A Nature Recovery Framework for Charlbury, Fawler & Finstock

The Land and Nature Group (LNG)

A Working Group of Charlbury Town Council

February 2024

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Background

This Nature Recovery Framework (NRF) sets out a series of steps to protect and enhance nature across the three parishes of Charlbury, Fawler and Finstock, following decades of decline. The Land and Nature Group (LNG), a Working Group of Charlbury Town Council, recognise that the framework is work in progress and will require extensive consultation within the wider community before it can be approved and adopted. The LNG request, therefore, that the framework is considered by Charlbury Town Council and approved *subject to further consultation*. Following consideration this (or an amended version) will be distributed to other participating councils (Fawler and Finstock)[1], before being forwarded to the county as a contribution towards the emerging Local Nature Recovery Strategy (LNRS) for Oxfordshire.

The LNG was established in 2019 and played a key role during the Climate Emergency Meeting held in Charlbury Memorial Hall in February 2020. At this meeting the Town Council took the decision to tackle the twin emergencies of biodiversity loss and climate change.

Habitat & Species loss

While there is little hard data on the scale of biodiversity loss around Charlbury, trends here are likely to be in line with the national picture. Recent studies point to a grim picture of decline over the last few decades, for example:

- Nearly half (48%) of UK bird species showed a decrease in population between 2015 and 2020, with farmland species the worst affected;[2]
- The UK's flying insect population has fallen 60% in less than 20 years (2004-2021);[3]
- Average abundance of wildlife has declined 13% since the 1970s;[4]
- The UK is ranked as one of the most nature depleted countries in the world (in the bottom 10%) having lost nearly half its wildlife and plant species since the Industrial Revolution.[5]

Climate change

The impacts of climate change continue to impact on wildlife in the UK[6], driven by a combination of more extreme weather, warmer, wetter, winters and hotter, drier, summers. The resulting shifts in climate may favour those southern species that are able to move north but less mobile species will be unable to adapt. Equally important is the role of land use for climate change mitigation. Woodland, hedgerows and wetlands sequester (draw down) and store carbon; by increasing the area of these and other habitats we can improve the carbon 'budget' of the region.

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[1] Participating Town or Parish Councils are to be determined by Charlbury Town Council and formally invited; ideally these represent a manageable cluster of parishes with similar aspirations, challenges and characteristics.

[2] https://www.gov.uk/government/statistics/wild-bird-populations-in-the-uk/wild-bird-populations-in-the-uk-1970-to-2021

[3] https://cdn.buglife.org.uk/2022/05/Bugs-Matter-2021-National-Report.pdf

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

[5] https://www.nhm.ac.uk/press-office/press-releases/natural-history-museum-reveals-the-world-has-crashed-through-the.html

[6] Morecroft, MD & Speakman, L, (2015). Biodiversity Climate Change Impacts Summary Report. Living With Environmental Change. ISBN 978-0-9928679-6-6 copyright © Living with Environmental Change.

Policy context

A number of significant policy initiatives have emerged in recent years, including:

1. 30:30. The national target to ensure that 30 percent of the land area in the UK is good for wildlife by 2030[7].
2. The Environmental Land Management Scheme (ELMS): funding for farmers across three tiers to enhance wildlife.
3. Local Nature Recovery Strategy (LNRS)[8].

These policy initiatives are likely to shape regional and national action on nature recovery for decades to come. It makes sense, therefore, for the NRF to sit within this policy context.

The development of this NRF was helped significantly by the Oxfordshire Treescapes Project[9,10], who provided a template of the key stages involved in a parish-based NRF. We have used this template to guide its development, including key aims and objectives:

Aims:

- promote and support nature recovery by increasing the quality and extent of habitats where plants and animals can thrive.
- consult widely with the local community, including landowners/mangers, to develop a long-term plan for nature recovery.
- inform and educate by explaining the need for nature recovery and the challenges and opportunities facing the local environment.
- ensure that nature recovery is a significant consideration in planning.
- promote the NRF as an exemplar for other parishes in the county, and nationally.

Objectives:

- collect and map the most important wildlife/habitats to establish a *baseline* against which to monitor future trends.
- work towards creating a 'blue-green' corridor along both sides of the Evenlode River and its tributaries.
- establish *targets* for the expansion/restoration of valuable and typical habitats of the area, based on the best available data.
- identify *opportunities* for nature recovery and to establish a dialogue with landowners/managers to encourage them to manage land for nature recovery, including the introduction of regenerative agriculture.
- create a 'Nature Hub' providing information about best practice, the challenges facing wildlife, visibility and open access to data relating to the status of local wildlife and habitats and to help co-ordinate and promote wildlife enhancement/recovery projects.

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[7] House of Lords, 2023. Environment and Climate Change Committee 2nd Report of Session 2022–23, HL Paper 234, *An extraordinary challenge: Restoring 30 per cent of our land and sea by 2030, p.67.*

[8] Defra, 2023. https://www.gov.uk/government/publications/local-nature-recovery-strategies-areas-and-responsible-authorities

[9] Oxfordshire Treescapes (undated). *Treescapes Guide*. p. 66;

[10] Oxfordshire Treescapes. *Ten steps to creating a parish nature recovery plan: An introduction to our easy-to-use template and set of supporting tools.*

- publicise best practice and achievements of the local farming community.
- encourage residents, including children/young people, to participate in surveys and nature improvement projects as part of a strong citizen science initiative.

The Context: Landscape & History

The area is mixed arable farming and lies entirely within the Cotswolds National Landscape. The landscapes of this part of West Oxfordshire are typical of the Cotswolds, characterised by a limestone/sandstone bedrock upon which have developed shallow, lime-rich soils on the valley sides and slightly acid-loamy and clayey soils with impeded drainage along the River Evenlode. The majority of the land area of the two parishes is used either for livestock grazing or arable farming (84 percent; Table 1). A large proportion of this agricultural land is under some form of conservation agreement, e.g. Countryside Stewardship. The new Environmental Land Management Scheme (ELMS) will replace existing conservation agreements, with the opportunity to fund a range of environmental improvements.

Land cover	Area (ha)	Percent
Woodland	156.159	8
Arable	1265.14	64
Pasture	395.471	20
Built-up	163.065	8
Total	1984.523	100

*Table 1. The proportions (ha & percent) of the four main land cover types in Charlbury, Fawler & Finstock [**source:** https://land.copernicus.eu/en/products/corine-landcover].*

The topography, geology and soils in combination with the long history of agricultural settlement gives rise to four distinctive Landscape Character Types (LCTs). LCTs can be used to guide change in the countryside, integrating important historic features (field and settlement patterns, tree cover and farm size/tenure) that are often overlooked, as well as the physical landscape (soils, geology, topography)[11]. The description, map and key characteristics of the four landscape types that cover the three parishes summarised in APPENDIX A, are based on the recently updated Landscape Character Map for Oxfordshire[12].

Local Characteristics

At a more detailed scale, the three parishes contain some important local features of wildlife interest.

River valley and margins:

Probably the single most distinctive zone warranting priority for both aquatic and riparian wildlife. There is also the potential for restored riparian buffers to reduce run-off from agriculture and for

[11] Warnock, SJ & Griffiths, GH, 2015. Landscape characterisation: The living landscapes approach in the UK. *Landscape Research* 40, 261–278.
[12] Oxfordshire County Council (unpublished?)

increased public access. Particular emphasis is given to the 'Blue-green' corridor, identified in the Charlbury Neighbourhood Plan[13].

Farmland

Predominantly arable with some permanent pasture and dispersed woodland. Included in this category are the hedges and walls bounding fields and a significant area of uncultivated field margins. Here, government policies designed to reward landowners for environmental enhancement may provide significant opportunities for wildlife enhancement based on our engagement with landowners. The linear features (walls/hedges) are critically important for wildlife, often acting as refugia in otherwise intensively farmed arable fields and as corridors to help plants and animals move across the landscape.

Built-up

Gardens and green spaces are important for wildlife but often overlooked. They provide habitats for a range of plants and animals if managed for wildlife:

- Pollinating insects
- Garden birds
- Small mammals
- Ponds for aquatic life

Woodland

As one of the most wooded areas of Oxfordshire, groups and individual trees (including aged and veteran trees, often associated with historic parkland), hedgerows, coppices and woodlands make a fundamental contribution to the landscape and character of the three parishes, as well as having their own intrinsic beauty and value.

The Nature Recovery Baseline

The NRF is an aspiration rather than a *concrete plan*, in recognition that nature recovery is the work of decades that will need updating as circumstances change. The starting point is a baseline of 'natural assets', the type and extent of habitats that sustain wildlife and the 'natural capital' (or ecosystem services) that benefit people.

Sites of Wildlife importance:

It's important to establish a baseline of species (what/where) and habitats (type/distribution) for two reasons:

- As part of the design of the final Nature Recovery Plan (NRP): we need to know what type of habitats and wildlife are typical of the region and to ensure that they are protected and enhanced.
- To measure and monitor change in the future: to what extent have interventions to protect and enhance wildlife helped.

[13] Charlbury Neighbourhood Development Plan 2031, p.128.
https://www.westoxon.gov.uk/media/0pthvr5t/made-charlbury-neighbourhood-plan-2031-14-06-2021.pdf

The map of habitats (Figure 1) is a combination of data from the Thames Valley Environmental Records Centre (TVERC), the Natural England Priority Habitats Inventory (PHI) and new photointerpretation of Bing/Google aerial imagery, principally to add detail and fill in gaps. The classification of semi-natural habitat types[14] is based on the UK Habitats (UKHab) typology[15].

Table 2 shows the extent of different habitats across the three parishes. An estimate of the confidence (accuracy) with which these habitats can be mapped is shown by the 'Confidence /Comments' column. Where we have strong confidence in the accuracy of the mapping 5 stars are given, and vice versa. 'Reedbeds', for example, are difficult to interpret accurately from aerial imagery and will require field-checking; by contrast 'Gorse scrub' has a distinctive 'look' and can be interpreted easily. A key part of the mapping is based on local knowledge, although it is acknowledged that *further ground-checking* will be needed as part of a citizen science initiative.

The data are summarised in the pie-chart (Figure 2), which shows the size distribution of the different semi-natural habitats across the three parishes. Mixed, mainly broadleaf woodland and Neutral grassland are dominant. In addition to hedgerow trees, there are estimated to be more than 800 isolated trees.

Hedgerows

Surveying the extent and condition of hedgerows is time-consuming and difficult, although members of LNG have been undertaking hedge surveying with guidance from Wild Oxfordshire for the last 2 years. The three parishes are fortunate in that many of the hedgerows were surveyed by the late Alan Spicer in the 1980s, providing a useful baseline against which to measure change. Recently however, new technology has enabled the width and height of hedgerows (and the location of both hedgerow/isolated trees) to be mapped from drone[16] and satellite imagery. The Land & Nature Group are fortunate to have access to hedgerow data mapped by Google (Figure 1) provided by courtesy of Alison Smith at the Leverhulme Centre for Nature Recovery, University of Oxford[17]. From this mapping we estiamte that there are approximately *72km of hedges* and *46km of overgrown hedges* (>10m width). In addition, there are estimated to be 175 hedgerow trees. The overgrown hedges in particular, represent an important habitat for wildlife, both in their own right and acting as corridors for the movement of plants and animals across the landscape. They are also a significant carbon store. Survey work has started but more will be needed to determine the condition of a sample of hedgerows before recommendations for management (e.g traditional hedge-laying) can be made. There is also the opportunity to re-plant hedgerows that have been lost. Two sources of information will be used to identfy sites for hedge repalcement: the recent Treescapes Reports for the three parishes and historical early edition OS maps from the 1840s onwards.

[14] Generally, we refer to 'semi-natural' habitat types in recognition that most have been modified by human activity.
[15] ukhab.org
[16] With thanks to Gary Harrison for the provision of drone imagery at sample sites
[17] Stop Press: The Centre for Ecology & Hydrology (CEH) have just published a new map of the type and alignment of hedgerows across the UK from LiDAR imagery, and we anticipate that we will have access to these data in due course.

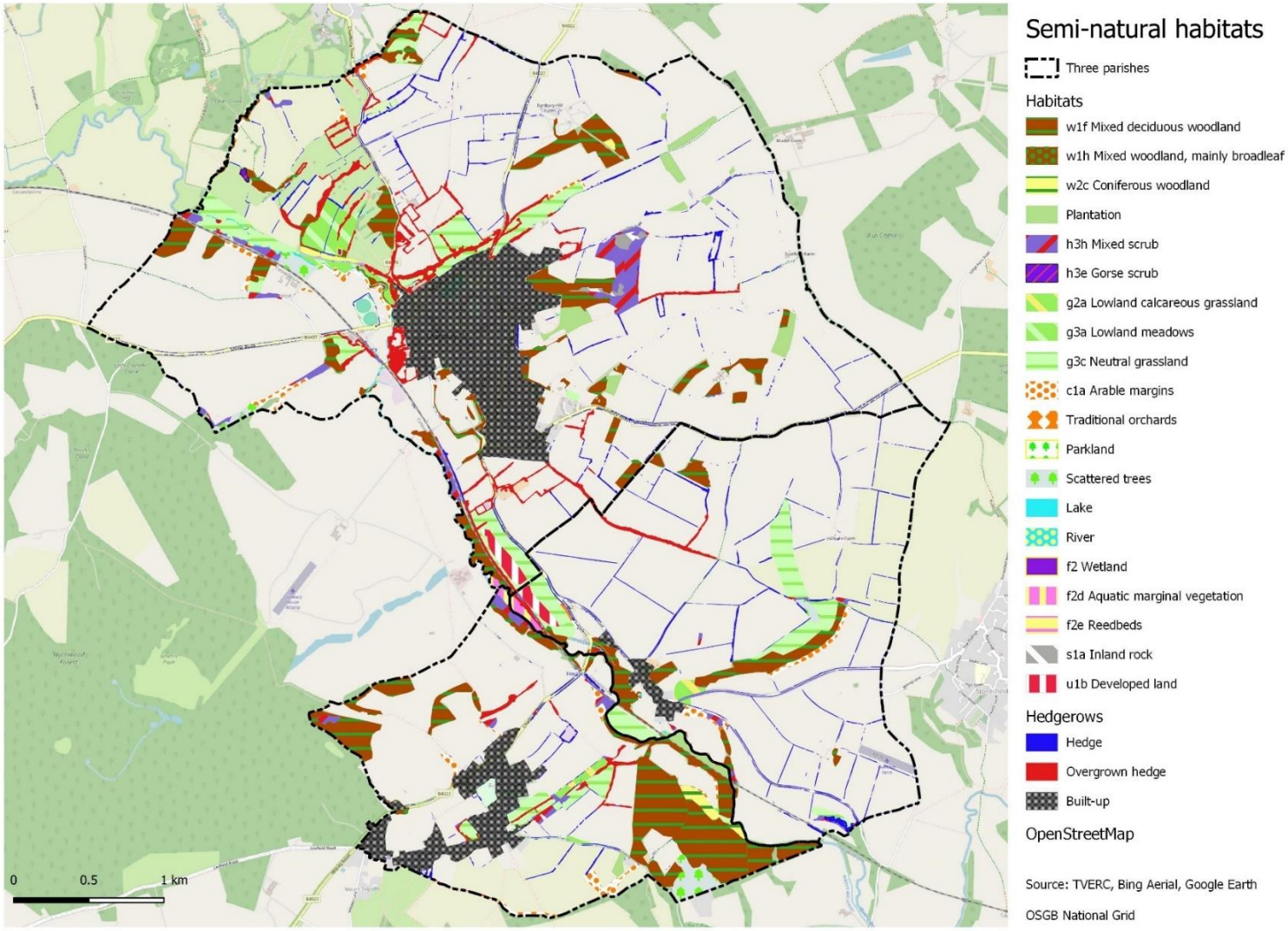

*Figure 1. Semi-natural habitats. [**source:** TVERC; Natural England PHI; photo-interpretation Bing Aerial]*

Land cover	Sum of Area (ha)	Area (percent)	Habitats only *	Confidence	Comments
Mixed woodland, mainly broadleaf (w1h)	0.91	0.05	0.05	**	Not identified to species
Mixed deciduous woodland (w1f)	150.18	**7.57**	7.57	***	Ok, but work needed to determine proportion s of broadleaf:conifer mix
Scattered trees	10.27	0.52	0.52	*****	Very easy to interpret from APs
Traditional orchards	0.31	0.02	0.02	***	Known locations
Plantation	13.19	0.66	0.66	****	Regular pattern of trees indicates recent planting
Neutral grassland (g3c)	71.97	**3.63**	3.63	**	Field survey needed for confirmation
Lowland meadows (g3a)	11.25	0.57	0.57	**	Definition problematic
Lowland calcareous grassland (g2a)	5.97	0.30	0.30	*	Requires field survey for confirmation
Gorse scrub (h3e)	0.28	0.01	0.01	*****	Local knowledge confirms status
Mixed scrub (h3h)	25.97	**1.31**	1.31	**	Field survey needed for confirmation
Wetland (f2)	0.12	0.01	0.01	**	Small areas, difficult to interpret
Reedbeds (f2e)	1.53	0.08	0.08	*	Difficult to interpret; relies on local knowledge
Aquatic marginal vegetation (f2d)	2.53	0.13	0.13	*	Very small extent
Standing water	0.06	0.00	0.00	****	Small ponds may be missed
River	5.54	0.28	0.28	***	Overhanging trees obscure alignment
Inland rock (s1a)	1.84	0.09	0.09	****	Very easy to interpret from APs; Charlbury Quarry only
Total	**325.08**	**15.22**	**15.21**		
			*excluding field margins; developed land and coniferous woodland		

Table 2. The area (percent/ha) of semi-natural habitats across the three parishes [source: TVERC; Natural England PHI; photo-interpretation Bing Aerial]

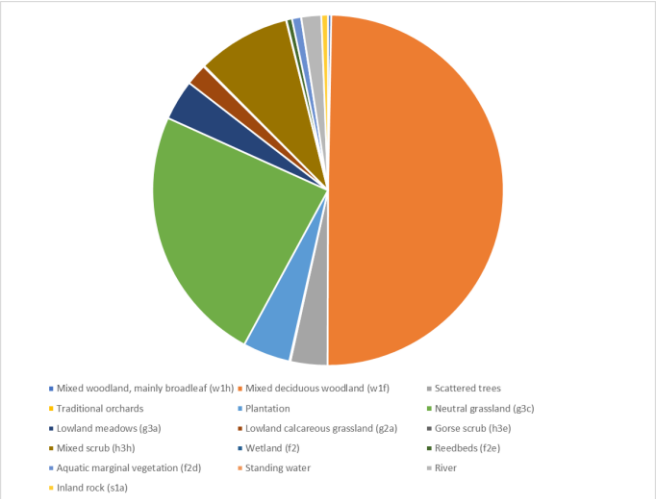

Figure 2. The size distribution of different semi-natural habitats across the three parishes.

About 15 percent of the land area of the three parishes is classified as semi-natural habitat with potential wildlife value, although this varies depending upon factors such as type, age, area, management and connectivity. Whilst extensive field survey would be required to compare the biodiversity value of different patches of semi-natural habitats, recent work at The University of Oxford[18] uses a scoring system that maps the relative differences.

Species

Data on protected and notable species (2000 – 2023) were obtained from TVERC (Figure 3Figure 3). The map is at broad species level, including over 700 records comprising about 120 different species (Table 3).

[18] Smith, A. 2024. *Agile NBS opportunity maps: user guide*. The Agile Initiative at the Oxford Martin School Sprint 3: Scaling up Nature-based Solutions in the UK, Environmental Change Institute and Nature-based Solutions Initiative, University of Oxford. V0.2, 2 January, 2024

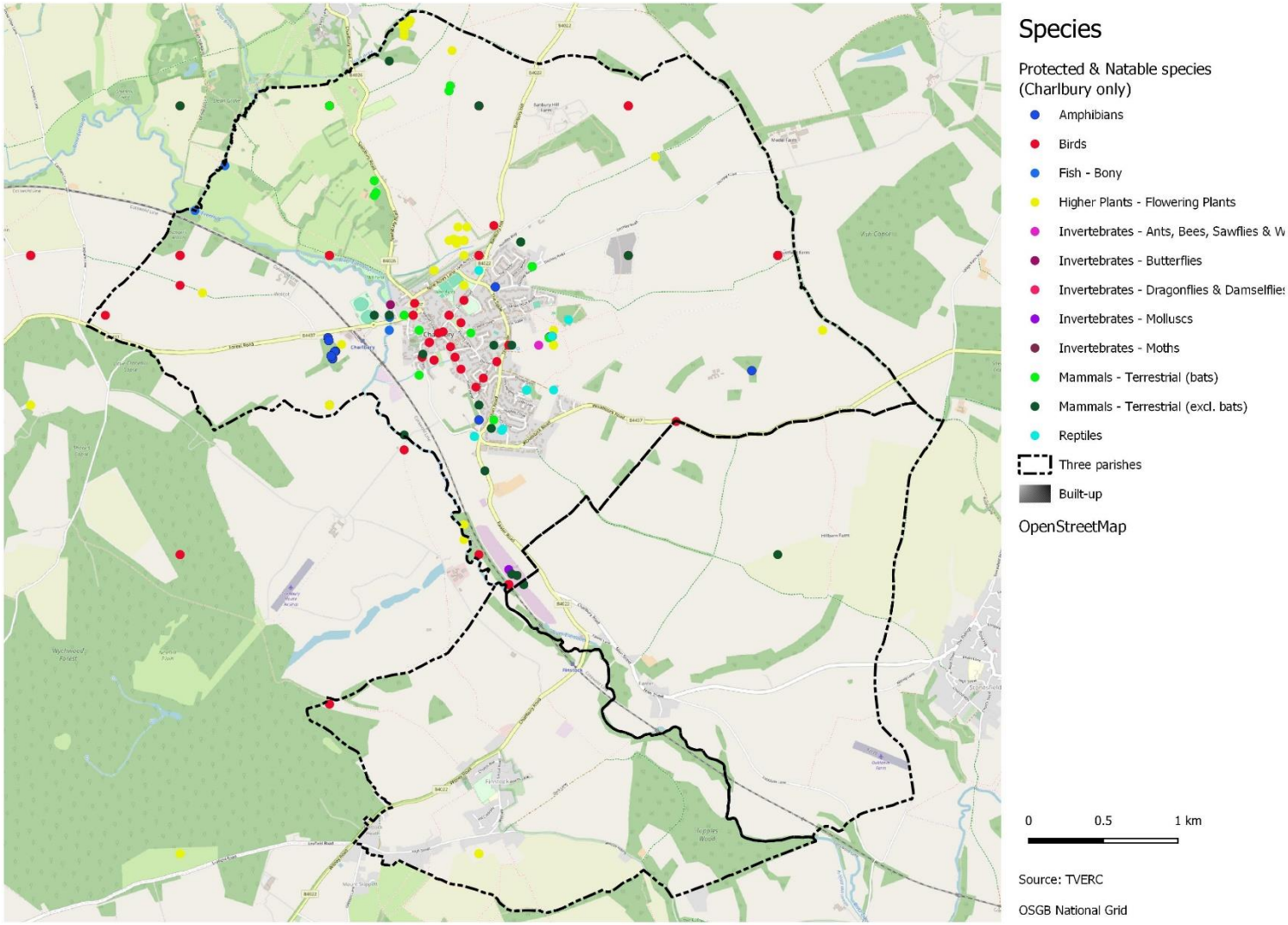

*Figure 3. Broad level species records for the three parishes [**source:** TVERC].*

Note the strong distribution bias in and around Charlbury, reflecting higher recorder effort close to where people live. In general, the data are probably not a good reflection of 'what's there' and more systematic recording of the diversity (number of different species) and their abundance (a count of the number of individuals of each species) is needed (see APPENDIX C).[19]

Taxon	Number of species in each taxon
Amphibians	69
Birds	417
Fish - Bony	13
Higher Plants - Flowering Plants	90
Invertebrates - Ants, Bees, Sawflies & Wasps	1
Invertebrates - Butterflies	5
Invertebrates - Dragonflies & Damselflies	3
Invertebrates - Molluscs	3
Invertebrates - Moths	2
Mammals - Terrestrial (bats)	52
Mammals - Terrestrial (excl. bats)	24
Reptiles	27
Total	706

Table 3. The number of Protected or Notable species in each species group recorded in Charlbury (only) between 2000 – 2023.

Natural Capital

The so-called 'natural capital' of land provides a range of benefits to people, including among others: flood mitigation; food provision; space for public access and recreation and carbon storage (for climate change mitigation).

Whilst the NRF focuses on nature recovery, we are aware that as the quality and area of semi-natural habitats improves, there are important co-benefits. For example, work funded by SusCha enabled the LNG to do a preliminary carbon survey of three selected sites in Charlbury (Wigwell, Southill Solar and The Mill Field) to determine whether overall the sites were negative (storing more carbon than emitting) or positive (emitting more carbon than storing)[20].

We can also draw on work and data from elsewhere[21] to produce maps of natural capital. The example in Figure 4 illustrates the variation in biodiversity values[22] and the storage of carbon in tonnes of carbon/hectare(tC/ha). Note the importance of woodland and, to a lesser extent permanent grassland, and the synergy between high biodiversity values and high levels of carbon storage.

[19] A butterfly survey was started at the Wigwell Nature Reserve in summer 2023. There are also several other surveys underway (Appendix C).
[20] Gregory M, Griffiths G & Miller A (2021). Carbon landscapes: mapping the carbon balance at sites in Charlbury.
[21] Smith A (2024). *Agile NBS opportunity maps: user guide. The Agile Initiative at the Oxford Martin School Sprint 3: Scaling up Nature-based Solutions in the UK*, Environmental Change Institute and Nature-based Solutions Initiative, University of Oxford. V0.2, 2, January 2024.
[22] Calculated using the Defra biodiversity metric

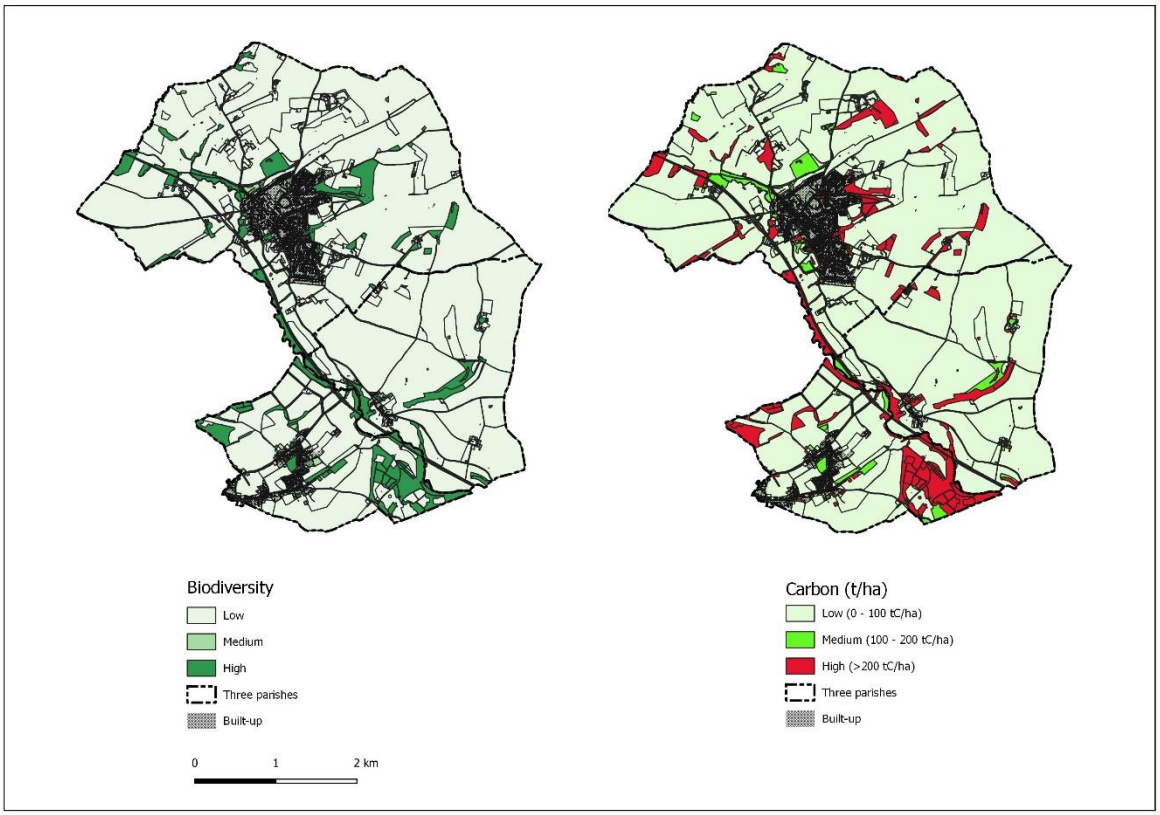

*Figure 4. Biodiversity 'values' and carbon storage (tC/ha) across the three parishes [**source**: Alison Smith, ECI, Oxford].*

The Nature Recovery Framework

In addition to the baseline of wildlife sites and natural capital, nature recovery must also incorporate a range of other *factors* that influence the *opportunities* for achieving agreed *targets*. Some of the key factors are listed, below:

- the extent and distribution of *protected sites/networks*
- supporting *ecological principles*
- patterns of *land ownership*
- *planning legislation & policy* context
- the *views of local people*, including landowners/managers

Protected Sites

National designations

The extent and type of nature protection designations across the three parishes is relatively limited. Finstock has one small Site of Special Scientific Interest (SSSI) for Broadleaf, mixed and yew woodland (part of Wychwood[23]; condition: 'unfavourable recovering'). Charlbury has one SSSI centred on the Town Quarry designated for geological interest and Fawler also has one SSSI, a dry valley of Limestone grassland and Broadleaved, mixed and yew woodland (condition: 'favourable') (Figure 5).

[23] Wychwood is a National Nature Reserve (NNR).

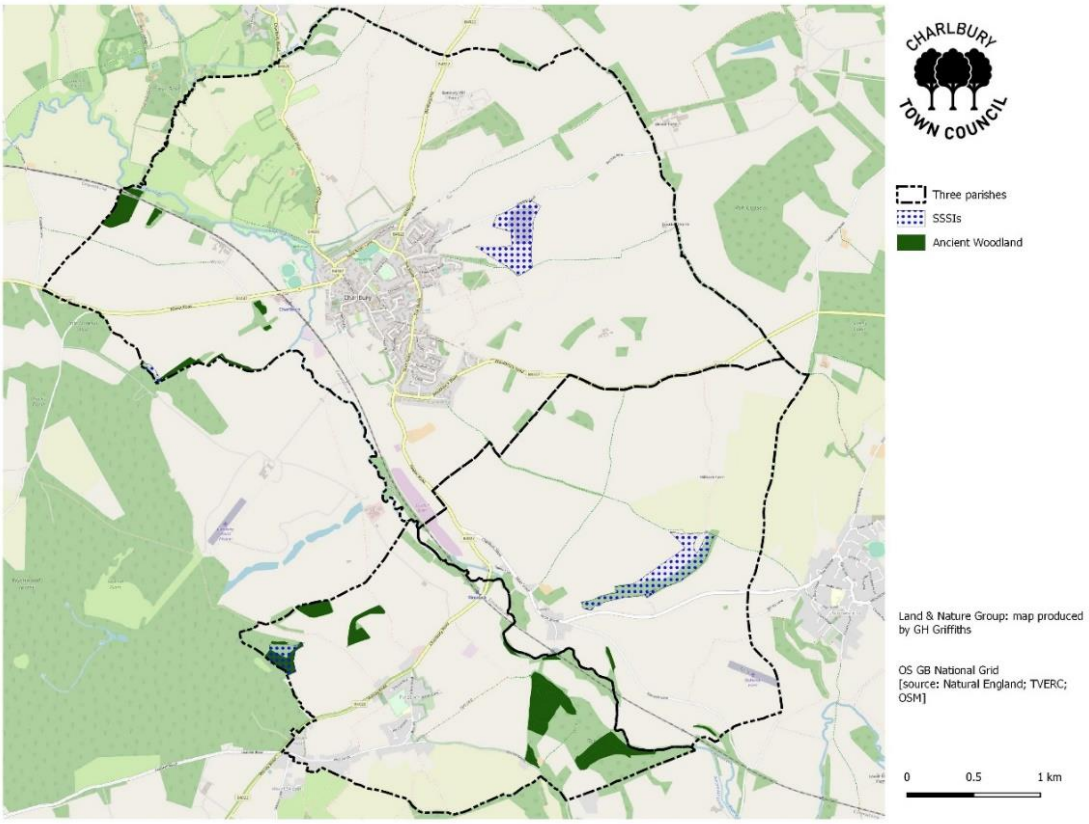

Figure 5. SSSIs and Ancient Woodland across the three parishes.

Local nature reserves

There are two categories:

1. Local Wildlife Sites (LWS) (Table 4)
2. Local Nature Reserves: two officially designated Local Nature Reserves, The Saltway and Blenheim Farm.

Local Wildlife Site	**Parish**
Taston Brook and Springs	Charlbury
Wigwell	Charlbury
Bridgefield Bank & Brake	Fawler
Palmers Bank	Fawler
Lady Grove	Finstock
Langland Farm Meadows	Finstock
Finstock Valley - NE section	Finstock
Topples Wood	Finstock

Table 4. Local Wildlife Sites in Charlbury, Fawler & Finstock

Additionally, a large proportion (54 percent) of the area of the three parishes is part of Countryside Stewardship (to be superseded by the Environment Land Management Scheme). The majority are in the 'Middle-level' tier or under 'Woodland Management'.

Gardens

Gardens are often overlooked as a wildlife resource, despite the fact that their combined area is greater than all of the National Nature Reserves in the UK and, for the most part, they are valuable for wildlife especially when viewed as a combined area. Approximately 8 percent of the area of the three parishes is built-up, of which at least one third is likely to be open space or gardens. There is a wonderful opportunity here for residents to become involved in citizen science projects to collect information on wildlife in their gardens. Indeed, there are already surveys underway on hedgehogs, house martins and swifts that are building up a long-term picture of decline of these charismatic species in the urban landscape.

Nature Recovery Network

The development of a draft Nature Recovery Network (NRN) map was undertaken collaboratively by a partnership of local nature conservation organisations, led by TVERC, Wild Oxfordshire and BBOWT, overseen by Oxfordshire's Biodiversity Advisory Group (BAG) and adopted by the Oxfordshire Environment Board (OxEB). Extensive consultation with a wide group of stakeholders ensured that the map has been scrutinised by the wider environmental community in Oxfordshire.

The concept of a Nature Recovery Network (NRN) is simple. Existing protected sites represent the best areas for wildlife, and they should form the core of any network. But to support nature's recovery action is required to extend and link these existing sites.

Superimposed onto this network are Conservation Target Areas (CTAs). The NRN and CTAs however, do not indicate that all of the land within the designated area is in favourable condition for wildlife; simply that these are priority areas for action and to be considered for statutory planning (Figure 6).

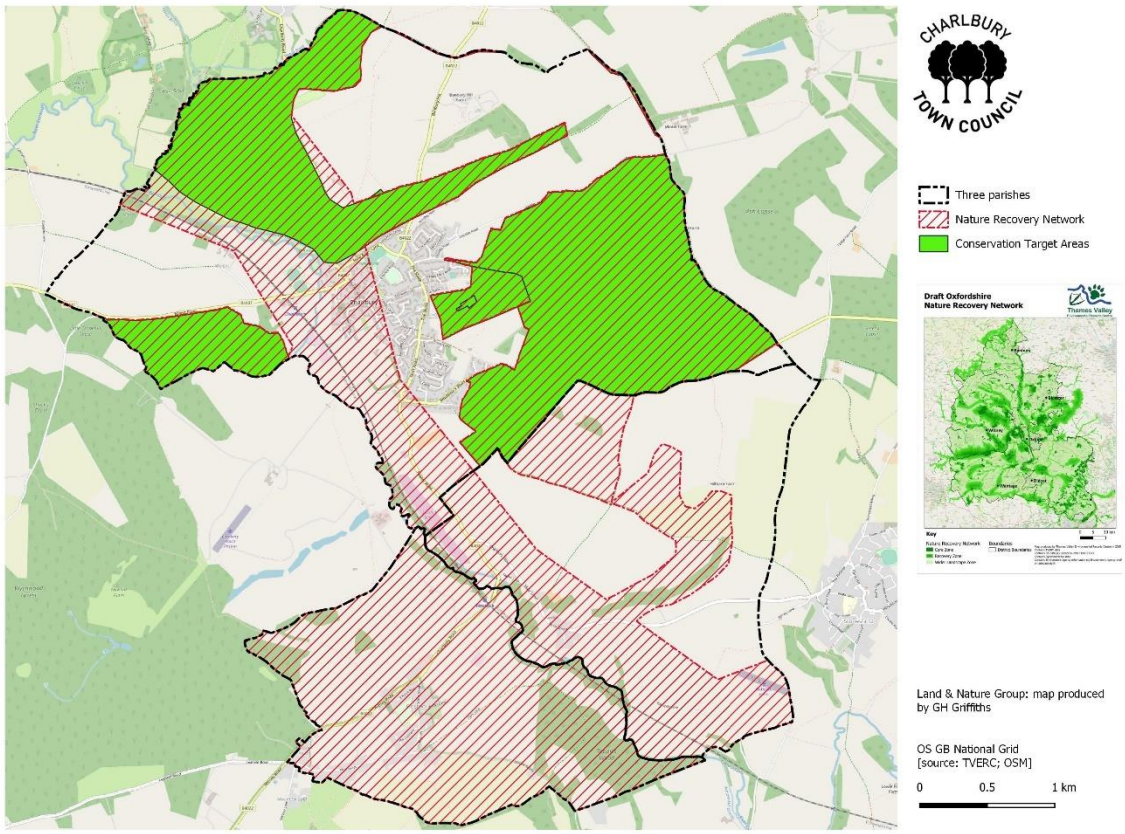

Figure 6. Nature Recovery Network and Conservation Target Areas.

Land ownership

Also important is the relationship between habitat area and land ownership, as some land holdings will have much more habitat than others depending upon location, history of land management and the type of farm business. Figure 7 shows how, for the largest (non-urban) landowners in the three parishes, the amount of semi-natural habitat varies considerably between landholdings. Where the area of semi-natural habitat is high, the focus could be on restoration and management; conversely, where extent is limited, there may be more opportunities for habitat expansion and connectivity.

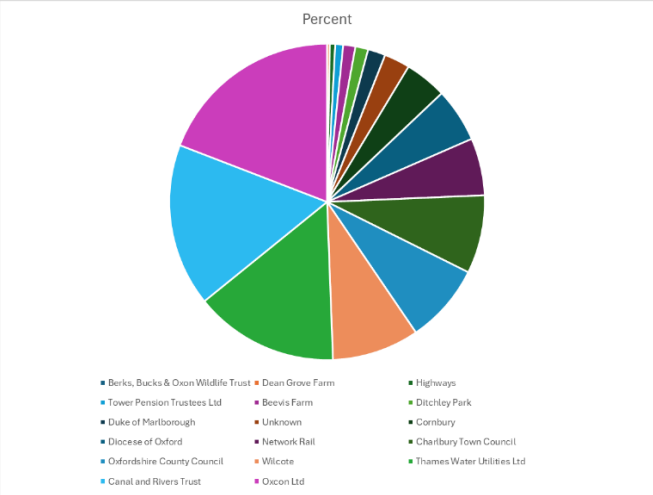

Figure 7. The percent of all mapped habitats by landowner (mostly non-urban).

Ecological principles

In recent years ecology has moved from a site-based to a landscape approach, in recognition that ecological processes operate across the whole landscape, rather than in isolated patches. This innovative approach informs opportunities for wildlife benefit, principally, the expansion and linking of habitats via *corridors* and *stepping stones*.

Planning legislation

The policy and legislative context are constantly changing as government struggles with replacing the Common Agricultural Policy (CAP) with post-Brexit regulations that balance the need to produce food with the urgent task of nature recovery and climate mitigation. Parishes will be required to contribute towards the county-level Local Nature Recovery Strategy,[24] a key opportunity to contribute towards county-level nature recovery. A LNRS is designed to, 'to identify locations to create or improve habitat most likely to provide the greatest benefit for nature and the wider environment'. The LNRS at county level will follow a common 'spatial' format, including:

- Agree priorities for nature's recovery.
- Map the most valuable existing areas for nature.
- Map specific proposals for creating or improving habitat for nature and wider environmental goals, in their area.

[24] NLRS is partly designed to work alongside Biodiversity Net Gain (BNG), a planning tool introduced in February 2024 to ensure that new development ensures no net loss of biodiversity.

There are no new enforcement mechanisms, except for two changes to planning procedures: project developers will be required to demonstrate 'biodiversity net gain' (BNG) as a condition for getting planning approval and local planning authorities must factor biodiversity issues into their decision making.

Public consultation: the views of local people

Having established a baseline of wildlife (habitats, species, hedgerows) as the 'building block' of nature recovery and considered other factors for nature recovery, the next and critically important step will be extensive *public consultation* to establish a *vision* for the landscape across the three parishes: what do local people want the landscape to look like in 20 or 30 years' time and what type and abundance of wildlife? The public consultation will need to incorporate views from landscape to local scales and ultimately, will lead to the development of a Nature Recovery Plan (NRP).

Landscape scale

We have begun to think about how this vision might emerge at a *landscape scale*, mapping *indicative sites to illustrate* the underlying concept. For example, there are a number of sites that could be restored to Limestone grassland (1, 6 & 5; Figure 8), whilst other sites provide links between existing areas of woodland to form continuous corridors (2, 3 & 4; Figure 8). Again, it is important to stress that these sites are *indicative only* and that, in consultation with landowners, we will identify a list of potential sites as the NRF evolves into a plan.

The concept of a 'Blue-green corridor' was introduced into the Neighbourhood Plan. This reflects the landscape significance of the Evenlode valley and its tributaries. The proposed 'Blue-green corridor', which roughly aligns with the flood zone, has the potential to provide:

- a buffer zone to reduce the input of agricultural run-off into the R. Evenlode
- flood mitigation
- wildlife enhancement, both along the banks of the river and in terms of improved water quality
- improved public access

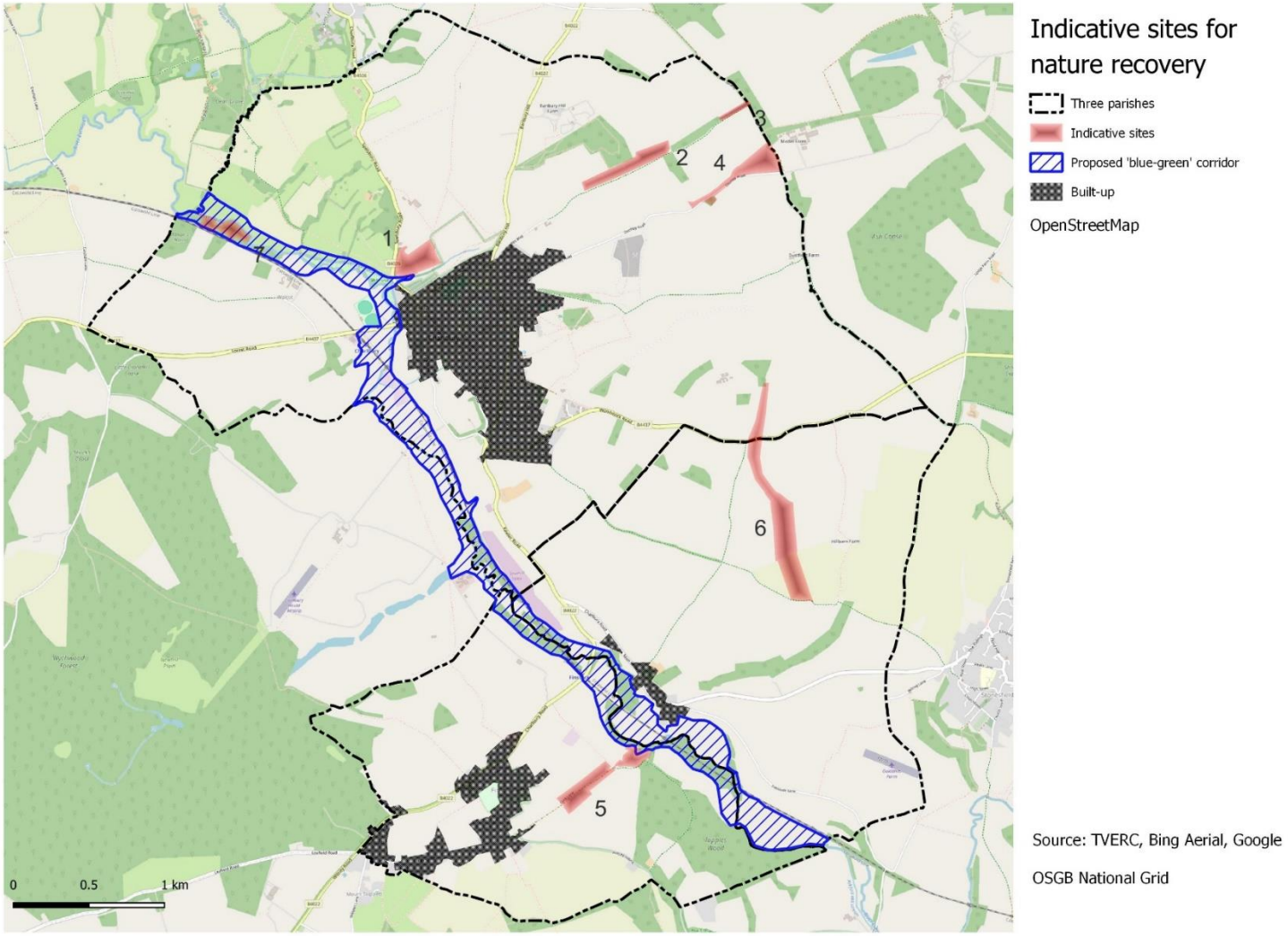

Figure 8. The proposed 'Blue-green' corridor and indicative sites for restoration/expansion, for illustration only.

Local scale

Land manged/owned by a parish council or public body

It is usually easier to obtain permission for a nature recovery project on land that is owned or managed by a parish council or public body. There are several important initiatives underway across the three parishes, including:

1. Mill Field: a collaborative effort within the Town Council for a long-term management plan, including restoration of flower-rich meadow.
2. Wigwell (Wychwood Forest Trust): a management plan to protect and enhance the species-rich grassland and insect diversity.
3. Finstock community orchard and restoration of High Street roadside verge (pending approval by Finstock PC).
4. Southill Solar: long-term plan for a diverse and wildlife rich site.
5. Roadside verge restoration: implementation of a more wildlife-friendly cutting regime[25].

Regenerative agriculture

We are well placed in West Oxfordshire to encourage landowners to move towards a more sustainable form of agriculture. FarmEd (near Chadlington) is a national centre for demonstrating the benefits of regenerative farming and the North East Cotswolds Farm Cluster (NECFC, part funded by Defra) is working with 50+ farms to encourage the uptake of regenerative techniques. In general, regenerative techniques use fewer inputs (fertilisers/herbicides & insecticides), a known cause of insect loss and farmland bird decline.

Significant biodiversity gains are likely to result from incremental changes in farming practise; for example, leaving small areas of scrub or increasing the length and width of field margins. These small 'wins' could make a very significant contribution towards the 30:30 target but, given their small size, are difficult to map as part of the NRF baseline.

Summary and Next Steps

Summary

About 15 percent of the land area of Charlbury, Finstock and Fawler (excluding built-up land) comprises semi-natural habitat with some wildlife value. Our ambition, in line with government policy, is to increase this area to 30 percent, by:

- Expanding and linking and restoring existing habitats, including the 'Blue-green' corridor
- Enhancing the wildlife benefits of existing habitats by improved, long-term management
- Encouraging the introduction of regenerative agriculture to reduce the input of fertilisers/pesticides and herbicides on agricultural land.

[25] A long-term project initiated and developed by Christine Elliot and others, generating a management plan that is constantly being reviewed and updated.

The NRF recognises the important distinction between 'landscape-scale' nature recovery and site-based or 'local-scale' projects. Both have their place but it is likely that local scale projects (for example, the Community Orchard in Finstock planned by Finstock for Nature; tree planting in Fawler) will dominate activity in the short-term, with landscape scale recovery becoming more important as government policy and associated legislation evolves and landowners begin to take up funding opportunities under schemes such as Biodiversity Net Gain (BNG), carbon credits and ELMS (Environmental Land Management Scheme). It is essential therefore, to stress the many activities that do not require big projects or resources but can contribute significantly to nature enhancement. Local examples include such things as wildflower seeding (e.g. Mill Field/Southill Solar), swift boxes, hedgehog mobility, planting of pollinator friendly plants etc. The Charlbury Wildlife Society (CWS) is a good example of how local enthusiasm and good practice can be encouraged and communicated.

Next Steps:

Public Consultation

The NRF is presented here as a *working document*, subject to public consultation. We have introduced some illustrative ideas (the 'blue-green'corridor/indicative sites) that, to some extent, satisfy the factors that determine suitability for nature recovery. There is a lot more work to be done but this type of mapping will be used extensively in public consultation, proving a *focus* for meetings and discussions. In fact, the LNG have already undertaken some consultation with individual landowners and with members of the public, notably at the Riverside Festival on the Mill Field in summer 2023 (APPENDIX D).

It is envisaged that public consultation will take different forms, from public meetings and events (e.g. the Launch event planned for June 2024 at Wigwell) to individual meetings with landowners/managers. An important next step will be to raise funds for different types of public consultation to translate the process of nature recovery into a plan of action envisaged by the local community.

Surveying & Monitoring:

This is a continuous process (see APPENDIX C), and the LNG are developing a plan for systematic surveying of habitats and species across the three parishes, including:

- Key species, e.g. butterfly monitoring already underway at Wigwell to be supplemented with other sites at, for example, Southill Solar.
- Habitats: ground-checking is required to validate the baseline maps of semi-natural habitats, including the all-important assessment of condition.
- Hedgerows: surveying of sample sites is already underway, with data sent to PTES (Peoples Trust for Endangered Species), but more work is needed to expand the number of sites.

Education and Engagement:

One of the most critical additional activities is education and engagement, i.e. promoting awareness of the need for action, demonstrating opportunities for improvement, and encouraging involvement by volunteers (citizen science), with a focus on children and young people. It is also important to publicise details of the many improvements to the natural world (outside this plan) that local people, landowners and estates are already undertaking.

Promotion

There are more than almost 11,000 parishes in England alone, all of which will need to contribute in some way or other to the county-level LNRS process. There are some good examples of Nature Recovery Plans nationally and we hope therefore, that this NRF will add to the growing list across the country to facilitate the sharing of best practise. This will need some degree of promotion, probably as a summary report uploaded to the Charlbury Town Council website.

Developing a plan

Finally, we stress that landscapes are dynamic, and the policy context is continually changing, making it challenging at this stage to develop a concrete plan with specific, detailed proposals for nature recovery. However, based on the '10 Steps to Nature Recovery' (APPENDIX B), we have presented some of the critically important baseline data, identified gaps in the data and

analysed some of the factors (land ownership, public views, ecological principles etc) that will help towards identifying opportunities for recovery across the three parishes. The NRF therefore, sets out a direction *of travel* and a *mechanism* to address the twin challenges of biodiversity loss and climate change.

Ultimately however, we will ned to move from a *process* to a *plan*. This will require extensive public consultation to ensure that the plan both meets any targets set and is informed by the opportunities available for nature recovery across the three parishes of Charlbury, Fawler and Finstock.

Acknowledgements

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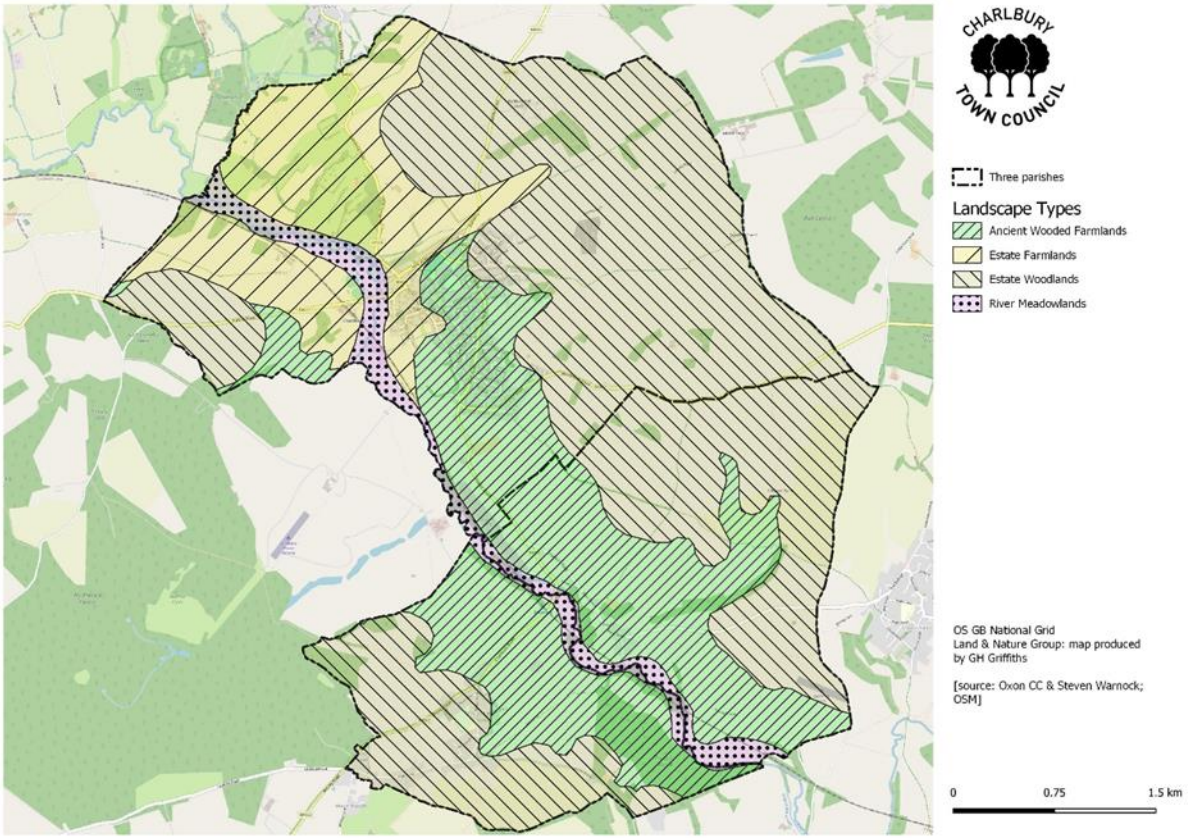
APPENDICES

APPENDIX A: Landscape Character Types



Ancient Wooded Farmlands:

This landscape type includes pastoral and wooded landscapes associated with the steep slopes and valleys of small streams and rivers.

Key characteristics

- Steep sided valleys and slopes.
- Large, interlocking blocks of ancient and plantation woodland.
- Small, irregular fields with localised permanent grassland.
- Tall, thick hedges and densely scattered hedgerow trees.

Estate Farmlands:

This is a rolling agricultural landscape characterised by parklands and a well-ordered pattern of fields and estate plantations.

Key characteristics

- Medium to large, regularly shaped, hedged fields.
- Small, geometric plantations and belts of trees.
- Large country houses set in ornamental parklands.
- Dispersed farmsteads.

Estate Woodlands:

A wooded estate landscape characterised by arable farming.

Key characteristics:

- Rolling topography with localised steep slopes.
- Large blocks of ancient woodland and mixed plantations of variable sizes.
- Large parklands and mansion houses.
- A regularly shaped field pattern dominated by arable fields.

River Meadowlands:

This is a linear riverine landscape with a flat, well defined alluvial floodplain. It has pastoral character with meadows, wet and semi-improved pasture.

Key characteristics:

- Flat, low-lying topography with seasonally flooded alluvial floodplains.
- Meandering river channels.
- Grazing meadows and small fields of permanent pasture.
- Riparian character with a strong pattern of riverside willows and tree-lined ditches.
- Sparsely settled with a few roads.

APPENDIX B: 10 Steps to Nature Recovery

PHASE	STEPS		
First thoughts	1. Request a Treescape Opportunity Report 2. Form a working group		
Early action & stakeholder engagement	3. Explore the parish's existing natural assets, inc nature friendly farming	4. Encourage all individual landowners & farmers to request reports	5. Form a stakeholder group to engage and comment on the maps
Draft and agree the plan	6. Decide the main objectives & content of your Nature Recovery Plan 7. Hold a stakeholder meeting to present and agree on the plan		
Action	8. Write up and agree your plan 9. Finalise and begin to action your plan 10. Conduct an annual review		

*[**Source:** Oxfordshire Treescapes Project]*

APPENDIX C: Wildlife Surveys

1. Butterflies (Wigwell); systematic recording of butterfly numbers and species at the Wigwell Reserve in collaboration with the Wychwood Forest Trust (WFT).
2. Hedgehogs (Charlbury). Initiative of the Charlbury Wildlife Society (CWS) to record sightings of hedgehogs and road fatalities in Charlbury.
3. Swifts and house martin mapping and monitoring
4. River fly monitoring (River Evenlode)
5. Farmland bird counts (Southill Solar)

APPENDIX D: Public consultation

We have presented the concept of the Nature Recovery Framework at a series of events, including Street Fair; Riverside Festival and Earth Day (2023)[26] in Charlbury; Finstock Village Music and Finstock Festival in Finstock. For example, at the Riverside Festival (2023), members of the public were invited to sketch their ideas for nature recovery onto a large-scale map. At least 20 people participated, enabling us to begin to build up a picture of local views, but more systematic consultation will be required as the NRF evolves.

Typical comments written on the map are summarised were often accompanied by an indication of the location, sketched onto the map in pen.

Comments
join woodland
wetland creation
restore floodplain
change to broadleaf woodland
connect and restore flood plain meadows
put hedges back to make smaller fields
clean the river
encourage insects and birds through improved cutting regime
more trees need to be planted
develop as wetland reserve
recognise importance of insect corridors for pollinators
spreading word and involving local farmers
more hedges
change grazing
fish passage
river citizen science monitoring
change to wetland by river

[26] Organised by the Evenlode Catchment Partnership (ECP).

create wet woodland
restoring historic woodland
plant an avenue of trees
create a corridor along river Evenlode

A selection of comments from members of the public about nature recovery at the Riverside Festival 2023.

Comments drawn onto the large-scale map, indicating the ideas of one member of the public for nature recovery in Charlbury.

The comments indicate that members of the public who took part in the survey, had a good understanding of the challenges facing long-term nature recovery.