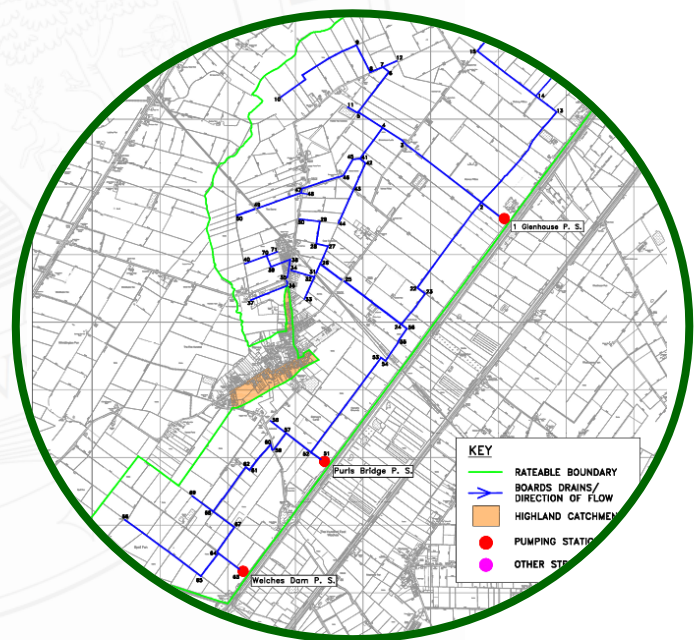




Biodiversity Action Plan

2026 – 2031

Manea & Welney
District Drainage
Commissioners



1. Statement

This Biodiversity Action Plan (BAP) has been prepared by the Middle Level Commissioners on behalf of Manea & Welney District Drainage Commissioners. 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

John Heading

Chairman of the Board

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

You can contact us about this Biodiversity Action Plan by writing to the following address:

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www.middlelevel.gov.uk

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2. Executive Summary

The UK is one of the most nature impoverished countries on the planet and Cambridgeshire is one of the most nature depleted counties in the UK. 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 Manea & Welney District Drainage Commissioners (Hereafter referred to as Manea & Welney DDC or "the 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 Manea & Welney DDC, as a modern Public Authority. Through their water level management activities, Manea & Welney DDC 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 Manea & Welney District Drainage Commissioners 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, that 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 Manea & Welney District Drainage Commissioners Drainage District

The drainage district is located in the east of the Middle Level Area.

The following outlines the key details of the District:

- Total area of the drainage district: **3102 ha**
- Catchment area draining to and including the District: **3148 ha**
- Area of agricultural land: **2896 ha**
- Area of other (non-agricultural) land: **206 ha**

Assets for which the Board has operational responsibility:

- Water level control structures: 5
- Watercourses (maintained): 33 km
- Raised embankments: N/A
- Reservoirs: N/A
- Sustainable drainage systems (SuDS): N/A
- Pumping Stations: 3
- Extent of “other” land owned: N/A

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

- Main Rivers: 13.5 km
- Raised embankments/flood walls: 10 km
- Pumping Stations: 1

5.2. Map of Audit Area (Drainage District)

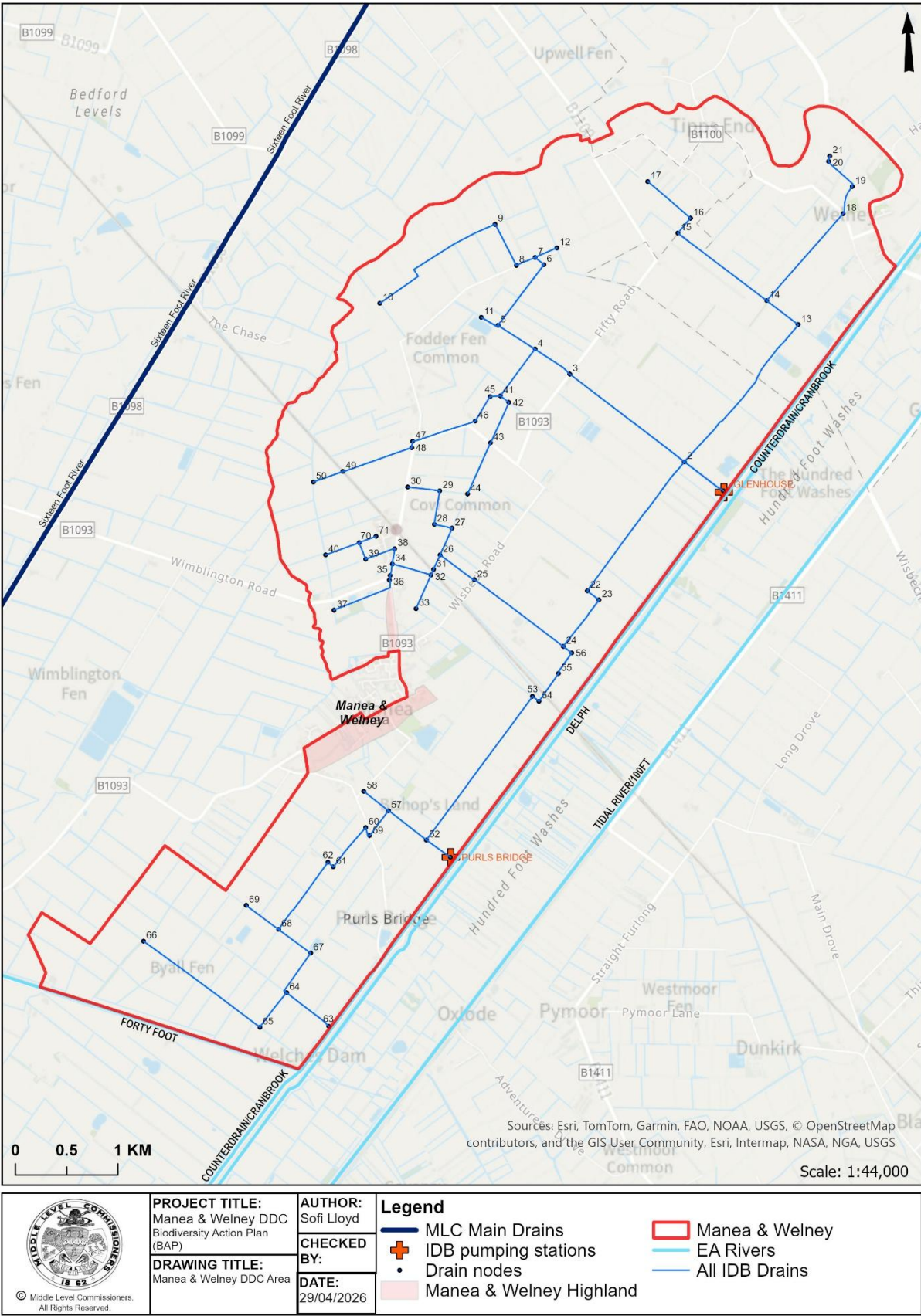


Figure 1. Manea & Welney District Drainage Commissioners District

5.3. Geology, Soils & Peat

Table 2 – Geology, Soils & peat extent within Manea & Welney District Drainage Commissioners Area

Geology Layer	Description	Related Map
Bedrock	Ampthill 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	South-west: River Terrace Deposits, 1 to 2-Sand and gravel. These sedimentary deposits are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting). Southern area predominant: Peat-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. Central small stretch: Oadby Till Member-Diamicton. These sedimentary deposits are glacial in origin. They are detrital, created by the action of ice and meltwater, they can form a wide range of deposits and geomorphologies associated with glacial and inter-glacial periods during the Quaternary. Northern Area: Tidal flat deposits, 1-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. Taken from: https://geologyviewer.bgs.ac.uk/?_ga=2.251525825.679216.1776107393-105918650.1776107392	
Soils	Predominantly loamy and sandy soils with naturally high groundwater and a peaty surface	Figure 2
Peat	The following sources have been interrogated which suggest that there are significant extents of peat throughout the district, particularly in the southern area of the district, with shallower, smaller more fragmented patches in the north. - 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

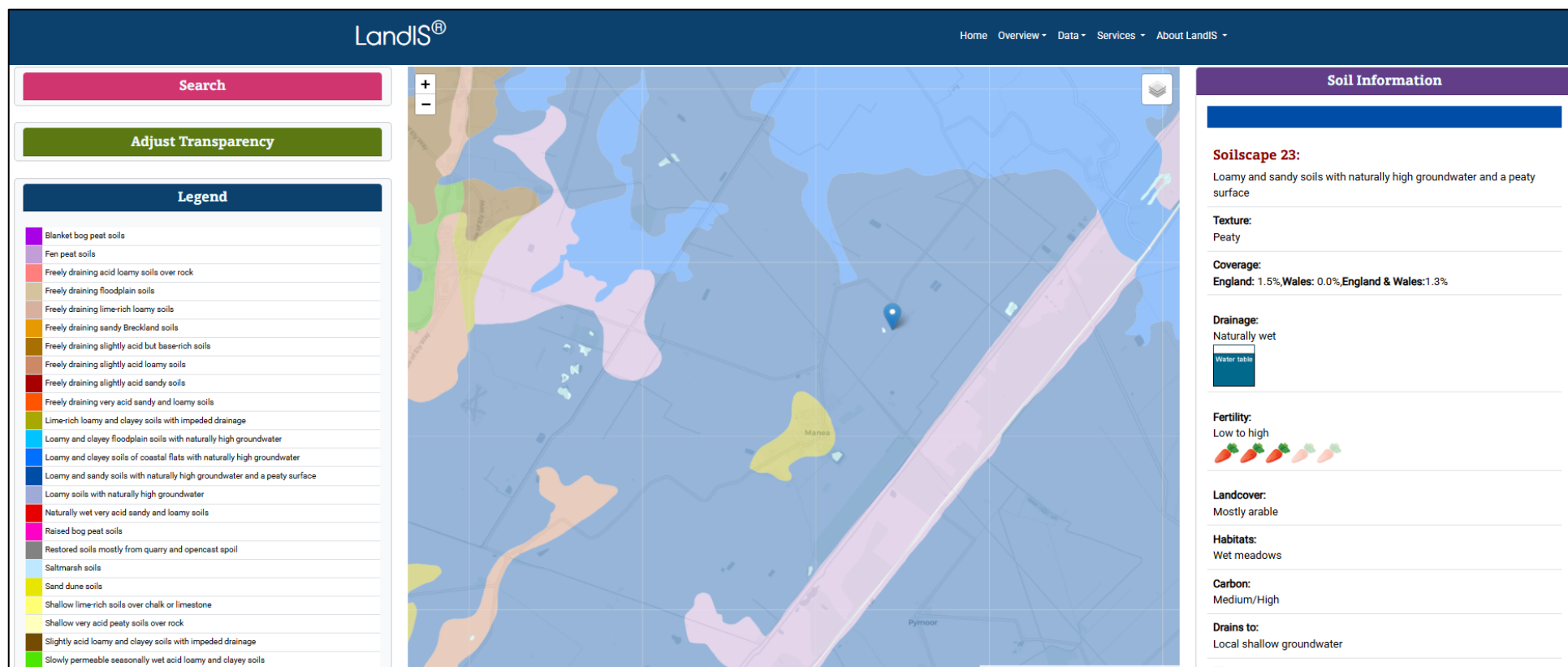


Figure 2 - Manea & Welney District Drainage Commissioners map of soil types

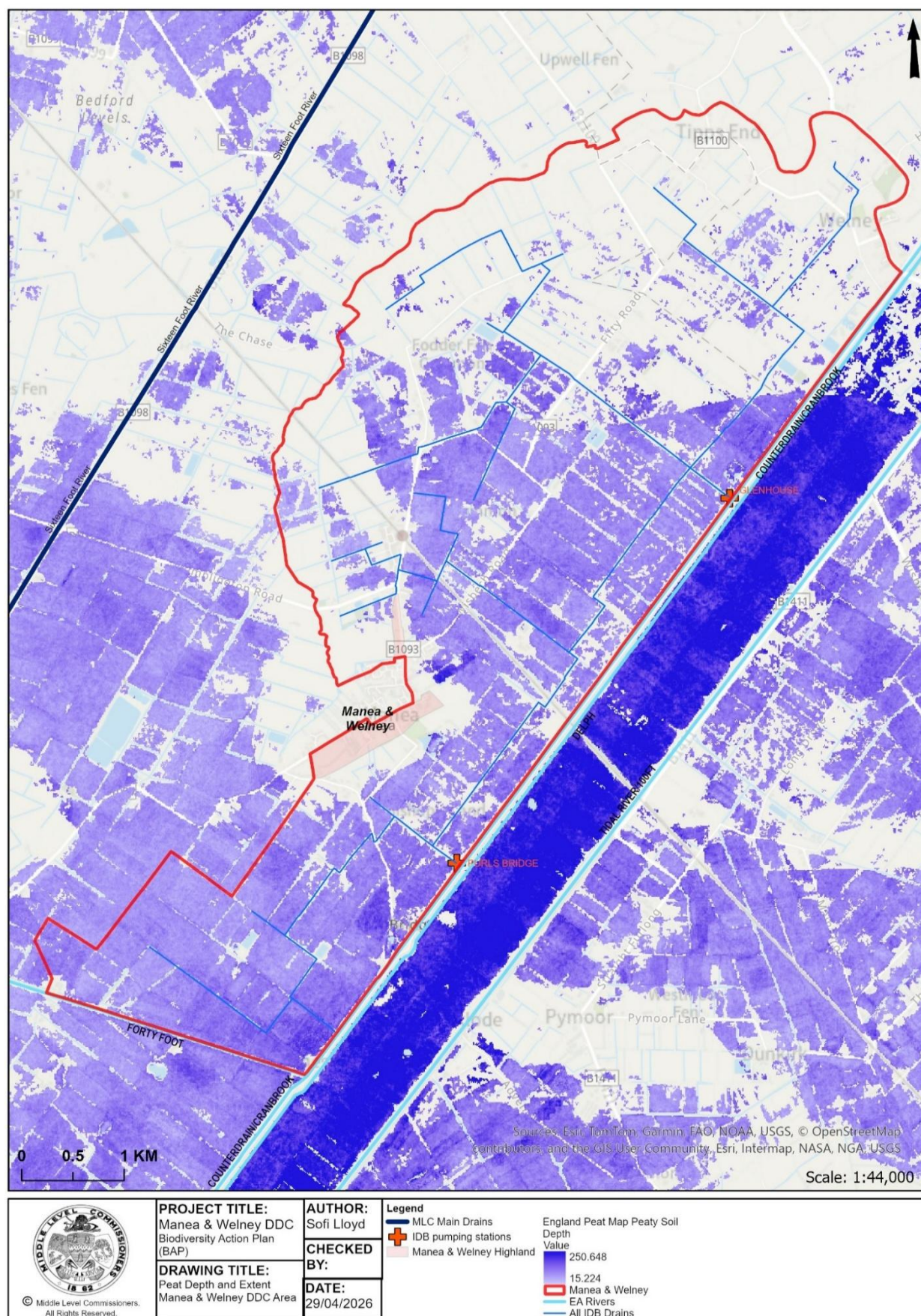


Figure 3 - BGS & NSRI Peat map showing deposit depth in Manea & Welney District Drainage Commissioners Area.

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.

Manea & Welney District Drainage Commissioners 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 are 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
Church of St Mary the Virgin – Welney	Grade II* Listed Building	https://historicengland.org.uk/listing/the-list/list-entry/1168946	Not near an IDB drain so unlikely to be impacted by any works
Parish Church of St Nicolas - Manea	Grade II* Listed Building	https://historicengland.org.uk/listing/the-list/list-entry/1126582	Not near an IDB drain so unlikely to be impacted by any works

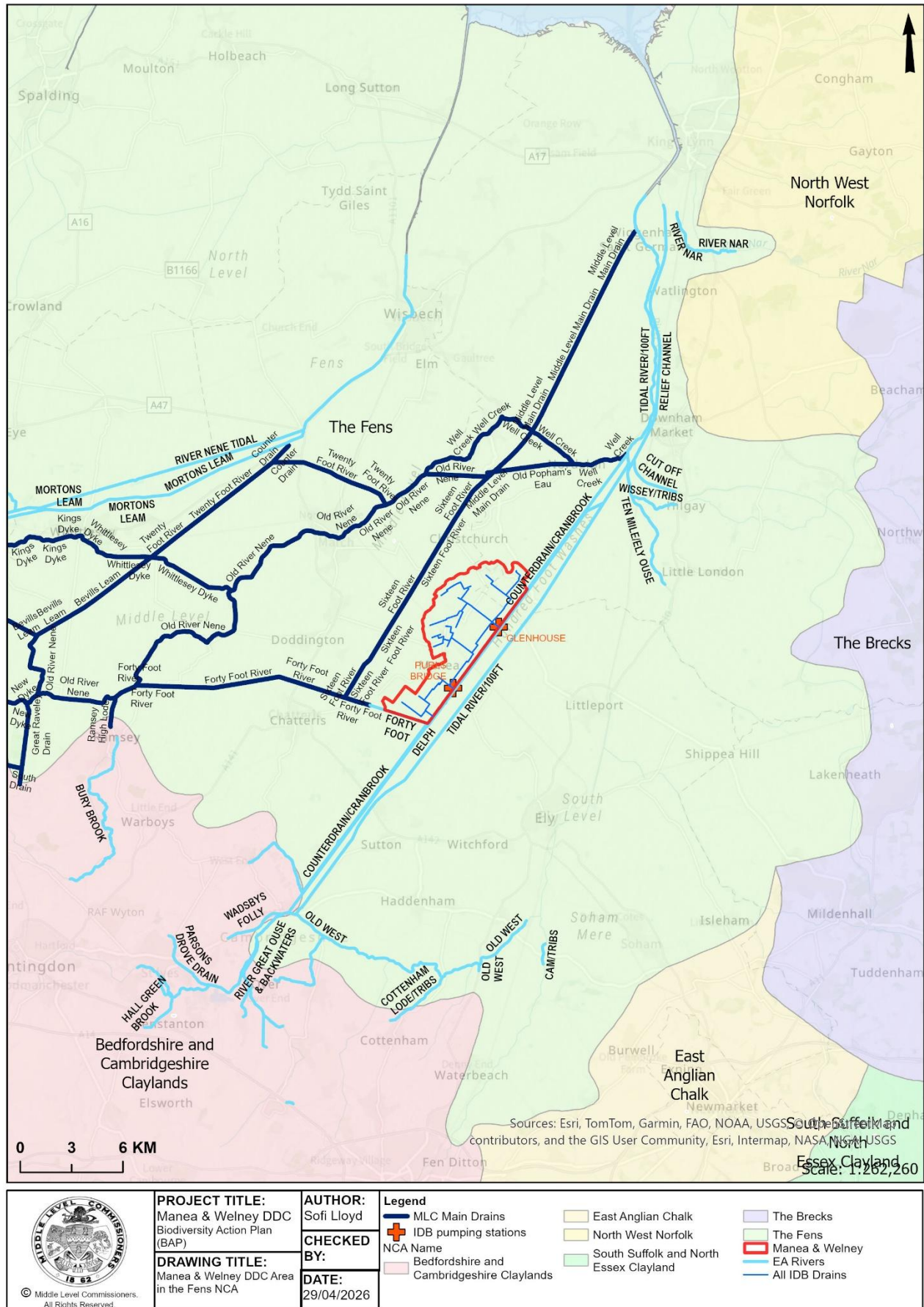


Figure 4. Map of Manea & Welney District Drainage Commissioners within the Fens NCA

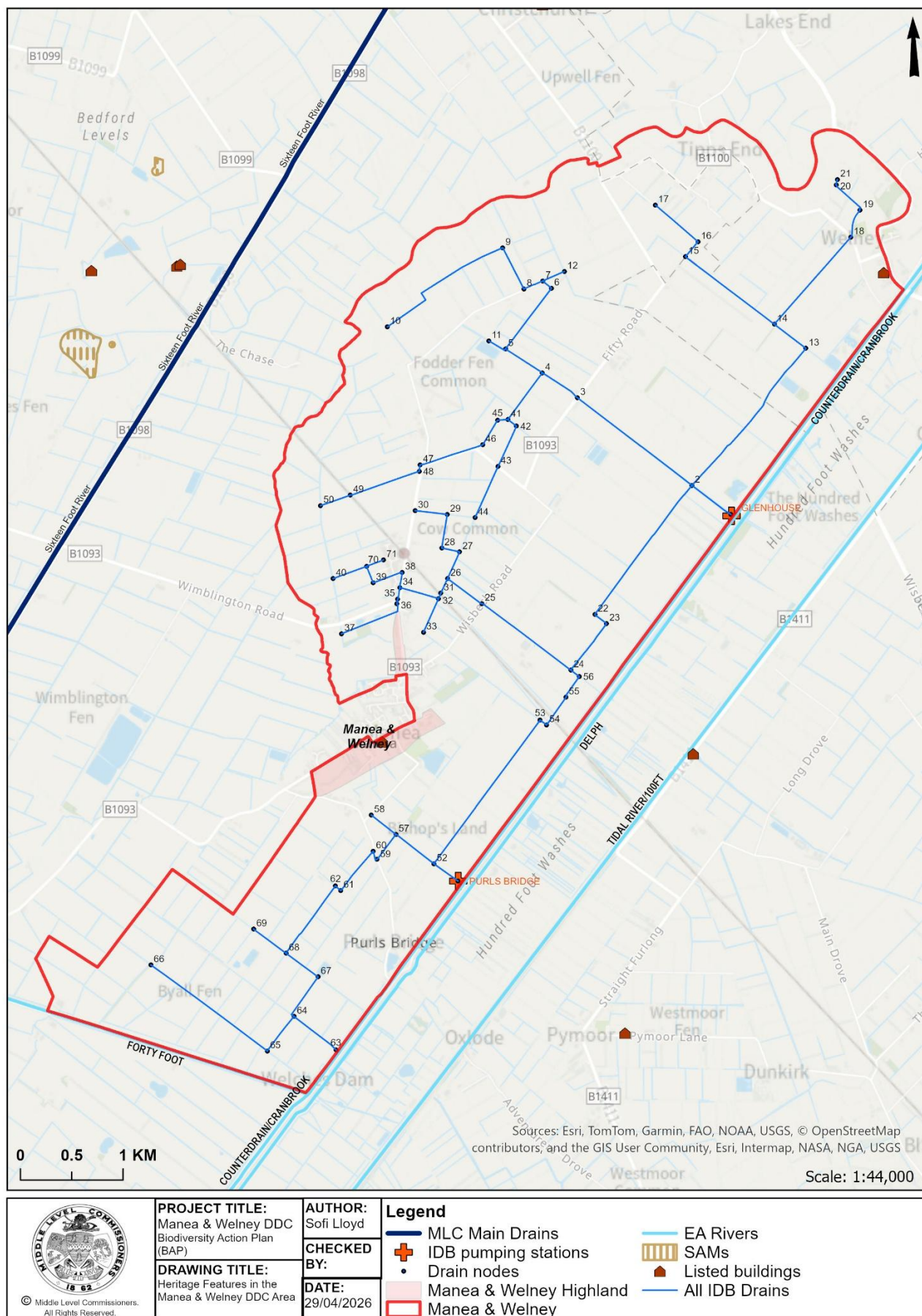


Figure 5. Map of heritage features within Manea & Welney District Drainage Commissioners Area

5.7. Tree Preservation Orders

There are a number of protected trees within the District, mainly associated with the village of Manea but none are in close proximity to IDB drains so are unlikely to be impacted by works.

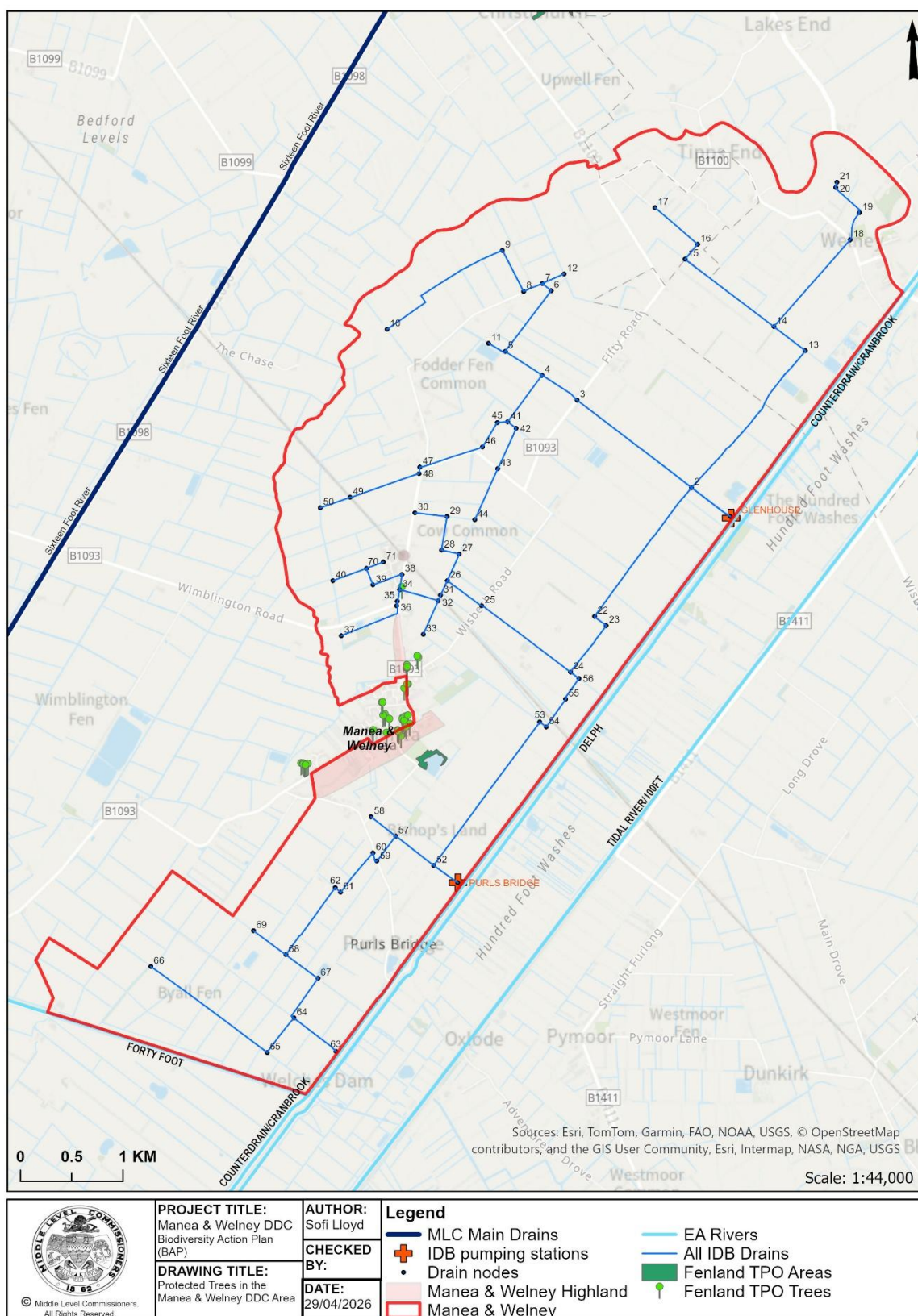


Figure 6. Map of Protected Trees locations within Manea & Welney District Drainage Commissioners Area

5.8. Statutory Nature Conservation Sites

The Eastern boundary of the District sits against the Counter Drain which is a designated Special Area of Conservation (SAC) for Spined Loach. The Counter Drain also forms the boundary of the **Ouse Washes, a RAMSAR and Special Protection Area (SPA) and SSSI** site designated as one of the most extensive areas of seasonally-flooding washland of its type in Britain. Managed in a traditional agricultural manner by grazing during dry months, 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. The Manea & Welney DDC Area is hydraulically linked to the designated sites and will be part of the functionally-linked land associated with the Ouse washes, used by, and important for the associated waterfowl. The IDB Area is also within the formal SSSI Impact Risk Zones for the site, which identify and constrain certain types of development or disturbance which could negatively impact the designated features of the site. See Appendix II for details of these constraints.

5.8.1 Internationally Designated Sites

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 are 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	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.

			• 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	
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5.8.2 Nationally Designated Sites

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.

5.8.3 Local Nature Reserves (LNR)

N/A

5.8.4 Non-statutory Nature Conservation Sites (Table 4)

Site Name	Desc.	Features Relevant to IDB
Bedlam Hill Pit County Wildlife Site	The site qualifies as CWS because it supports at least 0.5ha of NVC community S4 Common Reed swamp and because it is a site at least 0.1ha in size which supports at least two fen types.	Not near an IDB channel so unlikely to be impacted by IDB activities
Forty Foot Drain (East)	Supports at least 0.5ha of NVC S4 Common Reed swamp; contains at least 5 species of submerged, floating and emergent vascular plant per 20 metre stretch; supports a population of a Nationally Scarce vascular plant; and is Grade C site in the JNCC ISR.	Not near an IDB channel so unlikely to be impacted by IDB activities

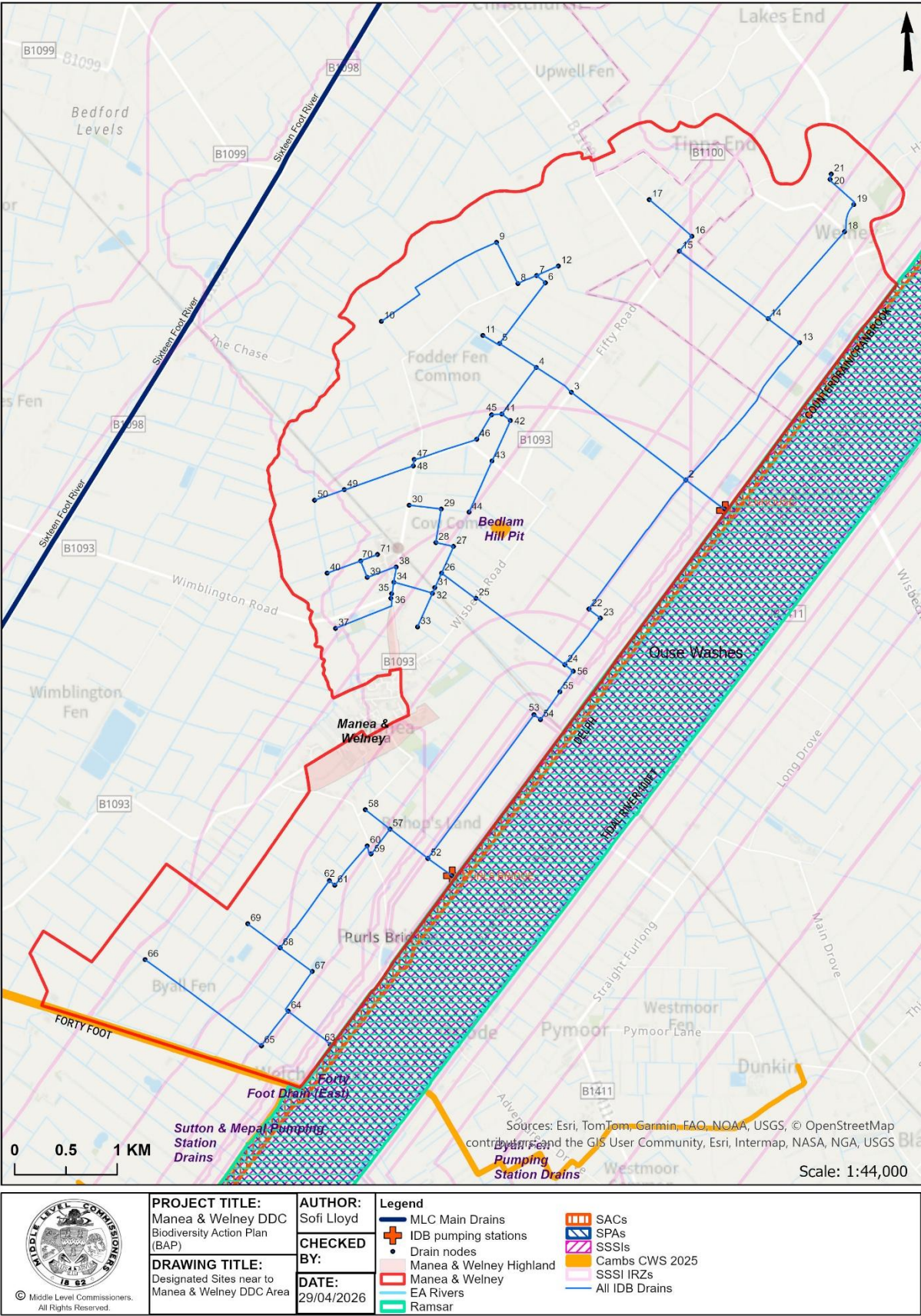


Figure7. Map of Statutory & Non-statutory Nature Sites in Manea & Welney District Drainage Commissioners Area

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 8. 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 5. 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)
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 168ha significant extent and well connected	We3 -enhance and create floodplain wet grassland sites to better support breeding and wintering wetland birds (LNRS) PM25 - Create new, enlarge and expand existing and connect wet grassland and grazing marshes where feasible and desirable	High – Habitats adjacent to IDB ditches so will 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.
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)	9ha, locally rare	Wo1 - better manage woodlands to improve resilience and structural diversity. Wo3 - expand and connect existing areas of woodland to increase woodland biodiversity and help combat climate change PM01; PM02 - Create new deciduous woodland - Enlarge and expand existing deciduous woodland - Connect deciduous woodland areas - Restore and enhance existing deciduous woodland	Low – Habitats are not adjacent to IDB ditches so unlikely to be influenced by IDB activity.

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Lowland Fens	Estimated 25,785 ha remain in England, predominately in East Anglia, the Broads and Anglesey, highly fragmented	BNG: Lowland Fens (Wetland) UKHab: Lowland Fens f2a	Aim to meet priority habitat definition for lowland raised bog and 'good condition' as per BNG habitat condition assessments.	Wetland (LNRS)	3ha approx. across 3 tiny fragments, 2 around open water.	We3 - enhance and create floodplain wet grassland sites to better support breeding and wintering wetland birds PM33 - Enlarge, Expand And Connect Existing Fen Habitats	Low – Habitats are not adjacent to IDB ditches so unlikely to be influenced by IDB activity
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)	1ha. Tiny fragments	WO 8 - Improve the management of traditional orchards and seek to expand them where possible. PM13; PM14 - Create new orchards where feasible - Enlarge and expand existing traditional orchards - Restore or enhance existing traditional orchards.	Low – Habitats are not adjacent to IDB ditches so unlikely to be influenced by IDB activity
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 PM29; PM30 - Restore and enhance existing rivers, streams and ditches. - Improve management of water resources through nature-based solutions (Natural Flood Management) - Strengthen mosaic of wetland habitats along river channels. - Improve river, riparian and floodplain habitat.	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. PM09; PM10 - Enlarge and expand existing arable field margins - Connect arable field margin areas - Restore and enhance existing arable field margins	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 occasional	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

						PM12 • Create new hedgerows using appropriate native species • Restore and enhance existing hedgerows • Establish more hedgerow trees.	private and community land and creation where appropriate.
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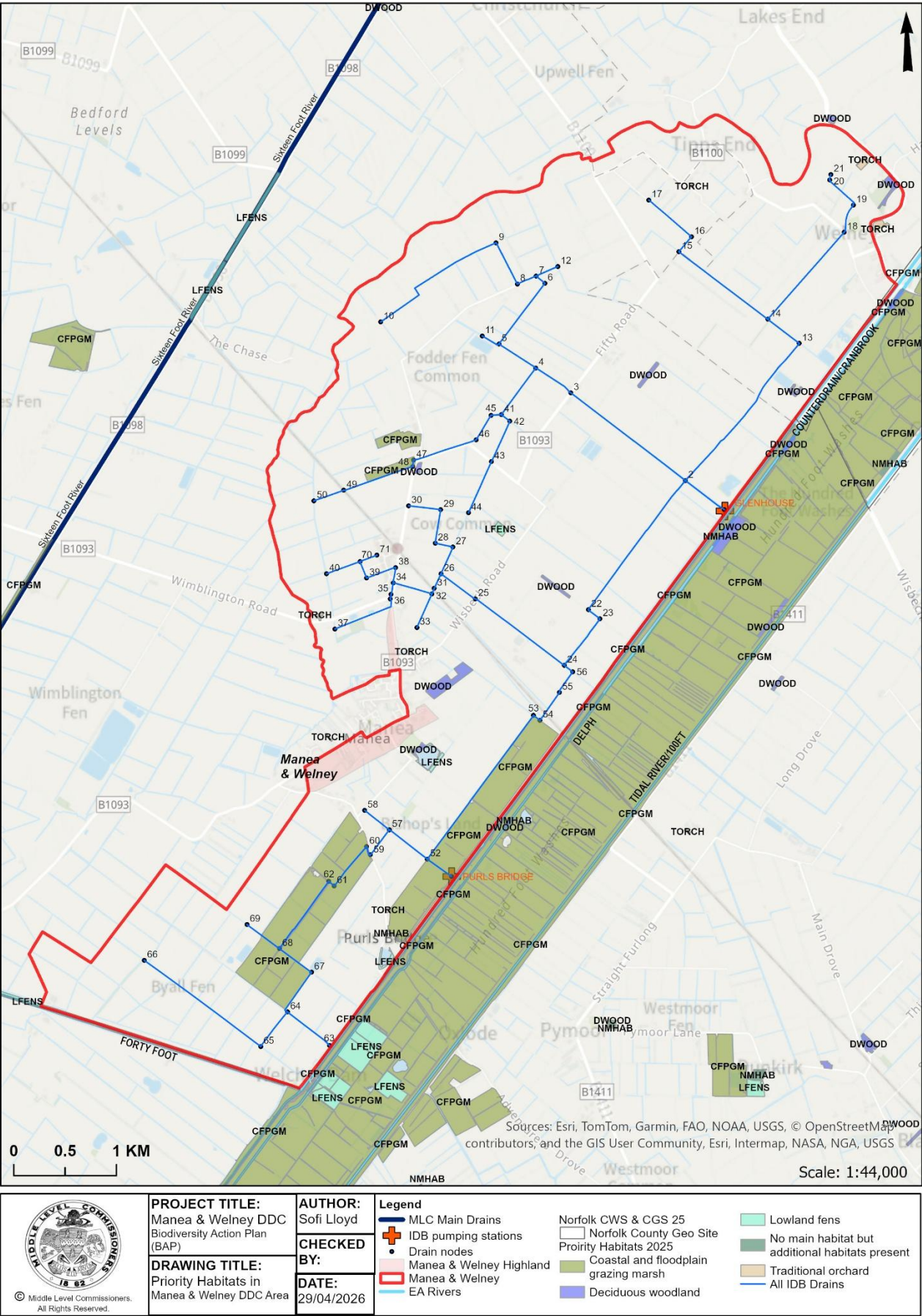


Figure 8. Map of Priority Habitats in Manea & Welney District Drainage Commissioner

The Local Nature Recovery Strategy (LNRS) for Cambridgeshire, published on the 23rd of December 2025, identifies a number of additional habitats that are of importance for conservation and creation within Cambridgeshire. There is potential for some such habitats 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 9 and/or are detailed in the below table.

Table 6. 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)
Wetlands	We1A – In the following large-scale Fenland wetland vision areas: Wicken Fen; Great Fen; Ouse Washes landscape area; and adjacent to the Nene Washes, create mosaics of wetland habitats such as fens, reedbeds, wet grasslands for breeding and wintering waterbirds, wet woodlands, pools and ponds on peat and other suitable soils. On the higher, drier ground within these vision areas on non-peat soils, create other complementary habitats such as meadows, scrub, woodland and ponds. We3B - Create areas of floodplain wetland mosaics within the embanked floodplains of the major rivers and other suitable locations to enhance connectivity between wetland sites and reverse habitat fragmentation to support diverse species assemblages. We3A - Manage floodplain wetland mosaics through sustainable grazing to create habitats that are wetter for longer and support a greater diversity and abundance of wetland flora and fauna, including breeding and wintering wetland birds. PM25 - Create new, enlarge and expand existing and connect wet grassland and grazing marshes where feasible and desirable	High – While the land is not owned by the IDB, the water levels within it can be influenced by the activities of the IDB. Encourage and support landowners in IDB network to create new wetland mosaics adjacent to IDB watercourses so new areas buffer the existing high-quality Ouse Washes habitats
Wet Woodland	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
Rivers & Streams	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. 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 PM30 - Strengthen mosaic of wetland habitats along river channels	High –Encourage and support landowners in IDB network to create and maintain riparian buffers. Manage IDB ditches according to the SOPs and best practice to maximise opportunities for wildlife.
Arable Field Margins	PM09 - Enlarge and expand existing arable field margins	Med – Encourage landowners in IDB network to establish good quality stewardship field margins

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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.
Woodlands (LNRS)	Wo3A – improve biodiversity by creating mixed deciduous woodland consisting of appropriate native or climate change tolerant (European only) species to increase resilience and diversity. Such newly created woodlands are to be within 2.5 kilometres of existing woodland, though in practice should be much closer (ideally within 500 metres). Newly created woods would ideally form a woodland block (or group of woodlands within 200 metres of each other) which are at least 40 hectares in size. Woodland creation would be expected over approximately 80% of the site area mapped under this measure, with the remaining 20% a mosaic of other complementary habitats such as species-rich grassland, scrub, ponds, and individual trees. Wo1A – enhance the management of unmanaged woodlands with a minimum size of 1 hectare to UK Forestry Standards to achieve a varied structure and greater diversity. PM02 - Restore And Enhance Existing Deciduous Woodland	Low – not on IDB-owned land and unlikely to be influenced by Board Activities. However, the encouragement, if possible, via IDB networks to retain and enhance woodlands in line with the LNRS objectives
Traditional Orchard	PM14 - Restore and enhance existing traditional orchard	Low – Habitats are not adjacent to IDB ditches so unlikely to be influenced by IDB activity
Still Water	PM32 - Restore and enhance existing still water	Med – Habitats are not adjacent to IDB ditches so unlikely to be influenced by IDB activity but could be influenced by water level management in the vicinity. Encourage private landowners to retain and enhance then in line with LNRS objectives.

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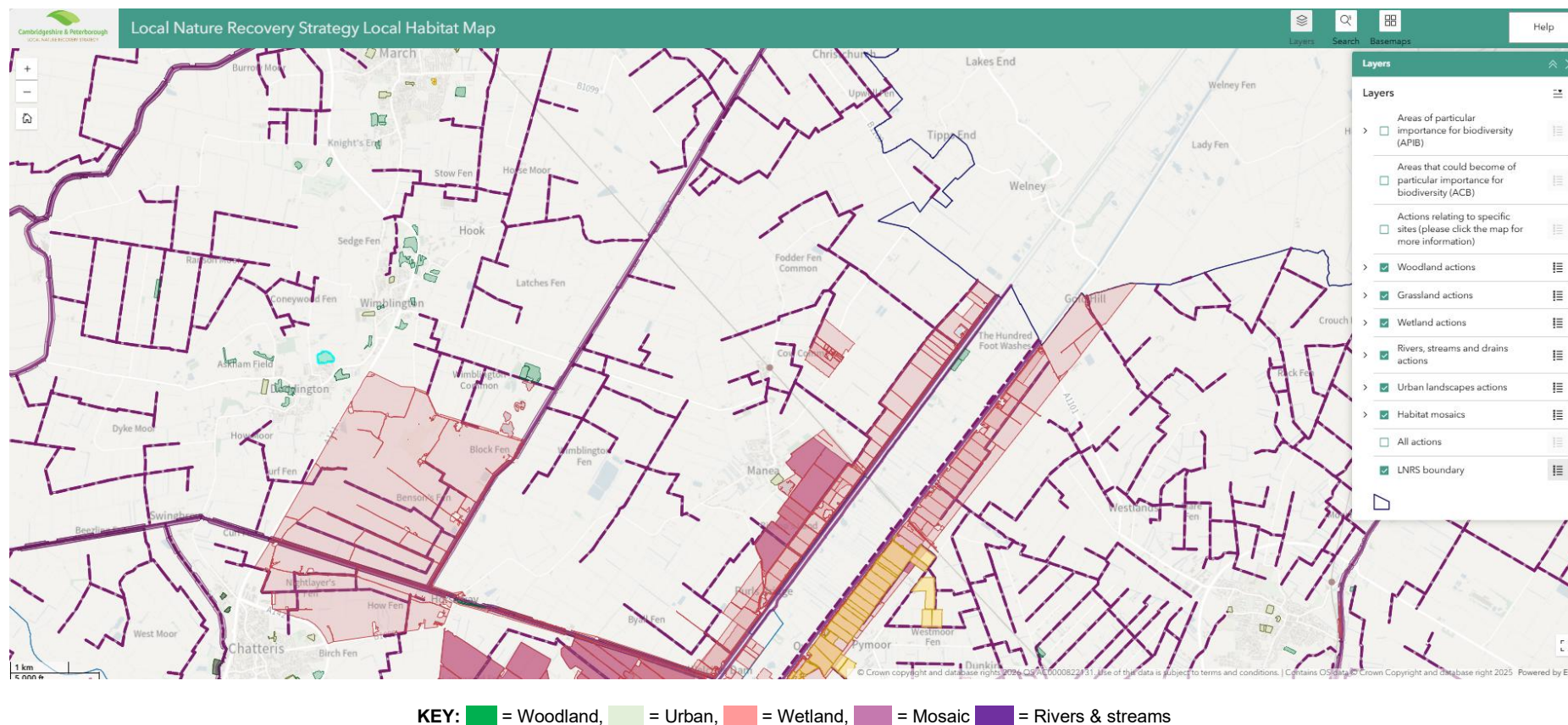


Figure 9. Mapped Priority Habitat Action Opportunities as detailed in the Cambridgeshire LNRS (published: 23rd December 2025) in Manea & Welney DDC Area, available from this link:

[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>

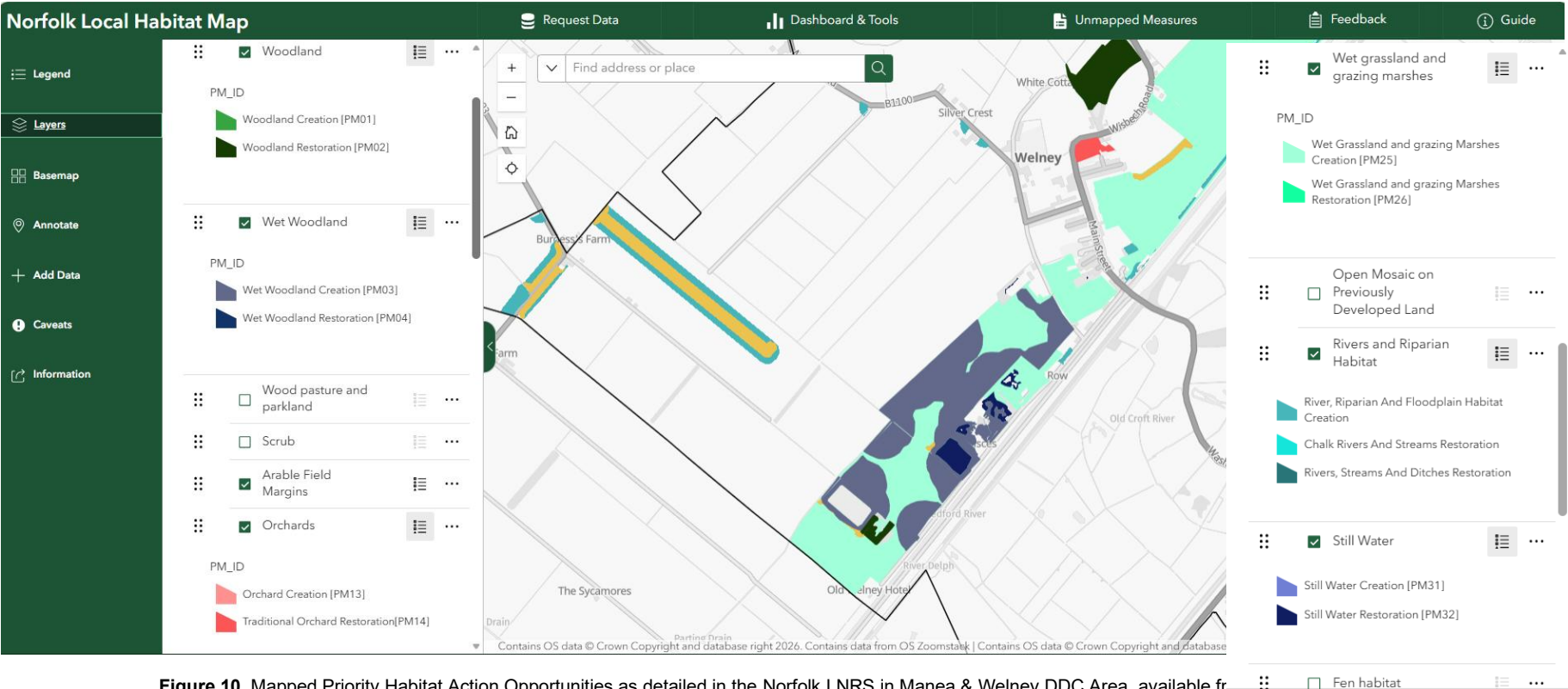


Figure 10. Mapped Priority Habitat Action Opportunities as detailed in the Norfolk LNRS in Manea & Welney DDC Area, available from <https://experience.arcgis.com/experience/3425559ce5b94929b6865d0ba7e34f50> or [Norfolk Local Habitat Map](#)

5.10. Species Audit Summary

There are 199 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, 142 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 7: 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	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
	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
	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.
	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.
	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.
	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.	Manage ditches to provide insect-rich habitats close to known swift nest sites & fund boxes
	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.
	Grasshopper Warbler	<i>Locustella naevia</i>	Sect.41, UKBAP, 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.

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Bird	Black-tailed Godwit	<i>Limosa limosa</i>	WCA1i, 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
	Lesser Redpoll	<i>Acanthis cabaret</i>	Sect.41, UKBAP, 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.	Tree nester in wet woodlands
	Goldeneye	<i>Bucephala clangula</i>	WCA1ii, LNRS		Nest in holes in trees near water
	Cuckoo	<i>Cuculus canorus</i>	Sect.41, UKBAP, LNRS		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		Assoc with fenland fields and washes when overwintering
	Whooper Swan	<i>Cygnus cygnus</i>	WCA1i, LNRS		Ground nesters in marshland and farmland
	Yellowhammer	<i>Emberiza citrinella</i>	Sect.41, UKBAP, LNRS		Ground, or near to, nesting birds with broods into late August. Favour ditch edges and grass margins.
	Linnet	<i>Linaria cannabina</i>	Sect.41, UKBAP, LNRS		Ground & low scrub/hedge nesters
	Yellow Wagtail	<i>Motacilla flava</i>	Sect.41, UKBAP, LNRS		Ground nesters in damp channel margins and banks and agricultural margins.
	Spotted Flycatcher	<i>Muscicapa striata</i>	Sect.41, UKBAP, LNRS		Dense hedge and scrub nesters
	Curlew	<i>Numenius arquata</i>	Sect.41, UKBAP, LNRS		Ground nesters in rough/damp pasture
	House Sparrow	<i>Passer domesticus</i>	Sect.41, UKBAP, LNRS		Dense hedge nesters
	Tree Sparrow	<i>Passer montanus</i>	Sect.41, UKBAP, LNRS		Hedge & scrub nesters
	Black-necked Grebe	<i>Podiceps nigricollis</i>	WCA1i, LNRS		Reedbed nesters
	Garganey	<i>Spatula querquedula</i>	WCA1i, LNRS		Swampy meadows and marshy area nesters
	Turtle Dove	<i>Streptopelia turtur</i>	Sect.41, UKBAP, LNRS		Dense scrub nesters
	Pintail	<i>Anas acuta</i>	WCA1ii		
	Greenland White-fronted Goose	<i>Anser albifrons flavirostris</i>	UKBAP		
	Purple Heron	<i>Ardea purpurea</i>	WCA1i		
	Scaup	<i>Aythya marila</i>	Sect.41, UKBAP, WCA1i		
	Ruff	<i>Calidris pugnax</i>	WCA1i		
	Cetti's Warbler	<i>Cettia cetti</i>	WCA1i		
	Marsh Harrier	<i>Circus aeruginosus</i>	WCA1i		
	Quail	<i>Coturnix coturnix</i>	WCA1i		
	Reed Bunting	<i>Emberiza schoeniclus</i>	Sect.41, UKBAP		

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Bird	Hobby	<i>Falco subbuteo</i>	WCA1i	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.	
	Bluethroat	<i>Luscinia svecica</i>	WCA1i		
	Bearded Tit	<i>Panurus biarmicus</i>	WCA1i		
	Spoonbill	<i>Platalea leucorodia</i>	WCA1i		
	Dunnock	<i>Prunella modularis</i>	Sect.41, UKBAP		
	Bullfinch	<i>Pyrrhula pyrrhula</i>	Sect.41, UKBAP		
	Redwing	<i>Turdus iliacus</i>	WCA1i		
	Song Thrush	<i>Turdus philomelos</i>	Sect.41, UKBAP		
Flowering Plant	Ribbon-leaved Water-plantain	<i>Alisma gramineum</i>	NR, RLENG.CR, RLGB.CR, Sect.41, UKBAP, WCA8, 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. Encourage establishment and retention of arable margins. Look for in surveys, record presence & inform LERC.	Fenland drain/ditch specialist
	Water-violet	<i>Hottonia palustris</i>	CPASI, RLENG.VU, RLGB.VU, LNRS		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
	Frogbit	<i>Hydrocharis morsus-ranae</i>	CPASI, RLENG.VU, RLGB.VU, LNRS		
	Fen Ragwort	<i>Jacobaea paludosa</i>	NR, RLENG.CR, RLGB.CR, Sect.41, UKBAP, WCA8, LNRS		Look for reintro sites, particularly in vegetated drains, old pump drains, dead end drains, reedbed peripheries etc.
	Tubular Water-dropwort	<i>Oenanthe fistulosa</i>	RLENG.VU, RLGB.VU, Sect.41, UKBAP, LNRS		Found in areas with winter flooding, including flood meadows and ponds. Look for around Nene and Ouse Washes IDBs
	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
	Fen Pondweed	<i>Potamogeton coloratus</i>	CPASI, NS, LNRS		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
	Greater Water-parsnip	<i>Sium latifolium</i>	NS, RLENG.EN, RLGB.EN, Sect.41, UKBAP, LNRS		Fenland characteristic species. Found parts of the Ouse Washes. Small populations remain vulnerable. 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
	Field Pepperwort	<i>Lepidium campestre</i>	RLENG.Lr(NT)		Open grassland/arable specialist favouring sandy/gravelly soils.

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Flowering Plant	Cat-mint	<i>Nepeta cataria</i>	CPASI, RLENG.VU, RLGB.VU	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. Encourage establishment and retention of arable margins. Look for in surveys, record presence & inform LERC.	Winter-green perennial herb favouring chalky soil in arable margins, verges, hedgebanks and wasteland.
	Bogbean	<i>Menyanthes trifoliata</i>	CPASI		rhizomatous perennial herb which grows as an emergent at the shallow edge of lakes, pools or slow-flowing rivers, or in swamps, flushes or dune-slacks. It tolerates a wide range of water chemistry, but is intolerant of shade.
	Sneezewort	<i>Achillea ptarmica</i>	CPASI		
	Narrow-leaved Water-plantain	<i>Alisma lanceolatum</i>	CPASI		
	Calystegia sepium subsp. roseata	<i>Calystegia sepium subsp. roseata</i>	NS		
	Bladder-sedge	<i>Carex vesicaria</i>	CPASI, RLENG.VU		
	Chicory	<i>Cichorium intybus</i>	RLENG.VU		
	Greater Dodder	<i>Cuscuta europaea</i>	CPASI, NS		
	Galingale	<i>Cyperus longus</i>	NS, RLENG.Lr(NT), RLGB.Lr(NT)		
	Slender Spike-rush	<i>Eleocharis uniglumis</i>	CPASI		
	Treacle-mustard	<i>Erysimum cheiranthoides</i>	RLENG.Lr(NT)		
	Marsh Pennywort	<i>Hydrocotyle vulgaris</i>	CPASI, RLENG.Lr(NT)		
	Marsh Ragwort	<i>Jacobaea aquatica</i>	CPASI, RLENG.Lr(NT)		
	Round-fruited Rush	<i>Juncus compressus</i>	RLENG.VU, RLGB.VU		
	Whorled Water-milfoil	<i>Myriophyllum verticillatum</i>	CPASI, RLENG.Lr(NT), RLGB.VU		
	Fringed Water-lily	<i>Nymphaeodes peltata</i>	CPASI, NS		
	Fine-leaved Water-dropwort	<i>Oenanthe aquatica</i>	CPASI		
	River Water-dropwort	<i>Oenanthe fluviatilis</i>	CPASI		
	Small Water-pepper	<i>Persicaria minor</i>	RLGB.VU		
	Red Pondweed	<i>Potamogeton alpinus</i>	RLENG.VU		
	Flat-stalked Pondweed	<i>Potamogeton friesii</i>	CPASI, NS, RLENG.VU, RLGB.Lr(NT)		Aquatic herb favouring eutrophic, still, or slowly flowing waters especially fenland lodes and ditches.
	Shining Pondweed	<i>Potamogeton lucens</i>	CPASI		
	Hairlike Pondweed	<i>Potamogeton trichoides</i>	CPASI		Aquatic herb found in a range of still or slowly flowing, mesotrophic or eutrophic waters including lakes, ponds, rivers, canals, ditches and flooded mineral workings. It often colonizes disturbed sites such as recently cleared canals and ditches.
	Greater Spearwort	<i>Ranunculus lingua</i>	CPASI		
	Marsh Dock	<i>Rumex palustris</i>	CPASI		
	Common Meadow-rue	<i>Thalictrum flavum</i>	CPASI		
	Strawberry Clover	<i>Trifolium fragiferum</i>	CPASI, RLENG.VU, RLGB.VU		
	Common Valerian	<i>Valeriana officinalis</i>	CPASI, RLENG.Lr(NT)		

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Insect - Beetle (Coleoptera)	Agabus undulatus	<i>Agabus undulatus</i>	CPASI, RLGB.Lr(NT), 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.	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
	Berosus luridus	<i>Berosus luridus</i>	Nb, RLGB.Lr(NT)		
	Enochrus quadripunctatus	<i>Enochrus quadripunctatus</i>	NS		
	Eubrychius velutus	<i>Eubrychius velutus</i>	Nb		
	Gymnetron villosulum	<i>Gymnetron villosulum</i>	Nb		
	Oulimnius major	<i>Oulimnius major</i>	NS		
	Oulimnius rivularis	<i>Oulimnius rivularis</i>	CPASI, NS		
	Pelenomus commari	<i>Pelenomus commari</i>	Nb		
Insect - Butterfly	Tournotaris bimaculata	<i>Tournotaris bimaculata</i>	Nb	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.	
	Small Heath	<i>Coenonympha pamphilus</i>	RLGB.Lr(NT), Sect.41, UKBAP		
Insect - Dragonfly (Odonata)	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.	
	Green-eyed Hawker	<i>Aeshna isoeles</i>	RLGB.EN, Sect.41, UKBAP, WCA5		
	Variable Damselfly	<i>Coenagrion pulchellum</i>	RLGB.Lr(NT)		
Insect - Moth	Scarce Chaser	<i>Libellula fulva</i>	RLGB.Lr(NT)	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.	
	Grey Dagger	<i>Acronicta psi</i>	Sect.41, UKBAP		
	Knot Grass	<i>Acronicta rumicis</i>	Sect.41, UKBAP		
	Beaded Chestnut	<i>Agrochola lychnidis</i>	Sect.41, UKBAP		
	Mouse Moth	<i>Amphipyra tragopoginis</i>	Sect.41, UKBAP		
	Brown-spot Pinion	<i>Anchoscelis litura</i>	Sect.41, UKBAP		
	Large Nutmeg	<i>Apamea anceps</i>	Sect.41, UKBAP		
	Dusky Brocade	<i>Apamea remissa</i>	Sect.41, UKBAP		
	Garden Tiger	<i>Arctia caja</i>	Sect.41, UKBAP		
	Centre-barred Sallow	<i>Atethmia centrargo</i>	Sect.41, UKBAP		
	Mottled Rustic	<i>Caradrina morpheus</i>	Sect.41, UKBAP		
	Latticed Heath	<i>Chiasmia clathrata</i>	Sect.41, UKBAP		
	Sallow	<i>Cirrhia icteritia</i>	Sect.41, UKBAP		Assoc with ditches and streams
	Goat Moth	<i>Cossus cossus</i>	Sect.41, UKBAP		
	Small Square-spot	<i>Diarsia rubi</i>	Sect.41, UKBAP		

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Insect - Moth	Dusky Thorn	<i>Ennomos fuscantaria</i>	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.	Assoc with Ash trees
	Garden Dart	<i>Euxoa nigricans</i>	Sect.41, UKBAP		
	Double Dart	<i>Graphiphora augur</i>	Sect.41, UKBAP		#N/A
	Crescent	<i>Helotropha leucostigma</i>	Sect.41, UKBAP		
	Ghost Moth	<i>Hepialus humuli</i>	Sect.41, UKBAP		Open damp grassland species
	Rustic	<i>Hoplodrina blanda</i>	Sect.41, UKBAP		
	Rosy Rustic	<i>Hydraecia micacea</i>	Sect.41, UKBAP		
	Shoulder-striped Wainscot	<i>Leucania comma</i>	Sect.41, UKBAP		
	Brindled Beauty	<i>Lycia hirtaria</i>	Sect.41, UKBAP		
	Lackey	<i>Malacosoma neustria</i>	Sect.41, UKBAP		
	Dot Moth	<i>Melanchra persicariae</i>	Sect.41, UKBAP		
	Dark Brocade	<i>Mniotype adusta</i>	Sect.41, UKBAP		Prefers damp habitats
	Oblique Carpet	<i>Orthonama vittata</i>	Sect.41, UKBAP		#N/A
	Powdered Quaker	<i>Orthosia gracilis</i>	Sect.41, UKBAP		Damp, grassy, and marshy habitats.
	Dark Spinach	<i>Pelurga comitata</i>	Sect.41, UKBAP		
	Large Wainscot	<i>Rhizedra lutos</i>	Sect.41, UKBAP		
	Giant Water-veneer	<i>Schoenobius gigantella</i>	Nb		
	Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	Sect.41, UKBAP		
	White Ermine	<i>Spilosoma lubricipeda</i>	Sect.41, UKBAP		
	Buff Ermine	<i>Spilosoma lutea</i>	Sect.41, UKBAP		
	Blood-vein	<i>Timandra comae</i>	Sect.41, UKBAP		
	Cinnabar	<i>Tyria jacobaeae</i>	Sect.41, UKBAP		
	Oak Hook-tip	<i>Watsonalla binaria</i>	Sect.41, UKBAP		
	Dark-barred Twin-spot Carpet	<i>Xanthorhoe ferrugata</i>	Sect.41, UKBAP		
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.	
	Common Lizard	<i>Zootoca vivipara</i>	Sect.41, UKBAP, WCA5		
Stonewort	Hedgehog Stonewort	<i>Chara aculeolata</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.	Only in some of the old Pboro brick pit sites in Cambs and Pboro. A freshwater species tolerant of slightly brackish water.
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	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	Brown Hare	<i>Lepus europaeus</i>	Sect.41, UKBAP	Yes. Retain areas of uncut undisturbed marginal and bank vegetation for refuge and foraging and manage rotationally.	
Terrestrial Mammal - Bat	Bat	<i>Chiroptera</i>	HabRegs2, 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	
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	HabRegs2, WCA5		
	Brown Long-eared Bat	<i>Plecotus auritus</i>	HabRegs2, Sect.41, UKBAP, WCA5		

In addition, there are 152 species identified by the Local Nature Recovery Strategies (LNRS) for Norfolk & Cambridgeshire that are a priority for nature conservation. 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. These species are also considered within the actions and objectives set by the IDB and are listed in Appendix II.

5.11. 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 several 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 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 were not present in the Manea & Welney DDC channels around the time and area that the EDNA samples were taken. However, the catchment is well connected, hydraulically, to channels where the species are known to be present so IDB channels should be considered important for the conservation of the species and should be managed with this in mind.

Table 8: Species identified by the EDNA studies undertaken in the Manea & Welney District Drainage Commissioners Catchment:

IDB/Pumping Station	Samples Taken	Mammal & Reptile Species Identified	Species Richness	Species Richness Range*	Fish Species Identified	Species Richness	Species Richness Range*
Glenhouse	10	1. Common Frog 2. Water Vole	2	0-7	1. Bitterling 2. Spined Loach 3. Common Bream 4. Silver Bream 5. Roach 6. Rudd 7. Tench 8. Three-spined stickleback 9. Nine-spined stickleback 10. Perch/Zander	10	1-13
Purils Bridge	7	1. Common Shrew 2. Water Vole 3. Field Vole 4. Brown Rat	4	0-7	1. Spined Loach 2. Common Bream 3. Roach 4. Rudd 5. Northern Pike 6. Nine-spined stickleback 7. Perch Zander	7	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.

5.12. 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 9: Aquatic & riparian invasive non-native species summary

Taxon	Common Name	Scientific Name	Location	Most Recent Date Recorded	Designation	Management Recommendations
Flowering plant	New Zealand Pigmyweed	<i>Crassula helmsii</i>	Ouse Washes (Pymoor)	21/01/1989	WCA9ii	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.
	Canadian Waterweed	<i>Elodea canadensis</i>	Forty Foot Drain (East) CWS	01/09/1972	WCA9ii	
	Canadian Waterweed	<i>Elodea canadensis</i>	Manea	30/08/2014	WCA9ii	
	Canadian Waterweed	<i>Elodea canadensis</i>	Old Mill Drove drain, Welches Dam	15/08/1997	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Byall Fen	02/07/2013	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Forty Foot Drain (East) CWS	16/08/1997	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Manea	03/07/2013	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Manea Pit	22/07/2009	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Old Bedford River, Manea	22/08/1991	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Ouse Washes (Manea)	16/07/1999	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Ouse Washes (Pymoor)	16/07/1999	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Ouse Washes (RSPB)	05/11/2011	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Ouse Washes (Welches Dam)	14/07/1999	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Ouse Washes (Welney)	31/07/1993	WCA9ii	
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	Wimblington	30/08/2014	WCA9ii	
	Russian-vine	<i>Fallopia baldschuanica</i>	Manea	30/08/2014		
	Orange Balsam	<i>Impatiens capensis</i>	Manea	31/07/1993		
	Orange Balsam	<i>Impatiens capensis</i>	Ouse Washes (Welches Dam)	17/06/1905		
Terrestrial mammal	American Mink	<i>Neovison vison</i>	Welches Dam	01/12/2020	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 routine 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	IDB	
			• Supporting table for above with reasoning	2026	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	

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. Favour the retention and rotational management of marginal and bank vegetation wherever possible.	• Map with planned veg management approach defined for each reach	2026 then annually	IDB	Ecologist
			• 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. Aim for regular and light desilting on a 3-year rotation approx. to mimic natural scour in periodic high flows.	• Map with desilting approach defined for each reach	2026 then annually	IDB	Ecologist
			• 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 / DO	
			• Minuted report to the Board of compliance non/compliance for maintenance undertaken	Annually	Ecologist / DO	
	2b	Survey a different sample reach of channel each year to benchmark biodiversity. 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.	• Chanel survey results and recommendations included in Board papers with summary review each year.	2026 then annually	Ecologist	IDB
			• 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. 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.	• 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

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 CFPGM and Lowland Fen 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 CFPGM/Lowland Fen 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 / Open water

6.2.6.1 Ponds / Open Water 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 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

6.2.7 Hedgerows

6.2.7.1 Hedgerow Objectives

3. *Identify and map all hedgerows within the district and confirm ownership and if/how the IDB currently interacts with them, particularly those with IDB ditches adjacent to them.*
4. *Retain, enhance, connect and increase the extent of hedgerows within the District by encouraging and supporting private landowners to do so, and creating managing hedgerows favourably where possible and appropriate, near IDB channels.*

6.2.7.2 Hedgerow Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Identify all hedgerows in the district and their owners / managers adjacent to IDB watercourses or on access routes to them, and make contact to ascertain if the IDB can do anything to support the favourable management / conservation status of the habitat	Map of hedgerows & listed owners	2026	IDB	Ecologist
2	2a	Identify and take opportunities to plant new hedgerows in the IDB system, particularly to reconnect separate hedgerows, using identified priority species, with trees	Map of new connecting hedgerow opportunities	2026-27	IDB	Ecologist / Landowners
	2b	Develop and publish a “no net loss” hedgerow policy to be enforced through the consenting process	Published hedgerow policy available on the website	2027	IDB	Ecologist/IDB
	2c	Publish a note on the website detailing the value of hedgerows for biodiversity in the District, and encouraging the retention, favourable management and planting of new connecting hedgerows, and signpost further advice & information	Published note on website	2026	IDB	Ecologist
	2d	Include brief flyer with rate demands promoting the retention, favourable management, creation and importance of hedgerows within the District and signpost further advice and guidance	Flyer with rate demand	2027	IDB	Ecologist
	2e	Audit the extent of hedgerows at the start and end of the BAP period	Extent of hedgerow in the district calculated	2026-31	Ecologist	IDB

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*

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
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

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3	3a	Encourage and support bird SURVEYS .	• 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
		RECORD AND REPORT SIGHTINGS of birds, particularly priority birds, and encourage others via IDB networks to do the same	• 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, which 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
	2b		Known and potential otter holts (refuges) mapped & made available to works operatives	2027	IDB	Ecologist, Landowners, Community

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		Identify and protect known or potential OTTER holts (refuges) and create or support the creation of more along appropriate IDB channels	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 and other priority trees within the district*

6.3.4.2 Trees Actions

Objective ref.	Action no.	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Map and protect priority trees 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 Dark-leaved Willow, Black poplar, Elm (various), Field Maple, Pedunculate Oak, Rowan, Small leaved lime and Sweet chestnut 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 priority trees 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 trained and dates	2026 & 29	IDB	Ecologist
2	2a	Refresh and publish a “no net loss” policy for trees and hedgerows	Publication of approved policy on website	By 2028	IDB	
3	3a	Refresh 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 – Other LNRS species

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
Birds	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
	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
	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.
	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.
	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.
	Motacilla flava	<i>Yellow Wagtail</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.	Ground nesters in damp habitat & farmland
	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.	Manage ditches to provide insect-rich habitats close to known swift nest sites & fund boxes

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Birds	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.
	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.
	Grasshopper Warbler	<i>Locustella naevia</i>	Sect.41, UKBAP, 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.
	Black-tailed Godwit	<i>Limosa limosa</i>	WCA1i, 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
	Black-necked Grebe	<i>Podiceps nigricollis</i>	Bern-A2	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.	
	Common Tern	<i>Sterna hirundo</i>	BirdsDir-A1		Assoc with coastal and inland waterways. Summer visitor.
	Coot	<i>Fulica atra</i>	BirdsDir-A2.1		Ground nesting assoc with lakes and rivers/drains
	Garganey	<i>Spatula querquedula</i>	Bird-Amber		
	Greenfinch	<i>Chloris chloris</i>	Bird-Red		Favours arable habitat
	House Martin	<i>Delichon urbicum</i>	Bird-Red		Assoc with buildings for nesting but may forage along drains and margins
	Kestrel	<i>Falco tinnunculus</i>	W(NI)O-Sch1_part1		Assoc with woodland edges, hedgerows, riverbanks and margins. Preys on small mammals
	Marsh Tit	<i>Poecile palustris subsp. palustris/dresseri</i>	Bird-Red		Nests in mature tree cavities
	Moorhen	<i>Gallinula chloropus</i>	BirdsDir-A2.2		Ground nesting Assoc with lakes and rivers/drains
	Oystercatcher	<i>Haematopus ostralegus</i>	BirdsDir-A2.2		Assoc with coastal and estuary but frequently inland. Ground nesters
	Red-backed Shrike	<i>Lanius collurio</i>	WACA-Sch1_part1		Assoc with thorn scrub across a range of habitats. Prey on small mamms
	Redshank	<i>Tringa totanus</i>	BirdsDir-A2.2		
	Redshank	<i>Tringa totanus</i>	BirdsDir-A2.2		
	Swallow	<i>Hirundo rustica</i>	Bird_RedList_GB_post2001-LC_Breeding		Assoc with buildings for nesting but may forage along drains and margins
	Turtle Dove	<i>Streptopelia turtur</i>	BirdsDir-A2.2		Dense scrub nesters

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Fish	Brook lamprey	<i>Lampetra planeri</i>	RLGB NT, SFWF, HabsRegs, LNRS	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 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.
	Spined loach	<i>Cobitis taenia</i>	Bern-A3	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
	European Eel	<i>Anguilla anguilla</i>	UKBAP. RL Critically Endangered. SPI UK. Eel Regs, LNRS	Yes. Retain marginal vegetation for eel refuge and foraging. 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.
	Burbot	<i>Lota lota</i>	WACA-Sch5Sect9.4c		Historically assoc with fenland waterways subject to reintroductions in the Great Ouse catchment
Flowering Plant	Cambridge Milk-parsley	<i>Selinum carvifolia</i>	RENG.EN, RLGB.EN, WCA8, 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.	Known to be present in an IDB drain near Ramsey
	Dyer's Greenweed	<i>Genista tinctoria</i>	CPASI, RENG.VU, LNRS		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
	Fen Pondweed	<i>Potamogeton coloratus</i>	CPASI, NS, LNRS		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
	Fen Ragwort	<i>Jacobaea paludosa</i>	NR, RENG.CR, RLGB.CR, Sect.41, UKBAP, WCA8, LNRS		Look for reintro sites, particularly in vegetated drains, old pump drains, dead end drains, reedbed peripheries etc.
	Greater Bladderwort	<i>Utricularia vulgaris</i> agg.	RENG.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
	Greater Water-parsnip	<i>Sium latifolium</i>	NS, RENG.EN, RLGB.EN, Sect.41, UKBAP, LNRS		Fenland characteristic species. Found parts of the Ouse Washes. Small populations remain vulnerable. Look for in surveys
	Heath Dog-violet	<i>Viola canina</i> subsp. <i>ruppii</i>	RLGB EN. RENG EN., LNRS		In Woodwalton Fen, Holme fen & RUGR IDB only.
	Large-flowered Hemp-nettle	<i>Galeopsis speciosa</i>	RENG.VU, RLGB.VU, LNRS		Found in peaty fields and disturbed fen. Look out for in surveys

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Flowering Plant	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
	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
	Meadow Saxifrage	<i>Saxifraga granulata</i>	RedList_ENG_pos t2001-LC		Occasionally found on banks or in floodplains, indicator of good quality unimproved grasslands
	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
	Milk Parsley	<i>Thysselimum palustre</i>	RedList_GB_post 2001-VU		
	Mousetail	<i>Myosurus minimus</i>	RedList_ENG_pos t2001-VU		
	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
	Opposite-leaved Pondweed	<i>Groenlandia densa</i>	CPASI, RLENG.VU, RLGB.VU, LNRS		Typical of shallow nutrient-poor calcareous waters. Mostly found in fen drains. Look for in surveys
	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
	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
	Tubular Water-dropwort	<i>Oenanthe fistulosa</i>	RLENG.VU, RLGB.VU, Sect.41, UKBAP, LNRS		Found in areas with winter flooding, including flood meadows and ponds. Look for around Nene and Ouse Washes IDBs
	Water-violet	<i>Hottonia palustris</i>	CPASI, RLENG.VU, RLGB.VU, LNRS		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
	Bog Pimpernel	<i>Lysimachia tenella</i>	RedList_GB_post 2001-LC		

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Flowering Plant	Common Butterwort	<i>Pinguicula vulgaris</i>	RedList_ENG_post2 001-VU	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.	
	Common Cottongrass	<i>Eriophorum angustifolium</i>	RedList_ENG_post2 001-VU		
	Deptford Pink	<i>Dianthus armeria</i>	WACA-Sch8		prefers unimproved margins; recorded in Sawtry (Monk's Wood) 2000-2019
	Early Marsh-orchid (cream-flowered)	<i>Dactylorhiza incarnata</i>	RedList_ENG_post2 001-LC		
	English Dandelion	<i>Taraxacum anglicum</i>	RedList_ENG_post2 001-VU		
	Fen Orchid	<i>Liparis loeselii</i>	Bern-A1		
	Fen Violet	<i>Viola stagnina</i>	RedList_GB_post20 01-CR		
	Fen Wood-rush	<i>Luzula pallescens</i>	RedList_GB_post20 01-CR		Found in Holme Fen, Needs ground disturbance
	Fibrous Tussock-sedge	<i>Carex appropinquata</i>	NS-excludes		
	Flat-sedge	<i>Blysmus compressus</i>	Scottish_Biodiversity_List		
	Fly Orchid	<i>Ophrys insectifera</i>	England_NERC_S.4 1		
	Grass-poly	<i>Lythrum hyssopifolia</i>	WACA-Sch8		
	Great Burnet	<i>Sanguisorba officinalis</i>	NI_Priority		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.
	Hampshire Dandelion	<i>Taraxacum akteum</i>	NR-excludes		
	Least lettuce	<i>Lactuca saligna</i>	WACA-Sch8		formerly common on river and ditch banks in East Anglia
	Marsh Dandelion	<i>Taraxacum palustre</i>	RedList_ENG_post2 001-VU		
	Marsh Helleborine	<i>Epipactis palustris</i>	W(NI)O-Sch8_part1		
	Marsh Lousewort	<i>Pedicularis palustris</i>	RedList_ENG_post2 001-VU		
	Marsh Valerian	<i>Valeriana dioica</i>	RedList_ENG_post2 001-NT		
	Oxlip	<i>Primula elatior</i>	NS-excludes		

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Flowering Plant	Saw-wort	<i>Serratula tinctoria</i>	RedList_ENG_post2001-LC	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.	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.
	Slender Tare	<i>Ervum gracile</i>	RedList_GB_post2001-VU		
	Small-flowered catchfly	<i>Silene gallica</i>	NS-excludes		Annual herb of cultivated and disturbed ground, mainly arable
	Twayblade	<i>Neottia ovata</i>	RedList_GB_post2001-LC		Tolerant of a wide range of habitats including hedgerow, fen, wasteland and scrub
	Water Germander	<i>Teucrium scordium</i>	WACA-Sch8		
Insect - Beetle	Agabus uliginosus	<i>Agabus uliginosus</i>	Nb, RLGB.Lr(NT), 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.	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
	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, Sagittaria sagittifolia. Relatively large and identifiable. Look out for in surveys
	Eyed Longhorn beetle	<i>Oberea oculata</i>	NR-includes		
	Mud Beetle	<i>Sphaerius acaroides</i>	RedList_GB_post2001-EN		
	Zircon reed beetle	<i>Donacia aquatica</i>	NI_Priority		Favours sedge dominated marginal habitat
Insect	Drab Wood-soldierfly	<i>Solva marginata</i>	RedList_GB_post2001-LC		Assoc with riverside trees esp. willow/poplar
Insect - Butterfly	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		
	Large Copper	<i>Lycaena dispar</i>	WACA-Sch5_sect9.5a		
	Swallowtail	<i>Papilio machaon</i>	WACA-Sch5_sect9.4b		
Insect - Caddis Fly (Trichoptera)	Erotesis baltica	<i>Erotesis baltica</i>	NR-includes		
Insect - Grasshopper	Large Marsh Grasshopper	<i>Stethophyma grossum</i>	England_NERC_S.4 1		

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Insect - Moth	Four-spotted	<i>Tyta luctuosa</i>	Nationally Scarce. 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.	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.
	Marsh Carpet	<i>Gagitodes sagittata</i>	RLEN EN., LNRS		Present south of Benwick and Doddington & west of Coates.
	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.
	White-spotted Pinion	<i>Cosmia diffinis</i>	Sect.41, UKBAP, LNRS		Caterpillar feeds on elms. Disappearing from almost all its range except Cambs, which now comprises over three-quarters of its current British range.
	Scarce vapourer	<i>Orgyia recens</i>	RedList_GB_Pre94-VU		Assoc with hawthorn/sallow in eastern England
	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.
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
	Large Marsh Grasshopper	<i>Stethophyma grossum</i>	England_NERC_S.4 1		
Insect - Spider	Rosser's Sac-spider	<i>Clubiona rosserae</i>	NL, 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.	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.
	Pardosa paludicola	<i>Pardosa paludicola</i>	NR-includes		
	Wolf spider	<i>Hygrolycosa rubrofasciata</i>	NR-includes		Favours damp ground level habitat; fen marsh damp woodland
	Zora armillata	<i>Zora armillata</i>	NR-includes		

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Mollusc	Large-mouthed Valve Snail	<i>Valvata macrostoma</i>	RLGB LC. RLENG ? , LNRS	Limited. Look for presence during surveys.	Look for in surveys
	Taylor's Spire Snail	<i>Marstoniopsis insubrica</i>	RLUK Rare, LNRS		IDBs along the Ouse washes
	Witham Orb Mussel	<i>Sphaerium solidum</i>	NL, LNRS		IDBs along the Ouse washes
	Depressed river mussel	<i>Pseudanodonta complanata</i>	RedList_Global_pos t2001-VU		Strictly assoc with large running water habitats
	Desmoulin's Whorl Snail	<i>Vertigo (Vertigo) moulinsiana</i>	HabDir-A2*		
Reptile	Adder	<i>Vipera berus</i>	WACA-Sch5_sect9.5a	Yes. Manage channels according to the SOP. Retain & create suitable habitat. Record sightings.	
Stonewort	Great Tassel Stonewort	<i>Tolypella prolifera</i>	RLGB.EN, Sect.41, UKBAP, 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	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.
	Hedgehog Stonewort	<i>Chara aculeolata</i>	RLGB VU, UKBAP, NR, LNRS		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		
Terrestrial Mammal	European 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 wv habitat. Manage bank face vegetation rotationally to maintain/develop a favourable & diverse sward as optimal habitat for wv. 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.
	Harvest Mouse	<i>Micromys minutus</i>	England_NERC_S.4 1	Yes. Retain areas of uncut undisturbed marginal and bank vegetation for refuge and foraging and manage rotationally.	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.
	West European Hedgehog	<i>Erinaceus europaeus</i>	RLGB.VU, Sec+2:15t.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".

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Terrestrial Mammal - Bats	Barbastelle Bat	<i>Barbastella barbastellus</i>	<i>HabDir-A2*</i>	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	<i>Thought to prefer pastoral landscapes with a mixture of deciduous woodland and other habitats. Roost mainly in cracks in trees.</i>
	Serotine	<i>Eptesicus serotinus</i>	<i>CMS_EUROBATS-A1</i>		
	Western Barbastelle	<i>Barbastella barbastellus</i>	<i>HabRegs2, RLGB.VU, Sect.41, UKBAP, WCA5, LNRS</i>		<i>Thought to prefer pastoral landscapes with a mixture of deciduous woodland and other habitats. Roost mainly in cracks in trees.</i>
Tree	Dark-leaved Willow	<i>Salix myrsinifolia</i>	<i>RENG.LC, RLGB.LC., LNRS</i>	Limited. Look for presence during surveys. Retain where present	<i>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</i>
	Black poplar	<i>Populus nigra subsp. betulifolia</i>	<i>RedList_GB_post2001-LC</i>	Yes. Look for planting opportunities. Identify those existing and conserve.	<i>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</i>
	Elm (various)	<i>Ulmus spp.</i>	<i>RedList_ENG_post2001-LC</i>	Yes. Map droves across district	<i>Map droves and record Elm locations</i>
	Field Maple	<i>Acer campestre</i>	<i>RedList_ENG_post2001-LC</i>	Yes. Look for planting opportunities. Identify those existing and conserve.	<i>Common in hedgerows and scrub and planted on amenity land</i>
	Pedunculate Oak	<i>Quercus robur</i>	<i>RedList_ENG_post2001-LC</i>		<i>ubiquitous species tolerant of waterlogging and may be growing along ditches and adjacent woodland</i>
	Rowan	<i>Sorbus aucuparia</i>	<i>RedList_ENG_post2001-LC</i>		<i>widely planted tree may be growing alongside ditches/drains</i>
	Small leaved lime	<i>Tilia cordata</i>	<i>RedList_ENG_post2001-LC</i>		<i>widely planted tree may be growing alongside ditches/drains</i>
	Sweet chestnut	<i>Castanea sativa</i>	<i>RedList_ENG_post2001-LC</i>		<i>present in the Middle Level; may be planted in hedgerow</i>

10.3. Appendix III - 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 (ie to seep away) or to surface water, such as a beck or stream.

Water Supply: Any development needing its own water supply eg 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.