



Appleshaw Churchyard and Cemetery Biodiversity Action Plan

Prepared on behalf of

The Parish Church Council (PCC) of St Peter-in-the-Wood, Appleshaw, Hampshire

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Client: The Parish Church Council (PCC) of St Peter-in-the-Wood, Appleshaw, Hampshire

Main Author(s): Ben Kite BSc (Hons) MSc CEcol MCIEEM PIEMA

Report Prepared for Issue by:
Ben Kite BSc (Hons) MSc CEcol MCIEEM PIEMA

Report Approved for Issue by:
XXX



Ecological Planning & Research Ltd

The Barn, Micheldever Station, Winchester, Hampshire SO21 3AR
Tel: 01962 794720 Fax: 01962 794721 email: info@epr.uk.com www.epr.uk.com

Appleshaw Churchyard and Cemetery

Biodiversity Action Plan

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Appleshaw Churchyard and Cemetery

Biodiversity Action Plan

1. INTRODUCTION

Brief and Objective

- 1.1 Ecological Planning & Research Ltd (EPR) was requested by Appleshaw Parish Church Council (APCC) to produce a strategy to achieve the following:
- Set out how the church estate and its management could deliver ecological and biodiversity related enhancements; and
 - Outline how community involvement and engagement with the above can be maximised.
- 1.2 The primary aim of the above is to create a mutually beneficial and reciprocal three-way relationship between the church, the community and the natural environment in and around Appleshaw Parish, whereby the church estate and those involved in its management act as the catalyst for bringing local people closer to the living world around them, and to each other.
- 1.3 The underlying intention for the strategy is to promote the benefits to human health and wellbeing that a burgeoning body of evidence shows arises from a closer connection to nature, whilst also fostering better future stewardship of the natural world upon which we all depend, through improved education and empowerment of the local community. There will also be direct benefits to the church, arising from the more effective use of church assets to serve valued community causes – by extension improving outreach to sectors of the community not normally involved in church activities.
- 1.4 This strategy has been produced in connection with a proposed bid for National Lottery Heritage Fund (NLHF) monies, hoped to facilitate a wider range of community-oriented projects of which the initiatives outlined in this strategy form part.

Who will be Involved?

- 1.5 This strategy has been prepared by Ben Kite of EPR, a professional ecologist who is also the convenor of the Appleshaw, Redenham and Clanville Natural History Society, in close collaboration with Bruce Parker, Letitia Adams and Caroline Tomlinson, members of APCC with an interest in the natural world. The abovementioned individuals will coordinate the delivery of actions envisaged through this strategy.
- 1.6 In addition to members of the Parish community, there are various organisations both locally and nationally that have objectives allied to those set out above, that will be approached with a view to planning and undertaking future joint initiatives on a cooperative basis. Foreseeable opportunities for such initiatives are discussed where relevant throughout this strategy. The organisations in question are:

- **‘Caring for God’s Acre’** (<https://www.caringforgodsacre.org.uk/>) – an organisation that works nationally to support groups and individuals to investigate, care for and enjoy burial grounds. The organisation has a focus on both the natural history and cultural heritage of burial grounds, as it was originally inspired by the National Living Churchyard and Cemetery Project (LCCP). The organisation has been a previous recipient of NLHF Funding and works with a range of partners nationally – including various conservation related charities.
- **Hampshire Swifts** – A relatively new charity established in Hampshire with a mission to help conserve Swifts *Apus apus*, an amber listed Bird of Conservation Concern (BoCC) which nests in Appleshaw in good numbers. Hampshire Swifts have already given an educational talk about Swift conservation to the Natural History Society (see below) and intend to provide further advice and support to parishioners who wish to provide new nesting opportunities for this bird (<https://www.hampshireswifts.co.uk/>)
- **Hampshire Dormouse Group** – A local conservation volunteering group co-founded by the author, focused on the conservation of Hazel Dormice, a Priority species protected at the European level for which Hampshire is a stronghold (<https://hampshiredormousegroup.co.uk/>)
- **Appleshaw, Redenham and Clanville Natural History Society (ARC NHS)** – A local community group established in April 2017, with the objective of inspiring and educating local people to learn about and care for the natural environment in and around the Parish. The group meets semi-regularly for wildlife and natural history related talks and presentations, guided walks and talks – sometimes from local naturalists and sometimes from guest speakers.
- **Appleshaw Toad Patrol** – This is an organisation newly formed in 2020 and loosely associated with ARC NHS. Its purpose is to help conserve the exceptional amphibian assemblage that lives in the Parish, centred on the large pond at Hill House which is used for breeding. It does this by rescuing animals migrating there during the breeding season (Jan-Apr) from the roads and ‘airlifting’ them to the pond. In 2020, the Toad Patrol rescued almost 4,000 amphibians from the roads, making Appleshaw possibly the single busiest Toad Patrol area in Hampshire.



Plate 1: An ARC NHS talk about bats held in the Walnut Tree Pub.

1.7 **Section 2** of this document provides a broad overview of the ecological baseline within and around the Parish that will be of relevance to deciding what activities and actions would be most beneficial to pursue. **Section 3** then outlines a plan for the proposed activities.

2. ECOLOGICAL BASELINE

Ecological Context

National Character Area (NCA) 130: Hampshire Downs

- 2.1 The Estate is located within the Parish of Appleshaw in north Hampshire, within Natural England's National Character Area 130: Hampshire Downs. The area is underlain by cretaceous chalk bedrock. The Natural England NCA Profile states:

"Soils are mainly free-draining, thin chalky loams, with heavier, younger, clay-with-flint soils on the tops of hills and some of the valley sides. These coincide with much of the scattered woodland in an otherwise uniform arable landscape of large fields, shelterbelts (many of them acting as cover for game birds) and low, thin hedgerows".

- 2.2 The above description applies very well to the Parish. Much of the lower lying areas are comprised of thin loamy or clayey soils with a high flint content over chalk bedrock that are used either for intensive arable production or as pasture. Areas further upslope and on hilltops are sometimes capped with lenses of clay-with-flints, and these often support woodlands, many of which in and around the Parish are either Ancient and Semi Natural Woodlands (ASNW) or Plantations on Ancient Woodland Sites (PAWS). Whilst many of these woodlands have been damaged by inappropriate modern forestry operations or by nutrient pollution from surrounding agricultural operations, these woodlands nonetheless represent important surviving reservoirs of high biodiversity in the landscape.
- 2.3 Cutting through the Parish in a north-south orientation running past the church there is an open swale, within which flowing water only appears once every few years, usually in Spring after heavy rainfall when groundwater levels in the underlying chalk are high. In relation to this, the NCA profile states: *At the head of the valleys and in small side valleys, flowing water can be seasonally intermittent, hence their name – 'winterbournes'.*"
- 2.4 A key ecological feature of the north Hampshire Downs are the relict areas of species-rich calcareous (chalk) grassland that were once part of the vast unenclosed downlands that at one time stretched uninterrupted from Salisbury Plain to Winchester and beyond. Lowland Calcareous Grassland is a Priority Habitat under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, and can be much richer in species than modern improved pasture grasslands - with up to 40 species per square metre in the best surviving parts of nearby Salisbury Plain (the largest surviving area) – compared with 5-10 species in the whole areas of most modern pastures. Surviving patches of chalk grassland generally occur in small fragments that have escaped the worst effects of biological impoverishment caused either by fertilisation or by management. Such areas occur often in field margins, narrow corners inaccessible to farm machinery or road verges, but very occasionally whole fields where management regimes have been low intensity and low levels of agrochemicals have been used.
- 2.5 With the above in mind, the NCA Profile for the Hampshire Downs contains the following 'Statements of Environmental Opportunity' (SEOs) that are of potential relevance to this Biodiversity Action Plan:

"SEO 2: Ensure that the remnant areas of biodiversity-rich chalk grassland are retained and managed to ensure good condition, and seek opportunities to restore areas in poor

condition and extend the area of this habitat. Protect and manage the associated historic features of these sites.

SEO 3: Work with landowners and the farming community to encourage sustainable food and fodder production that also retains or enhances landscape character, provides habitats for wildlife, and minimises the impacts on ecosystems such as water and soil and on the historic features in the landscape.

SEO 4: Encourage woodland management regimes that: ensure good condition of priority habitats and species; maximise the potential ecosystem benefits of woodland such as carbon sequestration, water quality and regulation, timber provision, recreation and biomass potential; and enhance the landscape visually.”

Historical Ecology

- 2.6 Much can be learned about the ecological baseline of an area by examining its historical ecology, either through fieldwork observations or forensic examination of historic maps to trace changes in landscape management over time and identify relict ancient features of higher biodiversity importance. A series of the most important available maps are provided below and discussed.

Thomas Milne’s Map of Hampshire (1791)

- 2.7 This map is the oldest reasonably cartographically accurate map known to be available that shows the Parish in useful detail. An extract is provided below as **Figure 1**.
- 2.8 The most notable observations of ecological significance from this map are as follows:
- Ramridge (then ‘Rambridge’) was shown as being a deer park with a curvilinear perimeter bounded by a ‘park pale’ that is suggestive of medieval origins – fragments of this feature can still be seen on modern aerial images.
 - Ramridge Wood is set within the bounds of the deer park and is larger than it is today. Three ornamental avenues leading to Ramridge House are shown cut through the woodland – two of these are still identifiable on modern aerial images and on the ground, and the third, easternmost avenue is faintly visible on aerials (although mostly grown over) and can still be made out on LIDAR satellite imagery.
 - The area located between Ramridge park and the Weyhill Fair (at the time an important centre for trading cattle, sheep, wool and hops) is marked as being ‘Down’ land and the symbology used indicates that this land was unenclosed and crossed only by informal tracks (like much of Salisbury Plain today). It is very likely that, at the time, this area was comprised of species rich calcareous grassland was used as common land/pasture and which extended in an unbroken belt from the Weyhill Fair to Salisbury Plain – probably used as a droveway for shepherds to bring their animals to market. This area is therefore likely to be the very last significant area of lowland calcareous grassland to have existed in the Parish itself.



Figure 1: Milne's Map of Hampshire (1791). Courtesy of Old Hampshire Mapped.

The 1st Edition 1" to the Mile Ordnance Survey Map (1817)

2.9 An extract of this map is shown below as **Figure 2**. Key observations of ecological significance are:

- Ramridge Woods is still shown to be larger than in the present day. This map also shows other areas of likely ancient woodland that were previously omitted from Milne's Map – including Hill Copse and Long Copse to the West of Applethaw.

- The area between Rambridge and the Weyhill Fair is still marked as being unenclosed land bisected by informal tracks – almost certainly used as common land. The OS surveyor has however shown this area as being larger than did Milne – extending west right through the Parish along the turnpike road to Ludgershall where it likely continues to link to Salisbury Plain as part of the aforementioned droveway and east past the Weyhill Fair (the buildings of which are drawn in finer detail) to Penton Mewsey.
- Although of no ecological relevance, the settlement now known as ‘Tilly Down’ is marked as ‘Chilly Down’.



Figure 2: *The 1st Ed 1" to the Mile OS Map (1817)*

The Parish Enclosure Map (1818)

2.10 The Parish Enclosure Map is available to view in the Hampshire County Records Office in Winchester and has been examined by the author. An extract is shown below as **Figure 3**.



Figure 3: *Appleshaw Parish Enclosure Map (1818).* Courtesy of Hampshire Records Office.

- 2.11 The Enclosure Map above in **Figure 3** is perhaps the most important map in understanding the natural history of the Parish. It was produced on behalf of the Enclosure Commissioners, and marks the exact point in time when Parliament gave permission, through the Enclosure Act for the Parish, for any common land remaining to be seized, the commoners evicted, any ancient features ploughed up and destroyed, and the land reorganized into what were generally larger more rectilinear parcels for improved agricultural production, prior to then being sold to new owners. For any affected land, this transition marks a change from what Rackham (1986) describes as “*ancient countryside*”, which would have been very much more biodiverse, into “*planned countryside*” – the precursor to modern intensively managed farmland.
- 2.12 Land that was already enclosed and owned prior to the Parish Enclosure Act is marked on the map simply by the owner’s name and a single number, which corresponds to the description of that land as entered into the Enclosure allotments, which are available alongside the map in the County Records Office. However, land that was newly ‘seized’ common land is shown differently; it is labelled with the purchaser’s name, the size of the newly created field (three numbers separated by dots; each corresponding to size in acres, roods and perches) and the allotment number for the purchaser in question (e.g. “*1st Allotment, 2nd Allotment*” etc). Areas of former common land also have their historical names in ornate calligraphy,
- 2.13 With the above in mind, the following observations of importance to natural history can be made:
- Ramridge Copse is still present, and its ornamental avenues are still marked. The surrounding ‘park pale’ around the former deer park area is still mostly present and its alignment is clear.
 - Other likely ancient woodlands can be seen, such as Appleshaw Copse (located to the west of School House).
 - The area of former chalk downland between Ramridge and the Weyhill Fair has been enclosed and sold off. The names of the purchasers are given. The historic name labels show that these areas were known at the time as ‘Great Field’ (to the west of the road into the village from the Ludgershall turnpike road to the south), ‘Little Field’ (to the east of the road) and ‘Cholderton Field’ (to the south of the main turnpike road). We can be reasonably sure that this means that the fields in question would have been ploughed up, their chalk grasslands destroyed and any other features such as sinuous ancient hedgerows removed and typically replaced with single-species rectilinear hedgerows (usually Hawthorn or Blackthorn) between the new parcels. The last surviving areas of intact and unenclosed chalk grassland in the Parish were therefore destroyed in 1818.
 - Various other significant shaws and tree lines can be seen, some of which are likely to have significant antiquity, including the Parish boundary itself.
- 2.14 The remaining text below in this section set out what is known about the natural environment in and around the Parish in view of the above-described historical ecology, the personal observations of the author, and records of protected and notable habitats and species returned by HBIC (see **Appendix 1**).

Present Day Habitats, Vegetation and Flora

Woodlands

- 2.15 The Parish contains, and is surrounded by, a number of small areas of woodland, many of which are listed on Natural England's Provisional Ancient Woodland inventory (PAWI), and some of which are also designated as Sites of Nature Conservation Importance (SINCs) due to being of County level importance for nature conservation (see the map in **Appendix 1**). These woodlands represent assets of 'Critical Natural Capital', as they have in the main persisted in the landscape for many centuries acquiring new species and increasing in biodiversity. Those woodlands with 'copse' in the title are likely to have once been medieval 'coppice' or 'coppice-with-standards' woodlands (an ancient form of forestry that is very beneficial for biodiversity).
- 2.16 In general, the pattern of woodland cover aligns well with the descriptions in the Natural Capital Area profile – with woodlands mainly occurring on higher ground around the edges of the Parish, either on caps of clay-with-flints or where the soil overlying the chalk is thinnest and least suitable for agriculture.
- 2.17 A summary description of each of the most significant woodlands around the Parish is given below (Number in brackets corresponds to the map in **Appendix 1**):

Ramridge Woods (No 12)

- 2.18 This SINC is a relict medieval coppice-with-standards woodland, although in the early post-war period much of the original woodland cover was removed and replaced with modern forestry plantation (mainly Larch), leaving only the outer 'rim' or 'halo' of the original ancient woodland (see **Figure 4** below), along with some of the edges of the surviving ornamental avenues and other small pockets comprised of the original broadleaf woodland cover. From the surviving ancient areas we can surmise that the original woodland was comprised mainly of Oak Standards *Quercus robur* (for timber used in housebuilding or shipbuilding) with Hazel *Corylus avellana* understorey (used for charcoal, firewood, fence and hurdle making etc).
- 2.19 Other tree species present include Ash *Fraxinus excelsior*, Field Maple *Acer campestre*, Wild Cherry *Prunus avium*, Hornbeam *carpinus betulus*, Beech *Fagus sylvatica*, Willow *Salix sp* and in recently cleared areas Silver Birch *Betula pendula*. Species present in the understorey include Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa*, Wild Privet *Ligustrum vulgare*, Yew *Taxus baccata* and Spindle *Euonymus europeus*. Climbers include Wild Honeysuckle *Lonicera periclymenum*, Ivy *Hedera helix*, Wild Hops *Humulus lupulus* and Wild Clematis *Clematis vitalba*.

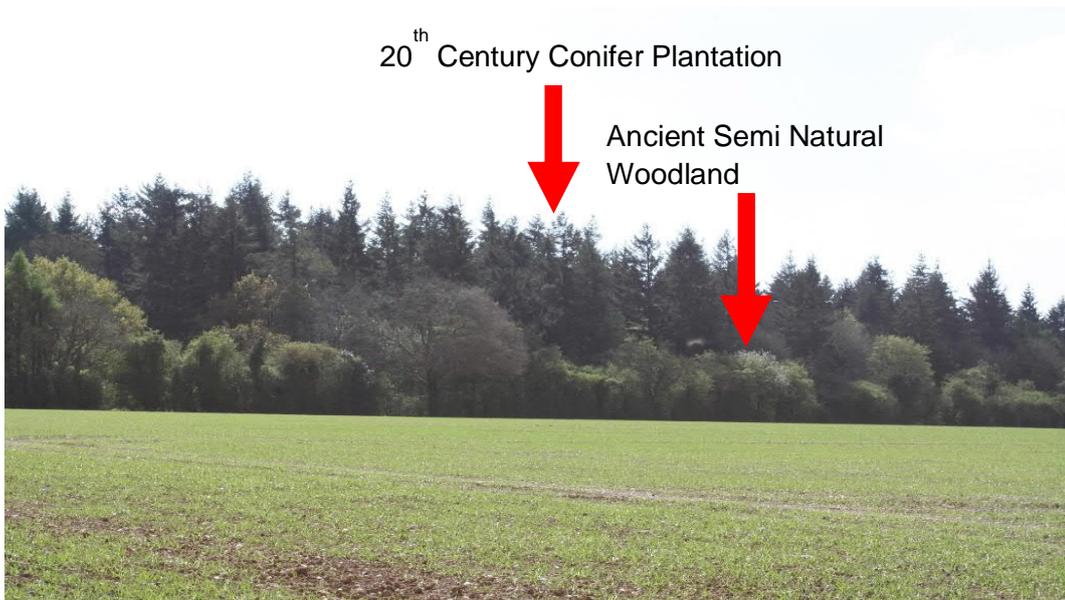


Figure 4: Profile of Ramridge Woods showing 20th Century Larch plantation (PAWS) set behind the outer ‘rim’ of surviving broadleaf ASNW.

- 2.20 Remnants of the medieval boundary bank and ditch around the outside of the wood still survive and can be seen both from the ground and on the 1m LIDAR Digital Terrain Model (DTM) satellite imagery (**Figure 5** below), which also reveals other features, including; solution hollows, worked pits, internal coppice coupe boundaries, and all three ornamental avenues (the eastern arm is present but faint). The black line on the image below shows the modern extent of the woodland – the topography revealed by the DTM imagery shows the historic extent of the woodland to the south.

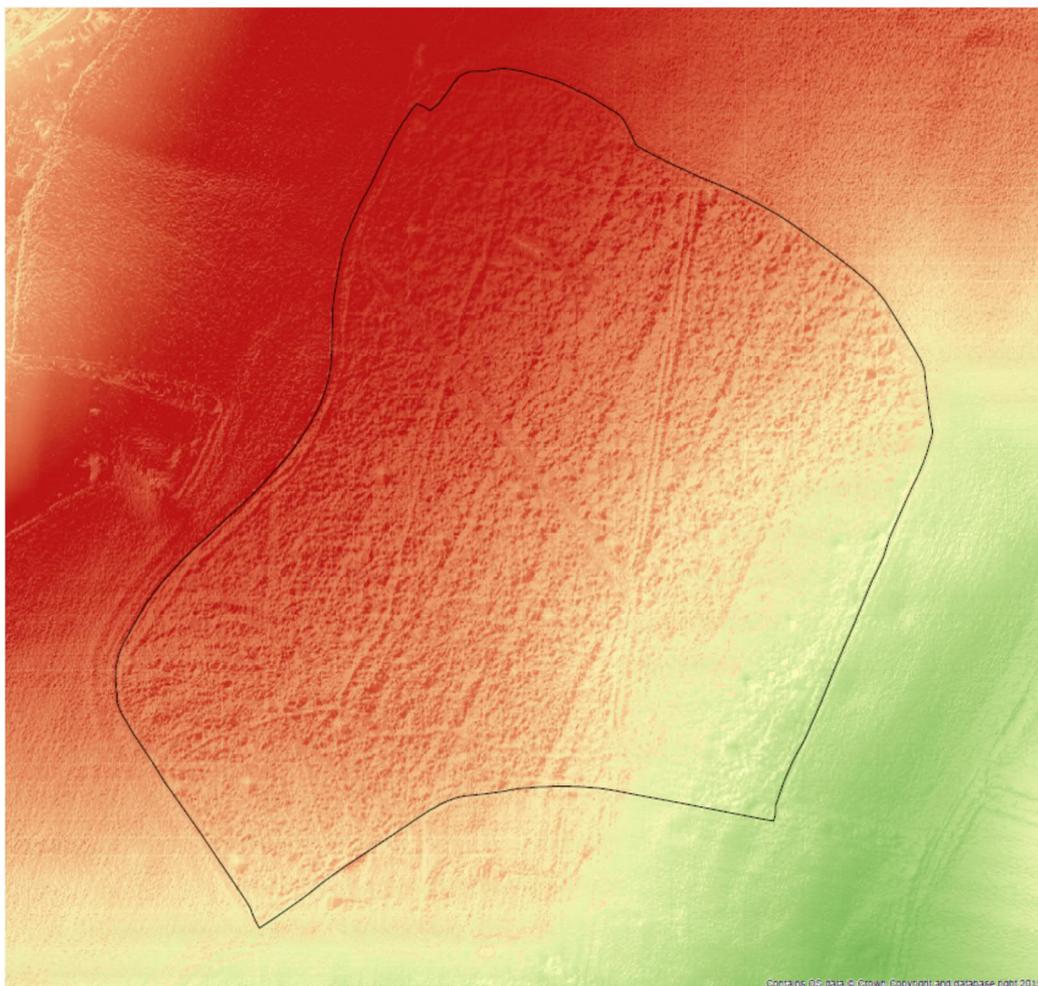


Figure 5: 1m Lidar Digital Terrain Model (DTM) Satellite Imagery of Ramridge Copse

- 2.21 Ancient Woodland Indicators (AWIs) or Ancient Woodland Vascular Plants (AWVPs) are species of plants that are known to be very slow colonisers of new woodlands. Thus, finding a large number of these species in a woodland can be used as a proxy measure of the antiquity of that woodland.
- 2.22 Ramridge Copse has an exceptional assemblage of AWVPs, with richer assemblages located outside of the plantation areas – in particular associated with the historic woodland features such as boundary banks and the edges of the avenues. Species of AWVP found in Ramridge include; Bluebell *Hyacinthoides non-scripta*, Wood Anemone *Anemone nemorosa*, Solomon's Seal *Polygonum multiflorum*, Yellow Archangel *Lamium galeobdolon*, Town Hall Clock *Adoxa moschatellina*, Wood Speedwell *Veronica montana*, Sweet Woodruff *Galium odoratum*, Barren Strawberry *Potentilla sterilis*, Wood Spurge *Euphorbia amygdaloides*, Wood Sanicle *Sanicula europaea*, Goldilocks Buttercup *Ranunculus auricomus*, Bush Vetch *Vicia sepium*, Pignut *Conopodium majus*, Wild Garlic *Allium ursinum*, Wild Primrose *Primula vulgaris*, Dog's Mercury *Mercurialis perennis*, Redcurrant *Ribes rubrum*, Wood Sedge *Carex sylvatica*, at least two species of Violet *Viola spp*, Early Purple Orchid *Orchis mascula* and Common Spotted Orchid *Dactylorhiza fuschii*. Ramridge also contains a small population of the red data book 'Near Threatened' species Ragged Robin *Lychnis flos-cuculi*.

Great Copse (No 11) and Appleshaw Copse

- 2.23 Great Copse Ancient Woodland is a designated SINC. Records from HBIC indicate that the uncommon AWVPs Herb Paris *Paris quadrifolia* and the parasitic Toothwort *Lathraea squamaria*. Appleshaw Copse, which is the area between Great Copse and the road in front of School House, is not included either in the designated SINC nor the area included on the Provisional Ancient Woodland Inventory, however, this area is shown as being wooded on all of the historic maps above. Today, this area is comprised of Oak standards over grass pasture (pasture woodland), with no understorey. The title 'copse' however implies that it must once have had a coppiced understorey. This area warrants further investigation.

Hill Copse and Long Copse (8 and 10)

- 2.24 These woodlands have a flora similar to Ramridge Copse, although HBIC records indicate that Herb Paris and Wood Vetch *Vicia sylvatica* can also be found in Long Copse. The latter species is listed as being rare in Hampshire. The road verges have abundant Wood Melick *Melica uniflora*, and relict boundary banks with large pollarded Oaks can be seen.

Cunney's Down Copse (9)

- 2.25 Little is known about this woodland, although HBIC records show that it contains the uncommon and County Rare native plant Meadow Saffron *Colchicum autumnale*.

Chapel Copse (7)

- 2.26 Little is known about this woodland, although HBIC records show that it contains the uncommon and red-listed vulnerable native plant White Helleborine *Cephalanthera damasonia*.

Horsecroft Copse (13)

- 2.27 Little is known about this woodland, although HBIC records show that it contains the uncommon and County Scarce Greater Chickweed *Stellaria neglecta*.

Grasslands

- 2.28 There are two main types of grassland of conservation interest likely to occur within the Parish; on thin loamy soils over chalk, lowland calcareous grassland may occur, and on heavier clay-with-flints based soils, mesotrophic (neutral) grasslands (also known as 'Lowland Meadow'). Both types of grassland are Section 41 Priority Habitats under the 2006 NERC Act when in adequate condition.
- 2.29 As described above, any significant intact areas of chalk grassland within the Parish have been destroyed. There are however faint ghosts of their former presence:

- The eastern side of the road into the village from the Ludgershall Road, which once ran through the last surviving area of chalk downland, is dotted with species typically associated with these types of grasslands, including; Harebell *Campanula rotundifolia*, Wild Basil *Clinopodium vulgare*, Wild Marjoram *Origanum vulgare*, Hoary Plantain *Plantago media*, Lady's Bedstraw *Galium verum*, Field Scabious *Knautia arvensis* and Salad Burnet *Sanguisorba minor*, as well as other species associated with less improved grasslands such as Common Knapweed *Centaurea nigra*, Wild Strawberry *Fragaria vesca*, Lady's Bedstraw and Bird's Foot Trefoil *Lotus corniculatus*;
- There are smatterings of individual species from the above list occasionally present in other areas of grassland such as road verges and field margins around the Parish,

including the Ward Memorial Playing Field – although this area appears to exhibit a more circum-neutral character;

- The triangle of grassland to the South of the playing field includes a small number of Pyramidal Orchid *Anacamptis pyramidalis* (**Plate 2** below);
- The uncommon grassland plant Meadow Saxifrage *Saxifraga granulata*, which is known to occur in places across north Hampshire where chalk downlands once existed, is also scattered in low numbers across the Parish – this species has been noted in the bank on the right-hand side of the entrance to Hill House, and in the verges around gardens in Ragged Appleshaw; and
- There is a small patch of relict calcareous grassland present to the west of Appleshaw on the verge of the A342 road between Andover and Ludgershall (see map from HBIC in **Appendix 1**). Data supplied by HBIC indicates that this area supports 10 calcareous grassland indicator species, as well as a notable population of White Helleborine *Cephalanthera damasonium*, a Priority species listed as Nationally vulnerable.

2.30 Although the chalk grassland resource in the Parish has been seriously diminished, just outside of the Parish there are exceptional surviving examples of this habitat type – notably at Salisbury Plain and other Sites of Special Scientific Interest (SSSIs) such as Danebury Hillfort, but even closer too – there is for example an exceptional quality chalk grassland located on an old field system of Iron Age Plough Lynchets just to the north of the Parish, on the northern edge of Collingbourne Woods. The flora here is exceptionally diverse and by extension so is the invertebrate fauna – with day-flying moths such as Cinnabar and Burnet Moths, and Lesser Elephant Hawk Moths observed here. The author has also been told (G. Prior-Palmer *pers comm*) that there may be a surviving colony of the rare Duke of Burgundy Butterfly *Hamearis Lucina* (a Priority Species which is threatened at the European level). Subject to agreement with the landowners (and Natural England where the area in question is a SSSI), these nearby areas would make excellent donor sites for seed material should a chalk restoration project one day be possible within the Parish itself.



Plate 2: *Pyramidal Orchid*

Hedgerows

- 2.31 The ecological quality of hedgerows across the Parish is variable. Some, typically those with straight alignments, are species poor modern additions to the landscape. Others, particularly those along the edges of ancient lanes or more sinuous field boundaries, are species-rich, although most have been negatively impacted by agrochemical pollution from adjacent arable land. Ground flora in more interesting hedgerows includes Wood Anemone, Bluebell, Dog's Mercury, Lesser Celandine *Ficaria verna*, Greater Stitchwort *Stellaria holostea* and Lords and Ladies *Arum maculatum*, but in most places nutrient pollution has caused these species to be overwhelmed by thick mats of Cleavers *Galium aparine*, Nettles *Urtica dioica* and Docks *Rumex sp.* Woody species in hedgerows include Hawthorn and Blackthorn, Elder *Sambucus nigra*, Yew, Guelder Rose *Viburnum opulus*, Wayfaring Tree *Viburnum lantana*, Spindle, Sycamore *Acer pseudoplatanus*, Hazel and Field Maple. Climbers include Wild Honeysuckle, Wild Hops, Wild Clematis, Black Bryony *Tamus communis* and Ivy.

Ponds and Winterbournes

- 2.32 The winterbourne running through the village is heavily managed, with artificially straightened alignment and artificially steepened banks and does not contain much botanical interest. When flowing, the water quality can vary – after significant rainfall the quality is reduced and the water appears cloudy due to suspended sediment washed in, but when flowing purely with groundwater, the water is 'gin clear' like most chalk streams in the area. The southern sections of the swale can also be subject to fairly high levels of nutrient pollution from the occasional sewage leaks that arise from the tank and pumping station near Cleaver Cottage during periods of high ground water levels – with Tomato plants having been seen growing in the ditch here in

years after sewage leaks. Common Comfrey *Symphytum officinale* does grow along the watercourse in patches, which attracts many pollinators.

- 2.33 Ponds are scarce in the Parish with the exception of artificial garden/ornamental ponds containing fish that are of limited value for wildlife. The most significant exception to this is the lined pond at Hill House which supports an exceptional amphibian population comprising thousands of Common Toad *Bufo bufo*, as well as smaller numbers of Common Frog *Rana temporaria*, Smooth Newt *Lissotriton vulgaris* and Great Crested Newt *Triturus cristatus*, which is rare and protected at the European level. Large numbers of bats also forage over this pond at night.
- 2.34 Examination of old maps shows that there were once other farm ponds in the landscape that no longer exist – given the present scarcity of permanent or semi-permanent waterbodies, the creation of new wildlife ponds may be the easiest way to increase biodiversity within the Parish.

Lichens and Bryophytes

- 2.35 Appleshaw Parish has been fortunate enough to be visited on more than one occasion (1971 and 1996) by the eminent and sadly late Dr Francis Rose – an internationally renowned botanist and lichenologist who was the author of '*The Wildflower Key*', and these visits have resulted in a number of interesting lichen records from the Parish.
- 2.36 Additionally, another prominent lichenologist, Ken Sandell, visited the Parish in 1988 and recorded a species of foliose lichen known as 'Eagle's Claws' *Anaptychia ciliaris subsp. ciliaris* (OS Grid Ref: SU303488 – located on a Sycamore just to the rear (West) of Whistler's Mead near a clump of trees). At the time of recording this species had declined significantly but was still fairly well distributed across Southern England. However, since that time it has suffered a continued catastrophic decline due to its sensitivity to nutrient Nitrogen and Sulphur dioxide air pollution (the former mainly from farming activity such as fertiliser spraying and the latter from combustion processes in energy generation and industry). This species is now listed as a Nationally Endangered Red Data Book Species. If Eagle's Claws has managed to persist at its location in Appleshaw then this would be a very significant discovery, and its previously known location should be checked by an expert lichenologist as soon as possible.

Habitats of the Churchyard and Cemetery

- 2.37 The habitats of the churchyard and cemetery, the locations of which are shown on **Map 1** to the rear of this document, were visited by the author on 1 February 2020. This is a sub-optimal time/season for botanical fieldwork, nonetheless, useful information was gathered to inform future conservation related actions on both of these sites, which can be expanded upon in due course. This is summarised below.

The Churchyard

- 2.38 The habitats of the churchyard are affected by the church building itself and the varying degree of shading that it, and surrounding features such as flint walls and trees, cast. Trees and shrubs dotted around the yard include Yew, Holly *Ilex aquifolium*, Box *Buxus sempervirens*, and those surrounding it include Elder, Sycamore, Beech and Larch. The perimeter walls support Ivy-leaved Toadflax *Cymbalaria muralis*, Hart's Tongue Fern *Asplenium scolopendrium*, and Lesser

Celandine. Great Spotted Woodpecker was seen in trees to the south of the Church and Green Woodpecker was heard.

- 2.39 The western (frontal) and exposed parts of the southern areas of the churchyard receive the most light, and here the grassland contains some diversity. Here, the sward contains Yarrow *Achillea millefolium*, Daisy *Bellis perennis*, Self Heal *Prunella vulgaris*, Hedge Bedstraw *Galium mollugo*, Germander Speedwell *Veronica chamaedrys*, Ribwort plantain *Plantago lanceolata*, Red Clover *Trifolium pratense*, Field Speedwell *Veronica persica*, Ivy-leaved Speedwell *Veronica hederifolia*, Creeping Buttercup *Ranunculus repens*, Groundsel *Senecio vulgaris*, Common Sorrel *Rumex acetosa* and Dandelion *Taxaracum spp*, with individual Common Mallow *Malva Sylvestris* and Sun Spurge *Euphorbia helioscopia*.
- 2.40 The eastern (rear) side of the churchyard (**Plate 3** below) is well shaded. The ground flora is comprised mostly of planted non-natives such as Winter Aconite *Eranthis hyemalis* and Snowdrops *Galanthus sp* with individual Crocosmia and Buddleia, although there are native species mixed in such as Bluebell, Cow Parsley *Anthriscus Sylvestris*, Cleavers, Ground Ivy *Glechoma hederacea*, White Dead Nettle *Lamium album*, Lord's and Ladies and Prickly Sow Thistle *Sonchus asper*, and there are clumps of Honeysuckle and Ivy climbing up some of the headstones – many of which are covered with lichens, along with the flint boundary walls.
- 2.41 The northern area is the shadiest, and here the ground flora is more reminiscent of a woodland floor, with species including Primrose, Barren Strawberry and Herb Robert *Geranium robertianum*.



Plate 3: *The eastern (rear) of the Churchyard – Snowdrops and Winter Aconite in Bloom.*

The Cemetery

- 2.42 The cemetery is not wholly unlike the churchyard, but it does contain more grassland with less overall shade, and as a consequence has a more diverse sward in places, with species such as Crow Garlic *Allium vineale*, Barren and Wild Strawberry, Common Sorrel, Creeping Buttercup and Germander Speedwell. Older headstones are again covered in lichens. There are scattered non-native plants including Lungwort *Pulmonaria officinalis*, Daffodil *Narcissus*, Winter Aconite, Snowdrop. A Kestrel *Falco tinnunculus* was seen flying over. Trees within the cemetery include Yew, Leylandii.
- 2.43 The boundary vegetation varies, with the roadside hedgerows containing Holly and Wild Privet, the northern boundary being highly modified with non-native species such as Snowberry *Symphoricarpos albus* and Garden Privet mixed in with Blackthorn, Bramble *Rubus fruticosus*, and Hazel with Yew, Sycamore, Holly and Wild Clematis with Cleavers and Nettles beneath. There is also accumulated flint rubble and log piles in the northern boundary and a single Broom Plant *Cytisus scoparius*, which is normally associated with more acidic conditions. The eastern and southern boundaries are the most intact, also containing Oak, Field Maple, Beech, Elder and Hawthorn, and containing more ground flora associated with native hedgerows or woodlands such as Wood Sedge, Dog's Mercury, Lord's and Ladies and Primrose.

Fauna

Birds

- 2.44 The avifauna of the Parish is diverse and cannot be covered comprehensively here – an overview of the highlights is given instead. Where birds of conservation concern (BOCCs) are mentioned, listings of either amber or red are given in brackets.

Birds around the Villages

- 2.45 In summer, significant numbers of Swifts *Apus apus* (amber), visit the villages to nest in houses, and these are joined by House Martins *Delichon urbicum* (amber) and smaller numbers of Swallows *Hirundo rustica*. House Sparrows *Passer domesticus* (red), also occurs in good numbers.
- 2.46 Records from HBIC and sightings by local residents amount to a large number of common garden bird species too numerous to list, but including such typical species as; Blue Tit *Cyanistes caeruleus*, Great Tit *Parus major*, Long-tailed Tit *Aegithalos caudatus*, Coal Tit *Periparus ater*, Collared Dove *Streptopelia decaocto*, Nuthatch *Sitta europaea*, Starling *Sturnus vulgaris* (red), Chaffinch *Fringilla coelebs*, Greenfinch *Carduelis chloris*, Siskin *Carduelis spinus*, Goldfinch *Carduelis carduelis*, Dunnock *Prunella modularis* (amber), Robin *Erithacus rubecula*, Woodpigeon *Columba palumbus*, Rook *Corvus frugilegus*, Jackdaw *Corvus monedula*, Blackbird *Turdus merula*, Wren *Troglodytes troglodytes*.

Birds of Prey

- 2.47 The assemblage of raptors and birds of prey in the Parish is impressive. Barn Owl *Tyto alba*, a bird listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended – the 'WACA') is observed from time to time in fields to the east of Ramridge Copse and to the west of Appleshaw. Tawny Owl *Strix aluco* is common in the Parish and can be heard in the evenings all across the Parish – in particular around the areas of the Walnut Tree Pub and Ramridge Copse. Little Owl *Athene noctua* is sometimes seen around the Cleaver Cottage area. Other common sightings

include Buzzard *Buteo buteo*, Red Kite *Milvus milvus*, Sparrowhawk *Accipiter nisus* and Kestrel. Goshawk *Accipiter gentilis* (**Plate 4**) and Hobby *Falco Subbuteo*, both of which are listed on Schedule 1 of the WACA, nested in the Parish in 2019 (NB: the location is sensitive so not disclosed in this document). Records from HBIC also show that Peregrine Falcon *Falco peregrinus*, Merlin *Falco columbarius* (red) and even Hen Harrier *Circus cyaneus* (red) have from time to time been seen (the latter two likely overwintering).



Plate 4: A juvenile Goshawk recently fledged from its nest in the Parish in 2019. Photo credit: Rob Read.

Farmland Birds

- 2.48 As would be expected from the rural location, the farmland bird assemblage is fairly diverse. Ground nesting birds like Grey Partridge *Perdix perdix* (red) and Skylark *Alauda arvensis* (red) can be seen – the latter in fairly large numbers with the males singing making it easy to count territories over the surrounding arable fields. There are also small numbers of Lapwing *Vanellus vanellus* (red), another ground nesting bird, still present in the Parish, though in much reduced numbers to what must have once been present – longstanding residents recall times when large numbers once nested on the fields around the villages (T Burden *pers comm*), but records from HBIC show that this is now reduced to the occasional individual or pair.
- 2.49 Hedgerow nesting birds like Yellowhammer *Emberiza citrinella* (red) and Linnet *Linaria cannabina* (red) are also present in good numbers, though the distribution of the former is patchy and focused on hedgerows that are not too intensively managed – singing males are conspicuously absent from hedgerows subject to annual heavy flailing, for example. There is considerable scope for improving the outlook for these species and others reliant on hedgerows by encouraging landowners to take a more sympathetic approach to hedgerow management.

- 2.50 The colder months also sees fairly large flocks of overwintering birds moving around the farmscape around the Parish, for example flocks of thrushes such as Redwing *Turdus iliacus* (red) and Fieldfare *Turdus pilaris* (red).
- 2.51 Finally, there are some individual records of particularly rare and unusual species occasionally and infrequently turning up in farmland areas, such as Corn Bunting *Emberiza calandra* (red listed and County Scarce), which was last recorded in 2013 according to HBIC records, to the west of Appleshaw. This species has very specific habitat requirements that typically occur at the interface between more species-rich grasslands (which provide the soft-bodied insects needed to feed their chicks in summer) and more traditionally managed arable land (which provides uncollected grain and left over stubble to feed adults in winter). The scarcity of species-rich grasslands and the effectiveness of modern arable farming methods at collecting all grain has led to a precipitous decline in this species Nationally. Elsewhere, Corn Bunting numbers have been very successfully boosted by setting up winter feeding stations for the birds. If therefore the species still visits the Parish, this opportunity could be explored with the landowner.

Woodland and Woodland Edge / Parkland / Wood Pasture Birds

- 2.52 As might be expected from the variety of local ancient woodlands, the woodland bird assemblage of the area is of significant conservation interest. In addition to the birds of prey already mentioned above, the assemblage collectively supported by the various small copses and woodlands also includes the following birds of conservation concern; Marsh Tit *Poecile palustris* (red), Bullfinch *Pyrrhula pyrrhula* (amber), Woodcock *Scolopax rusticola* (red), Wood Warbler *Phylloscopus sibilatrix* (red), Cuckoo *Cuculus canorus* (red), Lesser Spotted Woodpecker *Dendrocopus minor* (red) and Lesser Redpoll *Carduelis cabaret* (red). There is a large population of Firecrest *Regulus ignicapillus* resident in Ramridge Woods and perhaps other woods nearby – this is a species protected under schedule 1 of the WACA.
- 2.53 In addition to the more regular occupants of local woodlands listed above, in the past there have been times when particularly rare species have been present or at least visited. These include Pied Flycatcher *Ficedula hypoleuca* (red listed – visited in 2015), Spotted Flycatcher *Muscicapa striata* (redlisted 2006-2012), Hawfinch *Coccothraustes Coccothraustes* (red listed – seen in 2017), Nightingale *Luscinia megarhynchos* (red listed – last recorded in 2009) and Turtle Dove *Streptopelia turtur* (red listed – recorded between 2006 and 2008 but not since). None of these species are likely to make use of habitats within the Parish on a more permanent basis in the future unless the condition of their habitats is improved.

Mammals

- 2.54 Larger mammals seen regularly about the Parish include Roe Deer *Capreolus capreolus* and Muntjac Deer *Muntiacus reevesi*, Fox *Vulpes Vulpes*, Polecat *Mustela putorius* (a Priority species) and Badger *Meles meles* – the latter are seen from time to time in the evenings on the village roads or as roadkill, and Badger setts, paths and latrines can be relatively easily picked out in the woodlands and farmland in the local area.
- 2.55 In terms of smaller mammals, there is a peculiar absence of records of Hazel Dormouse, *Muscardinus avellanarius* in the Parish, which is a rare species protected at the European level. The ancient woodlands and species-rich hedgerows provide ideal habitat for this species, which has been recorded all along the A303 corridor and on the eastern side of Andover. It is very likely that this species is present. Brown Hare *Lepus europeaus* is widespread across arable and pasture areas, as is Hedgehog *Erinaceous europeaus* (a species in decline for which new

protections are currently being debated), and there is an old record of Harvest Mouse *Micromys minutus*, a Priority species at both the National and Hampshire levels, from Redenham cemetery in 2009. Yellow Necked Mouse *Apodemus flavicollis* is also recorded from the Parish, but whilst this species is listed as County Scarce and a Priority species in the County, this is likely to be due to under-recording due to its similarities with Wood Mouse *Apodemus sylvaticus*.

- 2.56 The bat assemblage (NB: all bats are protected at the European level but are of varying conservation importance) in the Parish is not known to be particularly diverse, but this is likely to be due to the absence of recent survey work using modern detectors. Species known to occur are common and widespread, and include Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctula*, Serotine *Eptesicus serotinus*, Brown Long-Eared Bat *Plecotus auritus* and Natterer's Bat *Myotis nattereri*. There is a well known large maternity roost of Serotine bats in one of the older buildings in Ragged Appleshaw.

Reptiles and Amphibians (Herpetofauna)

- 2.57 In terms of reptiles, Slow Worm *Anguis fragilis* is widespread in the Parish in more tussocky grasslands, field margins and hedgerow bases. There are also old records of Adder *Vipera berus*, a Priority species in serious decline Nationally, to the west of Appleshaw from 2006, and earlier than that behind the churchyard. Adders have now largely been lost from their old habitat niches in woodland edges, rides and glades due to a range of pressures that include persecution, inappropriate habitat management and Pheasant rearing, and until recently it seemed likely that Adders had been lost from the local area. Recently however (mid-March 2020), there has been a credible sighting of what seems likely to have been a female Adder along a garden/field edge in Ragged Appleshaw (C. Tomlinson *pers comm*). The timing suggests that the animal may have recently emerged from hibernation. Given the seriously declining distribution and abundance of Adder Nationally, this should be investigated further as there are likely to be multiple opportunities to work with local landowners to improve habitat for this species. Common Lizard and Grass Snake are not recorded from the village but may be present (the latter in particular).
- 2.58 In terms of amphibians, as mentioned above there is limited standing water suitable for breeding amphibians in the Parish, as the majority of ponds are small ornamental garden ponds with fish (which eat amphibian eggs and larvae). The main notable exception is the pond at Hill House, which, whilst recent and artificial in origin, nonetheless contains no fish and provides near perfect conditions for amphibians; comprising shallowly sloping edges with shelves for amphibians to rest, sinuous edges, large quantities of floating and marginal aquatic macrophytes for egg laying and highly suitable surrounding terrestrial habitat comprised of wooded areas, wet ditches, rough grasslands and gardens. Due to the high number of Common Toad road casualties near this pond during the annual Spring breeding migration, in 2020 a group of conservation volunteers implemented the village's first 'Toad Patrol', to collect animals from the road and transport them to the pond. This endeavour resulted in just short of 4,000 toads being collected, plus a number of Common Frog and Smooth Newts – making this perhaps the busiest toad crossing in Hampshire (it is likely that there are well over 10,000 adult Toads using the pond in total – see **Plate 5** below). A dead Great Crested Newt (a rare species protected at the European level) was also found in the road, and several live adults were also observed in the pond. The ARC NHS surveyed this pond in May 2018 and found it to contain many thousands of Toad Tadpoles, lower numbers of Frog tadpoles, several Smooth Newts

and several Great Crested Newts including courting pairs and females actively engaged in egg laying at the time of survey. The amphibian assemblage here is exceptional.



Plate 5: Toads gathering for the breeding season in just one small corner of the large pond at Hill House, 2020.

Invertebrates

2.59 Fairly little is known about the invertebrate fauna of the Parish, and this area represents one of the most obvious for further exploration and description through future community-based activities and citizen science.

2.60 Based on records returned by HBIC and the observations of the author, the order lepidoptera (butterflies and moths) is well represented, as follows:

- There is a healthy population of Orange Tip butterflies *Anthocaris cardamines* in Appleshaw and Ramridge Copse in particular – most likely making use of the abundant Garlic Mustard *Alliaria petiolata* as the larval foodplant;
- The County Scarce Dark Green Fritillary *Argynnis aglaja* has been recorded in the area as recently as 2018 – this butterfly uses violets as its larval foodplant;
- Silver Washed Fritillary *Argynnis paphia*, a Hampshire Priority species that lives in woodlands and also uses violets at its larval foodplant, is well distributed in local woodlands;

- Two priority species listed as 'vulnerable' in the IUCN red data book, White Admiral *Limenitis camilla* and Brown Hairstreak *Thecla betulae*, have both been recorded locally as recently as 2018. The former is a woodland butterfly, but the latter uses Blackthorn as its larval foodplant and is commonly associated with hedgerows. Brown Hairstreak is also a Priority species in Hampshire and listed as being Scarce in the County; and
- The Priority species Small Heath *Coenonympha pamphilus*, which is also listed as 'near threatened' in the IUCN red data book, was recorded in Redenham Park in 2018.

2.61 Aside from the above, Marbled White butterflies *Melanargia galathea* can sometimes be seen nectaring on grassland wildflowers (the caterpillars of this butterfly eat certain grasses), Cinnabar *Tyria jacobaeae* and Burnet *Zygaena sp.* Moths (both day-flying moths) can sometimes be seen. Gardens in the villages are sometimes visited by the impressive looking Humming-bird Hawk-Moth *Macroglossum stellatarum* from around May to September.

2.62 There are various species of bees and wasps in the Parish, including multiple species of *Adrena* burrowing bees, including the Tawny Mining Bee *Adrena fulva* which has been seen digging burrows in the rear of the Churchyard. Ivy Bee *Colletes hederiae*, a fairly recent arrival with climate change, is now a common sight in autumn when Ivy is in flower, and Common European Hornet *Vespa crabro* is numerous in some hotter years.

3. BIODIVERSITY ACTION PLAN

The Vision

- 3.1 This section of the Biodiversity Action Plan outlines the actions that are proposed to be taken pursuant to the overarching objectives outlined in **Section 1**, within the context of the ecological baseline and opportunities identified in **Section 2**.
- 3.2 The proposed activities will all contribute towards one or more of the following aims, that collectively comprise the Vision that this project will seek to promote:
- **Aim 1:** To provide benefits to the natural environment by directly creating, restoring or enhancing habitats for wildlife;
 - **Aim 2:** To encourage better future stewardship of the natural environment by raising awareness of nature conservation issues amongst the local community and inspiring the public to take positive action; and
 - **Aim 3:** To empower people to this end, by providing ecological education, knowledge, skills and training, to empower people to be effective champions of the living world.
- 3.3 Whilst the ecological benefits that can be delivered directly within the Church Estate itself are likely to be modest in scale and significance (given the small area of land available and the need to reconcile these projects with the primary functions of the Church and Cemetery) the potential for these interventions to have much wider impact across the Parish through community involvement and engagement should not be underestimated. Even small projects can serve to inspire others or provide examples that others can take away to repeat at home or even scale up.
- 3.4 Members of the public who engage with nature conservation related events and projects facilitated by the Church will improve their own ecological knowledge and develop deeper affinity for wildlife. They will take their enthusiasm home with them. Some participants will be children, who will grow up to be the nature conservationists of the future. Others will be inspired to participate in conservation volunteering, or will own gardens or homes that they will adapt to be friendlier to wildlife. Some will also be large landowners or farmers with the potential ability to make or contribute toward landscape-scale changes to the land that they control or manage, that may have profound long-term future benefits for nature conservation.
- 3.5 As outlined in **Section 1**, there is also a burgeoning body of evidence to demonstrate the link between access to the natural environment and improved physical and mental wellbeing. Hampshire County Council has undertaken a County-wide review (Tantram & Howlands, 2009) of schemes designed to provide access to nature, and noted that contact with nature, and associated exercise, was thought to bring a range of benefits that can be summarised as improved:
- Physical health, e.g. weight and blood-pressure.
 - Mental health, self-worth, self-confidence and social inclusion.
 - Well-being, e.g. behaviour, social interaction and activity/interest levels.

- Practical skills.

- 3.6 In addition to the County-level work, the benefits of providing increased access to nature are well documented, with a wide range of research reports now published by Natural England and organisations such as Forest Research. The Mental Health Charity 'MIND' is also sufficiently convinced of these benefits that they have been campaigning to make 'Ecotherapy' a prescribable treatment option for certain mental health conditions.
- 3.7 The remainder of this Section outlines each of the activities to be carried out under this Biodiversity Action Plan.

Proposed Actions

Health & Safety Warning

- 3.8 At time of writing, the UK was experiencing the global outbreak of COVID-19 / Coronavirus. The movement restrictions imposed by the Government to combat this outbreak would make many of the activities envisaged as part of this Biodiversity Action Plan impossible. It will be essential to make sure that any actions progressed under this plan comply with Government guidelines as they stand at the time, and that an appropriate Risk Assessment (RA) has been carried out. This notwithstanding, the full range of envisaged activities is still included below, so that they may be progressed when circumstances permit.

Action 1: Produce and then Implement A Biodiversity Management and Enhancement Plan (BMEP) for the Churchyard and Cemetery Areas

- 3.9 The first task will be to work with the Church Estate to draw up plans to enhance the existing ecological interest within the Churchyard and Cemetery. Although this will need to be led by the author or another suitably experienced naturalist if it is to be successful, it will also need to involve both those responsible for managing these areas, and members of the Church community. In respect of the former, this is because the proposals will need to be reconciled with the primary function of the Church Estate and the sanctity of the ground. In the case of the latter, it is important that the proposals secure 'buy in' from the community and serve not just to deliver ecological benefits but also to inspire people.
- 3.10 The BMEPs for these areas should be written during 2020, but thereafter they will not be set in stone – they should be considered 'living' documents that are evolved and iterated as more is learned about the wildlife of these areas (including as a result of the proposed activities outlined below).
- 3.11 In addition to the recommendations outlined below, further assistance could potentially be sought if necessary from 'Caring for God's Acre'. This organisation offers a range of cost-effective support packages aimed at helping Churches to determine how best to care for the natural and cultural resources that they have in their churchyards, and make the most of them. Details are at the link below:

<https://www.caringforgodsacre.org.uk/our-work/how-can-we-help-you/>

Initial Proposals for the Churchyard BMEP

3.12 Based on the information gathered and presented in **Section 2** above, the following should be considered for inclusion in the Churchyard BMEP:

- Firstly, the Church itself should be considered. Subject to listed building and other constraints being respected, it is usually very easy to retrofit wildlife nesting boxes to buildings like the church in a discrete way that respects the appearance of the building. For example, St Mary's Church in Andover has installed a nesting box on its roof for Peregrine Falcons, and the author supported the installation of a live-streamed specialist wildlife camera to enable the community to observe the birds, which have returned to nest in 2020 (see link below). St Peter-in-the-Woods is unlikely to be suitable for Peregrine Falcons, but alternatives could be either Swift nest boxes (which will also be used by Starlings), House Sparrow terraces or bat boxes. The former two would be suitable to accommodate a small in-box camera that could provide images of the nest box interior to a small wildlife display inside the Church. **Hampshire Swifts** should be approached for assistance, as they have already provided successful advice on the installation of Swift nest boxes to listed or historic buildings elsewhere.

<https://www.stmarysandover.org/peregrine-cam>

- The Churchyard should be divided up into character areas or ecological 'zones' based on their existing flora:
 - The western (front) and southern aspects should focus on the management of the grassland interest to enhance the diversity and abundance of grasses and forbs associated with calcareous grasslands. This is likely to involve selecting certain areas that can be left uncut between May and July to enable wildflowers to flower and set seed. This will need to be communicated visually so that deliberately uncut areas are not confused with neglected management. Following survey in spring/summer, the grasslands could also be diversified if appropriate through the introduction of a suitable seed mix or seeds harvested from elsewhere in the Parish.
 - The eastern (rear) area is one where biodiversity enhancements can take a more novel approach, as this area is already dominated by introduced garden species. Ideas to explore include the provision of a 'bug/bee hotel', which could be constructed with the help of local children from Appleshaw school. Small piles of logs and turf could also be created as hibernacula for reptiles, amphibians and insects, and a range of bird and bat boxes could be affixed to the trees. The large Yew tree present here is potentially suitable for a larger box – e.g. one designed for owls or Stock Dove. Areas of scrub and quiet corners would be suitable for Hedgehog houses or Stag Beetle Loggeries.
 - The flora of the northern area is already reminiscent of a woodland floor, and this could be enhanced by planting shade-tolerant climbers such as native Honeysuckle against the wall, and plug-planting with native woodland bulbs or rhizomes purchased from a reputable conservation supplier, such as Bluebell, Wood Anemone, Solomon's Seal and Yellow Archangel (NB: not the invasive non-native subspecies '*argentatum*').

- The flint walls could have planting pockets affixed to create simple green wall areas. Species suitable for planting in these will vary depending on the aspect and amount of light, but again local school children could be involved in the planting. If possible, a suitable location should be selected for a small 13cm x 13cm hole to be made through or under one of the boundary walls, to enable access for species such as Hedgehog:

<https://www.hedgehogstreet.org/help-hedgehogs/link-your-garden/>

- Some standing water would be highly beneficial, although space will be limited here.
- Interpretation materials (discrete information boards) should be installed to enable visitors to appreciate and understand what they are looking at. Some limited seating would also be helpful.



Plate 6: A Barn Owl Box being erected in an Oak Tree

Initial Proposals for the Cemetery BMEP

3.13 Subject to a more comprehensive survey in the correct season, the cemetery offers a more convincing opportunity to restore more meaningful areas of species-rich calcareous grassland, due to its larger comparative size. This could be achieved through the following means:

- Offering families of the bereaved small packets of chalk grassland wildflowers from a reputable conservation supplier to sow into recently covered graves. This would help create attractive wildflower-rich spaces as a fitting tribute to loved ones. Suitable seed mixes would include Emorsgate EM6, EM18 or EM6F (see link below)

<https://wildseed.co.uk/mixtures/category/meadow-and-grassland>

- Identifying other discrete areas to diversify, either by scarifying and then sowing the above mixtures or, what would be more difficult but more worthwhile, collecting seed from a local surviving chalk grassland in the later summer and importing it (e.g. as green hay).

- After establishment, the areas in question should not be mown between May and July if possible, to enable wildflowers to flower and set seed.
- Some small permanently longer areas of grassland around the margins of the cemetery would also be beneficial, as there are nearby records of the rare priority species Harvest Mouse in the Parish, which would make use of such habitats and could potentially be surveyed for.



Plate 7: *A Wildflower-rich Grassland Sward that has recently been subject to diversification as part of a conservation project*

- 3.14 Further to the above, gaps in boundary hedgerows could be ‘gapped up’ with appropriate native planting using species that are berry or nut bearing to provide food birds and small mammals, of which have other known benefits to wildlife such as Hazel, Guelder Rose, Wayfaring Tree, Blackthorn (which is used by Brown Hairstreak Butterfly), Elder, Hawthorn, Crab Apple, Field Maple and Oak. It would also be beneficial to include the occasional fruit tree (e.g. Plum or Damson) to provide food for both wildlife such as Badgers and people. Climbers like native Honeysuckle, Wild Clematis and Wild Hops would also be positive additions.
- 3.15 If possible, it would be highly beneficial to lay the cemetery hedgerow fronting on to the road. Laying is a traditional management technique performed over the winter period that over time yields great benefits for wildlife, and leads to a scene once regarded as being quintessentially English, though hedgerow laying is now a rare occurrence due to its labour-intensive method. Modern mechanical flailing of hedgerows strips off young growth, severely curtailing the

flowering and then fruiting that will be seen on that hedgerow that year. By contrast, laying retains much of the young growth, and also promotes a bushier growth form that is better suited to nesting birds and small mammals such as the rare Hazel Dormouse. Other traditional management techniques such as coppicing and pollarding could also be explored – even when done on a small scale these interventions can serve as examples to others.



Plate 8: *A Recently Laid Hedgerow*

- 3.16 The provision of a small pond or other area of standing water would be highly beneficial, and there is more space for it in the cemetery, provided this can be reconciled with the need for grave spaces and the sanctity of the ground. If well considered, a small wildlife pond with a bench would provide a welcome and tranquil environment for mourners to contemplate their loved ones.
- 3.17 Other recommendations for wildlife boxes and interpretive material made for the Churchyard also apply to the cemetery, although a particular opportunity in the cemetery is the line of Hazel trees, Field Maple and Oaks located near the south-eastern corner – some of these could potentially support a discrete Dormouse nest box (although these would need to be considered to avoid tampering by visitors, as Hazel Dormice are legally protected from disturbance).

Action 2: Host a Programme of ‘Bioblitz’ Events Within the Church Estate

- 3.18 A excellent way to both increase the sum of knowledge that is available pertaining to the wildlife and natural environment of the area and also engage with the public and share that knowledge, is to run a ‘Bioblitz’. This is an event where professional ecologists join forces with members of the public and amateur naturalists to attempt to identify as many species as they possibly can within a particular area during a specific length of time – usually though not necessarily 24 hours. The partnership works well because the more experienced naturalists present can focus on

assisting participants to be able to carry out some of the methods used to search for different taxa of species, and then identify what they find, whilst the less experienced members provide a greatly increased capacity to search. The event is in effect a hybrid between the forensic accuracy of professional ecological survey work as the raw data generating power of 'citizen science'.

- 3.19 Guidance for planning and undertaking a Bioblitz has been published by the conservation charity OPAL, and is available here:

<https://www.opalexplornature.org/BioBlitzes>

- 3.20 The Bioblitz need not be confined to the two areas of the church estate and can take in other communal spaces within the Parish or even private land – including nearby gardens (for example those with ponds) is a way of expanding inclusion and reaching a wider social audience.

- 3.21 The results of the Bioblitz would be written up into a short report that is circulated to participants and also submitted to the local biodiversity records centre (HBIC in this case). In this case, the results of the Bioblitz would not only add to the existing sum of knowledge – they would also help to inform and improve the future stewardship of the wildlife habitats present, by informing and driving iterative year-on-year improvements to the BMEPs for the two areas of Church Estate. In this way, management interventions can be refined to be of greatest benefit to the particular species or assemblages that are present, and positive impacts of those interventions will be reflected in the information that is generated (in the form of an annual increase in species and the arrival of individual species of conservation importance). This creates a positive feedback loop that maintains interest in the event.

- 3.22 In addition to 'normal' hand searching, the event can be combined with a number of specialist survey methods that can be taught to participants by the more experienced naturalists that are present. Such methods would include:

- Sweep netting, pootering or pitfall trapping for invertebrates;
- A guided bat walk/survey with bat detection equipment;
- A guided lichen survey led by an expert lichenologist with hand lenses – in the Appleshaw case, this might be extended to a visit to the last known location of the Nationally endangered lichen 'Eagles Claws', although headstones, trees and walls are great places to search for important species;
- Pond dipping with nets and trays;
- Capturing and identifying small mammals (under expert supervision) by deploying Longworth traps or species-targeted nest boxes/tubes;
- Night-time moth trapping (often accompanied with wine and hot food/soup); and
- Identifying birds through song and sight.

- 3.23 Bioblitzes can take place at any time of year, but the best time is generally late Spring or early Summer as this period results in the greatest variety of species. There is also merit in

undertaking the event more than once per year (in different seasons) so that species can be added that will only be present at times like winter (e.g. overwintering birds). If the event can only be managed once per year, then it could potentially be timed to coincide with 'Love your Burial Ground Week' (6 June 14 June in 2020), which is a National event coordinated by the 'Caring for God's Acre' Charity – see details below:

<https://www.caringforgodsacre.org.uk/our-work/love-your-burial-ground-week/>

Action 3: Create a Biodiversity Information Display within the Church

- 3.24 As alluded to above, the knowledge gathered through Actions 1 and 2 should be made available to Church visitors on a more permanent basis, so that infrequent or one-time visitors to the Church have the opportunity to benefit from it, but also so that the body of knowledge and understanding becomes more of an easily accessible resource to local people (including potentially the children and teachers of Appleshaw Primary School), which will be extension increase footfall into the Church and enhance the social benefits delivered by it.
- 3.25 If a permanent display is arranged, then this can be added to and refreshed on a periodic basis so that even more regular church visitors form a habit of checking frequently to see whether there is any new information.
- 3.26 Elements of the biodiversity information display could include:
- Live feed from any cameras placed in nest boxes on or near the Church
 - Interactive elements such as a 'sightings board' on which Church visitors can record any unusual wildlife sightings they have made that month (the information on the board would be recorded each month and the board wiped)
 - A stock of leaflets outlining a 'wildlife trail' around the Church estate and the wider village – describing highlights and things to look out for.
 - A small store of second-hand wildlife books and identification guides for public use.
 - Copies of this document, the BMEPS for the Church Estate and the reports of any Bioblitzes that have taken place.
 - Natural history curiosities found in the Parish, such as skulls, nests, feathers etc of particular species
 - Written and pictorial information about the natural history highlights of the Church Estate and Parish.
 - A visitors/suggestions book.

Action 4: Collaborate with ARC Natural History Society to Jointly Develop and Promote a Wildlife and Natural History Events Calendar

- 3.27 ARC Natural History Society already holds a semi-regular programme of Natural History events in the village. These are typically held at the Walnut Tree Pub but sometimes involve field excursions to see particular things (woodland ground flora in spring, meadow wildflowers in summer, night-time bat walks etc). They are typically attended by around 15-30 people.
- 3.28 There is considerable scope for future collaboration with the ARC NHS as part of this project. Planning joint events would share the administrative burden and would increase uptake by broadening the scope of those reached by event advertising.
- 3.29 The Church could advertise forthcoming joint events to its own congregation to increase attendance and could also submit details of the events in question to 'Caring for God's Acre', for them to advertise on their online National events calendar. The Church could also provide a venue for some events, for example where the number of participants envisaged cannot be accommodated within the Walnut Tree Pub.
- 3.30 To reciprocate, the ARC NHS could provide guest speakers for Church-led events, and a range of naturalists with different specialisms for the Bioblitz events outlined above. Both organisations could also use their joint events programmes to influence attendees and seek to encourage them to take pro-biodiversity actions in their own lives.
- 3.31 Examples of the events that could be run jointly include:
- Talks and lectures on different aspects of Natural History – occasionally including book signings from Natural History authors
 - Wildlife walks – e.g. night-time bat walks, summer wildflower identification courses, practical skills workshops etc
 - Citizen science – coordinated mass entries for the 'Big Garden Birdwatch', Butterfly Count or New Year Plant Hunt. Volunteer support on surveys (e.g. for Harvest Mouse) or activities such as the annual Toad Patrol could also be supported by the Church.
 - ARC NHS also intends to establish a monitoring site for the rare Hazel Dormouse in a local woodland within the Parish to register with the People's Trust for Endangered Species (PTES) as part of the National Dormouse Monitoring Programme (NDMP). This will involve obtaining 50 Dormouse nest boxes, putting them up in trees and then monitoring them monthly for use by Hazel Dormice and other species (under expert supervision as this requires a licence from Natural England), cleaning them out each winter ready for the nest season. This process benefits from a willing body of volunteers to assist.

Review Period

- 3.32 The above represents the embryonic beginnings of the Church Estate Biodiversity Action Plan in the Parish of Appleshaw, Redenham and Clanville. As discussed, it is intended that this document should not remain set in stone, and that the actions taken pursuant to it be subject to continual refinement as new information emerges, with formal review at least every 5 years.

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Appendix 1

Map Showing Location of Nearby Local-Level Designated Sites
(Hampshire Biological Information Centre).
