

BRUNDALL PARISH COUNCIL
BIODIVERSITY WORKING GROUP

REPORT ON BIODIVERSITY AT CHURCH
FEN, CREMERS MEADOW, LOW FARM
WOOD AND COUNTRYSIDE PARK

Prepared by:

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1. EXECUTIVE SUMMARY

Brundall Parish Council (BPC) owns/leases four sites in the parish: Church Fen, Cremers Meadow, Low Farm Wood and Countryside Park. The sites are important community assets for the residents of Brundall and others who visit the village. Each site comprises different types of natural habitat and ecological composition.

An ecological survey (Phase 1 Habitat Survey) of the sites was carried out by consultants appointed by BPC in 2015. This survey identified and mapped the habitats and ecological condition of each site at that time and the species of vegetation present (*Phase 1 Habitat Survey of Brundall Rural Landholdings, The Landscape Partnership*). The 2015 study also included recommended individual management plans for the sites.

Since 2015, the four sites have been managed by teams of volunteers appointed by BPC and the Broadland Tree Warden Network. Management plans for each site are developed by the individual groups looking after the sites and these are submitted to BPC for approval, typically on an annual basis.

Changes have occurred to the habitats of the sites over the years, some due to natural ecological succession and some due to management activities. The biodiversity of the four sites was not assessed during the previous 2015 studies and hence there is no baseline information on this important issue.

In 2023, BPC established a dedicated Biodiversity Working Group (BWG) to advise the Council on biodiversity matters in the parish and to facilitate bringing forward the Council's Wildlife and Diversity Vision (*Brundall Parish Council, Wildlife and Diversity Vision , 2021*). During 2023, the BWG carried out new Phase 1 Habitat surveys at each site in order to provide up to date information on the changes that had occurred since the original 2015 studies and to establish their biodiversity status. These surveys will form a baseline from which future biodiversity assessments of the four sites can be measured.

This report presents the findings of the updated surveys.

The study has shown that each of the sites has its own intrinsic ecological value and contribution to the biodiversity of the parish. This report includes a review of the biodiversity status of each site and presents options for how this might be enhanced in the future through specific management approaches.

2. INTRODUCTION

- 2.1 Biodiversity (biological diversity) is the term used to describe all the organisms, species and populations on planet Earth, including their genetic composition, variations and interactions within ecosystems. Maintaining and enhancing biodiversity is recognised as an essential requirement for sustaining life on earth for all living things, including humans.
- 2.2 Brundall Parish Council (BPC) owns/leases four sites in the parish: Church Fen, Cremers Meadow, Low Farm Wood and Countryside Park. The sites are important community assets for the residents of Brundall and others who visit the village. They are located in different parts of the parish and were acquired over a period of several years. Their locations are shown in Figure 2.1.
- 2.3 Management of these sites is carried out by volunteers who conduct maintenance and other activities according to plans agreed with BPC, typically on an annual basis.
- 2.4 In 2015, a consultancy study was conducted by The Landscape Partnership which assessed the (then) condition of these sites in terms of their ecological status and provided a series of recommendations on how the management of the sites should be carried out in the future. The report on this work was presented to BPC and has formed the basis of how these four sites have been maintained/managed since 2015 [*The Landscape Partnership, 2015*].
- 2.5 Since 2015, there has been no systematic review of the implementation of the consultant's recommendations or of the progress of the management of the four sites.
- 2.6 In 2023, BPC established a dedicated Biodiversity Working Group (BWG) to advise the Council on biodiversity matters in the parish and to facilitate bringing forward the Council's Wildlife and Diversity Vision [*Brundall Parish Council, Wildlife and Diversity Vision* Appendix A]. A Biodiversity Action Plan (BAP) was subsequently developed by the BWG to provide a framework for implementation of this Vision and to support future biodiversity activities within Brundall [Appendix B].
- 2.7 One of the first tasks of the BWG was to review the current biodiversity status of the four BPC owned/leased sites and to assess the changes that had occurred since the original 2015 Landscape Partnership study. It was also charged with advising BPC on future management of the sites including options for how biodiversity could be enhanced.
- 2.8 This report presents the findings of the first phase of the work carried out by the BWG during 2023. It includes an assessment of the current biodiversity status of each of the four sites and presents recommendations on possible management strategies for enhancing this at each site.

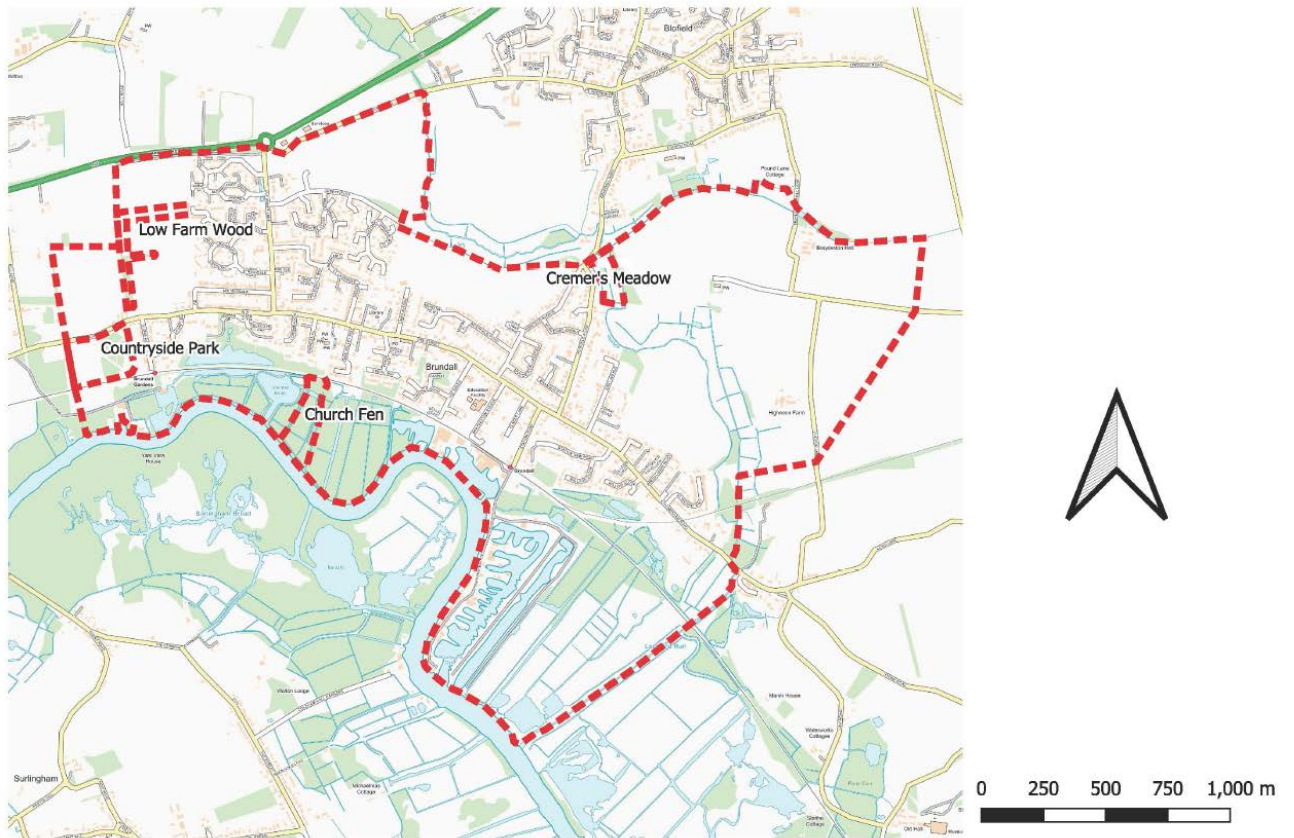


FIG.2.1 LOCATION OF STUDY SITES

3. BACKGROUND

- 3.1 The four sites are different in character and in terms of habitat type and how they are used and managed.

Church Fen

- 3.2 Church Fen is designated as a Local Nature Reserve (LNR). It occupies an area of approximately 3.2 ha and was purchased by BPC in 1980. It was originally an area of salt grazing by sheep, but with the decline in this activity since the early 20th century, the area has undergone natural succession to mixed woodland fen. In 1998, BPC designated the site as a conservation area and it subsequently achieved the status of Local Nature Reserve in 2003. The site abuts the River Yare and is subject to tidal inflows and outflows from the river. Dikes are present along the boundaries of the site which channel the water.
- 3.3 The River Yare forms the southern boundary of the site and the Norwich to Great Yarmouth and Lowestoft railway line forms the northern boundary. To the West of the site is Brundall Broad, which comprises carr woodland, scrub and ditches. To the East is further carr woodland, scrub, ditches and reed bed. Brundall Dyke, with moorings, lies further to the east of the site. The site is accessed via Church Lane, and a crossing over the railway line.
- 3.4 The woodland is dominated by alder, willow and ash, with sycamore on the drier ground, and an understorey of sallow, dogwood and many other species, including those that have been planted. These include a large number of non-native tree and shrub species. The trees have a good age structure, a well-developed shrub layer and plenty of standing deadwood. The fen is nutrient-enriched, and therefore species-poor, but includes gypsywort, water avens, large bitter-cress, hemp-agrimony, greater tussock-sedge, common valerian and skullcap. Himalayan Balsam and other invasive non-native species are locally abundant and possibly increasing. There is limited information on the fauna present, but birdlife includes breeding Cetti's warbler and most common woodland species, and otter, water vole and Chinese water deer have been recorded. Public access is low key, the circular walk being used mainly by dog walkers and less frequently for family walks. It provides the only public access to the riverbank from the village, and is popular with anglers, and also has the only public moorings at Brundall.
- 3.5 There is a dedicated footpath around the site, which allows walkers to enjoy the site safely and without disturbance to the majority of the reserve habitats and wildlife occupying it. Over the years this footpath has become eroded leaving some tree roots exposed. Options are now being considered by BPC for improving the footpath.
- 3.6 Important animal species known to inhabit the reserve include Water Vole and Otter.

Cremers Meadow

- 3.7 Cremer's Meadow covers an area of approximately 1.8 ha comprising grassland, fen vegetation, ditches, woodland, trees and scrub. There is also a large pond in the central area of the site that is fed by Run Dike. There are a number of mature trees on the site including native and non-native species. Some of these trees border the pond and will shed leaves into the pond every year, contributing to eutrophication of the water body. Over the years there has been a steady inflow of nutrients and sediment into the pond which has led to a significant build-up of sediment at the bottom.
- 3.8 Cremers Meadow is notable for its species rich low lying wet meadow on the east of the site which was originally grazed, but is now subject to periodic mowing.
- 3.9 Originally in private ownership, the site was acquired by BPC in 2015 and is designated as County Wildlife site by Norfolk Wildlife Trust.
- 3.10 At the time of the original Landscape Partnership Study in 2015, there were several buildings and structures on the site. There were also various materials and debris dumped during its former ownership. Extensive work by volunteers (*Friends of Cremers Meadow*) since 2015 have cleared much of the debris and restored the natural habitat. Unsafe buildings and structures have also been removed.
- 3.11 Run Dike flows along part of the north boundary of the site and then along the eastern boundary. This watercourse originates near to Plumstead Green in Great and Little Plumstead CP, where it is called Witton Run. Flowing south past the County Wildlife Sites, adjacent to Witton Lane and Birch Grove, Witton Run becomes Run Dike as it enters Brundall. From the point at which Run Dike flows past Cremer's Meadow, it continues to flow south past High Noon Farm County Wildlife Site. As the watercourse passes under the railway line it becomes the Lackford Run where it flows between Bradeston Marsh to the west and Strumpshaw Fen RSPB reserve to the east.

Low Farm Wood

- 3.12 Low Farm Wood is an 'F' shaped parcel of land located to the north of Postwick Lane. It comprises an area of deciduous woodland that was planted around 20 years ago, together with smaller areas of older mixed deciduous and coniferous woodland. The majority of the site is surrounded by arable farm land and is accessed by a footpath from Postwick Lane. Since BPC took over management of the site, under an informal arrangement with Norfolk County Council, it has been managed by the Broadland Tree Warden network. Management of the woodland has included significant thinning of trees, creation of new paths and some additional planting.

Countryside Park

- 3.13 Brundall Countryside Park was created in 2014 on a former agricultural site. It is approximately 5 ha in area and is divided into two distinct areas: a western half which is allocated to allotments for Brundall residents and an eastern half comprising managed grassland, shrubs and trees. There are wide circular pathways created by mowing that allow easy access to the site for walkers.
- 3.14 Since BPC took over the site, there have been many significant changes in the use of the land. These changes include the creation of 50+ allotments, planting of native broadleaved woodland and shrub, creation of a community orchard, a wildflower area and pathways. A hedgerow of native species has also been planted around the allotment area.
- 3.15 The site is used for recreation including a parkrun every Saturday and is also used by dog walkers.
- 3.16 Within the allotment area there are five mature oak trees.
- 3.17 The original community orchard suffered from lack of management and many of the original trees did not survive. Recently (2023), a new orchard has been planted and is now being managed exclusively by the Broadland Tree Warden Network. There is a rectangular shaped basin located near the north east boundary of the site which does contain water at certain times of the year. This receives run-off from Postwick Lane during periods of rainfall. There is also a small excavation in the south west corner which was originally designed to take excess water from the adjacent pathway, which tends to flood in wet weather. However, at the time of production of this report, there are no connections between the pathway and the excavation so the basin does not currently perform its intended function.

4. METHODOLOGY

- 4.1 A survey of the habitats and species at each site was completed by BWG over the period May to August 2023. The surveys were conducted according to the protocol detailed in JNCC Phase 1 Habitat Surveys [JNCC 2010, 2016]. A Phase 1 habitat survey is a standardised system for surveying, classifying and mapping wildlife habitats. Any habitats present and areas or features of ecological interest within such habitats are recorded and mapped by the surveyors. In addition to the habitat surveys, vegetation species at each site were recorded.
- 4.2 The JNCC method prescribed for a Phase 1 survey is as follows: each parcel of land in the survey area is visited by a trained surveyor and the vegetation is mapped on to digitised Ordnance Survey maps, usually at a scale of 1:10,000, in terms of some ninety specified habitat types, using standard colour codes. The use of colour codes on the habitat maps allows rapid visual assessment of the extent and distribution of different habitat types. Further information is gained from the use of dominant species codes within many habitat types and from descriptive 'target notes' which give a brief account of particular areas of interest. The target notes are an essential part of Phase 1 survey and provide the basis for selection of sites for Phase 2 survey and for decision-making in relation to conservation. It is planned to add Target Notes during subsequent stages of the work in 2024.
- 4.3 Once mapped, the habitat areas are measured on the maps and statistics compiled on the extent and distribution of each habitat type. The end products of a Phase 1 survey are (a) habitat maps, (b) target notes and (c) statistics.
- 4.4 The above methodology was used to compile updated habitat maps for each of the four sites in this study.
- 4.5 Species lists compiled during the surveys are provided in Appendix C.
- 4.6 In addition to the field surveys described above, the BWG also carried out a breeding birds survey and commenced a wide ranging Biodiversity Audit of the whole of Brundall. Information from these studies is included in this report where appropriate. These additional studies are ongoing and will be reported separately.

Limitations of the Surveys

- 4.7 There are certain limitations that apply to the species lists compiled during Phase 1 surveys which are due to the seasonality of vegetation and their presence or absence during the survey period. Some gaps in the latest species lists may therefore be present. This will be addressed by repeat surveys to be carried out in 2024 at different times of the year. Work planned for 2024 on breeding birds and compiling the Biodiversity Audit will add to the initial information gathered in 2023 and will be used to refine the results reported here.

5 PHASE 1 HABITAT SURVEYS-RESULTS

5.1 The results of the habitat surveys at Church Fen, Cremers Meadow, Low Farm Wood and Brundall Countryside Park are shown in Figures 5.1 to 5.4.

Church Fen

5.2 The habitats within Church Fen remain broadly the same as those recorded during the previous (2015) surveys i.e. mixed woodland fen dominated by alder and willow. There are large areas of the site which are under water at various times of the year due to seasonal flooding from the River Yare. The main habitats comprise semi natural broadleaved woodland, swamp and running open water (eutrophic) –see figure 5.1.

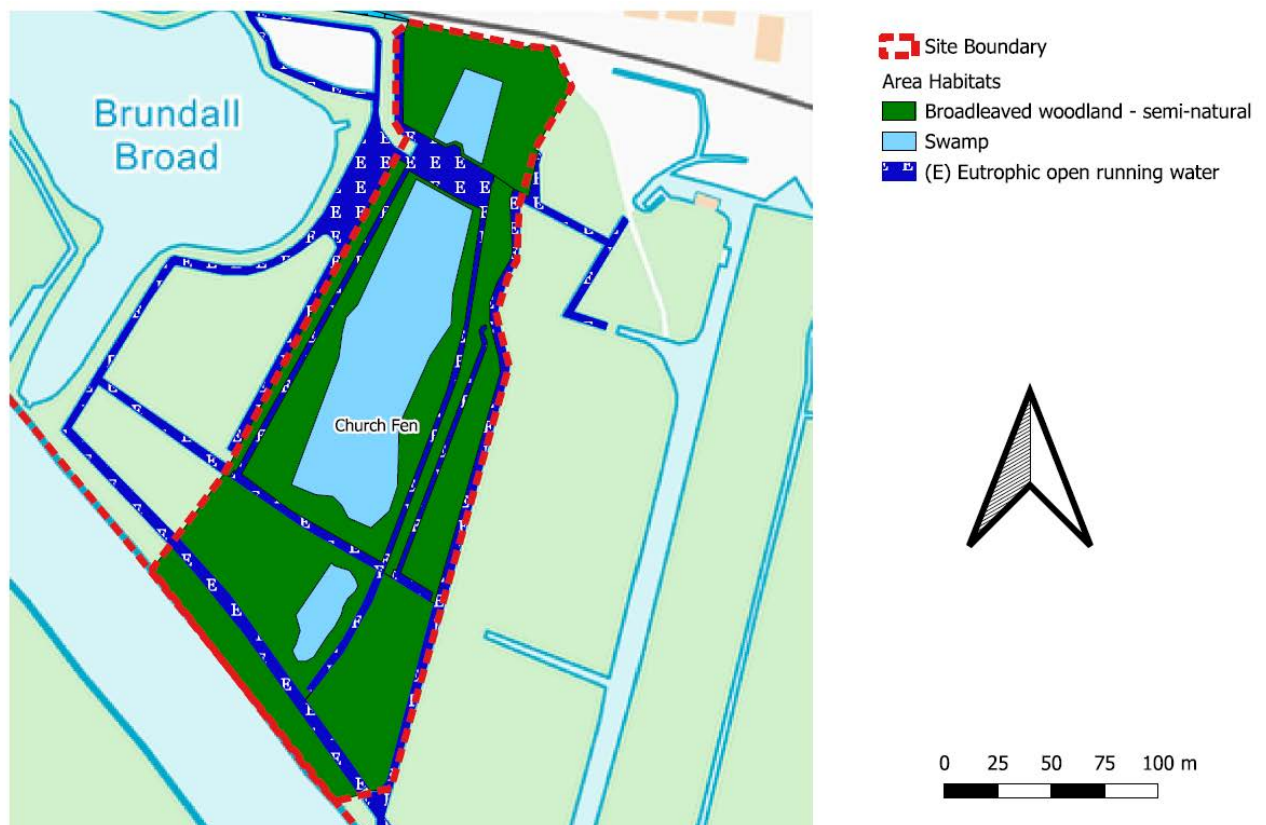


FIGURE 5.1: PHASE1 HABITAT MAP-CHURCH FEN 2023

Cremers Meadow

- 5.3 The habitat of Cremers Meadow has undergone significant change since 2015. The Phase 1 habitat survey in 2015 recorded several habitats including semi-improved grassland, ephemeral/short perennial and tall ruderal vegetation, running water, species-rich fen, scattered trees, scrub and plantation woodland. In addition there were several areas of rubbish tip and numerous structures. The botanical surveys carried out in early spring and late summer 2015 recorded numerous species. In excess of 250 native and non-native vascular species and 25 non-vascular (bryophyte) species were recorded within Cremers Meadow. The activities of the Friends of Cremers Meadow have transformed the site into what is now an important County Wildlife site (Norfolk Wildlife Trust no.2277) as well as a recreation area hosting many visitors.
- 5.4 The results of the 2023 habitat survey are shown in Figure 5.2. Although the main components of the habitat remain essentially the same as that found in 2015, there have been some changes to the areas covered by certain habitat types and the vegetation that they support. In addition, various items of construction and other waste have been removed from the site, leading to an overall more natural environment.



FIGURE 5.2 PHASE 1 HABITAT MAP-CREMERS MEADOW 2023

Low Farm Wood

- 5.6 Low Farm Wood is managed by the Broadland Tree Warden Network on behalf of BPC. Since taking over the management of the site, the Broadland Tree Warden Network have carried out extensive thinning of the overcrowded tree and shrub vegetation and constructed a circular walkway to allow visitors to access the site. Some planting of native trees and woodland bulbs has also been carried out.
- 5.7 The habitat map resulting from the 2023 Phase 1 survey is shown in Figure 5.3. The bulk of the site is covered by plantation woodland with a small area of semi natural mixed woodland on the western boundary. There are also species rich hedges along some of the site boundaries.
- 5.8 The work of the Broadland Tree Warden Network in clearing overgrown vegetation, thinning of trees and path construction has transformed a largely inaccessible area of woodland with limited amenity value into a valuable and useable community resource.

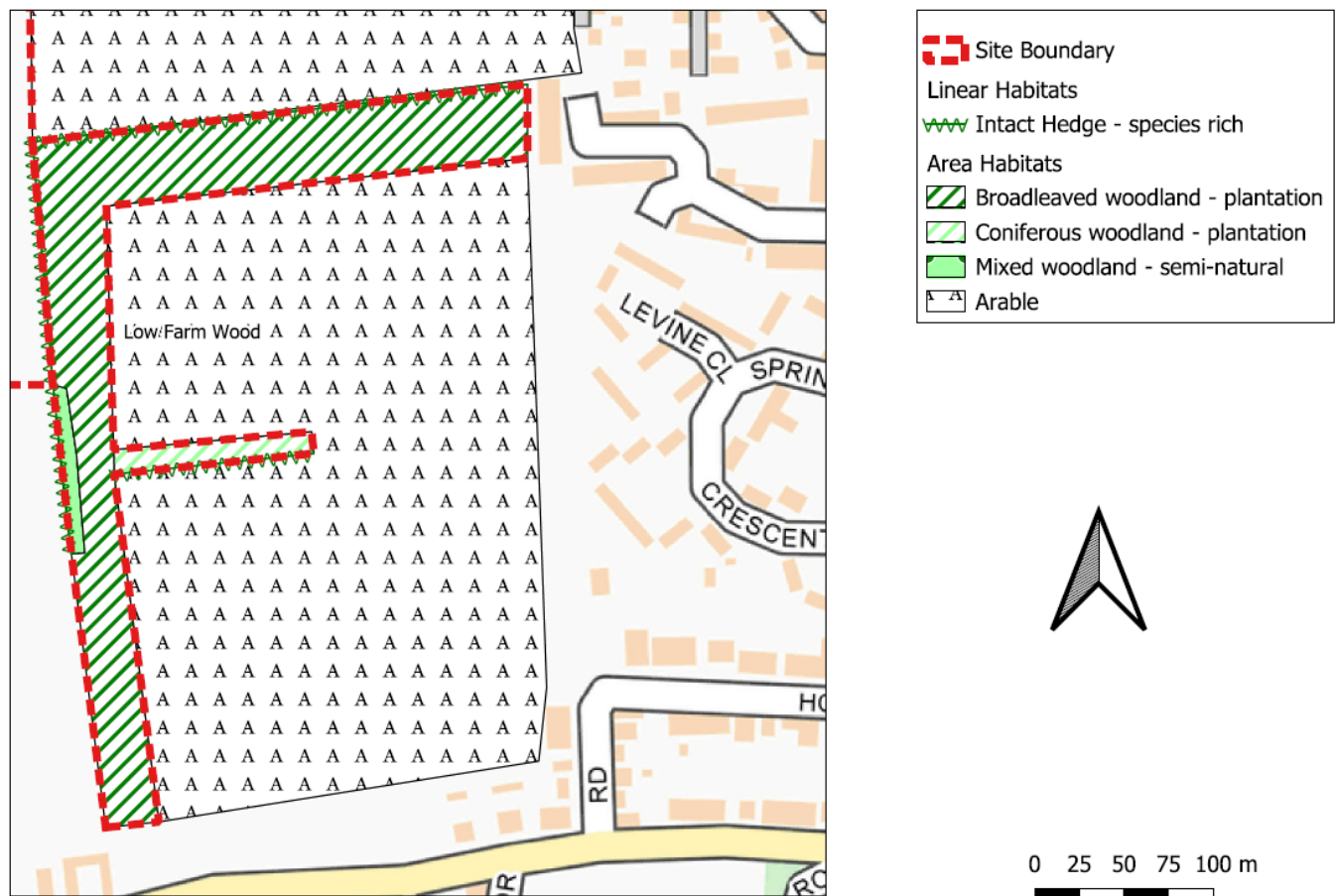


FIGURE 5.3: PHASE 1 HABITAT MAP LOW FARM WOOD 2023

Countryside Park

- 5.9 Brundall Countryside Park has undergone dramatic change since it was acquired by BPC in 2014. Originally used for agriculture, the site has been transformed into mixed use recreational, woodland, grassland and shrub. The western half of the site comprises allotments for Brundall residents. There has been extensive hedgerow planting around the allotment area and a car park and a community orchard facility have also been provided. The original native tree planting has developed over the years through self-seeding. There are also small areas of wildflower meadow which provide important habitat for a range of species. Pathways within the main park area are maintained by periodic mowing.
- 5.10 There is a sand covered track which runs around the allotment area and is used by runners every Saturday of the year. The track degrades during the winter months due to this usage, but appears to recover during other times of the year.
- 5.11 Figure 5.4 shows the results of the 2023 habitat surveys.

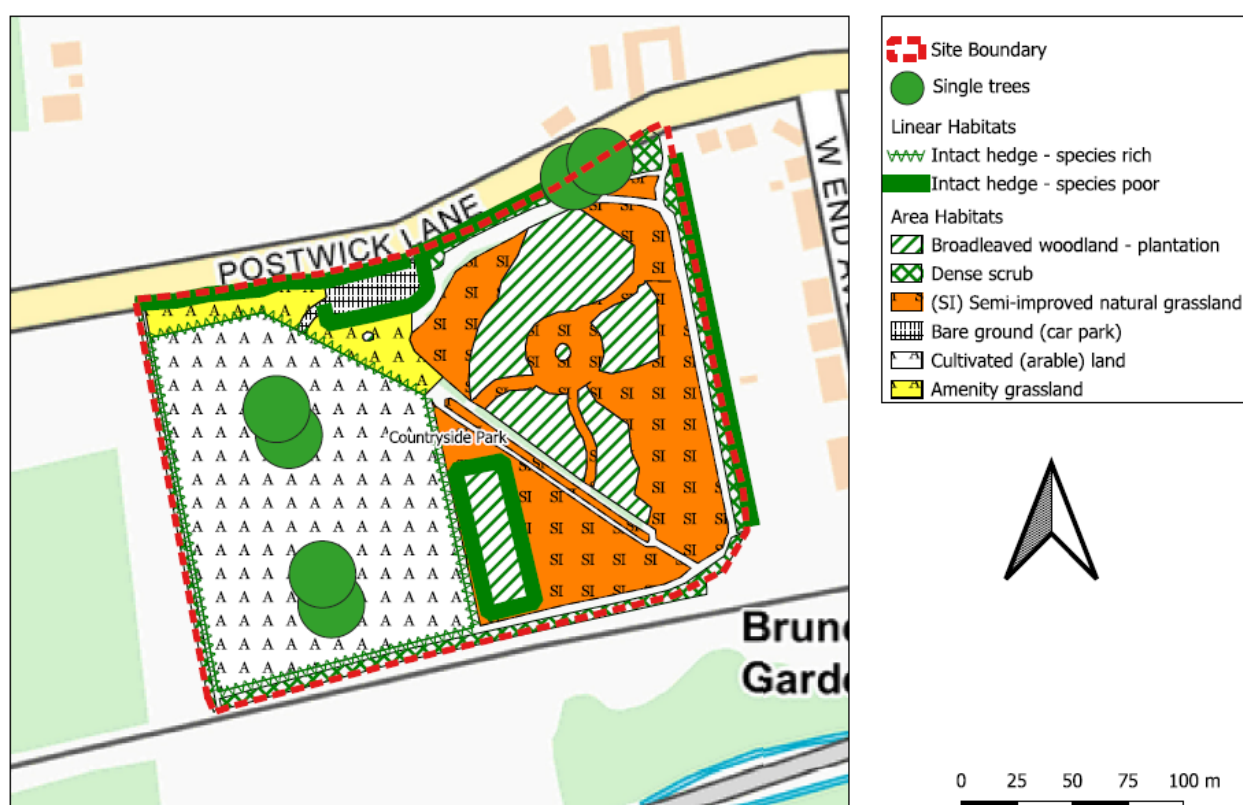


FIG 5.4 PHASE 1 HABITAT MAP COUNTRYSIDE PARK 2023

- 5.11 There is a small semi-natural depression located in the north east corner of the site which forms a small pond during wetter times of the year. It was dry at the time the Phase 1 habitat survey was conducted. There is also a small excavation in the south

west corner which was constructed to alleviate surface water accumulation on the designated parkrun track. This was also dry at the time of the surveys.

6 ASSESSMENT OF CURRENT BIODIVERSITY STATUS

- 6.1 The following summaries of biodiversity status are based on the data available. This comes from a combination of a desk study to collate species data from multiple sources, the Phase 1 surveys during 2023 and some anecdotal records. The data are consistently good for plant species but very patchy for all animal groups. More data is required for all sites before a comprehensive biodiversity assessment can be made, and these accounts should be treated as a provisional assessment.

Church Fen

- 6.2 The desk study located 331 species records for Church Fen involving 184 plant, 6 fungi and 19 animal species.
- 6.3 The woodland habitat which covers most of the site has developed mainly during the past 150 years, and the site has been assessed as Wet Woodland priority habitat. Much of the southern half of the site is dominated by alder, ash and willow, with a diverse ground flora including Marsh Marigold, Water Aven, Creeping Jenny and Large Bittercress. However, the northern parts of the site have a much higher frequency of non-native trees, shrubs and herbaceous plants, some of which date from the time it was managed as a garden, and others are more recent invaders. In places, the site is dominated by the invasive Himalayan Balsam. Breeding birds have not yet been surveyed, but Cetti's Warbler, Bullfinch and Marsh Tit, which are more or less confined to wet woodland habitat locally, are present and may breed, and wintering species include Lesser Redpoll and Siskin, which are specialist feeders on alder seeds.
- 6.4 The remnant area of reedbed/tall fen vegetation is rather species poor and dominated by common reed, but there are a few less common species including Purple Small-reed and Stingless Nettle. This habitat has not been surveyed for invertebrates, but there are some interesting casual records of nationally scarce or localised flies (*Oxycera nigricornis*) and beetles (*Crudosilis ruficollis*, *Demetrias imperialis*) from the site that suggest this habitat may support an important invertebrate assemblage, typical of similar habitat nearby.
- 6.5 The ditches have a very low abundance and diversity of aquatic plants and provide poor quality aquatic habitat as a result of heavy shading and the strongly tidal water regime which will occasionally be saline.
- 6.6 The richest parts of the site are certainly of equivalent habitat quality to parts of the Yare Broad and Marshes SSSI directly across the River Yare, and it is likely that further invertebrate recording would find many more important invertebrate species associated with the native trees and swamp vegetation.

Cremers Meadow

- 6.7 The desk study located 497 species records for Cremer's Meadow involving 287 plant and 65 animal species.
- 6.8 The "meadow" is more accurately described as a transition between fen meadow and tall fen habitat. It is of very high biodiversity value and likely to qualify as Lowland Fen priority habitat. This part of the site habitat was heavily grazed in the past and is now reasserting its natural vegetation form and improving in biodiversity potential. It is species-rich, with many notable plant species including Star Sedge, Oval Sedge and Southern Marsh Orchid. This type of vegetation typically supports a very rich assemblage of moths, flies, beetles and other invertebrates, and the presence of two notable specialist bees, Yellow Loosestrife Bee and Red Bartsia Bee, and a scarce wasp, *Gymnomerus laevipes*, suggest this habitat deserves formal invertebrate surveys.
- 6.9 This site has two significant water bodies, the central watercourse which is managed as a pond and the Run Dike stream, though there is little information available for aquatic species at this site. The central pond appears to be of rather poor ecological quality, with an abundance of duckweed, indicative of nutrient enrichment, and a deep bed of sediment. A high proportion of the pond margins and more than 50% of the open water is overhung by trees and shrubs, which are shading out emergent plants and the fallen leaves will be depleting oxygen in the water. While the stream attracts a few waterbirds and dragonflies, it has trapezoidal channel which has been over-deepened to aid land drainage, a uniform bed of fine sediment, low oxygen levels (EA classification), high Nitrogen levels (Natural England data), and does not appear to be of high ecological potential. The weir at the Northern end of the site is a barrier to fish and invertebrate movements.
- 6.10 The position of these wetland habitats within the ecological corridor along the Run Dike stream which link with the high-quality wetland habitats of the Yare valley, adds to their biodiversity value and potential.
- 6.11 The dry habitats at the site comprise a structurally diverse and plant species-rich mosaic of woodland, scrub, dry grassland and ruderal vegetation. Within these dry habitats, there is a high frequency of planted, ornamental non-native species including some potentially invasive species, which are of little biodiversity value. More than a quarter of plant species recorded are non-native. Native trees and shrubs, including Alder, Grey Willow, Silver Birch, Bramble, Elder and Dog Rose are also present, and there is a high diversity of native plant species in places. Some unshaded grassy areas support a high diversity of nectar plants, including Wild Basil, Viper's-bugloss and Wild Carrot. These areas are likely to support a notable invertebrate assemblage, and the S.41-listed wasp *Cerceris quinquefasciata* is among the species recorded (*Section 41 Priority Species List, Natural Environment and Rural Communities Act, 2006*).

Low Farm Wood

- 6.12 The desk study located 245 species records for Low Farm Wood including 140 plant and 23 animal species.
- 6.13 This woodland is a mix of young woodland planted in 2006, some mature shelterbelts and old hedgerows with mature trees. The mature trees are a mix of Corsican Pine, Pedunculate Oak and Ash, and the trees planted in 2006 are mainly native species. Since 2015 there has been some additional under-planting in the young woodland which has added several non-native species. Twelve species of native shrub have been recorded at the site but only 9 of 23 tree species recorded are native species.
- 6.14 The old hedgerow and mature trees contribute significantly to the biodiversity value of the woodland as a whole. The breeding birds survey in 2023 recorded 24 potential breeding species using the site. Of these, at least 26 pairs of 13 species nested, which included 1 red-listed and 3 amber-listed species. Territories were very much clustered near to mature trees and old hedgerows. The mature trees provide nest holes for birds and have potential to support bat roosts.
- 6.15 The structure of the young woodland is very uniform, with a high frequency of self-sown willows (3-4 species) creating a high stem density and with little shrub layer. Some recent thinning has created a few gaps in the canopy, but overall canopy cover is >90%, and there is little potential to support most woodland butterfly species and many woodland birds, which need open glades. The ground flora is typical of woodland that has been recently planted on arable land, being rather uniform and dominated by ruderal and grassland species and includes relatively few non-native species. A few woodland species are present, including bluebell and snowdrop, which are understood to have been planted.
- 6.16 The wood functions well as a wildlife corridor for woodland/hedgerow species, connecting with Countryside Park and the continuous belt of valley side woodland on the North side of the River Yare, but its biodiversity value will be constrained by the narrowness of the site. This will limit its value to woodland specialist species which need more extensive woodland areas or cannot tolerate the proximity to people using the paths, and the adjacent intensive arable cultivation, which will damage roots and potentially cause fertiliser and pesticides drift.

Countryside Park

- 6.17 The desk study located 2144 species records for the Countryside Park involving 191 plant and 248 animal species.
- 6.18 Since its creation from an arable field in 2014-15, most of the grassland habitat has been established through natural colonisation, but a small area of species-rich grassland was sown and this is the most diverse area, with species including Field Scabious, Bird's-foot Trefoil, Tufted Vetch and Wild Marjoram. These species are

slowly spreading around the site. Bees and wasps have been subject to a study at this site since 2015 and this has demonstrated the high biodiversity value of the grassland, with 90 species of bees, including the rare Large Scabious Mining Bee *Andrena hattorfiana*, and the rare wasps *Nysson interruptus*, *Argogorytes fargeii* and *Chrysis gracillima*. The Wasp Spider *Argiope bruennichi* and many butterfly and dragonfly species have also been recorded.

- 6.19 The young, planted woodland of mainly native species is slowly developing and starting to attract nesting birds. This has been planted with clumps of shrubs which will create a diverse structure as it matures. Several hedges, the orchard, allotments, and the scrubby margins of the site all add to the habitat diversity at the park. A breeding bird survey in 2023 recorded 39 potential breeding species using the site. Of these, at least 29 pairs of 13 species nested, which included 3 red-listed and 4 amber-listed species. These were concentrated around the mature trees within and around the margins of the park.
- 6.20 Throughout the grassland, self-sown shrubs and trees have created a nice ecotone between grassland and woodland, though in places these are now threatening to overtake the grassland habitat and cover the whole site in a willow and sycamore forest.
- 6.21 This rich mosaic of grassland, scrub and woodland habitats already forms an important stepping stone in the local ecological network that is helping the recovery or spread of many species such as those mentioned above.

7 OPPORTUNITIES FOR BIODIVERSITY ENHANCEMENT

- 7.1 Various measures can be taken to improve biodiversity at a particular site. The approach taken depends on the site itself, its functions and uses, the overall aims and objectives for the site and the resources available. It is important to decide from the outset what the objectives are for a given site, and how these objectives can be achieved whilst ensuring biodiversity is not only maintained but also, wherever possible, enhanced.
- 7.2 Sites may be managed for a particular species or group of species. But managing for one group may conflict with another. As a general rule, increasing biodiversity can often be achieved by diversifying the range of habitats or vegetation available at a site. This can be achieved by, for example, varying mowing regimes, planting or seeding with native tree and shrub species, or occasional soil disturbance. Animal diversity may be increased by providing a range of fruit sources, for example by not clipping berry-bearing shrubs until January, and by allowing wildflowers to flower for nectar provision and to bear seed as food for birds. Site drainage can also have an important impact.
- 7.3 Following the results of the updated Phase 1 habitat surveys, the BWG reviewed possible opportunities for biodiversity enhancement at each of the four sites. The following sections describe the options that might be considered. Further details and recommendations are provided in Appendix D.

Church Fen

- 7.4 Options for biodiversity enhancement at Church Fen are limited due its essential natural condition. The site already provides a range of natural habitats which have developed over a considerable period of time. However, if the site is not actively managed it will gradually decline in terms of biodiversity value as incremental changes to the habitat through natural succession and the advance of invasive species reduces its importance to a wide range of species.
- 7.5 Active management of the site will arrest the process of natural succession and prevent these losses. This will require a long term woodland management plan to be developed and implemented for the site. This plan should include maintaining the open fen/reed habitat and restoring the water balance in the aquatic areas as far as possible.
- 7.6 It is equally important that vigorous control of invasive species such as Himalayan Balsam is practiced to prevent their spread throughout the fen.

Cremers Meadow

- 7.7 Cremers Meadow is a high value site in terms of habitat type and biodiversity. Much has been achieved on the site by the volunteers who manage it (Friends of

Cremers Meadow) and work now needs to focus on how best to maintain and if possible enhance its biodiversity status.

- 7.8 The management of the pond is a considerable challenge due to its overall size, nutrient status and historical sediment build up. However, restoring the pond would provide Cremers Meadow with a significant opportunity to enhance the biodiversity of the site in terms of aquatic ecology/diversity. This is therefore seen as a priority issue with respect to biodiversity enhancement.
- 7.9 The species rich fen area is also of high value in terms of its habitat/biodiversity. However, it is gradually undergoing natural succession in terms of vegetation spread and its nature is changing.

Low Farm Wood

- 7.10 Low Farm Wood provides important habitat for birds as well as a wide range of insects, and other invertebrates. It probably also supports small mammals and other species. Its biodiversity could be enhanced through a long term woodland management plan that encourages birds to visit and breed on the site, as well as encouraging the preservation, growth and development of hedgerows. Planting of an appropriate mix of native trees/shrubs will also provide improvement of the site in terms of biodiversity.

Countryside Park

- 7.11 Countryside Park is at a relatively early stage in terms of its change from agricultural land of limited biodiversity value to a rich mosaic of habitats which provide food and shelter to a wide range of species. To build on what has been achieved in the past few years will require a long term plan that recognises the importance of the site's specific characteristics and habitats and potential for future biodiversity enhancement.
- 7.12 The newly planted woodland areas are developing well, but they will require managing through thinning and removal where appropriate of self-seeded trees and shrubs. Decisions are needed on how much woodland/shrub is wanted on the site relative to amenity grassland/semi-improved grassland and this needs to be incorporated into the long term woodland management plan. The outcome of these decisions and relative distribution of woodland and other areas will determine what is possible in terms of enhancing the biodiversity of the Countryside Park.
- 7.13 Providing a wildlife pond on the site presents a significant opportunity for a substantial enhancement to its overall biodiversity and should be seriously considered. Countryside Park occupies a large area and could accommodate a reasonably large wildlife pond which would provide a home to a wide range of aquatic species. If developed and appropriately managed, such a pond would

provide not only biodiversity improvements, but benefits to the community in terms of interest to those visiting the park and educational visits.

- 7.14 The allotment area represents a specific part of the site which has been developed for use by Brundall residents to grow food/plants.
- 7.15 Whilst the primary objective of allotments is to grow food, they provide important habitats for a range of animals and birds. They form useful habitat mosaics and wildlife corridors, often linking up with parks, tracks, hedgerows, churchyards and rivers; providing food, shelter and breeding sites for insects, birds, mammals and amphibians.
- 7.16 The presence of the allotment area provides a range of opportunities for enhancing the biodiversity of Brundall Countryside Park. By managing individual plots, or collectively managing the allotment area, plot holders can help to promote a balanced ecosystem that contributes to local biodiversity; it will also increase the productivity of their plots and help to deter pests. Specific activities that plot holders can do that promote biodiversity include:
- Use of compost on plots in the spring. This helps promote earthworm activity which promotes soil aeration and plant growth
 - Crop rotation. Not planting the same crop in the same place every year restricts the ability of pests to develop.
 - Grow a range of fruit vegetables and herbs. This provides food for bees and other insects at different times of the year.
 - Plant native flowers and berried bushes. These provide food for birds.
 - Provide a source of water. A shallow dish with some pebbles will allow a range of birds and insects to drink.
 - Provide shelter in the form of leaf piles and other plant debris which will provide cover and food for a wide range of animals including frogs, toads, hedgehogs and field mice.
- 7.17 The key to achieving the potential biodiversity improvements discussed above lies in developing and implementing appropriate biodiversity action plans for each site. Recommended action plans are summarised in Appendix D.

REFERENCES

1. The Landscape Partnership, 2015 : Survey of Brundall Rural Land Holdings
2. JNCC Handbook for Phase 1 Habitat Survey 2016
3. Broadland Tree Warden Network Church Fen Local Nature Reserve Management Plan Draft February 2021
4. Broadland Tree Warden Network Low Farm Wood Management Plan February 2020

APPENDICES

- A. Brundall Parish Council Wildlife and Biodiversity Vision, July 2021
- B. Brundall Parish Council Biodiversity Action Plan 2023
- C. Species Lists (2023)
- D. Recommended Biodiversity Action Plans: Church Fen, Cremer's Meadow, Low Farm Wood, Countryside Park

APPENDIX A

BPC Wildlife and Biodiversity Vision

Brundall Parish Council Wildlife and Bio-diversity Vision



This policy has been created to provide an overview document which aims to make Brundall a better place to live for both people and wildlife.

Brundall Parish Council aims to provide the following to enhance the natural surroundings which will bring greater bio-diversity, a greater feeling of well-being and a natural environment to benefit all.

The Council aims to;

1. Appoint a specialist expert group from within the Parish Council and the Community which will take a lead on wildlife and bio-diversity
2. Carry out a bio-diversity and wildlife audit which would inform future priorities.
3. Ensure that there is a high-quality management plan for all areas of land owned by the PC which has input from the specialist group. These plans will be reviewed regularly.
4. Communicate with the village community to ensure that they have access to factual information about the land owned and understand the aspirations for that land
5. Undertake dialogue with firms who are building in the village to explore ways to increase wildlife and bio-diversity within any new sites
6. Identify other areas of land not owned by the Parish and explore possibilities with the landowners for natural improvement
7. Take opportunities to provide education about the benefits of improved bio-diversity.
8. Create and enhance green spaces within the village



Photo courtesy of Greg Chandler

APPENDIX B

BPC Biodiversity Action Plan

BRUNDALL PARISH COUNCIL

ENVIRONMENT COMMITTEE

BIODIVERSITY ACTION PLAN (BAP)

Biodiversity (biological diversity) is the term used to describe all the organisms, species and populations on planet Earth, including their genetic composition, variations and interactions within ecosystems. Maintaining and enhancing biodiversity is recognised as an essential requirement for sustaining life on earth for all living things, including humans.

Following on from Brundall Parish Council's '*Wildlife and Biodiversity Vision*', this document establishes the Council's framework Biodiversity Action Plan for Brundall, covering the period 2023 to 2028. Its purpose is to provide the overarching framework which will guide and inform the implementation of the strategy for conserving and, where possible, enhancing the biological diversity of Brundall for the benefit of the natural environment, the wildlife, plants and other species that inhabit the area, including the human population.

The Biodiversity Action Plan (BAP) shall:

1. Carry out Biodiversity Audits of those sites owned or leased by the Council to establish their present status with respect to biodiversity and to identify opportunities for biodiversity enhancement.
2. Establish appropriate guidelines and actions for those sites so that they are managed in a sustainable way, consistent with Brundall Parish Council's biodiversity Vision and this BAP.
3. Identify opportunities for biodiversity enhancement at other sites within the parish boundaries through investigation of land uses in the area and identification of sites/areas where the Council's Vision and this BAP could be implemented. This includes reviewing opportunities that may arise from planned future developments and on land that Brundall Parish Council may seek to acquire.
4. Identify potential threats to biodiversity that could arise as a result of:
 - a. Future development proposals
 - b. Existing or inappropriate land management practices
 - c. Habitat loss or degradation
 - d. Loss of species
 - e. Impacts of pollution
5. Promote awareness of biodiversity within the local community through appropriate community engagement initiatives such as providing information on results of biodiversity audits on the Council's website, display boards and at public meetings. Engagement with local schools will also form part of the campaign of awareness.
6. Identify further opportunities to preserve or enhance biodiversity on land occupied by local businesses and to enlist the support of local businesses in implementing this BAP for the benefit of all who live and work here.

This BAP will be reviewed every 5 years to ensure its appropriateness and effectiveness in achieving Brundall Parish Council's Vision and Objectives for biodiversity.

APPENDIX C

Species Lists (2023)

Scientific name	Common name	Date
<i>Acer platanoides</i>	Norway Maple	May/June
<i>Acer pseudoplatanus</i>	Sycamore	May/June
<i>Aegopodium podagraria</i>	Ground-elder	May/June
<i>Aesculus hippocastanum</i>	Horse-chestnut	May/June
<i>Agrostis stolonifera</i>	Creeping Bent	May/June
<i>Alliaria petiolata</i>	Garlic Mustard	May/June
<i>Allium paradoxum</i>	Few-flowered Garlic	May/June
<i>Alnus glutinosa</i>	Alder	May/June
<i>Angelica sylvestris</i>	Wild Angelica	May/June
<i>Anthriscus sylvestris</i>	Cow Parsley	May/June
<i>Apium nodiflorum</i>	Fool's-water-cress	May/June
<i>Arctium minus</i>	Lesser Burdock	May/June
<i>Arrhenatherum elatius</i>	False Oat-Grass	May/June
<i>Arum maculatum</i>	Lords-and-Ladies	May/June
<i>Bellis perennis</i>	Daisy	May/June
<i>Berula erecta</i>	Lesser Water-parsnip	May/June
<i>Brachypodium sylvaticum</i>	False-brome	May/June
<i>Bryonia dioica</i>	White Bryony	May/June
<i>Buxus sempervirens</i>	Box	May/June
<i>Calamagrostis canescens</i>	Purple Small-reed	May/June
<i>Callitriche</i> agg.	Water-starwort	May/June
<i>Caltha palustris</i>	Marsh-marigold	May/June
<i>Calystegia sepium</i>	Hedge Bindweed	May/June
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	May/June
<i>Cardamine pratensis</i>	Cuckooflower	May/June
<i>Carex acutiformis</i>	Lesser Pond-sedge	May/June
<i>Carex elata</i>	Tufted-sedge	May/June
<i>Carex paniculata</i>	Greater Tussock-sedge	May/June
<i>Carex pendula</i>	Pendulous Sedge	May/June
<i>Carex remota</i>	Remote Sedge	May/June
<i>Carex riparia</i>	Greater Pond-sedge	May/June
<i>Circaea lutetiana</i>	Enchanter's-nightshade	May/June
<i>Cirsium vulgare</i>	Spear Thistle	May/June
<i>Cornus sericea</i>	Red-osier Dogwood	May/June
<i>Corylus avellana</i>	Hazel	May/June
<i>Crataegus monogyna</i>	Hawthorn	May/June
<i>Dactylis glomerata</i>	Cock's-foot	May/June
<i>Dryopteris filix-mas</i>	Male-fern	May/June
<i>Epilobium hirsutum</i>	Great Willowherb	May/June
<i>Equisetum arvense</i>	Field Horsetail	May/June
<i>Equisetum palustre</i>	Marsh Horsetail	May/June
<i>Eupatorium cannabinum</i>	Hemp-agrimony	May/June
<i>Festuca rubra</i> agg.	Red Fescue	May/June
<i>Filipendula ulmaria</i>	Meadowsweet	May/June
<i>Fraxinus excelsior</i>	Ash	May/June
<i>Galium aparine</i>	Cleavers	May/June
<i>Galium palustre</i>	Marsh Bedstraw	May/June
<i>Geranium molle</i>	Dove's-foot Crane's-bill	May/June
<i>Geranium robertianum</i>	Herb-Robert	May/June
<i>Geum rivale</i>	Water Avens	May/June

Scientific name	Common name	Date
<i>Geum urbanum</i>	Wood Avens	May/June
<i>Glechoma hederacea</i>	Ground-ivy	May/June
<i>Glyceria maxima</i>	Reed Sweet-grass	May/June
<i>Hedera helix</i> subsp. <i>helix</i>	Common Ivy	May/June
<i>Heracleum mantegazzianum</i>	Giant Hogweed	May/June
<i>Heracleum sphondylium</i>	Hogweed	May/June
<i>Humulus lupulus</i>	Hop	May/June
<i>Hypericum androsaemum</i>	Tutsan	May/June
<i>Ilex aquifolium</i>	Holly	May/June
<i>Impatiens capensis</i>	Orange Balsam	May/June
<i>Impatiens glandulifera</i>	Indian Balsam	May/June
<i>Iris foetidissima</i>	Stinking Iris	May/June
<i>Iris pseudacorus</i>	Yellow Iris	May/June
<i>Juncus effusus</i>	Soft-rush	May/June
<i>Lamium album</i>	White Dead-nettle	May/June
<i>Lamium purpureum</i>	Red Dead-nettle	May/June
<i>Lapsana communis</i>	Nipplewort	May/June
<i>Ligustrum sinense</i>	Chinese Privet	May/June
<i>Ligustrum vulgare</i>	Wild Privet	May/June
<i>Lolium perenne</i>	Perennial Rye-grass	May/June
<i>Lonicera periclymenum</i>	Honeysuckle	May/June
<i>Lycopus europaeus</i>	Gipsywort	May/June
<i>Lysimachia nemorum</i>	Yellow Pimpernel	May/June
<i>Lythrum salicaria</i>	Purple-loosestrife	May/June
<i>Malva sylvestris</i>	Common Mallow	May/June
<i>Medicago lupulina</i>	Black Medick	May/June
<i>Mentha aquatica</i>	Water Mint	May/June
<i>Myosotis scorpioides</i>	Water Forget-me-not	May/June
<i>Nicandra physalodes</i>	Apple-of-Peru	May/June
<i>Pentaglottis sempervirens</i>	Green Alkanet	May/June
<i>Persicaria hydropiper</i>	Water-pepper	May/June
<i>Petasites fragrans</i>	Winter Heliotrope	May/June
<i>Phragmites australis</i>	Common Reed	May/June
<i>Phyllitis scolopendrium</i>	Hart's-tongue	May/June
<i>Plantago lanceolata</i>	Ribwort Plantain	May/June
<i>Plantago major</i>	Greater Plantain	May/June
<i>Poa annua</i>	Annual Meadow-grass	May/June
<i>Prunella vulgaris</i>	Self-heal	May/June
<i>Prunus avium</i>	Wild Cherry	May/June
<i>Prunus laurocerasus</i>	Cherry Laurel	May/June
<i>Pteridium aquilinum</i>	Bracken	May/June
<i>Quercus robur</i>	Pedunculate Oak	May/June
<i>Ranunculus acris</i>	Meadow Buttercup	May/June
<i>Ranunculus ficaria</i>	Lesser Celandine	May/June
<i>Ranunculus repens</i>	Creeping Buttercup	May/June
<i>Rhamnus cathartica</i>	Buckthorn	May/June
<i>Rhododendron ponticum</i>	Rhododendron	May/June
<i>Ribes rubrum</i>	Red Currant	May/June
<i>Rosa canina</i> agg.	Dog-rose	May/June
<i>Rubus fruticosus</i> agg.	Bramble	May/June

Scientific name	Common name	Date
<i>Rudbeckia laciniata</i>	Coneflower	May/June
<i>Rumex obtusifolius</i>	Broad-leaved Dock	May/June
<i>Salix cinerea</i>	Grey Willow	May/June
<i>Salix fragilis</i>	Crack-willow	May/June
<i>Sambucus nigra</i>	Elder	May/June
<i>Scrophularia auriculata</i>	Water Figwort	May/June
<i>Senecio jacobaea</i>	Common Ragwort	May/June
<i>Silene dioica</i>	Red Campion	May/June
<i>Solanum dulcamara</i>	Bittersweet	May/June
<i>Sonchus asper</i>	Prickly Sow-thistle	May/June
<i>Stachys sylvatica</i>	Hedge Woundwort	May/June
<i>Stellaria media</i>	Common Chickweed	May/June
<i>Symphoricarpos albus</i>	Snowberry	May/June
<i>Taraxacum</i> agg.	Dandelion	May/June
<i>Taxus baccata</i>	Yew	May/June
<i>Tilia x europaea</i>	Lime	May/June
<i>Torilis japonica</i>	Upright Hedge-parsley	May/June
<i>Trifolium repens</i>	White Clover	May/June
<i>Typha latifolia</i>	Bulrush	May/June
<i>Ulmus glabra</i> x <i>minor</i> sensu Stac	Elm sp.	May/June
<i>Urtica dioica</i>	Common Nettle	May/June
<i>Urtica dioica</i> intermediate ssp.	Stingless Nettle	May/June
<i>Valeriana officinalis</i>	Common Valerian	May/June
<i>Viburnum opulus</i>	Guelder-rose	May/June

Scientific name	Common name	Date
<i>Acer campestre</i>	Field Maple	May/June
<i>Acer pseudoplatanus</i>	Sycamore	May/June
<i>Achillea millefolium</i>	Yarrow	May/June
<i>Aegopodium podagraria</i>	Ground-elder	May/June
<i>Agrostis capillaris</i>	Common Bent	May/June
<i>Agrostis stolonifera</i>	Creeping Bent	May/June
<i>Alliaria petiolata</i>	Garlic Mustard	May/June
<i>Alnus glutinosa</i>	Alder	May/June
<i>Anagallis arvensis</i>	Scarlet Pimpernel	May/June
<i>Angelica sylvestris</i>	Wild Angelica	May/June
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	May/June
<i>Anthriscus sylvestris</i>	Cow Parsley	May/June
<i>Apium nodiflorum</i>	Fool's-water-cress	May/June
<i>Araucaria araucana</i>	Monkey Puzzle	May/June
<i>Arctium minus</i>	Lesser Burdock	May/June
<i>Arrhenatherum elatius</i>	False Oat-Grass	May/June
<i>Artemisia vulgaris</i>	Mugwort	May/June
<i>Arum maculatum</i>	Lords-and-Ladies	May/June
<i>Ballota nigra</i>	Black Horehound	May/June
<i>Barbarea vulgaris</i>	Winter-cress	May/June
<i>Bellis perennis</i>	Daisy	May/June
<i>Berberis darwinii</i>	Darwin's Barberry	May/June
<i>Berberis gagnepainii</i>	Gagnepain's Barberry	May/June
<i>Berberis jamesiana</i>	James Barberry	October
<i>Berberis thunbergii</i>	Thunberg's Barberry	May/June
<i>Betula pendula</i>	Silver Birch	May/June
<i>Betula pubescens</i>	Downy Birch	May/June
<i>Bryonia dioica</i>	White Bryony	May/June
<i>Buddleja davidii</i>	Butterfly-bush	May/June
<i>Calamintha nepeta</i>	Calamint	May/June
<i>Callitriche</i> agg.	Water-starwort	May/June
<i>Caltha palustris</i>	Marsh-marigold	May/June
<i>Calystegia silvatica</i>	Large Bindweed	May/June
<i>Cardamine flexuosa</i>	Wavy Bitter-cress	May/June
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	May/June
<i>Cardamine pratensis</i>	Cuckooflower	May/June
<i>Carex buchananii</i>	Silver-spiked Sedge	May/June
<i>Carex disticha</i>	Brown Sedge	May/June
<i>Carex echinata</i>	Star Sedge	May/June
<i>Carex hirta</i>	Hairy Sedge	May/June
<i>Carex nigra</i>	Common Sedge	May/June
<i>Carex ovalis</i>	Oval Sedge	May/June
<i>Carex pendula</i>	Pendulous Sedge	May/June
<i>Carpinus betulus</i>	Hornbeam	May/June
<i>Centaurea nigra</i> agg.	Black/Brown Knapweed	May/June
<i>Centranthus ruber</i>	Red Valerian	May/June
<i>Cerastium fontanum</i>	Common Mouse-ear	May/June
<i>Cerastium glomeratum</i>	Sticky Mouse-ear	May/June
<i>Chaerophyllum temulum</i>	Rough Chervil	May/June
<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress	May/June

Scientific name	Common name	Date
<i>Chamaenerion angustifolium</i>	Rosebay Willow-herb	May/June
<i>Chelidonium majus</i>	Greater Celandine	May/June
<i>Chenopodium album</i>	Fat-hen	May/June
<i>Cirsium arvense</i>	Creeping Thistle	May/June
<i>Cirsium palustre</i>	Marsh Thistle	May/June
<i>Cirsium vulgare</i>	Spear Thistle	May/June
<i>Clematis montana</i>	Himalayan Clematis	May/June
<i>Clinopodium vulgare</i>	Wild Basil	May/June
<i>Conyza canadensis</i>	Canadian Fleabane	May/June
<i>Conyza sumatrensis</i>	Guemsey Fleabane	May/June
<i>Cornus sericea</i>	Red-osier Dogwood	May/June
<i>Coronopus didymus</i>	Lesser Swine-cress	May/June
<i>Corylus avellana</i>	Hazel	May/June
<i>Crataegus monogyna</i>	Hawthorn	May/June
<i>Crepis capillaris</i>	Smooth Hawksbeard	May/June
<i>Crococsmia x crocosmiiflora</i>	Montbretia (<i>C. aurea</i> x <i>pottsii</i>)	May/June
<i>Crocus vernus</i>	Spring Crocus	May/June
<i>Cynosurus cristatus</i>	Crested Dog's-tail	May/June
<i>Dactylis glomerata</i>	Cock's-foot	May/June
<i>Dactylorhiza praetermissa</i>	Southern Marsh-orchid	May/June
<i>Digitalis purpurea</i>	Foxglove	May/June
<i>Dipsacus fullonum</i>	Wild Teasel	May/June
<i>Dryopteris dilatata</i>	Broad Buckler-fern	May/June
<i>Dryopteris filix-mas</i>	Male-fern	May/June
<i>Echium vulgare</i>	Viper's-bugloss	May/June
<i>Eleocharis palustris</i>	Common Spike-rush	May/June
<i>Elytrigia repens</i>	Common Couch	May/June
<i>Epilobium ciliatum</i>	American Willowherb	May/June
<i>Epilobium hirsutum</i>	Great Willowherb	May/June
<i>Epilobium montanum</i>	Broad-leaved Willowherb	May/June
<i>Epilobium parviflorum</i>	Hoary Willowherb	May/June
<i>Epilobium tetragonum</i>	Square-stalked Willowherb	May/June
<i>Eranthis hyemalis</i>	Winter Aconite	May/June
<i>Eryngium planum</i>	Blue Eryngo	May/June
<i>Euonymus europaeus</i>	Spindle	May/June
<i>Euonymus japonicus</i>	Evergreen Spindle	May/June
<i>Eupatorium cannabinum</i>	Hemp-agrimony	May/June
<i>Euphorbia amygdaloides</i> subsp	Turkish Wood Spurge	May/June
<i>Euphorbia lathyris</i>	Caper Spurge	May/June
<i>Euphorbia peplus</i>	Petty Spurge	May/June
<i>Fallopia japonica</i>	Japanese Knotweed	May/June
<i>Festuca arundinacea</i>	Tall Fescue	May/June
<i>Festuca rubra</i> agg.	Red Fescue	May/June
<i>Filago vulgaris</i>	Common Cudweed	May/June
<i>Filipendula ulmaria</i>	Meadowsweet	May/June
<i>Forsythia x intermedia</i>	Forsythia	May/June
<i>Fraxinus excelsior</i>	Ash	May/June
<i>Galanthus nivalis</i>	Snowdrop	May/June
<i>Galanthus plicatus</i>	Pleated Snowdrop	May/June
<i>Galium aparine</i>	Cleavers	May/June

Scientific name	Common name	Date
<i>Galium mollugo</i>	Hedge Bedstraw	May/June
<i>Galium palustre</i>	Marsh-bedstraw	May/June
<i>Galium uliginosum</i>	Fen Bedstraw	May/June
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	May/June
<i>Geranium endressii</i>	French Crane's-bill	May/June
<i>Geranium lucidum</i>	Shining Crane's-bill	May/June
<i>Geranium molle</i>	Dove's-foot Crane's-bill	May/June
<i>Geranium pusillum</i>	Small-flowered Crane's-bill	May/June
<i>Geranium pratense</i>	Meadow Crane's-bill	May/June
<i>Geranium robertianum</i>	Herb-Robert	May/June
<i>Geranium x oxonianum</i>	Druce's Crane's-bill	May/June
<i>Geum urbanum</i>	Wood Avens	May/June
<i>Glechoma hederacea</i>	Ground-ivy	May/June
<i>Glyceria fluitans</i>	Floating Sweet-grass	May/June
<i>Glyceria maxima</i>	Reed Sweet-grass	May/June
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	May/June
<i>Gunnera manicata</i>	Brazilian Giant-rhubarb	May/June
<i>Hedera helix</i> subsp. <i>helix</i>	Common Ivy	May/June
<i>Helleborus foetidus</i>	Stinking Hellebore	May/June
<i>Heracleum sphondylium</i>	Hogweed	May/June
<i>Holcus lanatus</i>	Yorkshire-fog	May/June
<i>Holcus mollis</i>	Creeping Soft-grass	May/June
<i>Hordeum murinum</i>	Wall Barley	May/June
<i>Hordeum secalinum</i>	Meadow Barley	May/June
<i>Hyacinthus orientalis</i>	Hyacinth	May/June
<i>Hypericum androsaemum</i>	Tutsan	May/June
<i>Hypericum humifusum</i>	Trailing St. John's-wort	October
<i>Hypericum perforatum</i>	Perforate St John's-wort	May/June
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	May/June
<i>Hypochaeris radicata</i>	Common Cat's-ear	May/June
<i>Ilex aquifolium</i>	Holly	May/June
<i>Impatiens glandulifera</i>	Indian Balsam	May/June
<i>Iris foetidissima</i>	Stinking Iris	May/June
<i>Iris pseudacorus</i>	Yellow Iris	May/June
<i>Isolepis setacea</i>	Bristle Club-rush	May/June
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	May/June
<i>Juncus articulatus</i>	Jointed Rush	May/June
<i>Juncus bufonius</i>	Toad Rush	May/June
<i>Juncus effusus</i>	Soft-rush	May/June
<i>Kerria japonica</i>	Kerria	May/June
<i>Kniphofia</i> spp.	Red-hot Poker	May/June
<i>Lactuca serriola</i>	Prickly Lettuce	May/June
<i>Lamiastrum galeobdolon</i> subsp.	Garden Yellow-archangel	May/June
<i>Lamium maculatum</i>	Spotted Dead-nettle	May/June
<i>Lapsana communis</i>	Nipplewort	May/June
<i>Lathyrus latifolius</i>	Broad-leaved Everlasting-pea	May/June
<i>Lathyrus pratensis</i>	Meadow Vetchling	May/June
<i>Lemna gibba</i>	Fat Duckweed	May/June
<i>Lemna minor</i>	Common Duckweed	May/June
<i>Leucanthemum vulgare</i>	Oxeye Daisy	May/June

Scientific name	Common name	Date
<i>Leucanthemum x superbum</i>	Shasta Daisy	May/June
<i>Leucojum aestivum</i>	Summer Snowflake	May/June
<i>Linaria purpurea</i>	Purple Toadflax	May/June
<i>Lonicera periclymenum</i>	Honeysuckle	May/June
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	May/June
<i>Lotus pedunculatus</i>	Greater Bird's-foot Trefoil	May/June
<i>Lunaria annua</i>	Honesty	May/June
<i>Lychnis coronaria</i>	Rose Campion	May/June
<i>Lychnis flos-cuculi</i>	Ragged-Robin	May/June
<i>Lycopus europaeus</i>	Gypsywort	May/June
<i>Lysimachia punctata</i>	Dotted Loosestrife	May/June
<i>Lythrum salicaria</i>	Purple-loosestrife	May/June
<i>Mahonia aquifolium</i>	Oregon-grape	May/June
<i>Malus domestica</i>	Apple	May/June
<i>Malus sylvestris</i>	Crab Apple	October
<i>Malva moschata</i>	Musk-mallow	May/June
<i>Malva sylvestris</i>	Common Mallow	May/June
<i>Medicago lupulina</i>	Black Medick	May/June
<i>Melissa officinalis</i>	Lemon Balm	May/June
<i>Mentha aquatica</i>	Water Mint	May/June
<i>Mentha spicata</i>	Spearmint	October
<i>Mimulus guttatus</i>	Monkeyflower	May/June
<i>Myosotis arvensis</i>	Field Forget-me-not	May/June
<i>Myosotis laxa</i>	Tufted Forget-me-not	May/June
<i>Myosotis scorpioides</i>	Water Forget-me-not	May/June
<i>Myosotis sylvatica</i>	Wood Forget-me-not	May/June
<i>Narcissus</i> agg.	Cultivated Daffodil	May/June
<i>Nigella damascena</i>	Love-in-a-mist	May/June
<i>Nymphaea alba</i>	White Water-lily	May/June
<i>Odontites vernus</i>	Red Bartsia	May/June
<i>Oenothera biennis</i>	Common Evening-primrose	May/June
<i>Oenothera glazioviana</i>	Large-flowered Evening-primrose	May/June
<i>Papaver rhoeas</i>	Common Poppy	May/June
<i>Pentaglottis sempervirens</i>	Green Alkanet	May/June
<i>Persicaria amphibia</i>	Amphibious Bistort	May/June
<i>Persicaria hydropiper</i>	Water-pepper	May/June
<i>Persicaria maculosa</i>	Redshank	May/June
<i>Petasites fragrans</i>	Winter Heliotrope	May/June
<i>Phleum pratense</i>	Timothy	May/June
<i>Phragmites australis</i>	Common Reed	May/June
<i>Physalis alkekengi</i>	Japanese-lantern	May/June
<i>Picea abies</i>	Norway Spruce	May/June
<i>Picris echioides</i>	Bristly Oxtongue	May/June
<i>Plantago coronopus</i>	Buck's-horn Plantain	May/June
<i>Plantago lanceolata</i>	Ribwort Plantain	May/June
<i>Plantago major</i>	Greater Plantain	May/June
<i>Poa annua</i>	Annual Meadow-grass	May/June
<i>Poa trivialis</i>	Rough Meadow-grass	May/June
<i>Polygonatum x hybridum</i>	Garden Solomon's-seal	May/June
<i>Polygonum aviculare</i> agg.	Knotgrass	May/June

Scientific name	Common name	Date
<i>Polypogon monspeliensis</i>	Annual Beard-grass	May/June
<i>Populus x canadensis</i>	Hybrid Black-poplar	May/June
<i>Potentilla anserina</i>	Silverweed	May/June
<i>Potentilla reptans</i>	Creeping Cinquefoil	May/June
<i>Primula vulgaris</i>	Primrose	May/June
<i>Primula x polyantha</i> cultivar	Cultivated Primrose	May/June
<i>Prunella vulgaris</i>	Selfheal	May/June
<i>Prunus avium</i>	Wild Cherry	May/June
<i>Prunus laurocerasus</i>	Cherry Laurel	May/June
<i>Prunus lusitanica</i>	Portugal Laurel	May/June
<i>Pyracantha</i> spp.	Firethorn	October
<i>Quercus robur</i>	Pedunculate Oak	October
<i>Quercus rubra</i>	Red Oak	May/June
<i>Ranunculus acris</i>	Meadow Buttercup	May/June
<i>Ranunculus ficaria</i>	Lesser Celandine	May/June
<i>Ranunculus flammula</i>	Lesser Spearwort	May/June
<i>Ranunculus repens</i>	Creeping Buttercup	May/June
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup	May/June
<i>Reseda luteola</i>	Weld	May/June
<i>Rhinanthus minor</i>	Yellow Rattle	May/June
<i>Rhododendron</i> spp.	Rhododendron	May/June
<i>Rhus typhina</i>	Stag's-horn Sumach	May/June
<i>Robinia pseudoacacia</i>	False-acacia	May/June
<i>Rorippa sylvestris</i>	Creeping Yellow-cress	May/June
<i>Rosa canina</i> agg.	Dog-rose	May/June
<i>Rubus armeniacus</i>	Blackberry	May/June
<i>Rubus fruticosus</i> agg.	Bramble	May/June
<i>Rubus idaeus</i>	Raspberry	May/June
<i>Rubus ulmifolius</i>	Elm-leaved Bramble	May/June
<i>Rumex acetosa</i>	Common Sorrel	May/June
<i>Rumex conglomeratus</i>	Clustered Dock	May/June
<i>Rumex obtusifolius</i>	Broad-leaved Dock	May/June
<i>Rumex sanguineus</i>	Wood Dock	May/June
<i>Sagina apetala</i> subsp. <i>erecta</i>	Upright Pearlwort	May/June
<i>Sagina procumbens</i>	Procumbent Pearlwort	May/June
<i>Salix alba</i>	White Willow	May/June
<i>Salix caprea</i>	Goat Willow	May/June
<i>Salix cinerea</i>	Grey Willow	May/June
<i>Salix fragilis</i>	Crack-willow	May/June
<i>Salix matsudana</i>	Corkscrew/Twisted Willow	October
<i>Salix x sepulcralis</i>	<i>S. alba</i> x <i>babylonica</i>	May/June
<i>Sambucus nigra</i>	Elder	May/June
<i>Scorzonoides autumnalis</i>	Autumn Hawkbit	May/June
<i>Scrophularia auriculata</i>	Water Figwort	May/June
<i>Senecio jacobaea</i>	Common Ragwort	May/June
<i>Silene dioica</i>	Red Campion	May/June
<i>Silene latifolia</i>	White Campion	May/June
<i>Silene vulgaris</i>	Bladder Campion	May/June
<i>Sisymbrium officinale</i>	Hedge Mustard	May/June
<i>Sisyrinchium striatum</i>	Pale Yellow-eyed-grass	May/June

Scientific name	Common name	Date
<i>Smyrnium olusatrum</i>	Alexanders	May/June
<i>Solanum dulcamara</i>	Bittersweet	May/June
<i>Solidago canadensis</i>	Canadian Goldenrod	May/June
<i>Sonchus arvensis</i>	Perennial Sow-thistle	May/June
<i>Sonchus asper</i>	Prickly Sow-thistle	May/June
<i>Sorbus aria</i> agg.	Whitebeam	May/June
<i>Sorbus aucuparia</i>	Rowan	May/June
<i>Sparganium erectum</i>	Branched Bur-reed	May/June
<i>Stachys sylvatica</i>	Hedge Woundwort	May/June
<i>Stellaria graminea</i>	Lesser Stitchwort	May/June
<i>Stellaria media</i>	Common Chickweed	May/June
<i>Symphoricarpos albus</i>	Snowberry	May/June
<i>Symphytum 'Hidcote Blue'</i>	Hidcote Comfrey	May/June
<i>Symphytum orientale</i>	White Comfrey	May/June
<i>Syringa vulgaris</i>	Lilac	May/June
<i>Tanacetum parthenium</i>	Feverfew	May/June
<i>Tanacetum vulgare</i>	Tansy	May/June
<i>Taraxacum</i> agg.	Dandelion	May/June
<i>Torilis japonica</i>	Upright Hedge-parsley	May/June
<i>Trifolium dubium</i>	Lesser Trefoil	May/June
<i>Trifolium pratense</i>	Red Clover	May/June
<i>Trifolium repens</i>	White Clover	May/June
<i>Tristagma uniflorum</i>	Spring Starflower	May/June
<i>Tulipa gesneriana</i>	Garden Tulip	May/June
<i>Typha latifolia</i>	Broadleaf Cattail (bulrush)	May/June
<i>Ulmus minor</i>	Small-leaved Elm (sensu Stace)	May/June
<i>Urtica dioica</i>	Common Nettle	May/June
<i>Urtica dioica galeopsifolia</i>	Stingless Nettle	October
<i>Valeriana dioica</i>	Marsh Valerian	May/June
<i>Valeriana officinalis</i>	Common Valerian	May/June
<i>Verbascum nigrum</i>	Dark Mullein	May/June
<i>Verbascum thapsus</i>	Great Mullein	May/June
<i>Veronica arvensis</i>	Wall Speedwell	May/June
<i>Veronica beccabunga</i>	Brooklime	May/June
<i>Veronica chamaedrys</i>	Gemander Speedwell	May/June
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	May/June
<i>Viburnum tinus</i>	Laurustinus	October
<i>Viburnum opulus</i>	Guelder-rose	May/June
<i>Viburnum plicatum</i>	Japanese Snowball-bush	May/June
<i>Vicia hirsuta</i>	Hairy Vetch	May/June
<i>Vicia sativa</i> subsp. <i>nigra</i>	Narrow-leaved Vetch	May/June
<i>Vicia sativa</i> subsp. <i>segetalis</i>	Common Vetch	May/June
<i>Vinca major</i>	Greater Periwinkle	May/June
<i>Viola canina</i>	Heath Dog-violet	May/June
<i>Viola odorata</i>	Sweet Violet	May/June
<i>Viola x wittrockiana</i>	Garden Pansy	May/June

Scientific name	Common name	Date
<i>Acer campestre</i>	Field Maple	May/June
<i>Acer pseudoplatanus</i>	Sycamore	May/June
<i>Aethusa cynapium</i>	Fool's Parsley	May/June
<i>Agrostis gigantea</i>	Black Bent	May/June
<i>Agrostis stolonifera</i>	Creeping Bent	May/June
<i>Alliaria petiolata</i>	Garlic Mustard	May/June
<i>Alopecurus pratensis</i>	Meadow Foxtail	May/June
<i>Anagallis arvensis</i>	Scarlet Pimpernel	May/June
<i>Anisantha sterilis</i>	Barren Brome	May/June
<i>Anthriscus sylvestris</i>	Cow Parsley	May/June
<i>Arrhenatherum elatius</i>	False Oat-Grass	May/June
<i>Artemisia vulgaris</i>	Mugwort	May/June
<i>Arum maculatum</i>	Lords-and-Ladies	May/June
<i>Avena fatua</i>	Wild-oat	May/June
<i>Ballota nigra</i>	Black Horehound	May/June
<i>Bellis perennis</i>	Daisy	May/June
<i>Betula pendula</i>	Silver Birch	May/June
<i>Bromus hordeaceus</i>	Soft-brome	May/June
<i>Bryonia dioica</i>	White Bryony	May/June
<i>Buddleja davidii</i>	Butterfly Bush	May/June
<i>Calamagrostis epigejos</i>	Wood Small-reed	May/June
<i>Carex pendula</i>	Pendulous Sedge	May/June
<i>Carpinus betulus</i>	Hornbeam	May/June
<i>Castanea sativa</i>	Sweet Chestnut	May/June
<i>Centaurea nigra</i> agg.	Black/Brown Knapweed	May/June
<i>Cerastium fontanum</i>	Common Mouse-ear	May/June
<i>Chaerophyllum temulum</i>	Rough Chervil	May/June
<i>Chamerion angustifolium</i>	Rosebay Willowherb	May/June
<i>Chenopodium album</i>	Fat-hen	May/June
<i>Cirsium arvense</i>	Creeping Thistle	May/June
<i>Cirsium vulgare</i>	Spear Thistle	May/June
<i>Clematis vitalba</i>	Traveller's-joy	May/June
<i>Convolvulus arvensis</i>	Field Bindweed	May/June
<i>Conyza canadensis</i>	Canadian Fleabane	May/June
<i>Cornus sanguinea</i>	Dogwood	May/June
<i>Coronopus squamatus</i>	Swine-cress	May/June
<i>Corylus avellana</i>	Hazel	May/June
<i>Crataegus monogyna</i>	Hawthorn	May/June
<i>Crepis capillaris</i>	Smooth Hawk's-beard	May/June
<i>Dactylis glomerata</i>	Cock's-foot	May/June
<i>Daphne laureola</i>	Spurge-laurel	May/June
<i>Duchesnea indica</i>	Yellow-flowered Strawberry	May/June
<i>Elytrigia repens</i>	Common Couch	May/June
<i>Epilobium ciliatum</i>	American Willowherb	May/June
<i>Epilobium hirsutum</i>	Great Willowherb	May/June
<i>Epilobium parviflorum</i>	Hoary Willowherb	May/June
<i>Epilobium tetragonum</i>	Square-stalked Willowherb	May/June
<i>Equisetum arvense</i>	Field Horsetail	May/June
<i>Erigeron sumatrensis</i>	Guernsey Fleabane	May/June
<i>Euonymus europaeus</i>	Spindle	May/June

Scientific name	Common name	Date
<i>Euphorbia helioscopia</i>	Sun Spurge	May/June
<i>Festuca rubra</i> agg.	Red Fescue	May/June
<i>Filago vulgaris</i>	Common Cudweed	May/June
<i>Fraxinus excelsior</i>	Ash	May/June
<i>Galanthus nivalis</i>	Snowdrop	May/June
<i>Galium aparine</i>	Cleavers	May/June
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	May/June
<i>Geranium robertianum</i>	Herb Robert	May/June
<i>Geum urbanum</i>	Wood Avens	May/June
<i>Glechoma hederacea</i>	Ground-ivy	May/June
<i>Hedera helix</i>	Common Ivy	May/June
<i>Heracleum sphondylium</i>	Hogweed	May/June
<i>Holcus lanatus</i>	Yorkshire-fog	May/June
<i>Hyacinthoides non-scripta</i>	Bluebell	May/June
<i>Hypericum androsaemum</i>	Tutsan	May/June
<i>Hypericum perforatum</i>	Perforate St John's-wort	May/June
<i>Hypochaeris radicata</i>	Cat's-ear	May/June
<i>Iris foetidissima</i>	Stinking Iris	May/June
<i>Juglans nigra</i>	Black Walnut	May/June
<i>Juglans regia</i>	English Walnut	May/June
<i>Laburnum anagyroides</i>	Laburnum	May/June
<i>Lactuca serriola</i>	Prickly Lettuce	May/June
<i>Lactuca virosa</i>	Great Lettuce	May/June
<i>Lamium album</i>	White Dead-nettle	May/June
<i>Lapsana communis</i>	Nipplewort	May/June
<i>Leucanthemum vulgare</i>	Oxeye Daisy	May/June
<i>Ligustrum vulgare</i>	Wild Privet	May/June
<i>Lolium perenne</i>	Perennial Rye-grass	May/June
<i>Malus domestica</i>	Apple	May/June
<i>Malva sylvestris</i>	Common Mallow	May/June
<i>Matricaria discoidea</i>	Pineappleweed	May/June
<i>Medicago lupulina</i>	Black Medick	May/June
<i>Mentha arvensis</i>	Corn Mint	May/June
<i>Myosotis arvensis</i>	Field Forget-me-not	May/June
<i>Narcissus pseudonarcissus</i>	Wild Daffodil	May/June
<i>Odontites vernus</i>	Red Bartsia	May/June
<i>Pentaglottis sempervirens</i>	Green Alkanet	May/June
<i>Picea abies</i>	Norway Spruce	May/June
<i>Picris echioides</i>	Bristly Oxtongue	May/June
<i>Pilosella aurantiaca</i>	Fox-and-cubs	May/June
<i>Pinus nigra</i>	Austrian Pine / Corsican Pine	May/June
<i>Plantago lanceolata</i>	Ribwort Plantain	May/June
<i>Plantago major</i>	Greater Plantain	May/June
<i>Poa annua</i>	Annual Meadow-grass	May/June
<i>Poa trivialis</i>	Rough Meadow-grass	May/June
<i>Polygonum aviculare</i> agg.	Knotgrass	May/June
<i>Populus alba</i>	White Poplar	May/June
<i>Prunus spinosa</i>	Blackthorn	May/June
<i>Pulicaria dysenterica</i>	Common Fleabane	May/June
<i>Pyrus communis</i>	Wild Pear	May/June

Scientific name	Common name	Date
<i>Quercus robur</i>	Pedunculate Oak	May/June
<i>Ranunculus repens</i>	Creeping Buttercup	May/June
<i>Raphanus raphanistrum</i> subsp. <i>raphanistrum</i>	Wild Radish	May/June
<i>Rhamnus cathartica</i>	Buckthorn	May/June
<i>Rosa canina</i> agg.	Dog-rose	May/June
<i>Rubus fruticosus</i> agg.	Bramble	May/June
<i>Rubus idaeus</i>	Raspberry	May/June
<i>Rumex crispus</i>	Curled Dock	May/June
<i>Rumex obtusifolius</i>	Broad-leaved Dock	May/June
<i>Salix alba</i>	White Willow	May/June
<i>Salix caprea</i>	Goat Willow	May/June
<i>Salix cinerea</i>	Grey Willow	May/June
<i>Salix x.fragilis</i>	Crack Willow	May/June
<i>Sambucus nigra</i>	Elder	May/June
<i>Senecio jacobaea</i>	Common Ragwort	May/June
<i>Senecio vulgaris</i>	Groundsel	May/June
<i>Sisymbrium officinale</i>	Hedge Mustard	May/June
<i>Sonchus arvensis</i>	Perennial Sow-thistle	May/June
<i>Sonchus asper</i>	Prickly Sow-thistle	May/June
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	May/June
<i>Sorbus aria</i>	Whitebeam	May/June
<i>Sorbus torminalis</i>	Wild Service-tree	May/June
<i>Tamus communis</i>	Black Bryony	May/June
<i>Taraxacum</i> agg.	Dandelion	May/June
<i>Taxus baccata</i>	Yew	May/June
<i>Tilia cordata</i>	Small-leaved Lime	May/June
<i>Trifolium repens</i>	White Clover	May/June
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	May/June
<i>Tussilago farfara</i>	Colt's-foot	May/June
<i>Urtica dioica</i>	Common Nettle	May/June
<i>Veronica arvensis</i>	Wall Speedwell	May/June
<i>Veronica hederifolia</i>	Ivy-leaved Speedwell	May/June
<i>Veronica persica</i>	Common Field-speedwell	May/June
<i>Viburnum lantana</i>	Wayfaring Tree	May/June
<i>Viburnum opulus</i>	Guelder Rose	May/June
<i>Vulpia myuros</i>	Rat's-tail Fescue	May/June

Scientific name	Common name	Date
<i>Acer pseudoplatanus</i>	Sycamore	May/June
<i>Achillea millefolium</i>	Yarrow	May/June
<i>Aegopodium podagraria</i>	Ground-elder	May/June
<i>Agrostis stolonifera</i>	Creeping Bent	May/June
<i>Alliaria petiolata</i>	Garlic Mustard	May/June
<i>Anagallis arvensis</i>	Scarlet Pimpernel	May/June
<i>Anchusa arvensis</i>	Bugloss	May/June
<i>Anthriscus sylvestris</i>	Cow Parsley	May/June
<i>Arctium minus</i>	Lesser Burdock	May/June
<i>Artemisia vulgaris</i>	Mugwort	May/June
<i>Arum maculatum</i>	Lords-and-Ladies	May/June
<i>Ballota nigra</i>	Black Horehound	May/June
<i>Bellis perennis</i>	Common Daisy	May/June
<i>Betula pendula</i>	Silver Birch	May/June
<i>Buddleja davidii</i>	Butterfly Bush	May/June
<i>Calamagrostis epigejos</i>	Wood small-reed	May/June
<i>Calystegia sepium</i>	Hedge Bindweed	May/June
<i>Calystegia silvatica</i>	Large Bindweed	May/June
<i>Capsella bursa-pastoris</i>	Shepherd's-purse	May/June
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	May/June
<i>Carex pendula</i>	Pendulous Sedge	May/June
<i>Castanea sativa</i>	Sweet Chestnut	May/June
<i>Centaurea nigra</i> agg.	Black/Brown Knapweed	May/June
<i>Cerastium fontanum</i>	Common Mouse-ear	May/June
<i>Chenopodium album</i>	Fat-hen	May/June
<i>Cirsium arvense</i>	Creeping Thistle	May/June
<i>Cirsium vulgare</i>	Spear Thistle	May/June
<i>Clematis vitalba</i>	Traveller's Joy	May/June
<i>Convolvulus arvensis</i>	Field Bindweed	May/June
<i>Conyza canadensis</i>	Canadian Fleabane	May/June
<i>Cornus sanguinea</i>	Dogwood	May/June
<i>Corylus avellana</i>	Hazel	May/June
<i>Crataegus monogyna</i>	Hawthorn	May/June
<i>Crepis capillaris</i>	Smooth Hawk's-beard	May/June
<i>Cynosurus cristatus</i>	Crested Dog's-tail	May/June
<i>Dactylis glomerata</i>	Cock's-foot	May/June
<i>Daucus carota</i>	Wild carrot	May/June
<i>Dipsacus fullonum</i>	Wild Teasel	May/June
<i>Dryopteris filix</i>	Male Fern	May/June
<i>Epilobium hirsutum</i>	Great Willowherb	May/June
<i>Epilobium tetragonum</i>	Square-stalked Willowherb	May/June
<i>Euonymus europaeus</i>	Spindle	May/June
<i>Eupatorium cannabinum</i>	Hemp Agrimony	May/June
<i>Euphorbia helioscopia</i>	Sun Spurge	May/June
<i>Fagus sylvatica</i>	Beech	May/June
<i>Festuca rubra</i> agg.	Red Fescue	May/June
<i>Fragaria vesca</i>	Wild Strawberry	May/June
<i>Fraxinus excelsior</i>	Ash	May/June
<i>Galium aparine</i>	Cleavers	May/June
<i>Galium verum</i>	Lady's Bedstraw	May/June

Scientific name	Common name	Date
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	May/June
<i>Geum urbanum</i>	Wood Avens	May/June
<i>Glechoma hederacea</i>	Ground-ivy	May/June
<i>Hedera helix</i> subsp. <i>helix</i>	Common Ivy	May/June
<i>Heracleum sphondylium</i>	Hogweed	May/June
<i>Holcus lanatus</i>	Yorkshire-fog	May/June
<i>Hyacinthoides x massartiana</i>	Hybrid Bluebell (H. non-scripta)	May/June
<i>Hypericum androsaemum</i>	Tutsan	May/June
<i>Hypericum perforatum</i>	Perforate St John's-wort	May/June
<i>Hypochaeris radicata</i>	Cat's-ear	May/June
<i>Juglans regia</i>	Walnut	May/June
<i>Knautia arvensis</i>	Field Scabious	May/June
<i>Lactuca serriola</i>	Prickly Lettuce	May/June
<i>Lactuca virosa</i>	Great Lettuce	May/June
<i>Lamium album</i>	White Dead-nettle	May/June
<i>Lamium purpureum</i>	Red Dead-nettle	May/June
<i>Lapsana communis</i>	Nipplewort	May/June
<i>Lathyrus pratensis</i>	Meadow Vetchling	May/June
<i>Leontodon hispidus</i>	Rough Hawkbit	May/June
<i>Leucanthemum vulgare</i>	Oxeye Daisy	May/June
<i>Linaria repens</i>	Pale Toadflax	May/June
<i>Lolium perenne</i>	Perennial Rye-grass	May/June
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	May/June
<i>Malva sylvestris</i>	Common Mallow	May/June
<i>Montbretia</i> spp.	Montbretia	May/June
<i>Origanum vulgare</i>	Wild Marjoram	May/June
<i>Papaver rhoeas</i>	Common Poppy	May/June
<i>Pentaglottis sempervirens</i>	Green Alkanet	May/June
<i>Persicaria maculosa</i>	Redshank	May/June
<i>Petasites fragrans</i>	Winter Heliotrope	May/June
<i>Phleum pratense</i>	Timothy Grass	May/June
<i>Plantago coronopus</i>	Buck's-horn Plantain	May/June
<i>Plantago lanceolata</i>	Ribwort Plantain	May/June
<i>Plantago major</i>	Greater Plantain	May/June
<i>Poa annua</i>	Annual Meadow-grass	May/June
<i>Potentilla erecta</i>	Tormentil	May/June
<i>Prunella vulgaris</i>	Self-heal	May/June
<i>Prunus avium</i>	Wild Cherry	May/June
<i>Prunus cerasifera</i>	Cherry Plum	May/June
<i>Prunus spinosa</i>	Blackthorn	May/June
<i>Pulicaria dysenterica</i>	Common Fleabane	May/June
<i>Quercus robur</i>	Pedunculate Oak	May/June
<i>Ranunculus acris</i>	Meadow Buttercup	May/June
<i>Ranunculus ficaria</i>	Lesser Celandine	May/June
<i>Ranunculus repens</i>	Creeping Buttercup	May/June
<i>Rosa canina</i> agg.	Dog-rose	May/June
<i>Rosa pimpinellifolia</i>	Burnet Rose	May/June
<i>Rubus fruticosus</i> agg.	Bramble	May/June
<i>Rubus idaeus</i>	Raspberry	May/June
<i>Rumex crispus</i>	Curled Dock	May/June

Scientific name	Common name	Date
<i>Rumex obtusifolius</i>	Broad-leaved Dock	May/June
<i>Salix caprea</i>	Goat Willow	May/June
<i>Salix cinerea</i>	Grey Willow	May/June
<i>Sambucus nigra</i>	Elder	May/June
<i>Sanguisorba minor</i>	Salad Burnet	May/June
<i>Senecio jacobaea</i>	Common Ragwort	May/June
<i>Senecio vulgaris</i>	Groundsel	May/June
<i>Silene dioica</i>	Red Campion	May/June
<i>Silene latifolia</i>	White Campion	May/June
<i>Sinapis arvensis</i>	Charlock	May/June
<i>Sisymbrium officinale</i>	Hedge Mustard	May/June
<i>Smyrnium olusatrum</i>	Alexanders	May/June
<i>Solanum nigrum</i>	Black Nightshade	May/June
<i>Sonchus arvensis</i>	Perennial Sow-thistle	May/June
<i>Stachys sylvatica</i>	Hedge Woundwort	May/June
<i>Stellaria media</i>	Common Chickweed	May/June
<i>Symphytum x uplandicum</i>	Russian Comfrey (<i>S. asperum</i>)	May/June
<i>Taraxacum</i> agg.	Dandelion	May/June
<i>Tilia cordata</i>	Small-leaved Lime	May/June
<i>Trifolium campestre</i>	Hop Trefoil	May/June
<i>Trifolium pratense</i>	Red Clover	May/June
<i>Trifolium repens</i>	White Clover	May/June
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	May/June
<i>Urtica dioica</i>	Common Nettle	May/June
<i>Veronica persica</i>	Common Field-speedwell	May/June
<i>Viburnum opulus</i>	Guelder Rose	May/June
<i>Vicia cracca</i>	Tufted Vetch	May/June
<i>Vinca major</i>	Greater Periwinkle	May/June
<i>Vulpia bromoides</i>	Squirreltail Fescue	May/June

APPENDIX D

Recommended Biodiversity Action Plans

RECOMMENDED BIODIVERSITY ACTION PLAN-CHURCH FEN

Note: The Management Plan for Church Fen produced by the Broadland Tree Warden Network (*Broadland Tree Warden Network Church Fen Local Nature Reserve Management Plan 2021*) remains extant. The following recommendations are consistent with the current management plan, with additional recommendations to enhance biodiversity where appropriate.

ACTIVITY/TASK	MANAGEMENT ACTION	TIMING
Control of invasive and exotic species.	There are a number of non-native and invasive species on the site including Red-osier Dogwood (<i>Cornus sericea</i>); Himalayan Balsam (<i>Impatiens glandulifera</i>); Japanese Knotweed (<i>Reynoutria japonica</i>) and Giant Hogweed (<i>Heracleum mantegazzianum</i>); Rhododendron (<i>Rhododendron ponticum</i>) and Snowberry (<i>Symphoricarpos albus</i>). Examples of all of these species were found during previous surveys of the site in 2015 and it is therefore clear that further/ongoing control is needed. It is important to control these species to prevent them becoming dominant in the habitat. In addition, some of these species are required to be controlled for legal reasons including risks to health and safety. Methods of control depend on the species concerned and whether special precautions are required. Personnel responsible for control of these plants need to be adequately trained and aware of any potential risks.	Ongoing
Standing dead trees/dead wood.	Dead trees/wood provide important habitat for a range of insects and can also provide nesting sites for birds where hollows exist. Such trees should therefore be left to decay naturally, except where there may be a risk to the public. Occasional inspection of dead trees should be carried out to check there are no safety risks.	Ongoing/periodic
Maintenance open fen/reed bed habitat.	This habitat is important for a wide range of invertebrates and other species and it is gradually disappearing as tree and shrub growth encroaches. Action is required to trim fringing trees and	Ongoing

	remove new self -seeding trees/shrubs.	
Reed bed management.	Rotation cutting of reeds to be carried out as per Broadland Tree Warden Network Church Fen Management Plan.	As per Church Fen LNR Management Plan 2021
Water flow management.	Consider options for improving flow of water into Fen and minimise stagnant water in ditches.	N/A
Coppicing of Alder and Willow.	Alder and Willow to be coppiced to control growth and maintain the open fen habitat, as well as increase the amount of light to surface waters.	As per Church Fen LNR Management Plan 2021

RECOMMENDED BIODIVERSITY ACTION PLAN-CREMERS MEADOW

ACTIVITY/TASK	MANAGEMENT ACTION	TIMING
Pond and water course management.	The aquatic habitats are an important feature of the Cremers Meadow site, both from a biodiversity perspective and for visitors to the site. Although the pond appears to support a certain number of invertebrate species its overall biological status is unclear. It also contains a substantial quantity of silt. Recent and ongoing work to determine the nutrient concentrations in the pond show these are probably influenced by inflows from Run Dike but further data needs to be collected. Before establishing the most appropriate management plan for the pond, a systematic collection of water and sediment quality data should be carried out, probably over a period of at least 12 months. A water quality and sediment plan should also be developed to inform the next stages.	12 -18 months for data collection and analysis; long term plan including dredging of silt, within 5 years
Trimming/removal of overhanging trees near pond/watercourse.	Some of the trees overhanging the pond/water course are preventing light getting to the water which in turn restricts development of pond vegetation. Debris from leaf fall also enters the pond annually and contributes to nutrient levels and eutrophication. A review of the trees surrounding the pond and central watercourse should be carried out and action taken to trim/remove some of these to allow greater light penetration.	Within the next 12 months
Control/removal of invasive plant species.	There are a number of non-native and invasive species on the site including Red-osier Dogwood (<i>Cornus sericea</i>); Himalayan Balsam (<i>Impatiens glandulifera</i>), Stag's- horn Sumach (<i>Rhus typhina</i>)and Bamboo; as well as various trees/shrubs that have been planted on the site such as	Within 12-24 months

	Apple (<i>Malus domestica</i>), Rhododendron (<i>Rhododendron ponticum</i>) and Cherry Laurel (<i>Prunus laurocerasus</i>) Examples of some of these species were found during previous surveys of the site in 2015 and it is therefore clear that further/ongoing control/management is needed. It is important to control those species that are invasive to prevent them becoming dominant in the habitat.	
Mature trees on perimeter of site.	The mature trees at the edges of the site can be left largely unmanaged but with regular checks being made to ensure loose or damaged branches are removed where they are at risk of falling.	Ongoing
Maintenance of semi-improved grassland habitat.	These areas should be mowed annually. However, some of these areas can be left to be colonised by wildflowers to attract butterflies and other insects.	Annual
Management of the species rich and species poor fen areas	Various methods have been used to manage these areas over the years including sheep/cattle grazing and periodic cutting back. Currently the Friends of Cremers Meadow are experimenting with different cutting regimes in this area. The method of management will determine how this area develops in the coming years; regular cutting during the year should prevent invasion of the species from the poorer areas migrating into the species rich areas – as is currently happening. A management plan needs to be developed that achieves the optimum outcome for this part of the site in terms of what the long term objectives are and for maintaining/enhancing biodiversity.	Develop long term management strategy within 12 months
Tree planting/management.	The woodland areas within the site should be managed on an ongoing basis so as to maintain their health and maximise opportunities for biodiversity. A long term woodland management plan should be drawn up to achieve these	Ongoing

	objectives. At the same time, ad –hoc planting of trees on the site, particularly non-native species, should be discouraged.	
Ruderal vegetation (nettles, thistles, burdock etc).	These species provide valuable habitat and food resources for a range of invertebrate species and should generally be left unmanaged unless they become a problem with over growing near paths etc.	N/A
Scrub vegetation.	Periodic cutting back of scrub vegetation is required to control spread. Areas where such control is needed include along the central watercourse and on the edges of the fen. However, care is needed to maintain at least some of this scrub as it provides habitat for a range of species.	Annual

RECOMMENDED BIODIVERSITY ACTION PLAN-LOW FARM WOOD

Note: The Management Plan for Low Farm Wood produced by the Broadland Tree Warden Network (*Broadland Tree Warden Network Management Plan for Low Farm Wood 2020*) remains extant. The following recommendations are consistent with the current management plan, with additional recommendations to enhance biodiversity where appropriate.

ACTIVITY/TASK	MANAGEMENT ACTION	TIMING
Thinning of the planted woodland to allow greater penetration of light	Broadland Tree Warden Network (BTWN) has already carried out extensive thinning work, including removal of goat willow. This has been very successful.	N/A
Provide breeding habitat for rural bird species including bullfinch, yellowhammer, marsh tit, spotted flycatcher etc.	Develop a long-term management plan for the wood including ongoing management of trees and hedges, creating permanent clearings (15-20%) and coppice zones (10-20%) and planting under-represented species to accelerate development of high quality woodland.	Within 12 months
Install bird boxes.	Identify suitable sites for bird boxes and install.	Within 6 months
Install bat boxes.	Identify suitable sites for bat boxes and install.	Within 6 months
Buffer zone around site.	The proximity of agricultural activities to Low Farm Wood is a potential threat to use of edge vegetation/trees/hedges as habitat and feeding resource for birds and other species. Ideally, a buffer zone of 10-20m should be established on agricultural land around the site where no agricultural work is permitted. This buffer zone could be sown with wildflower mixes and new hedging planted where appropriate. This will attract butterflies and other insects to the woodland edges and enhance its biodiversity. This option will need to be explored with NCC and the farmer who owns land to the north of the site.	Within 12 months; seeding/planting in buffer zone if consent is achieved within 24 months

RECOMMENDED BIODIVERSITY ACTION PLAN-COUNTRYSIDE PARK

ACTIVITY/TASK	MANAGEMENT ACTION	TIMING
Control the expansion of the planted woodland and shrub areas by self-seeding.	The initial woodland planting scheme for the Countryside Park has been largely successful in the establishment of new woodland areas. Action is needed urgently to control undesirable/over abundant self-seeding trees/shrubs including willows and sycamores.	
Develop woodland and scrub habitats to provide suitable breeding habitat for rural bird species including bullfinch, yellowhammer, marsh tit, spotted flycatcher etc.; and to maximise biodiversity opportunities.	A long term spatial development plan for the woodland and shrub areas is needed to ensure that unplanned natural succession is controlled and opportunities for enhancing the biodiversity of the site are provided. Management/intervention measures will be required to achieve controlled development in accordance with such a plan.	Plan development with 12 months
Woodland management	Consideration now needs to be given to how best to manage the development of the woodland to maximise biodiversity potential. Management of the woodland areas will require periodic felling and coppicing. These activities are necessary to ensure the desired structure of woodland/shrub areas is achieved. These activities should be identified and included in the development plan referred to above.	Ongoing
Install nest boxes	Identify suitable sites for locating bird boxes and install.	Within 6 months
Enhance grassland biodiversity.	The biodiversity of the grassed areas can be enhanced by creating wildflower meadows which are left unmanaged. Such areas attract a wide range of butterflies and other insects and invertebrates. A wildflower meadow has already been successfully created on one	Suitable sites to be identified within 6 months, seeding in spring/summer of

	part of the site. A decision on where best to create additional meadows should be taken in consultation with specialist ecologists.	2024
Provision of a wildlife pond.	Providing a reasonable sized pond within the Countryside Park will have significant benefits for the biodiversity of the site. Ponds are known to attract a wide range of species including frogs, newts, insects and birds. Aquatic vegetation also provides habitat and food for a wide range of species. Provision of a pond is potentially the single most important action that could be taken to enhance biodiversity at this site. The optimum location of a pond together with consideration of size, method of construction, maintenance and costs need to be evaluated.	Feasibility review within 12 months
Provision of dead wood/log piles for insects and invertebrates.	Piles of dead wood or logs from woodland management form excellent habitats for small mammals, insects and invertebrates. Where this type of material arises from woodland activities, it should be used to create such habitat wherever practical/possible.	Ongoing