

**ABBOTS LEIGH, HAM GREEN,
PILL, EASTON-IN-GORDANO
NEIGHBOURHOOD PLAN**

Background Paper 3

**The Natural Environment
Landscape, Ecology and Biodiversity**



January 2020

Background Papers were prepared over 2018 and 2019 to assist the Neighbourhood Plan Team develop its thinking and proposals. Some of this background work has been overtaken by the development of the Final October 2020 Plan

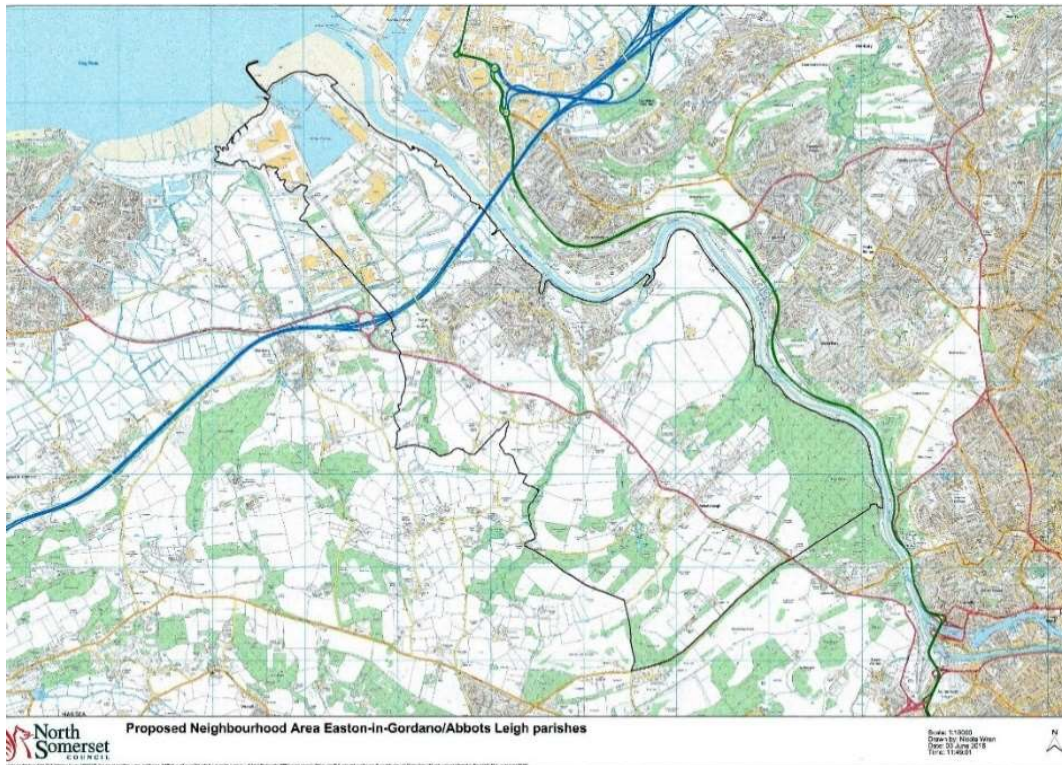
SUMMARY

- Other than the Pill settlement area and Royal Portbury Dock the entire Neighbourhood Plan Area lies within the Green Belt.
- There is a varied topography from the Avon Gorge and the Abbots Leigh ridge downwards through woodland and pasture to the River Avon and the Severn Estuary. The area supports a diverse range of habitats and wildlife, including a number of rare and protected species.
- The combination of woodland, field trees, semi improved grassland and meadow, open farmland, hedgerow, orchards, ponds and streams is crucial in providing shelter, feeding and breeding sites vital to the survival of many wildlife species.
- There are key areas of international, national and local significance designated for protection – RAMSAR wetlands, Special Protection Areas, Special Areas of Conservation, Special Sites of Scientific Interest, Local Nature Reserves, Registered and Unregistered Parks and Gardens, and North Somerset Council recognised Wildlife Sites or Sites of Nature Conservation Interest.
- The Avon Gorge and the Severn Estuary are designated under the EC Habitats Directive.
- North Somerset Council's Landscape Quality Assessment emphasises the importance of landscape, with the land above Crockerne Drive and Brookside assessed as of high landscape sensitivity.
- The intertidal and coastal habitats in the vicinity of the mouth of the Severn Estuary and Avon longshore comprise mudflats, saltmarshes, marshy grassland and meadows with rhymes, ditches and ponds
- There is a diversity of land ownership and management including that of the National Trust, the Forestry Commission, the District and Parish Councils, the Bristol Port Company, a number of agricultural, business and development landowners, and individual landowners.
- Management of many of the environmental assets of the area is carried out by voluntary/community individuals or groups, in some instances in collaboration with North Somerset Council.
- Sustainability of the ecological framework of the Neighbourhood Plan depends on the connectivity and interdependence of its diverse elements - woodland, grassland, pasture and rivers/streams and ponds.

1 INTRODUCTION

Abbots Leigh, Ham Green, Pill and Easton in Gordano are communities based in the Green Belt that surrounds Bristol. The Neighbourhood Plan area has a long history with much historic and heritage value but also significant environmental value especially in its inclusion of the Internationally important environmental sites of the Avon Gorge and the Severn Estuary.

This note provides a background statement both of the environmental sites of the area (Section 2 below) and of the ecological framework which it sustains (Section 3) The Neighbourhood Area – almost 17 square kilometres in size - stretches from Beggar Bush Lane to the Severn and is shown in black below.



The analysis uses a number of documentary sources supplemented by the knowledge of local residents. The aim is not to provide detailed statistics of the numerous species to be found – many surveys of birds, butterflies, flowers are held in the BRERC archive. The aim rather is to provide an ecological context within which the analysis and recommendations of the Neighbourhood Plan can be developed. The sources include¹:

- The North Somerset Landscape Character Assessment (2018)
- West of England Nature Partnership: Ecosystems Partnership (2016)
- North Somerset Policies Map (as at November 2018)
- West of England Joint Spatial Plan: Habitat Regulations (2017)
- Local Management Plans - Bristol Port Company, Abbots Pool, Watchhouse Hill, St. George's Bank. (2018 and 2019)
- Details of twenty-six local sites generated from local intelligence

¹ Further details of these sources are provided in an annex.

The analysis is consistent with the Core Strategies of North Somerset Council and in particular: CS 4 (Nature Conservation), CS 5 (Landscape and the Historic Environment), CS 6 (Green Belt).

The description of the topography, landscape, and ecology of the Neighborhood Area given in this Background Paper is confirmed and reinforced by the independent WildService Ecology Report attached as an Appendix to this Plan.

The report contains a range of recommendations for protection and enhancement of biodiversity. These are summarised by WildService as:

- 1 Protect, manage and enhance semi-natural habitats (e.g. pastoral waterside landscape of permanent pasture and wet grassland, calcareous and neutral grasslands, and ponds).**
- 2 Investigate and pursue opportunities to create such habitats, to increase resilience to climate change, reduce soil erosion and provide benefits to the water environment and biodiversity in general.**
- 3 Protect, manage and enhance the NPA area's woodlands and parklands for their rich ecological resource.**
- 4 Plant areas of native species of trees and shrubs and ensure the provision of green corridors for wildlife in any development areas.**

2 The Environmental sites of the Neighbourhood Area

The material in this section is set out in a way which uses the Landscape Character Assessment as a starting point but draws also on the reports of the West of England Nature Partnership North Somerset Council Policies, the JSP Habitat Regulations as well as Local Insights. The aim is to highlight the range of environmental assets in the Neighbourhood Area which the Plan must address in order to meet the key aims of sustainability and bio-diversity.

On the northern edge of the Neighbourhood Plan area is its most striking site – the **Avon Gorge** - the only example of the Limestone Gorge Landscape Type in North Somerset. The Gorge rises 100 metres above the River Avon and cuts through underlying limestone to create the steep scree slopes covered by ancient coppiced woodland and wood pasture which stretches inwards from the Gorge towards Abbots Leigh. The Neighbourhood Plan area touches the southern border of the Avon Gorge

The carboniferous limestone faces of the Gorge support a rich ecology of lime-maple woodland with unique whitebeam species and other nationally rare plants. The Avon Gorge is a Special Area of Conservation (SACs) strictly protected under the EC Habitats Directive.

Leigh Woods, with a substantial area of coppiced woodland is a Special Protection Area for which the Forestry Commission and National Trust have responsibility for management and recreational use.

Inland from the Gorge and Leigh Woods a small part of the Neighbourhood Area lies within the Failand Limestone Plateau (G2) characterised by relatively level upland with large, regular open fields with highly variable hedgerows, and tall woodland belts. There is woodland, areas of

unimproved grassland, hedgerow trees and scattered field trees, and semi improved grassland areas used as grazing for cattle, sheep and horses.

Thereafter the landscape descends from the Gorge and the Abbots Leigh ridge towards the River Avon - a fall from 200 metres elevation to sea level. Towards the river the landscape is predominantly Mercia Mudstone in character although at the lower end there are areas of Tidal Deposit, one of which (at Ham Green) is designated an SSSI as a rare example of pleistocene sediment. Further inland there is extensive woodland running down from the Abbots Leigh and Failand Ridge incorporating brooks or waterways (through **Vowles Bottom** and **Markham Bottom** for example) and within this area **Old Park Wood, Fishponds Wood, Fifty Acre Wood, Summerhouse Wood** and **Hall's Woods** have all been designated by North Somerset Council as Wildlife Sites.

Within the village of Abbots Leigh there lie important gardens and areas of semi-improved grassland which represent significant environmental assets. **Campfield, The Glebe, Abbots Leigh House, The Priory, and The Manor House** all have unregistered gardens. Also, in Abbots Leigh lies **Abbots Pool**, an NSC registered Local Nature Reserve which is set in mature woodland containing a good level of wildlife. It was landscaped, using Pulhamite, an artificial type of rock of historic importance in the 1920s. NSC owns the majority of the woodland with the rest leased to the Forestry Commission. A joint NSC/Village Management Committee is responsible for the maintenance of the area with the help of a team of local volunteers. The Pool has received a Green Flag for each of the last eleven years.

There is a large stretch of historic parkland at **Leigh Court Estate** a Registered Historic Park covering 128 hectares running from Coronation Avenue, through Oak Wood down to Paradise Bottom and up to Blackmoor. Much of the park is wooded (though with areas of grassland) and is used for forestry, agriculture, and horticulture with an active historic walled garden. At Ham Green the 4-acre unregistered garden of **Ham Green House** (laid out in 1750-1770 includes the Gazebo and Watergate (Adam and Eve). Below Ham Green House lie **Ham Green Lakes**, an NSC Wildlife Site; freshwater fishing lake supporting freshwater fish and a range of water-based birds and mammals. **Chapel Pill Wood** (off Chapel Pill Lane) comprises damp woodland, salt marsh, tidal mud.

Watchhouse Hill is an NSC conservation site with a Green Flag designation. It lies above Pill and incorporates Pill Community Orchard on the site of the old Ham Green Hospital grounds. The Hill now comprises unimproved grassland, a meadow area, sports pitches, mature orchard and woodland along the river and immature woodland elsewhere all supporting a wide range of birdlife; current uses include dog walking, exercise, cycling, play, sports.

A number of other significant environmental sites are located within or on the edge of the settlements of Ham Green, Pill and Easton-in-Gordano. **Priory Fields**, a large area of open grassland with some trees; and pasture has Village Green status and is well utilised by walkers for access to parts of the village. **Pill Paddock** is an old allotment site transformed by the local community to a local nature reserve, with hedges, a pond and a meadow now home to a range of birds and butterflies. It is owned by the Parish Council but adopted and managed as a reserve by Avon Wildlife Trust.

St. George's Bank is a Local Nature Reserve running along both sides of the A 369 at Easton-in-Gordano supporting an all year range of flowers and related wildlife. **Markham Farm** by the A 369 is primarily arable farmland with large fields in mixed agricultural use surrounded by hedgerow and is an important area for birds - like skylarks, pipits, lapwing and corvids). **Lodway Farm** is a buffer between Pill and the M5. There are old-established damp meadow fields for livestock with a variety of flora and invertebrates. The area is important for amphibians

and supports significant numbers of toads and newts. Two very old farm ponds are utilized for breeding and the whole area has masses of amphibians living in the rough pasture.

Elsewhere **St Katherine's School Pond** set in the school grounds is home to the protected species great crested newts, **Glebe Pond** (Rectory Road) is a small walled/hedged woodland with shallow pond; managed by a volunteer group. **The Bee Bank** (Rudleigh Road) is a south-facing residential bank supporting mining bee; flower bee; and sweat bee. **Brookside** (off Crockerne Drive) is a former school playing field, now managed by Parish Council as play area and backs onto arable fields, grass, woodland with a small stream.

At the **Severn Estuary** and up the river along the **Avon Longshore**, the very large tidal range produces one of the most extensive intertidal wildlife habitats in the UK, comprising mudflats, sandflats, saltmarshes, rocky platforms and islands, rhynes and ditches with coastal marshy grassland and remnant woodland of biodiversity value.

These extensive intertidal habitats are home to millions of small marine animals providing food and shelter for internationally important populations of migratory birds and fish. The plant and animal communities here are typical of the extreme physical environment of the Severn Estuary, including strong tidal currents, high suspended sediments, mobile shifting sands, liquid muds and tide-swept rock

In recognition of its nature conservation importance, the estuary and mouth of the River Avon are designated as a Special Area of Conservation (SAC), Special Protection Area (SPA) and a wetland area of international importance (RAMSAR site). Together these designated areas form the Severn Estuary European Marine Site, for which a management scheme has been developed by the Association of Severn Estuary Relevant Authorities.

This part of the Neighbourhood Plan area is dominated by the Royal Portbury Dock, with port-related operations and associated businesses based on a 1,200-acre estate owned by The Bristol Port Company. The Docks incorporate a network of wildlife corridors and a conservation area (Vole City), which protect a range of habitats. The Bristol Port Company manages and monitors these green areas for a variety of wildlife (including great crested newts, water vole, breeding birds, owls, and wildfowl and wading birds) in accordance with their Ecological Management Plan.

SSSIs Wildlife NSCIs

In addition to the locations listed above there are a number of sites which support bio-diversity. The 5-acre **Pill Allotments** site is owned by the Parish Council but plots are let to and managed by the Pill Allotments Association under a lease which is reviewed and renewed every ten years. There are 124 plots of varying sizes, rented to 94 named members /plot holders from the community.

The **cemeteries** of several churches offer shelter and food for small mammals. The **Hardwick Road and St. George's playing fields** in Easton, and the **Old School Field** in Abbots Leigh all make a contribution to biodiversity

A final characteristic of the area which contributes to the enjoyment of the area is the network of Rights of Way – footpaths and bridleways which criss-cross the area. The Avon Trail and the Monarch's Way are widely used by visitors as well as local residents and in addition to the marked Rights of Way there are numerous other well-used paths in Leigh Woods, the Leigh Court Estate, around Abbots Pool (designated a Local Nature Reserve), on Watchhouse Hill in Pill and many other woodland areas. There is a bridleway, cycle path and footpaths around the periphery of Royal Portbury Docks.

The topography of the area - from the Abbots Leigh ridge down to the River Avon and Severn Estuary affords numerous views, not only of estuary and across to Wales but of the semi-improved grassland and farmed fields between the settlement areas of Abbots Leigh, Ham Green, Pill and Easton-in-Gordano. The landscape has been assessed for landscape quality

CS 4 (Nature Conservation) and CS 5 (Landscape) emphasise the importance of landscape and the land above Crockerne Drive and Brookside has been assessed by NSC as of high landscape sensitivity². The site makes a crucial contribution to the interconnected ecological framework of the Neighbourhood Plan Area of woodlands, pasture and grassland which characterises the Area (for detail see background paper 3). Although avoiding Priory Fields, the Village Green and the allotments, the site would take up most of the open space between Pill and the A 369.. NSC Core Strategy states that

It is important that habitats rich in species are not confined to reserves but that interconnected networks of such habitats exist throughout an area to allow dispersal and interbreeding between different populations.....Commons are also a valued resource, often comprising semi improved grassland which can be important for wildlife and recreation.

3 AN ECOLOGICAL FRAMEWORK

The Avon Biodiversity Action Plan (BAP) set out the state of nature in the old county of Avon stressing its ecological variety. Avon's varied geology results in the occurrence of a wide range of habitats, from species-rich calcareous grasslands and ancient woodlands of the ridges, steep slopes and scarp faces, to the networks of rhynes and the coastal saltmarshes of the Severn Estuary. An audit (2003) of species of particular local importance and local conservation listed over 1000 nationally important species of UK BAP species.

The Neighbourhood Area continues to support a large number of plant and animal species that are regarded as vulnerable nationally. The species of local conservation concern include dormice, water voles, white-clawed crayfish, otters, barn owls, horseshoe bats and a significant number of butterfly species including brown hairstreak, chalkhill blue and various species of fritillary. In the Avon Gorge, rare plant species include round-headed leek (Bristol onion), Bristol rock-cress, the endemic Bristol whitebeam and nationally notable plants such as lizard orchid, adder's-tongue spearwort (found in only two sites in the UK).

The Neighbourhood Area is important in that its grasslands, woodlands, rivers and ponds connect not only to protected sites such as Leigh Woods, the Severn Estuary and the Avon Gorge but to neighbouring sites. Such sites - the Failand, Ashton Court and Tyntesfield Estates, for example, may not have a special designation but contribute hugely to the enhanced bio-diversity currently found across the whole area.

Wildlife knows no boundaries so the ability of wildlife to extend their range of habitat to find food; shelter and breeding sites is of vital importance to bio-diversity and sustainability. Wildlife protection is becoming increasingly important at a national scale in the face of dramatic national decline in the abundance of many species and their natural habitats.

The Neighbourhood Area comprises only a small part of the former Avon authority but it carries more than a proportionate share of natural assets. The Plan area has much pasture, both farmed and open land offering important environmental benefit. There are half a dozen working

² North Somerset Council. Landscape Sensitivity Assessment, 2018 pp 45-47

farms within the area and a number of ponds in woodland and on the Avon River edge in Pill. There is a well-used and cared-for allotment in Pill. There are road and lane verges throughout the area. Some, in Abbots Leigh, are monitored and managed for wildflowers by a local Verges Group. In Easton-in-Gordano the St George Flower Bank, a Local Nature Reserve, is managed by a local voluntary group. There are numerous valuable small meadows and flower banks, and in addition to formally registered/unregistered gardens there are hundreds of private gardens which fulfil an ecological role and function and which could become increasingly important in enhancing biodiversity over the next 20 years.

There are other open spaces with wider community and social uses but which also have implications for the management and sustainability of the natural environment – walking and cycle paths, running routes, sports pitches, play areas, fishing lakes, churchyards, cemeteries, Some sites are owned by North Somerset Council (though managed by the Parish Councils). There is also Forestry Commission, National Trust, North Somerset Council, Crown Estate and Bristol Port Company owned land. Across the several areas of farmland there is mixed, often absent, landlord ownership land. Finally, in assessing the natural environmental assets of the Neighbourhood Area it is important to recognise and respect the interdependence of the natural with the built environment and the relationship of environmental with physical conservation.

The ecological features of the area differ from one end to the other. Abbots Leigh (over 9 square kilometres large) has a diverse ecology. This 'mosaic' of habitat comprises parcels of ancient woodland, permanent pastureland (land that has never been ploughed), native hedges; old orchards, mature open field trees, meadowland and roadside verges, some farmland with agricultural grass and a volume of fresh water at Abbots Pool. The Pill and Easton-in-Gordano parish area includes the Royal Portbury Dock with its estuarial and wetland stretches, but is otherwise geographically more concentrated (1.5 square kilometers) small areas of pasture and open field surrounding the built-up settlement area.

Woodland around Abbots Leigh

This woodland across the Neighbourhood Plan Area, notably that of Leigh Woods and Abbots Leigh (see below) supports a huge range of flora and fauna such as, fungi; lichens, bryophytes and flowering plants (including bluebells). It supports mammals such as badger, deer, fox, wood mouse and eight species of bats. Birds such robin, blackbird, blue tit, great tit, wren, treecreeper, woodpecker, spotted flycatcher, nuthatch and jay. A list of notable sightings can be found in the BRERC records in the WildService Ecology report.

Species important to this area are toads who migrate to Abbots Pool every year to breed and rarities such as dormice, the dotted chestnut moth, and cave spider. Tawny Owls inhabit village woodland and Barn Owls and Little Owls have been recorded. There are bumblebees, solitary bees, hoverflies and beetles and many species of birds that are not as common as they used to be (e.g. long tailed tits, nuthatch, green woodpecker). There are woodland mammals like deer and badger which survive in the patchwork of woodland and pasture.

The woodland is supported by small patches of woodland and established hedges and scrub. These are crucial to biodiversity as they allow wildlife to move and forage for food and provide shelter.



Grassland

The widespread species-rich semi-improved grassland (see above) is valuable for wildlife of all kinds and the majority of grassland around Abbots Leigh comprises this type. Birds of prey like owls will hawk across it for small mammals like voles and wood mice and at night bats will hunt for insects. Many of the characteristics of the Abbots Leigh woodlands such as those of Markham Brook and Vowles Bottom are replicated through Old Park, Happerton and towards Summerhouse Wood. A very small proportion of this grassland has retained its floral diversity and forms flowering meadows, cut for hay after the flowers have set their seed and the vegetation dried and removed.

At the same time, towards Blackmoor and Ham Green, protection is offered by the historic Leigh Court Estate, whilst bordering Pill at Martcombe and Priory Fields there is extensive valued open grassland area.

There is also a small amount of improved agricultural land, some ploughed and re-seeded and offering grazing for sheep and cattle. This landscape can be valuable for foraging horseshoe bats because if it is grazed the dung left by animals may contain dung beetles and other invertebrates. Finally, there is a small area of arable land in the parish (Markham) ploughed to grow crops like wheat, oats or barley which, with sympathetic management supports skylarks (a species of concern), pipits and lapwing.

Orchards

Orchards add hugely to biodiversity. At Watchhouse Hill (a national Green Flag site) there is a 1.2-hectare orchard containing a range of traditional apple, pear and plum varieties with the occasional English oak and silver birch (see below right). This lies on the site of an old orchard and was replanted in 1949 with some further replacement planting in 2006 and 2011. There is an annual Apple Orchard festival held by and for the Pill community.



There are also over twenty acres of mixed variety cider apple orchards, over fifty years old, along Manor Lane in Abbots Leigh (see above left) that produce commercial fruit. Fallen fruit and old fruit left on trees over winter provide a much-needed food source for migrant birds such as redwing and fieldfare and resident jays as well as badgers and other mammals. In spring, the blossom on the trees will attract bumble-bees and honey bees. When old branches and trees fall, they will provide a host for lichen and fungi and food for 'decomposers', the insects that break down the wood over time.

Grassland Verges

Britain's wildflower meadows have declined drastically and road verges are now likely to be the last refuge of many wildflowers. Verges are vital food corridors for wildlife, especially pollinators. The most striking verge within the Neighbourhood Area is St George's Bank. The Friends of St George's Flower Bank are a group of volunteers dedicated to the conservation and enhancement of the A369 road verges in the Parish of Pill and Easton-in-Gordano. The Bank was created when the A 369 was cut to bypass Pill some years ago. The soil resulting from the road work excavations was extremely poor and thus made an ideal habitat for wild flowers. There has been no seed planted – all the flora is completely natural – but the bank is managed by a community group in conjunction with North Somerset Council. Brambles and other undergrowth are removed to encourage species proliferation whilst the hedges are trimmed carefully to encourage nesting birds with any wood cut is kept on site to encourage invertebrates and fungi.

In Abbots Leigh a number of verges – Manor Lane, Manor Road and the A 369 near Blackmoor are mown annually in the autumn, and arisings are removed by a volunteer group. The verges have thrived and more than 150 species of wildflower have been identified. The range of plants is encouraging - common knapweed is favoured by a range of pollinators and in particular the marbled white butterfly. birds-foot trefoil provides food for the silver studded blue and wood white butterflies, an orchid was seen for the first time in 2015/16.

Pools, Lakes and Streams

Across the Neighbourhood Area there is a network of connected freshwater streams and ponds. Markham Brook runs across the area from Tanpits into the centre of Pill and thence into the Avon, whilst Abbots Pool feeds a stream running (part underground) into the Ham Green Lakes.

Abbots Pool (a second national Green Flag site) is an important spawning site for toads and frogs with regular monitoring counting up to 1000 toads migrating to the pool annually. Elsewhere in Easton in Gordano between 1,500 and 5,000 toads have been counted crossing from Lodway Farm to the freshwater ponds close to the Motorway bridge.

The Ham Green fishing lakes supports heron, kingfisher, moorhen, mallard, fish (eel, pike, carp) and great crested newts, whilst at St Katherines School great crested newts are found in a small pond in the school ground (the School caretaker has a newt licence to survey them). Glebe Pond in Pill, managed by a volunteer group, is a small freshwater pool with associated frogs, newts and herons.

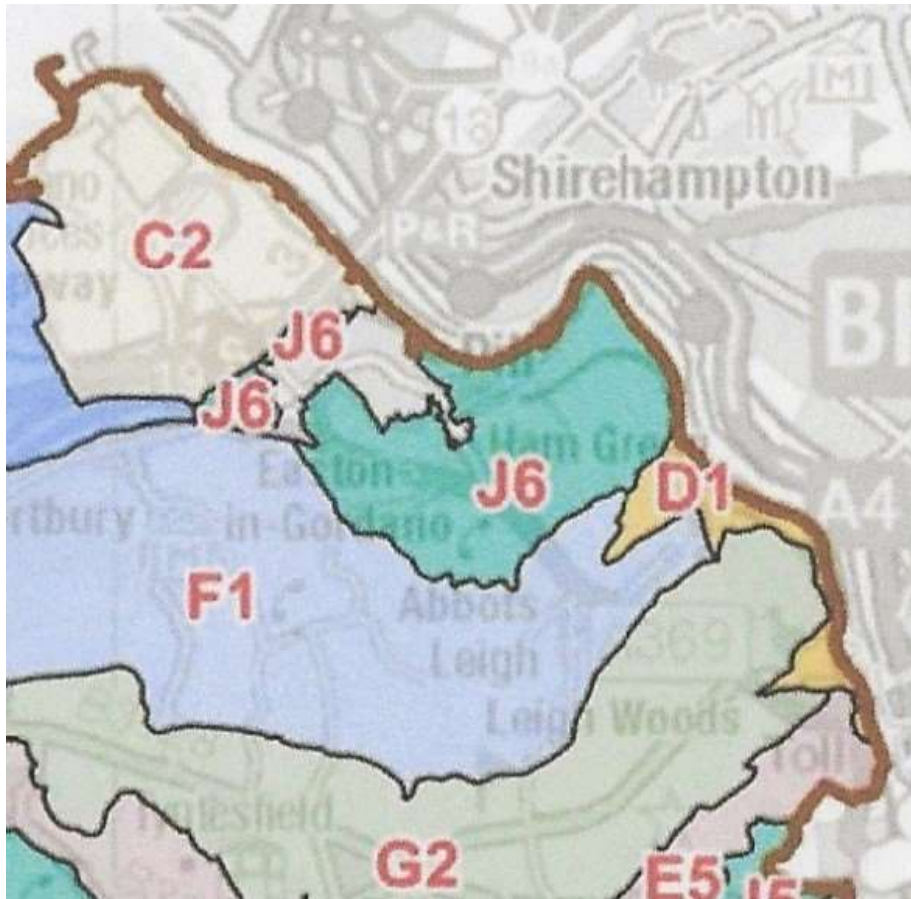
The Estuary and the Longshore

Finally, at the estuary end of the Neighbourhood Area, the intertidal and coastal habitats in the vicinity of the mouth of the River Avon (the Avon longshore) comprise mudflats, saltmarshes, marshy grassland and meadows with rhynes, ditches and ponds (see below). A wide variety of wildlife has been monitored and recorded in the environmental corridors and coastal wetland areas at Royal Portbury Docks, including deer, water vole, breeding birds (such as Cetti's, reed and sedge warblers, kestrel and barn owls), great crested and smooth newts, frogs, toads (see below) and over 90 species of invertebrates. These intertidal mudflats and saltmarshes around Royal Portbury Docks and the associated coastal wetlands support waders and wildfowl such as redshank, dunlin, curlew, shelduck, teal, mallard, common sandpiper and little grebe. Water vole are found within the network of rhynes and ponds in the Portbury area, a nationally rare species. Otter have been sighted on the banks of the Avon, Pill Longshore and at Markham.



APPENDIX 1 INFORMATION SOURCES USED TO PREPARE THIS STATEMENT

The **North Somerset Council Landscape Character Assessment** (2018) is represented by eleven landscape types (e.g. Moors, and River Flood Plain), each having a distinct character with similar physical and cultural attributes, including geology, landform, land cover and historical evolution. These types are divided into smaller areas of which five lie within the NPA (see map below). The landscape changes from the limestone Avon Gorge (D1) and the Failand Settled Limestone Plateau (G2) to the Abbots Leigh Sandstone Uplands (F1) and thence through the Avon Rolling Valley Farmland (J6) to the Settled Coastal Edge of the Severn (C2) - much of which lies within the Royal Portbury Dock.



The **West of England Nature Partnership** 2016 report on Ecosystems services summarises findings from an assessment of the natural resources of the area and describes the ecosystems which underlie bio-diversity and environmental management. Maps provide analysis of the woodland network, the grassland network, the wetland network, together with information on water quality and quantity.

North Somerset Council. Landscape Sensitivity Assessment, 2018 provides details of high, medium and low landscape sensitivities

The **North Somerset Council Policies Map** marks a range of environmental assets which are recognised in NSC Core Strategy and/or Development Management. Lying within the Neighbourhood Plan Area are The Green Belt, Registered Historic Park/Garden (1), Unregistered Parks/Gardens (7 sites), Special Areas of Conservation (2), Special Protection Area (1), RAMSAR wetlands of international importance (1), Special Sites of Scientific Interest

(SSSIs) (3), National Nature Reserve (1), Local Nature Reserves (1), Regionally Important Geographic Sites (1), Wildlife Sites (11), and land reserved for public purposes (4)

West of England Joint Spatial Plan Technical Document: Habitat Regulations (2017) The European Habitats Directive provides legal protection for a range of habitats and species, requires the maintenance or restoration of these habitats and species and is achieved through the establishment and maintenance of protected areas - Natura 2000 sites including Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites designated as wetlands of international importance under the Ramsar Convention.

Local Management Plans

Watchhouse Hill Management Plan 2013-2017. www.n-somerset.gov.uk

Abbots Pool Management Plan www.n-somerset.gov.uk

The Bristol Port Company Royal Portbury Docks. Ecological Management Plan. 2019
www.bristolport.co.uk

Finally, **Local Intelligence** has informed understanding of the existence and nature of sites of significance across the Neighbourhood Area. These range from sites of international/national designation through to smaller sites recognised locally as being of importance and value. More detailed information about many of these sites comes from regular surveys, for example at Watchhouse Hill, Abbots Pool, St George's Bank, the Severn Estuary. A report from the Abbots Leigh Wildlife Group sets out details of this local information (available on the environment and landscape page of www.pilanddistrictplan.org).

ECOLOGY REVIEW

Summary of a review undertaken by WildService
on behalf of the Neighbourhood Plan Steering
Group



In summary, the data review shows that Abbots Leigh and Pill/Easton-in-Gordano Neighbourhood Plan Area comprises an area of ecological valuable habitats that support a diverse flora and fauna. Many of the diverse range of habitats within the NPA comprise UK BAP Priority Habitats ranging from the coastal saltmarsh and intertidal mudflats in the north, to the central coastal and floodplain grazing marsh, and the southern lowland mixed deciduous woodland, upland mixed ashwoods and intertidal mudflats. The northern NPA also contains areas of neutral semi-improved and improved grassland. The central and southern NPA area also comprises patches of neutral semi-improved grassland, marshy grassland, broadleaved parkland and scattered trees, mixed, coniferous and broadleaved woodland plantations,

broadleaved woodland (a significant amount of which constitutes ancient woodland), neutral unimproved grassland, scrub, traditional orchards, cultivated/amenity grassland, arable and improved grassland.

The fields tend to be bounded by hedgerows, which are often relatively mature and can be species rich (UK BAP Priority Habitat), which connect to copses and larger woodland blocks. Within the southern part of NPA, there is an extensive area of historic parkland. Numerous ponds (UK BAP Priority Habitat) are distributed across the NPA.

This diversity in habitat type is reflected in the diversity of species of wildlife and plants found in the NPA, many of which are protected and/or notable.

For example, the range of habitats supports a wide variety and abundance of bird species, typical of wetlands, woodlands and farmland. The large areas of open pasture support ground nesting species of bird such as skylarks (Avon BAP Priority Species). The Severn Estuary not only provides invaluable habitat for waders and wildfowl, but also water vole and otter, both of which are Avon BAP Priority Species. The numerous woodland blocks with the interconnecting hedgerow network across the NPA support a variety of mammal species including various Avon BAP Priority Species: hazel dormouse, greater and lesser horseshoe bats, barbastelle bats, brown long-eared bats, soprano pipistrelles and noctules plus common pipistrelle, Daubenton's and Leisler's bats.

The ecological value of the habitats within the NPA is further indicated by the number of protected sites. There are 17 non-statutory sites and the main statutory sites include Severn Estuary Site of Special Scientific Interest (SSSI), which contains an intertidal zone of mudflats, sand banks, rocky platforms and a range of saltmarsh types. The Severn Estuary is also recognised as a wetland area of international importance and is designated as a RAMSAR site, a Special Protection Area (SPA) and as a Special Area of Conservation (SAC). Together these designated areas form the Severn Estuary European Marine Site. The Severn Estuary SSSI supports internationally important populations of waterfowl; invertebrate populations of considerable interest; and large populations of migratory fish and nationally notable plant species.

The Avon Gorge SSSI contains natural cliffs and quarry exposures of Carboniferous limestone, screes, scrub, pockets of herb-rich calcareous grassland, bracken and strandline saltmarsh, ancient woodland, semi-natural broadleaved (including small-leaved lime high forest) woodland. Avon Gorge SSSI supports plants unique to the site as well as both nationally rare and scarce plant species. For example, the Avon Gorge and Leigh Woods are very important site for whitebeams including three endemic species. Leigh Woods National Nature Reserve, known for its rich limestone rock flora, also contains a variety of wildlife including hazel dormice and various bat species (including greater & lesser horseshoe bats), a variety of species of invertebrates and birds.

Recommendations

In order to conserve and potentially enhance the diversity of habitats and flora and fauna in the NPA there are various actions that could be undertaken.

Protect, manage and enhance semi-natural habitats (e.g. pastoral waterside landscape of permanent pasture and wet grassland, calcareous and neutral grasslands, and ponds). Investigate and pursue opportunities to create such habitats, to increase resilience to climate change, reduce soil erosion and provide

benefits to the water environment and biodiversity in general. This could be achieved by the following actions as examples:

- Maintaining, extending and linking fragmented areas of species-rich calcareous and neutral grassland to enhance biodiversity (particularly invertebrate and landscape) and help to reduce soil erosion and nutrient run-off.
- Restoring, maintaining and extending flood meadows and wet woodland, to enhance the landscape, and to increase water retention capacity for the benefit of flood alleviation.
- Restoring and re-creating ponds, for the benefit of wildlife in general and the enhancement of the landscape character.
- Reinstating riverine habitats such as backwaters and reedbeds, to provide refuges for aquatic species, in the interests of biodiversity, and, by assisting with water filtration, to benefit water quality and water flow.
- Reinstating and managing hedgerows to restore the local landscape character, to help reduce soil erosion and to foster linear habitat networks for pollinators and pest regulation for the benefit of agriculture, biodiversity generally and – notably – farmland birds and hazel dormice (People’s Trust for Endangered Species’ hedgerow expansion scheme).
- Creating grassland buffer strips across slopes and alongside watercourses to help reduce soil erosion and nutrient run-off in areas of arable production and grazing.
- Protecting and encouraging planting of riverside trees (can provide valuable bat roosts and shelter for various other species), to help stabilise river banks, managing these by pollarding for longevity and aiding adaptation to climate change
- Developing access on foot, and where possible on bicycle and horse, for recreation and other use, in the interests of reducing traffic (to benefit the climate) and the health and enjoyment of residents and visitors to the area.

Protect, manage and enhance the NPA area’s woodlands and parklands for their rich ecological resource.

- Maintaining, restoring and extending existing woodland, including and especially ancient woodland, to enhance wildlife networks and enhance resilience of existing woodland habitats, in particular in relation to the bat (and in some cases dormice) communities.
- In woodlands with areas of hazel and/or sweet chestnut coppice, maintain this practice while ensuring it is undertaken in a sympathetic manner for wildlife, with different patches of woodland (no larger than 10% of the woodland) being coppiced on a rotational basis over several years. Coppicing should be undertaken on a 15-20 year cycle to ensure that the coppiced hazel is allowed to grow large enough to produce hazel nuts that a variety of wildlife including dormice use as a valuable food source.
- Maintaining and restoring historic parkland landscapes and, in particular, nurturing and replacing veteran trees, especially where they are vulnerable to changes in agricultural practices and where they are important habitat for bats (as roosts), lichens, invertebrates and fungi, while encouraging deadwood management as appropriate.
- Developing access on foot, and where possible on bicycle and horse, for recreation and other use, in the interests of reducing traffic (to benefit the climate) and the health and enjoyment of residents and visitors to the area.

Plan for the creation of new landscapes associated with the expansion/creation of settlements, while incorporating the existing landscape features into green infrastructure planning. This will serve the interests of local landscape character, access and recreation, biomass provision, biodiversity and water flow regulation

- Planting areas of native species of trees and shrubs (including coppice) locally where this can link into existing woodland and can screen and soften the edge of new development while serving as a local source of biomass energy.
- Developing woodlands and new wetland habitat within and around new development as a recreational resource and as part of sustainable urban drainage systems, to help regulate water flow.
- Seeking to provide community food growing opportunities (e.g. allotments and orchards growing local varieties of fruit trees) within the planned open space associated with new development
- Promoting the use of sustainable materials and integrated renewable energy technologies within new low carbon developments, to be fostered as reflecting local character.
- Developing semi-natural accessible green spaces and making provision for their sustainable management.
- Ensuring the provision of green corridors for wildlife along canal and river banks and in any development sites, and generally to explore and expand linkages between the natural landscapes of the NPA area. Green infrastructure planning can be facilitated with schemes such as 'Building with Nature', which is a voluntary approach that enables developers, who want to go beyond the statutory minima, to create places that deliver for the natural world and healthy communities, allowing people to live closer to nature. It brings together guidance and good practice to recognise high quality green infrastructure at all stages of the development process including policy, planning, design, delivery, and long-term management and maintenance. The standards enable nature-friendly features to be integrated throughout the development. Further details can be found on the website: <https://www.buildingwithnature.org.uk/about>
- Promoting green travel schemes, such as cycle paths between neighbouring urban areas, in the interests of the environment generally