



Slimbridge Parish Neighbourhood Development Plan

Regulation 15 submission

Natural Environment Report

Introduction

This report sets out local information on the green and blue infrastructure network of Slimbridge Parish; its biodiversity value and other assets, along with opportunities for improving the natural environment in the Neighbourhood Area. The National Planning Policy Framework defines 'Green Infrastructure' as '*A network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity.*'

Biodiversity can be defined as all the different kinds of wildlife found in one area, this encompasses animals, plants, fungi and microorganisms that make up our natural world. Each of these species whether terrestrial, marine or other aquatic ecosystems form an intricate web to maintain a balance and therefore support life on Earth.

The Natural History Museum has recently developed a Biodiversity Intactness Index. This has found that the UK has lost 50.3% of its natural biodiversity and places the UK at the bottom of the G7 countries and in the bottom 10% of all countries.

The Severn Estuary

The Upper Severn Estuary Site of Special Scientific Interest (SSSI) covers the River Severn's tidal range and includes mudflats and sand flats which are recognised as Special Protection Area under the EC Directive on the Conservation of Wild Birds. The estuary also is recognised as a Special Area of Conservation under the EU Habitats Directive and is of International importance for wintering and wading birds of passage and of estuarine habitats of outstanding ornithological significance. It is also listed under the Ramsar convention. Statutory designations in the Slimbridge Neighbourhood Area are shown on Maps 1, 2, 3 and 4 overleaf.

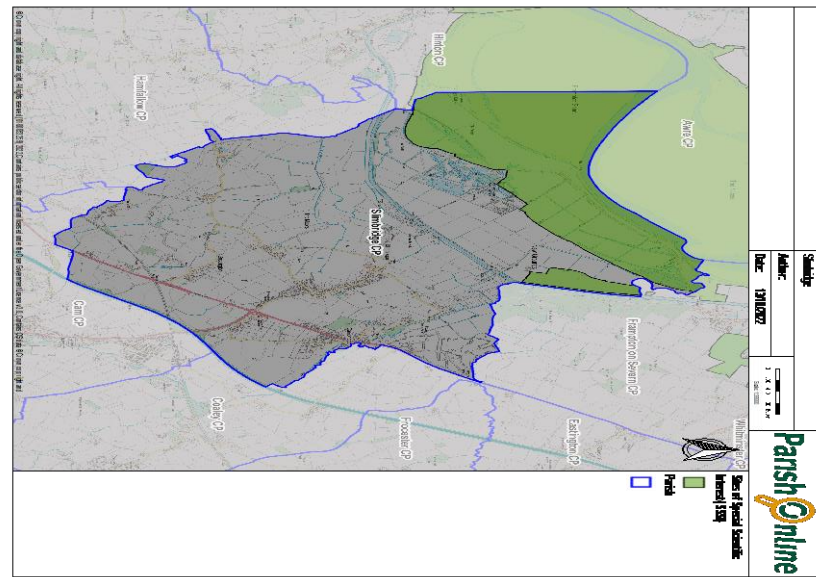
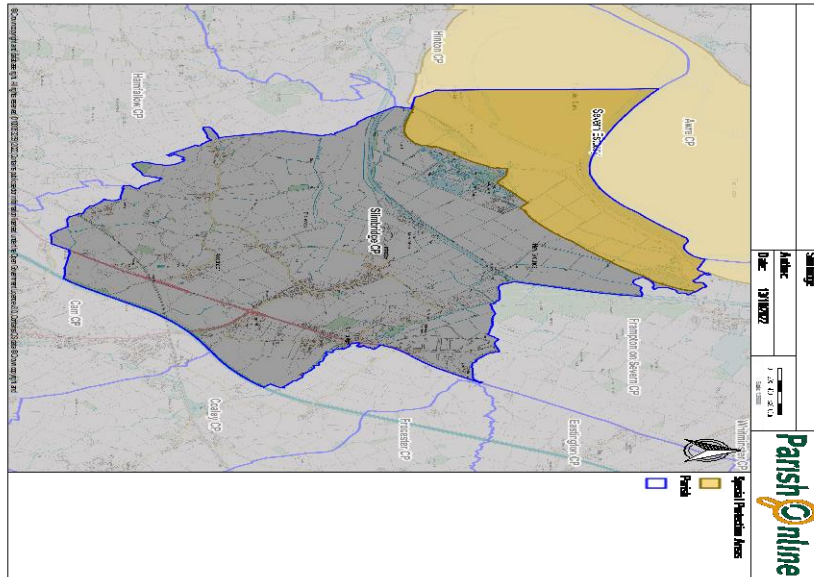
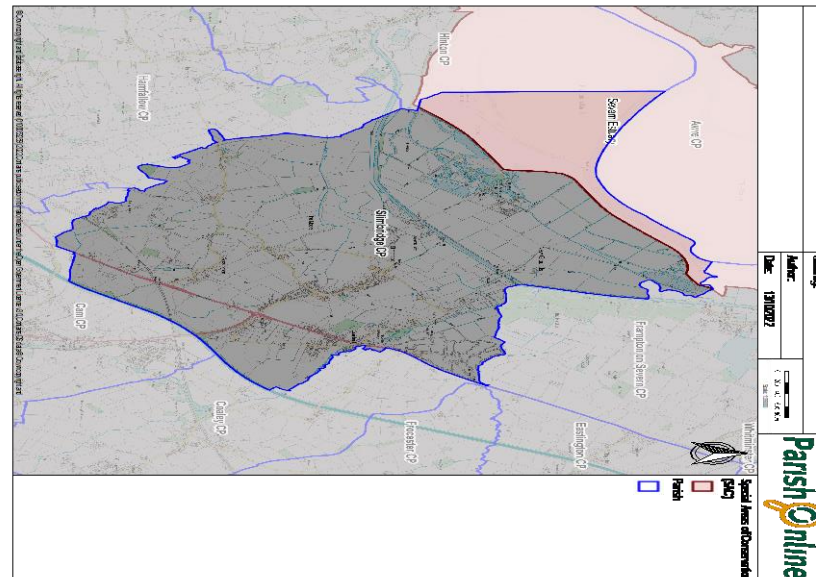
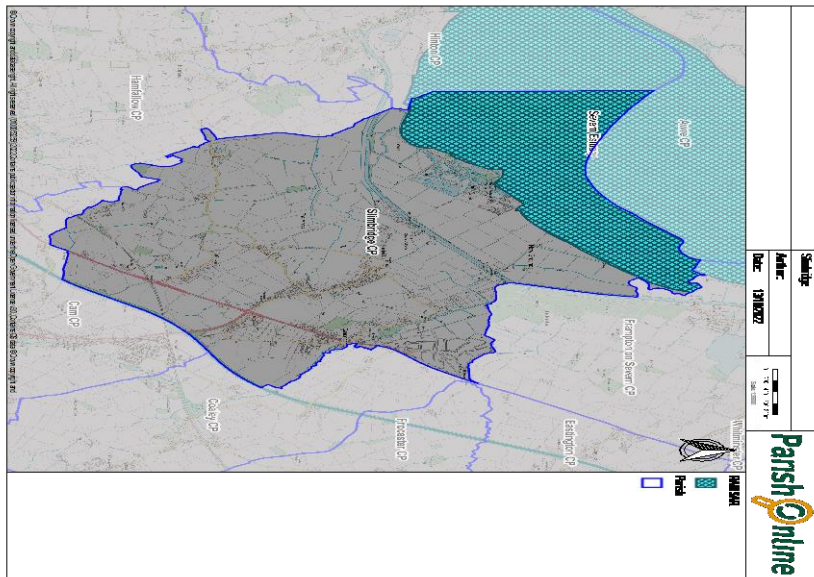
The estuary supports over 10% of the British wintering population and is the single most important wintering grounds for Dunlin and significant numbers of Berwick Swans, European White fronted geese and Wigeon. This area is also nationally important for wintering populations of Gadwell, Shoveller and the Pochard.

In May 2022 the Eurasian Curlew returned to the Slimbridge wetlands area. This is the first step towards helping the decline of the species as Curlew numbers have halved since the 1990s because they rely on wetland areas such as river estuaries, riversides and wet grasslands and pastures for safe breeding and overwintering. These can be improved further if landowners and farmers can be persuaded not to drain their fields or harvest their grass until a later date or to implement innovative ideas by using infra-red scanning on tractors to detect nests and place electric fencing around them.

During the winter of 2020, the natural restoration project of WWT Slimbridge was developed which changed what was the salt marsh into a freshwater habitat. This connects the north and south corridors of the wetlands allowing many types of birds to use the islands for nesting and even encouraged wild otters to return. It was noted that otters were sighted in ditches around Gossington in 2020.

The sea barriers may need to be moved further inland to help with severe weather and flooding events. Not only will it help manage extreme flooding, it may also help with intertidal habitats.

Migratory species of fish also use the estuary to pass through in both directions. Particularly important are the Atlantic Salmon and the Common Eel. Obstacles such as dams and culverts, pollution in rivers, climate change and even poachers can seriously impede on the life cycle of these critically endangered creatures. Eels and elvers have been found using various water courses in both the Gossington and Cambridge areas.



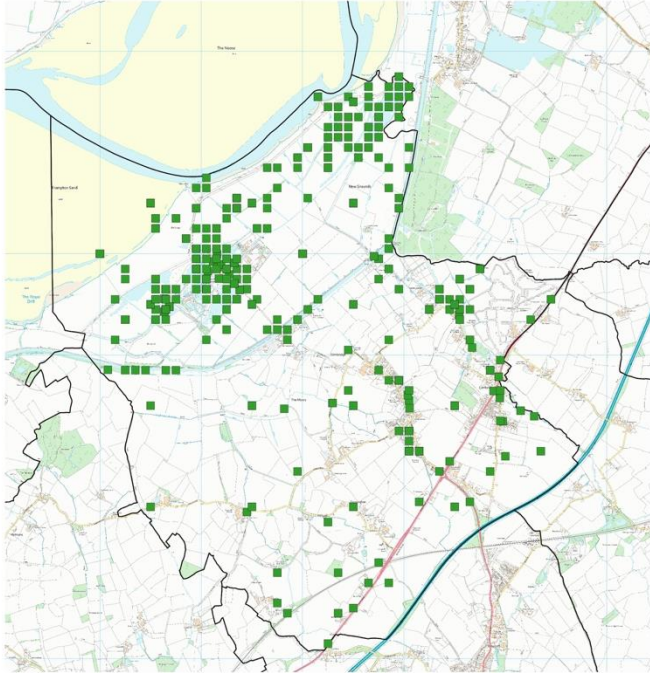
Slimbridge Statutory designations, clockwise from top left:

Map 1 – Ramsar, Map 2 – Special Area of Conservation, Map 3 – Site of Special Scientific Interest, Map 4 – Special Protection Area

Priority Habitats, Rare and Protected Species

The Appendix contains a list of rare and protected species and key wildlife sites in the parish, mostly within the WWT area. Their distribution is shown on Map 5 overleaf. Due to the high number of ditches, culverts and historic ridge and furrows, many of these species can also be found in the more built up areas within Slimbridge parish. This data was obtained from Gloucestershire Centre for Environmental Records, however, it should be noted that these records are now over 2 years old.

Distribution of rare and protected species made in the last 25 years within Slimbridge parish



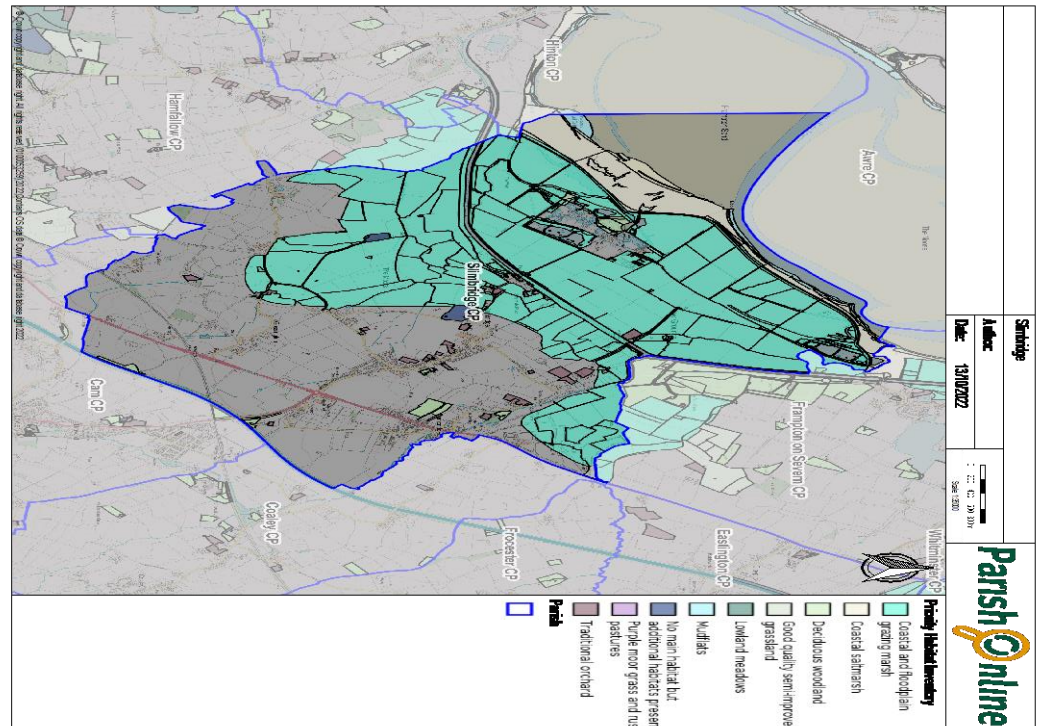
Zoom in for more detail. The points use the centroid grid reference.



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Sources of further information and records of wildlife and biodiversity include the WWT and Gloucestershire Wildlife Trust. GWT are currently updating their records by holding a county wide Citizen Science Survey which will eventually result in a Habimap. In recent years the GCER records have also been informed by the Stroud Wildlife Survey Group and by individuals.

Priority Habitats across the Neighbourhood Area are shown on Map 6 below.



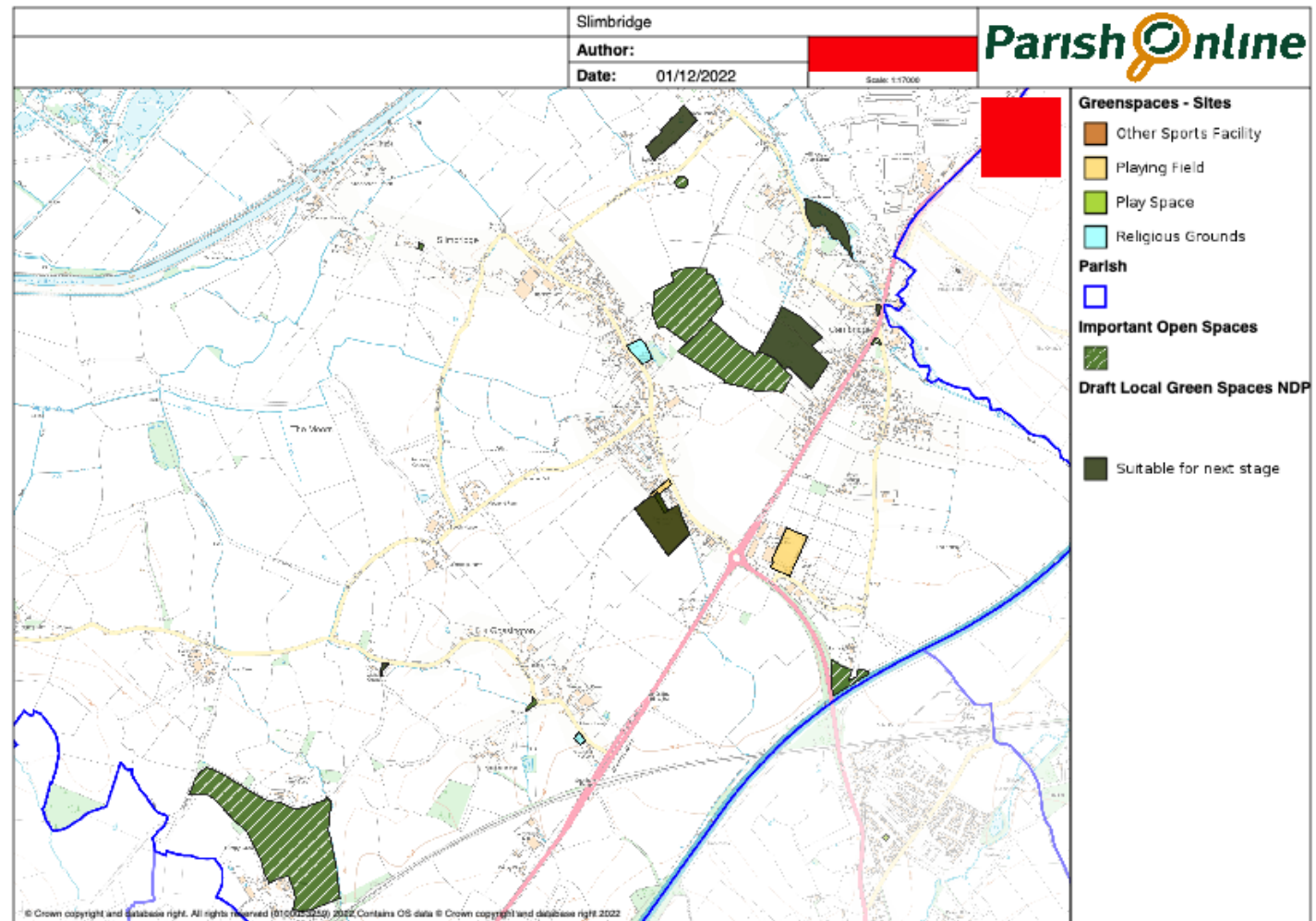
Above left: Map 5 - Distribution of Rare and Protected Species, Above right: Map 6 – Priority Habitats

Open Spaces

There are a number of valued open spaces within the Neighbourhood Area. A number of these spaces are being progressed as potential Local Green Space designations in the Neighbourhood Plan. There are also locally valued spaces that do not fit the Local Green Space criteria, but nevertheless have important functions as part of the wider Green and Blue Infrastructure network. These are shown on Map 7.

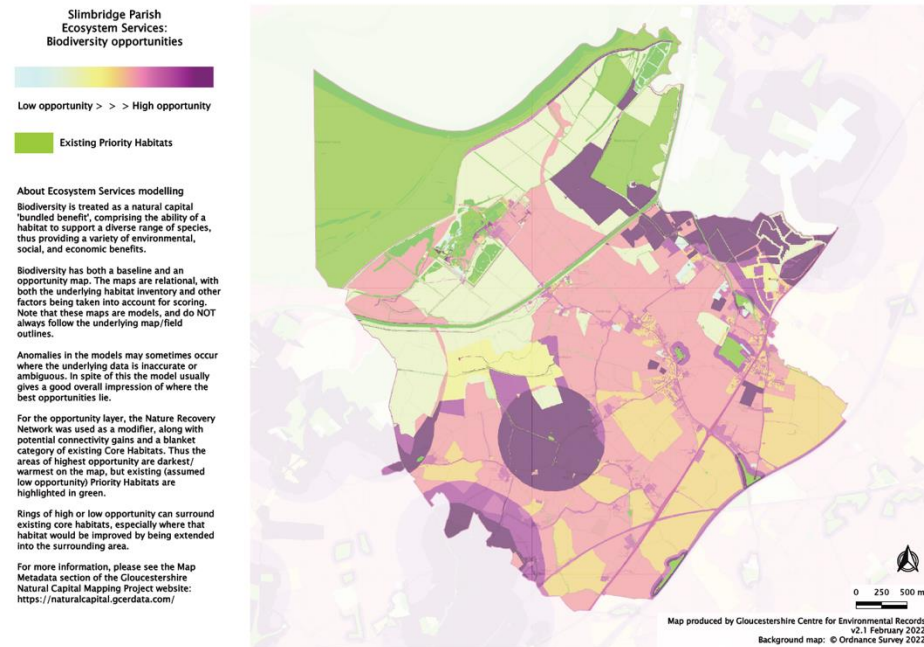
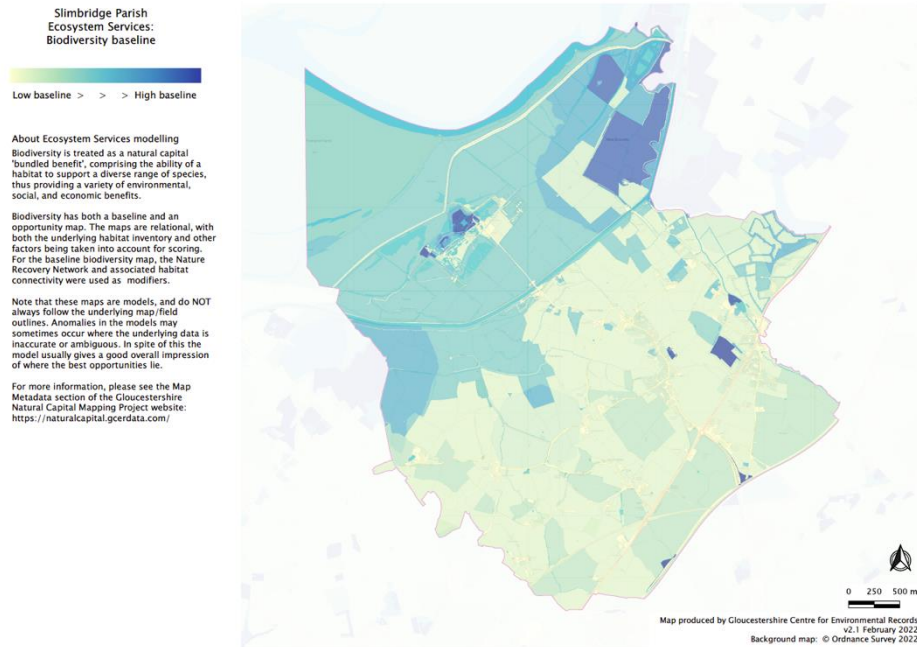
More information on much of these spaces included in the Play and Recreation Areas Evidence Base Report, and the Local Green Space Report.

Right: Map 7: Open Spaces



Improving the habitat: Opportunities

Gloucestershire Centre for Environmental Records has provided mapped information on baseline biodiversity value areas, as well as areas of with opportunity for improvement to biodiversity and ecosystem service value. This shown on Maps 8A and 8B below.



Above left: Map 8A – Biodiversity Baseline, Above right: Map 8B – Biodiversity Opportunities

Wildfowl and Wetlands Trust

The WWT at Slimbridge have appointed a new post as part of their planning to enhance their Severn/Slimbridge Waterscapes work. This will focus on certain wetland features that are characteristically important to the landscape which will have a bearing on the future biodiversity of the parish. It is anticipated that with climate change some low lying land -two metres below high tide- and already extremely wet, near to the WWT may out of sheer necessity be turned into an alternative habitat that will both help store carbon and ease flooding risks.

Farming Practices

At present the Parish has a number of dairy & sheep farmers alongside grasslands and crops grown for animal fodder. Other grasslands in the parish are used for housing horses. Grazing compacts the soil and reduces water infiltration and retention and leads to surface run-off. This can be mitigated by planting with vegetation species that have deeper roots and by the presence of woodlands and hedgerows.

Hedgerows

The VDS encourages the planting and maintenance of hedges and trees along boundaries, particularly in private gardens. However, the greatest amount of hedgerows belong to the landowners encompassing agricultural fields and it is estimated that this is currently in excess of 100 miles. Mixed hedgerows significantly promote biodiversity and also act as corridors for wildlife. The need to also protect trees within the hedges is important not only for small mammals such as mice and voles, but also for roosting places for birds and bats. Replanting lost trees will help maintain these vital corridors.

Therefore, landowners will hopefully play a key part in helping to increase the provision of wildlife habitats. Local landowners have been approached regarding hedge maintenance. The People's Trust for Endangered Species (PTES) have recently published information regarding the management of hedgerows. Cutting at the correct time of the year will help in achieving better biodiversity in as much as improving the habitat for birds, bats and other mammals and providing essential food for over winter. Late winter is the best time for cutting, ideally January or February. Cutting on a rotational basis or only cutting one side of the hedges will also allow fruit and flowers to thrive. One local landowner is in the process of planting a new hedge and also trees within his farm which will be a good boost. All local farmers have stated that they do not cut their hedges in summer but are a little hesitant regarding making any radical changes until the new English Land Management Stewardship (ELMS) has more detailed information.

Trees and Orchards

Overall tree canopy coverage in the Berkeley Vale Ward (which includes the majority of Slimbridge Parish) is estimated to be an average of 11.8%, which has been calculated using the i-tree canopy tool¹.

Slimbridge already has a wealth of Protected trees within its parish notably in and around St John's Church and the Old Rectory, others sited in what was known as Merretts Orchard, one at Yew Tree House and one at Church End Farm. Existing Tree Preservation Orders can be viewed on Stroud District Council's interactive map, viewable here:

<https://stroud.maps.arcgis.com/apps/webappviewer/index.html?id=f0a09333db6b43e592288452e6969147>

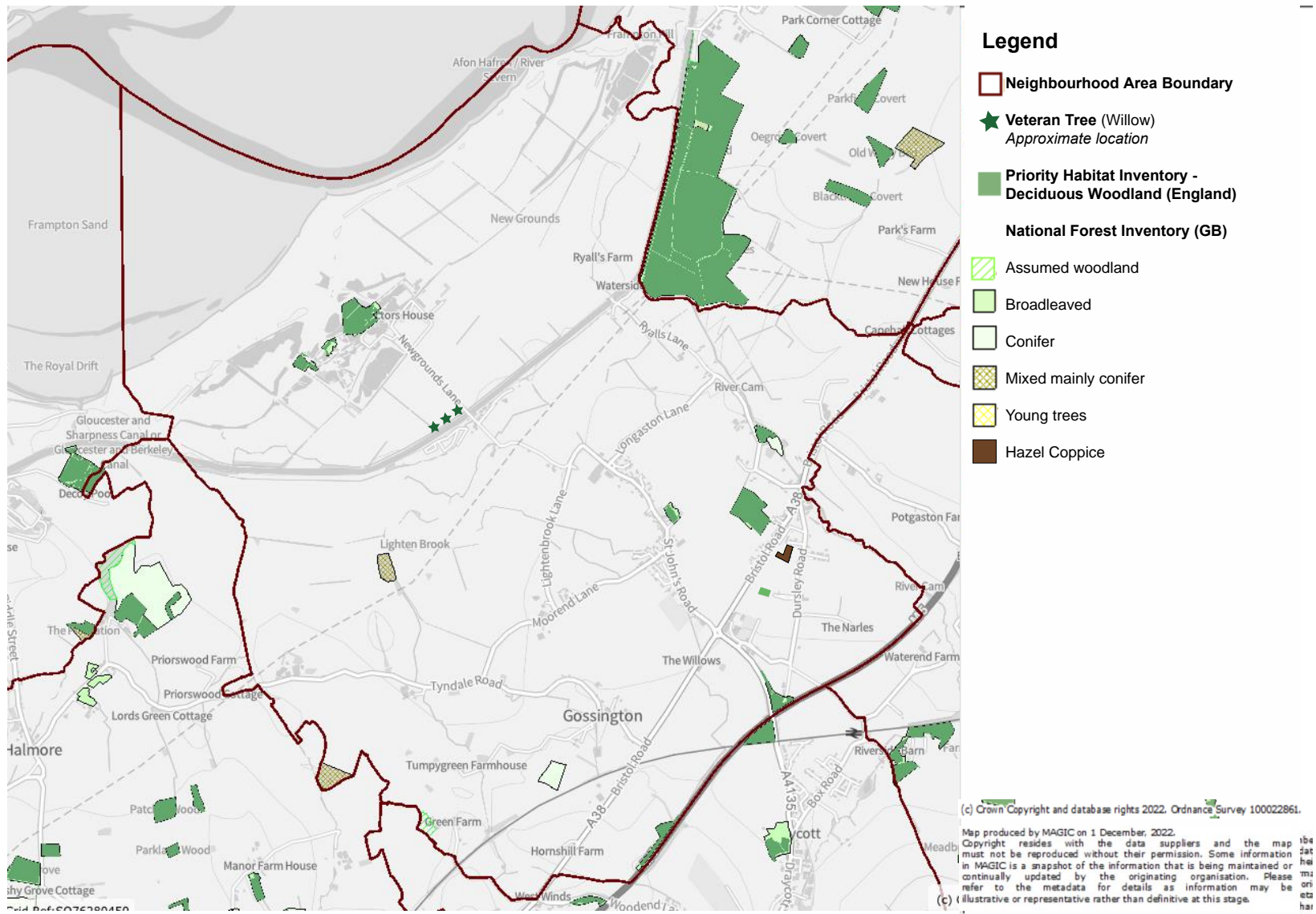
The Woodland Trust Ancient Tree Inventory currently identifies three Ancient Trees within the Parish comprising a row of three Veteran Willow Trees along the canal adjacent to Tudor Caravan Park. More information can be found here: <https://ati.woodlandtrust.org.uk/>

A tree trail may help in identifying further Ancient and Veteran trees as well as finding new trees that may need protecting. The planting of trees should be an aim for everyone, space permitting, as trees provide valuable food and protection for many species of wildlife.

The Parish Council should identify suitable areas for tree planting. With the increasing effects of climate change and problems with tree disease, it is essential to plant the right tree in the right place. Native local fruit trees such as the Cambridge Queening would be a welcoming addition in peoples gardens.

Woodland and Veteran Trees are shown on Map 9 overleaf.

¹ <https://www.itreetools.org/>

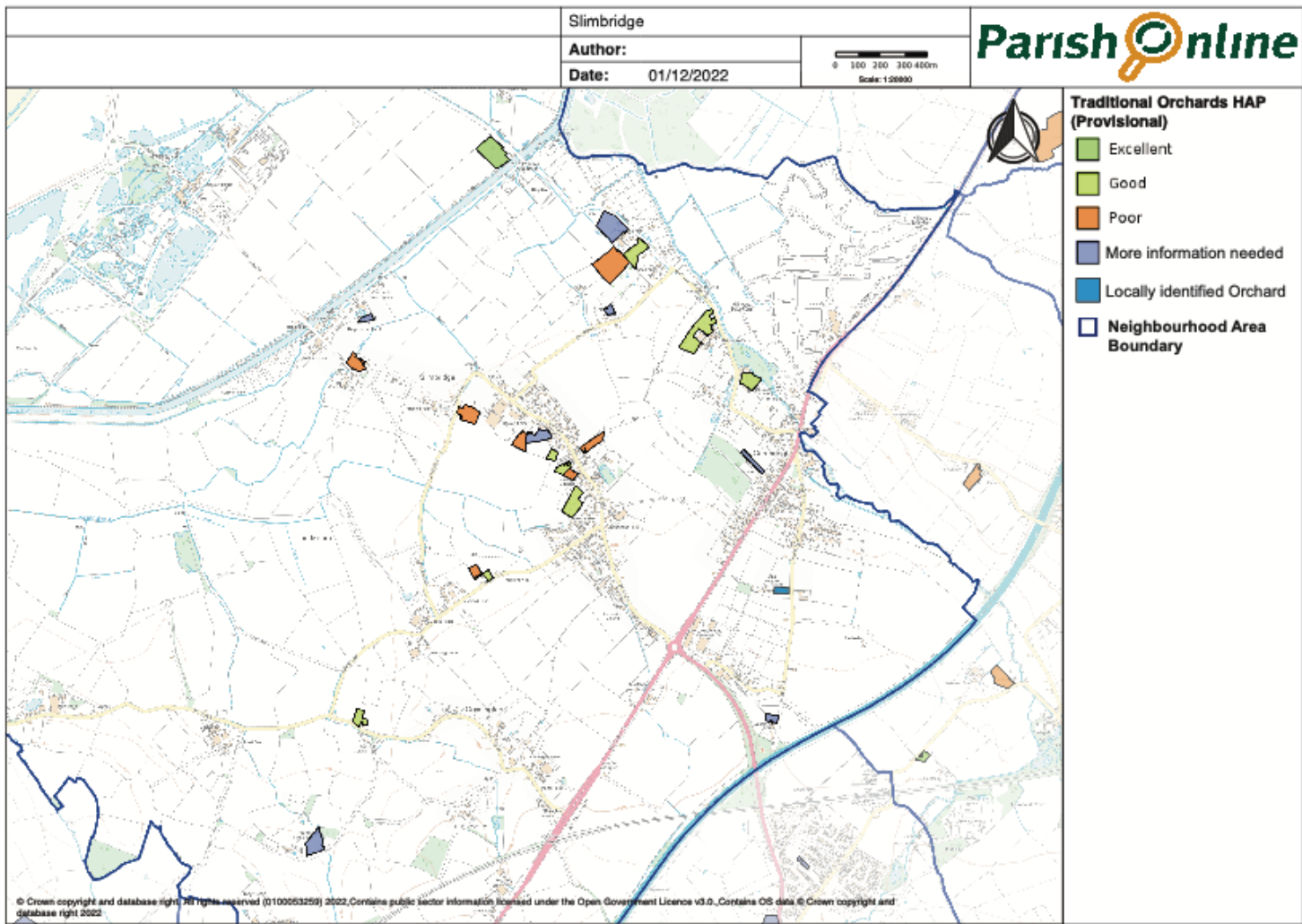


Above: Map 9 – Woodland and Veteran Trees

Gloucestershire is an important cider and perry producing district, and traditional orchards are a key part of the heritage and landscape of Slimbridge Parish. These orchards provide a wealth of ecosystem services, including contributing towards our local heritage as well as providing valuable Priority Habitat for local wildlife populations. Traditional orchards are a valuable resource and have unique ecological, cultural and genetic value. But during the past 50 years, 75% of Gloucestershire's traditional orchards have been lost² due to land use change, development, and the shift in which our food is produced, distributed and sold. More information about the condition of Traditional Orchards within Slimbridge Parish is shown on Map 10 overleaf.

Sadly many trees within our remaining orchards are not looked after, pruned or even replaced where others have fallen. Interestingly, many fallen and standing dead wood can be a haven to a variety of fungi and invertebrates such as the stag beetle and the rare noble chafer. Planting of new fruit trees will also increase the environment for wildlife as well as the ability to eventually enjoy the fruit of one's labour!

² <https://glosorchards.org/home/>



Above: Map 10 – Traditional Orchards

Blue Infrastructure

Ponds are also a great way of attracting many varied creatures. Again a decline in ponds over the last hundred years has resulted in a decline of freshwater species. By creating a wetland however small can create a mini habitat for not only insects but also plants, birds and mammals. In areas of risk of flooding, garden wetlands have the added benefit of slowing down and reducing the run off of heavy rains into ditches. Alternative to a pond is a rain garden which is a shallow depression with absorbent yet free draining soil, planted with flowers and grasses that can withstand occasional temporary flooding. If everyone added a small wetland into their garden, this would help reduce the pressure on our rivers and floodplains.

There are many ditches or rhyes known in this area. Many are maintained by the Internal Drainage Board. In a specific area of Ryalls Lane, there is a small community of glow worms which although not endangered are in decline due to loss of their particular habitat. Cutting of the grass at the sides of the ditches should not be undertaken between March and late August. This will allow the glow worms to live and breed in peace. Newts would also benefit from the correct cutting of grass verges around the water courses and help to continue their lifecycle. Ensuring waterways are free from non-native invasive species such as Himalayan Balsam which can spread their seeds up to 7 metres from the parent plant seeds would help allowing native species to survive. High levels of nutrients running off from farmers' fields can also play an important part in destroying the varied flora and fauna found in the local waterways and should be closely monitored.

Management of Green Spaces

Any green space that is either owned by or is the responsibility of and managed by the Parish Council should not use glyphosate weed killer. There are alternative ways of management such as hot foam weed control. Only peat free compost should be used in flower boxes or beds along with signage promoting this good practice. Buglife's B-lines is running a project which aims to support wildlife friendly corridors along with Friends of the Earth's piloting crowd funded postcode project aimed at helping people green the streets where they live.

Gardens also play a large part in helping biodiversity. The PTES together with the British Hedgehog Preservation Society (BHPS) ran a recent survey which found that over a third of hedgehogs have been lost since the millennium. It noted that the hedgehog population declined both in the rural and urban habitats due to a number of factors which included the use of pesticides, herbicides and fertilisers in both fields and gardens, reducing the number of invertebrates, over tidy gardens, car parking and decking areas reducing the food supply and impenetrable garden fencing or walls which limit connecting areas of land. Hedgehogs can travel miles each night for food and access along hedges and garden edges allow them to find food and help provide protection from predators. Setting aside a small wild area in each garden will also help wildlife by providing food sources for nationally declining species such as bees, butterflies and other pollinators, habitats for insects and birds all these look beautiful especially in winter. A compost area not only provides a home for slow worms and grass snakes but gives nutrient rich

soil to enhance the garden. The local schools, groups and parishioners could also take part in garden surveys, report their own sightings and act as a base figure to mark the improvement of their own gardens for biodiversity.

Allotments

During the past year or so, it has been increasingly obvious that enjoying the outside helps to improve both physical and mental wellbeing. Allotments can provide this as well as produce nutritious, locally grown produce.

There are currently no known publicly owned allotments within the parish of Slimbridge. Evidence from the Neighbourhood Plan questionnaire resulted in 40 households responding favourable to renting and using an allotment if available. The Parish Council will continue to search for suitable allotment sites, and is currently looking at the feasibility of land in close proximity to the playing field, to engage in discussions with ECT and Berkeley Estates as to availability of land.

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Appendix (overleaf):

Slimbridge Parish Rare & Protected Species List (GCER 2020)