiobunum rotundatum/blackwalli</i>	Harvestman

9.13 Molluscs (since 2006)

Species	Common Name
<i>Anodonta cygnea</i>	Swan Mussel
<i>Succinea putris</i>	Amber Snail
<i>Cepaea hortensis</i>	White-lipped Snail
<i>Arion ater</i> agg.	Slug

9.14 Amphibians (since 2006)

Species		08	09	10	11	12	To 2017	Comments
<i>Bufo bufo</i>	Toad	X	X		X	X	X	Breeding
<i>Rana temporaria</i>	Common Frog					X	X	Breeding

9.15 Reptiles (since 2006)

Species		08	09	10	11	12	To 2017	Comments
<i>Natrix natrix</i>	Grass Snake **				X	X		
<i>Anguis fragilis</i>	Slow Worm **		X	X	X	X	X	Breeding
<i>Zootoca vivipara</i>	Common Lizard		X					

** Legally Protected species

9.16 Fish (since 2006)

Species	Common Name
<i>Esox lucius</i>	Pike
<i>Perca fluviatilis</i>	Perch

9.17 Fish Recorded in Pollution Incident

Species	Common Name	<15cm	15-25cm	25-35cm	>35cm
<i>Salmo trutta</i>	Brown trout	0	1	0	0
<i>Rutilus rutilus</i>	Roach	234	27	0	0
<i>Luciscus luciscus</i>	Dace	72	11	0	0
<i>Squalius cephalus</i>	Chub	26	21	11	4
<i>Perca fluviatilis</i>	Perch	0	0	1	0
<i>Abramis brama</i>	Bream	1	0	0	0
<i>Esox lucius</i>	Pike	1	1	0	1
<i>Gobio gobio</i>	Gudgeon	148	0	0	0
	Unidentified coarse fish	28	0	0	0
<i>Phoxinus phoxinus</i>	Minnow	721	-	-	-
<i>Cottus gobio</i>	Bullhead	288	-	-	-
<i>Barbatula barbatula</i>	Stone loach	102	-	-	-
<i>Gasterosteus aculeatus</i>	Stickleback	5	-	-	-

9.18 Bird Records (2006)

Species	Common Name	National Designation	Somerset Designation
<i>Branta canadensis</i>	Canada Goose * **		
<i>Cygnus olor</i>	Mute Swan *		
<i>Anas querquedula</i>	Garganey *	Amber: LP	AB
<i>Anas platyrhynchos</i>	Mallard	Amber	
<i>Aythya fuligula</i>	Tufted Duck *	Amber	
<i>Phasianus colchicus</i>	Pheasant		
<i>Ardea cinerea</i>	Grey Heron		B
<i>Egretta garzetta</i>	Little Egret *	Amber	B
<i>Accipiter nisus</i>	Sparrowhawk		
<i>Buteo buteo</i>	Buzzard		
<i>Gallinula chloropus</i>	Moorhen		
<i>Charadrius dubius</i>	Little Ringed Plover *	Red: LP	AB

<i>Calidris alpina</i>	Dunlin *	Red	BC
<i>Lymnocyrtus minimus</i>	Jack Snipe *	Amber	C
<i>Gallinago gallinago</i>	Snipe *	Amber	BC
<i>Actitis hypoleucos</i>	Common Sandpiper *	Amber	
<i>Tringa ochropus</i>	Green Sandpiper *	Red: LP	AC
<i>Larus philadelphia</i>	Bonaparte's Gull *	Amber	
<i>Larus ridibundus</i>	Black-headed Gull *	Amber	
<i>Larus canus</i>	Common Gull *	Amber	C
<i>Larus argentatus</i>	Herring Gull *	Red	B
<i>Larus cachinnans</i>	Yellow-legged Gull *	Amber	
<i>Larus fuscus</i>	Lesser Black-backed Gull *	Amber	B
<i>Columba palumbus</i>	Wood Pigeon		
<i>Streptopelia decaocto</i>	Collared Dove		
<i>Cuculus canorus</i>	Cuckoo	Red	
<i>Apus apus</i>	Swift	Amber	
<i>Alcedo atthis</i>	Kingfisher	Amber: LP	AB
<i>Dendrocopos major</i>	Great Spotted Woodpecker		
<i>Picus viridis</i>	Green Woodpecker	Amber	D
<i>Falco tinnunculus</i>	Kestrel	Amber	D
<i>Falco peregrinus</i>	Peregrine Falcon	Amber: LP: Annex 1	B
<i>Pica pica</i>	Magpie		
<i>Corvus monedula</i>	Jackdaw		
<i>Corvus frugilegus</i>	Rook		
<i>Corvus corone corone</i>	Carrion Crow		
<i>Corvus corax</i>	Raven		
<i>Parus caeruleus</i>	Blue Tit		
<i>Parus major</i>	Great Tit		
<i>Riparia riparia</i>	Sand Martin *	Amber	
<i>Hirundo rustica</i>	Swallow	Amber	D
<i>Delichon urbica</i>	House Martin	Amber: LP	D
<i>Aegithalos caudatus</i>	Long-tailed Tit		
<i>Phylloscopus trochilus</i>	Willow Warbler	Amber	
<i>Phylloscopus collybita</i>	Chiffchaff		
<i>Acrocephalus schoenobaenus</i>	Sedge Warbler *		

<i>Acrocephalus scirpaceus</i>	Reed Warbler *		
<i>Sylvia atricapilla</i>	Blackcap		
<i>Sylvia communis</i>	Whitethroat	Amber	
<i>Regulus regulus</i>	Goldcrest		
<i>Troglodytes troglodytes</i>	Wren		
<i>Certhia familiaris</i>	Treecreeper		
<i>Sturnus vulgaris</i>	Starling		
<i>Turdus merula</i>	Blackbird		D
<i>Turdus pilaris</i>	Fieldfare	Amber: LP	C
<i>Turdus iliacus</i>	Redwing	Red: LP	C
<i>Turdus philomelos</i>	Song Thrush	Red: P	CD
<i>Turdus viscivorus</i>	Mistle Thrush	Amber	
<i>Muscicapa striata</i>	Spotted Flycatcher	Red: P	D
<i>Erithacus rubecula</i>	Robin		
<i>Phoenicurus phoenicurus</i>	Redstart	Amber	BC
<i>Saxicola torquata</i>	Stonechat		
<i>Oenanthe oenanthe</i>	Wheatear	Amber	
<i>Cinclus cinclus</i>	Dipper		
<i>Prunella modularis</i>	Dunnock	Amber	D
<i>Motacilla flava</i>	Yellow Wagtail *	Red	BD
<i>Motacilla cinerea</i>	Grey Wagtail	Amber	
<i>Motacilla alba</i>	Pied Wagtail		
<i>Anthus pratensis</i>	Meadow Pipit	Amber	
<i>Fringilla coelebs</i>	Chaffinch		
<i>Pyrrhula pyrrhula</i>	Bullfinch	Amber: P	D
<i>Carduelis chloris</i>	Greenfinch		
<i>Carduelis cannabina</i>	Linnet	Red: P	CD
<i>Carduelis flammea</i>	Lesser Redpoll	Red	
<i>Carduelis carduelis</i>	Goldfinch	Amber	CD
<i>Carduelis spinus</i>	Siskin		
<i>Emberiza schoeniclus</i>	Reed Bunting	Amber: P	D

* Linked to larger water-bodies and wetland habitats

National Designations (as at 2012):

Birds of Conservation Concern: Red: Amber: Full details at: www.bto.org/sites/default/files/u12/bocc3.pdf

LP: Legally protected by Wildlife and Countryside Act (1981)

P: Biodiversity Action Plan Priority species

Annex I: Species protected under Annex I of the EU Birds directive

Somerset Designations (2000):

A: Notable sightings: this category includes birds with low national populations (fewer than 10,000 individuals) at any time of year. A sighting of a bird in this category at any time of year constitutes a notable record

B: Breeding notable, this category includes species which are uncommon breeders at a national scale and which breed or have bred in Somerset or the South West. For a record to be notable a bird must be showing some evidence of breeding

C: Wintering notable, this category includes species which are uncommon winterers or which winter in internationally important numbers, a sighting of this bird in autumn or winter constitutes a notable record, providing it is not simply flying over a site on its migratory route

D: Declining breeder, this category includes species which breed in too large a number to be selected for category B, but which have declined in breeding numbers. For a sighting to be a notable record, birds must be exhibiting some evidence of breeding

9.19 Bird Records Since 2006

Species	Common Name	BoCC 4 Designation	Comments
<i>Branta canadensis</i>	Canada Goose		Regular visitor, occasional breeding attempts predated: feral
<i>Anser anser</i>	Greylag Goose	Amber	One record: probably feral
<i>Cygnus olor</i>	Mute Swan	Amber	Resident: attempted breeding one year
<i>Tadorna tadorna</i>	Shelduck	Amber	Uncommon visitor
<i>Aix galericulata</i>	Mandarin Duck		Uncommon visitor: feral
<i>Anas querquedula</i>	Garganey	Amber	Uncommon summer visitor
<i>Anas strepera</i>	Gadwall	Amber	One record
<i>Anas penelope</i>	Wigeon	Amber	Uncommon winter visitor
<i>Anas platyrhynchos</i>	Mallard	Amber	Resident: breeding
<i>Anas crecca</i>	Teal	Amber	Uncommon winter visitor
<i>Aythya fuligula</i>	Tufted Duck	Amber	Uncommon winter visitor
<i>Mergus merganser</i>	Goosander		Regular winter visitor

<i>Alectoris rufa</i>	Red-legged Partridge		Resident: breeding: feral
<i>Phasianus colchichus</i>	Pheasant		Resident: breeding: feral
<i>Trachybaptus ruficollis</i>	Little Grebe		One record
<i>Podiceps cristatus</i>	Great Crested Grebe		Uncommon visitor
<i>Botaurus stellaris</i>	Bittern	Amber	Occasional visitor
<i>Ardea cinerea</i>	Grey Heron		One or two present most days
<i>Ardea alba</i>	Great White Egret		One record
<i>Egretta garzetta</i>	Little Egret	Amber	Occasional visitor
<i>Phalacrocorax carbo</i>	Cormorant		Regular visitor
<i>Pandion haliaetus</i>	Osprey		One record (flying)
<i>Accipiter nisus</i>	Sparrowhawk		Regular visitor
<i>Milvus milvus</i>	Red Kite		One record (flying)
<i>Buteo buteo</i>	Buzzard		Regular visitor
<i>Rallus aquaticus</i>	Water Rail		Regular winter visitor: occasional in summer
<i>Gallinula chloropus</i>	Moorhen		Resident: confirmed breeding
<i>Fulica atra</i>	Coot		Uncommon visitor
<i>Vanellus vanellus</i>	Lapwing	Red	One record
<i>Charadrius dubius</i>	Little Ringed Plover	Red	Summer visitor: attempted breeding
<i>Calidris alpina</i>	Dunlin	Red	Uncommon passage visitor
<i>Lymnocyptes minimus</i>	Jack Snipe	Amber	Uncommon visitor
<i>Gallinago gallinago</i>	Snipe	Amber	Regular visitor
<i>Actitis hypoleucos</i>	Common Sandpiper	Amber	Regular passage visitor
<i>Tringa ochropus</i>	Green Sandpiper	Amber	Uncommon passage visitor
<i>Tringa tetanus</i>	Redshank	Amber	Uncommon passage visitor
<i>Tringa nebularia</i>	Greenshank	Amber	Uncommon passage visitor
<i>Larus philadelphia</i>	Bonaparte's Gull		One record
<i>Larus ridibundus</i>	Black-headed Gull	Amber	Regular visitor
<i>Larus melanocephalus</i>	Mediterranean Gull	Amber	One record
<i>Larus canus</i>	Common Gull	Amber	Uncommon visitor
<i>Larus argentatus</i>	Herring Gull	Red	Regular visitor
<i>Larus cachinnans</i>	Yellow-legged Gull	Amber	One record
<i>Larus fuscus</i>	Lesser Black-backed Gull	Amber	Regular visitor
<i>Sterna hirundo</i>	Common Tern	Amber	Uncommon summer visitor
<i>Columba oenas</i>	Stock Dove	Amber	Resident: confirmed breeding

<i>Columbus palumbus</i>	Wood pigeon		Resident: confirmed breeding
<i>Streptopelia decaocto</i>	Collared Dove		Uncommon visitor
<i>Cuculus canorus</i>	Cuckoo	Red	Uncommon summer visitor
<i>Tyto alba</i>	Barn Owl	Amber	Resident: confirmed breeding
<i>Strix aluco</i>	Tawny Owl	Amber	Occasional visitor
<i>Athene noctua</i>	Little Owl		Single sighting
<i>Apus apus</i>	Swift	Amber	Summer visitor
<i>Alcedo atthis</i>	Kingfisher	Amber	Regular visitor
<i>Dendrobates minor</i>	Lesser Spotted Woodpecker	Red	Two records
<i>Dendrocopos major</i>	Great Spotted Woodpecker		Regular visitor: possible breeding
<i>Picus viridis</i>	Green Woodpecker		Regular visitor
<i>Falco tinnunculus</i>	Kestrel	Amber	Regular visitor
<i>Falco subbuteo</i>	Hobby		Uncommon summer migrant
<i>Falco peregrinus</i>	Peregrine	Amber	Uncommon visitor
<i>Garrulus glandarius</i>	Jay		Uncommon visitor
<i>Pica pica</i>	Magpie		Regular visitor
<i>Corvus monedula</i>	Jackdaw		Uncommon visitor
<i>Corvus corone corone</i>	Carrion Crow		Regular visitor
<i>Corvus corax</i>	Raven		Regular visitor
<i>Parus ater</i>	Coal Tit		Resident: possible breeding
<i>Parus palustris</i>	Marsh Tit	Red	Uncommon visitor
<i>Parus caeruleus</i>	Blue Tit		Resident: confirmed breeding (box)
<i>Parus major</i>	Great Tit		Resident: confirmed breeding (box)
<i>Alauda arvensis</i>	Skylark	Red	One record
<i>Riparia riparia</i>	Sand Martin		Occasional summer visitor
<i>Hirundo rustica</i>	Swallow	Amber	Summer visitor
<i>Delichon urbica</i>	House Martin	Amber	Summer visitor
<i>Cettia cetti</i>	Cetti's Warbler		Resident in early years
<i>Aegithalos caudatus</i>	Long-tailed Tit		Resident: confirmed breeding
<i>Phylloscopus trochilus</i>	Willow Warbler	Amber	Regular summer visitor: probable breeding
<i>Phylloscopus collybita</i>	Chiffchaff		Regular summer visitor: probable breeding
<i>Acrocephalus schoenobaenus</i>	Sedge Warbler		Regular summer visitor: probable breeding

<i>Acrocephalus scirpaceus</i>	Reed Warbler		Regular summer visitor: confirmed breeding
<i>Locustella luscinioides</i>	Savi's Warbler	Red	One record
<i>Sylvia atricapilla</i>	Blackcap		Regular summer visitor: confirmed breeding
<i>Sylvia borin</i>	Garden Warbler		Regular summer visitor: possible breeding
<i>Sylvia curruca</i>	Lesser Whitethroat		Regular summer visitor: possible breeding
<i>Sylvia communis</i>	Whitethroat	Amber	Regular summer visitor: possible breeding
<i>Sylvia undata</i>	Dartford Warbler	Amber	One record
<i>Regulus regulus</i>	Goldcrest		Uncommon visitor
<i>Troglodytes troglodytes</i>	Wren		Resident: confirmed breeding
<i>Sitta europea</i>	Nuthatch		One record
<i>Certhia familiaris</i>	Treecreeper		Regular visitor
<i>Sturnus vulgaris</i>	Starling	Red	Uncommon visitor: confirmed breeding nearby
<i>Turdus merula</i>	Blackbird		Resident; confirmed breeding
<i>Turdus pilaris</i>	Fieldfare	Red	Regular winter visitor
<i>Turdus iliacus</i>	Redwing	Red	Regular winter visitor
<i>Turdus philomelos</i>	Song Thrush	Red	Resident: probable breeding
<i>Turdus viscivorus</i>	Mistle Thrush	Red	Uncommon visitor
<i>Muscicapa striata</i>	Spotted Flycatcher	Red	Uncommon summer visitor
<i>Erithacus rubecula</i>	Robin		Resident; confirmed breeding
<i>Phoenicurus phoenicurus</i>	Redstart		Uncommon visitor
<i>Saxicola rubetra</i>	Whinchat	Red	One record
<i>Saxicola torquata</i>	Stonechat		Uncommon passage visitor
<i>Oenanthe oenanthe</i>	Wheatear	Amber	Uncommon passage visitor
<i>Cinclus cinclus</i>	Dipper	Amber	Uncommon visitor
<i>Passer domesticus</i>	House Sparrow	Red	Uncommon visitor
<i>Prunella modularis</i>	Dunnock	Amber	Resident: probable breeding
<i>Motacilla flava</i>	Yellow Wagtail	Red	Uncommon summer visitor
<i>Motacilla cinerea</i>	Grey Wagtail	Red	Regular visitor, possible breeding
<i>Motacilla alba</i>	Pied Wagtail		Regular visitor
<i>Anthus pratensis</i>	Meadow Pipit	Amber	Regular winter visitor
<i>Anthus trivialis</i>	Tree Pipit	Red	Rare visitor
<i>Fringilla coelebs</i>	Chaffinch		Resident: probable breeder
<i>Fringilla montifringilla</i>	Brambling		Uncommon winter visitor
<i>Pyrrhula pyrrhula</i>	Bullfinch	Amber	Resident: possible breeding

<i>Carduelis chloris</i>	Greenfinch		Resident: possible breeding
<i>Carduelis cannabina</i>	Linnet	Red	Uncommon visitor
<i>Carduelis flammea</i>	Lesser Redpoll	Red	Regular winter visitor
<i>Carduelis carduelis</i>	Goldfinch	Amber	Resident: possible breeding
<i>Carduelis spinus</i>	Siskin		Regular winter visitor
<i>Emberiza citrinella</i>	Yellowhammer	Red	Uncommon visitor
<i>Emberiza schoeniclus</i>	Reed Bunting	Amber	Resident: confirmed breeding

BOU British List 2017.

Birds of Conservation Concern: Red: Amber: Full details at: www.bto.org/sites/default/files/u12/bocc4.pdf

9.20 Mammal Records (total)

Species	Common Name	Conservation Status	Comments
<i>Vulpes vulpes</i>	Fox	Least Concern	Sighting
<i>Meles meles</i>	Badger	Least Concern	Prints/latrine
<i>Lutra lutra</i>	Otter	Least Concern **	Prints/spraint/sightings
<i>Mustela nivalis</i> *	Weasel	Least Concern	Sighting
<i>Capreolus capreolus</i>	Roe Deer	Least Concern	Sighting
<i>Muntiacus reevesi</i> *	Reeves' Muntjac Deer	Non-native	Sighting
<i>Talpa europaea</i>	Mole	Least Concern	Field signs & sighting
<i>Sorex araneus</i>	Common Shrew	Least Concern	Sighting
<i>Sorex minutus</i> *	Pygmy Shrew	Least Concern	Sighting
<i>Neomys fodiens</i> *	Water Shrew	Least Concern	Sighting
<i>Rattus norvegicus</i>	Brown Rat	Non-native	Prints
<i>Apodemus sylvaticus</i> *	Wood Mouse	Least Concern	Probable breeding
<i>Apodemus flavicollis</i> *	Yellow-necked Mouse	Least Concern	Sighting
<i>Arvicola amphibius</i>	Water Vole	Endangered **	Sighting
<i>Myodes glareolus</i> *	Bank Vole	Least Concern	Breeding
<i>Microtus agrestis</i> *	Field Vole	Least Concern	Breeding
<i>Sciurus carolinensis</i>	Grey Squirrel	Non-native	Sighting
<i>Oryctolagus cuniculus</i>	Rabbit	Non-native (naturalised)	Sighting
<i>Lepus europeaus</i> *	Brown Hare	Non-native (naturalised) **	Remains
<i>Felis catus</i>	Cat (domestic)	Non-native	Prints/sighting

<i>Pipistrellus pipistrellus</i> *	Common Pipistrelle Bat	Least Concern	Sighting
<i>Pipistrellus pygmaeus</i> *	Soprano Pipistrelle Bat	Least Concern **	Sighting
<i>Nyctalus noctula</i> *	Noctule Bat	Least Concern **	Sighting
<i>Eptesicus serotinus</i> *	Serotine Bat	Vulnerable	Sighting
<i>Myotis daubentonii</i> *	Daubenton's Bat	Least Concern	Sighting
<i>Plecotus auritus</i> *	Brown Long-eared Bat	Least Concern **	Sighting

* New since 2012

** UK BAP Species

Conservation Status based on IUCN Red List of Threatened Species and a Red List for British Status, as per Mathews, F. *et al* (2018) A Review of the Population and Conservation Status of British Mammals. Natural England Joint Publication JP025

10.0 References

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