

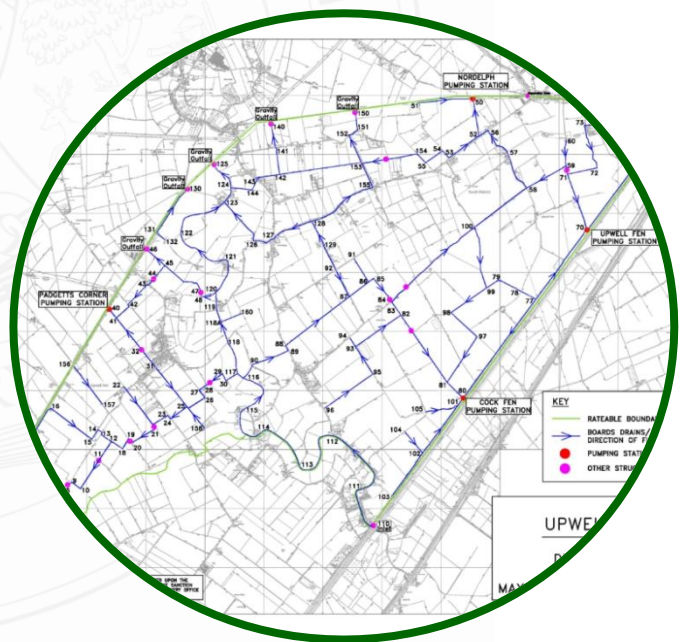


Biodiversity Action Plan

2026 – 2031

Upwell

Internal Drainage Board



1. Statement

This Biodiversity Action Plan (BAP) has been prepared by the Middle Level Commissioners on behalf of Upwell Internal Drainage Board. It demonstrates the Board's commitment to fulfilling its duty as a public body, in accordance with the Environment Act 2021, to conserve and enhance biodiversity whilst exercising their statutory functions.

Importantly, it reflects the Board's aspiration to maximise the outcomes for biodiversity, particularly priority UK species and habitats and the wider environment in general, through its day to day activities, by setting clear objectives, actions and targets, and then taking action. It also highlights the recognition of its vital role in contributing towards a wider thriving natural environment.

The Board has adopted this Biodiversity Action Plan as one of its policies and is committed to its implementation. It will be reviewed annually and updated every 5 years.

Signed Date

K Goodger

Chairman of the Board

Note: We would welcome appropriate involvement in the delivery of the Plan from interested organisations, companies, and individuals.

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2. Executive Summary

The UK is one of the most nature impoverished countries on the planet. It's no wonder that protecting and improving biodiversity and the environment are higher than ever on the political agenda. The Government is looking for strong and proactive environmental delivery from Public Authorities to contribute towards their own challenging statutory environmental targets. The public services provided by Upwell Internal Drainage Board (IDB) are no exception.

All IDBs will increasingly be expected to implement more sustainable approaches to water level and flood risk management. Proactively contributing to biodiversity conservation and enhancement is a vital part of this, and is a statutory requirement of Upwell IDB, as a modern Public Authority. Through their water level management activities, Upwell IDB is well placed to conserve and enhance a great range of habitats and species, particularly those associated with freshwater, riparian and wetland habitats.

Biodiversity Action Plans (BAPs) provide IDBs with a formal mechanism to demonstrate and record their contribution to biodiversity conservation and enhancement. While biodiversity conservation thinking has evolved and some new approaches are being taken to protect and enhance our nature, the IDB BAP approach remains the most suitable tool to help IDBs to deliver their statutory conservation duties.

This revised BAP takes into account the most up to date legislation, policy and best practice, and includes current local strategies, plans and priorities for nature conservation. An up-to-date biodiversity audit has also been completed which has identified the valuable habitats and species within the district but also sets out objectives to achieve improved biodiversity in general. These new and challenging targets and objectives have been set to ensure that the IDB continues to contribute to the Government's 25 Year Environment Plan and meet the associated new legislative requirements.

3. Introduction

3.1. What is biodiversity and why is it important?

Biodiversity can be defined simply as “the variety of life” and encompasses the whole spectrum of living organisms, including plants, birds, mammals and insects. It includes both common and rare species, as well as the genetic diversity within species. Biodiversity also refers to the habitats and ecosystems that support these species.

Biodiversity is part of our natural capital, a vital resource providing:

- Supply of ecosystem services including clean water, nutrients, climate change mitigation, flood mitigation, carbon storage and pollination.
- Life resources including food, medicine, energy and raw materials.
- Improved health and well-being.
- Landscape and cultural distinctiveness.
- Direct economic benefits from biodiversity resources and ‘added value’ through local economic activity and tourism.
- Educational, recreational and amenity resources.

This Biodiversity Action Plan is part of a much larger biodiversity framework that encompasses international, national and local levels of legislation and policy and which also include ecosystem services and climate change.

3.2. Legislative Background

When carrying out its functions, an IDB must pay particular regard to the effects their actions have on the natural environment. Some environmental legislation relates specifically to maintaining or restoring the condition of protected sites or protecting certain species, but there are also statutory duties for IDBs to conserve and enhance biodiversity in general, in and alongside the watercourses they manage and the wider landscape.

The Natural Environment and Rural Communities Act 2006 places a duty on IDBs to conserve biodiversity. The Environment Act 2021 extends this duty to also include the enhancement of biodiversity and associated statutory reporting to demonstrate the actions they have taken to do so. Below is a list of key environmental legislation (by no means an exhaustive list) relevant to the work of IDBs:

- The Environment Act 2021
- Conservation of Habitats and Species Regulations 2017
- Eels (England and Wales) Regulations 2009
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2003
- Natural Environment and Rural Communities Act 2006 (Section 40)
- The Environmental Impact Assessment (Land Drainage Improvement Works) (Amendment) Regulations 2017
- Land Drainage Act 1994
- Wildlife and Countryside Act 1981 (as amended)
- The Countryside and Rights of Way Act 2000
- The Protection of Badgers Act 1992

- Flood and Water Management Act 2010
- Salmon and Freshwater Fisheries Act 1975
- Hedgerow Regulations 2024

3.3. Policy & Strategic Background

In 1992 at the United Nations Conference on the Environment and Development, commonly known as the **Rio Earth Summit**, the UK signed the Convention on Biological Diversity which pledged its commitment to contribute towards halting the worldwide loss of habitats and species and their genetic resources. At the 2010 biodiversity summit in Nagoya, Japan, the UK re-affirmed this commitment, and the “Biodiversity 2020” white paper was developed setting out how those commitments would be put into action.

Also in 2010, the report by Sir John Lawton “Making Space for Nature” set out that ecological networks were required in order to halt and reverse the declines seen in many threatened species and habitats. The report succinctly made clear that these ecological networks needed to be bigger, more frequent, better in quality, and more joined up in order to be successful in their ambitions.

The Government’s Biodiversity 2020 strategy was published in 2011 and set out the ambition to halt overall loss of England’s biodiversity by 2020. The publication of the 25 Year Environment Plan (2018) followed along with the first UK Environmental Improvement Plan; a more long-term strategy for nature recovery beyond 2020. The Environment Act 2021 further provided for the development of Local Nature Recovery Strategies (LNRS) and along with the EIP, helps to better define the priorities, targets, and goals for successful nature recovery. The enhancements IDBs can make to their management of their arterial networks of drainage channels across the landscape are key to delivering these goals.

Importantly, these policies and strategies take into account the value of the ecological services provided by non-priority species and habitats such as the carbon sequestration of wetlands, the flood alleviation of tree-planting in the uplands and the wellbeing benefits brought about by green space. As such, this BAP presents the actions planned by the IDB to support both priority and non-priority species.

Numerous national and international reports have recognized and reaffirmed that climate change in particular is considered to be one of the biggest threats to our biodiversity now, and in the future. Supporting the continuity, connectivity and quality of habitat through management, restoration and expansion of our drainage ditches may help even the less mobile species to adapt more easily to climate change. This BAP presents the actions the IDB can take to support climate resilience for biodiversity.

3.4. UK Biodiversity Indicators

The latest (Dec 2025) update of the UK Biodiversity Indicators (UKBIs), produced each year by DEFRA and JNCC, give a snapshot of the current status of biodiversity in the UK, and track trends over time, showing whether aspects of biodiversity are improving, declining, or remaining stable.

The UKBIs are used in reporting the UK’s progress against goals and targets agreed under the **Convention on Biological Diversity (CBD)**. The UKBIs include 39 indicators, comprising 68 measures in total.

The overall summary for 2025 concludes that more indicators are deteriorating or showing no change than improving, over both the long and short term.

The table below is an extract of the full list of indicators and measures and includes those that could be influenced by the activities of the IDB. Regardless of the current status or trend of the indicator, its presence in the UKBIs is sufficient reason for it to be recognized by IDBs as one that should be a priority for action and therefore included as part of this BAP.

Table 1: Extract of the UKBI summary table of trends and status of indicators and measures as of December 2025

Key:	Deteriorating	Improving	Little or no overall change	Not assessed / Insufficient data	
Indicator			Measure	Long term period	Short term period
Birds of the wider countryside and at sea	All bird species		1970 to 2024	2019 to 2024	
	Breeding birds on farmland		1970 to 2024	2019 to 2024	
	Breeding birds in woodland		1970 to 2024	2019 to 2024	
	Breeding wetland birds		1975 to 2024	2019 to 2024	
	Breeding seabirds		1986 to 2024	2019 to 2024	
	Wintering waterbirds		1975/1976 to 2023/2024	2018/2019 to 2023/2024	
	Breeding upland birds		1994 to 2024	2019 to 2024	
Insects of the wider countryside (butterflies)	All species of butterfly		1976 to 2024	2014 to 2024	
	Habitat specialist butterflies		1990 to 2024	2014 to 2024	
	Generalist butterflies		1990 to 2024	2014 to 2024	
	Farmland specialist butterflies		1990 to 2024	2014 to 2024	
	Woodland specialist butterflies		1990 to 2024	2014 to 2024	
Mammals of the wider countryside (bats)	Change in the abundance of bat populations		1999 to 2023	2018 to 2023	
Plants of the wider countryside in the UK	Arable field margins				
	Bog and wet heath				
	Broadleaved woodland and hedges				
	Lowland grassland				
Status of priority species: distribution	Priority species distribution				
Status of priority species: relative abundance	Priority species abundance		1970 to 2023	2018 to 2023	
Status of threatened species: species of European importance	Conservation status of species of European importance		2007 to 2019	2013 to 2019	
Area of land in agri-environment schemes	Area of land under higher-level or targeted agri-environment schemes		1992 to 2022	2017 to 2022	
Extent and condition of protected areas	Total extent of protected areas on land		1950 to 2025	2020 to 2025	
	Condition of Areas or Sites of Special Scientific Interest				
Habitat connectivity	Habitat connectivity				
Status of threatened habitats: habitats of European importance	Conservation status of habitats of European importance		2007 to 2019	2013 to 2019	
Surface water status	Percentage of UK surface water bodies in High or Good ecological status		2009 to 2024	2019 to 2024	
Expenditure on UK and international biodiversity	Non-governmental organisation and private sector spending on biodiversity in the UK		2010/2011 to 2023/2024	2018/2019 to 2023/2024	
Integration of biodiversity considerations into business activity	Proportion of medium and large UK businesses with ISO 14001 certification				
Pressure from invasive species	Number of terrestrial species establishments		1969 to 2024		
	Number of freshwater species establishments		1969 to 2024		
	Rate of establishment		1920 to 2022	2017 to 2022	
Awareness, understanding and support for conservation	Awareness, understanding and support for conservation				
Status of pollinating insects	Change in the distribution pollinators in the UK				
Biodiversity data for decision making	Cumulative number of records in the National Biodiversity Network				
	Number of publicly accessible records at 1 square kilometre resolution or better				
Biodiversity information for conservation decision making	Number of records downloaded			2019 to 2024	
	Number of download events			2019 to 2024	
	Number of NBN Atlas users			2019 to 2024	

3.5. Purpose

This BAP has been produced to demonstrate how the IDB fulfils its legal obligations to conserve and enhance biodiversity and sets out targets and actions that contribute to local, national and international strategies and policies.

While the IDB has a statutory duty to have regard for the environment whilst carrying out their functions, for example on or within drainage assets such as watercourses and their banks, the IDB has also to give consideration to how they can contribute to the enhancement of the wider environment.

It is not within the scope of this document to set out the IDBs' objectives and actions in relation to wider environmental topics, such as reducing carbon emissions or reducing waste. However, strategies to address such topics may be mentioned in connection to the enhancement of habitats and species, such as peatland restoration and carbon sequestration.

The opportunity to work together to support and enhance biodiversity in partnership with other organisations is sought wherever possible, as the IDB recognises the additional value working in such ways can bring to the overall objectives.

The intention is that biodiversity is fully integrated into the Board's activities, policies and procedures such as annual maintenance programmes, capital works projects, training and communications.

3.6. Vision

The IDB's vision is:

A drainage district where thriving wildlife is an integral part of delivering efficient and effective water-level management.

3.7. Aims

The aims of this BAP are:

- To ensure that opportunities for conservation and enhancement of biodiversity are fully considered throughout the IDB's operations;
- To enable more effective monitoring and reporting of progress and outcomes;
- To ensure that priority species and habitats receive effective action within defined targets within the drainage district.
- To identify targets and appropriate actions for other habitats and species of local importance within the drainage district. This includes invasive non-native species.
- To contribute to local environmental partnerships and strategies such as the Local Nature Recovery Strategies to ensure that programmes and priorities for biodiversity conservation are aligned and maintained in the long term.
- To raise awareness, within the IDB and locally, of the need for biodiversity conservation and reporting, and to communicate with the local and wider community about what actions the IDB is undertaking to support biodiversity.

4. The IDB BAP Process

4.1. The Biodiversity Audit

Middle Level Commissioners on behalf of Upwell IDB has conducted a biodiversity audit of its drainage district (Figure 1) and identified those habitats and species that would benefit from particular management or actions by the IDB.

This audit focuses on nationally important priority habitats and species, which is to say those that have been deemed of 'principal importance' in England under the NERC Act 2006. However, those that are not priority species or habitats, but may be locally significant for a variety of reasons have also been considered. Invasive non-native species have also been included.

The information gathered, which is presented in later sections, has been used to develop this IDB's Biodiversity Action Plan.

4.2. Objectives and Actions

Conservation and enhancement **objectives** have been identified for each included habitat and species. The action plan then details individual **actions** required to achieve the objectives, and the associated monitoring and reporting of progress and impact.

In order for this BAP to be as effective as possible, the actions have been devised to be SMART (Specific, Measurable, Achievable, Relevant and Time-limited).

Procedural actions have also been considered allowing the Board to measure the way in which it considers and incorporates biodiversity across the whole range of its operations. These may involve changes to administrative, management and operating procedures.

4.3. Monitoring and Reporting

Monitoring is the on-going process of regularly collecting and analysing relevant information to determine whether the actions within the Plan are positively contributing towards the objectives, and to capture any additional benefit achieved. The Plan sets out how and when this monitoring will take place throughout the life of the plan.

The frequency and type of information reported is also defined by the Plan and includes the publication of progress reports in the public domain via the IDB's website and in accordance with the duty set out in the Environment Act 2021.

The overall plan will be updated at least every 5 years but as this is a dynamic document it may change more frequently. For example, in the light of routine monitoring or local strategy introductions, changes may be necessary to ensure an objective can be met.

5. The Biodiversity Audit

5.1. The Upwell Internal Drainage District

The drainage district is located to the south of the Middle Level Area and in Fen Edge of Cambridgeshire.

The following outlines the key details of the District:

- Total area of the drainage district: **4847 ha**
- Catchment area draining to and including the District: **4847 ha**
- Area of agricultural land: **4343 ha**
- Area of other (non-agricultural) land: **504 ha**

Assets for which the Board has operational responsibility:

- Water level control structures: 16
- Watercourses (maintained): 72 km
- Raised embankments: N/A
- Reservoirs: N/A
- Sustainable drainage systems (SuDS): N/A
- Pumping Stations: 5
- Extent of “other” land owned: **TBC**

Assets within or adjacent to the District that are maintained by the Environment Agency:

- Main Rivers: 9 km
- Raised embankments/flood walls: 9 km
- Pumping Stations: N/A

5.2. Map of Audit Area (Drainage District)

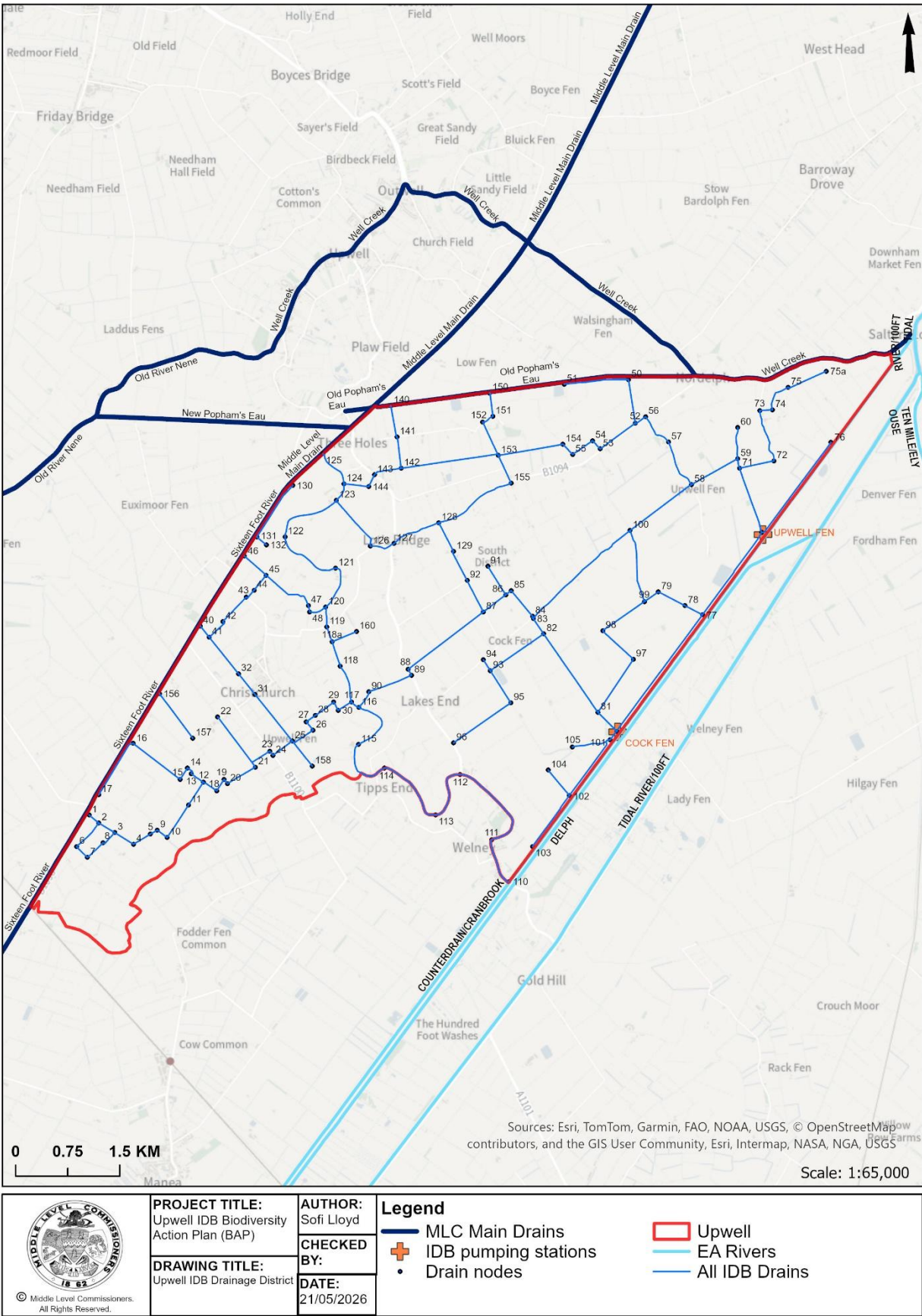


Figure 1. Upwell IDB District

5.3. Geology, Soils & Peat (Table 2)

Geology Layer	Description	Related Map
Bedrock	East of District: Kimmeridge Clay Formation-Mudstone. These sedimentary rocks are shallow-marine in origin. They are detrital, ranging from coarse- to fine-grained (locally with some carbonate content) forming interbedded sequences. West of District: Amphill Clay Formation-Mudstone. These sedimentary rocks are shallow-marine in origin. They are detrital, ranging from coarse- to fine-grained (locally with some carbonate content) forming interbedded sequences.	N/A
Superficial Geology	East of District: Tidal flat deposits-Clay and silt. These sedimentary deposits are shallow-marine in origin. They are detrital, generally coarse-grained forming beaches and bars in a coastal setting. West of District: Peat. These sedimentary deposits are lacustrine and palustrine in origin. They comprise accumulated (and detrital) organic material, forming beds and lenses within lagoons, bogs and swamps.	N/A
Soils	East of District: Loamy and sandy soils with naturally high groundwater and a peaty surface and some fen peat soils. West of District: Loamy and clayey soils of coastal flats with naturally high groundwater.	Figure 2
Peat	There are areas of shallow to moderately deep peat in the north and eastern areas of the district but peat deposits are patchier and less common in the southern extent of the district. The following sources have been interrogated: - BGS Boreholes data - https://mapapps2.bgs.ac.uk/geoindex/home.html?layer=BGSBoreholes&_ga=2.93480798.298319960.1728295174-1769537369.1728295174 - England Peat Map - https://england-peat-map-portal-ncea.hub.arcgis.com/ - Soil Surface Map (below) - LandIS - Land Information System - Soilsclapes soil types viewer	Figure 3

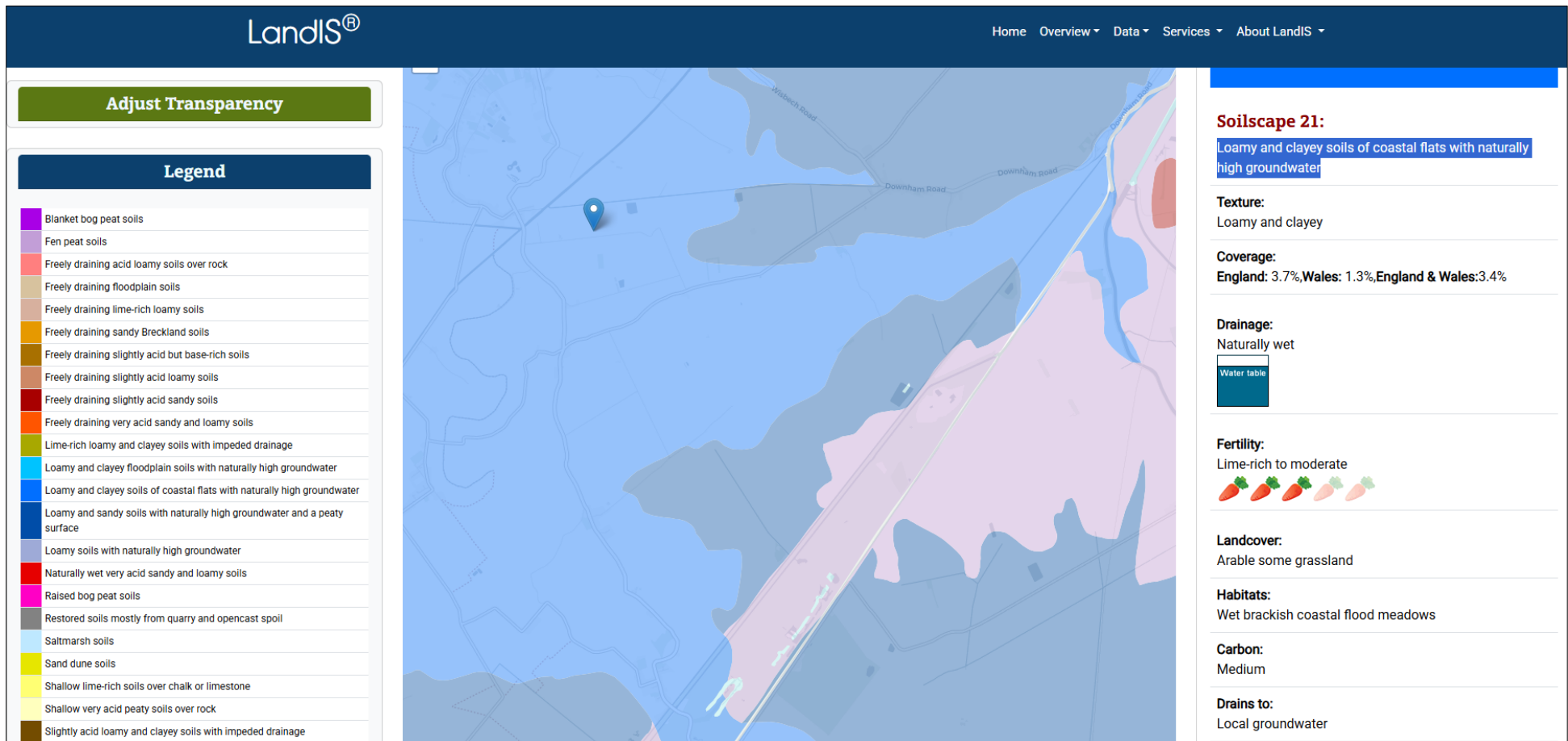


Figure 2: Upwell IDB map of soil types.

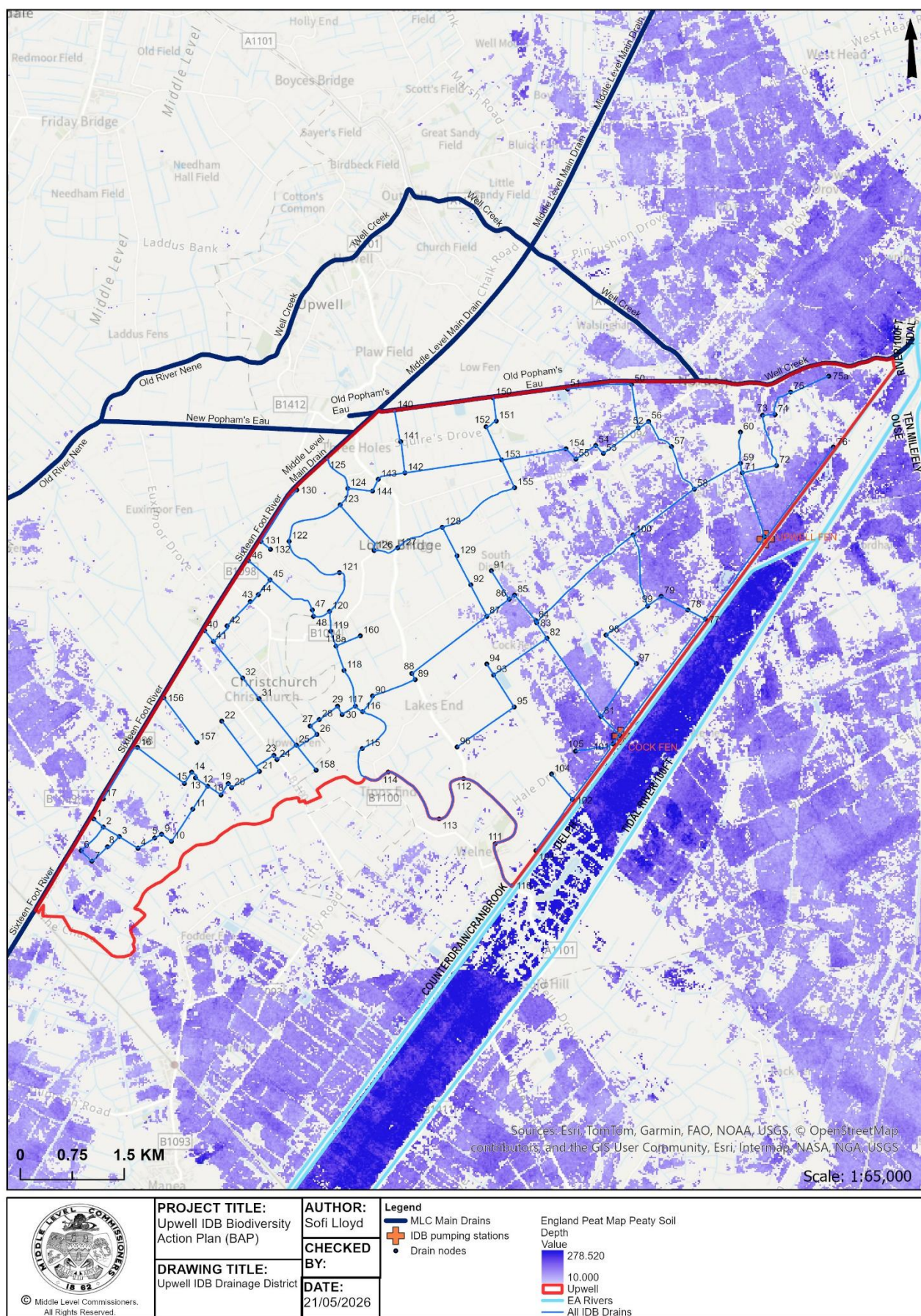


Figure 3: Location and depth of peaty soils across the Upwell District

5.4. Landscape Character

Natural England has divided the whole of England into a number of National Character Areas (NCA) based on characteristic landforms, wildlife and land use. For each NCA, there is a prepared profile that characterises the wildlife and natural features, identifies the influences that act upon those features and sets objectives for nature conservation.

Upwell IDB sits within the Fens as shown in figure 4 below. The NCA has a number of environmental enhancement targets defined within it, called Statements of Environmental Opportunity, (SEO). As part of this BAP, these have been reviewed and those that can be influenced or controlled by the IDB have been included as part of the BAP objectives. The full list of environmental opportunities is included in Appendix I but a summary is as follows:

The Fens Statements of Environmental Opportunity (SEO):

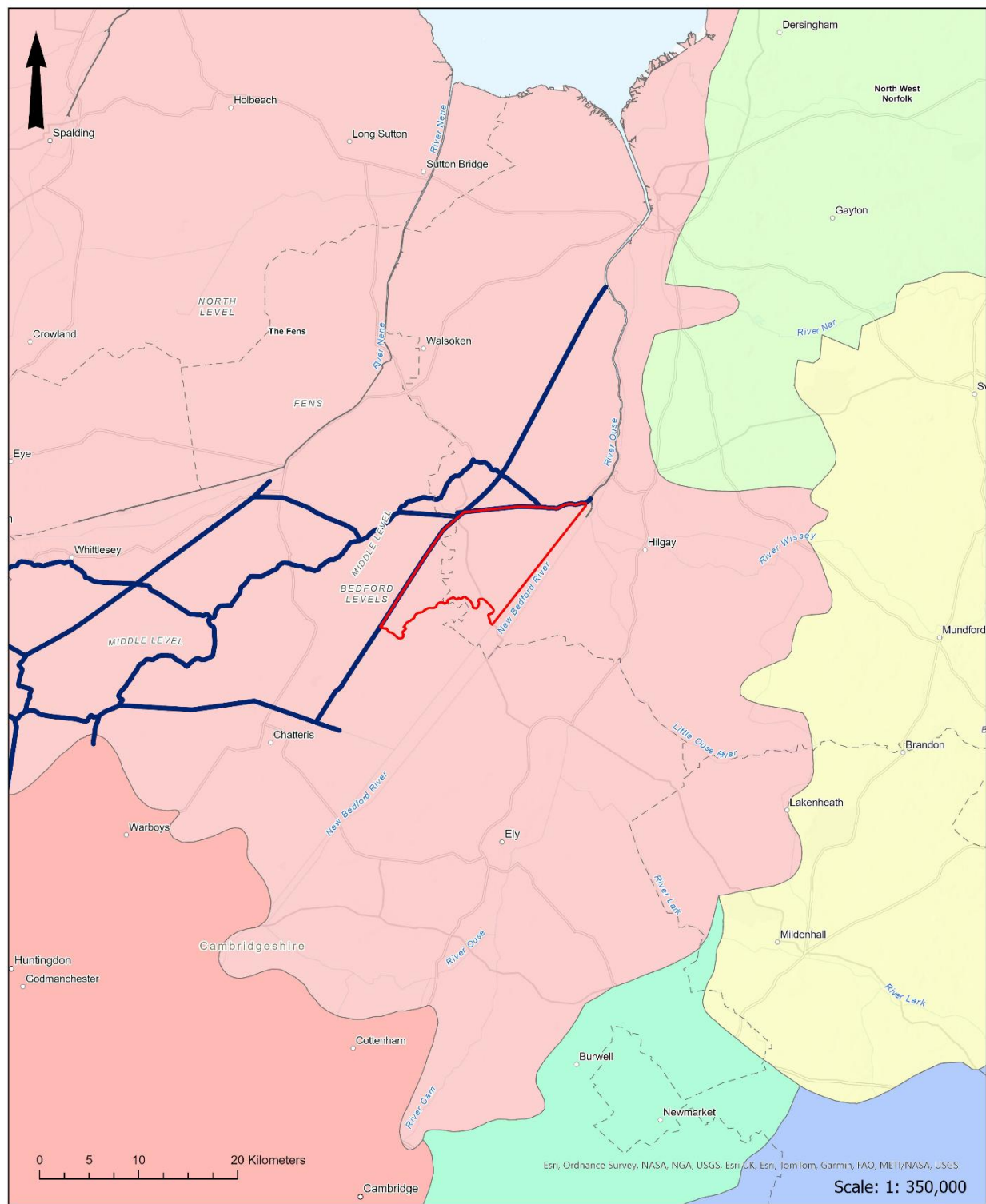
- **SEO 1:** Manage the agricultural landscape and soils which allow the Fens to be a major provider of food and horticultural produce, while seeking to enhance opportunities for biodiversity.
- **SEO 2:** Manage the core wetland complexes and increase their connectivity by enhancing the main rivers, waterways and their associated riparian habitats and improve recreational access opportunities to the Fens.
- **SEO 3:** Plan for the creation of new coastal landscapes in the Wash area that are adapted and resilient to the impact of climate change, for the benefit of people and wildlife.
- **SEO 4:** Conserve, manage and enhance the Fens landscape and increase educational opportunities to access its geodiversity, archaeology and cultural heritage to enhance enjoyment and understanding for those who live and work in and visit the Fens.

5.5. Landscape Designations

N/A

5.6. Sites and Monuments (Table 3)

Feature Name	Designation	Desc.	Features Relevant to IDB
Christ Church	Grade II Listed Building	https://historicengland.org.uk/listing/the-list/list-entry/1125930	Within 150m of the drain and may need to be considered if work is planned between Nodes 25 and 32.
War Memorial in Churchyard	Grade II Listed Building	https://historicengland.org.uk/listing/the-list/list-entry/1161189	Within 150m of the drain and may need to be considered if work is planned between Nodes 25 and 32.
Ralingham Hall	Grade II Listed Building	https://historicengland.org.uk/listing/the-list/list-entry/1161198	Within 150m of the drain and may need to be considered if work is planned between Nodes 122 and 124.
London Lode Hall and Stables 25m north of London Lode Hall	Grade II Listed Buildings	https://historicengland.org.uk/listing/the-list/list-entry/1305524	Within 150m of the drain and may need to be considered if work is planned between Nodes 128 and 155.
Church of St Mary the Virgin	Grade II* Listed Building	https://historicengland.org.uk/listing/the-list/list-entry/1168946	Within 150m of an IDB drain and may need to be considered if work is planned between Nodes 113 and 110 (Old Croft River).
Nordelph Conservation Area	Conservation Area	Nordelph conservation area leaflet.pdf	Sits along the Well Creek but is not near an IDB drain and unlikely to be affected by works to IDB drains.



	PROJECT TITLE Upwell BAP 2026-2031	AUTHOR AFL	LEGEND Breckland East Anglian Chalk East Anglian Plain North Norfolk The Fens West Anglian Plain Main Drains Upwell
	DRAWING TITLE Upwell IDB District in the context of local National Character Areas.	CHECKED BY SL	
		DATE 18/05/2026	

Figure 4. Map of Upwell IDB within the Beds & Cambs NCA

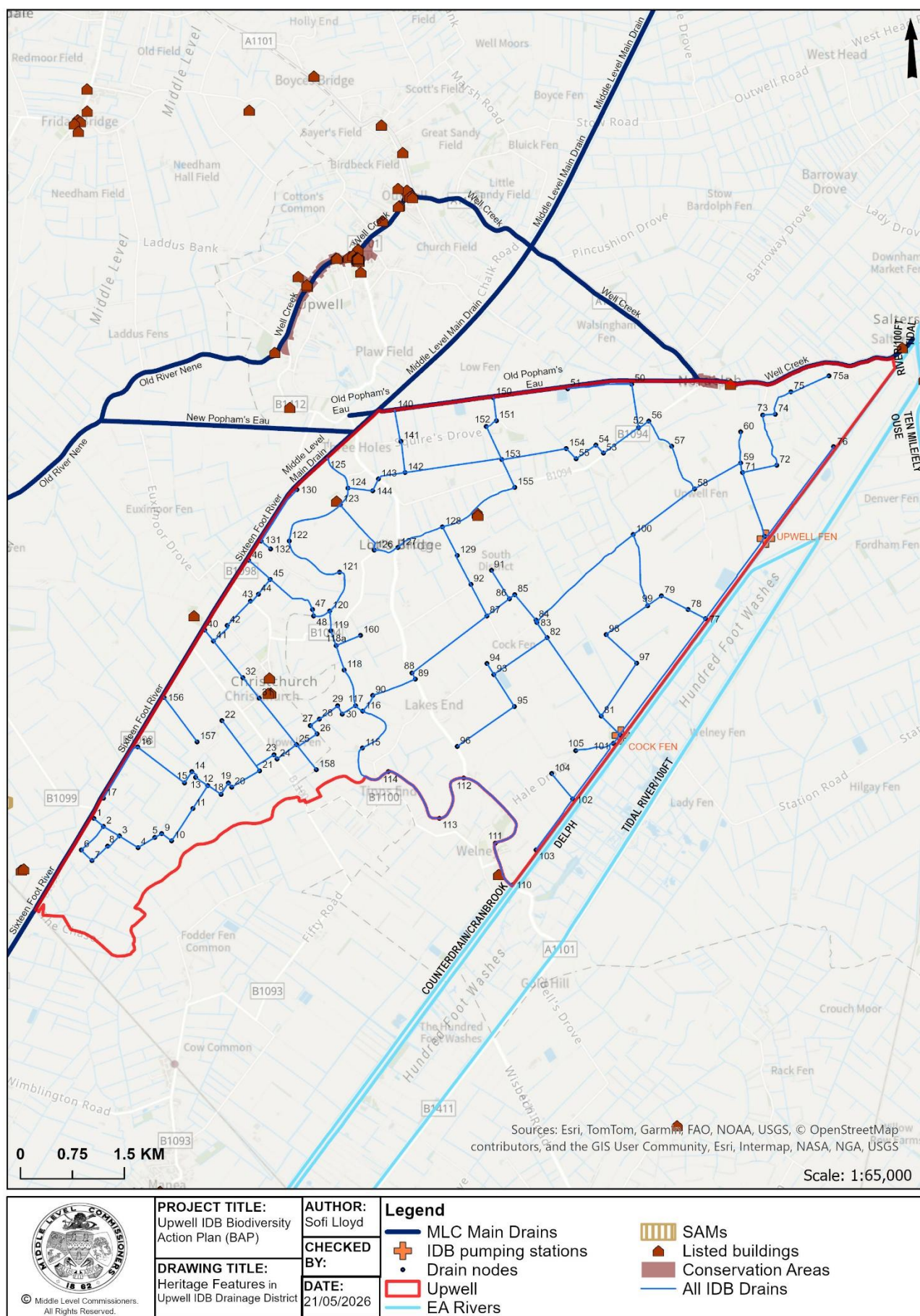


Figure 5. Map of heritage features within Upwell IDB Area

5.7. Tree Preservation Orders (Table 4)

Type	Near drain point & Location	Consideration
Protected Tree Area	123 – Deptfords Farm	All trees in this location are protected and works to or in close proximity to these trees would require prior consent from the Local Authority
Protected Tree Area	S of point 31 – Christchurch Churchyard	All trees in this location are protected and works to or in close proximity to these trees would require prior consent from the Local Authority

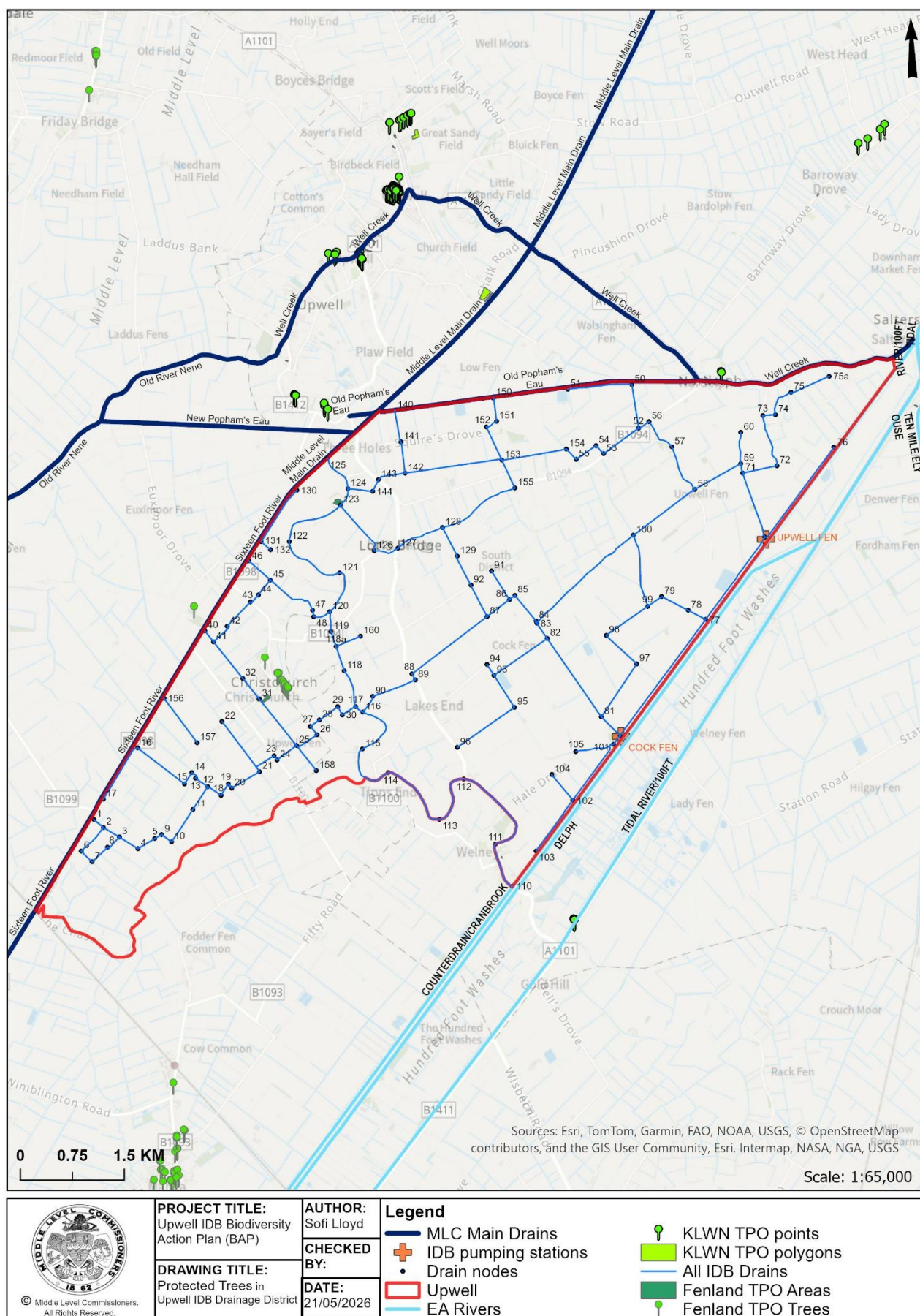


Figure 6: Map of Protected Trees locations within Upwell IDB

5.8. Statutory Nature Conservation Sites (Table 5)**Note:** The IDB district boundary is adjacent to the designated sites and hydraulically linked to them

Site Name	Designation	Assoc. WLMP? *	Desc.	Features Relevant to IDB
Ouse Washes	Ramsar	Y	One of the most extensive areas of seasonally-flooding washland of its type in Britain. Managed in a traditional agricultural, manner, the washlands support nationally and internationally important numbers of wintering waterfowl and nationally important numbers of breeding waterfowl. The site is also of note for the large area of unimproved neutral grassland communities which it holds, and for the richness of the aquatic flora within the associated watercourses. Designated for the following features: • Bewick's swan, <i>Cygnus columbianus bewickii</i> - Wintering • Pintail, <i>Anas acuta</i> - Wintering • Shoveler, <i>Anas clypeata</i> - Wintering • Teal, <i>Anas crecca</i> - Wintering • Washland • Waterbird assemblage - Wintering • Wetland bird assemblage - Breeding • Wetland invertebrate assemblage • Wetland plant assemblage • Whooper swan, <i>Cygnus</i> - Wintering • Wigeon, <i>Mareca penelope</i> - Wintering	The IDB ditches and surrounding land will be part of the functionally-linked land used by, and important for the associated waterfowl, so are a fundamental part of the conservation of the designated species.
Ouse Washes	SAC		A stronghold for Spined Loach <i>Cobitis taenia</i>	The IDB drains could be an extension of the Spined Loach's habitat so are a fundamental part of the conservation of the designated species
Ouse Washes	SPA	No mgmt. plan	An internationally important wetland site designated for the following species: • Bewick's swan (<i>Cygnus columbianus bewickii</i>), Non-breeding • Black-tailed godwit (<i>Limosa islandica</i>), Breeding • Breeding bird assemblage, Breeding • Gadwall (<i>Mareca strepera</i>), Breeding • Garganey (<i>Anas querquedula</i>), Breeding • Hen harrier (<i>Circus cyaneus</i>), Non-breeding • Mallard (<i>Anas platyrhynchos</i>), Breeding • Pintail (<i>Anas acuta</i>), Non-breeding • Ruff (<i>Calidris pugnax</i>), Breeding • Shoveler (<i>Spatula clypeata</i>), Breeding • Shoveler (<i>Spatula clypeata</i>), Non-breeding • Teal (<i>Anas crecca</i>), Non-breeding • Waterbird assemblage, Non-breeding • Whooper swan (<i>Cygnus cygnus</i>), Non-breeding • Wigeon (<i>Mareca penelope</i>), Non-breeding	The IDB ditches and surrounding land will be part of the functionally-linked land used by, and important for the associated waterfowl, so are a fundamental part of the conservation of the designated species.

5.8.1 Nationally Designated Sites (Table 6)**Note:** The IDB district boundary is adjacent to the designated site and hydraulically linked to it

Site Name	Designation	Assoc. WLMP? *	Desc.	Features Relevant to IDB
Ouse Washes	SSSI	Y	One of the country's few remaining areas of extensive washland habitat. It is of particular note for the large numbers of wildfowl and waders which it supports, for the large area of unimproved neutral grassland communities which it holds and for the richness of the aquatic fauna and flora within the associated watercourses. The capacity of the site to hold wintering and breeding waterfowl and waders is of international significance. See Appendix for details.	The IDB ditches and surrounding land will be part of the functionally-linked land used by, and important for the associated waterfowl, so are a fundamental part of the conservation of the designated species.

5.8.2 Local Nature Reserves (LNR)

N/A

5.8.3 Non-statutory Nature Conservation Sites (Table 7)

Site Name	Assoc. WLMP?*	Desc.	Features Relevant to IDB
Well Creek County Wildlife Site	N	CWS follows the extent of the Well Creek where it passes through Nordelph to meet the Great Ouse at Salter's Lode. Breeding waterfowl are known to use the site and there are good water plant assemblages as well as a good population of native orchids on the banks.	Adjacent to the northern boundary of the IDB. MLC managed watercourse with no hydrological link to the IDB do N/A
Welney Hundred Foot Washes County Wildlife Site	N	GCR site designated for lithological complexity of well-preserved Holocene peat sequence. Example of alluvial deposition between banks of the Old and New Bedford rivers between Mepal (Cambs) and Welney. Estimated rate of deposition c.2mm per year.	Outside but adjacent to IDB boundary. Not IDB ditches near within so N/A

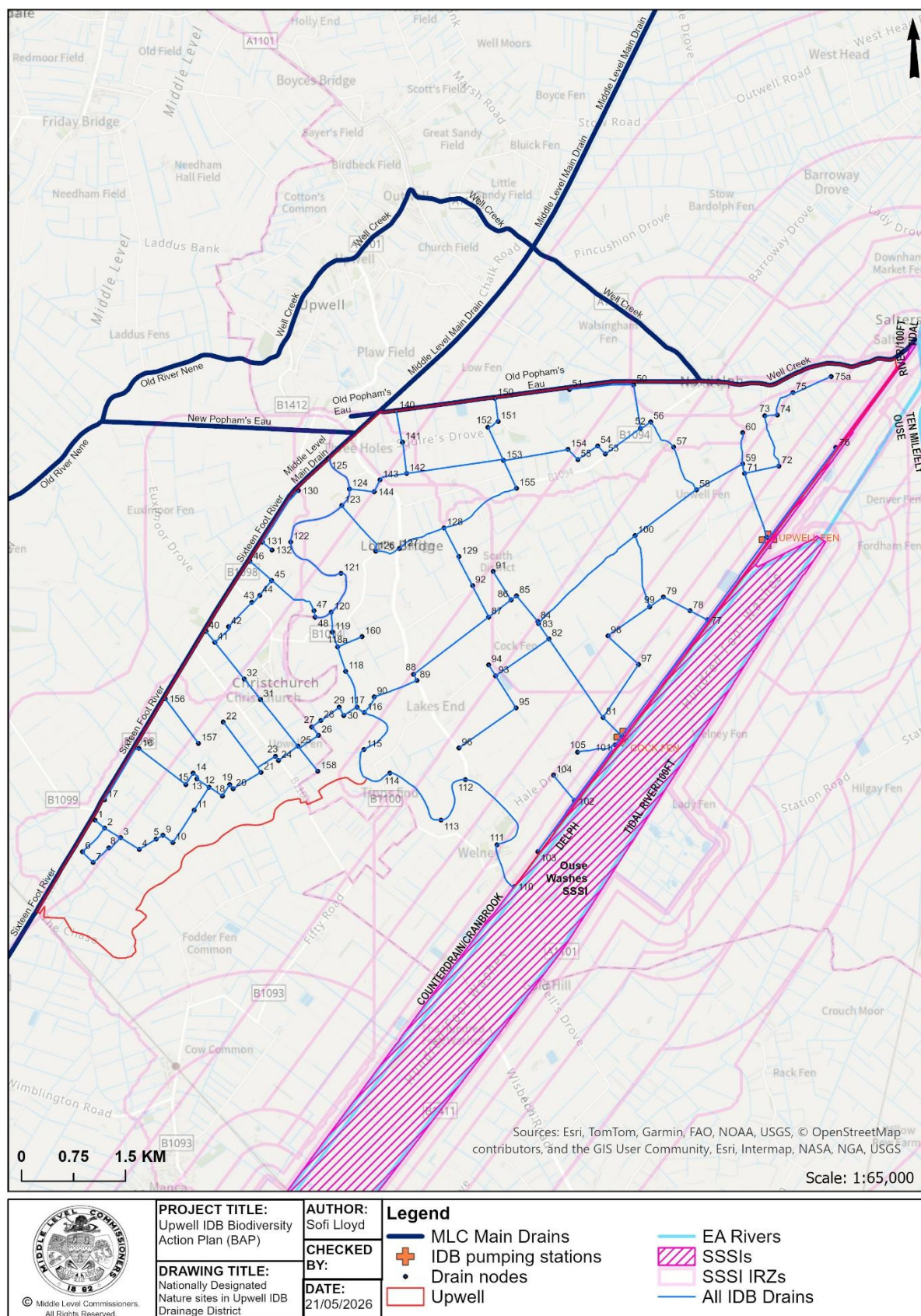


Figure 7: Map of Statutory national nature designations in Upwell IDB area.

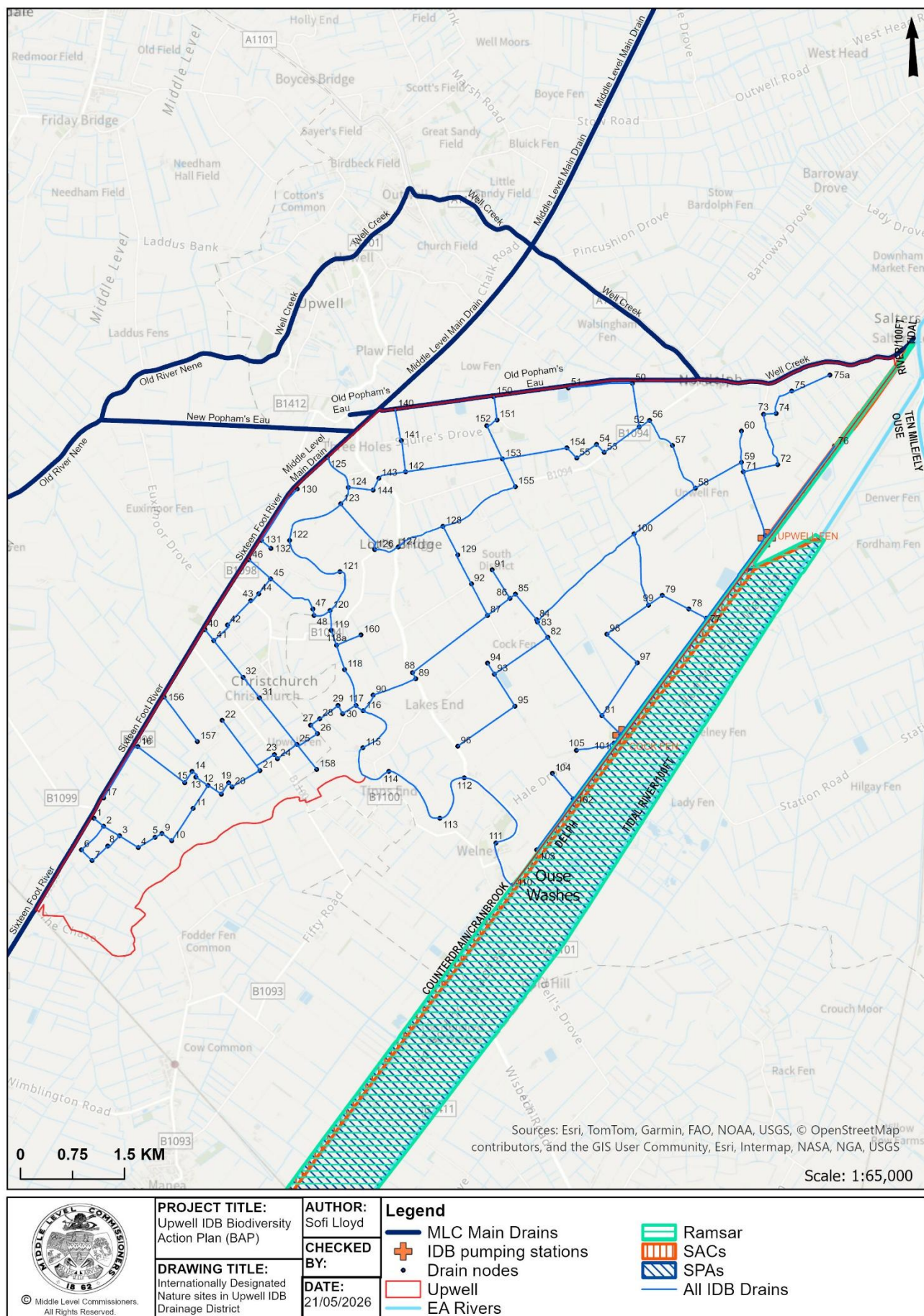


Figure 8: Map of Statutory international nature designations (Natura 2000 sites) in Upwell IDB Area

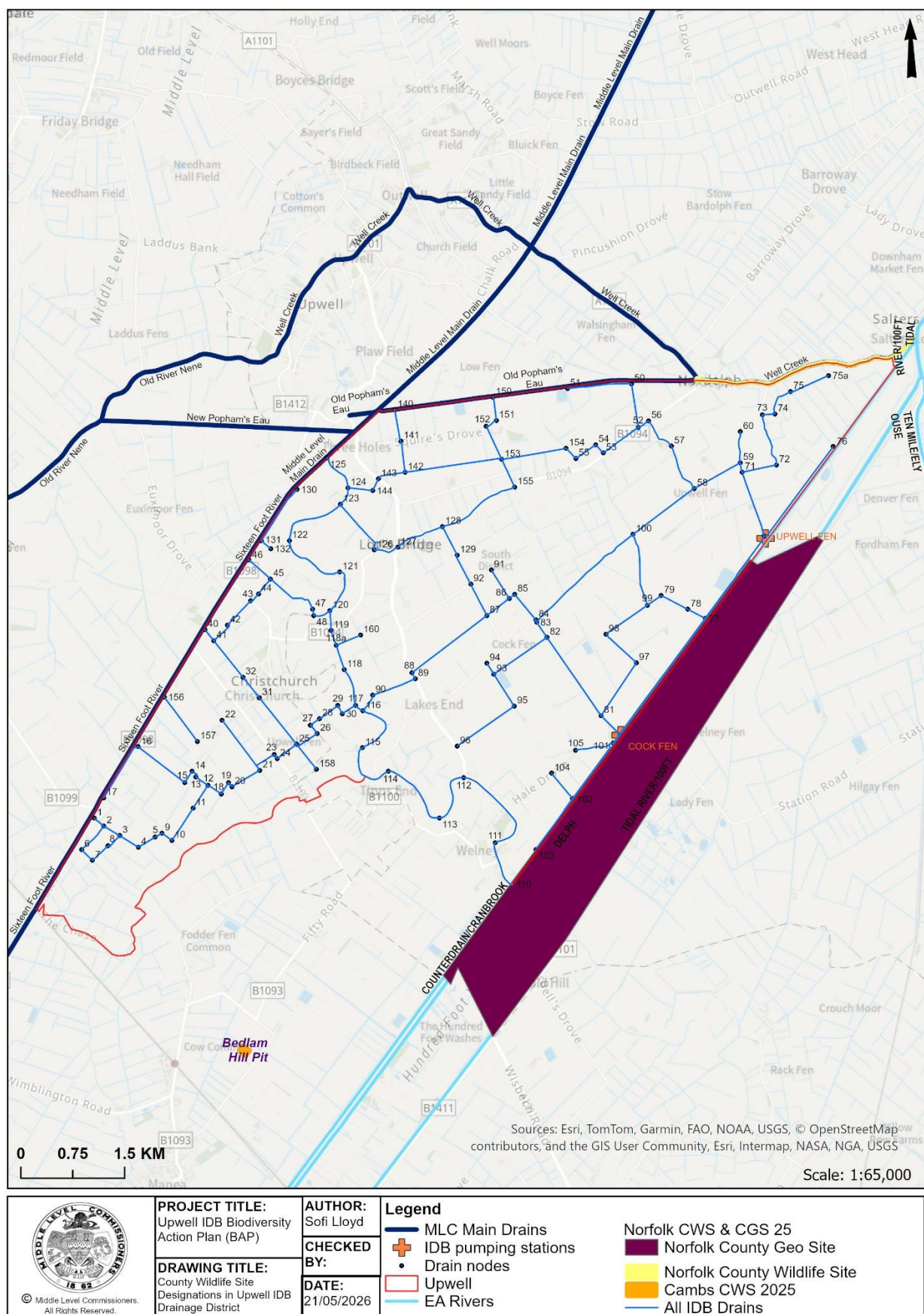


Figure 7: Map of country nature designations in Upwell IDB area.

5.9. Habitat Audit Summary

This habitat audit summary lists the UK and priority habitats that occur within the drainage district. A map of the Priority Habitats polygons within the district are shown in Figure 10. Linear and more general priority habitats are not mapped. Brief notes are included on the potential for the IDB to maintain, restore or expand the habitats present. its important habitats.

Table 8. Habitat Audit Summary

National Priority Habitat	National Status & Extent	Habitat classification	National Targets	Local Priority Habitat	Local Status and Extent	Local Targets	IDB Potential for Maintaining, Restoring or Expanding Habitat (high/medium/low)
Lowland Raised Bog	6000ha in the UK with 500ha remaining in England	BNG: Lowland Raised Bog UKHab: Lowland Raised Bog f16/H7120 (degraded lowland raised bog)	Aim to meet priority habitat definition for lowland raised bog and 'good condition' as per BNG habitat condition assessments.	Wetland (LNRS)	Significant area in the north-east of the district 143.01 ha recorded.	We7 -work with farmers, landowners and internal drainage boards to deliver nature-rich habitat restoration and more sustainable land use practices to protect peat, through the adoption of new agri-environment schemes and minimising the presence of bare peat.	Med – Habitats adjacent to IDB ditches so could be influenced by water levels but are privately owned. Look for opportunities to support and encourage the favourable management of the habitat including via complimentary channel management.
Coastal and floodplain grazing marsh	220,000 ha in England approx.	BNG: Floodplain Wetland Mosaic UKHab: Lowland Meadow G3a / 19 (CFPGM) or 55 (Floodplain Wetland Mosaic)	Aim to improve natural function wherever possible as part of future restoration within the floodplain. Aim for the habitat to meet "good condition" as per BNG habitat condition assessments.	Wetland (LNRS)	Approx. 5.4 ha within district	We3 -enhance and create floodplain wet grassland sites to better support breeding and wintering wetland birds (LNRS)	Low – Habitats not adjacent to IDB ditches and are privately owned. Look for opportunities to support and encourage the favourable management of the habitat.
Deciduous Woodlands	967,000 ha in England	BNG: Woodland UKHab: W1f7 Lowland mixed deciduous woodland	By 2050 achieve a minimum of 16.5% of land covered by woodland/trees outside woodland Annual planting of 30,000 hectares (ha) of new woodland per year.	Woodland (LNRS)	Locally very rare and highly fragmented. 7.66 ha in total recorded in District	Wo1 - better manage woodlands to improve resilience and structural diversity.	Low – Not on land owned or managed by the IDB and most not adjacent to IDB ditches. Use IDB networks to encourage retention, favourable management and support expansion if appropriate.

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No Main Habitat	N/A	A "main" habitat type cannot be assigned but potentially significant habitats are still present	Protecting 30% of land and sea by 2030	Habitat Mosaic (LNRS)	Locally very rare and highly fragmented	M1 - Improve the diversity of habitats at a landscape and site-scale to increase the diversity and abundance of species and make them more resilient to climate change.	Low – Habitats not adjacent to IDB ditches and are privately owned. Look for opportunities to support and encourage the favourable management of the habitat.
Traditional Orchard	24,600 to 27,000 ha	BNG: Traditional Orchard UKHab: Grassland – Traditional Orchard	4,700 hectares of traditional orchards to be created or brought into favourable condition (25YEP)	Woodland (LNRS)	5.2 ha recorded in the district. Fragmented and small patches.	W0 8 - Improve the management of traditional orchards and seek to expand them where possible.	Low – Med – Privately owned. Could be water level sensitive and if landowners look to restore or improve the habitat, IDB may be asked to support with favourable water levels.
Rivers & Streams	n/a	Fen Main Drains and drainage ditches	WFD - Improving at least 75% of waters to Good Ecological Status or Potential by 2027	Rivers, chalk streams & drainage ditches (LNRS)	Locally abundant	RD5 - enhance the network of fenland farm drainage ditches by providing habitat buffers and improving water quality	High – Manage ditches according to best practice & SOPs to maximise opportunities for biodiversity
Arable Field Margins	N/A	UKHab: C1a Arable field margins		Farmed Landscape (LNRS)	Locally abundant	F1 - Increase the presence and quality of biodiversity rich arable field margins around farmland to improve the diversity of farmland species and provide habitat that is connected and more resilient to climate change.	Med – Encourage landowners in IDB network to establish good quality stewardship field margins
Hedgerows	Approx. 390,000km in England	BNG: Hedgerow UK Hab: Native Hedgerow H2	Create or restore 30,000 miles of hedgerows by 2037 and 45,000 miles by 2050	Farmed Landscape (LNRS)	Locally frequent	F4 - Increase the presence of hedgerows around farmland to control run-off, improve the abundance and diversity of farmland species and provide habitat that is connected and more resilient to climate change	Med – Retain hedgerows within IDB control and manage favourably. Encourage the retention and favourable management of hedgerows on private and community land and creation where appropriate.

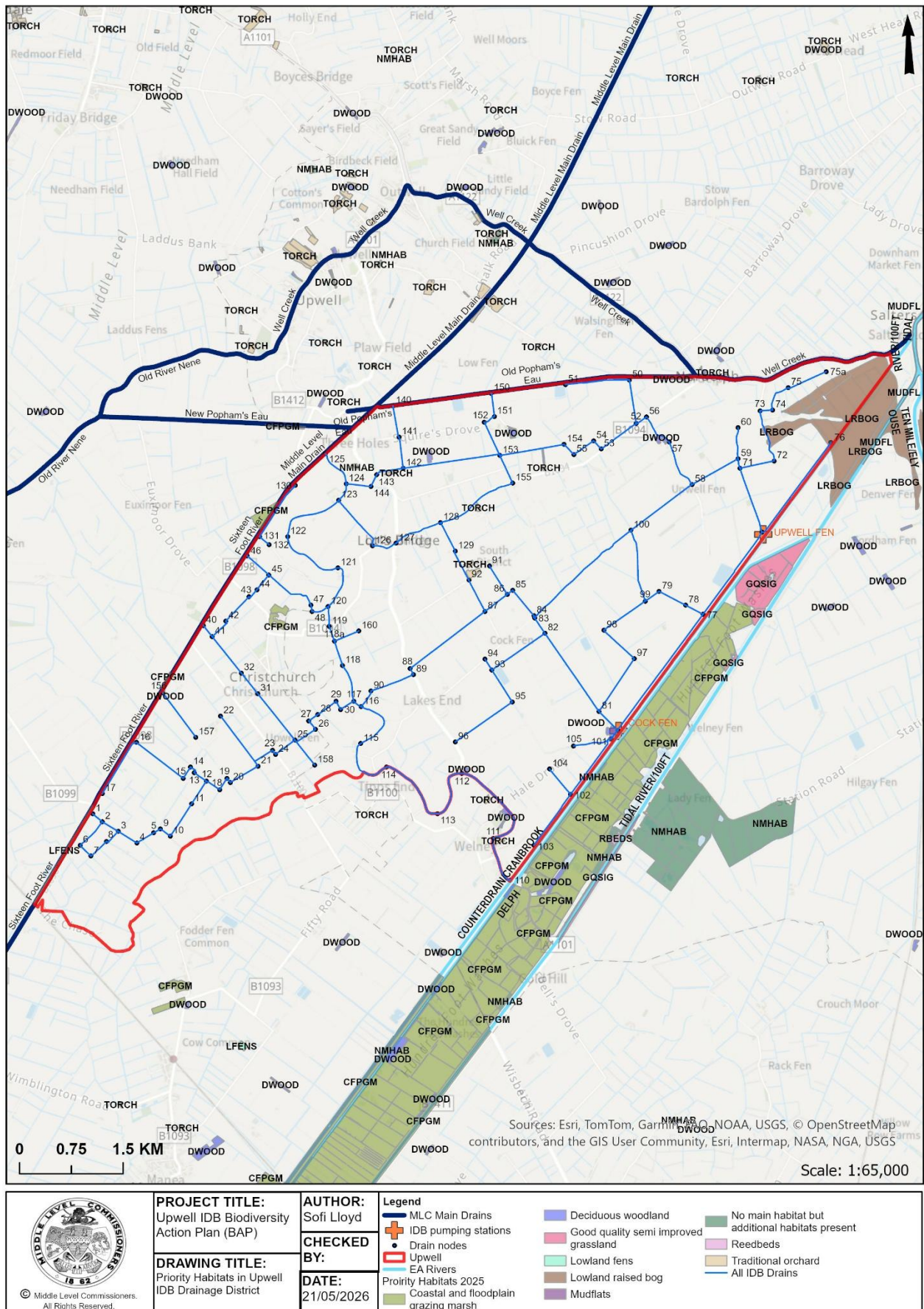


Figure 8. Map of Priority Habitats and Ponds in Upwell IDB

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Local Nature Recovery Strategies (LNRS) identify additional habitats that are of importance for conservation and creation. Upwell IDB spans the boundary of Cambridgeshire and Norfolk and is therefore subject to two separate LNRS documents. There is potential for some habitats identified in the respective LNRS's to be created or restored within the IDB District. Those which could be directly influenced and/or supported by the Boards' activities have been mapped in the LNRS in Figure 11/12 and/or are detailed in the below table.

Table 9. LNRS habitats prioritized for action that are relevant to IDB Activities

LNRS Priority Habitat	Local Targets	IDB Potential for Supporting / Influencing Habitat (high/medium/low)	LNRS
Woodlands	PM02 – Deciduous woodland restoration PM03 - Create New, Enlarge And Expand Existing And Connect Wet Woodland Where Feasible	High – IDB is likely to be able to influence local water levels	Norfolk
Ponds	PM32 – Restore and enhance existing still water	Low – Ponds mapped within the LNRS are not on IDB land. Use IDB networks to encourage and support creation and restoration of still water habitat.	Norfolk
Rivers and Streams	PM30 – Strengthen mosaic of wetland habitats along river channels. RD5A – Maximise opportunities for nature in fen drainage ditches by choosing nature-supporting and enhancing maintenance and management approaches such as enhancing in channel habitats to provide more habitat for wetland wildlife alongside managing flood risk and water levels.	High – IDB is likely to be able to influence local water levels to help support restoration and creation of riparian habitat. Encourage enhancement of IDB channels and support sensitive management through adherence to Standard Operating Procedures.	Norfolk/Cambridgeshire
Wet grassland	PM25 – Create new, enlarge and expand existing and connect wet grassland and grazing marshes where feasible and desirable.	Med – IDB are likely to be able to influence local water levels to support creation and ongoing management of wet grassland. Use IDB networks to encourage and support creation and restoration of wet grassland.	Norfolk
Traditional orchards	PM13 – Enlarge and expand existing traditional orchard PM14 – Restore and enhance existing traditional orchard.	Low – Use IDB network to encourage and support orchard creation. IDBs may be able to influence local water levels to support establishment and management of traditional orchard	Norfolk
Arable Field Margins	PM09 - Enlarge And Expand Existing Arable Field Margins RD5B - Establish uncultivated riparian buffer zones at least 15 metres wide from the top of the bank (including the 9 metre internal drainage board bylaw maintenance corridor). Plant or promote low growing, non-woody vegetation such as diverse grasses or wet grassland mixes that are compatible with regular ditch maintenance operations, to provide habitats for nature	Med – IDB is likely to be able to influence local rate payers and stakeholders through their networks to increase the uptake of appropriate environmental stewardship or voluntarily establish riparian buffers (uncultivated)	Norfolk/Cambridgeshire
Fen Droves (LNRS)	U3B – Map the locations of fen droves and identify remaining biodiversity hotspots, including for locally significant species such as elms and scarce invertebrate species. F4B - Identify all fen droves with important populations of elms or assemblages of invertebrate species and prioritise the protection and enhancement of the hedgerows and associated grasslands.	High – Use local knowledge within IDBs to map and identify ownership, provenance and status. Encourage and support landowners in IDB network to retain, survey, protect and enhance, particularly those adjacent to IDB drains or used to access and/or maintain IDB drains.	Cambridgeshire

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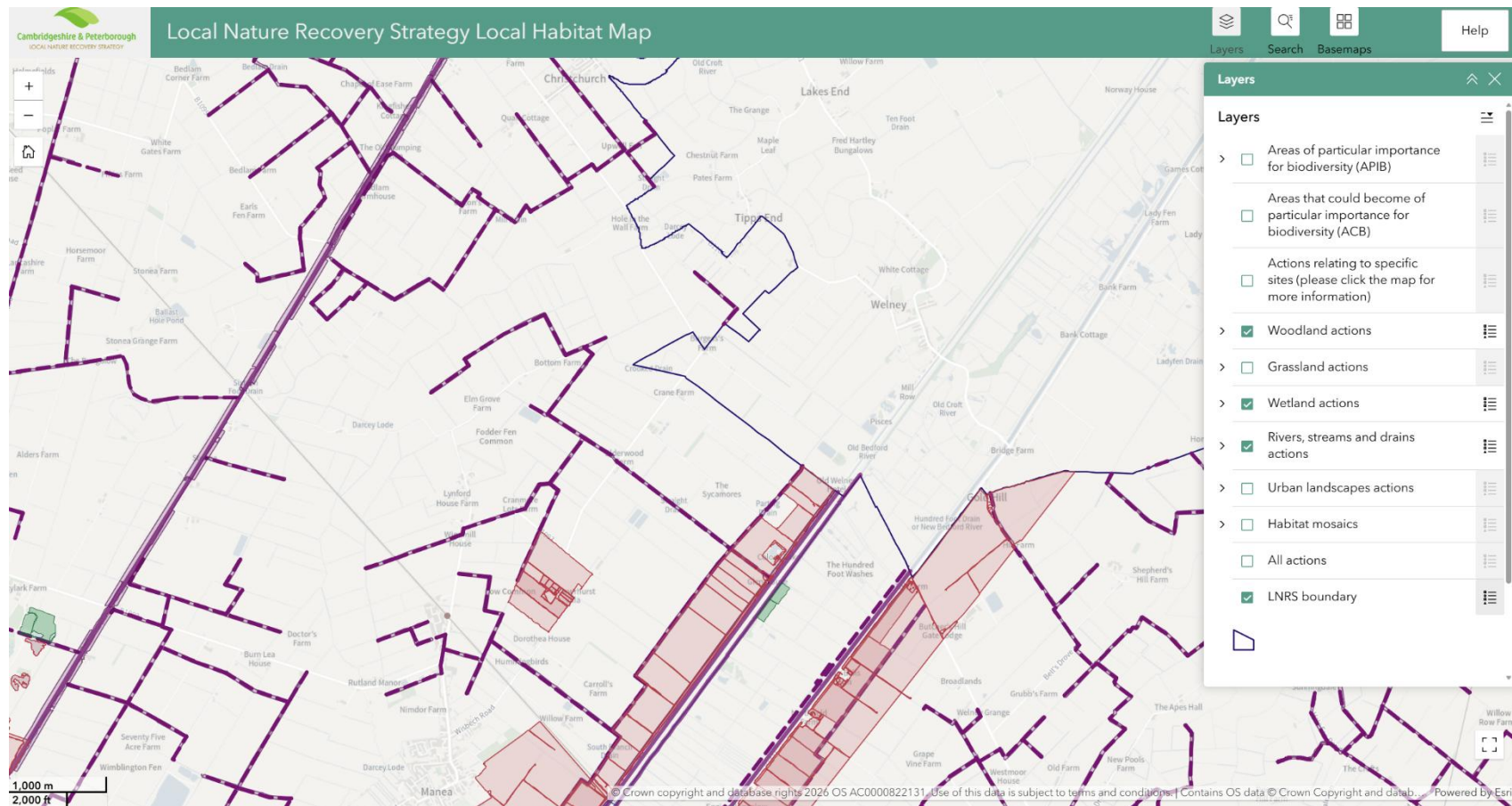


Figure 11. Mapped Priority Habitat Action Opportunities as detailed in the Cambridgeshire LNRS (published: 23rd December 2025) in Upwell IDB, available from this link: [Local Nature Recovery Strategy](https://www.cambridgeshire.gov.uk/residents/climate-change-energy-and-environment/improving-the-natural-environment/cambridgeshire-and-peterborough-local-nature-recovery-strategy#local-nature-recovery-strategy-published-5-0) or <https://experience.arcgis.com/experience/a1963a7dc51c4c259a8d19832b63f461>
<https://www.cambridgeshire.gov.uk/residents/climate-change-energy-and-environment/improving-the-natural-environment/cambridgeshire-and-peterborough-local-nature-recovery-strategy#local-nature-recovery-strategy-published-5-0>

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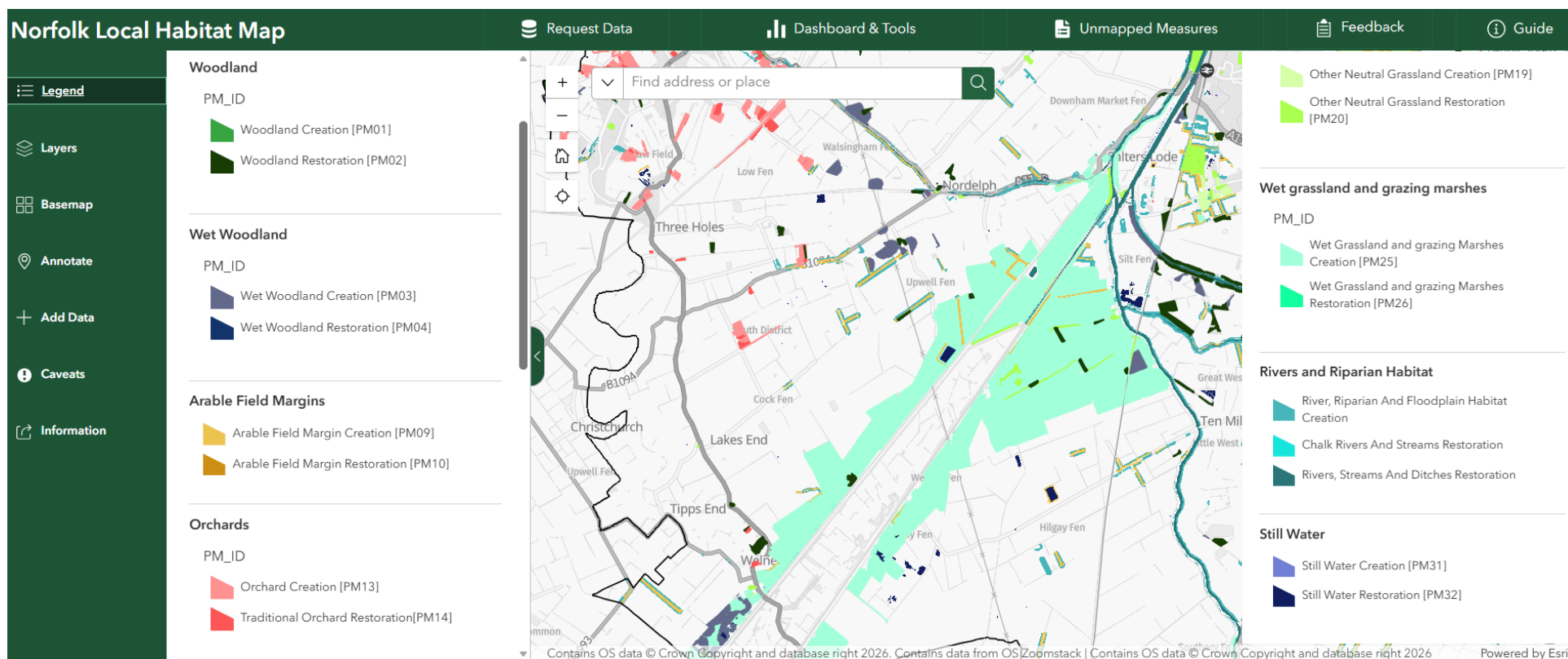


Figure 92: Mapped Priority Habitat Action Opportunities as detailed in the Norfolk LNRS (published: 31st October 2025) in Upwell IDB, available from this link: [Norfolk Local Habitat Map](#) | [Local Nature Recovery Strategy - Norfolk's Local Nature Recovery Strategy - Norfolk County Council](#)

5.10. Species Audit Summary

There are 176 protected, priority or other notable species that have previously been recorded within the district, as reported by the Local Environmental Records Centre (LERC). Of these, 120 species are associated with the habitats the Board manages and so could be influenced by the Boards' activities. A table listing these species is provided below.

Table 10: Rare, protected, notable and priority species previously recorded within the drainage district:

Taxon	Common Name	Scientific Name	Conservation Status	Potential for IDBs to influence	Species Info
Bird	Lesser Redpoll	<i>Acanthis cabaret</i>	UKBAP; S41 , LNRS	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Tree nester in wet woodlands
	Kingfisher	<i>Alcedo atthis</i>	WCA1i, LNRS	Yes. Check and maintain artificial nest sites. Retain bank-side trees / scrub as fishing perches and as a refuge for small fish which the bird eats. Record sightings.	Check and maintain artificial nest sites. Retain bank-side trees / scrub as fishing perches and as a refuge for small fish which the bird eats.
	Swift	<i>Apus apus</i>	CPASI, LNRS	Yes. Fund nest boxes and manage ditches to provide insect-rich foraging near nest sites.	Associated with buildings for nesting but may forage along drains and margins
	Bittern	<i>Botaurus stellaris</i>	Sect.41, UKBAP, WCA1i, LNRS	Moderate. Look for opportunities to create and manage reedbeds such as old pump drains. Record sightings.	Look for opportunities to create and manage reedbeds such as old pump drains.
	Goldeneye	<i>Bucephala clangula</i>	WCA1.2 , LNRS	Yes. Retain dense mature scrub stands i.e. bramble near water and manage extent rather than remove. Retain bankside trees and pollard rather than remove. Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Trim hedges outside bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Record sightings.	Nest in holes in trees near water
	Cuckoo	<i>Cuculus canorus</i>	UKBAP; S41 , LNRS	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Will often use a reed warbler's nest to lay and egg for them to raise so can be present in nests in reeds.
	Bewick's Swan	<i>Cygnus columbianus bewickii</i>	Sect.41, UKBAP, WCA1i, LNRS	Limited. Identify opportunities to support wetland creation and conservation.	Associated with fenland fields and washes when overwintering
	Whooper Swan	<i>Cygnus cygnus</i>	WCA1i, LNRS	Limited. Identify opportunities to support wetland creation and conservation.	Ground nesters in marshland and farmland

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Bird	Corn Bunting	<i>Emberiza calandra</i>	Sect.41, UKBAP, LNRS	Moderate. Rotationally manage ditch vegetation to maximise diversity which will support better numbers of inverts for chick food. Encourage cereal retention options in stewardship agreements next to ditches. Record sightings.	A key farmland indicator species. Has had a dramatic decline nationally and has been lost from many areas of the county but still remains in good numbers locally. Availability of invertebrates in summer and seeds in the winter are key to its abundance. Manage ditch vegetation to maximise diversity which will support better numbers of inverts.
	Yellowhammer	<i>Emberiza citrinella</i>	UKBAP; S41, LNRS	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Ground, or near to, nesting birds with broods into late August. Favour ditch edges and grass margins.
	Black-tailed Godwit	<i>Limosa limosa</i>	WCA1.1S41, LNRS	Yes. Seek local conservation projects to support / fund.	ID opportunities for IDBs near Ouse and Nene washes to become involved in/fund conservation projects or create wetland sites
	Linnet	<i>Linaria cannabina</i>	Sect.41, UKBAP, LNRS	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Ground & low scrub/hedge nesters
	Grasshopper Warbler	<i>Locustella naevia</i>	UKBAP; S41, LNRS	Yes. Promote uptake of environmental stewardship riparian buffer strip options	Prefers sites with a mixture of habitats including grassland, scrub and reedbed/wetland areas, therefore a good indicator of relatively wild habitats.
	Yellow Wagtail	<i>Motacilla flava</i>	S41, LNRS	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Ground nesters in damp channel margins and banks and agricultural margins.
	Spotted Flycatcher	<i>Muscicapa striata</i>	UKBAP; S41, LNRS		Dense hedge and scrub nesters
	Curlew	<i>Numenius arquata</i>	UKBAP; S41, LNRS	Moderate. Look for opportunities to create and/or restore wetland habitats. Manage ditches to maximise diversity.	Ground nesters in rough/damp pasture
	House Sparrow	<i>Passer domesticus</i>	Sect.41, UKBAP, LNRS	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Dense hedge nesters
	Tree Sparrow	<i>Passer montanus</i>	UKBAP; S41, LNRS		Hedge & scrub nesters
	Grey Partridge	<i>Perdix perdix</i>	Sect.41, UKBAP, LNRS	Limited. Promote uptake of environmental stewardship riparian buffer strip options. Record sightings.	Localised breeding species in the county, with the main populations in Cambs. in the South Cambs. chalk areas. Promote Environmental stewardship alongside IDB drains for a number of reasons
	Black-necked Grebe	<i>Podiceps nigricollis</i>	WCA1.1, LNRS	Moderate. Look for opportunities to create and/or restore reedbeds and wetland habitats. Manage ditches to maximise diversity.	Reedbed nesters
	Bullfinch	<i>Pyrrhula pyrrhula</i>	S41, LNRS	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Dense hedge and scrub nesters

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Bird	Garganey	<i>Spatula querquedula</i>	WCA1.1 , LNRS	Moderate. Look for opportunities to create and/or restore wetland habitats. Manage ditches to maximise diversity.	Swampy meadows and marshy area nesters
	Turtle Dove	<i>Streptopelia turtur</i>	UKBAP; S41 , LNRS	Yes. Retain dense mature scrub stands i.e. bramble near water and manage extent rather than remove. Retain bankside trees and pollard rather than remove. Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Trim hedges outside bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Record sightings.	Hedge & scrub nesters
	Barn Owl	<i>Tyto alba</i>	CPASI, WCA1i, LNRS	Yes. Manage existing boxes, fund and install new ones where necessary and support box surveys. Retain areas of taller bank veg to support small mammals.	Species is still under threat from a range of factors relating to agricultural intensification and urbanisation. Erect and manage Barn Owl Boxes.
	Lapwing	<i>Vanellus vanellus</i>	Sect.41, UKBAP, LNRS	Limited. Promote uptake of environmental stewardship riparian buffer strip options to provide insect-rich foraging near nest sites.	Ground nester in farmland. One of the most strongly declining birds in Europe but Cambs. is a stronghold
	Pintail	<i>Anas acuta</i>	WCA1.2	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Ground nesters near water
	European White-fronted Goose	<i>Anser albifrons albifrons</i>	UKBAP; S41	Limited. Identify opportunities to support wetland creation and conservation.	Overwintering population in the Fens. Sensitive to wetland loss and modification.
	Greenland White-fronted Goose	<i>Anser albifrons flavirostris</i>	UKBAP	Limited. Identify opportunities to support wetland creation and conservation.	Overwintering population in the Fens. Sensitive to wetland loss and modification.
	Purple Heron	<i>Ardea purpurea</i>	WCA1.1	Moderate. Look for opportunities to create and manage scrapes/ponds/reedbeds. Record any sightings.	Occasional migrant with no established UK breeding population though potential to colonise.
	Scaup	<i>Aythya marila</i>	Sect.41, UKBAP, WCA1i	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Ground nesters near water
	Cetti's Warbler	<i>Cettia cetti</i>	WCA1.1		Dense scrub nesters near water. Uses same nest sites across years.
	Marsh Harrier	<i>Circus aeruginosus</i>	WCA1i		Ground-nesters using reedbeds and grassy margins
	Quail	<i>Coturnix coturnix</i>	WCA1.1	Limited. Encourage establishment and retention of arable margins.	Spring and summer visitors favouring arable farmland and open grassland.
	Tundra Swan	<i>Cygnus columbianus</i>	WCA1.1	Limited. Identify opportunities to support wetland creation and conservation.	Feed on aquatic plants
	Lesser Spotted Woodpecker	<i>Dryobates minor</i>	S41	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Nest in holes in trees near water
	Reed Bunting	<i>Emberiza schoeniclus</i>	Sect.41, UKBAP		Ground, or near to, nesting birds with broods into late August. Favour ditch edges and grass margins.
	Hobby	<i>Falco subbuteo</i>	WCA1.1		Tree nesters hunting across open habitats

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	Black-winged Stilt	<i>Himantopus himantopus</i>	WCA1.1	Limited. Manage watercourses in line with SOPs and promote good water quality.	Rare migrant with potential to colonise suitable wetland habitats
	Bearded Tit	<i>Panurus biarmicus</i>	WCA1.1	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Reedbed nesters
	Spoonbill	<i>Platalea leucorodia</i>	WCA1.1	Yes. Manage channels according to the SOP. Retain & create suitable habitat. Record sightings.	Small, localised breeding populations expanding northwards. Will breed in mixed colonies alongside herons and cormorants.
	Dunnock	<i>Prunella modularis</i>	Sect.41, UKBAP	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Hedge & scrub nesters
	Redwing	<i>Turdus iliacus</i>	WCA1.1		Hedge & scrub nesters
	Song Thrush	<i>Turdus philomelos</i>	Sect.41, UKBAP		Nest low in hedges and scrub
Fish	Eel	<i>Anguilla anguilla</i>	UKBAP; S41, LNRS	Yes. Retain in-channel marginal vegetation to provide refuge from predators. If pumps are fish friendly, focus operation at night to enable migration. If pumps are not fish friendly, plan replacement to fish friendly pumps and/or eel passes to enable migration. Only desilt centre 2/3rds of channel.	Spends most of its life in European rivers which flow into the Atlantic, Mediterranean and Baltic seas, and migrate to the western sub-tropical Atlantic where it breeds. Retain marginal veg as refuge for them.
	Spined Loach	<i>Cobitis taenia</i>	UKBAP; S41, LNRS	Yes. Desilt little and often to provide diversity of substrate for the filter-feeders	Appears to be restricted to Trent, Welland, Witham, Nene and Great Ouse, with their associated waterways. Moreton's Leam is thought to contain the highest recorded density of spined loach in the UK and is designated an SAC for this reason, as are Ouse Washes Counter Drain and Old Bedford River. Have been found on occasion in the Middle Level system. Desilt little and often
	Smelt	<i>Osmerus eperlanus</i>	UKBAP; S41	Yes. Retain in-channel marginal vegetation to provide refuge from predators. If pumps are fish friendly, focus operation at night to enable migration. If pumps are not fish friendly, plan replacement to fish friendly pumps and/or fish passes to enable migration. Only desilt centre 2/3rds of channel.	
Flowering Plant	Frogbit	<i>Hydrocharis morsus-ranae</i>	CPASI, RLENG.VU, RLGB.VU, LNRS	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	
	Mousetail	<i>Myosurus minimus</i>	, LNRS		
	Tubular Water-dropwort	<i>Oenanthe fistulosa</i>	UKBAP; S41, LNRS		Found in areas with winter flooding, including flood meadows and ponds. Look for around Nene and Ouse Washes IDBs
	Black-poplar	<i>Populus nigra</i> subsp. <i>betulifolia</i>	CPASI, LNRS	Yes. Look for planting opportunities. Identify those existing and conserve.	One of the rarest native trees in Cambs. and Pboro. Under threat because of a lack of natural reproduction opportunities. Most trees present now are thought to have been planted but maybe not all. Natural habitat is river floodplains. Look for planting opportunities

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Flowering Plant	Greater Water-parsnip	<i>Sium latifolium</i>	UKBAP; S41NationallyScarce, LNRS	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	Fenland characteristic species. Found parts of the Ouse Washes. Small populations remain vulnerable. Look for in surveys
	Corn Chamomile	<i>Anthemis arvensis</i>		Limited. Encourage establishment and retention of arable margins.	Arable weed favouring light sandy soils on grassland leys, disturbed ground and wasteland.
	Calystegia sepium subsp. roseata	<i>Calystegia sepium subsp. roseata</i>	NS	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	
	Chicory	<i>Cichorium intybus</i>	RENG.VU		
	Field Pepperwort	<i>Lepidium campestre</i>	RENG.Lr(NT)	Limited. Encourage establishment and retention of arable margins.	Open grassland/arable specialist favouring sandy/gravelly soils.
	Cat-mint	<i>Nepeta cataria</i>	CPASI, RENG.VU, RLGB.VU	Limited. Encourage establishment and retention of arable margins.	Winter-green perennial herb favouring chalky soil in arable margins, verges, hedgebanks and wasteland.
	Small Water-pepper	<i>Persicaria minor</i>		Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	
	Flat-stalked Pondweed	<i>Potamogeton friesii</i>	CPASI, NS, RENG.VU, RLGB.Lr(NT)		Aquatic herb favouring eutrophic, still, or slowly flowing waters especially fenland lodes and ditches.
Insect - Butterfly	Wall	<i>Lasiommata megera</i>	RLGB.Lr(NT), Sect.41, UKBAP	Yes. Invertebrates use a wide range of plants as hosts for their larval stage and for feeding and egg laying in their adult stages. Aim to create and maintain the most diverse sward possible on banks, channel margins and in channel to support them by following a rotational vegetation management regime. Retain trees, hedgerows and scrub and plant more where possible. Look for in surveys, record presence & inform LERC.	
Insect - Dragonfly (Odonata)	Scarce Chaser	<i>Libellula fulva</i>	RLGB.Lr(NT)		
Insect - Hymenopteran	Large Garden Bumblebee	<i>Bombus ruderalis</i>	UKBAP; S41NotableB		Favours flower-rich grasslands, particularly in large river valleys where red clover is prevalent.
	Brown Tree Ant	<i>Lasius brunneus</i>	NotableA		Linked to Oak
Insect - Moth	Knot Grass	<i>Acronicta rumicis</i>	UKBAP; S41		
	Beaded Chestnut	<i>Agrochola lychnidis</i>	UKBAP; S41		
	Green-brindled Crescent	<i>Allophyas oxyacanthae</i>	UKBAP; S41		
	Ear Moth	<i>Amphipoea oculea</i>	UKBAP; S41		Found in wetlands / fen

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Insect - Moth	Mouse Moth	<i>Amphipyra tragopoginis</i>	UKBAP; S41	Yes. Invertebrates use a wide range of plants as hosts for their larval stage and for feeding and egg laying in their adult stages. Aim to create and maintain the most diverse sward possible on banks, channel margins and in channel to support them by following a rotational vegetation management regime. Retain trees, hedgerows and scrub and plant more where possible. Look for in surveys, record presence & inform LERC.	
	Brown-spot Pinion	<i>Anchoscelis litura</i>	UKBAP; S41		
	Large Nutmeg	<i>Apamea anceps</i>	UKBAP; S41		
	Dusky Brocade	<i>Apamea remissa</i>	UKBAP; S41		
	Garden Tiger	<i>Arctia caja</i>	UKBAP; S41		
	Centre-barred Sallow	<i>Atethmia centrargo</i>	UKBAP; S41		
	Fen Crest	<i>Brachmia inornatella</i>	NotableB		Fen and marsh specialist, restricted to East Anglia
	Minor Shoulder-knot	<i>Brachylomia viminalis</i>	UKBAP; S41		
	Bulrush Veneer	<i>Calamotropha paludella</i>	NotableB		
	Mottled Rustic	<i>Caradrina morpheus</i>	UKBAP; S41		
	Latticed Heath	<i>Chiasmia clathrata</i>	UKBAP; S41		
	Sallow	<i>Cirrhia icteritia</i>	UKBAP; S41		Assoc with ditches and streams
	Goat Moth	<i>Cossus cossus</i>	UKBAP; S41		
	Small Square-spot	<i>Diarsia rubi</i>	UKBAP; S41		
	Dusky Thorn	<i>Ennomos fuscantaria</i>	UKBAP; S41		Assoc with Ash trees
	Comfrey Ermine	<i>Ethmia quadrillella</i>	NotableA		Strongly Assoc with wetlands and wetland plants
	Garden Dart	<i>Euxoa nigricans</i>	UKBAP; S41		
	Crescent	<i>Helotropha leucostigma</i>	UKBAP; S41		
	Ghost Moth	<i>Hepialus humuli</i>	UKBAP; S41		Open damp grassland species
	Rustic	<i>Hoplodrina blanda</i>	UKBAP; S41		
	Rosy Rustic	<i>Hydraecia micacea</i>	UKBAP; S41		
	Shoulder-striped Wainscot	<i>Leucania comma</i>	UKBAP; S41		
	Brindled Beauty	<i>Lycia hirtaria</i>	UKBAP; S41		
	V-moth	<i>Macaria wauaria</i>	UKBAP; S41		Dependent on fruit bushes in cultivated environments.
	Lackey	<i>Malacosoma neustria</i>	UKBAP; S41		
	Dot Moth	<i>Melanchra persicariae</i>	UKBAP; S41		
	Pretty Chalk Carpet	<i>Melanthia procellata</i>	UKBAP; S41		Favours hedgerows and scrubland, food plant is traveller's joy.
	Dark Brocade	<i>Mniotype adusta</i>	UKBAP; S41		Prefers damp habitats
	Spindle Knot-horn	<i>Nephopterix angustella</i>	NotableB		Occupies hedgerows and scrubby places across the south of England.
	Powdered Quaker	<i>Orthosia gracilis</i>	UKBAP; S41		Damp, grassy, and marshy habitats.
	Dark Spinach	<i>Pelurga comitata</i>	UKBAP; S41		
	Large Wainscot	<i>Rhizedra lutosa</i>	UKBAP; S41		
	Giant Water-veneer	<i>Schoenobius gigantella</i>	NotableB		
	Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	UKBAP; S41		
	White Ermine	<i>Spilosoma lubricipeda</i>	UKBAP; S41		
	Buff Ermine	<i>Spilosoma lutea</i>	UKBAP; S41		

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Moth	Blood-vein	<i>Timandra comae</i>	UKBAP; S41	Yes. Invertebrates use a wide range of plants as hosts for their larval stage and for feeding and egg laying in their adult stages. Aim to create and maintain the most diverse sward possible on banks, channel margins and in channel to support them by following a rotational vegetation management regime. Retain trees, hedgerows and scrub and plant more where possible. Look for in surveys, record presence & inform LERC.	
	Cinnabar	<i>Tyria jacobaeae</i>	UKBAP; S41		
	Oak Hook-tip	<i>Watsonalla binaria</i>	UKBAP; S41		
	Dark-barred Twin-spot Carpet	<i>Xanthorhoe ferrugata</i>	UKBAP; S41		
Mollusc	Mud Pond Snail	<i>Omphiscola glabra</i>	UKBAP; S41 Nationally Scarce	Limited. Manage watercourses in line with SOPs and identify opportunities for pond creation.	Prefers ponds with low calcium, nutrient poor water on acidic sandy or gravelly soils. Typically occur in habitats such as ephemeral ponds, ditches and seepages.
Reptile	Grass Snake	<i>Natrix helvetica</i>	Sect.41, UKBAP, WCA5, LNRS	Yes. Manage channels according to the SOP. Retain & create suitable habitat. Record sightings.	
Terrestrial Mammal	Water Vole	<i>Arvicola amphibius</i>	RLGB.EN, Sect.41, UKBAP, WCA5, LNRS	Yes. Manage ditches according to the SOPs to ensure no burrows are damaged and marginal vegetation is maintained for optimal vv habitat. Manage bank face vegetation rotationally to maintain/develop a favourable & diverse sward as optimal habitat for vv. Continue support for mink control project. Record in surveys.	IDB ditches are stronghold for them. Ensure water levels of at least 30cm are maintained all year round, keeping summer/winter level fluctuations as small as possible. Retain marginal vegetation for refuge. Fund and support mink trapping.
Terrestrial Mammal	Hedgehog	<i>Erinaceus europaeus</i>	RLGB.VU, Sect.41, UKBAP, LNRS	Yes. More associated with mosaic habitats but IDBs must be mindful not to disturb scrub patches / weed screen piles / leaf piles after October as they may be hibernating. Fund hedgehog hotels, encourage leaf piles and don't keep things "tidy". Record sightings.	More associated with mosaic habitats but IDBs must be mindful not to disturb scrub patches / weed screen piles / leaves after October as they may be hibernating. Fund hedgehog hotels, encourage leaf piles and don't keep things "tidy".
	Hare	<i>Lepus europaeus</i>	UKBAP; S41	Yes. Retain areas of uncut undisturbed marginal and bank vegetation for refuge and foraging and manage rotationally.	
	Otter	<i>Lutra lutra</i>	HabRegs2, Sect.41, UKBAP, WCA5	Yes. Manage channels according to the SOP. Retain & create suitable habitat. Record sightings and field signs.	
Terrestrial Mammal - Bat	Daubenton's Bat	<i>Myotis daubentonii</i>	HabsRegs2; WCA5	Yes. Retain mature bank-side trees to provide suitable roosts for bats. Trim or pollard trees rather than remove them. Install bat boxes on bank-side trees or elsewhere in the district to improve roost provision. Provide bat boxes Yes. Retain mature bank-side trees to provide suitable roosts for bats. Trim or pollard trees rather than remove them. Install bat boxes on bank-side trees or elsewhere in the district to improve roost provision. Provide bat boxes.	Assoc. with water
	Natterer's Bat	<i>Myotis nattereri</i>	HabsRegs2; WCA5		
	Noctule	<i>Nyctalus noctula</i>	HabsRegs2; WCA5UKBAP; S41		
	Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	HabsRegs2; WCA5		Favours parkland, light woodland and areas near waterbodies.
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	HabRegs2, WCA5		
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	HabsRegs2; WCA5UKBAP; S41		
	Brown Long-eared Bat	<i>Plecotus auritus</i>	HabRegs2, Sect.41, UKBAP, WCA5		
	Barbastelle	<i>Barbastella barbastellus</i>	HabsRegs2; WCA5UKBAP; S41, LNRS		Thought to prefer pastoral landscapes with a mixture of deciduous woodland and other habitats. Roost mainly in cracks in trees.

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In addition, there are 106 species identified by the Local Nature Recovery Strategy (LNRS) that are a priority for nature conservation within Cambridgeshire. Some of these species are commonly associated with the habitats that the Board manages. While there are no known recent records of these species being present within the district, there is potential for them to be found, or for them to colonise, either naturally or via translocation if the habitats they prefer are managed favourably. There is therefore potential for the conservation status of these species across the county to be influenced by the activities of the Board.

Table 11: Species identified by the Local Nature Recovery Strategy (LNRS) for Cambridgeshire as being a conservation priority in the county:

Taxon	Common Name	Scientific Name	Conservation Status	Potential for IDBs to influence	Species Info
Amphibian	Northern pool frog	<i>Pelophylax lessonae</i>	WACA-Sch5_sect9.4b	Low. Create ponds where possible	Ponds specific
	Great Crested Newt	<i>Triturus cristatus</i>	Bern-A2		Favourable habitat in fen ditches
Bird	Common Crane	<i>Grus grus</i>	CPASI, LNRS	Moderate. Look for opportunities to create and/or restore reedbeds and wetland habitats. Manage ditches to maximise diversity.	Now over a dozen pairs and a wintering population in excess of 80 individuals, making Cambs and Pboro a key county. Continued management of existing and creation of new areas of mixed wetland will bolster breeding numbers further - IDB action.
	Snipe	<i>Gallinago gallinago</i>	UK Amber List, LNRS	Yes. Look for opportunities to create / restore reedbeds and wetland habitats	Requiring wet grassland / water meadow. IDBs Look for opportunities to restore / create reedbeds & wet grasslands and/or support conservation efforts within the district.
	Motacilla flava	Yellow Wagtail	Sect.41, UKBAP	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Ground nesters in damp habitat & farmland
	Greenfinch	<i>Chloris chloris</i>	Bird-Red		Favours arable habitat
	House Martin	<i>Delichon urbicum</i>	Bird-Red	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Assoc with buildings for nesting but may forage along drains and margins
	Kestrel	<i>Falco tinnunculus</i>	W(NI)O-Sch1_part1		Assco with woodland edges, hedgerows, riverbanks and margins. Preys on small mammals
	Coot	<i>Fulica atra</i>	BirdsDir-A2.1	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Ground nesting assoc with lakes and rivers/drains
	Moorhen	<i>Gallinula chloropus</i>	BirdsDir-A2.2		Ground nesting assoc with lakes and rivers/drains
	Oystercatcher	<i>Haematopus ostralegus</i>	BirdsDir-A2.2	Retain marginal and bank vegetation as much as possible and cut banks rotationally outside of bird nesting season. Encourage farmers to establish stewardship margins alongside hedgerows and ditches for foraging. Maximise plant diversity for invertebrate abundance. Record sightings.	Assoc with coastal and estuary but frequently inland. Ground nesters
	Swallow	<i>Hirundo rustica</i>	Bird_RedList_GB_post2 001-LC_Breeding		Assoc with buildings for nesting but may forage along drains and margins
	Red-backed Shrike	<i>Lanius collurio</i>	WACA-Sch1_part1		Assoc with thorn scrub across a range of habitats. Prey on small mammals
	Common Tern	<i>Sterna hirundo</i>	BirdsDir-A1		Assoc with coastal and inland waterways. Summer visitor.
	Redshank	<i>Tringa totanus</i>	BirdsDir-A2.2		
Fish	Brook lamprey	<i>Lampetra planeri</i>	Bern-A3	Limited. Look for presence during surveys.	A positive indicator for rivers and streams. It tends to be observed in the headwaters of smaller waterbodies (but may be present in the middle reaches of rivers). The species has a larval form which

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					requires unpolluted and stable silt beds, thus if a river supports brook lamprey it could be considered as one that is in a better ecological condition and is exhibiting stability and naturalness of the river environment.
	Burbot	<i>Lota lota</i>	WACA-Sch5Sect9.4c		Historically assoc with fenland waterways subject to reintroductions in the Great Ouse catchment
Flowering Plant	Fen Ragwort	<i>Jacobaea paludosa</i>	RedList_GB_post2001-CR	Possibly. Identify possible reintroduction sites i.e. vegetated drains, old pump drains, dead end drains, reedbed peripheries etc.	Look for reintro sites, particularly in vegetated drains, old pump drains, dead end drains, reedbed peripheries etc.
	Lesser Water-plantain	<i>Baldellia ranunculoides</i>	CPASI, RLENG.VU, RLGB.Lr(NT), LNRS	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	Only a few sites now have significant numbers. Under threat from a range of factors. Survey for them annually.
	Long-stalked Yellow-sedge	<i>Carex lepidocarpa</i>	RLGB LC. RLENG LC. , LNRS		Strong indicator of high-quality wet fen meadow habitats. Likely less than ten sites in Cambs and Pboro where it still occurs, at some of those in small numbers. Look for in surveys
	Meadow Thistle	<i>Cirsium dissectum</i>	CPASI, LNRS		Strong indicator of high-quality wet fen meadow habitats. Perhaps less than five sites in Cambs and Pboro where it still occurs. Look for in IDB surveys
	Large-flowered Hemp-nettle	<i>Galeopsis speciosa</i>	RLENG.VU, RLGB.VU, LNRS		Found in peaty fields and disturbed fen. Look out for in surveys
	Dyer's Greenweed	<i>Genista tinctoria</i>	CPASI, RLENG.VU, LNRS	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	Good indicator of old permanent grassland of interest (including verges), particularly in the clay areas of Cambs and Pboro. Number of sites in Cambs and Pboro has been declining in recent decades and it is still under threat as many populations are small. Pboro IDBs
	Opposite-leaved pondweed	<i>Groenlandia densa</i>	RedList_ENG_post2001-VU		Typical of shallow nutrient-poor calcareous waters. Mostly found in fen drains. Look for in surveys
	Water violet	<i>Hottonia palustris</i>	W(NI)O-Sch8_part1		Found in still, shallow, base-rich, clear and not eutrophic waterbodies so it is a positive indicator. Found in fenland drains, although has declined here. Look for in surveys
	Narrow-leaved Water-dropwort	<i>Oenanthe silaifolia</i>	CPASI, NS, LNRS		Characteristic flood meadow species. Mostly restricted to a few sites in the River Great Ouse valley area. IDBs near Ouse washes only
	Tasteless Water-pepper	<i>Persicaria mitis</i>	CPASI, NS, RLENG.VU, RLGB.VU, LNRS		Found in the Ouse and Nene Washes and only found in a few sites outside of these and has been lost from some locations. Found in wet places in open vegetation, typically on nutrient-rich mud and peat that is exposed by a rapid 'drawdown' of water in the summer. Look out for in Ouse washes IDBs

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Flowering Plant	Fen Pondweed	<i>Potamogeton coloratus</i>	CPASI, NS, LNRS	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	Fenland is the British stronghold. Shallow calcareous water. Most records in the Wicken and Whittlesey areas. Wetland habitats such as ponds and drains. All IDB surveys
	Meadow Saxifrage	<i>Saxifraga granulata</i>	RedList_ENG_post2001-LC		Occasionally found on banks or in floodplains, indicator of good quality unimproved grasslands
	Cambridge Milk-parsley	<i>Selinum carvifolia</i>	RLENG.EN, RLGB.EN, WCA8, LNRS		Known to be present in an IDB drain near Ramsey
	Pepper-saxifrage	<i>Silaum silaus</i>	CPASI, LNRS		Strong indicator of old species-rich grassland, especially damp grassland. Many populations are small and so are under threat from a lack of appropriate management and potentially development where sites are not protected. Look for in surveys
	Marsh Stitchwort	<i>Stellaria palustris</i>	RLENG.VU, RLGB.VU, Sect.41, UKBAP, LNRS		Strong old wet grassland indicator. Present at less than ten sites in Cambs and Pboro and at risk in many of them. Look for in surveys near Nene, Ouse and WWF
	Milk Parsley	<i>Thysselinum palustre</i>	RedList_GB_post2001-VU		
	Greater Bladderwort	<i>Utricularia vulgaris</i> agg.	RLENG.LC, RLGB.LC., LNRS		Good indicator of high-quality wetland habitats as it is susceptible to eutrophication. At risk where populations are small. Look for in surveys
	Heath Dog-violet	<i>Viola canina</i> subsp. <i>ruppii</i>	RLGB EN. RLENG EN., LNRS		In Woodwalton Fen, Holme fen & RUGR IDB only.
	Ribbon-leaved water-plantain	<i>Alisma gramineum</i>	WACA-Sch8		fenland drain/ditch specialist
	Flat-sedge	<i>Blysmus compressus</i>	Scottish Biodiversity List		
	Fibrous Tussock-sedge	<i>Carex appropinquata</i>	NS-excludes		
	Early Marsh-orchid (cream-flowered)	<i>Dactylorhiza incarnata</i>	RedList_ENG_post2001-LC		
	Deptford Pink	<i>Dianthus armeria</i>	WACA-Sch8		prefers unimproved margins; recorded in Sawtry (Monk's Wood) 2000-2019
	Marsh Helleborine	<i>Epipactis palustris</i>	W(NI)O-Sch8 part1		
	Common Cottongrass	<i>Eriophorum angustifolium</i>	RedList_ENG_post2001-VU		
	Slender Tare	<i>Ervum gracile</i>	RedList_GB_post2001-VU		
	Least lettuce	<i>Lactuca saligna</i>	WACA-Sch8		formerly common on river and ditch banks in East Anglia
	Fen orchid	<i>Liparis loeselii</i>	Bern-A1		
	Fen Wood-rush	<i>Luzula pallescens</i>	RedList_GB_post2001-CR		Found in Holme Fen, Needs ground disturbance
	Bog Pimpernel	<i>Lysimachia tenella</i>	RedList_GB_post2001-LC		
	Grass-poly	<i>Lythrum hyssopifolia</i>	WACA-Sch8		
	Twayblade	<i>Neottia ovata</i>	RedList_GB_post2001-LC		tolerant of a wide range of habitats including hedgerow, fen, wasteland and scrub
	Fly Orchid	<i>Ophrys insectifera</i>	England_NERC_S.41		
	Marsh Lousewort	<i>Pedicularis palustris</i>	RedList_ENG_post2001-VU		
	Common Butterwort	<i>Pinguicula vulgaris</i>	RedList_ENG_post2001-VU		
	Oxlip	<i>Primula elatior</i>	NS-excludes		

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Flowering Plant	Great Burnet	<i>Sanguisorba officinalis</i>	NI_Priority	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	Characteristic flood meadow and positive old grassland indicator species (although can be found in woodland). Associated with sites of natural history interest in Cambs and Pboro and has declined significantly. Many populations are small and so are under threat from destruction or neglect.
	Saw-wort	<i>Serratula tinctoria</i>	RedList_ENG_post2001-LC		Strong indicator of a range of old species-rich habitats, including grassland and woodland edges. Has declined significantly nationally and locally. At the eastern edge of its range in Cambs and at many sites numbers are small so these populations are under threat. Now may only be present at less than ten sites in Cambs and Pboro.
	Small-flowered catchfly	<i>Silene gallica</i>	NS-excludes		annual herb of cultivated and disturbed ground, mainly arable
	Hampshire Dandelion	<i>Taraxacum akteum</i>	NR-excludes		
	English Dandelion	<i>Taraxacum anglicum</i>	RedList_ENG_post2001-VU		
	Marsh Dandelion	<i>Taraxacum palustre</i>	RedList_ENG_post2001-VU		
	Water Germander	<i>Teucrium scordium</i>	WACA-Sch8		
	Marsh Valerian	<i>Valeriana dioica</i>	RedList_ENG_post2001-NT		
	Fen Violet	<i>Viola stagnina</i>	RedList_GB_post2001-CR		
Insect	Drab Wood-soldier fly	<i>Solva marginata</i>	RedList_GB_post2001-LC	Yes. Invertebrates use a wide range of plants as hosts for their larval stage and for feeding and egg laying in their adult stages. Aim to create and maintain the most diverse sward possible on banks, channel margins and in channel to support them by following a rotational vegetation management regime. Retain trees, hedgerows and scrub and plant more where possible. Look for in surveys, record presence & inform LERC.	Associated with riverside trees especially willow and poplar
Insect - Beetle (Coleoptera)	Zircon reed beetle	<i>Donacia aquatica</i>	NI_Priority		Favours sedge dominated marginal habitat
	Eyed Longhorn beetle	<i>Oberea oculata</i>	NR-includes		
	Mud Beetle	<i>Sphaerius acaroides</i>	RedList_GB_post2001-EN		
	Agabus uliginosus	<i>Agabus uliginosus</i>	Nb, RLGB.Lr(NT), LNRS		Potentially a flagship species for seasonal pools. Found in a range of wetlands in isolated ponds or in seasonally flooded fen. Found at Wicken Fen, Woodwalton Fen and a relatively small number of sites outside of these. Look out for in surveys
	Agabus undulatus	<i>Agabus undulatus</i>	CPASI, RLGB.Lr(NT), LNRS		Most often found in fenland drains. Suitable flagship species for improved drain management as it is a distinctive species that is relatively recognisable. Look out for in surveys
	Donacia dentata	<i>Donacia dentata</i>	RLGB.VU, LNRS		Very few known sites in Cambs and Pboro. Found in larger drains and rivers and feeds mainly on Arrowhead, <i>Sagittaria sagittifolia</i> . Relatively large and identifiable. Look out for in surveys
Insect - Butterfly	Large copper	<i>Lycaena dispar</i>	WACA-Sch5 sect9.5a		
	Swallowtail	<i>Papilio machaon</i>	WACA-Sch5 sect9.4b		
	Grizzled Skipper	<i>Pyrgus malvae</i>	RLGB.VU, Sect.41, UKBAP, LNRS		Active management is needed to maintain suitable habitat where the suitable food plants grow (such as Creeping Cinquefoil, Agrimony and Wild Strawberry). Relatively open, patchy grassland seems to be preferred where there is some periodic disturbance. This includes land by railway lines and brownfield sites.
	Black Hairstreak	<i>Satyrrium pruni</i>	RedList_GB_post2001-EN		
Insect - Caddis Fly (Trichoptera)	Erotesis baltica	<i>Erotesis baltica</i>	NR-includes		
Insect - Grasshopper	Large Marsh Grasshopper	<i>Stethophyma grossum</i>	England_NERC_S.41		

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Insect - Moth	White-spotted Pinion	<i>Cosmia diffinis</i>	Sect.41, UKBAP, LNRS	Yes. Invertebrates use a wide range of plants as hosts for their larval stage and for feeding and egg laying in their adult stages. Aim to create and maintain the most diverse sward possible on banks, channel margins and in channel to support them by following a rotational vegetation management regime. Retain trees, hedgerows and scrub and plant more where possible. Look for in surveys, record presence & inform LERC	Caterpillar feeds on elms. Disappearing from almost all its range except Cambs, which now comprises over three-quarters of its current British range.
	Silver Barred	<i>Deltote bankiana</i>	RedList_GB_Pre94-VU		Restricted distribution nationally. Species of fens, coastal marshes and bogs. Long-standing populations known only at Wicken Fen and Chippenham Fen in Cambs and Pboro.
	Marsh Carpet	<i>Gagitodes sagittata</i>	RLEN EN., LNRS		Present south of Benwick and Doddington & west of Coates.
	Scarce vapourer	<i>Orgyia recens</i>	RedList_GB_Pre94-VU		Assoc with hawthorn/sallow in eastern England
	Reed Leopard	<i>Phragmataecia castaneae</i>	RLGB VU. UKBAP, LNRS		Long-standing populations known only at Wicken Fen and Chippenham Fen but recorded from a few other sites in this area of the county. The larval food plant is common reed.
	Four-spotted	<i>Tyta luctuosa</i>	Nationally Scarce. UKBAP, LNRS		Food plant is field bindweed so dependent on early successional habitats which are threatened by inappropriate management and eutrophication. May be more widespread and common than previously thought but more surveys are required to establish this.
Insect - Orthopteran	Great Green Bush Cricket	<i>Tettigonia viridissima</i>	CPASI, LNRS	Yes. Invertebrates use a wide range of plants as hosts for their larval stage and for feeding and egg laying in their adult stages. Aim to create and maintain the most diverse sward possible on banks, channel margins and in channel to support them by following a rotational vegetation management regime. Retain trees, hedgerows and scrub and plant more where possible. Look for in surveys, record presence & inform LERC.	Populations with sustainable numbers may only be present in less than five sites in Cambs and Pboro. Found in rough grassland with some scrub or on woodland edges. Look for in surveys near Nene and Ouse washes and WWF
Insect - Spider	Rosser's Sac-spider	<i>Clubiona rosserae</i>	NL, LNRS		Only found in 1-2 sites in Britain, with recent records only at Chippenham Fen. Found in fens amongst cut sedge and reeds and in sedge tussocks.
	Wolf spider	<i>Hygrolycosa rubrofasciata</i>	NR-includes		Favours damp ground level habitat; fen marsh damp woodland
	Pardosa paludicola	<i>Pardosa paludicola</i>	NR-includes		
	Zora armillata	<i>Zora armillata</i>	NR-includes		
Mollusc	Taylor's Spire Snail	<i>Marstoniopsis insubrica</i>	RLUK Rare, LNRS	Limited. Look for presence during surveys	IDBs along the Ouse washes
	Depressed river mussel	<i>Pseudanodonta complanata</i>	RedList_Global_pos t2001-VU		Strictly assoc with large running water habitats
	Witham orb mussel	<i>Sphaerium solidum</i>	NR-includes		IDBs along the Ouse washes
	Large-mouthed Valve Snail	<i>Valvata macrostoma</i>	NR-includes		Look for in surveys
	Desmoulin's Whorl Snail	<i>Vertigo moulinsiana</i>	HabDir-A2*		

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Reptile	Adder	<i>Vipera berus</i>	WACA-Sch5_sect9.5a	Yes. Manage Channels according to SOPs	
Stonewort	Hedgehog Stonewort	<i>Chara aculeolata</i>	RLGB VU, UKBAP, NR, LNRS	Yes. Maintain a programme of rotational bank cutting and desilting little and often to support aquatic, marginal and terrestrial plants. Where found, and/or diversity is high, identify the historic management regime and maintain it as closely as possible to retain valuable species or make informed improvements to regime to enhance the stand. Look for in surveys, record presence & inform LERC.	Only in some of the old Pboro brick pit sites in Cambs and Pboro. A freshwater species tolerant of slightly brackish water.
	Bearded Stonewort	<i>Chara canescens</i>	WACA-Sch8		
	Dwarf stonewort	<i>Nitella tenuissima</i>	RedList_GB_post20 01-EN		
	Tassel Stonewort	<i>Tolypella intricata</i>	RedList_GB_post20 01-EN		
	Great Tassel Stonewort	<i>Tolypella prolifera</i>	RLGB.EN, Sect.41, UKBAP, LNRS		Found in small alkaline water bodies which prefers slow-moving water and tends to grow in deeper water. A spring or summer annual and often occurs in quantity after ditch clearances.
Terrestrial Mammal - Bat	Serotine	<i>Eptesicus serotinus</i>	CMS_EUOBATS-A1	Yes. Retain mature bank-side trees to provide suitable roosts for bats. Trim or pollard trees rather than remove them. Install bat boxes on bank-side trees or elsewhere in the district to improve roost provision. Provide bat boxes	
Terrestrial Mammal	Harvest Mouse	<i>Micromys minutus</i>	England_NERC_S.4 1	Limited. Look for presence of nests during surveys and aim to retain reedbed/grassland habitats	GB Red List Near Threatened. Thought to have declined significantly due to agricultural intensification. Not commonly recorded in Cambs and Pboro so population levels are unknown.
Tree	Field Maple	<i>Acer campestre</i>	RedList_ENG_post2 001-LC	Limited. Look for presence during surveys. Retain where present	Common in hedgerows and scrub and planted on amenity land
	Sweet chestnut	<i>Castanea sativa</i>	RedList_ENG_post2 001-LC		Present in the Middle Level; may be planted in hedgerow
	Pedunculate Oak	<i>Quercus robur</i>	RedList_ENG_post2 001-LC		Ubiquitous species tolerant of waterlogging and may be growing along ditches and adjacent woodland
	Dark-leaved Willow	<i>Salix myrsinifolia</i>	RENG.LC, RLGB.LC., LNRS	Limited. Look for presence during surveys. Retain where present	Cambs holds the majority of the of the remaining southern / eastern England (likely) native sites for the species (less than five sites). Found in wet riverside woodland and fens. Look out for in surveys
	Rowan	<i>Sorbus aucuparia</i>	RedList_ENG_post2 001-LC		Widely planted tree may be growing alongside ditches/drains
	Small leaved lime	<i>Tilia cordata</i>	RedList_ENG_post2 001-LC		Widely planted tree may be growing alongside ditches/drains
	Elm (various)	<i>Ulmus spp.</i>	RedList_ENG_post2 001-LC	Yes. Map droves across district	Map droves and record Elm locations

5.10.1 The Hull International Fisheries Institute (HIFI), EDNA Surveys

Between 2021 and 2023, the Hull International Fisheries Institute (HIFI) collected and analysed Environmental DNA (EDNA) samples from channels within almost all IDB catchments in the Middle Level and surrounding areas. The aims of the project were; to gain a better understanding of the presence and distribution of the endangered European Eel within IDB pumped catchments, to better inform and focus conservation efforts and regulation in areas where eels are already present, as well as to better understand their habitat requirements, identify and remediate the obstacles to eel passage and welfare. The EDNA studies also identified the presence of a number of other species, which have been detailed below. It is important to understand that these samples and results only represent a snapshot in time. The presence or absence of any EDNA of any particular species is not conclusive proof of their presence or absence in the channel at any other time. But it does give us a good understanding of what species the habitats managed by the IDB are capable of supporting.

The studies demonstrate that eel had been present in Upwell channels around the time the EDNA samples were taken, so the catchment is important for the conservation of the species and should be managed with this in mind.

Table 12: Species identified by the EDNA studies undertaken in the Upwell IDB Catchment:

IDB/Pumping Station	Samples Taken	Mammal & Reptile Species Identified	Species Richness	Species Richness Range*	Fish Species Identified	Species Richness	Species Richness Range*
Bedlam Bridge	7	1. Common Frog 2. Chinese Water Deer 3. Water Vole	3	0-7	1. Three-spined stickleback 2. Nine-spined stickleback	2	1-13
Cock Fen	7	1. Common Toad 2. Smooth Newt 3. Eurasian Otter 4. Water Deer 5. Water Vole 6. Field Vole 7. Brown Rat	7	0-7	1. European Eel 2. Three-spined stickleback 3. Nine-spined stickleback	3	1-13
Nordelph	7	1. Common Toad 2. Great Crested Newt 3. Grey Long Eared Bat 4. Water Vole 5. Field Vole 6. Bank Vole 7. Brown Rat 8. Mouse sp.	8	0-7	1. European Eel 2. Northern Pike 3. Three-spined stickleback 4. Nine-spined stickleback	4	1-13

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IDB/Pumping Station	Samples Taken	Mammal & Reptile Species Identified	Species Richness	Species Richness Range*	Fish Species Identified	Species Richness	Species Richness Range*
Padgetts Corner	1	1. Water Vole	1	0-7	1. Three-spined stickleback	1	1-13
Upwell Fen	7	1. Common Frog 2. Smooth Newt 3. Brown Hare 4. Bank Vole 5. Brown Rat	5	0-7	1. Three-spined stickleback 2. Nine-spined stickleback	2	1-13

*The range provided is the greatest and lowest species richness across all IDB sites sampled. A total of 29 fish and 31 mammal and amphibian species were detected in all samples taken.

Note: Samples were only taken up to the point when eels were detected. Some of the smaller sites were only sampled once.

5.11. Invasive Non-native Species Summary

The IDB has identified the following aquatic and riparian invasive non-native species within or adjacent to the drainage district that are identified as likely to be influenced by, or impact upon the Board's activities. Some INNS species records have been excluded as they are not considered to be any greater detriment to the habitats managed by IDBs than some similar native species, and they are common throughout the district and Middle Level area so would be very difficult to control and/or eradicate. Only the most recent record from each specific location has been included.

Table 13: Aquatic & riparian invasive non-native species summary

Taxon	Common Name	Scientific Name	Location	Most Recent Date Recorded	Designations	Management Recommendations
Bird	Ruddy Duck	<i>Oxyura jamaicensis</i>	Welney	18/01/2014	WCA9i	Observe stringent biosecurity procedures to prevent spread. Familiarise with species recognition. Encourage all IDB networks to recognise and report sightings of the species to the board ecologist straight away so it can be managed swiftly.
Bony Fish (Actinopterygii)	Zander	<i>Sander lucioperca</i>	Upwell, Middle Level Main Drain	10/09/1999	WCA9i	
Crustacean	Chinese Mitten Crab	<i>Eriocheir sinensis</i>	Old Bedford, Welney Sluice	03/10/2008	WCA9i	
Fern	Water Fern	<i>Azolla filiculoides</i>	Tipps End	01/08/2019	WCA9ii	
Flowering Plant	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Three Holes, Upwell	27/05/2017	WCA9ii	
	Lamium galeobdolon subsp. argentatum	<i>Lamium galeobdolon subsp. argentatum</i>	Christchurch	19/06/2016	WCA9ii	
	Canadian Waterweed	<i>Elodea canadensis</i>		10/06/1905	WCAii	
	Japanese Knotweed	<i>Fallopia japonica</i>		10/06/1905	WCAii	
	Winter Heliotrope	<i>Petasites fragrans</i>		10/06/1905		
	Rhododendron	<i>Rhododendron</i>	Welney	14/10/2000	WCAii	
Terrestrial Mammal	American Mink	<i>Neovison vison</i>	Sixteen Foot Drain, Stonea	12/11/2020	WCA9i	

6. Habitat and Species Action Plans

6.1. Introduction

The following sections detail the objectives that the IDB has defined for each of the habitats and species that have been identified as a priority in the biodiversity audit, and that have the most potential to be influenced by the Boards activities, and the associated actions that will help to deliver each objective.

6.2. Habitat Action Plans

6.2.1 IDB Ditches

6.2.1.1 IDB Ditch Objectives:

1. *Develop and regularly review an Operations Manual to help to define the most favourable channel maintenance approaches for flood risk management and biodiversity, on a reach-by-reach basis.*
2. *Maximise the biodiversity value of IDB channels, banks and margins through sensitive management, all designed to support a wide range of species.*
3. *Enhance channel biodiversity via non-routine works where opportunities arise*

6.2.1.2 IDB Ditch Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Categorise / review categorisation of all IDB channels by flood risk to determine maintenance intensity and approach and document reasoning	• Map with channels coloured by risk category	2026 then annually	IDB	
			• Supporting table for above with reasoning	2026 then annually	IDB	
			• Minuted review of any changes from previous years categorisation and approval of current determination at Board Meeting ahead of works	2026 then annually	IDB	

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6.2.1.2 IDB Watercourses Actions Cont.

	1b	Define/redefine and deliver most appropriate vegetation management approach/intensity for each IDB channel reach to manage flood risk and maximise opportunities for biodiversity.	Map with planned veg management approach defined for each reach	2026 then annually	IDB	Ecologist
		Favour the retention and rotational management of marginal and bank vegetation wherever possible.	Documented confirmation that works were carried out in line with plan for each reach and if not, reasons why.	2026 then annually	IDB	Contractor
			Minuted review of any changes to previous approach and approval of plan ahead of works at Board Meeting	2026 then annually	IDB	Ecologist
	1c	Define/redefine and deliver most appropriate desilting approach/intensity for each IDB channel reach to manage flood risk and maximise opportunities for biodiversity.	Map with desilting approach defined for each reach	2026 then annually	IDB	Ecologist
		Aim for regular and light desilting on a 3-year rotation approx. to mimic natural scour in periodic high flows.	Documented confirmation that works were carried out in line with plan for each reach and if not, reasons why.	2026 then annually	IDB	Contractor
			Minuted review of any changes to previous approach and approval of plan ahead of works at Board Meeting	2026 then annually	IDB	Ecologist
2	2a	Undertake routine channel maintenance in line with standard operating procedures (SOPs), best practice and in compliance with a range of environmental law.	Spot checks during and after routine maintenance for SOP compliance	Annually	Ecologist	
			Minuted report to the Board of compliance non/compliance for maintenance undertaken	Annually	Ecologist	
	2b	Survey a different sample reach of channel each year to benchmark biodiversity.	Channel survey results and recommendations included in Board papers with summary review each year.	2026 then annually	Ecologist	IDB
		Aim to identify areas of high biodiversity value and which areas could benefit from enhancement. Also aim to identify any correlation between diversity, habitat quality and management approaches.	Results of surveys submitted to LERC			
3	3a	Ensure all non-routine channel works are assessed for environmental and ecological constraints and opportunities in advance of works.	- Minuted review of planned non-routine works and ecol. assessment requirements for forthcoming year at each Board Meeting. - Extent of habitat enhanced as a result of non-routine works reported annually in Board papers	2026 then Annually	IDB	Ecologist
		Identify and design-in opportunities to enhance channels using natural engineering approaches i.e. vegetated coir roll for bank toe stabilisation, hydroseeding, vegetated berms and diverse seed mixes.				

6.2.2 Wet Grasslands (Coastal & Floodplain Grazing Marsh (CFPGM) & and Lowland Fen)

6.2.2.1 Wet Grassland Objectives

1. *Retain, improve and increase the extent of wet grasslands within the District by encouraging and supporting private landowners to retain and manage existing habitat favourably, primarily via assisting with favourable water levels, and creating or supporting the creation of new wet grassland habitats where possible and appropriate.*

6.2.2.2 Wet Grassland Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Identify wet grassland owners / managers adjacent to IDB watercourses and make contact to ascertain if the IDB can do anything to support the favourable management / conservation status of the habitat	No. of wet grassland owners / managers contacted	2026	Ecologist	IDB
	1b	Publish a note on the website detailing the value of wet grasslands for biodiversity in the District and encouraging the retention, favourable management and creation of the habitat, and signpost further advice & information	CFPGM note on website	2027	Ecologist	IDB
	1c	Include brief flyer with rate demands promoting the retention, favourable management, creation and importance of wet grasslands within the District and signpost further advice and guidance	Flyer sent out with rate demand	2028/2030	Ecologist	IDB
	1d	Audit the extent of wet grassland at the start and end of the BAP period	Extent of CFPGM in District at the end of the BAP period is the same / greater than at the start.	2026 & 2030	IDB	Ecologist

6.2.3 Reedbeds

6.2.3.1 Reedbeds Objectives

1. *Retain, enhance and increase the extent of reedbeds within the District by encouraging and supporting private landowners to do so, and creating or supporting the creation of new reedbeds where possible and appropriate in and around IDB channels.*

6.2.3.2 Reedbeds Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Identify and map any existing patches of reedbed within IDB control and develop a plan to manage them favourably	Map of reedbeds & plan of enhancement opportunities	2026	IDB	Ecologist
	1b	Identify and take opportunities to create new reedbeds in the IDB system i.e. ditch junctions, channel margins, berm creation, dead-end channels or old pump drains. Even small patches of a few metres are valuable as stepping stones.	Map of reed bed creation opportunities	2026-27	IDB	Ecologist / Landowners
	1c	Identify existing reedbed owners / managers adjacent to IDB watercourses and make contact to ascertain if the IDB can do anything to support the favourable management / conservation status of the habitat	No. of reedbed owners / managers contacted	2027	IDB	Ecologist / Landowners
	1d	Publish a note on the website detailing the value of Reedbeds for biodiversity in the District, particularly for priority birds and invertebrates, and encouraging the retention, favourable management and creation of the habitat, and signpost further advice & information	Published note on website	2026	IDB	Ecologist
	1e	Include brief flyer with rate demands promoting the retention, favourable management, creation and importance of Reedbeds, particularly for priority birds and invertebrates, within the District and signpost further advice and guidance	Flyer with rate demand	2027	IDB	Ecologist
	1f	Audit the extent of reedbeds at the start and end of the BAP period	Extent of reedbed in the district calculated	2026-31	Ecologist	IDB

6.2.4 Fen Droves

6.2.4.1 Fen Droves Objectives

1. *Identify and map all existing and defunct Droves within the district and confirm ownership, provenance and status, particularly those with IDB ditches adjacent to them and those that IDBs use as access to inspect and maintain assets.*
2. *Retain, protect and enhance Droves within the District by encouraging and supporting private landowners/managers to do so.*

6.2.4.2 Fen Droves Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Liaise with/enlist assistance of community groups, IDB members and rate payers to develop a register and map of Fen Droves within the district	• Map with Droves highlighted	2026-7	IDB	Ecologist / Community Groups
			• Supporting table detailing drove ownership, provenance, status i.e. PRow. and any other relevant history	2026-8	IDB	Ecologist / Community Groups / Landowners
	1b	Publish findings of Fen Droves Register project within local community	• Publication of map and drove history via Parish News or similar and IDB website	2027-8	IDB	Ecologist / Community Groups
			• Summary of project findings in Board Report	2028	IDB	Ecologist
			• Provide map and details to LERC	2028	IDB	Ecologist
2	2a	Support/encourage biodiversity surveys of Fen Droves, particularly those along IDB ditches, to identify any enhancements that could be made to maximise biodiversity. <i>*Annual channel biodiversity surveys could be expanded to incorporate this.</i>	• Number of survey reports with current & historic management approaches detailed along with enhancement recommendations made, provided to relevant landowner	2026-31	IDB / Ecologist	Ecologist / Community Groups / Landowners
			• Number of surveys & summary published in Board Reports			
			• Number of survey results sent to LERC			

6.2.5 Arable Field Margins

6.2.5.1 Arable Field Margins Objectives

1. *Retain, enhance and increase the extent of arable field margins within the District by encouraging and supporting private landowners to do so, particularly adjacent to IDB drains, and encourage the establishment of new arable field margins wherever possible.*

6.2.5.2 Arable Field Margins Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Publish details on the IDB website of the benefits of retaining and creating good quality arable field margins for the IDB and for biodiversity and signpost further advice, including LNRS habitat opportunity map	Post on the website	2026-27	IDB / Ecologist	
	1b	Develop a brief flyer encouraging the retention, enhancement and creation of field margins for the benefit of IDBs and biodiversity & signpost further advice, , including LNRS habitat opportunity map, and send with rate demands	Flyer sent out with rate demand	2027 & 2029	IDB / Ecologist	Ecologist
	1c	Audit the extent of arable field margins at the start and end of the BAP period	Map of extent of field margins in 2026 & 2031	2026 & 2030	IDB	Ecologist & Landowners/LNRS owner

6.2.6 Ponds

6.2.6.1 Ponds Objectives

2. *Retain, enhance and increase the number ponds within the District, to serve as stepping stones for aquatic and riparian species, by encouraging and supporting landowners/managers to create more and manage them favourably*

6.2.6.2 Ponds Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Publish a note on the website detailing the value of ponds for biodiversity in the District and encouraging the retention, favourable management and creation of ponds, and signpost further advice & information.	Ponds note on website	2028	Ecologist	IDB
	1b	Include brief flyer with rate demands promoting the retention, favourable management, creation and importance of ponds within the District, particularly near IDB watercourses to act as stepping stones for wildlife, and signpost further advice and guidance	Flyer sent out with rate demand	2029	Ecologist	IDB
	1c	Audit the number of priority ponds in the District at the start and end of the BAP period	No of ponds created in district in BAP Period	2026 & 2030	IDB	Ecologist

6.3. Species Action Plans

6.3.1 Notes on species without specific actions

Some species have not been detailed specifically in this section, as actions to provide more, and better quality, habitat for them are delivered via other actions, mainly habitat and procedural actions. Such species include a range of flora that will be better supported via standard operating procedures (SOPS) for ditches, which aim to retain marginal and bank-side vegetation and manage it rotationally. Actions for habitats also encourage retention, creation and favourable management which will be of benefit to a range of species, such as the creation of arable field margins and reedbeds. Also, annual surveys aim to identify, record, report and protect many priority plant and animal species. SOPs and best practice IDB habitat management will also optimize opportunities for reptiles, many birds, invertebrates, other mammals, eels and fish.

6.3.2 Birds

6.3.2.1 Birds Objectives:

1. *Maximise habitat availability and quality for all birds that use IDB channels and margins for foraging and nesting, through sensitive routine channel maintenance activities*
2. *Improve opportunities for particular priority birds within the IDB District that could be impacted by IDB activities, with specific provisions*
3. *Improve understanding of bird population trends in District by recording and reporting bird sightings, particularly for priority birds*
4. *Protect and enhance bird habitats through non-routine works*

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6.3.2.2 Birds Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Define and publish standard operating procedures (SOPs) for routine maintenance activities, in line with legislation and best practice, that consider birds, including: - Retention and rotational management of marginal vegetation fringes - Bank-side tree and scrub retention and management, - Rotational bank vegetation cutting - Scheduling work outside the nesting season i.e. mid-August onwards	- Published SOPs available on website which consider birds covering: ~ Channel vegetation management, ~ Bank vegetation management inc. trees and scrub, ~ Desilting, ~ Herbicide use	2026	IDB	Ecologist
2	2a	Map, retain, protect and increase bank-side trees for KINGFISHERS as fishing perches wherever possible, favouring trimming for access and conveyance rather than removal.	Important Kingfisher fishing areas mapped & made available to works operatives	2027	Ecologist / IDB	Landowners, Community
			No. of important Kingfisher areas equal or greater at end of BAP period	2031	IDB	Ecologist, Landowners, Community
	2b	Map, retain, manage, protect and create KINGFISHER nesting sites along IDB watercourses	Kingfisher nest sites mapped & made available to works operatives	2027	IDB	Ecologist, Landowners, Community
	2c	Map existing BARN OWL BOXES within the district, maintain existing boxes, fund and install new ones either on IDB assets or by liaising with private landowners and communities	Map of Barn Owl boxes in district	2027	IDB	Ecologist, Landowners, Volunteers, Community
			Number of boxes maintained each year reported in Board Report	Annually	IDB	Ecologist, Landowners, Volunteers, Community
			No. of Barn Owl boxes in district equal or greater at end of BAP period	2027-2031	IDB	Ecologist, Landowners, Volunteers, Community

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2	2d	Install on IDB assets, or encourage the installation of SWIFT NEST BOXES on private and community assets near IDB channels by funding nest boxes and providing installation assistance where necessary	Promotion of swift nest box installation and provision via website, community news and rate demands	2028	IDB	Ecologist
			Number of swift boxes installed and map of them	Ongoing	IDB	Ecologist, Community, Landowners
3	3a	Encourage and support bird SURVEYS . RECORD AND REPORT SIGHTINGS of birds, particularly priority birds, and encourage others via IDB networks to do the same	Publication to encourage surveys, recording and reporting to the ecologist and/or iRecord via: ~ Board Report ~ IDB website ~ Rate demand ~ Community communications	2026	IDB	Ecologist, Community, Landowners
			Mapped sightings across the IDB District published with Board report	Annually	IDB	Ecologist
4	4a	Ensure all non-routine channel and asset works are assessed for impacts to birds and mitigations and enhancements are designed-in ahead of works, particularly scheduling works outside nesting season. Enhancements could include retaining valuable habitat, artificial nest box provision and using green engineering such as coir roll and enhanced seed mixes.	- Minuted review of planned non-routine works and ecol. assessment requirements for forthcoming year at each Board Meeting. - Enhancements that benefit birds as a result of non-routine works reported annually in Board papers	2026 then Annually	IDB	Ecologist

6.3.3 Mammals

6.3.3.1 Mammals Objectives:

1. *Maximise habitat availability and quality for all mammals but particularly priority mammals, that use IDB channels and margins for foraging and refuge, through sensitive routine channel maintenance activities*
2. *Improve opportunities for particular priority mammals within the IDB District that could be impacted by IDB activities, with specific provisions*
3. *Improve understanding of mammal population trends in District by recording and reporting sightings, particularly for priority mammals*
4. *Protect and enhance mammal habitats through non-routine works*

6.3.3.2 Mammals Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Define and publish standard operating procedures (SOPs) for routine maintenance activities, in line with legislation and best practice, that consider mammals, including: - Retention and rotational management of marginal vegetation fringes - Bank-side tree and scrub retention and sensitive management, - Rotational bank vegetation cutting - Scheduling work outside sensitive seasons	- Published SOPs available on IDB website which consider WATER VOLES, OTTERS, HEDGEHOGS AND BATS at least, covering: ~ Channel vegetation management, ~ Bank vegetation management inc. trees and scrub, ~ Desilting, ~ Herbicide use	2026	Ecologist	IDB
2	2a	Support WATER VOLE conservation through the mink control project	Funding provided to support mink control project	Annually	IDB	Waterlife Recovery Trust
			Number of mink control rafts hosted or funded on IDB watercourses	Annually	IDB	Waterlife Recovery Trust
			Publication to promote the mink control project via posts on website, rate demand notices, Board meetings and community communications and no. of volunteers recruited	Ongoing	IDB	Waterlife Recovery Trust, MLC

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	2b	Identify and protect known or potential OTTER holts (refuges) and create or support the creation of more along appropriate IDB channels	Known and potential otter holts (refuges) mapped & made available to works operatives	2027	IDB	Ecologist, Landowners, Community
			No of otter holts increasing along IDB channels	Ongoing	IDB	Ecologist, Landowners, Community
			Promotion of otter holt creation and retention via website, community news and rate demands	2028-2030	IDB	Ecologist
	2c	Identify and protect known and potential BAT roosts (in trees and structures) along or near to IDB watercourses and install or support the installation of bat boxes in appropriate places along or near to IDB channels	Known and potential bat roosts in trees and structures mapped & made available to works operatives	2027	IDB	Ecologist, Landowners, Volunteers, Community
			No. of bat roost provisions increasing along IDB channels	Annually	IDB	Ecologist, Landowners, Volunteers, Community
			Promotion of bat roost retention and bat box installation via website, community news and rate demands	2027-2031	IDB	Ecologist, Landowners, Volunteers, Community
3	3a	Encourage and support mammal surveys , particularly priority mammals. Record and report sightings of mammals, particularly priority mammals, and encourage others via IDB networks to do the same	- Publication to encourage recording and reporting to the ecologist and/or iRecord via ~ Board Report ~ IDB website ~ Rate demand ~ Community communications	Ongoing	IDB	Ecologist, Community, Landowners, Volunteers
			Mapped sightings across the IDB District & (non-sensitive elements) published with Board report	Annually	IDB	Ecologist
4	4a	Ensure all non-routine channel and asset works are assessed for impacts to mammals and mitigations and enhancements are designed-in ahead of works, particularly scheduling works outside sensitive seasons. Enhancements could include retaining valuable habitat, creation of artificial refuges and boxes, provision and use of green engineering such as coir roll and enhanced seed mixes.	- Minuted review of planned non-routine works and ecol. assessment requirements for forthcoming year at each Board Meeting. - Enhancements that benefit mammals as a result of non-routine works reported annually in Board papers	Annually	IDB	Ecologist

6.3.4 Trees

6.3.4.1 Trees Objectives:

1. *Identify and protect priority trees, particularly elm, black poplars and dark-leaved willow within the District*
2. *Increase numbers of black poplars*

6.3.4.2 Trees Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Map and protect elm, black poplars and dark-leaved willow within the IDB district	Map of selected trees & made available to works operative	2028	Ecologist / IDB	Landowners, Community
2	2a	Seek and progress opportunities to plant more black poplars in appropriate locations across the IDB district	- Publication to request opportunities to plant black poplar via: ~ Board Report ~ IDB website ~ Rate demands ~ Community communications	At least twice in BAP period	IDB	Ecologist, Landowners, Volunteers, Community
			No. of black poplar in District equal or greater at end of BAP period	2027-2031	IDB	Ecologist, Landowners, Volunteers, Community

6.3.5 Invasive Non-native Species (INNS)

6.3.5.1 INNS Objectives:

1. *Minimise the risk of introducing or spreading INNS through IDB activities*
2. *Identify, control and eradicate INNS from the District*

6.3.5.2 INNS Actions:

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Develop/update, publish and adhere to a biosecurity protocol for IDB activities	Biosecurity protocol published on-line and made available to IDB operatives	2026	Ecologist	IDB
2	2a	Encourage and support all IDB networks to: - Improve their recognition of INNS - Report suspected INNS in and around IDB channels promptly - Follow good biosecurity procedures such as check-clean-dry protocols - Signpost further information	- Information published via: ~ Board Report ~ IDB website ~ Rate demands ~ Community communications ~ Information Boards	2027	IDB	Ecologist, Community, Landowners
	2b	Provide support to partners in IDB networks to control existing INNS within the IDB District	No. of INNS control projects supported	Ongoing	IDB	Ecologist, Community, Landowners

7. Procedural Action Plan

7.1. Introduction

A number of procedural actions have been identified and detailed below. These aim to help to underpin all other actions to support and enhance biodiversity via IDB activities.

7.2. Procedural Objectives

1. *Improve IDB representative's and contractor's knowledge and delivery of biodiversity support through training*
2. *Maintain no net loss of trees and hedgerows as a result of IDB activity and consenting*
3. *Maintain a no-culverting policy which aims to maintain the extent of open ditch habitat in the District*
4. *Liaise closely with Parish Councils to improve knowledge and support for IDB work*

7.3. Procedural Actions

Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Ensure all staff including contractors have received biodiversity training within 6 months from the start date of this Plan, or as part of their induction, and refresher training provided every 3 years.	Numbers of staff and trained and dates	2026 & 29	IDB	Ecologist
2	2a	Develop and publish a “no net loss” policy for trees and hedgerows	Publication of approved policy on website	By 2028	IDB	
3	3a	Develop and publish a “no culverting” policy	Publication of approved policy on website	By 2029	IDB	
4	4a	Deliver IDB updates at Parish Council meetings and request attendance of Parish Council at IDB meetings	No of meetings attended by IDB and Parish Councils	Ongoing	IDB	Parish Council

8. Monitoring

Appropriate indicators have been set for each of the IDB's biodiversity actions. The individual action plans set out the indicators and measurables which will be used to assess progress and execution against the plan. The IDB will review actions and indicators at least annually.

The overall plan will be updated at least every 5 years but is a dynamic document so may change more frequently for example in the light of monitoring outcomes or changing priorities.

9. Reporting

The Board is responsible for ensuring that progress against the Plans' targets are routinely reviewed and reported, at least annually, at Board meetings to allow the Board to discuss and review BAP activity and to modify the BAP and actions to meet the objectives where necessary.

Annual summary progress reports will detail which actions have been progressed according to the plan, any new opportunities identified, risks and issues affecting the objectives or actions, and the contribution actions have made towards achieving the objectives. Recommendations will be made in the light of the monitoring outcomes.

Making this information available to a wider audience is important in increasing the understanding of the importance of the Boards' actions regarding biodiversity and inspiring people about biodiversity. As such, the IDB will make the summary reports available externally in the following ways:

1. *In the public domain via the IDB's website;*
2. *Provided to conservation partners and community groups such as Parish Councils to assist with further local biodiversity conservation planning;*
3. *Provided to local authorities in order to contribute towards their legislative biodiversity reporting requirements including the Local Nature Recovery Strategies;*
4. *The Local Biological Records Centre.*

10. Appendices

10.1. Appendix I – National Character Area 46 – The Fens - Detailed Statements of Environmental Opportunity

Link to full Fens NCA - [The Fens - National Character Area Profiles](#)

SEO 1: Manage the agricultural landscape and soils which allow the Fens to be a major provider of food and horticultural produce, while seeking to enhance opportunities for biodiversity.

For example by:

- Maintaining the valuable, productive, open agricultural landscape of the Fens National Character Area (NCA) with its high-quality soils, many of which are classed as Grade 1 agricultural land, through sustainable farming and agricultural agreements to the benefit of food production, biodiversity, sense of place and climate change regulation.
- Increasing opportunities to manage and protect the remaining peat resource, for example by raising water levels, to maintain (or enhance where possible) the build-up of organic matter; and encouraging landowners and managers to pursue such activities.
- Encouraging landowners and managers to use sustainable farming methods that protect the soil, such as maintaining vegetative cover and using grass buffer strips to reduce soil erosion from susceptible arable fields in the autumn and winter.
- Encouraging the adoption of good practice to avoid soil compaction and maintain good soil structure.
- Encouraging landowners and managers to manage land to prevent peat from drying out, and to maintain wetted peat soils to reduce loss through compaction, oxidation and wastage.
- For mineral soils in the NCA, promoting management techniques to build up soil organic matter to help maintain and enhance soil quality.
- Encouraging farmers to use techniques such as establishing break crops to manage land and protect soil.
- Encouraging minimum tillage and greater use of organic manures, biosolids and digestates plus soil conditioners, which will help to ameliorate soil losses if pursued on sufficient scale.
- Encouraging the establishment of areas of semi-natural habitat such as reedbed and washland which slow the passage of water through the hydrological system.
- Restoring and managing traditional orchards where there is already a traditional pattern, for example around Wisbech, promoting the planting of new orchards of mixed fruit trees to encourage bees where they are absent, and promoting the expansion of traditional shelterbelts around orchards.

SEO 2: Manage the core wetland complexes and increase their connectivity by enhancing the main rivers, waterways and their associated riparian habitats and improve recreational access opportunities to the Fens.

For example by:

- Promoting the creation and restoration of wetland landscapes through co-ordinated and sensitive management of water resources in conjunction with Fens for the Future partners, including Internal Drainage Boards (IDBs) and the farming community.
- Managing key wetland sites, including Wicken, Woodwalton and Holme Fens, remnants of the original fen, together with the great washlands which will form the core wetland complexes.
- In addition to the existing core areas, developing extensions at Baston Fen, Great Fen and Wicken Fen as envisioned in the Wicken Vision, as well as new areas such as Lakenheath Fen, Needingworth and the Wissey Wetland, to create more and larger areas of wetland habitats.

- Improving the water quality and quantity in water bodies in the Fens and improving their habitat value by creating buffer zones and undertaking habitat enhancement works, and identifying means by which issues including diffuse pollution can be co-operatively tackled, thus making a valuable contribution to outcomes required by the Water Framework Directive.
- Critically assessing the engineered network of ditches, installing new water management mechanisms where necessary, to enable localised management of groundwater.
- Encouraging winter flood storage on appropriate areas of land, ensuring appropriate management and control of any water resource created, in accordance with Water Level Management Plans, promoting the reversion of existing flood-storage washlands to permanent grassland with extensive grazing regimes, and promoting the creation of new multi-functional washlands.
- Ensuring that sustainable flood risk management for the Fens is delivered through close partnerships.
- Promoting and establishing strategic, appropriately sized areas for biodiversity across the Fens to mitigate the impacts of local, summer storm-related catchment flooding, and to develop robust populations.
- Integrating and developing water resource management within flood management works and land management regimes, particularly at break point areas along the edge of the fen.
- Ensuring that the soils remain adequately hydrated to prevent erosion and maintain soil chemistry, especially where these soils could form ochre and become extremely acidic if dried and re-wetted.
- Promoting the creation of permissive and definitive access to increase opportunities for people to visit the Fens using sustainable transport methods; identifying the strategic gaps in the network and providing public transport in association with employment, heritage, education and recreation initiatives for local people and neighbouring towns and cities; and ensuring that existing projects with capacity such as Fens for the Future and the Fens Waterway Link address recreational and access issues.
- Identifying the strategic access gaps in the network and providing public transport in association with employment, heritage, education and recreation initiatives for local people and neighbouring towns and cities.

SEO 3: Plan for the creation of new coastal landscapes in the Wash area that are adapted and resilient to the impact of climate change, for the benefit of people and wildlife.

For example by:

- Seeking opportunities to reinstate intertidal salt marshes through realignment from arable to extensively grazed salt marsh, in line with the Wash Shoreline Management Plan.
- Seeking opportunities to create grazing marsh, reedbed and salt marsh throughout the Fens to compensate for losses of these habitats at the coast as a result of climate change and associated isostatic adjustment-induced sea-level rise, or where work carried out has damaged habitat.
- Seeking opportunities to identify and monitor key coastal active process sites.
- Replacing habitat lost from the coast through the East of England Regional Habitat Creation Programme.
- Planning for provision of permissive and definitive access (including the coastal access path) to increase opportunities for people to visit the Fens using sustainable transport methods.

SEO 4: Conserve, manage and enhance the Fens landscape and increase educational opportunities to access its geodiversity, archaeology and cultural heritage to enhance enjoyment and understanding for those who live and work in and visit the Fens.

For example by:

- Protecting and appropriately managing the historic environment, for its contribution to local character and sense of identity and as a framework for habitat restoration and

sustainable development.

- Improving the condition of heritage assets through appropriate measures and seeking to reduce conflicting or unsympathetic management regimes, while recognising the high potential in this landscape for undiscovered remains.
- Providing a wider understanding of the geological record of environmental change held within the peat and associated Quaternary sediments, and supporting demonstration projects and sites that illustrate the cultural history, successional fenland habitats and geodiversity of the Fens.
- Managing and conserving the geological exposures throughout the Fens by the removal of undergrowth and the prevention of fly-tipping on these sites, in addition to identifying and protecting new (key) sites as they are discovered.
- Making links between geodiversity, archaeology and cultural heritage, building towards an integrated approach with the surrounding natural environment/landscapes.
- Conserving and monitoring buried geological and archaeological remains that are under threat through erosion of peat, increased or inappropriate cultivation, drying out from dewatering for irrigation, and pressures from development.
- Conserving historic landmark buildings and earthwork sites together with their setting, especially on the settled fens and clay islands.
- Using understanding of the area's traditional and historic architecture, and its distinct patterns of settlement, to inform appropriate conservation and use of historic buildings and farmsteads, and to plan for and inspire any environmentally beneficial new development that makes a positive contribution to local character.
- Promoting understanding of the benefits and potential adverse impacts of wind farms and associated electricity transmission pylons, which are an increasing feature of the fenland landscape.

SEO 5: Seek partners to aid in the development and future provision of new, distinctive, Fenland economies.

For example by:

- By promoting fenland cuisine and food preparation using local ingredients.
- Promoting natural art and craft production (such as baskets, woven reed mats, screens and fences for garden or poultry/ animal management purposes) in order to diversify the economic opportunities and output from Fenland resources.



10.2. Appendix II - Impact Risk Zones for Sites of Special Scientific Interest

Does the proposed development match any of the descriptions below?

All Consultations: All planning applications (except householder applications) where the proposed development is outside or extends outside existing settlements/urban areas and will increase lighting levels or affect greenspace, farmland, semi natural habitats, trees/woodland, waterbodies, rural buildings/structures (manmade or natural) or linear landscape features such as hedgerows, streams and rivers through direct loss, fragmentation or change of use.

Infrastructure: Pipelines and underground cables, pylons and overhead cables (excluding upgrades and refurbishment of existing network). Any transport proposal including new or extended footways, cycleways, roads/car parks, railways and waterways (excluding routine maintenance). Airports, helipads and other aviation proposals.

Wind and Solar: Solar schemes with a footprint > 0.5ha, all wind turbines.

Minerals, Oil and Gas: Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.

Rural Non-Residential: Large non-residential developments outside of existing settlements/urban areas where the net additional gross internal floorspace is > 1,000m² or the footprint exceeds 0.2ha.

Residential: Residential development of 50 units or more.

Rural Residential: Any residential developments outside of existing settlements/urban areas with a total net gain in residential units.

Air Pollution: Any industrial/agricultural development that could cause AIR POLLUTION(including: industrial processes, livestock & poultry units with a floorspace > 500m², slurry lagoons > 200m² & manure stores > 250 tonnes).

Combustion: General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.

Waste: Landfill. Including: inert landfill, non-hazardous landfill, hazardous landfill.

Compost: Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.

Discharge: Any discharge of water or liquid waste of more than 2m³/day that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream.

Water Supply: Any development needing its own water supply e.g. remote rural housing that is not connected to a mains water supply, OR large infrastructure such as warehousing/industry where the total net additional gross internal floorspace following development is > 1,000m².