

Great Marlow Nature2021

Initial biodiversity audit

Client: Great Marlow Parish Council

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Contents

1	Summary	3
2	Introduction	3
3	Description of Great Marlow Parish’s Biodiversity	3
3.1	General.....	3
3.2	Protected sites.....	4
3.3	Habitats	5
3.3.1	<i>Priority habitats</i>	5
3.3.2	<i>Farmed land</i>	6
3.3.3	<i>Waterbodies</i>	7
3.3.4	<i>Parkland</i>	7
3.3.5	<i>Woodland</i>	7
3.4	Species.....	8
4	Potential biodiversity enhancement projects.....	10
5	Appendices	11
5.1	Map 1: Local Wildlife Sites and Biological Notification Areas	11
5.2	Map 2: Other designated sites	12
5.3	Map 3: Notable habitats	13
5.4	Map 4: Land Use with Cropmap data.....	14
5.5	Buckinghamshire and Milton Keynes Biodiversity Partnership, Medmenham BOA statement	15
5.6	BMERC report on notable species and designated sites	15

1 Summary

Great Marlow Parish has employed Sundew Ecology to undertake an audit of the area's wildlife to: 'allow the ecology of the Parish to be considered for funding within a series of other considered priorities by GMPC. The intention being to allocate funds wisely to activities that support the local people and their environment that enhance the wellbeing and ensure the stewardship of the parish.' (Nick Horslen November 2020).

This audit finds that Great Marlow Parish has great opportunities to enhance the wildlife habitats that are already present and there may be opportunities to extend these to further benefit the species that inhabit them.

Although arable farming dominates the landscape, there are large tracts of ancient woodland, one of the most valuable habitats for wildlife in the UK.

2 Introduction

This document provides information about the biodiversity of Great Marlow Parish, to assist with the future production of a Neighbourhood Plan, and to help identify projects that will enhance the wildlife of the parish.

The following were undertaken to compile this report:

- A desktop study to identify biodiversity data relevant to Great Marlow Parish in the public domain.
- A standard Neighbourhood Plan data request from the [Buckinghamshire and Milton Keynes Environmental Records Centre \(BMERC\)](#)
- Interpretation of the collated data.

3 Description of Great Marlow Parish's Biodiversity

3.1 General

The protection of biodiversity in the UK is based upon the statutory designation of areas of land (protected sites) and the identification of vulnerable species, both of which are subject to regulations on activities that may cause harm.

In addition, certain habitats (areas of land with similar vegetation types, and therefore similar fauna) are identified as 'Priority Habitats'. These are not necessarily given any statutory protection, but more effort and resources may be devoted to managing them to enhance wildlife.

Biodiversity can also be protected indirectly by other legislation aimed at controlling planning, such as regulations associated with Green Belt.

An area's ecology is strongly influenced by its geology. Certain plants are better able to compete in areas with a particular geology because of the acidity of soil, the availability of nutrients, and the accessibility to water, for example.

The parish's bedrock geology is relatively simple. The whole of the parish is on chalk apart from a tiny patch of 'clay, silt and sand' extending into the north west of the parish. This is overlain, in parts, by 'superficial deposits' of clay with flints on the higher ground. This means that we would expect to see habitats associated with chalk, such as chalk grassland, in the valleys and slopes and habitats associated with clay, like neutral grassland and Beech woodland on the higher plateaus.

Great Marlow is a rural parish, with a very small proportion of the nearly 1700-hectare parish having been developed. The remainder is predominantly farmland – mostly arable (land used for crops) but with some pasture (livestock grazing land). There are also two significant areas of non-agricultural land; the aerodrome to the north and the golf course to the south.

A significant area of the parish is covered in deciduous woodland, as might be expected in this part of the Chilterns. Most of this woodland is considered to be 'ancient', the most valuable and species-rich type of woodland.

3.2 Protected sites

See Maps 1 and 2 showing protected sites.

Great Marlow Parish does not contain any statutory designated sites (**Sites of Special Scientific Interest (SSSI)** or **European Designated Sites**).

The nearest SSSIs, all immediately adjacent to the Parish boundary, are 'Hollowhill and Pullingshill Woods' to the southwest, 'Moorend Common' to the northeast and 'Widdenton Park Wood' to the north. These sites are afforded significant protection, and their owners are encouraged to undertake beneficial management to maintain and enhance their wildlife.

The nearest European designated site is 'Chilterns Beechwoods' made up of a cluster of woodlands including 'Hollowhill and Pullingshill Woods' and 'Bisham Woods' about one kilometre to the southeast of the parish.

There are no **National Nature Reserves** or **Local Nature Reserves** within the Parish. The nearest Local Nature Reserve is Bisham Woods. LNRs are areas of land dedicated as nature reserves and managed by a local authority.

Local Wildlife Sites (LWS) are a local designation, identified and surveyed by the Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC). Although there is no statutory protection for these sites, there may be an assumption against development in the local plan, and resources may be available for proactive habitat management. More detail is available in the

BMERC report. **Biological Notification Sites** (BNS) are areas of land that have been identified as potential LWSs.

There are ten LWSs in Great Marlow Parish, covering 71ha of land. Most of these are designated because of their woodland (five sites, covering 30ha), with chalk grassland (four sites, 40ha) and neutral grassland (one site, 2ha) making up the rest.

There are seven BNSs within the parish. All but one of these are woodland, the other being chalk grassland.

Much of the Parish is included in the 'Medmenham' **Biodiversity Opportunity Area** (BOA). BOAs are landscape-scale areas that have been identified as supporting high concentrations of priority habitats and species populations, and have the potential for habitat restoration at a landscape scale. These areas act as a focus for targeting resources into habitat management and restoration. The 'Buckinghamshire and Milton Keynes Biodiversity Partnership' has produced a BOA statement for Medmenham BOA (appendix 5.5) which includes targets to manage, restore and create: lowland calcareous grassland, woodland, hedgerows and lowland meadows.

Roadside verge natures reserves are areas of land adjacent to the highway that have been identified (by [Buckinghamshire CC](#)) as having a special wildlife interest and should be managed in a particular way. There is one Road Verge Nature Reserve in the parish, alongside the Wycombe Road near Marlow. This has been designated because of its chalk grassland habitat and associated flora, such as Marjoram and Burnet Saxifrage.

Most of the Parish, except areas to the east and far south, is designated as part of the London Area **Green Belt**. This is primarily a planning tool, which has little impact on biodiversity apart from influencing the location and scale of development.

3.3 Habitats

3.3.1 Priority habitats

See Map 3 for a plan showing relevant habitats.

There are about 170 individually mapped areas of 'Priority Habitat' (although some of these are contiguous) totalling just over 300ha in Great Marlow Parish. Almost all of these are 'Broadleaved Woodland', the remainder being 'Traditional Orchard' and other habitats.

3.3.2 Farmed land

Data from [UK Cropmap](#), see Map 4.

Arable

Growing crops is the biggest land use (c26%) in Great Marlow Parish. This is likely to be poor for wildlife. The fields are likely to be plant monocultures with few resources to support a diverse flora or fauna. Arable land can be improved for wildlife with good quality margins and hedgerows.

Pasture

Grassland for animal pasture covers approximately 14% of the Parish, presumably on the steeper areas or those that are prone to waterlogging. Good pasture management can be beneficial for wildlife, with a species-rich sward supporting a diverse fauna.

One field within the Parish has been identified as a Priority Habitat: Lowland Meadow. It is likely that this field has not received as many inputs (fertiliser and herbicide) or been ploughed for many years, resulting in a species-rich grassland. This field is also designated as a Local Wildlife Site (Munday Dean).

Hedgerows

Good quality hedges provide a wide range of resources for wildlife throughout the year: cover for nesting and moving through an otherwise open landscape; food in the form of pollen, nectar, berries and foliage; shade and shelter from the weather and predators.

Hedgerows form an important component of the landscape in Great Marlow Parish. The Medmenham BOA (appendix 5.5) statement indicates that the area around Marlow Bottom contains pre-18th century enclosures which may be bordered by species rich hedgerows.

Hedgerows across the parish are likely to be of varying quality, with the best ones being continuous, bushy and allowed to grow flowers and fruit.

Funding is available to encourage landowners to manage their land to benefit the environment. The primary scheme for this is Environmental Stewardship (ES). There are currently two such funding schemes in place in the Parish, a Mid-tier ES Scheme on the Carington Estate to the north and a Higher-tier scheme on Widmere Farm. ([Data from DEFRA](#))

Traditional Orchards

The traditional management of orchards can be very beneficial for wildlife. Trees were well-spaced and larger, the vegetation beneath the trees was managed like a pasture, and there are a number of features normally associated with ancient woodlands like dead wood and fungi.

In Great Marlow Parish, there are 26 areas that have been identified as 'Traditional Orchard' covering 5ha in total.

3.3.3 Waterbodies

Waterbodies - ponds, lakes, streams and rivers - can be valuable places for wildlife, depending on their 'naturalness', water quality and adjacent land management.

Because of the extremely porous nature of the chalk bedrock, there are unlikely to be many significant waterbodies apart from the occasional pond and, of course, the River Thames and waterbodies associated with its floodplain.

3.3.4 Parkland

Harleyford Manor, at the far south of the Parish has been identified as Parkland on the 'Wood Pasture and Parkland' register. Parkland is land that is managed by grazing but allowing the survival of multiple generations of trees, with at least some veteran trees or shrubs, and being associated with a stately home and 'designed' landscape.

This habitat is normally associated with veteran trees and may have species-rich grassland. There is 32ha of registered parkland in Great Marlow Parish. ([Data from DEFRA](#))

3.3.5 Woodland

Ancient Woodland

Good-quality woodlands are likely to support more wildlife than any other habitat, and Ancient Woodland (older than 1600) being the most diverse, is likely to support a significant variety of fungi, birds, wild flowers and mammals.

There are seven main areas of Ancient Woodland, mapped on the national register, within Great Marlow Parish, totalling 250ha.

Plantation and recent woodland

The remainder of the woodland in the Parish is likely to be more recent than 1600, having been either planted or allowed to grow naturally since then. This woodland is unlikely to be as species-rich as the Ancient Woodland.

There is relatively little non-ancient woodland within the Parish, covering an area of 100ha. Some of this is still considered Priority Habitat, as it is broadleaved woodland.

Urban habitats

Approximately 45ha (less than 3%) of Great Marlow Parish is taken with urban land, a combination of residential, industrial and farm units.

Although seemingly less important for wildlife than undeveloped areas, urban habitats like gardens and parks can provide important spaces for wildlife, often better than intensively farmed agricultural land.

Gardens and parks can be home to widespread, but increasingly uncommon mammals like Hedgehogs and Common Shrews, amphibians and reptiles like Slow Worms and Common Frogs, and garden birds. If allowed to have wilder areas, parks and golf courses can provide niches for wildlife that may be absent from the wider countryside.

Wycombe Air Park

This large (67ha) area of grassland has the potential to be an important resource for wildlife. Many other airfields are home to special flora and fauna such as butterflies and other pollinators. This is dependent on the site's history and current management and there are, of course, safety considerations for how the vegetation is managed.

Summary of habitats in Great Marlow Parish:

	Area
Great Marlow Parish	1700 ha
Agriculture – arable	Approx. 440ha
Agriculture – pasture	Approx. 240ha
Ancient Woodland	250ha
Non-ancient woodland (includes broadleaved, mixed and coniferous)	100ha
Priority Habitat – Broadleaved Woodland (includes ancient and non-ancient)	270ha
Priority Habitat – Lowland Meadow	1ha
Priority Habitat – Traditional Orchard	5ha
Priority Habitat – Calcareous Grassland	2ha
Parkland	32ha
Urban area	Approx. 45ha

3.4 Species

See the separate report from the Buckinghamshire and Milton Keynes Environmental Records Centre for complete species records. (Appendix 5.6)

BMERC collects and distributes records of wild species in the area. Its records are by no means exhaustive, but they do provide an indication of the types of plant and animal that are present in an area. The records provided

are considered 'notable', so do not include those that might be thought of as 'common or garden'.

Four species of amphibian and two species of reptile have been recorded, of a possible seven amphibians and six reptiles native to the UK. Those recorded in Great Marlow Parish are considered to be 'widespread' (although suffering national declines in recent years) except the **Adder** (last recorded at Marlow Common in 2008), which is a protected species in the UK.

57 species of bird have been recorded, although this is likely to be considerably higher in actuality. BMERC do not provide an indication of whether the birds were breeding or not, so it is difficult to specify the significance of a sighting. Of particular note, because of their recent declines, are: **Little Ringed Plover** (most recent sighting 2011, nest on open gravel areas like quarries), **Cuckoo** (2007, often lay eggs in wetland habitats), **Corn Bunting** (1965, farmland), **Pied Flycatcher** (2010, ancient woodland), **Nightingale** (1944, dense scrub), **Grey Partridge** (2018, farmland), **Redstart** (2015, ancient woodland), **Wood Warbler** (2012, ancient woodland) and **Turtle Dove** (2013, scrub).

94 species of higher plant have been recorded which, again, is probably an under-estimate of the number of species. Many of the plants that have been recorded are either woodland plants; such as **Bluebell**, **Sanicle** and **Bird's-nest Orchid**; and plants associated with chalk grassland like **Chiltern Gentian** and **Common Rock-rose**.

97 species of invertebrate are recorded including the UK's largest species of beetle, the **Stag Beetle**; and a number of increasingly scarce butterflies associated with ancient woodland (**Purple Emperor**, **Silver-washed Fritillary**, **White Admiral**, and **Wood White**), chalk grassland (**Small Blue**, **Chalk Hill Blue** and **Duke of Burgundy**) and other habitats (**Wall**, **White-letter Hairstreak**, **Marsh Fritillary**). BMERC provides records for 72 species of moth, out of a possible 2500 UK species.

5 species of bat have been confirmed in the parish, out of a possible 17 UK species. This is disappointing as there are rare species of bat associated with ancient woodland, which are expected to be present. All of the records held are of relatively widespread species.

There are records of six species of other mammal, including the heavily protected **Badger**, and the European protected **Water Vole** (last recorded in 1999) and **Hazel Dormouse** (1970).

In summary, the BMERC records show a fairly standard rural flora and fauna, with some exceptional records (highlighted above), but many of these are old and populations may no longer be present.

4 Potential biodiversity enhancement projects

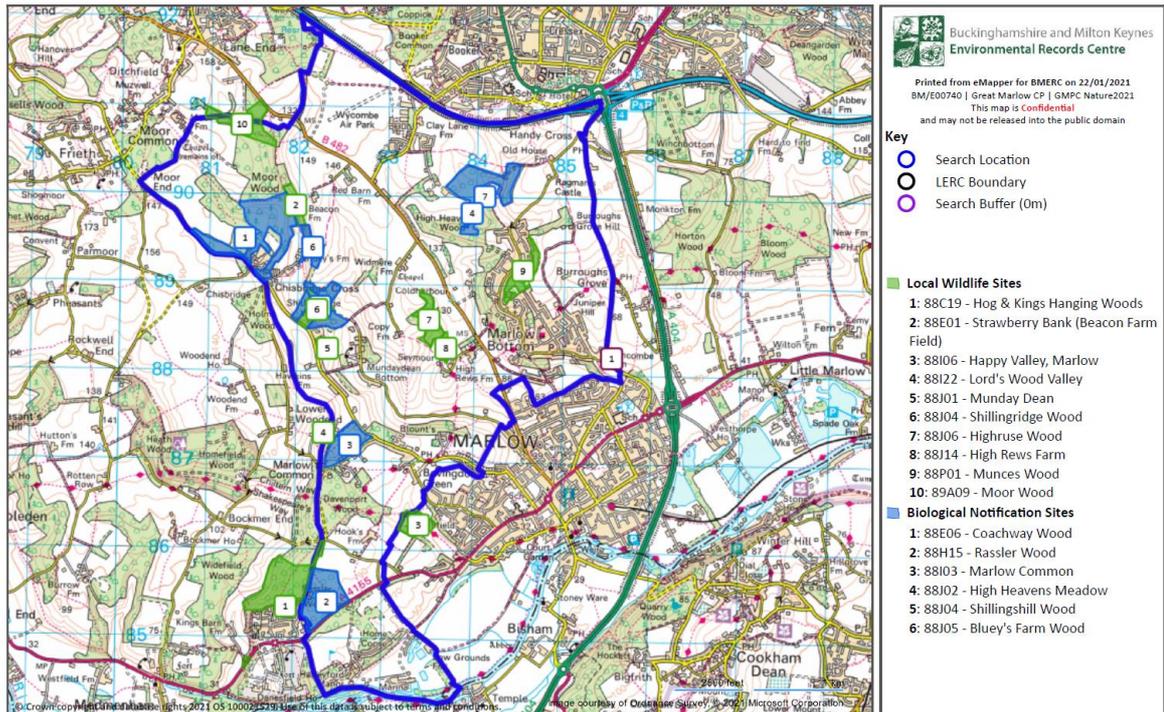
These are projects identified from the findings of the desk study, and the presence of certain habitats and species. These are very broad, and further investigation would be required to provide more detail.

Nature conservation in the UK should aim to make existing wildlife sites 'bigger better and more joined'.

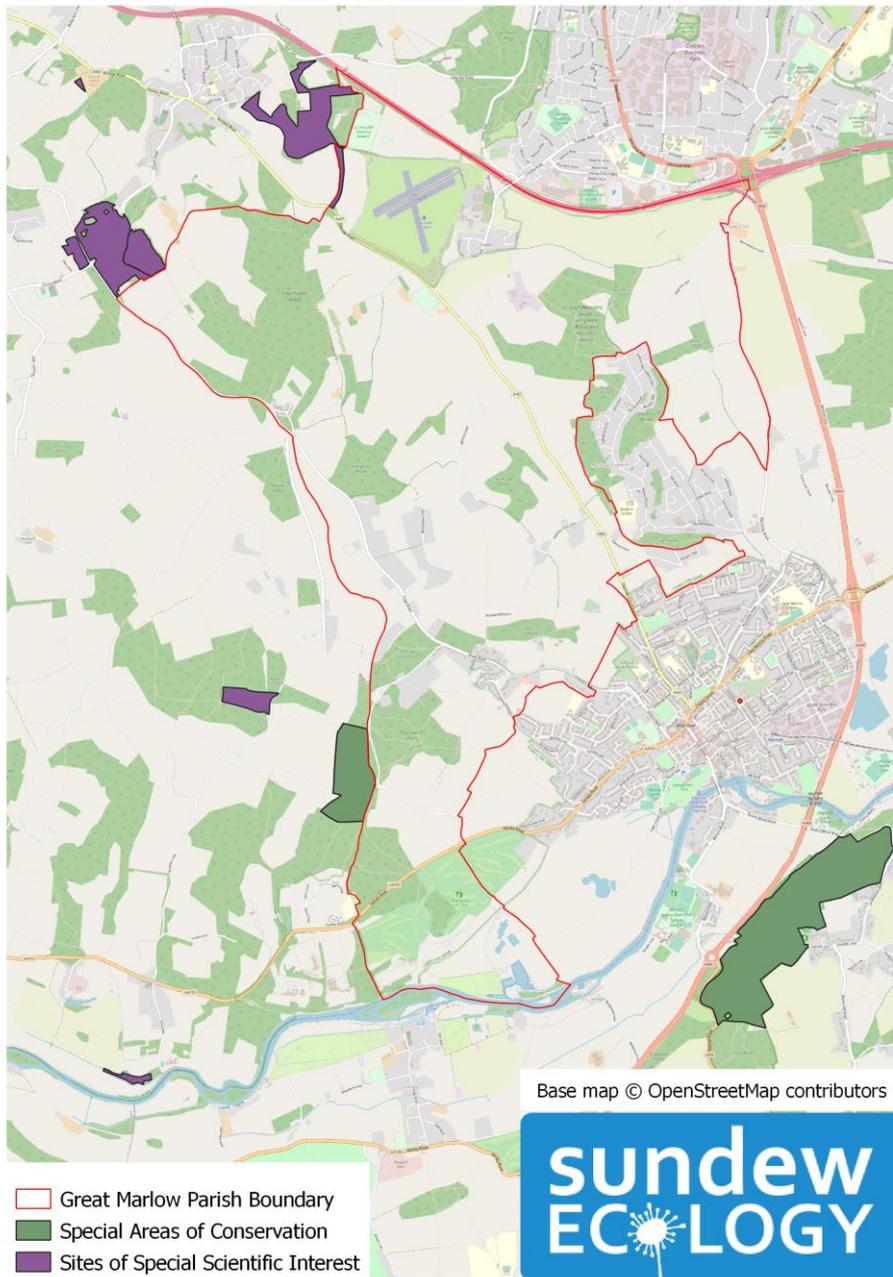
- Encourage more landowners to enter Environmental Stewardship Schemes.
- Engage with the owners of Wycombe Air Park to encourage wildlife-friendly management of the airfield.
- Encourage local wildlife recorders to submit their records to BMERC.
- Facilitate coppicing and other beneficial woodland management through the promotion of local woodland products.
- Ensure that the owners of LWSs understand the importance of their land and are aware of how they can be managed to benefit wildlife.
- Promote good hedgerow maintenance across the Parish.
- Identify more wildlife-rich road verges and work with the highways authority to encourage beneficial management.

5 Appendices

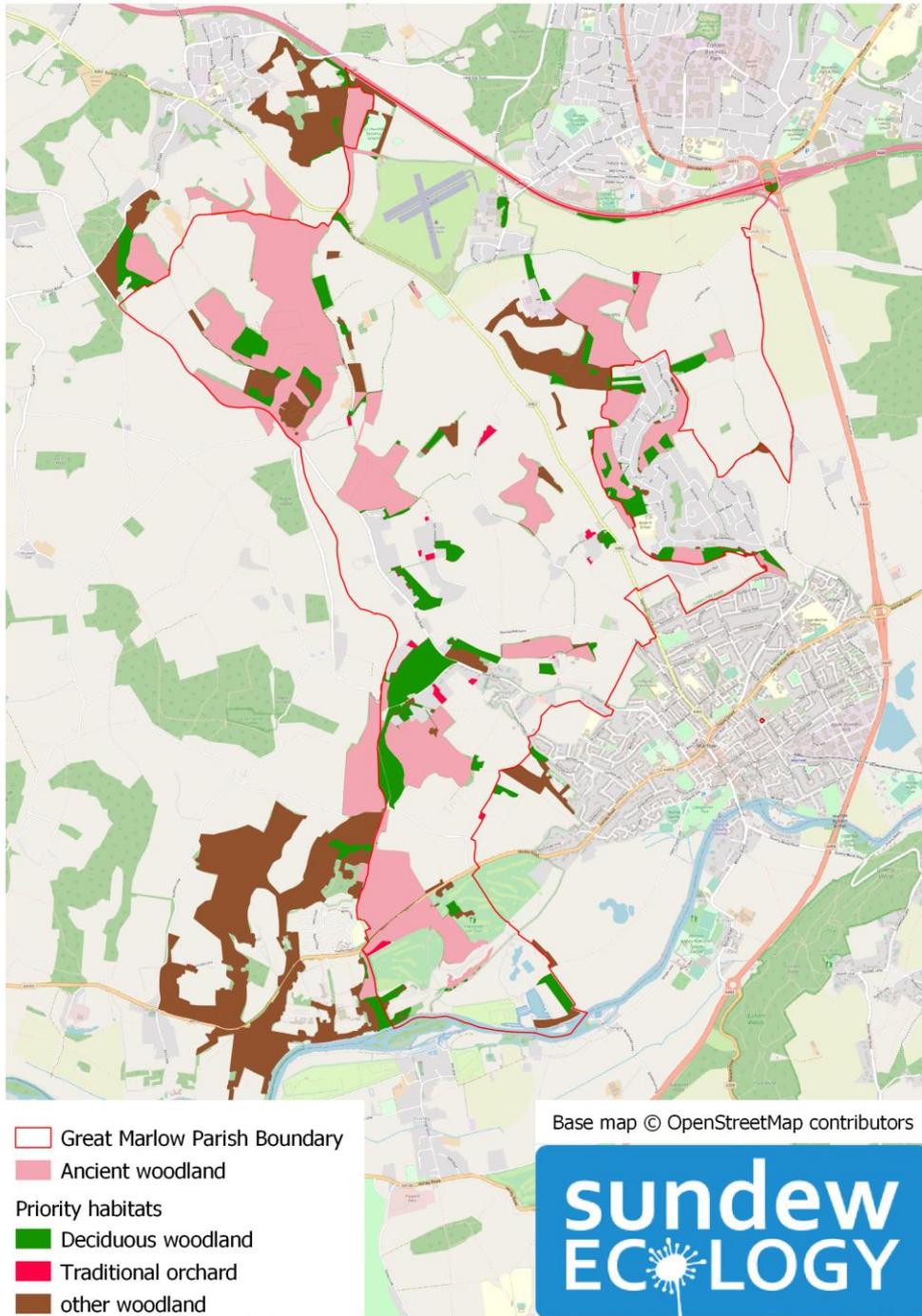
5.1 Map 1: Local Wildlife Sites and Biological Notification Areas



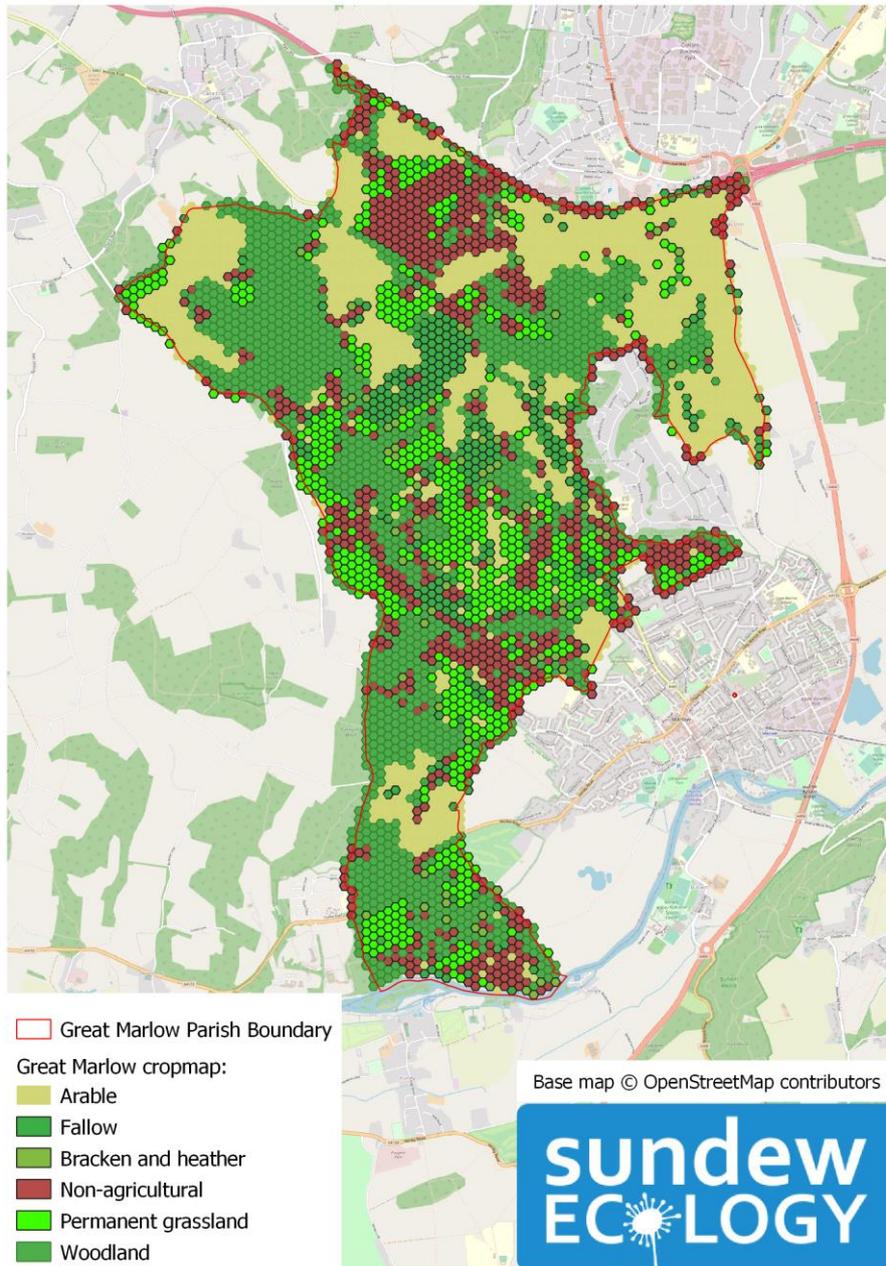
5.2 Map 2: Other designated sites



5.3 Map 3: Notable habitats



5.4 Map 4: Land Use with Cropmap data



**5.5 Buckinghamshire and Milton Keynes Biodiversity Partnership,
Medmenham BOA statement**

[See PDF](#)

5.6 BMERC report on notable species and designated sites

[See PDF](#)