



East Hagbourne

NEIGHBOURHOOD DEVELOPMENT PLAN -
2018 to 2033

Plan Made - April 2019
- Draft 2023 Update

Appendix 12. A Strategy for People and Nature in East Hagbourne

A Strategy for People and Nature in East Hagbourne

1. Introduction

In June 2021 the UK Government published a report from the Environmental Audit Committee of the House of Commons entitled "Biodiversity in the UK: bloom or bust?"¹

The report notes that: the world is witnessing a colossal decline in global biodiversity and this global picture is reflected in the UK, one of the most nature-depleted countries in the world. To reverse the trend of biodiversity loss requires urgent transformative change - nature needs to be accounted for in economic decision making and governments and businesses need to take pre-emptive and precautionary actions to avoid, mitigate and remedy the deterioration of nature.

Although we are fortunate to live in a pleasant rural part of the country, biodiversity loss affects us too. Action will be needed at all levels of government and society if we are to reverse the declining trend.

This document outlines a strategy to safeguard and enhance green infrastructure in the parish of East Hagbourne. It provides a framework and guidance for efforts to conserve and enhance our natural assets to improve biodiversity, to benefit both wildlife and people.

East Hagbourne Neighbourhood Plan Policy E2 calls for new development to protect and enhance biodiversity and the natural environment. The strategy outlined here is intended to guide how that can be achieved. The remit is, however, wider than the built environment and extends to the opportunities in the wider landscape of the parish.

The document is not prescriptive, but it provides a framework within which more detailed plans for nature recovery can be developed.

¹ <https://committees.parliament.uk/publications/6498/documents/70656/default/>

2. Background

2.1. National Level

The twin problems of climate change and biodiversity loss are well documented.

Biodiversity is essential for the processes that support all life on Earth, including humans².

Research by the Natural History Museum indicates that the UK is one of the most nature-depleted countries in the world, with half of its natural biodiversity lost since the Industrial Revolution³.

The most recent State of Nature report, published in 2019, collates the best available data on the UK's biodiversity. It suggests that the decline is continuing with a 13% decline in the average abundance of wildlife in the UK since the 1970s and that many important species much reduced in numbers⁴.

We do, though, have opportunities to halt and reverse this decline.

In 2018, the UK Government published a 25 Year Environment Plan which includes (Ch2 p56) a commitment to develop a Nature Recovery Network to protect and restore wildlife, and to conserve and enhance the natural beauty of our landscapes⁵.

The legislation to achieve this comes through the Environment Act 2021, which introduces legally binding environmental targets to increase biodiversity, and halt the decline in species by 2030⁶.

Among the measures introduced, new building developments will need to achieve a biodiversity net gain of at least 10%, and the way farming is supported will change under new Environmental Land Management Schemes. The details of these schemes are still being worked out and they are expected to be introduced around 2024.

2.2. County/District Level

To respond to the urgency of the situation, South Oxfordshire District Council declared a Climate Emergency in 2019 and an Ecological Emergency in February 2021. The announcement acknowledged that this would require the introduction of a Local Nature Recovery Strategy and Nature Recovery Networks⁷

The Oxfordshire Wildlife and Landscape Study (OWLS) has existed since 2004 and is a survey of landscape character and biodiversity across the county. It was jointly sponsored by Oxfordshire County Council, Natural England and The Earth Trust. It is used extensively in planning and has been referenced in both the character assessments forming part of the East Hagbourne Neighbourhood Plan⁸.

Work on a Nature Recovery Network (NRN) is already under way at county level. A draft network map has been developed by a partnership of local nature conservation organisations,

² <https://royalsociety.org/topics-policy/projects/biodiversity/why-is-biodiversity-important/>

³ <https://www.nhm.ac.uk/discover/news/2020/september/uk-has-led-the-world-in-destroying-the-natural-environment.html>

⁴ <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf>

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

⁶ <https://www.gov.uk/government/news/world-leading-environment-act-becomes-law>

⁷ <https://www.southoxon.gov.uk/climate-emergency/ecological-emergency-declared-by-south-oxfordshire-district-council/#:~:text=The%20council%20agreed%20to%20declare,carbon%20neutral%20district%20by%202030.>

⁸ <https://owls.oxfordshire.gov.uk/wps/wcm/connect/occ/OWLS/Home/>

led by Thames Valley Environmental Records Centre (TVERC), Wild Oxfordshire and The Berks, Bucks and Oxon Wildlife Trust (BBOWT), overseen by Oxfordshire's Biodiversity Advisory Group (BAG). The draft map will be reviewed and form part of the forthcoming Nature Recovery Strategy for Oxfordshire.

The concept of the NRN is to identify opportunities for recovering or enhancing biodiversity, prioritising efforts where they will have greatest effect, but recognising that all areas including agricultural and urban landscapes can make important contributions to nature's recovery, particularly by creating ecological corridors so that wildlife can move across the landscape⁹.

The core zones show existing areas of higher biodiversity, while the Recovery Zones represent areas with high potential for biodiversity uplift. The Oxfordshire Treescape Project (Treescape) assumes that uplift will also be higher in areas bordering Core Zones which will help new areas to colonise quickly. Within the NRN are the Conservation Target Areas. These identify some of the most important areas for wildlife conservation in Oxfordshire, where targeted conservation action will have the greatest benefit. Our nearest CTA is the Blewbury to Streatley Downs CTA¹⁰.

An extract for East Hagbourne from the NRN map, provided by Oxfordshire Treescape, is shown in Figure 1.

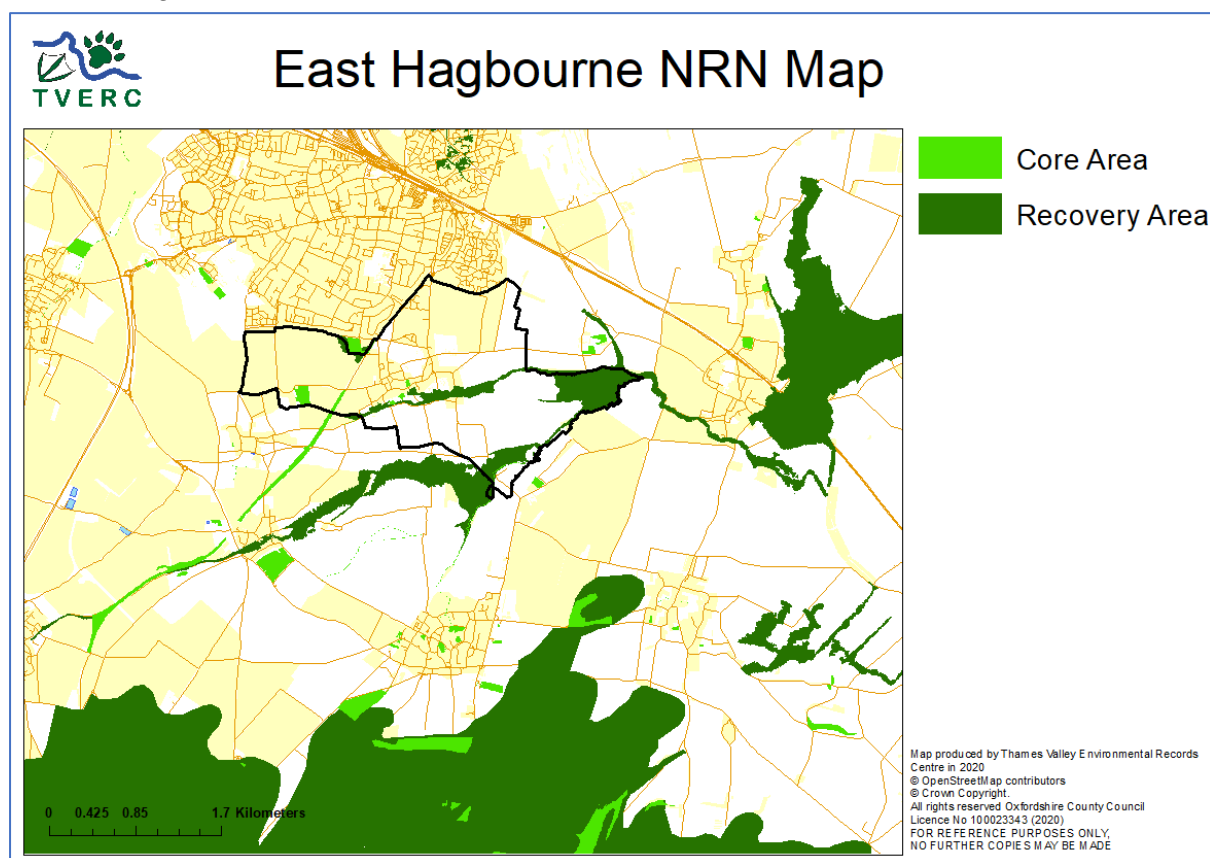


Figure 1: Extract from the Oxfordshire NRN map showing East Hagbourne area.

The NRN shows some small areas within the parish classed as Core Zones and three of these are within the historic village, highlighting the importance of the urban environment. The areas

⁹ <https://www.wildoxfordshire.org.uk/oxfordshires-nature/oxfordshires-nature-recovery-network>

¹⁰ <https://www.wildoxfordshire.org.uk/oxfordshires-nature/conservation-target-areas>

classed as Recovery Zones follow the waterways and the lower lying land to the south and east of the parish.

While it is a valuable guide, the NRN map excludes many of the smaller areas of biodiversity in the parish that are described below.

2.3. Parish Level

Although there is activity at national and county level to address biodiversity loss, this needs to be complemented by local action at parish level, where more detailed local knowledge can be applied. Many smaller areas exist in East Hagbourne parish that do not appear on the Oxfordshire NRN map - but these are worthy of protection as well.

East Hagbourne Parish Council (EHPC) recognises and values the rural area in which we live. Sustainability & biodiversity featured in the Parish Plan of 2010 as well as the East Hagbourne Neighbourhood Plan (2019). Also in 2019 EHPC adopted the principles of the Woodland Trust Charter for Trees, which highlights the benefits of landscapes rich in wildlife for people as well as nature¹¹.

EHPC's efforts on climate change and environment are focussed through its Community Project Strategy, working over many years with Hagbourne Environment Group (HEG) and more recently with its successor, the Hagbournes and Upton Group for Sustainability (HUGS). Since 2020 HUGS has installed 21 owl nest boxes, planted over 700 trees/hedging plants along footpaths and gardens and worked on grassland restoration. Projects to engage with the community include a wildlife walk, wildlife garden competition and activities with Hagbourne School.

The East Hagbourne Neighbourhood Plan (EHNP)

Policy E2 of the adopted EHNP promotes protection and enhancement of biodiversity and the natural environment. At the time the EHNP was written, policies were required to focus closely on new housing development, however the plan does reference the East Hagbourne Village Character Assessment and Landscape Study 2018 (Character Assessment)¹² and the East Hagbourne Green Buffer Assessment (Green Buffer Assessment) which include information on landscape and habitats across the parish¹³.

More recently, the 2021 issue of the National Planning Policy Framework (NPPF, para 179) requires plans to "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks . . ." in order to protect and enhance biodiversity and geodiversity. Progress has already been made to identify and map wildlife assets through the 'Wildlife Habitats and Landscape in East Hagbourne' report, prepared in 2020¹⁴.

This strategy will contribute as a first step to the second requirement, to safeguard valued assets and enhance biodiversity.

¹¹ <https://www.woodlandtrust.org.uk/support-us/act/tree-charter/>

¹² https://easthagbourne.net/wp-content/uploads/2019/09/EHNP-Appendix-2_East-Hagbourne-Village-Landscape-Character-Assessment-2018update.pdf

¹³ https://easthagbourne.net/wp-content/uploads/2019/09/EHNP-Appendix-10_EH-Green-Buffer-Assessment_20180914.pdf

¹⁴ https://easthagbourne.net/wp-content/uploads/2020/12/EH-wildlife-habitats-landscape_20200903.pdf

3. Methodology

The draft NRN map for Oxfordshire identifies three zones: a core zone containing the most important sites for biodiversity in Oxfordshire; a recovery zone containing areas with high potential for improvement; and a wider landscape zone – recognising the important contribution that agricultural and urban landscapes can make to nature's recovery.

With all this detailed work, it could be asked why we need a strategy at local level. A local, parish level approach has value because:

- Priorities identified at national or county level may overlook smaller areas or opportunities that nevertheless have significance at a local level.
- Local knowledge can identify opportunities for improvement at a more detailed level than can be accomplished through national/county databases.
- While it is right to prioritise resources where they will have most effect, there is a risk that the broader objective of improving biodiversity everywhere may be lost.
- Priorities reflected in our local landscape assessment, in particular the value placed on open countryside and long views can be incorporated into the strategy.

The approach taken here is similar to that being taken at county level - to prioritise, but at a more granular level incorporating desk study and local field observations/knowledge; to protect, enhance, build and join-up wildlife sites. Although this strategy is centred on East Hagbourne, landscape does not stop at parish boundaries and we expect that further work may be done in cooperation with adjoining parishes.

3.1. The importance of people

People are central to improving biodiversity. Many people are already making contributions to biodiversity through managing their own gardens or participating in work parties in our public places. Farmers and other landowners care for the wider landscape, including hedges and trees and their cooperation will be vital as more concrete plans emerge in due course. Efforts will be most effective if the whole community understands, and is hopefully engaged in, improving biodiversity. The beneficial effects of contact with nature on wellbeing are well documented, so improving biodiversity brings direct benefits to people. At the same time, people have other needs and priorities which need to be considered. This is particularly true for East Hagbourne which lies in the Green Buffer Zone of Didcot Garden Town and provides "green lungs" for the people of Didcot as well as the village.

3.2. What do we mean by biodiversity?

The government's 2021 report on UK Biodiversity Indicators says:

"Biodiversity is the variety of all life on Earth. It includes all species of animals and plants, and the natural systems that support them. Biodiversity matters because it supports the vital benefits we get from the natural environment. It contributes to our economy, our health and wellbeing, and it enriches our lives."¹⁵

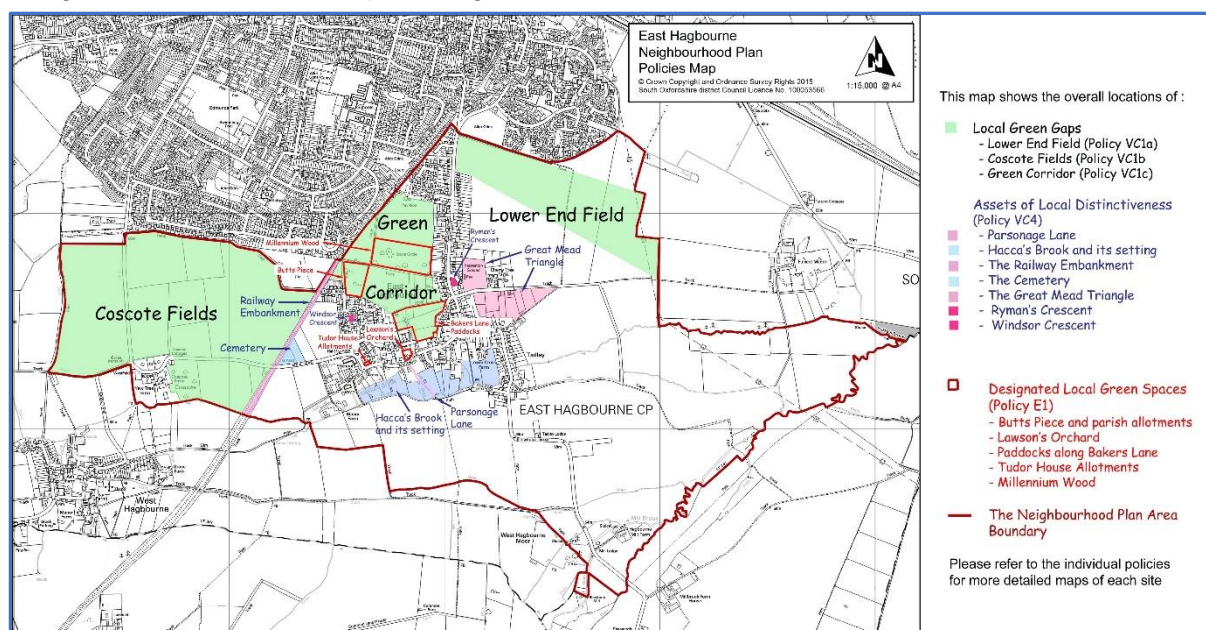
Biodiversity is all around us, in our urban lives and in the rich farming land around our village, but it is much degraded. We can work to reverse the trend by valuing, extending and improving existing habitats, by sensitive planting, joining wildlife rich areas to make a stronger network and by caring for wildlife in our gardens and countryside.

¹⁵ <https://data.jncc.gov.uk/data/31925413-3fa4-4382-962f-6ac2c168d542/ukbi2021-summary-booklet.pdf>

4. Our assets - what we value.

4.1. The village environment

East Hagbourne is a compact village, so areas of green space within the built area are highly valued. Five areas are designated as Local Green Spaces in the EHNP, and in addition, five areas are designated as Assets of Local Distinctiveness with two additional Assets proposed by the EHNP Review. Most of these are managed by the landowners and are not physically accessible to the public, but all contain green infrastructure which contributes strongly to the village character as well as providing a resource for wildlife.



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Figure 2. The EHNP Policies Map, showing the areas protected by the Plan.

More generally, most houses in the core village and the wider parish have gardens, some of a good size, so provide a resource for wildlife, particularly pollinators and other invertebrates, if sensitively planted. As shown above in Figure 1, some undeveloped areas in the village can be rich in wildlife and are recognised as Core Areas in the Oxfordshire NRN.

4.2. Landscape

East Hagbourne is bounded by Didcot to the north, but to the west, south and east looks out onto extensive farmlands.

We value the highly productive land managed by our local farmers and the high quality arable and animal products they produce. It is management by our farmers that shapes the landscape that we know today. While landscapes can of course change, an understanding of their valued attributes, as outlined below, can encourage a sensitive evolution.

The Character Assessment notes that from the 11th century this area has been characterised by an open farming landscape. The landscape is not denuded, in fact its open nature with expansive views reflects the historical character of the land. The Character Assessment sets out (Table 6) four natural features to retain and enhance:

- The historic routeways which extend out of the village into the surrounding former open fields.

- The watercourses, including the pollarding of willow, poplars, oak and other trees along their banks.
- The open character of the agricultural landscape with few trees.
- The fragmentary evidence of the once extensive orchards around the village and Coscote.

The Character Assessment (Table 9 and Figure 40) also recognises long views as an important feature of the village surroundings. In our parish, trees and hedges are found principally along the watercourses and trackways and the open fields within this framework are equally important in defining the local landscape. Policy VC2 of the Neighbourhood Plan supports key views as an important part of our rural character.

4.3. Wildlife resources

The East Hagbourne Village Character Assessment and Landscape Study 2018 (Character Assessment) highlights the importance of the vegetation and trees along historic routeways, watercourses and hedges along field boundaries and calls (p47/48) for maintenance and creation of new habitats to enable species to move from one area to another. There are good examples, particularly in the east and south of the parish and around Millennium Wood where hedges have been allowed to grow. In some case, though, hedges have been close trimmed which will impact species diversity.

The green environment around the village itself also provides good habitat for wildlife. The extensive backlands along the south side of Main Road provide a varied and scenic habitat, while gardens themselves can be havens for wildlife.

The former railway embankment extending from Butts Piece through to Upton village has a rich grassland flora and good populations of butterflies. It is registered as a Local Wildlife Site¹⁶

Our waterways, comprising the Hacca's Brook network and the Mill Brook along the south-east boundary of the parish are an important part of our landscape. The Character Assessment also highlighted that they are mostly well vegetated, providing a valuable resource for wildlife as indicated by the NRN Recovery Zones shown in Figure 1.

Flooding from the Hacca's Brook has been a problem for some areas of the village, exacerbated by run-off from fields after heavy rain^{17 18}.

Water quality tests in Hacca's Brook¹⁹ during the September 2021 'waterblitz' showed high levels of nitrate (1-2mg/litre) and phosphates (0.1-0.2mg/litre) indicating that the water has a poor ecological status. Phosphate levels are much higher than measured in the Mill Brook, where fish can still be found.

While the water channels need to be kept open to avoid flood issues, vegetation along stream banks could serve to absorb run-off as well as providing habitat for wildlife.

Much of the farmland in East Hagbourne is farmed intensively for arable crops or grazing with the field edges and hedgerows providing the best wildlife resource. A fairly rich ground flora survives along field edges in a few places that could be nurtured. The arable land provides some feeding for birds during the winter, but annual arable flora is much diminished. The eastern part of Coscote Field has been planted with new hedges and is registered under Defra's Countryside Stewardship scheme while the land adjacent to the Mill Brook (mostly in Blewbury parish) is managed under an Environmental Stewardship Agreement which includes wide field margins and areas planted to support winter birds, which have included flocks of

¹⁶ https://www.tverc.org/cms/sites/tverc/files/SouthOx_LWS_2021_map.pdf

¹⁷ https://easthagbourne.net/wp-content/uploads/2018/02/Flood_Report_January_2014.pdf

¹⁸ <https://eip.ceh.ac.uk/hydrology/freshwaterwatch/?thames>

¹⁹ <https://www.freshwaterwatch.org/pages/explore-our-data#Dive%20Deeper>

greenfinch and linnet. Defra designates priority species for conservation targeting in the parish as Lapwing and, in the south and east of the parish, Corn Bunting²⁰.

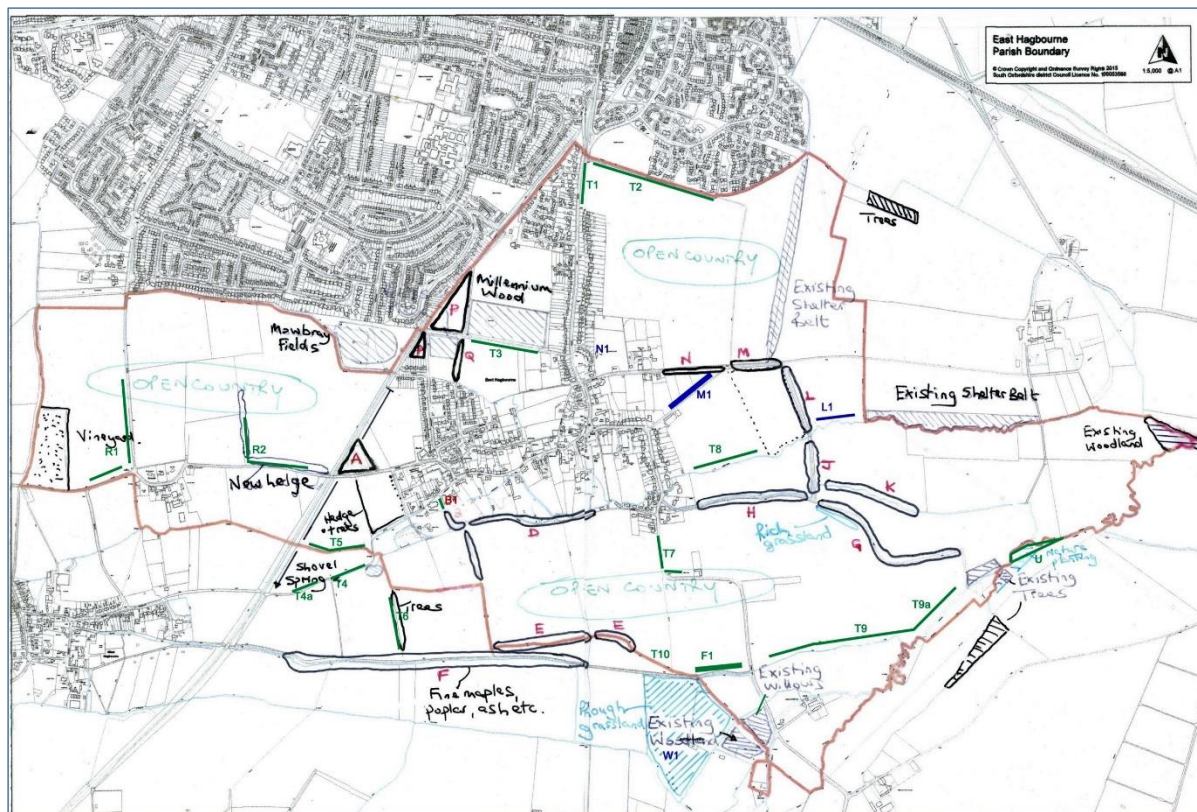


Figure 3. Wildlife assets in East Hagbourne based on local knowledge.

East Hagbourne benefits from an extensive footpath network in and around East Hagbourne is a valuable asset, both within the built environment and extending into the countryside and to the neighbouring villages.

The footpath network is a valuable asset and offers potential for improvements that benefit both people and nature. The footpaths give access to the wide views that are such a feature of the landscape, while some offer a more intimate wild landscape of trees, hedges and ground

²¹ https://easthagbourne.net/wp-content/uploads/2020/12/EH-wildlife-habitats-landscape_20200903.pdf

vegetation. Other paths across more open fields offer the potential for joining up existing wild areas through sensitive improvements that are compatible with farm management.

The public footpaths in East Hagbourne parish are shown in Figure 4. On the Definitive Footpath map these will be prefixed by 197.

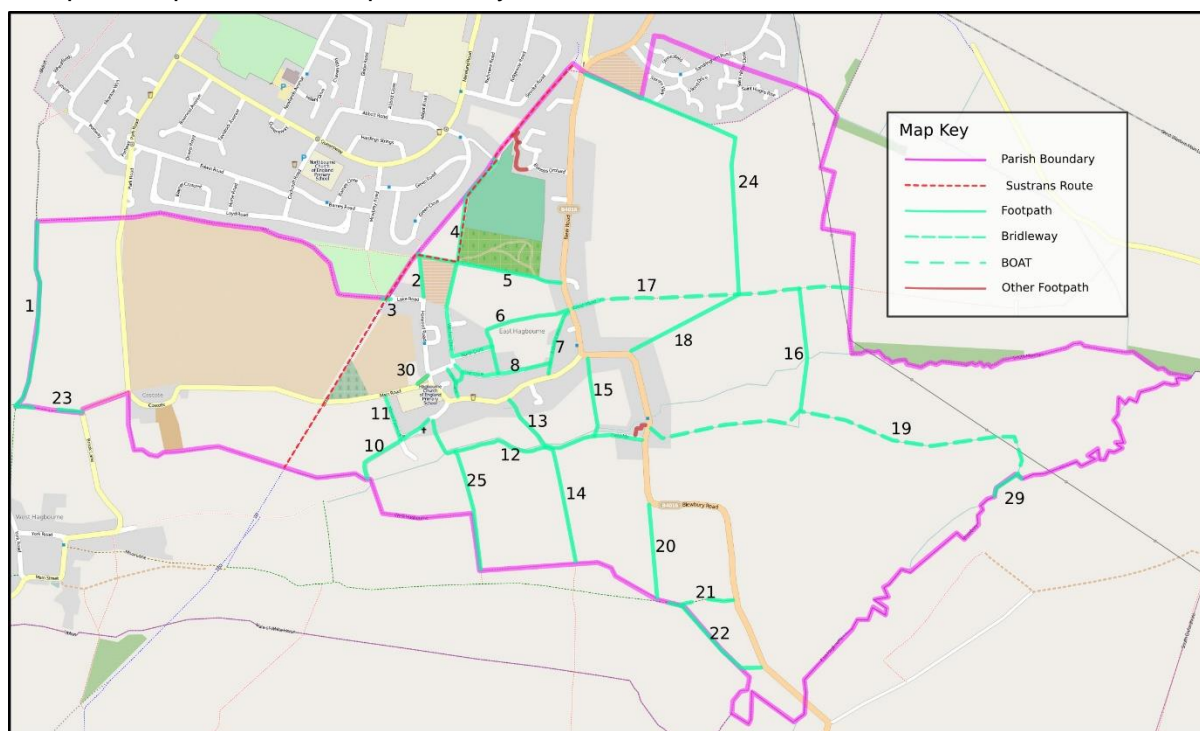


Figure 4. Public Footpaths in East Hagbourne

4.5. The farming landscape of East Hagbourne

The landscape of East Hagbourne is described in the Green Buffer Assessment. The parish lies adjacent to the North Wessex Downs AONB to the south and east, and landscape within East Hagbourne has similarities to AONB Character Area 5D: Moreton Plain²².

The landscape character assessment for Oxfordshire (OWLS) identifies two landscape character types which correspond closely to the features visible in the landscape. These are:

Lowland Village Farmlands: a varied, gently rolling and almost flat topography, with medium to large-sized arable and hedged fields; thinly scattered hedgerow trees, ash, willow and poplars fringing ditches and streams.

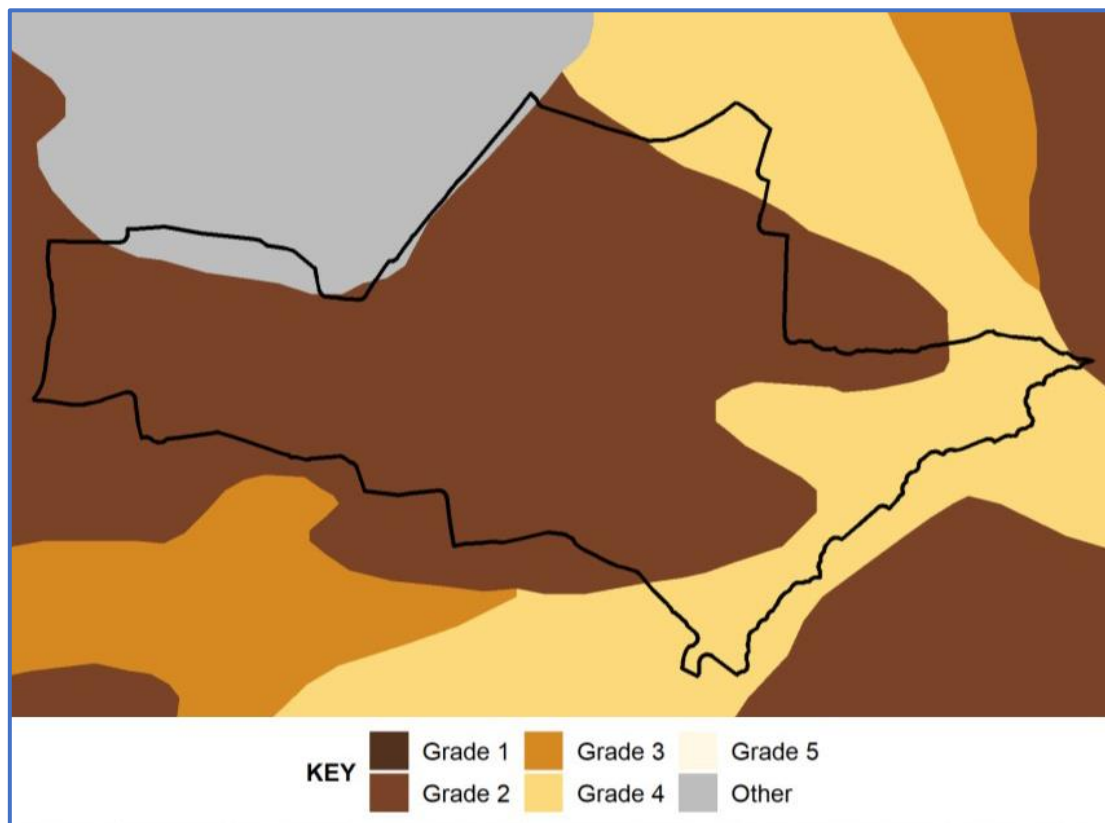
Alluvial Lowlands: regular fields with both arable cropping and pasture; densely scattered hedgerow trees of ash and willow; dense willow corridors bordering ditches.

These descriptions are generally applicable to East Hagbourne with the qualification that the range of tree and hedge species is wider, including poplar (some pollarded) and aspen, mature hawthorn in a number of places, and occasional apple, plum, walnut and oak. A notable feature is the number of mature field maples.

These landscape types are reflected in the soil conditions, with highly productive Grade 2 arable land predominantly in the Lowland Village Farmlands, and less productive land in the Alluvial Lowlands as shown in Figure 5 below from the Oxfordshire Treescapes Report: East

²² <https://www.northwessexdowns.org.uk/wp-content/uploads/2021/11/Landscape-Character-Assessment-8-DOWNS-PLAIN-AND-SCARP.pdf> (See pages 161-164).

Hagbourne Parish 2022. A mix of arable and grazing use is found in both areas, with trees and high hedges more dominant in the lowlands and wider open country on the farmlands.



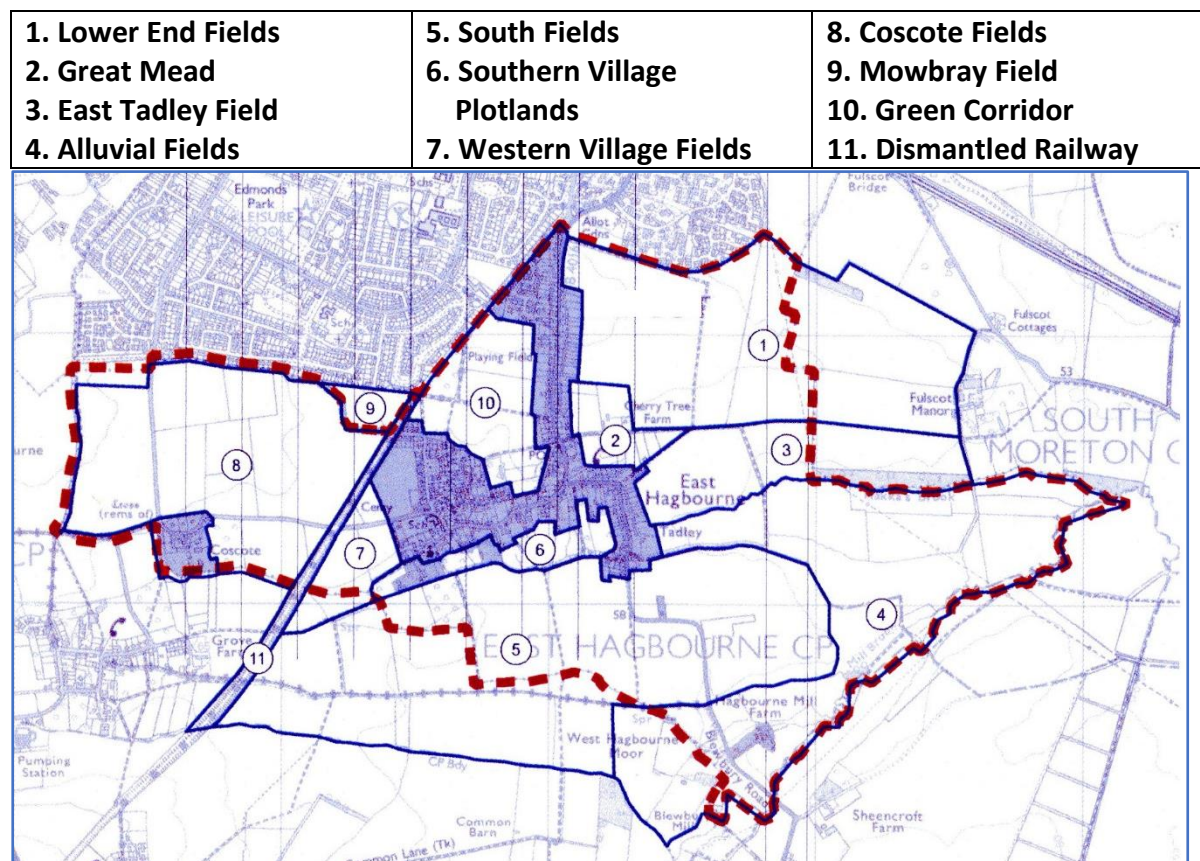
This map incorporates natural capital data from the Environmental Change Institute (University of Oxford) and biodiversity data supplied by the Thames Valley Environmental Records Centre (TVERC) which is copyright to TVERC and/or its partners.

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Figure 5. Agricultural land in East Hagbourne parish

5. A Strategy for East Hagbourne

The Green Buffer Study analysis divided the parish in 11 landscape areas and made outline recommendations for conserving tranquillity, views, waterways, public footpaths and existing vegetation. These 11 areas, shown in Figure 6, provide a convenient basis for this closer evaluation of biodiversity opportunities.



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Figure 6. Landscape areas identified in the Green Buffer Survey.

The Treescaping Guide produced by Oxfordshire Treescape outlines a range of possible ways to improve diversity in the landscape, which provide a useful checklist to evaluate in the context of East Hagbourne²³.

The categories, with additional comments, are:

Woodland	Look for opportunities for new tree planting. e.g. widening existing tree belts.
Boundary trees	Fill in gaps along streams, field boundaries, trackways.
Hedgerows	Allow existing hedgerows to grow taller; identify non-intrusive locations for new hedges,
Grasslands	Explore increasing diversity of existing grassland. Field edge wildlife areas.
Orchards	Look for relict orchard sites that could be restored.
Agro-forestry	Would depend on farmer interest.
Wildlife corridors	Explore hedges or grassland along footpaths to link existing sites.

To these should be added care of waterways and the urban environment.

²³ <https://www.oxtrees.uk/the-treescaping-guide>

The suitability of these options will vary in different areas of the parish, not least because they must be compatible with landowners' needs, but also to respect valued landscape and views and to promote the engagement and benefit of local people. The comments below assess our wildlife opportunities firstly by area and secondly by the different options for wildlife enhancement. The boxed text then highlights these opportunities, options and recommendations for development or initiatives in our Neighbourhood Area.

5.1. Review of the parish by Area

The areas where long views to the open countryside are most important are:

Area 1 (Lower End Fields) This area is designated as a Local Gap in the EHNP, because of the wide views and the separation it provides between East Hagbourne and Didcot. The area in the north-east corner slopes down towards Didcot, so does not partake of the long views to the same extent.

Area 5 (South Fields) Long views to the North Wessex Downs AONB to the south and west with longer views to the Chilterns to the east, which are highly visible from FP12 (Fieldside) and the network of paths to the south as well as from the elevated position of the railway embankment. The Moor Lane track to the south (mostly in West Hagbourne parish) has many fine mature trees. HEG/HUGS have been active over the years adding to and renewing the plantings, but there is scope to do more.

Area 8 (Coscote Fields) These are again designated as a Local Gap in the EHNP because of its expansive, open landscape with panoramic views across and into the area. Highly visible from the footpath along its northern edge and from the railway embankment as well as from the roads.

Views - Areas 1, 5 and 8

Opportunities and recommendations: Tree planting in these areas is undesirable unless it is to sensitively extend existing rows or groups of trees, particularly on the lower lying lands where they do not impede views. Sensitive hedge planting may be appropriate, but the open, wide nature of the countryside should be respected. Opportunities to enhance grasslands would be welcome.

Areas 2 (Great Mead), 3 (East Tadley Field) and 6 (Southern Village Plotlands) also contain views that are cited as important. However, the views here are in many cases more intimate and the landscape already benefits from trees and tall hedges. The area includes the Recreation Ground which has some fine trees around the field maintained for football.

Areas 2, 3 and 6

Opportunities and recommendations: The existing trees and tall hedges should be valued and conserved. Views remain important in these areas, but sensitive planting of trees or hedges should be considered, particularly where it reinforces established planting structure e.g. along trackways or waterways. Initiatives to enhance grasslands would be welcome.

Area 4 covers the **Alluvial Fields**, extending through the lower lying lands to the south beyond Moor Lane and into West Hagbourne and Blewbury parishes. From Hagbourne Mill, the area covers the land bordering the Mill Brook, a chalk stream which rises in Blewbury and forms

the parish boundary through to the far eastern tip of the parish. The landscape is varied, with grazing land to the south and an area of unimproved grassland and woodland in Blewbury parish close to Hagbourne Mill where there is a managed willow plantation. The field south of Hagbourne Mill is also under grass. Arable land becomes more predominant as the land rises to the north and east. There are wide views out to the North Wessex Downs AONB from FP19 (the Papermill path) and across fields to the north, with small patches of woodland visible - notably woodland at the Papermill site and to the south and two belts of trees following the northern bank of main channel of Hacca's Brook. FP19 itself, together with the linking FP16 has mature vegetation that has high scenic value as well as some biologically diverse spots. Tall hawthorns line the whole of FP19, interspersed with blackthorn and some taller trees including maple and apple. The section close to Blewbury Road retains relict woodland flora in places, while the grass verges on the section beyond FP16 have a good range of flowering plants. Both banks of the Mill Brook are well vegetated, providing a fairly broad wildlife corridor, supplemented by grassland strips along the edges of the arable fields on the Blewbury side. Many of the poplars have been pollarded and there is some new hedge planting at the eastern end of the parish.

Area 4

Opportunities and recommendations: The long-range views from FP19 remain important and are not impeded by trees growing on the lower lands around the Mill Brook. Overall, this is a varied landscape, with opportunities for more trees and hedges, particularly to strengthen the existing structure along tracks and water courses, fill gaps and provide continuity as trees age. There are some areas of diverse ground flora which could be enhanced.

Area 7 (Western Village Fields) is situated at the western end of the built village and extends from the cemetery with its mature trees and wildflower meadow and Hagbourne School playing field south to Shovel Spring with its trees and other vegetation. It is currently managed as grassland and retains well-preserved ridge and furrow, with some fairly tall hedges along its eastern and southern edges as well as along Main Road. It forms an important part of the rural village setting with the view from the railway embankment towards the church and Manor Farm being particularly attractive. The area includes the Hagbourne School playing field. The older cemetery area has a diverse flora while the newer area includes a wildflower meadow established about 25 years ago and managed by HUGS.

Area 7

Opportunities and recommendations: This area is a smaller scale and enclosed rural landscape, which is important to the setting of the village and contains a number of wildlife assets. Further improvements e.g. through allowing hedges to grow more freely, diversifying grassland flora and managing the area around Shovel Spring are encouraged. The school playing field area is quite large and could provide opportunities for tree/shrub planting or grassland improvement while preserving its function.

Area 9 (Mowbray Fields) lies in Didcot parish, but is important to the setting of the village, lying next to Butts Piece and the Millennium Wood. It is an attractive area widely used by walkers and with considerable wildlife interest. It contains a grassy general recreation area with some trees and an area left to grow as a wildflower meadow. The more marshy spill pond area is floristically rich and has been designated since 2000 as a Local Nature Reserve. It is home to five species of orchid including a large colony of marsh and common spotted orchids,

but numbers have fluctuated over the years as the vegetation has grown. Earth Trust manage Mowbray Fields on behalf of SODC and have prepared a Management Plan²⁴.

Area 9 (Mowbray Fields)

Opportunities and recommendations: Proposals have been made to further extend the uncut grassland area and these are encouraged. The marsh area would benefit from maintenance to restore a more open habitat as outlined in the management plan.

Area 10 (the Green Corridor) is the third of the Local Gaps designated in the EHNP to preserve the soft transition between East Hagbourne and Didcot and to maintain the setting of the village. It is a diverse area, covering the paddocks along Baker's Lane (designated as a Local Green Space in the EHNP), across a former arable field now used for ponies and other diverse activities to Didcot's Millennium Wood and to the north, the playing fields of St Birinus School. To the west, the area includes Butts Piece, owned by the Parish Charities and managed by the Parish Council as allotments, a grassy recreation area and a 'wild' area of scrub and trees. There are many tall hedges in the area, particularly around the two triangular paddocks used for horses. The open fields including the Local Green Space along Bakers Lane are under grass and used for horses and other animals. There are just a few relict orchard trees in the area. The area immediately adjoins the railway embankment and Mowbray Fields providing a broad corridor of wildlife interest. Hagbourne Environment Group and its successor HUGS have worked to improve diversity in the area, including tree and hedge planting and grassland improvement in the Butts Piece area and the Parish Council has carried out maintenance work on the row of trees to the south of Millennium Wood along FP5.

Area 10 (the Green Corridor)

Opportunities and recommendations: The tall hedges in the area should be valued and conserved. New hedge planting is encouraged where appropriate. The Millennium Wood has grown well and is now ready for some judicious thinning to encourage a richer ground flora.

Area 11 is the Railway Embankment. There is much to value in this Local Wildlife Site. The area is sympathetically managed by Sustrans as a walking and cycle route and for its rich grassland habitat (extending south into West Hagbourne and Upton). Incorporating chalk excavated from cuttings through the downs, the land supports a good chalk flora with good colonies of butterflies. These are surveyed by Butterfly Conservation volunteers who are also engaged in management of the habitat. Scenically, it is very important for giving access to wide views. There are scattered trees, including walnut, apple and cherry which are frequented by birds including chaffinch in spring.

Once an industrial construction, the embankment has become today a valuable recreational resource giving access to the wide views, attractive flora and productive brambles. Sustrans and volunteers carry out systematic maintenance to prevent the grasslands reverting to scrub and HUGS is working to enrich the grassland on selected areas at the northern end adjacent to Butts Piece. This is one of the more biodiverse assets in the parish and we encourage continued efforts to maintain and improve it.

²⁴ <https://www.southoxon.gov.uk/wp-content/uploads/sites/2/2022/02/Mowbray-Fields-Management-Plan-2020-2025.pdf>

Area 11 (the Railway Embankment)

Opportunities and recommendations: We encourage sensitive maintenance to conserve and enhance this biodiverse asset.

The built environment

Although the focus of the Green Buffer Study is the wider countryside, from the perspective of wildlife and biodiversity, the built environment is equally important. Although the village has a rich historical legacy, it is not static and many of the green areas that form the setting of the village today have been planted in recent decades. Notable among these are Didcot's Millennium Wood, trees along New Road and FP5, willow tree planting at Hagbourne Mill and trees behind the former Spread Eagle. Hedges have been introduced over many years, many of these by HEG/HUGS along tracks and other accessible areas, but also by landowners. The adoption of the railway embankment by Sustrans has brought these important grasslands under more systematic management. At the same time, many trees have been removed from gardens in the village as they mature and owners seek a more open garden setting. The need for off-road parking has resulted in loss of some lawn areas under hard paving. These trends are countered to some extent by new garden planting by residents. Over the past three years, HUGS has provided trees for planting in village gardens as well as hedging plants for the wider countryside and in addition stewarding the installation of owl nesting boxes across East and West Hagbourne, some in gardens.

The extensive area along Hacca's Brook where it passes through the village comprises gardens, some untended land and pasture. This area, together with the Local Green Space known as Lawson's Orchard provide spaces where human pressure is less and there are places for wildlife to thrive. The small green area at Ryman's Crescent dates from a time when housing densities were less intense and is being developed by HUGS to diversify the flora, in conjunction with the owners, SOHA.

Many houses in East Hagbourne, even beyond the historic village core benefit from generous sized gardens and these provide a great resource, not just for the enjoyment of residents, but for the encouragement of wildlife.

One area where the built environment impacts on wildlife is light pollution. Artificial light at night has been linked to the decline in insects and disrupts the behaviour of nocturnal species such as moths and bats²⁵.

While street lighting in new developments is a factor, insensitive lighting outside houses can be very intrusive and impact both people and wildlife. Guidance on controlling light pollution is included in the new EHNP Design Guide (ref EHNP Appendix 11).

There is a new awareness among many residents of the value of wildlife and the part our gardens can play in supporting diversity, from wildflowers to pollinators and in some cases mammals and aquatic life. At the same time, more area is being hard surfaced for car parking and mature trees are being lost.

²⁵ <https://www.rhs.org.uk/wildlife/garden-lighting-effects-on-wildlife>

The built environment

Opportunities and recommendations: We support efforts to increase public awareness of the value of their gardens for wildlife. Mature trees should be retained and valued wherever possible. Opportunities to increase biodiversity in our public spaces and along pathways should be explored. Householders should be encouraged to be sensitive in their use of outdoor lighting and to remove excessive or poorly designed lighting.

5.2. Opportunities for biodiversity improvement

A first priority is to value & conserve our existing trees, shrubs and hedgerows. Annual trimming of hedges and trackway trees is necessary in a farming environment, but should be carried out sensitively to avoid damaging existing vegetation.

In this section, the opportunities for different interventions in the landscape, trees, hedges etc are summarised.

Trees. Tree planting is being promoted as one of the ways to combat climate change, because growing trees capture and store carbon dioxide from the atmosphere. However, the solution is not easy, because the number of trees that would be needed to offset our carbon emissions is huge and other efforts including the shift to renewable energy are equally important. Furthermore, what and where we plant is just as important as the number of trees and trees, once planted, need to be cared for²⁶.

Our open country is appreciated for its scenic value, but also as highly productive farmland. Extensive tree planting on the village farmlands would detract from these important values. On the alluvial lowlands, to the south into WH and Blewbury/Upton and in the east of East Hagbourne, there is more opportunity. The landscape here is more enclosed and there are existing woodland areas which could be expanded. In both areas, opportunities exist in strengthening and extending networks along tracks and stream channels, using a mix of native species that contribute to wildlife habitat.

Equally important is to value & conserve, maintain, and if necessary, replace ageing trees. There may be opportunities to broaden boundary tree belts and those along tracks and waterways.

Opportunities and recommendations: Considering the value of trees for wellbeing, opportunities for small groups of trees in appropriate locations adjacent to footpaths would be welcomed, perhaps providing small oases, as in the Shovel Spring area. There may be opportunities to broaden boundary tree belts and those along tracks those along tracks and waterways.

We support selective tree planting where it provides biodiversity, respects the scenic landscape and views and is compatible with farming needs. New plantations of single species are not appropriate.

Hedges. Healthy hedges can provide floristically rich wildlife corridors and have the advantage that they can develop much faster than trees. There are many tall hedges in the parish which

²⁶ <https://www.zurich.com/en/media/magazine/2021/can-reforestation-uproot-climate-change>

provide a haven for birds and other wildlife, notably around the Butts Piece area, Great Mead and along footpaths 16, 18 and 19 to the east of the village. New hedges have been planted recently, for example in Coscote Fields, Butts Piece along FP18, along Moor Lane and in the east of the parish - a combination of work by HUGS and landowners. Elsewhere, there are some hedges that are kept more closely trimmed. Wildlife could benefit if these were allowed to grow more freely and gaps filled to provide more continuous corridors. Examples include to the south of the church, Manor Farm Lane and some roadside hedges.

Opportunities and recommendations: We welcome new hedge planting where it is sympathetic to the landscape, and particularly encourage the repair and improvement of existing hedge lines.

Grasslands. Species-rich grassland can be a resource for native flora and also home to invertebrates and the small mammals that are food for owls and other species, so complementing the work on installing owl boxes. There are many areas of grassland in the parish and the adjoining lands mainly to the south. Some of those used for farm grazing may be short-term leys, with limited species diversity. Other areas, used for ponies, may be less intensely managed and there are some areas e.g. south and west of Hagbourne Mill that are potentially richer. Land that has previously been used for arable crops is likely to contain high levels of nutrients. The experiences with the wildflower meadows at the cemetery and at Mowbray Fields show that it takes many years and much effort to control those plants that dominate in rich soil and to create a wider diversity. Nevertheless, there are some areas of pasture and private grassland that could potentially be improved if compatible with the owners' needs. Nationally, there is interest in allowing roadside verges to grow more freely, to provide a network of diverse flora for pollinators. This concept has been tried in a few select places in the parish, but generally the verges here, both within and beyond the village are too narrow to be managed safely and easily. Encouraging people to diversify the flora in their garden lawns may be more effective. However, although 'no mow' has become a mantra, taken to extremes this just produces rank grass. To achieve diverse grassland requires proper management including sensitive timing of cutting to avoid harming small animals, invertebrates or plant diversity. There are some species rich areas along footpaths, and carefully extending these could be an effective way to increase grassland diversity. The railway embankment provides our most valuable existing grassland asset. Being composed partially of chalk extracted from the downs, it supports a good chalk flora, particularly at the southern end towards West Hagbourne and Upton.

Opportunities and recommendations: Grassland exists all around us in larger fields or smaller patches including in gardens. We encourage efforts to increase native flora in these areas and provide habitat for invertebrates and small mammals.

Arable Land. Arable land, by its nature, is devoted to crop production and this generally involves extensive use of fertilisers, pesticides and in some cases herbicides. As a result, much of the traditional arable 'weed' population has been eliminated, with only a few persistent species like speedwell and field pansy surviving. Any drift of pesticides, herbicides and even fertilisers can have a devastating effect on insect and plant life on adjoining areas including grass strips along footpaths and controlling these chemicals is most important to help biodiversity. Although crops can be grown right up to field boundaries, any strip that can be left, however narrow, can allow some of these species to survive. The new UK Environmental Land Management Schemes (ELMS) are still under development, but there are good examples on the Blewbury side of the Mill Brook where existing schemes have been applied

to provide grassland boundaries around fields and to plant seed plants which support winter birds. ELMS will encourage farmers to use land management and cropping systems which reduce harmful emissions to the air and to water courses and also support interventions to support wildlife and improve the resilience of farmland. Closer to home, our vegetable gardens are mini-fields and we do not have to apply so many chemicals. Close observation should reveal a range of species seeding naturally, some of which may be worth retaining.

Opportunities and recommendations: Avoid spray drift of pesticides, herbicides, fertiliser onto adjacent verges. Make spaces available for wild plants and insects where possible.

Orchards. A look at the OS maps from the 1930s shows that much of the land in East Hagbourne was formerly orchard, benefitting from the potassium-rich 'Harwell Series' soils. Most of these once extensive orchards have been removed, but there remain a few relict trees. Their conservation and enhancement and new planting by sympathetic landowners are encouraged. Community Orchards have been created in a number of villages, providing social and wellbeing benefits for the community as well as refuges for wildlife. The historic link with fruit growing makes this an attractive concept for EH if a suitable piece of land close to the village and secure from mischief could be acquired for public use.

Opportunities and recommendations: We encourage the retention and care of relict orchard trees where they still exist and the planting of new orchards, particularly if they can be in publicly accessible locations.

Waterways.

Our waterways, comprising the Hacca's Brook network and the Mill Brook along the south-east boundary of the parish are an important both for our landscape and for wildlife. Flooding has been a problem for some areas of the village, and water quality is vulnerable to sewage overflows and agricultural run-off as reported in section 4.3. Anecdotally, the occurrence of fish in Hacca's Brook has declined sharply within living memory.

The stream banks are important for their both for their scenic and wildlife value and provide ready-made wildlife corridors if sensitively maintained.

Opportunities and recommendations: We encourage continued management of stream vegetation to avoid flooding. More vegetation along stream banks could slow field run-off as well as providing valuable wildlife corridors. Monitoring of the water quality and aquatic life is encouraged to better understand and improve the health of our streams.

Wildlife Buffers. The wildlife assets of East Hagbourne are mostly concentrated along waterways or trackways and are closely surrounded by agricultural land or built development. The resilience of the areas can be enhanced and extended by providing buffer zones to increase the habitat suitable for wildlife and mitigate nutrient run-off into waterways, following the concept of 'Recovery Zones' as shown on the NRN map (Figure 1).

Opportunities and recommendations: We encourage enhancement and expansion of habitats alongside watercourses that would mitigate nutrient impacts and around these and other wildlife assets to enhance and extend biodiversity value.

Wildlife Corridors. The combination of a green nucleus around the historic village and the existing pattern of trees and vegetation concentrated along waterways and historic trackways means that we already have the making of a good wildlife network, but there is no doubt that both the quality and the extent of the network could be improved. Suggestions have been made above about how existing corridors could be 'thickened'. There are also some areas where new corridors could be added to the network, notably footpaths 14 and 25 across South Fields and footpath 24, north from Great Mead towards Didcot. These all lie in open areas with wide views so are perhaps less suited to hedges than to grassland. It is suggested that the existing grass strips might be protected and diversity encouraged, and that if possible they could be widened. As noted above, footpaths are important for people as well as wildlife. A good experience will enhance people's wellbeing and also encourage them to value and care for the nature around them.

While not directly related to biodiversity, our footpath network could be enhanced by safe foot routes connecting Coscote with East Hagbourne and connecting Hagbourne Mill to FP135/20 along the Mill Brook, where people currently have to walk along the road.

Opportunities and recommendations: We encourage protection and enhancement of the vegetation along all footpaths to increase diversity and the enhancement of key routes to provide new and expanded habitats. We applaud those people who regularly pick up litter around our parish and those responsible dog owners who clean up after their pets.

Community Engagement. Our local environmental group, the Hagbournes and Upton Group for Sustainability (HUGS), is already active in engaging people in local wildlife efforts, through newsletters and work parties and liaison with schools. This work is doubly beneficial: it increases awareness of our local wildlife and what we can do to care for it, and it improves the landscape in ways that benefit people as well as wildlife. Most practical work takes place on the footpath network or other publicly accessible sites. The footpath network could be further enhanced by providing landmark features, whether they be trees or other features including interpretation boards explaining local features.

6. Next Steps

This report has been prepared as part of the East Hagbourne Neighbourhood Plan and its first application will be to inform the 2023 update of the Plan.

We hope the strategy will prove useful for landowners and others who are considering actions to increase biodiversity, and that it will lead to a better understanding of parish assets, so that stakeholders can work together to coordinate actions and interventions which support nature recovery in the parish and involve adjoining parishes where appropriate.

14/07/2023