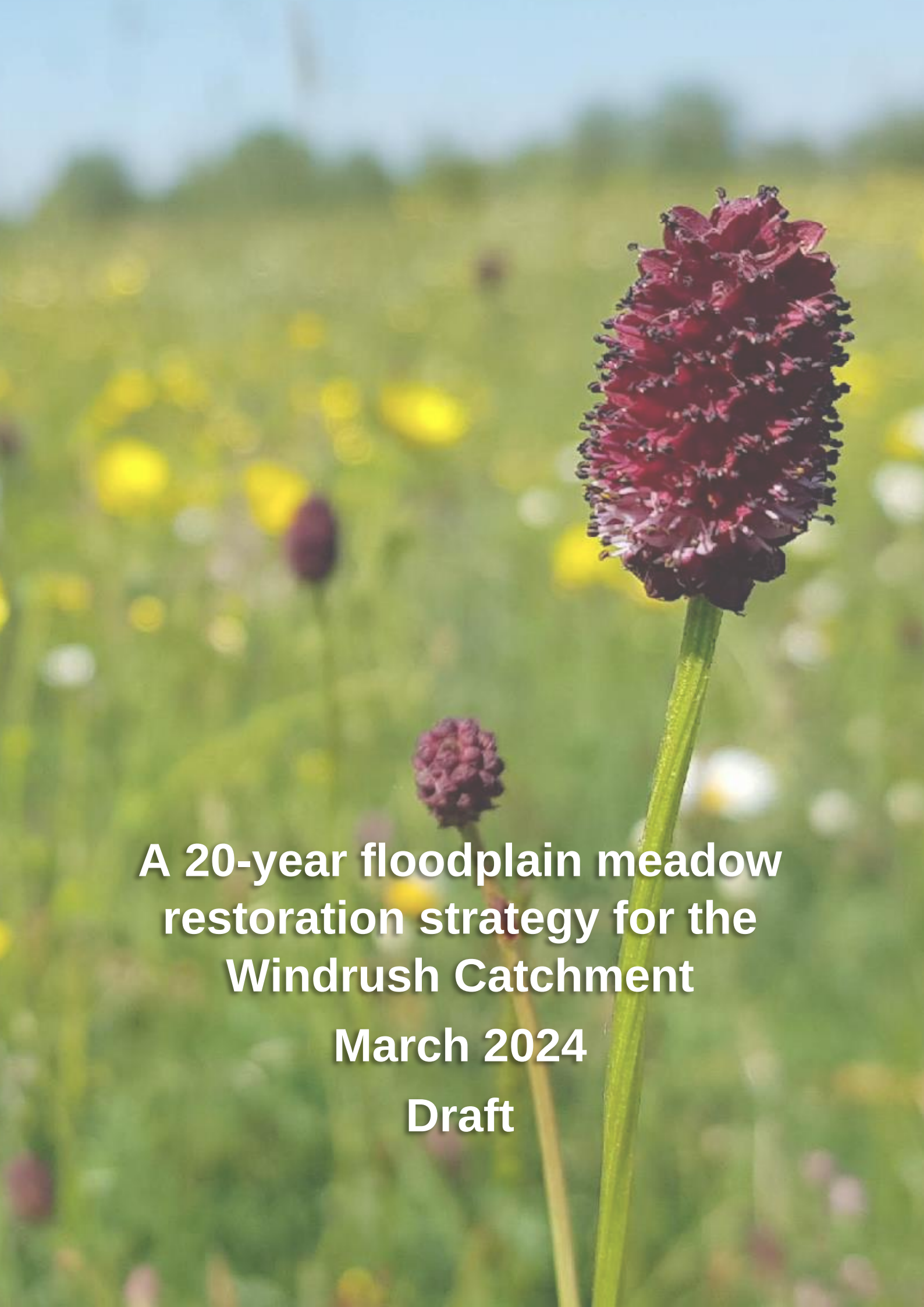

A 20-year floodplain meadow restoration strategy for the Windrush Catchment

March 2024

Draft

Summary

Species-rich floodplain meadows were once widespread in lowland floodplains due to their natural fertility and resulting high agricultural value. However, they are now a rare habitat, reflecting a wider loss of species-rich grasslands across the UK. But despite their rarity, they are now understood to be a multi-functional habitat, delivering a full range of ecosystem-service benefits whilst maintaining agricultural productivity.

The Windrush catchment is recognised as being important for species-rich floodplain meadows, both in terms of existing extent, and potential for restoration. A 20-year strategy for floodplain meadow restoration was therefore funded by the Farming in Protected Landscapes scheme[1].

The strategy is underpinned by an overall vision for the catchment, based on the concept of bigger, better, and more connected habitat networks, delivered through a bottom-up, landowner led model:

By 2045, farmers will have 1,000 ha of floodplain meadow under favourable management, with 60% being species rich, connecting this nationally rare habitat down the entire Windrush valley to deliver multiple ecosystem services at scale as part of viable farm businesses.

This strategy has used data collected through desk and field studies to determine both the existing extent of species-rich floodplain meadows in the catchment and where there is potential for restoration. It has also been informed by a historic land use assessment which determined the historical extent of floodplain meadows for parts of the catchment.

It highlights the range of ecosystem services that floodplain meadows would provide including acting as a nature-based solution for flood storage, nutrient mitigation and soil carbon storage if restored at a catchment scale.

This information has been used to develop a series of criteria based on the physical characteristics that shape whether floodplain meadow restoration is possible, to identify where there are opportunities to restore the target plant communities found on floodplain meadows. It also provides recommendations for filling existing data gaps, funding opportunities and mechanisms for future delivery.

The strategy also identifies how to determine where floodplain meadows are not a suitable restoration objective, and where other land uses and habitats, such as wetlands for waders and wildfowl, may therefore be more appropriate. But at its heart, it assumes a priority of floodplain-meadow restoration due to the importance of the Windrush catchment nationally for this rare habitat.

We would like to take this opportunity to thank all the landowners for working with us on the Windrush Floodplain Meadows project and giving permission to access their land.

[1] https://www.cotswolds-nl.org.uk/looking-after/farming-in-protected-landscapes/

1. Introduction and rationale

Historically, species-rich floodplain meadows were a highly prized land use. Most lowland floodplains were managed as meadows to exploit the natural fertility derived from flood sediments. This fertility combined with traditional management of an annual hay cut in early summer followed by aftermath grazing has resulted over centuries in a diverse plant community which delivers a productive agricultural crop.

The plant species these meadows support are adapted to the range of conditions in a floodplain; they are resilient to extremes of weather, recovering well after flooding and productive in drought thanks to their deep roots and fertile soils. This long-term consistent management has led to a very species-rich plant community, defined in the National Vegetation Classification (Rodwell, 1992) as Burnet floodplain meadow (MG4 *Sanguisorba officinalis – Alopecurus pratensis* grassland). However, just 1,100 ha of this plant community now remains in England and Wales.

As the impacts of climate change are better understood, the importance of the many benefits of species-rich floodplain meadows are clear. This ancient agricultural system offers a resilient and self-sustaining means of food production without the need for chemicals, whilst delivering a range of public goods such as increased biodiversity, soil carbon and floodwater storage, rebuilding healthy soils, and reduced siltation and pollution in our rivers. We believe they should be part of a sustainable future for farming, floodplains, and the wider environment.

The Windrush Valley is recognised as being of importance for floodplain meadows in a national context. This is due to the existence of several key sites, along with suitable soil and hydrological conditions to support restoration of species-rich floodplain meadow vegetation in large parts of the catchment. This recognition has led to a focus for this habitat in the valley to develop this 20-year restoration strategy.

Alongside this there are several critical issues in the catchment that species-rich floodplain meadows may in part help to resolve. The status of the water quality in the Windrush is of great concern and is the subject of several activist groups and citizen science projects. Flooding towards the lower end of the catchment is also an issue. The whole catchment is therefore receiving close scrutiny in terms of land management change, flood protection and pollution prevention.

The previously known extent of this grassland type in the Windrush Valley, of Priority Habitat quality[2] represents 6.5% of the national resource (72 ha). However, given its small size, the valley holds a disproportionate amount of this vegetation, and appears to contain nearly twice this amount with physical properties that identify them as areas that are readily restorable, and significantly more that is restorable in the medium to long term. Historically, a large proportion of the floodplain of the Windrush and its tributaries was floodplain meadow (Firth and Firth, 2024). This combination of extensive historical extent, current extent, potential for restoration, critical catchment-wide issues, and a very engaged land-management community makes the Windrush a top priority for species-rich floodplain-

[2] Priority Habitats are those which have been deemed to be of principal importance for the purpose of conserving biodiversity, being listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, and with maintenance and restoration of these habitats being promoted through agri-environment scheme. A number of datasets from different sources have been used to build the Priority Habitat Inventory

meadow restoration, which if undertaken at scale, will result in significant wider ecosystem-service benefits.

The valley regularly holds a pair of breeding curlews, and we believe with extension of suitable floodplain-meadow habitat which could act as both nesting and foraging habitat, this number could increase. Curlews are now listed as 'Vulnerable to Extinction' in Europe and their breeding numbers have catastrophically collapsed in recent years.

Farmers and land managers are key to a sustainable future of our floodplains, and the bottom-up approach of this project means many landowners are already engaged. The recent increase in number and value of funding options available means that they should now be able to access greater financial support to make changes and restore meadows.

The project is a joint venture between the North-East Cotswold Farmer Cluster (NECFC), the Floodplain Meadows Partnership (FMP), Glorious Cotswold Grasslands (GCG) and the Farming and Wildlife Advisory Group (South-West). It is funded by Farming in Protected Landscapes (FiPL), with support and funding from the cluster membership, Rothamsted Research Institute and the NEIRF2 project, and we would like to take this opportunity to thank all those who have worked with us on the Windrush Floodplain Meadows project.

To develop this strategy, during 2022-2024 the project has:

- Engaged with farmers across the catchment through multiple events.
- Collected data from approximately 900 ha of floodplain grassland to assess existing quality and potential for restoration to species-rich meadow.
- Undertaken flood sediment analysis across the catchment to assess nutrient deposition levels.
- Collected soil samples at 51 locations to assess soil organic carbon, which will complement the cluster members' existing data.
- Undertaken an assessment of historical land use in the floodplain, which has identified that floodplain meadows were a major land use in the catchment.
- Undertaken desktop study of historical wader breeding records to prioritise areas to be considered for restoration for breeding waders.
- Used the data to provide a baseline from which to develop future landscape scale restoration projects.
- Provided data collected to landowners/managers to support them in any future individual funding applications and land management decisions.

The value of floodplain meadows

Floodplain meadows arguably deliver more ecosystem services than any other floodplain land use. In this strategy we focus on thirteen of these ecosystem services, w selected because they have been identified as providing key goods or services by the different land uses found within floodplains or have a negative or detrimental impact on the ecosystem service provided (Harrison *et al*. 2010; Pilgrim *et al*., 2010; Bullock *et al*., 2011; Maltby *et al*., 2011; Quine *et al*., 2011). Floodplain meadows are shown to be able to deliver across 12 of the 13 services identified. If restored at scale they would deliver a range of public goods of great social and financial significance, such as cleaner water, reduced flooding, increased soil carbon storage, enhanced biodiversity, improved connectivity within the landscape, and more pollinator resources. At the same time, they are a productive agricultural system and therefore enable valuable, naturally productive floodplain land to contribute towards food provision and security. Their benefits compared to other floodplain land uses are shown in Table 1.

Table 1. Ecosystem goods and services provided by the broad habitats found within floodplains (+ identified as providing these goods and services; – negative or detrimental effect on ecosystem service) Lawson *et al.,* (2018). Neutral grassland services are highlighted in green.

Ecosystem service provided by floodplains	**Description of the environmental or social goods and services**	**Land Use**					
		Arable and Horticulture	**Improved Grassland**	**Broadleaved and mixed Woodland**	**Coniferous Woodland**	**Neutral Grasslands**	**Fen, Marsh and Swamp**
Food	Agriculture; crop and livestock production	+	+			+	
Fibre	Timber production, reeds & osiers			+	+		+
Mitigation of climate change	Carbon sequestration and storage (soil)	-		+	+	+	+
Pollination of crops	Habitat for pollinating insects			+		+	+
Biological control	Nesting habitat for birds and bats as biological control agents			+	+	+	+
Water quality enhancement	Sediment trapping	-	+	+	+	+	+
Flood risk alleviation	Flood storage (above and below ground)	+	+	+	+	+	
Conservation of genetic resource	Species-rich habitats – high diversity and rare species.			+		+	+
Pollution control	Nutrient Management (nutrient removal through hay cut)	-		+	+	+	

Maintenance of soil fertility	Soil development			+	+	+	+
Cultural history	Strong ‘sense of place’ and social history, nostalgia			+		+	+
Aesthetic	Enhancement of the landscape, intrinsic appeal			+		+	+
Recreation and health	Enjoyment of the outdoors, access to nature	+	+	+	+	+	+

2. Historic and current extent of floodplain meadows in the Windrush catchment

The following maps and tables summarise our survey findings collected during summer 2023, along with the historic extent of floodplain meadows, insofar as it can be gleaned from available digital Tithe maps and early OS maps. Tables 2, 3 and 4 show the extent of existing meadows and grasslands with potential for restoration, historic extent of floodplain meadows and data gaps. Figure 1 shows the area covered by botanical survey in 2023.

Table 2. Extent of existing grasslands of interest and potential for restoration identified in the Windrush Valley (see also Figs 2 and 3).

PHI Assessment	**Area (ha)**
Lowland Meadows Priority Habitat	77.7
Good Quality Semi-Improved grassland (high species richness) (GQSI)	64.7
Good Quality Semi-Improved grassland (moderate species richness)[3]	50.1
Grassland that doesn't meet PHI or GQSI criteria, but is potentially suitable for restoration in medium and long term	463.0
Fields not assessed	145.6
Total	**801.1**

Table 3. Historic extent of floodplain meadows, and extent of existing grasslands of interest on historic sites (see also Fig. 4).

Historic extent of floodplain meadows	**Area (ha)**
Total historic floodplain meadows recorded from accessible tithe maps	1098
Existing PHI and GQSI on historic meadow sites	
PHI	31.0
GQSI (High species richness)	16.4
GQSI (Moderate species richness)	23.2
Total (PHI and GQSI on historic sites)	**79.2**

[3] GQSI grassland forms a component of the Priority Habitat assessment process, whereby grasslands of lower quality than Priority Habitat, but still containing some species of interest, are recognised. As well as being of value in themselves, they should also offer easy win restoration opportunities to Priority Habitat quality. Details of the method can be obtained directly from Natural England and are contained within this report: Countryside Stewardship Baseline Evaluation of Higher Tier Agreements (BEHTA) Manual. Part 2: Sheffield, UK. Natural England, 2016.

Table 4. Extent of floodplain where data gaps exist for botanical interest and historic distribution.

Data gaps	
Floodzone with no tithe (additional historical investigation needed)	717.16
Historic meadows not yet visited for botanical assessment	215.94
Botanically unassessed parcels worth revisiting	65.4

Fig 1: Extent of land in the Windrush and tributaries floodplain covered by the botanical survey in 2023.

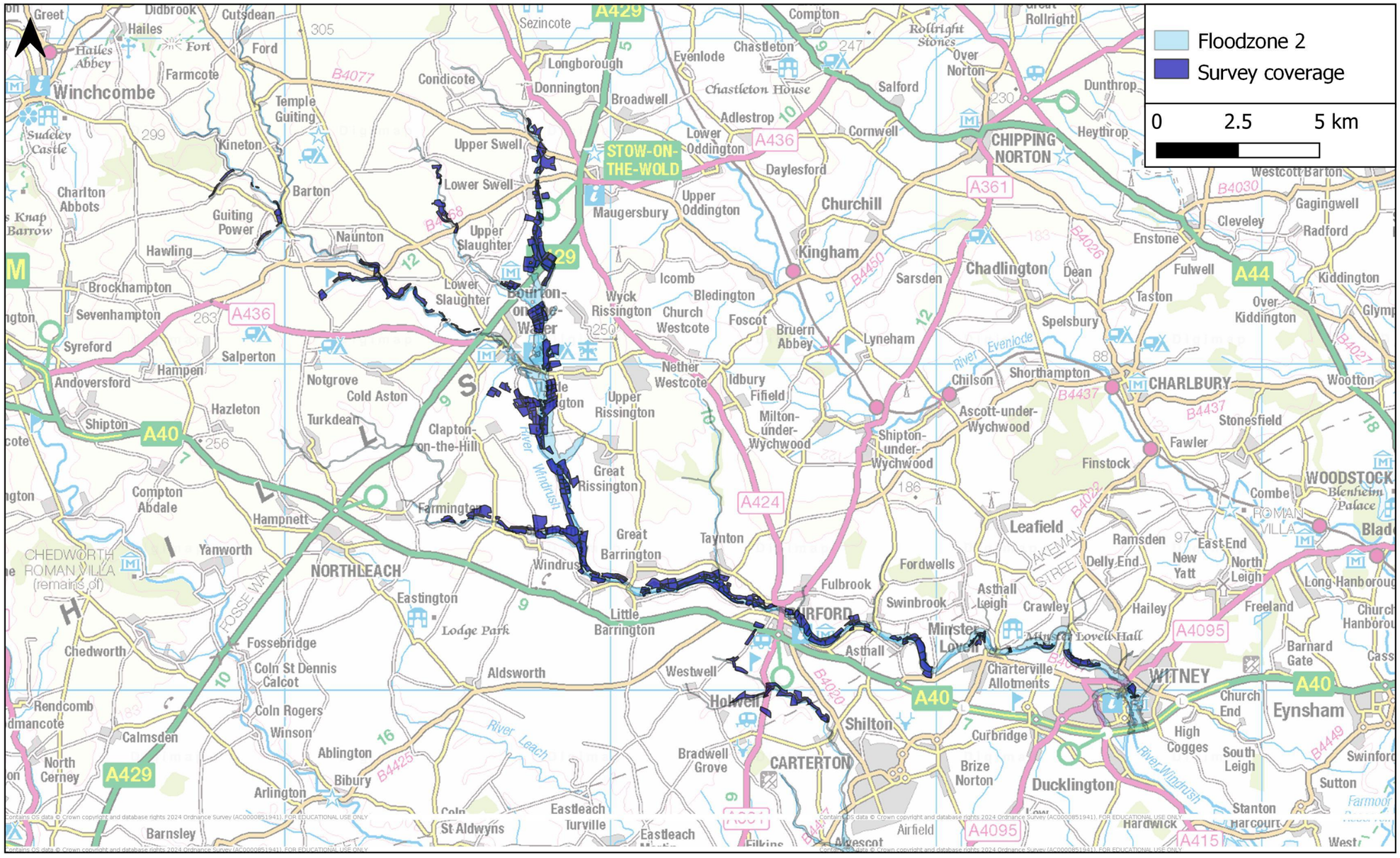

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Fig 2: Extent of Lowland Meadow Priority Habitat before and after the 2023 botanical survey work. Designated sites (SSSI) are also shown.

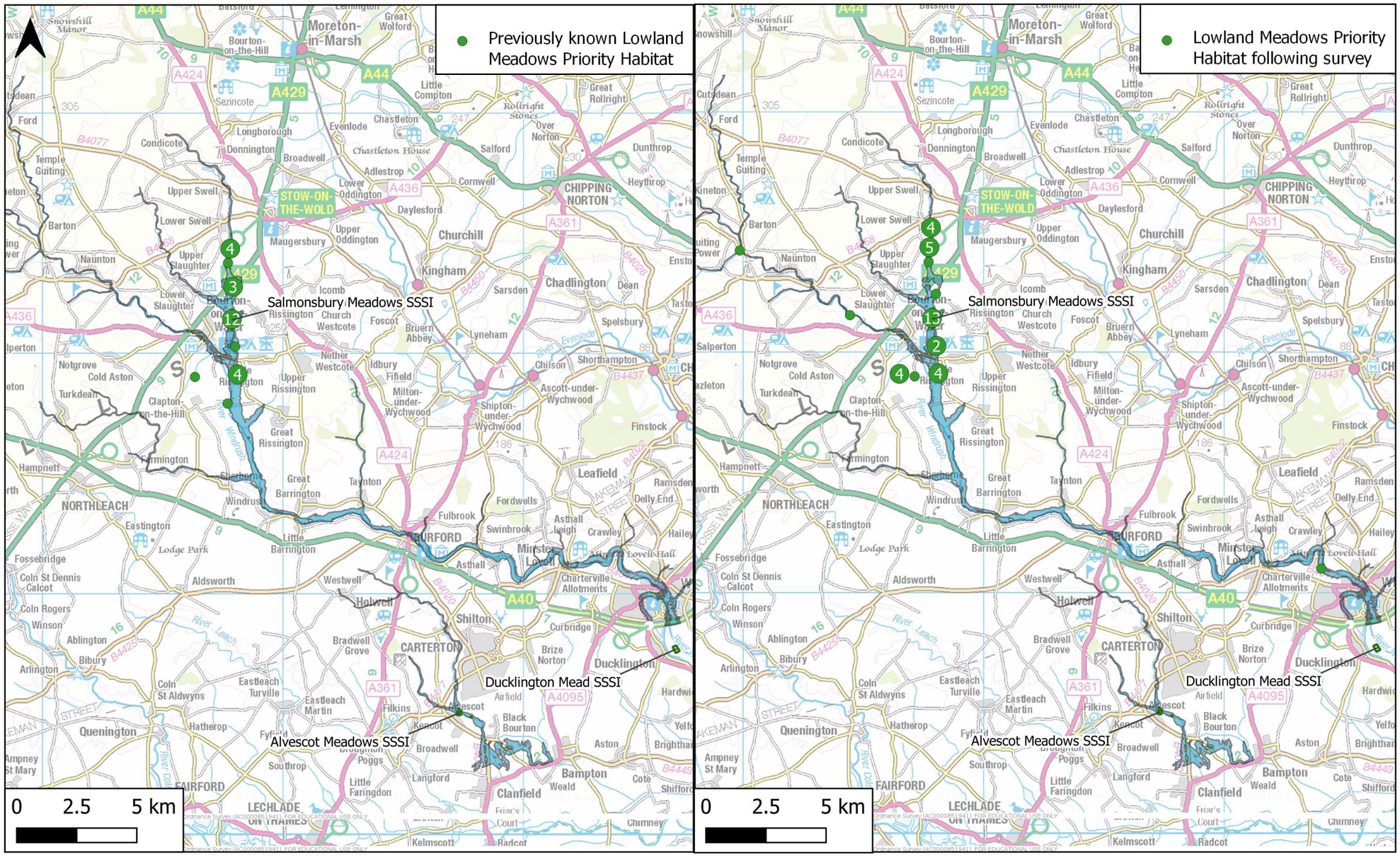

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Fig 3: Extent of Good Quality Semi-Improved Grassland before and after the 2023 botanical survey. Designated sites (SSSI) are also shown.

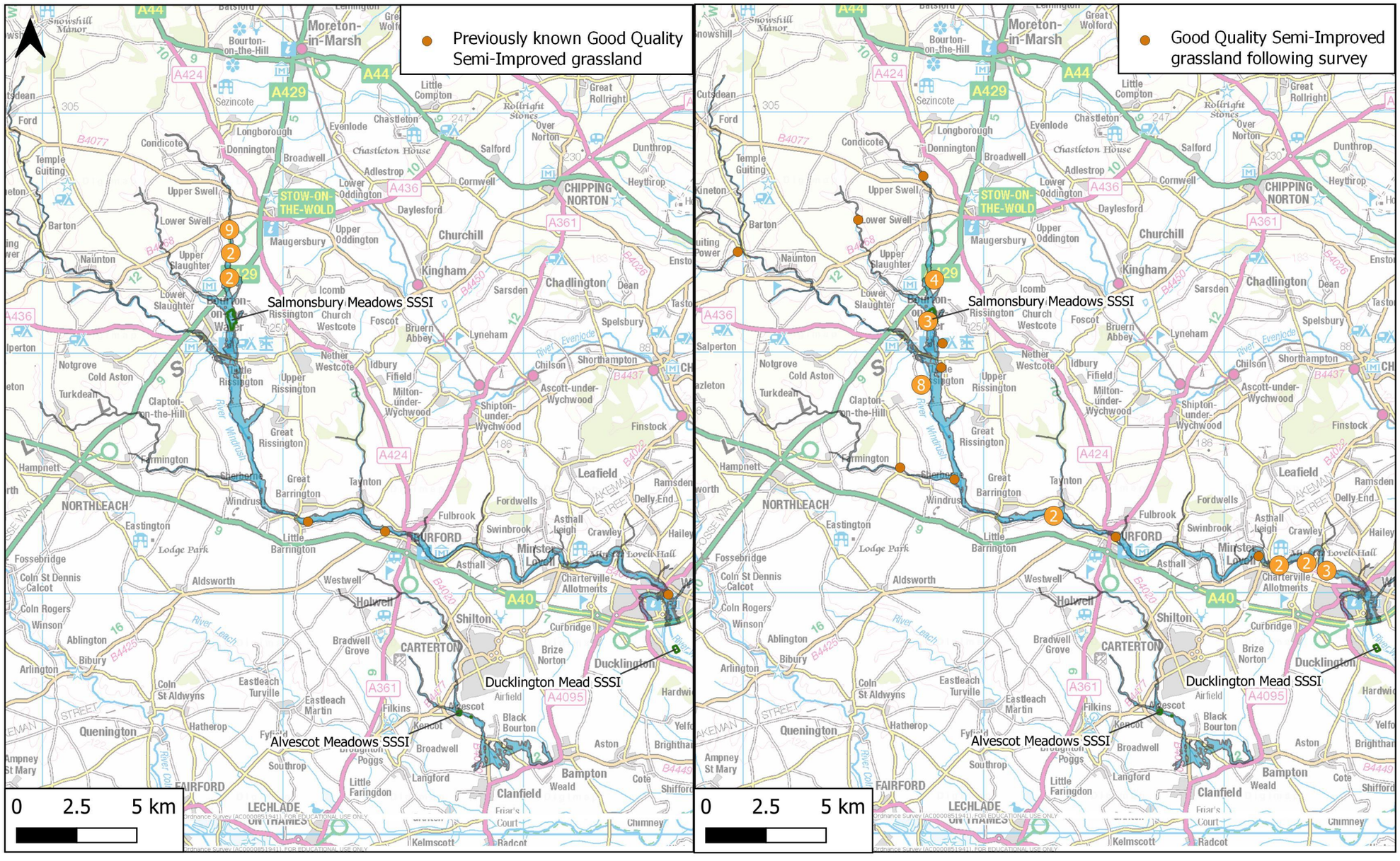

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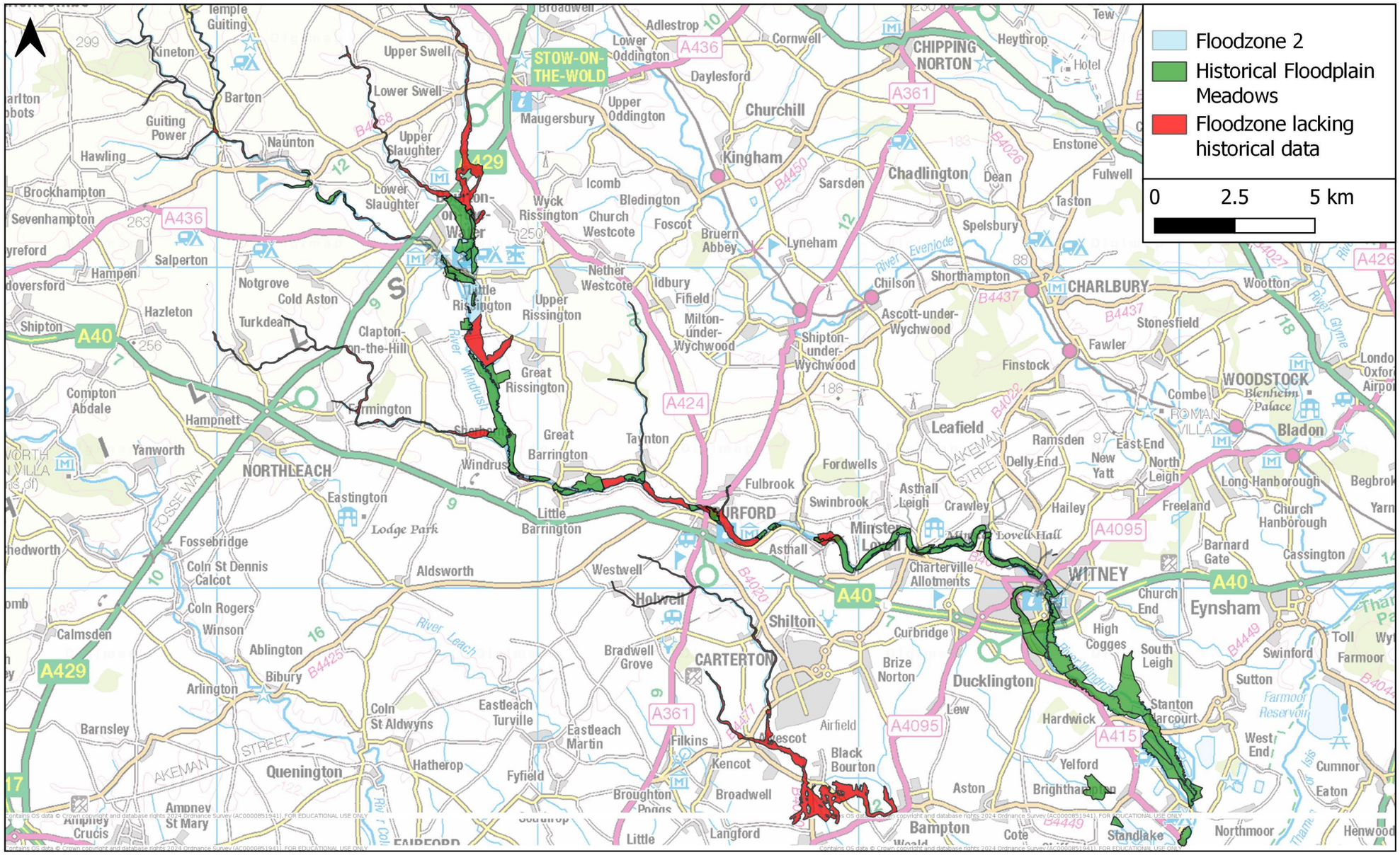
Fig. 4. Historical extent of floodplain meadows in the Windrush catchment, assessed using digitally available Tithe maps. The map also shows the areas where Tithe maps or other information were not available and therefore an assessment could not be undertaken.



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3. Funding mechanisms and delivery

For the strategy to be successful landowners and managers will require funding and technical support for both capital works and long-term management.

Several potential funding routes including public, private, and blended models are already available to support restoration of floodplain meadows. There are also emerging markets and new funds coming online, all of which may assist with meadow restoration and management. These options (as of March 2024) are summarised below (Table 5), with more detail in Appendix 1.

Table 5: Summary of potential funding options for floodplain meadow restoration.

1. Public subsidies and grants for individual farms	
Countryside Stewardship	Multi-year grants, typically 5 years, but some can last for longer.
	Capital items: grants for specific capital works or items (work must be completed within 3 years).
Glorious Cotswold Grasslands//National Highways Designated Funds scheme	Wildflower grassland restoration in the Cotswolds National Landscape from 2023-2025, supported by National Highways Designated Funds
Farming in Protected Landscapes (FiPL)	Grants for projects that support nature, climate, people, or place. Running until March 2025, offering grants of up to £250,000
Water management	Funding provided through public and private sectors to facilitate increased water storage to reduce flooding to properties.
2. Private sources of funding for individual farms	
Biodiversity Net Gain (central credit system)	Funding provided through development activities to offset habitats damaged or lost elsewhere.
Carbon sequestration	Funding provided through private carbon markets to offset carbon outputs from elsewhere.
Water management	Funding provided through public and private sectors to facilitate increased water storage to reduce flooding to properties.
Becoming a seed source for meadow restoration	Sale of seed from existing species-rich sites to enable restoration elsewhere.
3. Funding for larger/aggregated projects	
Landscape Recovery Scheme	Existing scheme for larger groups of landowners to propose catchment wide restoration activity.

4.The Strategy

The strategy proposed here offers a draft vision, and a mechanism for determining site suitability at a catchment scale for floodplain meadow restoration. The steps required to see the strategy through to delivery are outlined.

The draft vision will be discussed with landowners and managers in the Valley before it is finalised, as part of an event to share the findings and recommendations of the strategy in June 2024.

Vision

By 2045, farmers will have 1,000 ha of floodplain meadow under favourable management, with 60% being species rich, connecting this nationally rare habitat down the entire Windrush valley to deliver multiple ecosystem services at scale as part of viable farm businesses.

Aims

- To enable farming practices that ensure food security continues in the long term.
- To restore existing species poor grassland to the Burnet floodplain meadow (MG4 *Sanguisorba officinalis-Alopecurus pratensis*) community.
- To contribute to the overall extent of and increase connectivity between existing areas of Burnet floodplain meadow in the Windrush catchment.
- To increase the extent of other valuable habitats where floodplain meadow restoration is not feasible.
- To contribute to ecosystem service delivery across the catchment including soil carbon storage, nutrient management, water quality, floodwater storage, and overall biodiversity alongside food production.
- To support our vibrant and engaged farming community to maintain and restore floodplain meadows in the long term.

Strategy

The historical land use assessment identified that in all areas where data were available, large sections of the Windrush catchment were likely to have been floodplain meadow in the past, providing a precedent for restoration at a landscape scale.

Our approach has therefore been to identify the key characteristics (Table 6) that determine whether floodplain-meadow restoration is possible to facilitate restoration of all locationswhere landowner interest aligns with physical and biological suitability of the land

Given the historical extent of floodplain meadows in the catchment, their huge potential for ecosystem-service delivery, and the current prevalence of intensively managed grassland, the strategy aims to ensure that, provided conditions are suitable, landowners are not excluded based on the difficulty or timescale of restoration on their land.

Rather than highlighting the ‘easy wins’ of individual fields that are already suitable for restoration based on our survey work or focussing on expansion from key sites, a series of questions to determine the starting point and likely timescale for restoration of a field are presented. These are followed by recommendations for actions to restore species-rich floodplain meadows over the short, medium, and long term across the catchment (Table 7).

Where floodplain-meadow restoration is unlikely to be successful, due to the existing physical conditions, this is identified, and recommendations will be made for more suitable alternative habitats.

Table 6. A summary of the data required to assess the suitability of a site for restoration. These data address the questions in Table 7.

Key physical information	**Collecting**	**Revealing**
Vegetation survey (collected summer 2023)	Botanical quadrat data	Species indicative of soils that are free draining, low fertility, and potentially with historic meadow management. Indicator species of meadows, waterlogging or compaction
Historic meadows extent (part completed winter 2023)	Digitised shapefiles of meadows present in early 1800's and possibly Domesday	The extent of floodplain meadows historically in the catchment. Indicates where soils and water regime may still be suitable and highlights cultural practise and history of value to local communities and landowners.
Hydrological management	Information about flood extent and period.	Floodwater that sits for longer than about 5 days after the river returns to the channel during the growing season, suggests surface-water management is sub-optimal and needs addressing for effective floodplain-meadow restoration.
Soil fertility and compaction	Not collected at a catchment scale currently, but some sites have phosphorus data. Compaction can be assessed on site using plant indicators or by digging a pit	High fertility sites can be restored over time. Heavily compacted soils are harder to restore and should not be prioritized.
Other species of interest	Desk-top breeding wader surveys	Information on historic records and current extent of curlews, lapwing, and redshank. Identifying where these rare species requirements need to be considered when restoring habitats[4].

[4]This may mean if a particular species is present then it may not be suitable to restore to floodplain meadow grassland. Hay meadows do not provide very suitable nesting sites for redshank and lapwing for example.

Species-rich floodplain meadows should probably not be considered for restoration where at least one of the following applies:

- The soil is extensively compacted.
- The soil has a phosphorus index higher than 4.
- The hydrology cannot be managed to ensure floodwaters return to the channel within 5 days, following a flood.

Where one or more of these conditions applies, other habitats may be more appropriate and should be prioritised. For example, where the hydrology is too wet for floodplain meadows, management for wintering and/or breeding waders should be considered, particularly in areas where there are current or historical breeding wader records.

Where conditions for restoration are favourable, Table 7 summarises the management activity required to restore species-rich floodplain meadow vegetation.

Table 7 also provides a tick list for what information is required to make decisions about land-management change before any work is carried out, to maximise the chances of success. Each individual restoration site should be assessed to determine its starting point and thus the restoration activities required. These assessments will also consider potential conflicts with floodplain-meadow restoration e.g., the presence and value of existing habitats and species.

For example, a highly fertile field with inappropriate drainage may be suitable for restoration, but is likely to require a resource intensive, medium to long term project. However, the landowner may be prepared to take on the commitment.

Conversely, a field which already has indicator species, low fertility, and a suitable water regime, is likely to take much less time and effort to restore, but the landowner may lack enthusiasm, in which case the restoration is likely to fail.

Table 7. Management activity required and timescale for restoration of floodplain meadows depending on existing conditions.

Some FPM plant indicators present	Y	Y	N	N	Y	Y	N	N	Y	Y	N	N	Y	Y	N	N
Plant indicators of waterlogging	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Historic meadow	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Hydrological management suitable	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
P index 0-2	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	N	N	N	N
P index 3-4	N	N	N	N	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y
Activity	Implement/continue managing using an annual hay cut and aftermath grazing or a second hay cut															
	Apply propagules[5].				Reduce fertility by taking hay cuts for 2-3 years to reduce soil fertility, then apply propagules.				Consider drainage and/or compaction issues on site. If too wet, are there ditch networks that require maintenance. Then apply propagules. **Other habitats could also be considered here.**				Consider drainage issues on site. If too wet, are there ditch networks that require maintenance. Take hay cuts for 2-3 years to reduce soil fertility, then apply propagules. **Other habitats could also be considered here.**			
Timescale of interventions	SHORT (1 year)				MEDIUM (3 years)				LONG (>5 years)							

[5] Sourcing of propagules needs to be managed to protect existing sites from over exploitation. This becomes less of a problem in the medium and long term, as more sites are restored and therefore able to provide seed themselves.

Delivery

In order to deliver catchment wide floodplain meadow restoration over the next 20 years using the decision-making process outlined above, a series of activities will be required. These are listed below:

1. Assess site suitability using method outlined above.
2. Identify management activities required.
3. Identify timescale.
4. Secure funding for restoration tasks.
5. Undertake practical tasks to start the restoration process.
6. Monitor progress and adjust management accordingly.
7. Extend the initiative.

5. Data gaps

To finalise the strategy, the following actions are required to gather key pieces of information and address data gaps. They are:

- Complete the historical analysis of the floodplain by visiting the local records office to access non-digital Tithe and early OS maps.
- Visit additional fields that could not be assessed in 2023 due to already having been cut, or belonging to landowners who were not engaged in the process.
- Assess natural flood management potential in the catchment using NFM Studio and check the underlying assumptions in the model accurately reflect contributions by species-rich grasslands (and other valuable habitats). The application of NFM Studio in the Windrush catchment should take the opportunity to incorporate historic management practises that may have lapsed, leading to flow-pathway blockage.
- A pilot sediment study was undertaken. This revealed high variability on a fine scale. Consider undertaking a more regular sedimat survey to establish the relationship between event size and nutrient loading.
- Bring together existing soil carbon data collected across the catchment, with soil water retention data to explore the synergy between the two.

6. Next steps

- Secure funds to address the data gaps outlined above.
- Engage the farmer/land manager community more widely – the strategy aims to be inclusive and is relevant to anyone with land on the floodplain, to connect with neighbouring initiatives and with an interest in floodplain-meadow restoration.
- Support landowners and managers to access funding to deliver the strategy through baseline assessment work and practical restoration activity. In particular, support landowners ready to embark on practical restoration in 2024.
- Support existing work to identify and establish best practice to manage local seed sources. Set up a strategy for sustainable harvesting across the catchment over the long term and at scale, protecting sites from negative impacts of harvesting too often.
- Seek feedback on this strategy and vision from landowners, NGO catchment partners, statutory authorities and others through presenting findings at an open-to-all event in June 2024. Invite projects working in adjacent areas (e.g. Evenlode Landscape Recovery, Upper Thames Farmer Facilitation Fund, Upper Thames Catchment Partnership, Thames Valley Wildflower Meadow Restoration Project etc) to share the method and findings more widely.
- Propose the concept of a wider ‘Upper Thames Floodplain Meadow Restoration Strategy’ taking a similar approach, modified according to feedback.

Contact us[6]

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Cotswolds National Landscape / Glorious Cotswold Grasslands

Website: https://www.cotswolds-nl.org.uk/looking-after/our-grasslands-projects/glorious-cotswolds-grasslands/

Email: grasslands@cotswolds-nl.org.uk

[6] **Disclaimer:** Please note that NECFC, the Floodplain Meadows Partnership, Cotswolds National Landscape – Glorious Cotswold Grasslands Project, and FWAG (SW) accept no liability for the accuracy of the information in this report; or its use by you or anyone instructed by you. NECFC, the Floodplain Meadows Partnership, Cotswolds National Landscape – Glorious Cotswold Grasslands Project, and FWAG (SW specifically declaims any liability for any loss (direct, indirect, or consequential) incurred through its use.

Appendix 1. Funding sources

Where there are plans to use multiple funding sources, applicants need to double check about compatibility. Some funds cannot be matched or used together on the same land.

1. Public subsidies and grants for individual farms

Countryside Stewardship

Funding is available through the Countryside Stewardship (CS) scheme for creation, restoration, and maintenance of habitats. The scheme will open for application in Summer 2024 and includes a new, well-paid option specifically for floodplain meadows.

Grants are available for:

- Land management: multi-year grants, typically 5 years, but some can last for longer.
- Capital items: grants for specific capital works or items (work must be completed within 3 years).

Tables 1 and 2 set out some of the options which are available for floodplain meadow management.

Table 1: CS options for management of species-rich floodplain meadows

Option name	Payment rate/ha/year	Duration (years)	Notes
Manage species-rich floodplain meadows	£1070	5	This is a new option that will be available from Summer 2024. It is understood that the option will be available to existing species-rich areas but also to those trying to create or restore species-rich floodplain meadows.
GS15 haymaking supplement	£157-187	3-5	A crop of hay is grown and harvested. Payment rate will be dependent on cutting date (further details to be released).
SP6 Cattle grazing supplement	£59	5	To help create more varied sward structure and better control of scrub, bracken and coarse vegetation will increase wildlife diversity.
GS2 Permanent grassland with very low inputs (outside SDA's)	£151	5	Suitable for grassland of low species interest that is not immediately suitable for restoration of species-rich grassland. A very similar option is available in the SFI scheme, option LIG1 which has a duration of 3 years.

Table 2: CS capital grants for floodplain meadows

Option name	Payment rate
FG2 Sheep netting	£7.47/m
FG1 Fencing	£6.34/m
FG12 Wooden field gate	£489.90/gate
LV7 Livestock troughs	£152.92/trough
LV8 Pipework associated with livestock troughs	£3.31/m
LV2 Livestock handling facilities	Up to 80% of actual costs. Only available in Higher Tier scheme
DEFRA have indicated that they will be introducing a capital item to pay for seed for grassland restoration. Further details to be released.	TBC

For further advice on agri-environment scheme options for floodplain meadows you can speak to FWAG South-west, Gloucestershire office 01666 503 668.

Glorious Cotswold Grasslands/ National Highways Designated Funds Scheme

GCG have partnered with National Highways to deliver wildflower grassland restoration in the Cotswolds National Landscape from 2023-2025, supported by National Highways Designated Funds. Funding is available to cover all capital/restoration works, baseline botanical surveys and ongoing monitoring, advice, and support throughout the life of the project, any required future interventions plus annual management payments starting at a minimum of £311/ha rising to £427/ha over 30 years. Landowners are required to commit to the development of the site as wildflower grassland for a period of at least 30 years but will be able to opt out of the management payments under this scheme should a more profitable financing option become available. The project is most suited to sites between 1-7ha. All project planning, management and ongoing monitoring will be coordinated by the Cotswolds National Landscape. For more information, please visit contact grasslands@cotswolds-nl.org.uk

Farming in Protected Landscapes (FiPL)

FiPL is a funding programme running until March 2025, offering grants of up to £250,000 for farmers and land managers in the Cotswolds. It funds projects that:

- support nature recovery
- mitigate the impacts of climate change
- provide opportunities for people to discover, enjoy and understand the landscape and its cultural heritage
- protect or improve the quality and character of the landscape or place

Eligible projects may involve purchasing new equipment, upgrading infrastructure, carrying out land management activities, or hosting events – it's a very flexible programme, administered locally with the aim of supporting farmer-led action from the bottom up.

Specifically for floodplain meadows, FiPL may be a good source of funding for preparatory and restoration works such as specific capital costs for equipment, contractors, the purchase of green hay or seed, or restoration of surface water drainage.

Grants typically cover 40-80% of costs (capital and revenue), but you can receive up to 100% for exceptional projects that have no commercial benefits, such as the restoration of priority habitats. Items and activities that are offered by other Defra schemes, such as Countryside Stewardship, are paid at the same rate. Once restored to Priority Habitat quality, better payments may be available obtained through the Countryside Stewardship scheme.

FiPL may also 'bridge' fund maintenance and management until CS renewal, thereby bringing a meadow into restoration before entering or renewing CS agreements.

For more info visit the CNL website or contact farming@cotswoldsaonb.org.uk.

2. Private sources of funding for individual farms

The new private markets emerging in the sale of natural capital are still difficult to predict, however with statutory obligations and voluntary initiatives for carbon and nature, there will be new sources of funding for landowners. Keep in touch with the NECFC to stay abreast of these types of funding opportunities.

Biodiversity Net Gain (central credit system)

Biodiversity Net Gain (BNG) is the market most likely to be ready to release funding. Many restoration projects in the Windrush catchment will be eligible for this funding mechanism, which is likely to be suitable for larger sites (>7 ha).

Please note however, that if restoration has been funded by government sources it would then not be eligible for BNG. The exception to this rule is Landscape Recovery, under certain circumstances (see below).

Carbon sequestration

The carbon data collected for this project can complement the dataset in the wider cluster, which enables predictions to be made on soil carbon uplift from restoration practices. The NEIRF2 cluster project is using empirical data to verify any increase in soil carbon from floodplain meadow restoration.

More details will be available through the NECFC and other project partners as opportunities arise. There is ongoing engagement from a carbon buyer to develop a project with a group of farms.

Water management

At the time of writing, the Environment Agency is investing in research by Rothamsted Research, Atkins Realis and the NECFC into the role and value of soil organic carbon in flood and drought resilience across the farming landscape, along with the potential of floodplain meadows to remove excess nutrients from the catchment. The intention is to apply this research to unlock finance for habitat restoration and conservation projects.

Analysis of soil and sediment samples, literature review, and precedent from other national schemes should enable this value to be 'banked' for sale and realised when the market develops. This concept is currently being explored in the Evenlode Landscape Recovery pilot.

Becoming a seed source for meadow restoration

In the long-term, following successful restoration, exceptionally species-rich meadows may be able to sell their hay crop to commercial operations for green hay or wildflower seed. With the Evenlode Landscape Recovery project and the ambitions for the Windrush, it is anticipated that there may be a market for high quality meadows to be green hay or seed donors for the restoration of other nearby sites.

However, this needs to be done in consultation with local experts, such as the Glorious Cotswold Grassland team, to ensure donor and recipient sites are matched and that seed harvesting is done sensitively to avoid over-exploitation. Species-rich hay for bale-grazing and other methods for seed dispersal have also reached a premium for farmers selling hay within the NECFC.

3. Funding for larger/aggregated projects:

There are several funding sources available for habitat restoration on a larger scale. This includes the Landscape Recovery Scheme, Species Survival Fund, and various aggregated farm initiatives.

Landscape Recovery encourages contiguous habitat across multiple landholdings to work together for nature restoration. A pilot scheme is currently underway in the Evenlode Valley.

Given the uniqueness, extent, and restoration potential of floodplain meadows in the Windrush catchment, large-scale restoration could be an exciting option for a group of participating farms across the cluster to pursue and is an attractive prospect for a Landscape Recovery funded project.

At the time of writing, Round 2 pilots have been allocated funding by Defra for project development. It is anticipated that this will be followed by a roll-out for new entry into a finalised national scheme.

Please get in touch with NECFC if you are interested in being part of a collaborative restoration project (contact@cotswoldfarmers.org).

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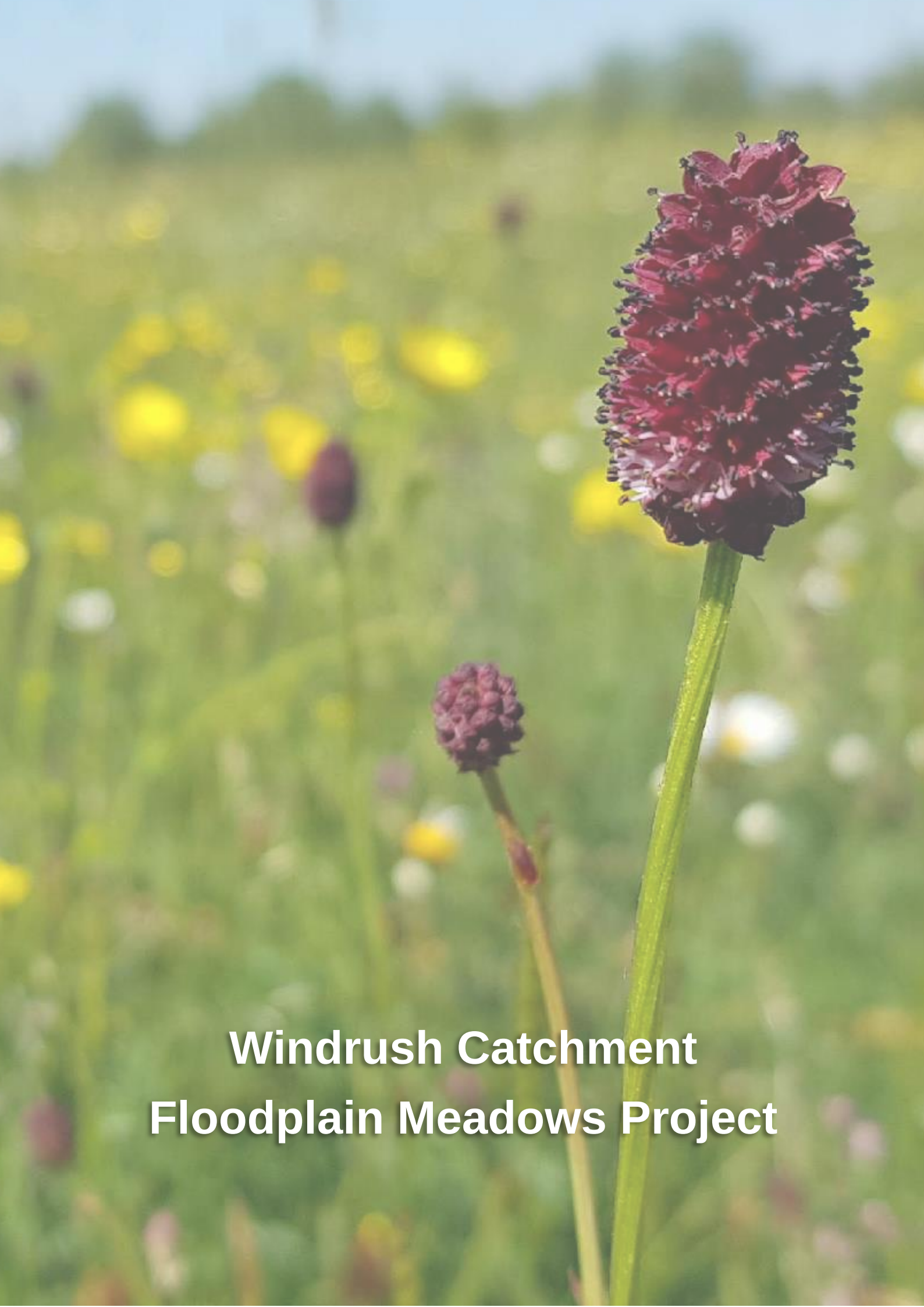

Windrush Catchment Floodplain Meadows Project