The Wildlife and Environment of the Parish of Pamber

In wildlife terms, Pamber is an exceptional Parish. With the Neighbourhood Plan (NP) in mind, this personal ecological overview is aimed at raising residents' awareness of the wildlife that is on their doorstep, and its significance locally and nationally. The NP presents an opportunity for residents to take pride in the countryside that remains in the Parish and to leave a positive environmental legacy for future generations. Here are some key points to consider, followed by a more detailed account of the environment of the Parish of Pamber. Assertions and figures used can be backed up with documentary evidence that would bear scrutiny from an examiner.

- In statutory terms, Pamber is the most important parish for wildlife in the whole of the Basingstoke and Deane Borough Council area.
- More than 20% of the land in the Parish of Pamber has Site of Special Scientific Interest status because of its wildlife.
- In terms of area, around 37% of SSSI land for which Basingstoke and Deane BC is the Local Planning Authority lies in the Parish of Pamber.
- The Neighbourhood Plan presents an opportunity for residents to enhance rather than degrade the wildlife value of this outstanding part of Hampshire - not just for the benefit of wildlife, but also as a legacy for future generations.

Above: Purple Emperor, Pamber's most iconic butterfly.

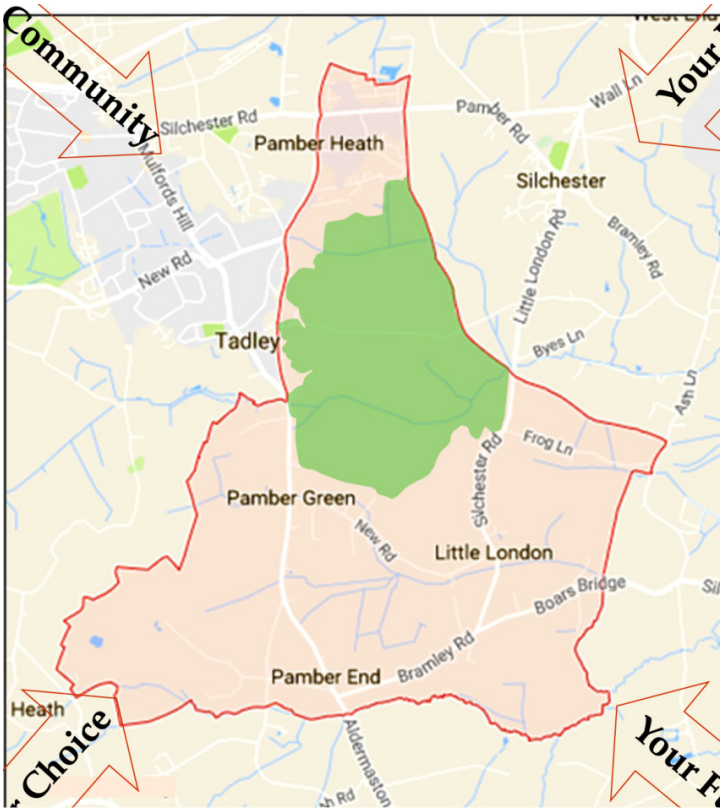
1. Background

Biodiversity is a buzzword these days and it seems that even politicians, of all hues, acknowledge the environmental concerns of many in the population. For the sake of clarity, 'biodiversity' can be defined as the variety of life, or number of species, present in any given habitat or ecosystem; it is used as a measure of the health of that location, the more species present the healthier it is deemed to be.

In England, sites that are especially rich in terms of biodiversity, or that harbour important species and habitats, are protected by a number of statutory designations. Across most of the UK, the most significant designation is that of Site of Special Scientific Interest (SSSI) a status conferred on a location because of its special interest in terms of wildlife or geology, or both. Natural England (the government's adviser for the natural environment in England) works with landowners and stakeholders to ensure the well-being of SSSI land. Most SSSI sites were designated by that organisation's previous incarnations, English Nature and before that the Nature Conservancy Council, to protect what were seen at the time to be good examples of habitats and wildlife communities. There are plenty of other sites that meet Natural England's criteria for SSSI status but which have not received this designation. Some have been designated Sites of Importance for Nature Conservation (SINC); these are lower down the scale in terms of statutory protection but their status is used to inform planning decision-making. And there are many areas that are rich in wildlife that lack any formal recognition.

As any local naturalist will tell you, the Parish of Pamber is a pocket of exceptional biological interest with a number of species that in the context of the UK can be seen as 'Flagship Species' (Appendix 1). The Parish stands out in a county that is itself recognised as being outstanding in the national context (for example in excess of 1,750 vascular plant species have been recorded in Hampshire, more than in any other county). Although this evidence is anecdotal, a review of land in the Parish designated as SSSI supports this contention. In 1951, 191 hectares of Pamber Forest was designated SSSI, in recognition of its importance as ancient woodland and for its invertebrate fauna, which included at least eight Red Data Book species of Diptera (true Flies). Today, Pamber Forest is managed as a nature reserve by the Hampshire and Isle of Wight Wildlife Trust on behalf of Basingstoke and Deane BC, who lease the land from the Englefield Estate.

More recently 16 hectares or so of private meadow abutting the western side of Pamber Forest had SSSI status conferred upon it. Plus there are SINC sites within the parish too. Silchester Common, Lord's Wood and Inham's Copse, are contiguous with Pamber Forest and are inextricably bound to it in biodiversity terms. However, for the sake of clarity they are not included in this discussion because they lie inside Silchester CP and outside the boundaries of Pamber Parish.



Above: Pamber Parish with SSSI land overlaid in green.

A map of the Parish of Pamber on which SSSI-designated land has been overlaid reveals that more than 20% of land has this status. This is an extraordinary figure for any Parish, and the majority of parishes in the Borough contain no SSSI-designated land at all. Neighbouring Silchester CP has 97 hectares (sites mentioned above) of land with this designation (perhaps 10% of this smaller parish) and Tadley CP has 11.5 hectares in the shape of Ron Ward's Meadow (under 5% in terms of area). The fact that SSSI sites within these two neighbouring parishes are virtually contiguous with Pamber's SSSI sites is further indication that Pamber Parish is a biodiversity hotspot.

The significance of the designated land (with perhaps relevance to any future Local Plan) becomes more apparent when put in the context of Basingstoke and Deane Borough Council as a whole, whose boundaries extend west to Woodhay, Highclere and St Mary Bourne, and south to the Candovers. The majority of parishes in the Basingstoke and Deane area do not contain any SSSI-designated land, and the designated land area in the Parish of Pamber is greater than any other single designated site in the Borough (Link 1). Expressed another way, roughly 37% of SSSI land for which Basingstoke and Deane BC is the Local Planning Authority is found in the Parish of Pamber. In environmental statutory terms, Pamber is B&D's most important Parish by a long way.

Above: The Parish of Pamber in the context of the Borough of Basingstoke and Deane

2. Habitat types present in the Parish

In terms of significance to native wildlife species and biodiversity there are three important habitat types in the Parish: deciduous woodland and hedgerows; grassland; and watercourses (ditches and streams). All of these are, to varying degrees, heavily influenced by human activity, both today and in centuries gone by.

2a. Deciduous Woodland and Hedgerows

Pamber Forest is a national treasure located within the Parish of Pamber. Its SSSI designation relates in part to its status as ancient woodland and its associated invertebrate communities. Underpinning Pamber Forest's extraordinary floral and faunal diversity, especially invertebrates, is its heritage: several centuries of unbroken land-use for growing timber, particularly oak. Oaks proliferate today, and the presence of veteran trees in and around the Forest is a testament to an ancient ancestry. The presence of Wild Service-tree *Sorbus torminalis* (much favoured by the Romans) in the Parish is a further sign of a millennium or more of woodland continuity. Today, Pamber Forest is managed along traditional lines and with wildlife in mind, and indeed the site's biodiversity is dependent upon informed and appropriate management. In addition to Pamber Forest, sizeable pockets of ancient woodland are found at Kinghern (King's Herne on older maps, a SINC site), and in the southwest of the Parish, at Wyeford for example.

In the past, the Parish of Pamber was more wooded than it is today (Refs. 1 & 2). And an 1824 enclosure map shows forested land extending from the existing southern boundary of Pamber Forest south to New Road, Little London and east to the settlements along Silchester Road either side of The Plough Inn. Further woodland was present south of New Road as well. Since then, all of these enclosed areas have had their woodland removed, replaced either by agricultural land or grassland of varying quality in terms of biodiversity.

The previous importance for wildlife of this 'lost' woodland is hinted at by looking at hedgerows in the Parish, in locations where these are the last remnants of earlier woodland. For example, on the north side of New Road and alongside the lane running south from SU61905925, the species composition suggests that their heritage as boundary banks dates back at least 500 years (Appendix 2); map evidence lends

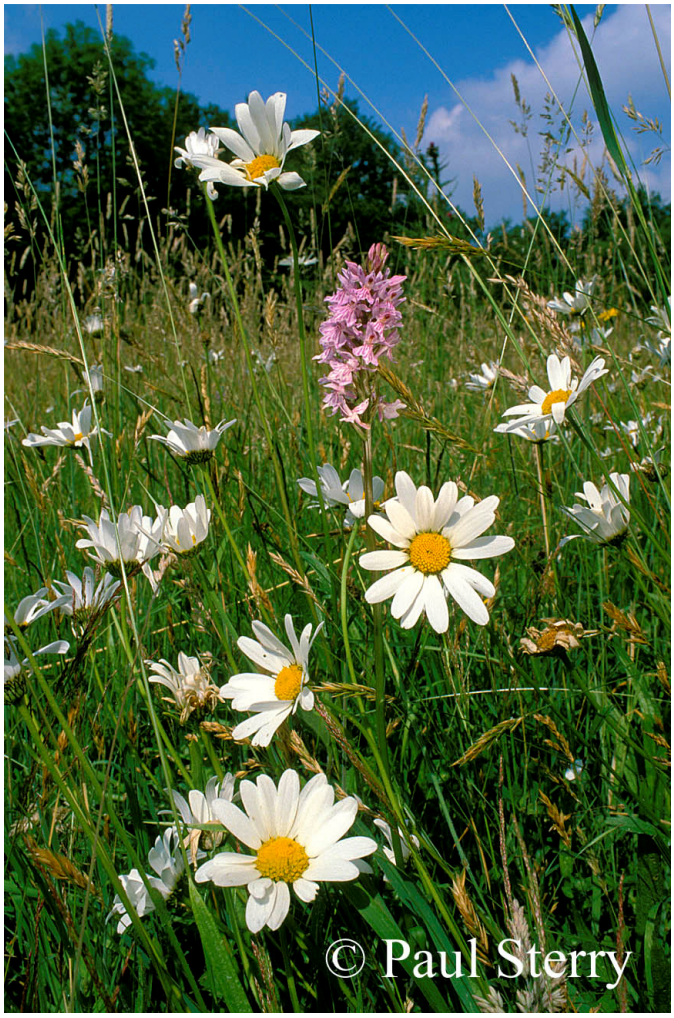
weight to this contention. And in a small garden adjacent to these hedgerows more than 450 species of moths have been recorded over the last 15 years (Ref. 3), mainly species whose larvae feed on the leaves of woodland trees and shrubs. Compare this to the figure of 800 or so species recorded in the whole of Pamber Forest since records began (Ref. 4) and you have a strong indication that the Parish harbours areas of rich biodiversity outside the boundaries of SSSI- or SINC-designated land.

Hedgerows are an integral part of the British countryside, and indeed the Pamber Parish landscape. Their aesthetic appeal belies their original, more practical function: that of defining boundaries and containing or excluding livestock. Nowadays they are rightly perceived as being important for wildlife in their own right. If maintained sympathetically they are havens for nesting birds, hedgerow flowers and insects, and they also serve as corridors connecting larger areas of biological interest. In ecological terms, hedgerows function in the same way as woodland edge, the woodland zone that supports greatest biodiversity.

2b. Grassland

In the context of southern England at least, grassland is a manmade habitat and requires regular cutting to remain in that state. To an untutored eye, one bit of grassland is much like another but in terms of biodiversity this is an illusion. Good quality so-called ‘unimproved’ meadows (ie. ones that have not been ploughed, artificially seeded or treated with chemicals) harbour rich biodiversity but are a rare commodity these days. Most of what we see in southern England today is ‘improved’ grassland (ie. seeded and treated with chemicals) with significantly depleted biodiversity.

At the last count the southern eight hectares of SSSI ‘unimproved’ meadows to the west of Pamber Forest had 250 species of flowering plant recorded growing there (Ref. 5). By contrast, seeded and sprayed agricultural ‘improved’ grassland is likely to host just a handful of flowering plant species, in the main either alien species or the born-survivor ‘weeds’ of agricultural land; invertebrate life is impoverished too. Native biodiversity is also significantly reduced on heavily grazed grassland.



Above: Biodiverse SSSI-designated grassland in the Parish of Pamber.

2c. Watercourses

A number of small streams run through the Parish, for example the ones that cross Pamber Forest, and the stream that runs under the bridge on Silchester Road adjacent to St Stephen's Hall. These watercourses harbour all the common plant and invertebrate species that might be expected of streams and ditches in this part of southern England. Interestingly, Pamber Forest's SSSI designation includes reference to an exceedingly rare (Red Data Book) species of caddis-fly *Ironoquia dubia* that is dependent upon freshwater for part of its life-cycle (Ref. 6). And as recently as the 1990s Water Voles *Arvicola terrestris* were still present in a stretch of the stream that runs south of, and parallel to, New Road and under the bridge next to the Village Hall. The Water Vole is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and is a priority conservation species.

3. Issues facing Biodiversity in the Parish of Pamber

The rich biodiversity found in Pamber Forest and the Parish's SSSI-designated meadows is a consequence of centuries of varied land management, largely dictated by changes in agricultural economics and, in historic terms, the limited physical resources available (Refs.1 & 2). SSSI land does not exist in isolation and there is good reason to suppose that, in the past, much of Parish had biodiversity comparable to that found in current SSSIs.

To preserve their biological integrity remaining SSSI sites benefit from having a buffer zone surrounding them. And fragmentation is a problem too: increasingly, nature reserves and other sites of biodiversity interest are becoming isolated from one another as a consequence of development and unsympathetic land use. The result is genetic isolation for species that are not mobile enough to travel distances. A small but valuable answer is to preserve wildlife corridors (hedgerows and the like); a more ambitious plan is to increase the amount of land that is wildlife-rich.

Pollution is another factor that affects native biodiversity in the Parish. Agricultural run-off has had a noticeable effect on the botanical make-up of verges and field margins, and those of streams and ditches. And sometimes pollution can be more obvious: for example the catastrophic pollution of Silchester Brook caused by contamination from the Sewage Works in (if memory serves me) August 2013.

4. The potential for habitat restoration

Grassland is a dynamic habitat and restoration of its native biodiversity is often an achievable goal. But the time this takes varies from site to site. The natural recovery of biodiversity is achieved as a result of what is present in the soil (seeds and invertebrate life) and by colonisation from neighbouring areas. Depending on previous land use some areas take longer to recover than others: the soil seedbank is usually rich in areas that have not been farmed intensively but severely impoverished where herbicide sprays have been employed previously.

The SSSI meadows west of Pamber are the best example in the Parish of how meadow recovery can work. Until as recently as the 1950s, they were agricultural fields, serving a variety of non-intensive purposes (Ref. 5). Their restoration has occurred naturally without any intervention other than a sympathetic cutting regime. The most significant factors aiding meadow recovery at this site were that agricultural sprays and fertiliser had never been used (hence the soil seedbank remained intact), and a rotation of land use meant that there were always fallow pockets of land to act as reservoirs of biodiversity, allowing recolonisation to occur elsewhere.

The grassland that lies to the south of Pamber Forest's southern boundary is an example of a slower progression. Returned to grassland in 2004/5 (if memory serves me) after years of varied agriculture, I would be hard pushed to find more than 30 species of flowering plant growing there after 14 years or so. This is despite an attempt to speed up the process by the application of 'wild flower' seed. Nevertheless, natural biodiversity will increase over time.

Meaningful grassland restoration can also take place on a much smaller scale. In response to large-scale meadow loss on neighbouring land a modest area of lawn in a garden on New Road, Little London, was set aside as a meadow (ie cut once a year); this was primarily for the benefit of those butterfly species whose larvae feed on grasses (Refs. 3 & 7). Where previously none had bred, within three years, seven species of grassland butterfly were breeding; this is as many species as you could reasonably expect even in the best quality unimproved grassland in this part of England.

The fact that the Pamber's SSSI meadows have such rich biodiversity is as much down to chance as it to design. Knowing what we know now, informed judgement could be employed to good effect for positive conservation outcomes elsewhere in the parish of Pamber - if residents and landowners have the vision.

Woodland restoration is potentially more of a challenge than is the case with grassland. Planting token trees does little or nothing to enhance woodland biodiversity on its own. Woodlands are more than just a collection of trees – they are an ecological community that takes time to develop; ancient woodland is given the name for a reason. Nevertheless the creation of larger areas of woodland is a worthy ambition; given the wooded heritage of the Parish and the pockets of forest biodiversity that persist there is good reason to suppose it would be a success. But based on personal experience, unless managed correctly and valued by locals, there are also reasons to be sceptical about the value of so-called 'community woodlands' for native wildlife biodiversity. On a more positive note, the planting of hedgerows, replicating the pattern that existed in 1824 for example, would be extremely beneficial for wildlife. Grants are available for such projects.

5. Summary

The residents of Pamber are privileged to live in such a biologically rich and diverse Parish. It is the responsibility of landowners, Natural England, the Hampshire and Isle of Wight Wildlife Trust, and the Borough Council to maintain the quality of designated land in the area. But Parish residents also have a role to play, and the Neighbourhood Plan offers a chance to embrace the remaining areas outside designated land for what it is: unprotected countryside some of which has similar conservation attributes to designated areas, and much of which has the potential to be restored to its former biological glory.

Given there are sensitive environmental 'assets' within the NP area (eg SSSI and SINC sites, discussed above) a Strategic Environmental Assessment (SEA) will be a required as part of the process of making the NP. Subjects covered in SEAs include biodiversity, landscape, and water quality; expertise exists within the Parish to undertake much of the work at no cost to the NP project.

Regardless of SEA requirements it would a worthy ambition, as part of the NP process, for a full environmental audit of the Parish to be undertaken so that a verified database of environmental assets is established. Surveys of existing SSSI land would not be necessary (the information is already there) and as mentioned expertise exists in the Parish for the work to be undertaken at little or no cost, apart from time and effort. Such an undertaking would also present an opportunity for anyone in the community interested in the Parish's biological heritage to become involved in, and informed by, the process. Hedgerows could be surveyed and mapped, streams and ditches assessed, and woodland and grassland biodiversity quantified. I am sure that such an ambitious and worthwhile mission would generate considerable media interest and positive stories for the Parish.

The Neighbourhood Plan presents an opportunity for residents to strive for truly sustainable development by balancing any genuine need for housing with environmental considerations. The result could be meaningful 'net environmental gain' for all residents. Land and biodiversity are finite resources. Once land is replaced by tarmac, concrete or bricks, its inherent biological interest is gone and a precious and part of our heritage is lost for future generations. The environment should be as much a part of any 'vision' for the Parish as housing and infrastructure.

Discussion points summarised:

- Protect the integrity of existing designated sites by ensuring that buffer zones of sympathetically managed land are maintained abutting them.
- Retain as much existing countryside in the Parish as possible (sometimes referred to as a 'green lung') to serve as a buffer between future encroaching development in neighbouring parishes and wildlife-rich habitats that exist within Pamber.
- Promote the concept of wildlife corridors by discouraging large-scale development in favour of appropriate, isolated and small-scale development.
- Aim to enhance rather than degrade biodiversity, and the environmental value of the remaining countryside in the Parish.
- Vet any future planning applications with a keen eye on their impact on biodiversity in the Parish; and encourage the concept of mitigation.

Primary recommendation:
As part of the process of making the Neighbourhood Plan, undertake a full environmental survey of the Parish so that residents know what is present in the area before it is lost - to establish a biodiversity baseline.

Dr Paul Sterry, Little London

References:

Ref. 1 - Rural History (2011) 22, 2, 159-181. Cambridge University Press. Woodland Management in Hampshire 900 to 1815. Alan Albery.
Ref. 2 - A Guide to Enclosure in Hampshire 1700-1900. John Chapman and Sylvia Seeliger. Hampshire Record Series volume 15. HCC 1997.
Ref. 3 - Collins Complete Guide to British Butterflies and Moths. Paul Sterry, Andrew Cleave and Rob Read. Published by William Collins, 2016.
Ref. 4 - Personal communication from the warden of Pamber Forest.
Ref. 5 - British Wildlife Magazine, volume 11, no.1, 1999. Agriculture and wildlife conservation: accident or design? Alan Albery.
Ref. 6 - Management Plan for Pamber Forest.
Ref. 7 - Collins Complete Guide to British Garden Wildlife. Paul Sterry. Published by William Collins, 2010.

Links

Link 1.
https://designatedsites.naturalengland.org.uk/SiteList.aspx?siteName=Common&countyCode=19&responsiblePerson=

Appendix 1.
Flagship species in the Parish of Pamber.

Purple Emperor *Apatura iris*

The Purple Emperor is one of Britain's most iconic butterflies and its restricted range is determined by its precise habitat requirements. It is associated with mature oak woodlands and, together with the surrounding countryside, Pamber Forest is one of its national strongholds. Males defend territories from the tops of particularly tall oaks in the forest; females disperse to lay eggs, primarily on Goat Willow *Salix capraea*, both in the forest and in nearby hedgerows; egg-laying females range as far as New Road, Little London, where the larval foodplant occurs. If hedgerow Goat Willow is cut inappropriately or worse still removed, then the eggs, larvae and pupae of this magnificent butterfly will be destroyed.

Silver-washed Fritillary *Argynnis paphia*

The Silver-washed Fritillary is a woodland butterfly with a range that is restricted to southern and central Britain. Pamber Forest is an important site for the species and it is one of this location's most familiar butterflies, on the wing from mid-June to mid-August in most seasons. Woodland management is undertaken with this species in mind: the larvae feed on violets and open, sunny clearings are needed for the foodplant to thrive. Flower-rich rides are where the adults feed and neighbouring grassland is also important; Creeping Thistle and Marsh Thistle are key nectar sources for this species.

White Admiral *Limenitis Camilla*

The White Admiral is another butterfly species for which Pamber Forest is famous in naturalist circles; the species' range is restricted to central and southern England. It is a woodland butterfly but its requirements are subtly different from that of the Silver-washed Fritillary or Purple Emperor. Although adults favour the same nectar sources as other species, and fly along sunny rides and forest edges in June and July, the larval requirements are very different. The foodplant is Honeysuckle and females will only lay eggs on straggly plants growing in shady, rather overgrown spots.

Above: White Admiral larva

Reptiles and Amphibians

Within the Parish of Pamber four native British reptile species occur namely: Grass Snake *Natrix natrix*; Adder *Vipera berus*; Slow-worm *Anguis fragilis;* and Common Lizard *Lacerta vivipara*. They are protected by the Wildlife and Countryside Act 1981 (plus amendments) which means it is illegal to intentionally injure or kill these species. In addition, four native British Amphibian species are recorded, namely: Common Frog *Rana temporaria*; Common Toad *Bufo bufo*; Palmate Newt *Lissotriton helveticus*; and Smooth Newt *Lissotron vulgaris*.

Above: emerging juvenile Grass Snake

Woodcock *Scolopax rusticola*

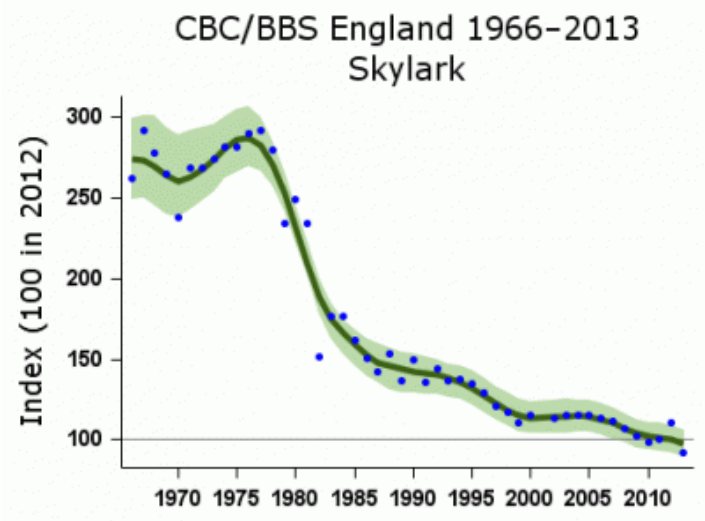
The Woodcock is an unusual wader that is primarily thought of as a bird of woodland. Its nocturnal habits, cryptic plumage and secretive habits mean it is notoriously difficult to observe, let alone study. It is present year-round in Pamber Parish and displaying males (which perform aerial displays at dusk) are seen every year in and around Pamber Forest, indicating that breeding is attempted. Disturbance by dogs was mentioned in the original management plan for Pamber Forest as a factor potentially affecting breeding success. Studies elsewhere have shown that most Woodcock feed at night in grassland adjacent to roosting or nesting woodland. Numbers increase in most winters with an influx of migrants, mainly from Russia.

Nightjar *Caprimulgus europaeus*

The Nightjar is a summer visitor to Britain, and a species that feeds after dark on night-flying insects, primarily moths. It nests on heathland relying on camouflage to avoid detection; despite disturbance, several pairs attempt to nest on Silchester Common and neighbouring heathland remnants each year. It is unlikely that Nightjars nest in the Parish of Pamber. But studies elsewhere have shown that birds spend considerable periods of time feeding over nearby forest canopies and insect-rich grassland; the Parish is important in this context.

Skylark *Alauda arvensis*

The Skylark was once seen as an emblematic bird of British farmland and grassland but its numbers have plummeted in recent decades. Its decline nationally is reflected locally in the Parish. I recall that when I used to visit the Parish in my teens (before I lived here) the song of the Skylark was something that you took for granted – you heard it wherever you went. Today, changes in agricultural practises and habitat loss mean that it is a rare sound in Pamber.



National decline in Skylark numbers - Common Bird Census / Breeding Bird Survey Trend for England, 1966 – 2013, British Trust for Ornithology

Dormouse *Muscardinus avellanarius*

The Dormouse is an iconic British mammal that is known to be present in the Parish, as well as in neighbouring ones. Being nocturnal and secretive it is a hard animal to observe and study and absence of evidence is not evidence of absence. It favours relatively undisturbed deciduous woodland comprising mature oak trees with an understorey of Hazel, and plenty of Honeysuckle. They respond well to careful woodland management and the provision of nestboxes. The maintenance of hedgerows and woodland corridors are essential for their long-term survival. Dormice and their habitat are protected by the following: the Wildlife and Countryside Act 1981; CROW Act 2000; The Natural Environment and Rural Communities Act 2006; and Conservation of Habitat and Species Regulations 2010.

Appendix 2.

Ageing Hedgerows.

The number of tree and shrub species present in a native hedgerow increases with time, through natural colonisation. In the 1970s Dr Max Hooper devised a method of estimating the age of a hedgerow by counting the number of woody species in a 100 ft (30.5 meters) length of hedge. This is referred to in ecological circles as 'Hooper's Law': if you multiply the number of species present by 99 years and then deduct sixteen, this gives you a rough idea of the age of the hedge. The likelihood is that many remaining hedges in our Parish were planted around 300 years ago to define boundaries. Much older hedgerows are also present and are likely to represent either boundaries of ancient byways or remnants of ancient woodland. When ageing hedgerows, field observations need to be corroborated by reference to maps and literature.

Above: Mature hedgerow on New Road, Little London.