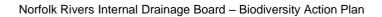




Norfolk Rivers Internal Drainage Board

# Biodiversity Action Plan 2023-2028





Cover Photo: River Nar Restoration Project taken by Charles Rangeley



## 1. Statement

This Biodiversity Action Plan (BAP) has been prepared by the Norfolk Rivers Internal Drainage Board in accordance with the commitment in the Implementation Plan of the Defra Internal Drainage Board Review of 2007 for internal drainage boards (IDBs) to produce their own Biodiversity Action Plans. It demonstrates the Board's commitment to fulfilling its duty as a public body to conserve and enhance biodiversity under various legislation and policy including, but not limited to, the Environment Act 2021, the Natural Environment and Rural Communities Act 2006, the 25 Year Environment Plan and Water Framework Directive.

Importantly, it reflects the Board's aspiration to maximise the support it provides to 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.

The Board has adopted this Biodiversity Action Plan as one of its policies and is committed to its implementation. It will review the plan periodically and update it as appropriate.

Date
John Carrick
Chairman of the Board
This Biodiversity Action Plan is a public statement by the Board of its biodiversity objectives and

This Biodiversity Action Plan is a public statement by the Board of its biodiversity objectives and the methods by which it intends to achieve them.

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:

Norfolk Rivers Internal Drainage Board

Pierpoint House 28, Horsley's Field King's Lynn Norfolk PE30 5DD

Or via email:

info@wlma.org.uk

Further information is available on the Board's website: https://www.wlma.org.uk/norfolk-idb/home/



# **Contents**

1.	Statement	3
	cecutive Summary	
	Introduction	
۷.		
	2.1. What is Biodiversity and why is it important?	
	2.2. Legislative Background	
	2.3. Policy & Strategic Background	
	2.4. Purpose	
	2.5. Vision	
	2.6. Aims	
3.	The IDB BAP Process	
	3.1. The Biodiversity Audit	
	3.2. Objectives, Targets and Actions	
	3.3. Monitoring and Reporting	
4.	The Biodiversity Audit	12
	4.1. The Norfolk Rivers Internal Drainage District	
	4.2. Map of Audit Area (Drainage District)	
	4.3. Geology	
	4.4. Landscape Character	
	4.5. Landscape Designations	15
	4.6. Sites and Monuments	15
	4.7. Tree Preservation Orders	
	4.8. Statutory Nature Conservation Sites	17
	4.8.1 Internationally Designated Sites	
	4.8.2 Nationally Designated Sites	
	4.8.3 Local Nature Reserves	
	4.8.4 Non-statutory Nature Conservation Sites	
	4.9. Habitat Audit Summary	
	4.10. Species Audit Summary	
	4.11. Invasive Non-native Species Summary	
	4.12. Water Level Management Plans	
5.	Habitat and Species Action Plans	36
	5.1. Introduction	
	5.2. Habitat Action Plans	36
	5.2.1 Coastal and floodplain grazing marsh	36
	5.2.1.1 National and Local Targets	36
	5.2.1.2 IDB Objectives	
	5.2.1.3 IDB Actions	37
	5.2.2 Reedbed	
	5.2.2.1 National and Local Targets	
	5.2.2.2 IDB Objectives	
	5.2.2.3 IDB Actions	
	5.2.3 Fens	
	5.2.3.1 National and Local Targets	
	5.2.3.2 IDB Objectives	
	5.2.3.3 IDB Actions	
	5.2.4 Rivers, Canals and Drains	
	5.2.4.1 National and Local Targets	
	5.2.4.2 IDB Objectives	
	5.2.4.3 IDB Actions	
	5.2.5 Wet Woodland	
	5.2.5.1 National and Local Targets	
	5.2.5.2 IDB Objectives	
	5.2.5.3 IDB Actions	
	5.2.6 Ponds	
	J.Z.U. I INALIUITAI ATIU LUCAI TAIYEIS	41



5.2.6.2 IDB Objectives	
5.2.6.3 IDB Actions	
5.3. Species Action Plans	49
5.3.1 Barn Owl and Kestrel	49
5.3.1.1 National and Local Targets	49
5.3.1.2 IDB Objectives	
5.3.1.3 IDB Actions	
5.3.2 Hirundinidae - Sand Martins, Swallows and Swifts	
5.3.2.1 National and Local Targets	
5.3.2.2 IDB Objectives	
5.3.2.3 IDB Actions	
5.3.3 Tree Sparrow	
5.3.3.1 National and Local Targets	
5.3.3.2 IDB Objectives	
5.3.3.3 IDB Actions	
5.3.4 Water Vole	
5.3.4.1 National and Local Targets	
5.3.4.2 IDB Objectives	
5.3.4.3 IDB Actions	
5.3.5 Brown Trout	
5.3.5.1 National and Local Targets	
5.3.5.2 IDB Objectives	
5.3.5.3 IDB Actions	
5.3.6 White Clawed Crayfish	
5.3.6.1 National and Local Targets	
5.3.6.2 IDB Objectives	
5.3.6.3 IDB Actions	
5.3.7 Bats (All Species)	
5.3.7.1 National and Local Targets	
5.3.7.2 IDB Objectives	
5.3.7.3 IDB Actions	
5.3.8 Non Native Invasive Species	
5.3.8.1 National and Local Targets	
5.3.8.2 IDB Objectives	
5.3.8.3 IDB Actions	
6. Procedural Action Plan	65
6.1. Introduction	
6.2. Objectives and Targets	
6.3. IDB Actions	
7. Implementation	
•	
8. Monitoring	68
9. Reporting	68
10. Appendices	
10.1. Appendix 1 : National Character Areas Map	
10.3. Appendix 3: Nationally Designated Sites	
10.4. Appendix 4: Non-Statutory Designated Sites	
10.5. Appendix 5 : Species Audit Summary	
10.6. Appendix 6: Biodiversity Action Plan Objectives	
10.7. Appendix 7: Habitats and Species Action Plans	85



## **Executive Summary:**

Contributing to biodiversity is an important part of an Internal Drainage Board's role as a modern public authority. Never has there been greater focus on protecting and enhancing our biodiversity as there is today. Through the Norfolk Rivers IDB water level management activities, the Board is uniquely placed to conserve and improve freshwater and wetland habitats, and to forge partnerships with organisations and landowners, to ensure sustainable water level management in lowland areas is undertaken in line with the Natural Environment and Rural Communities Act (2006) and the Environment Act (2021).

Biodiversity Action Plans (BAPs) provide IDBs with a formal mechanism to demonstrate and record their biodiversity contributions. The IDB BAP approach remains the most suitable tool to help IDBs meet their statutory conservation duties under the legislation, where some new approaches are being undertaken to protect and enhance our natural environment.

The Biodiversity Action Plan 2023-2028 although very similar in many respects to its two predecessors, but it now also represents a document which has been reviewed and updated to contain the most up to date legislation and policy. New objectives and action targets have been set following an audit of species and habitats within the internal drainage district, (as provided by the local records centre), to conserve and enhance biodiversity, whilst contributing to the Government's 25 Year Environment Plan and meeting the new legislative requirements.

The Biodiversity Action Plan 2023-2028 summarises the targets, objectives and actions for the following habitats and species, respectively:

- Coastal and Floodplain Grazing Marsh, Reedbed, Fen, Rivers Canals and Drains, Wet Woodland, Ponds.
- Barn Owl and Kestrel, Swallows, Martins and Swifts, Tree Sparrow, Water Vole, Brown Trout, White Clawed Crayfish, Bats, Non-Native Invasives.



## 2. Introduction

## 2.1. 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 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.

#### 2.2. Legislative Background

When carrying out its functions, an IDB must pay particular regard to the effect on the 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 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, when enacted, extends this duty on IDBs to also enhance biodiversity and report periodically on its actions. Therefore, as a public authority, every IDB must consider what action it can take, consistently with the proper exercise of its functions, to further the conservation and enhancement of biodiversity in England.

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

## 2.3. 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.

The 2010 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 concept of Nature Recovery Networks featured in the Government's Biodiversity 2020 strategy (2011) and 25 Year Environment Plan (2018). The Environment Act 2021 and the development of Local Nature Recovery Strategies (LNRS) expands this concept by also 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.

International reports such as by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) have found 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 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.



## 2.4. 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.

#### 2.5. Vision

The IDB's vision is:

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

#### 2.6. Aims

The aims of this BAP are:

- To positively demonstrate that the Boards water course maintenance, water level management and capital works are undertaken in a manner that, whilst reducing flood risk and managing flows, also safeguards biodiversity and makes a positive contribution to the enhancement of the biodiversity and the natural environment;
- To ensure that opportunities for conservation and enhancement of biodiversity are fully considered throughout the IDB's operations;
- 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 enable more effective monitoring and report on progress in biodiversity conservation.
- To contribute to local environmental partnerships such as the Local Nature Partnership to



ensure that programmes and priorities for biodiversity conservation are aligned and maintained in the long term;

- To contribute to the Local Nature Recovery Strategy and Local Nature Recovery Partnerships;
- To raise awareness within the IDB and locally of the need for biodiversity conservation, and to communicate with the local and wider community what actions the IDB are undertaking to support biodiversity.



## 3. The IDB BAP Process

## 3.1. The Biodiversity Audit

The Norfolk Rivers IDB has conducted a biodiversity audit of its drainage district (Figure 1) and identified those habitats and species that would benefit from particular management or actions by the IDB.

This BAP 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.

## 3.2. Objectives, Targets and Actions

For each relevant habitat and species, conservation objectives have been identified. The action plan then details individual actions required to achieve the objectives, and associated monitoring and reporting of progress and impact.

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

Procedural targets and 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.

#### 3.3. Monitoring and Reporting

Monitoring is the on-going process of regularly collecting and analysing relevant information to make sure the actions within the Plan are positively contributing towards the targets and to capture any additional benefit achieved. The Plan sets out how and when this monitoring will take place for example, to regularly review the progress of actions against the plan at Board meetings 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, changes may be necessary to ensure an objective can be met.



# 4. The Biodiversity Audit

## 4.1. The Norfolk Rivers Internal Drainage District

The Norfolk Rivers Internal Drainage district covers an area of 150.2km² within a catchment of 2390 km² and contains 405km of IDB-maintained watercourse. The catchment conveys upland water from many of the towns, villages and agricultural land within the county of Norfolk to release into the larger river systems. The rivers flowing east are the Rivers Wensum, Bure, Yare, Tas and Ant. The river flowing west is the River Nar and north is the River Stiffkey. All the Norfolk Rivers IDB drains, streams, rivers and tributaries are similar in the respect that they all flow gravitationally into the North Sea and many have a hard bottomed gravel substrate. They are all diverse in there form however and are home to some nationally rare flora and fauna. Some of the Wildlife sites in the are have water levels controlled by some of the six Norfolk Rivers IDB Water Control structures. There are no pumps in the area moving water out to sea but two tidal sluices prevent inland inundation during high tide.

Much of the area serves fertile agricultural land, much of which is arable or grazing marsh. The large market towns of Fakenham, Aylsham, North Walsham, Dereham and Wymondham are served by the Norfolk Rivers drainage systems and are integral in taking surface water from residential and industrial areas. The drainage system serves many thousands of people.

The following outlines the key details of the District:

Total area of the drainage district: 15,026 ha

Catchment area draining to and including the District: 239,005 ha

• Area of agricultural land: 12,855 ha

Area of other (non-agricultural) land: 2,171 ha

Assets for which the Board has operational responsibility:

Water level control structures: 6

Watercourses (maintained): 407 km

Raised embankments: 0

Reservoirs: 0

Sustainable drainage systems (SuDS): 0

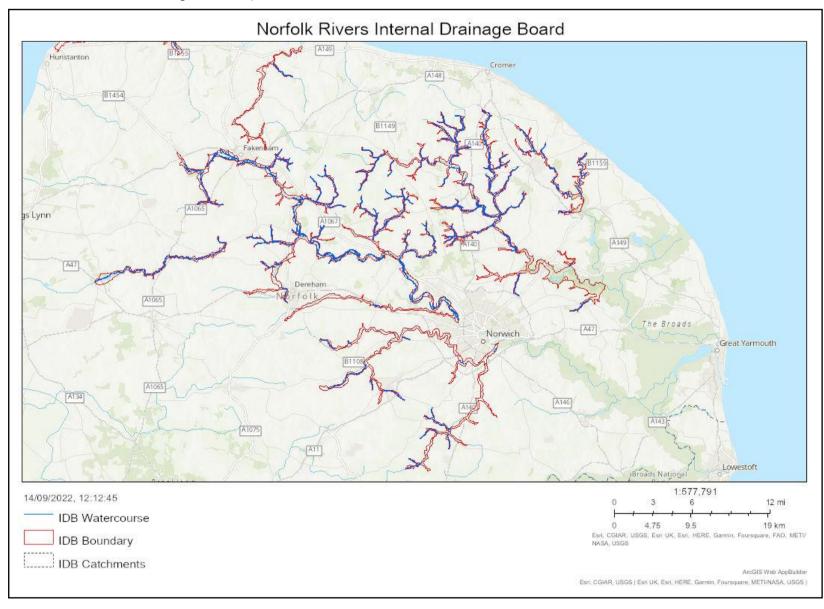
Pumping Stations: 0

Culverts: 64 (532m)



## 4.2. Map of Audit Area (Drainage District)

Figure 1. Norfolk Rivers Internal Drainage District (OS Licence : 100047016)





## 4.3. Geology

North Norfolk is considered to be outstanding in a national context for both its geology and its landforms. The basic structure of the landscape of the area is fundamentally influenced by its underlying rocks and relief. Geology and the processes of weathering, erosion and deposition, influence the shape and form of the landscape and its drainage and soils. In turn, these influence patterns of vegetation and land use.

The underlying bedrock of much of the Norfolk River IDB area is chalk, which was deposited during the Cretaceous period: between 144 and 65 million years ago. This Upper Cretaceous chalk layer dips gently eastwards, this is followed by Pleistocene Crags to the east of a north-south line through Norwich. The whole area is covered by glacial drift and post-glacial deposits of varying depths.

To the west of the are lies the western escarpment which a distinct terrace of lower greensand along the eastern edge of the Fens and Wash and through which has a number of western flowing rivers including the river Nar.

To the north, the Holt-Cromer Ridge is a relatively high ridge, formed of sands and gravels. It reaches 100 metres near Sheringham and is estimated to be c.350,000 years old. It is an important feature providing evidence of glacial advances and retreats.

Heading east, into the Broadland area of the Norfolk Rivers area, there is a disparate area of very fertile loam soils which is predominantly arable. The chalk is at or below sea level and is overlain by the iron-rich Pleistocene crag deposits such as Norwich crag, which are again overlain by drift deposits of the Anglian glaciation.

When the Great Eastern Ice Sheet meted, great torrents of water flowed from beneath the ice sheet and scoured deep channels in the drift clay and underlying chalk. Immediately following the retreat of the ice sheet, the drainage of the region is thought to have developed along hollows formed on the surface of the newly deposited boulder clay. These channels subsequently filled with glacial drift, and in some instances became filled with water, forming the river channels we know today.

#### 4.4. 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.

The Norfolk Rivers IDB falls under two of these National Character Areas, Central North Norfolk (Area 78) and Mid Norfolk (Area 84). The area does encompass small bots of other NCA's namely: West Norfolk (76), North Norfolk Coast (77), South Norfolk and High Suffolk Claylands (83) and North East Norfolk and Flegg (79). A map of the NCA's can be found in Appendix 1.

#### Central North Norfolk - 78

A large section across the middle of the drainage district, which includes from Aylsham to Norwich and surrounding areas, is within the Central North Norfolk NCA. The character of Central North Norfolk is mainly dominated by an undulating rural landscape which stretches



from the slightly flatter, more open land of Mid Norfolk, to the prominent glacial landform of the Cromer Ridge, which exposes coastal cliffs along the ever changing coastline. The landscape is primarily agricultural, where arable land is enclosed by hedgerows and tree lines, but is fragmented by woodland, remnant heathland and pastoral river valleys. The river valleys contain a mix of areas of late cretaceous underlying chalk beds to streams of gravels and sands.

#### Mid Norfolk – 84

The Mid Norfolk NCA is a broadly flat, rural landscape that occupies the northern section of the East Anglian Plain. The landscape becomes more undulating to the North as it approaches the Wensum Valley. The area is dominated by arable land which is enclosed by hedgerows and tree lines, but is fragmented by woodland, heathland, chalk streams and pastoral river valleys. The river valleys contain a mosaic of habitats and species, particularly along the length of the chalk-fed River Wensum SAC.

## 4.5. Landscape Designations

The Norfolk Rivers IDB has two landscape designations within its drainage district.

The North Norfolk Coast AONB:

The North Norfolk Coast Area of Outstanding Beauty covers intertidal, coastal and agricultural land with a total area of over 450km2. The AONB stretches from the silt expanses of the Wash in the west through the coastal marshes, soft cliffs and hinterland of North Norfolk, to the dune system at Winterton in the east.

#### The Broads:

The Broads are made up of flooded peat pits dug in medieval times that are now reed fringed lakes, many of which are connected to the five rivers that flow through the Broads by Dykes. The Broads consists of fens, slow, winding waterways, wet, tangled woodlands, and acres of marches. They extend from Norwich to Lowerstoft and total over 201km of navigation waters, covering an area of some 300km2. It is the largest protected wetland and third largest inland waterway in the UK.

#### 4.6. Sites and Monuments

The Board holds some information on Sites and Monuments. The Board will continue to carry out searches prior to work, as required, to prevent any Sites or Monuments being missed. Relevant information on Sites and Monuments within the Norfolk Rivers IDB catchment can be found on the Norfolk Heritage Explorer at https://www.heritage.norfolk.gov.uk/map-search

#### 4.7. Tree Preservation Orders

The Board hold some information on Tree Preservation Orders (TPO's). The Board will continue to carry out searches prior to work, as required, to prevent any new Tree Preservation Orders being missed. Relevant information on TPO's within the Norfolk Rivers IDB catchment can be found on the relevant District Council websites as follows:

Kings Lynn and West Norfolk District Council – https://www.west-norfolk.gov.uk/homepage/327/tree\_preservation\_orders

North Norfolk District Council - http://maps.north-





norfolk.gov.uk/wmlpublic9/Map.aspx?MapName=TPO

Breckland District Council – https://www.breckland.gov.uk/mymaps

South Norfolk District Council – https://www.southnorfolkandbroadland.gov.uk/treeshedges/protected-trees/2

Broadland District Council – https://www.southnorfolkandbroadland.gov.uk/treeshedges/protected-trees/2

Norwich District B Council - https://maps.norwich.gov.uk/mynorwich/index.html



## 4.8. Statutory Nature Conservation Sites

## 4.8.1 Internationally Designated Sites

The following internationally-designated conservation sites, relevant to the water level management\* and/or maintenance activities of the IDB, are found within or adjacent to the drainage district. Maps displaying the internationally designated sites within the IDD can be found in Appendix 2.

Table 1. Internationally designated sites within or adjacent to the IDB boundary

Site name	Designation	Associated WLMP?*	Features Relevant to IDB
Broadland	SPA, Ramsar	Wayford Bridge and East Ruston, Leists Farm	Mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow. International importance for a variety of wintering and breeding raptors and waterbirds.
River Wensum	nsum SAC		Naturally enriched and spring-fed, calcareous, lowland river, hosting various free-floating aquatic plants. International importance for a variety of species including White-clawed Crayfish, Bullhead, Brook Lamprey and Desmoulin's Whorl Snail.
Norfolk Valley Fens	SAC	Flordon Common, Buxton Heath, Southrepps Common, Potter and Scaring Fens, Booton Common, EA Plan for the River Tud, EA Plan for the River Yare	A series of valley-head spring-fed fens. International importance for a host of habitats including Alkaline fens, Alluvial forests, Calcareous fens, European dry heaths, Molinia meadows, Northern Atlantic wet heaths and Semi-natural dry grasslands. International importance for Narrow-mouthed Whorl Snail and Desmoulin's Whorl Snail.
The Broads	SAC	Leists Farm, Wayford Bridge and East Ruston	Mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow. International importance for a variety of wintering and breeding raptors and waterbirds.
North Norfolk Coast	SPA, Ramsar	Coastal Management Plan	North Norfolk coastline supporting internationally important breeding bird populations and over wintering bird populations.

<sup>\*</sup>Further information regarding Water Level Management Plans (WLMPs) are given later in the document

## 4.8.2 Nationally Designated Sites

The following nationally-designated conservation sites, relevant to water level management and/or maintenance activities of the IDB, are found within the drainage district. Maps displaying the nationally designated sites within the IDD can be found in Appendix 3.

Table 2. Nationally designated sites within or adjacent to the drainage district



Site name	Designation	Component of an International Site	Associate d WLMP?*	Features Relevant to IDB
Alderford Common	SSSI		Alderfen Common	Calcareous grassland - lowland
Aslacaton Parish Land	SSSI		Aslacton Parish Land	Neutral grassland – lowland
Badley Moor	SSSI	Norfolk Valley Fens SAC	EA Plan – River Tud	Fen, marsh and swamp – lowland
Beetley and Hoe Meadows	SSSI		EA Plan	Fen, marsh and swamp – lowland Neutral grassland – lowland
Booton Common	SSSI	Norfolk Valley Fens SAC	Booton Common	Fen, marsh and swamp – lowland
Broad Fen, Dilham	SSSI, NNR	Broadland SPA, Ramsar Broads SAC	Wayford Bridge and East Ruston	Fen, marsh and swamp – lowland
Bryants Heath	SSSI		Bryants Heath	Dwarf shrub heath – lowland Broadleaved, mixed and yew woodland – lowland
Bure Broads and Marshes	SSSI, NNR	Broadland SPA, Ramsar Broads SAC	Leist's Farm	Fen, marsh and swamp – lowland Standing open water and canals Broadleaved, mixed and yew woodland – lowland
Buxton Heath	SSSI	Norfolk Valley Fens SAC	Buxton Heath	Fen, marsh and swamp – lowland
Castle Acre Common	SSSI		River Nar	Neutral grassland – lowland
Coston Fen, Runhall	SSSI	Norfolk Valley Fens SAC	EA Plan – River Yare	Fen, marsh and swamp – lowland
Croswick Marsh	SSSI	Broadland SPA, Ramsar Broads SAC		Fen, marsh and swamp - lowland
Dereham Rush Meadow	SSSI		EA Plan	Neutral grassland – lowland Broadleaved, mixed and yew woodland – lowland
Dillington Carr, Gressenhall	SSSI		EA Plan	Broadleaved, mixed and yew woodland – lowland Standing open water and canals
East Ruston Common	SSSI		Wayford Bridge and East Ruston	Acid grassland – lowland Standing open water and canals
Flordon Common	SSSI	Norfolk Valley Fens	Flordon	Fen, marsh and swamp –



		SAC	Common	lowland Broadleaved, mixed and yew woodland – lowland
Forncett Meadows	SSSI			Neutral grassland – lowland
Gunton Park Lane	SSSI			Standing open water and canals
Morston Cliff	SSSI	North Norfolk Coast SAC, SPA, Ramsar The Wash and North Norfolk Coast SAC		Earth heritage
North Norfolk Coast	SSSI	North Norfolk Coast SAC, SPA, Ramsar The Wash and North Norfolk Coast SAC	Coastal Manageme nt Plan	Littoral sediment Supralittoral sediment Coastal lagoon Neutral grassland – lowland Fen, marsh and swamp – lowland Arable and horticulture
Potter and Scarning Fens, East Dereham	SSSI	Norfolk Valley Fens SAC	Potter and Scarning Fen	Fen, marsh and swamp – lowland
River Nar	SSSI		River NAR	Fen, marsh and swamp – lowland Neutral grassland – lowland Standing open water and canals Rivers and streams
River Wensum	SSSI	River Wensum SAC	EA Plan	Neutral grassland – lowland Broadleaved, mixed and yew woodland – lowland Fen, marsh and swamp – lowland Rivers and streams
Sea Mere, Hingham	SSSI		Sea Mere	Standing open water and canals Neutral grassland – lowland
Shotesham Common	SSSI			Neutral grassland – lowland
Smallburgh Fen	SSSI	Broadland SPA, Ramsar Broads SAC	Wayford Bridge and East Ruston	Fen, marsh and swamp – lowland
Southrepps Common	SSSI	Norfolk Valley Fens SAC	Southrepp s Common	Fen, marsh and swamp – lowland
Stiffkey Valley	SSSI		EA Plan	Neutral grassland – lowland Fen, marsh and swamp – lowland
Swannington Upgate Common	SSSI		Swanningt on on	Fen, marsh and swamp – lowland



		Upgate Common	
Warham Camp	SSSI		Calcareous grassland – lowland
Whitwell Common	SSSI	Whitwell Common	Fen, marsh and swamp – lowland

#### 4.8.3 Local Nature Reserves

The following Local Nature Reserves are relevant to the activities of the IDB are found within the drainage district.

Table 3. Local Nature Reserves within the drainage district

Site name	Associated WLMP?*	Features Relevant to IDB
Felmingham Cutting		Disused railway now used as a public footpath. Breeding site for sixteen species of Butterfly.
Litcham Common		Diverse mosaic of habitats, including rare acid grassland, heathland, mature secondary woodland, scrub, lowland meadow and numerous ponds and dykes.
Southrepps Common		Mosaic of woodland, reeds, sedges, grass and rare wild flowers.
Tolls Meadow, Wymondham		Species rich, wet meadow and woodland.
Sculthorpe Moor		Species rich mosaic of woodland, fen and reedbed habitats.
Smockmill Common		Diverse habitat including wet woodland and scrub, dry grassland and fen-marshy grassland.

## 4.8.4 Non-statutory Nature Conservation Sites

A large number of sites have been identified locally as being important for wildlife. Whilst these designations do not have statutory status, the sites are important for their contribution to biodiversity and planning policy requires that they are given consideration by the LPA in forming any decision. The following relevant Local Wildlife Sites are to be found within or bordering the drainage district. Appendix 4 shows County Wildlife Sites within the Norfolk Rivers IDB catchment and lists all the sites found within or bordering the drainage district.



## 4.9. Habitat Audit Summary

This habitat audit summary lists the UK priority habitats that occur within the drainage district and are identified as likely to be influenced by the Board's activities. Also listed are habitats deemed to be of local importance and/or featured in local nature strategies that occur in the drainage district. Finally, brief notes are included on the potential for the IDB to maintain, restore or expand its important habitats.

Table 5. Habitat Audit Summary

National Priority Habitat	National Status & Extent	Local Priority Habitat	Local Status and Extent	Habitat of Importance for IDB	Extent, status and Location of Habitat of Importance within drainage district	IDB Potential for Maintaining, Restoring or Expanding Habitat (high/medium/low)
Coastal and floodplain grazing marsh	The exact extent of grazing marsh in the UK is not known but it is possible that there may be a total of 300,000 ha. England holds the largest proportion with an estimate in 1994 of 200,000 ha.	Coastal and floodplain grazing marsh	Grazing marsh is an extensive habitat within Norfolk, estimated to cover some 29,500 ha. Individual blocks vary greatly in size, from 10 ha rising to 2,642 ha for Halvergate Marshes.	Grazing marsh and associated ditch systems	Throughout District	High IDB potential to maintain condition through sensitive management, and landowner partnerships for extending areas.
Coastal Sand Dunes	There are approximately 11,897 ha of Coastal Sand Dunes across England.	Coastal Sand Dunes	The exact extent of Coastal Sand Dunes in Norfolk is unknown, but is estimated at approximately 1,200 ha.	Coastal Sand Dunes	Holme	Low IDB potential to maintain or restore condition
Fen, Marsh and Swamp	It is proposed that the total extent of the Purple moor grass and rush pastures habitat in the UK is approximately 56,000ha	Purple Moor Grass and Rush Pastures		Purple Moor Grass and Rush Pastures	Holme, East Lexham, Dereham,. Briggate, Trunch, Felthorpe, Frettenham, Pedham, Great Moulton	Low IDB potential to maintain or restore condition



	Intomar Brainage Beara Bleat	7 10 10 11				
Low Mix Deciduous Woodland	In the 1980s, the Nature Conservancy Council estimated the total extent of this type to be 250,000 ha. It is believed to have declined in extent by 30- 40% over the last 50 years.	Lowland Mixed Deciduous Woodland	In Norfolk, there are no precise measurements of the extent of this habitat. Many are ancient woods and they include the classic examples of ancient woodland studied by Rackham (1980) and Peterken (1981) in East Anglia and the East Midlands.	Deciduous Woodland	Throughout District	Low IDB potential to maintain or restore condition
Lowland Fens	The UK is thought to host a large proportion of fen surviving in Europe. As in other parts of Europe, fen vegetation has declined dramatically in the past century.	Fens	Norfolk is particularly rich in fen habitats, supporting a large proportion of the UK total for some types. The Broads natural area possesses some 5,000 ha of rich-fen habitat, mostly of the floodplain type, with some examples of valley fen.	Lowland Fens	Throughout District	High IDB potential to maintain condition through sensitive management and landowner partnerships for maintain and restoring areas.
Lowland heathland	The UK has approximately 95,000 ha of lowland heathland, 58,000 ha of this is within England.	Lowland Heathland and Dry Acid Grassland	It is estimated that Norfolk holds approximately 7,878 ha of lowland heathland.	Lowland heathland	East Ruston, Little Ryburgh, Helhoughton, Gressenhall, Litcham, South Acre	Low IDB potential to maintain or restore condition
Lowland Meadows	It is estimated that only 10,521 ha of species-rich neutral grassland survive today in the UK.	Lowland meadows and pastures	East Anglia contains a small percentage (21%) of land occupied by permanent pasture and rough grazing (Roberts and Smyth, 1990).	Lowland Meadows	Throughout District	Medium IDB potential to maintain condition through sensitive management
Ponds	The current number of ponds in the UK has been estimated around 400,000	Ponds, lakes and reservoirs	It is estimated that Norfolk hold approximately 23,000	Ponds	Throughout District	Low – Ponds are not on our IDB owned land, so it will be inhibited by



NOTIOIK RIVERS I	nternal Drainage Board – Biodi	versity Action P	ian			
	(excluding garden ponds), with approximately 60% of these in lowland Britain.  Declining slowly		ponds, mainly located on farmland. The Norfolk Brecklands also holds over 100 'pingo ponds', ancient ponds formed during the last great ice age.			funding.
Reedbeds	A rare habitat. The RSPB Reedbed Inventory suggests over 1,540 ha in Norfolk - almost 30% of the UK resource.	Reedbeds	A rare habitat. Approximately 1,540 ha of reedbeds exist in Norfolk.	Reedbeds	Hingham, Holme, Brancaster, Dereham, East Ruston, Thorpe Market	High IDB potential to maintain condition through maintaining condition through sensitive management, landowner partnership for extending area.
Rivers and Streams	This habitat type includes a very wide range of types, encompassing all natural and near-natural running waters in the UK.	Rivers, canals and drains	Numerous Rivers and Streams flow through Norfolk	Rivers, canals and drains	Throughout District	High IDB potential to maintain condition through sensitive management, and landowner partnerships for extending areas.
Wet Woodland	There are no precise data on the total extent of wet woodland in the UK, but in the late 1980s the Nature Conservancy Council estimated the total extent of this type in ancient semi-natural woodland to be about 25,000–30,000ha. Thus a crude estimate of the total wet woodland area in the UK is 50,000–70,000ha.	Alder Carr Weet Woodland	The woodland in both the Broads and that found on valley fen/mires is a European priority feature under the Conservation (Natural Habitat) Regulations 1994 and has been listed as a feature in both the Broads SAC and Norfolk Valley Fens SAC.	Wet Woodland	Throughout District	Medium IDB potential to maintain or restore condition though sensitive management



## 4.10. Species Audit Summary

This species audit summary will include priority and other species including INNS that occur within the drainage district and are identified as likely to be influenced by the Board's activities. Also listed are species deemed to be of local importance and/or identified by local nature strategies. Finally, brief notes are included on the potential for the IDB to improve the status of the species in the drainage district. A full list of BAP Priority Species that occur within the NRIDD as identified by the species audit, can be found in Appendix 5. Also listed are Section 41 species and species deemed to be of local importance and/or identified in the county Local Biodiversity Action Plan that occur within the IDD.

Table 6. Species Audit Summary

Common & scientific name	National Status	Local Status	Location of Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)		
AMPHIBIANS						
Great Crested Newt ( <i>Triturus</i> <i>cristatus</i> )	The British population of great crested newt is among the largest in Europe but has suffered a decline in recent years and is in unfavourable conservation status. The great crested newt is listed on Annexes II and IV of the EC Habitats Directive, Appendix II of the Bern Convention, and Schedule 5 of the Wildlife and Countryside Act 1981.	The newt is locally common/frequent through south and mid Norfolk and Breckland and has suffered a major decline in the Broads.	Throughout district	Low IDB Potential to benefit species from Habitat enhancement		
BIRDS	BIRDS					
Barn Owl ( <i>Tyto alba</i> )	Widely distributed across the UK, barn owl has suffered declines over the past fifty years. This decline, fortunately, has halted in many areas and the population may now be increasing. A survey completed in	The drainage district supports a significant population of barn owls, which use ditch banks, pastures and margins for foraging. The population may be limited by lack	Throughout district	High IDB Potential to benefit species from habitat enhancement and partnerships		



ADIUI SIBVIA MOIIC	nal Drainage Board – Biodiversity Action Plan			
	1997, indicated a breeding population of 4,000 pairs. The Barn Owl is protected under Section 1 of the WCA 1981.	of nest sites. Rough-grassland margins provided by the banks of watercourses were recognised in 1987 as a vital resource for Barn Owls.		
Bittern ( <i>Botaurus</i> stellaris)	The bittern is rare and localised in the UK. It is listed on Annex I of the EC Birds Directive and Appendix II of the Berne Convention. It is protected in the UK under Schedule 1 of the WCA 1981.	Present in the Norfolk Broads and The Fens. The Norfolk Broads are thought to host approximately one third of the UK's breeding pairs.	Throughout District	<b>High</b> IDB Potential to benefit species from Habitat Action Plans
Grasshopper Warbler (Locustella naevia)	In decline. Red List species Protected in the UK under the Wildlife and Countryside Act, 1981.	Fairly common summer visitor and very scarce passage migrant	Throughout District	Low IDB Potential to benefit species from Habitat Action Plans
Hirundinidae - Sand Martin, Swallows and Swifts	In Britain, the Swallow occurs in a wide range of habitats, whereas the House Martin usually occurs near buildings, and the Sand Martin usually near water.	Common in Norfolk throughout spring and summer seasons	Throughout District	Low IDB Potential to benefit species from Habitat Action Plans
Kestrel ( <i>Falco</i> tinnunculus)	The kestrel is included on the Amber List of Birds of Conservation Concern due to the moderate decline of the UK breeding population	In Norfolk kestrel are the most common bird of prey and their numbers are stable.	Throughout District	High IDB Potential to benefit species from Habitat Action Plans
Kingfisher (Alcedo atthis)	Kingfishers are classified in the UK as Amber under the Birds of Conservation Concern 4: the Red List for Birds (2015). Protected in the UK under the Wildlife and Countryside Act, 1981	Kingfisher numbers in Norfolk have probably increased in recent years with milder winters undoubtedly enabling greater numbers to survive the winter.	Throughout District	Low IDB Potential to benefit species from Habitat Action Plans
Reed Bunting (Emberiza schoeniclus)	The decrease of the reed bunting has occurred at the same time as decreases in the numbers and/or range of a suite of other farmland birds. Classified in the UK as Amber under the Birds of Conservation Concern 4: the Red List for Birds (2015)	There are relatively limited records of reed bunting in drainage district, which use reed fringes along the rivers, drains and ditches. The restoration and careful	Throughout District	High IDB Potential to benefit species and enhance reedbed habitat Manage banks so as to maintain and extend areas of adjacent rank grassland



ortolk Rivers inter	nal Drainage Board – Biodiversity Action Plan			
	and a section 41 species. Protected in the UK under the Wildlife and Countryside Act, 1981.	management of these reed fringes that are addressed by the reedbed HAP offer the opportunity of enhancing the habitat for this species throughout the district.		
Skylark ( <i>Alauda</i> arvensis)	One of the most widespread birds of the British Isles, with over 2 million breeding pairs, the resident population is joined in winter by a significant proportion of the northern European population - possibly up to 25 million individuals. The skylark is protected under the EC Birds Directive and the Wildlife and Countryside Act 1981.	Still widespread in Norfolk as a breeding and wintering bird throughout the open countryside despite a likely decline in numbers in the county. In the Norfolk Bird Atlas (Kelly 1986), it was found in 97% of 2km squares, the blank squares being built up, plantations or wetlands.	Throughout District	Low IDB Potential to benefit species from Habitat Action Plans
Swifts (Apus apus)	The European swift population is 4.4 - 12 million pairs, with the UK population standing at 85,000 breeding pairs (N.B. figure from 1988-1991). Between 1994 and 2006, the UK population declined by 29%. The swift is protected under the Wildlife and Countryside Act 1981 (as amended).	According to the BTO/JNCC/RSPB Breeding Bird Survey, the swift population appears to be stable in the east of England; however, it declined by 44% in the south-east between 1995 and 2008.	Throughout District	Low IDB Potential to benefit species from Habitat Action Plans
Tree Sparrow (Passer montanus)	The tree sparrow is patchily distributed on farmland across Britain and Ireland, being scarcer in the uplands, and the far north and west. The tree sparrow is protected under the Wildlife and Countryside Act 1981, Wildlife (Northern Ireland) Order 1985 and EC Birds Directive.	Norfolk Patchily distributed across the county with main concentrations in north and mid Norfolk and the Brecks (RSPB/EN/BTO/Defra Farmland Bird Database). Unobtrusive and easily overlooked. The 1986 Norfolk Bird Atlas recorded tree sparrow in 36% of 2km squares.	Throughout District	Low IDB Potential to benefit species from Habitat Action Plans





CRUSTACEA				
White Clawed- Crayfish (Austropotam obius pallipes)	It is widespread in clean, calcareous streams, rivers and lakes in England and Wales and occurs in a few areas in Northern Ireland, but many populations have been lost since the 1970s. e. It is classed as globally threatened by IUCN/WCMC. It is also protected under Schedule 5 of the Wildlife and Countryside Act in respect to taking from the wild and sale, and is proposed for addition to Schedule 5 of the Wildlife (Northern Ireland) Order 1985.	White-clawed crayfish are found in the Rivers Wensum, Tat, Bure, Glaven and Yare.	Tasburgh	High IDB Potential to benefit species from Habitat enhancement, particularly Rivers and Drains
FISH				
European Eel (Anguilla Anguilla)	Priority Species under the UK Post-2010 Biodiversity Framework. Listed as Critically Endangered on the global IUCN Red List of Threatened Species.	Declines in eel populations have been noted on rivers across Norfolk but the cause is not known	Throughout District	High IDB Potential to benefit species from Habitat enhancement, particularly Rivers and Drains
Brown Trout (Salmo trutta)	The brown trout is a widespread species found throughout the UK. It lives in streams, rivers, lakes and salt water habitats.	Brown Trout are widely distributed across Norfolk and its main rivers.	Throughout District	High IDB Potential to benefit species from Habitat enhancement, particularly Rivers and Drains
Brook Lamprey (Lampetra planerri)	The Brook Lamprey is rare in the UK and is listed on the IUCN Red List of threatened species.		Throughout District	High IDB Potential to benefit species from Habitat enhancement, particularly Rivers and Drains
TERRESTRIAL	TERRESTRIAL MAMMALS			
Bats (Barbastella spp., Myotis spp.,	All bats and their roosts are protected by UK law and they are also covered by the EU Conservation of Habitats and Species	The distribution of bats is throughout the drainage district.	Throughout District	High IDB Potential to benefit species from Habitat enhancement through erecting bat boxes across the district



Eptesicus spp., Nyctalus spp., Pipistrellus spp., Plecotus spp.)	Regulations 2010 as European Protected Species.			
Eurasian Beaver (Castor fiber)	The Eurasian Beaver used to be widespread across the UK but became extinct in the 16 <sup>th</sup> century. They have since been reintroduced to the UK and are protected in England under the Wildlfie and Countryside Act 1981 and the Beavers (England) Order 2022 No. 858.	A number of small Beaver populations have be reintroduced to Norfolk in a controlled and enclosed environment.	Various enclosures within district	Low IDB Potential to benefit species from Habitat Action Plans
Otter ( <i>Lutra</i> lutra)	An estimate population size of 11,000 individuals in Great Britain The otter is listed on Appendix 1 of CITES, Appendix 11 of the Bern Convention and Annexes 11 and IV of the Habitats Directive. It is protected under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of the Conservation (Natural Habitats) Regulations 1994.	Otters now use all major watercourses in Norfolk and populations appear to be recovering. There are significant records of otters throughout the drainage district.	Throughout District	<b>High</b> IDB Potential to benefit species from Habitat enhancement
Water Vole (Arvicola amphibius)	Long term decline. Declining, both in number of sites occupied and number of individuals per colony. An estimate population size of 132,000 individuals in Great Britain. GB populations are inferred to have declined very rapidly over recent years, equating to a 50% decline over 17 years. S41 species, Listed in WCA 1981	There are significant records of Water Vole throughout the drainage district.	Throughout District	High IDB Potential to benefit species from Habitat enhancement and appropriate management of watercourses & predator control
MOLLUSCS				1
Desmoulin's	In the UK, Desmoulin's whorl snail is	Present in the Norfolk Valley Fens	Dunton, Fakenham, Norfolk	Low IDB Potential to benefit



whorl snail ( <i>Vertigo</i> <i>moulinsiana</i> )	known from a series of sites stretching in a broad band from Dorset to Norfolk. This snail is listed on Annex II of the EC Habitats Directive, and is listed as rare in the GB Red List. National decline of this species is difficult to assess as targeted surveys over the last 15 years have resulted in many additional sites being discovered, but this is not considered to be due to the spread of the species.		Broads	species from Habitat enhancement
Narrow- mouthed Whorl Snail (Vertigo angustior)	This species has a highly fragmented population over Britain. This localised European species is known in the UK from only eight sites in England and Wales, and one in Scotland. The snail is nationally and globally threatened and is included on Annex II of the EC Habitats Directive. It is listed as vulnerable on the IUCN/WCMC red list and endangered on the GB Red List.	Present in most of the Norfolk coastal strip	Holme, Flordon, Tasburgh	Low IDB Potential to benefit species from Habitat enhancement
Shining ram's-horn snail (Segmentina nitida)	In Britain, it has shown a dramatic decline this century. It is now confined mainly to the Norfolk Broads and Pevensey Levels. The species is listed as endangered in the GB Red List. The most severe decline in the range of this species occurred through the 19th and 20th centuries (Kerney, 1999), but there has still been localised decline over the last 10 years.	Norfolk around the Broads	Wymondham, Cringleford, Norfolk Broads	Low IDB Potential to benefit species from Habitat enhancement



Indik Rivers interi	nal Drainage Board – Biodiversity Action Plan			
Grass Snake ( <i>Natrix</i> helvetica)	Grass snakes have become scarcer. There are still some areas where they are locally abundant, but nationally they are in decline. Protected in the UK under the Wildlife and Countryside Act, 1981. Priority Species under the UK Post-2010 Biodiversity Framework.	Widespread across Norfolk but in decline.	Throughout District	High IDB Potential to benefit species from Habitat enhancement and restoration (i.e. grass snake pile construction)
Adder ( <i>Vipera</i> berus)	Found across the country, protected in the UK under the Wildlife and Countryside Act, 1981. Priority Species under the UK Post-2010 Biodiversity Framework.	They are scarce across much of East Anglia, but there are strongholds that exist along coasts and heaths. Heathland habitat has declined in Norfolk and it is likely that with the loss of this habitat adders have also declined in numbers and range.	Castle Acre, Gressenhall, Swannington, Hevingham, Felmingham	Low IDB Potential to benefit species from Habitat Action Plans
Common Lizard ( <i>Lacerta</i> <i>vivipara</i> )	The common lizard is the UK's most common and widespread reptile, Protected in the UK under the Wildlife and Countryside Act, 1981. Priority Species under the UK Post-2010 Biodiversity Framework.	Widespread across Norfolk.	Throughout District	<b>Low</b> IDB Potential to benefit species from Habitat Action Plans
INVERTEBRA	TES			
Dragonflies ( <i>Anisoptera</i> <i>spp</i> .)	Species richness has increased over time, especially in the northern half of Britain, but also in the south as new species arrive and colonize; increased recording intensity in recent years may explain some of these increases. A trend analyses show that 19 out of 46, just over 40%, of our resident and/or regular migrant dragonfly and damselfly species have increased in occupancy across both	Present throughout Norfolk	Throughout District.	Low IDB Potential to benefit species from Habitat enhancement



	Britain and Ireland, while just 11%, five species, have shown significant decline.			
Pollinators	Many species of bee, moth, butterfly, hoverfly, fly and beetle pollinate £690 million worth of crops annually. The European Red List reported that one in ten species of wild bee face extinction, and over the past 50 years, half the bee, butterfly and moth species studied in the 2013 State of Nature Report have declined.	Present throughout Norfolk	Throughout District	Low IDB Potential to benefit species from Habitat enhancement
VASCULAR P	PLANTS			
Wildflowers (including Orchids)	Protected under section 13 of the Wildlife and Countryside Act (1981).	Present throughout Norfolk	Throughout District	Low IDB Potential to benefit species from Habitat Action Plans



## 4.11. Invasive Non-native Species Summary

The IDB has identified the following high risk aquatic and riparian invasive non-native species within the drainage district that are identified as likely to be influenced by, or impact upon the Board's activities.

Table 7: High risk aquatic invasive non-native species summary

Common & scientific name	Location within IDB if known	Year first recorde d	Local status / Extent within drainage district	IDB potential for controlling species population or range
Floating pennywort ( <i>Hydrocotyle</i> ranunculoides)	Billingford (2007) Skeyton (2012) Tonnage Bridge, Dilham (2020) Coltishall (2006)	2003	The distribution of floating pennywort in Norfolk is largely restricted to the River Waveney, although there have been reported infestations from other isolated waterbodies in the east of the county	NNNSI management plan and control measures, provide advice and partnership working with landowners, biosecurity measures, and recording.
Parrots Feather (Myriophyllum aquaticum)	Matlaske (2012) Taverham (2008) Tacolneston (2008) Spixworth (2008) Panxworth (2008) Dilham (2013)	2005	Parrot's feather is sparsely distributed across the whole of Norfolk, with marginally more records occurring in the east of the county.	Biosecurity measures, and recording.
Himalayan Balsam (Impatiens glandulifera)	Throughout district	1990	The plant is now widespread in central and eastern Norfolk and is still expanding its range. It can be seen along the banks of rivers, in wet woodland and on waste ground, often growing in large dense clumps. Widespread distribution.	Partnership working with NNNSI and landowners, provide advice to landowners, biosecurity measures, and recording.
Japanese Knotweed ( <i>Fallopia</i> <i>japonica</i> )	Throughout district	1995	Widespread distribution.	Control measures on a case by case basis, partnership working with NNNSI and landowners, provide advice to landowners, biosecurity measures, and recording.
American Mink (Neovison vison)	Throughout District	1983	Mink can be found in and around many Norfolk waterways and has a widespread distribution.	Partnership working with WLRE and the Norfolk Mink Project.



OHOIK KIVEIS IIILEITI	ai Drainage Board – Biodiversity Action	IFIAII	T	<u> </u>
Australian Swamp- Stonecrop (Crassula hemsii)	Throughout District	1988	Australian swamp stonecrop is common across Norfolk.	Control measures on a case by case basis, partnership working with NNNSI and landowners, biosecurity measures, and recording.
Water Fern ( <i>Azolla</i> filiculoides)	Throughout District	1965	Water fern has a widespread distribution across Norfolk.	Control measures on a case by case basis, partnership working with NNNSI and landowners, provide advice to landowners biosecurity measures, and recording.
Giant Hogweed ( <i>Heracleum</i> <i>mantegazzianu</i> <i>m</i> )	Throughout District	1988	Giant hogweed is common across Norfolk. Most records of this plant occur in the east of the county, with the area to the south-east of Norwich having a particularly high density of infestations.	Control measures on a case by case basis, partnership working with NNNSI and landowners, provide advice to landowners, biosecurity measures, and recording.
Rhododendron (Rhododendron ponticum)	Saxthorpe (1989) Westwick (1935)	1935	Rhododendron is common across Norfolk.	Recording
Quagga Mussel and Zebra Mussel (Dreissena bugensis rostriformis; Dreissena polymorpha)	Ranworth (2012) Wroxham (2003) Wayford (2012)	1968	Quagga Mussel and Zebra Mussel are present in the Norfolk Broads	Biosecurity measures and recording.
Signal Crayfish ( <i>Pacifastacus</i> <i>leniusculus</i> )	Throughout the District	1988	Signal Crayfish are common across Norfolk in the waterways and Rivers.	Biosecurity measures and recording.
Killer Shrimp ( <i>Dikerogammar</i> us villosus)	Dilham Staithe (2013) Wroxham Broad (2012) Ranworth Broad (2012) Wayford Bridge (2012)	2012	Present in the Trinity Broads and the Norfolk Broads	Biosecurity measures and recording.



## 4.12. Water Level Management Plans

Water Level Management Plans (WLMPs) provide a means by which the water level requirements for a range of activities in a particular area, including agriculture, flood defence and conservation, can be balanced and integrated. Guidance for the production of WLMPs by the operating authorities for sites of conservation interest was produced by MAFF/ Defra in 1992, 1999 and 2004. This guidance concentrated on SSSIs, especially those of international importance (SPA or SAC sites).

Where IDBs are the operating authority for sites, they may or may not actively manage the water levels.

The table below provides further details of the Water Level Management Plans for which the IDB has some involvement within their drainage district.

Table 8: Water Level management plans in operation within the drainage district

Site Name & Designation	Reason for WLMP (state main species or habitat)	WLMP lead and other key partners	Favourable/ unfavourable condition (related to water level management)	WLMP Last Updated
Wayford Bridge and East Ruston WLMP – East Ruston Common SSSI	Grazing marsh, wet woodland, tall herb fen, fen meadow, wet heathland. Important for reed / milk parsley, marsh fern, fibrous tussock-sedge, Adder	NRIDB, NE, BA, NCC, NNDC	38.11% Favourable condition 61.89% Unfavourable – recovering condition	2001
Wayford Bridge and East Ruston WLMP – Broad Fen, Dilham SSSI, Broadland SPA, Ramsar, Broads SAC	Floodplain fen. Important for reed/milk parsley, marsh fern, fibrous tussock sedge, narrow-leaver marsh orchid, fen pondweed, water soldier, liverwort, Bittern, Marsh harrier, Wintering hen harrier, Shoveler	NRIDB, BIDB, NE, BE, NCC, NNDC	100% Unfavourable – recovering condition	2001
Wayford Bridge and East Ruston WLMP - Smallburgh Fen SSSI, Broadland SPA, Ramsar, Broads SAC	Spring-fed calcareous valley fen. Important for black-bog rush / blunt-flowered rush mire, marsh fern, narrow-leaved marsh orchid, Marsh harrier, Wintering hen harrier	NRIDB, NE, BA, NCC,NNDC	100% Favourable condition	2001
Leists Farm WLMP – River Bure Broads and Marshes SSSI, Broads	Reedbed with an extensive open water and ditch network, unimproved grazed wet fen meadow. Important for bittern, marsh and hen	NRIDB, BA, NE, RPA	43.08% Favourable condition 46.85% Unfavourable -recovering condition	2000



	ard Broatvorolly Admort Lan			
SAC, Broadland SPA	harrier, Beswick and whooper swan, gadwall and shoveler		10.07% Unfavourable – no change condition	
Coastal Management Plan WLMP – North Norfolk Coast SSSI, North Norfolk Coast SPA, Ramsar	Intertidal sands and muds, saltmarshes, brackish lagoons, reedbeds and grazing marshes. Important for breeding, migratory and overwintering birds	WNNMP, NRIDB	97.82% Favourable 2.18% Unfavourable – recovering	



# **5. Habitat and Species Action Plans**

#### 5.1. Introduction

Action plans comprise the objectives, targets and actions that the IDB has identified for each habitat and species to be included within the BAP. The following sections contain action plans for each of the habitats and species that have been prioritised by the IDB. A summary table of Biodiversity Action Plan Objectives can be found in Appendix 6 and a summary table of Habitat and Species Action Plans can be found in Appendix 7.

#### 5.2. Habitat Action Plans

## 5.2.1 Coastal and floodplain grazing marsh

## 5.2.1.1 National and Local Targets

#### Table 9:

National Targets	Local Targets
• Rehabilitate 10,000 ha of grazing marsh habitat which has become too dry, or is intensively managed, by the year 2000. This would comprise 5,000 ha already	Maintain the existing habitat extent (29,500 ha) and its quality, rehabilitate 2,950ha (10% of the total resource in Norfolk) of grazing marsh habitat in intensive management and create 350 ha of grazing marsh from arable land on the North Norfolk Coast by 2010.

## 5.2.1.2 IDB Objectives

Table 10:



### **IDB Objectives**

1 Continue to maintain or enhance the existing extent and quality of Coastal and Floodplain Grazing Marsh through appropriate river management, delivering river restoration schemes or providing Natural Flood Management solutions.

### 5.2.1.3 IDB Actions

Table 11:

Actic	on Plan					
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Continue to work in partnership with stakeholders to look for opportunities, to enhance grazing marshes by appropriate water level management practice.	Area (ha) of grazing marsh enhanced	Ongoing	Environment Team	RSPB, NRT, NE, EA, Landowners
1	1b	Deliver one Natural Flood Management Project per year.	Number of Projects delivered	Ongoing	Environment Team	NE, EA, BCP and Landowners
1	1c	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance grazing marshes and have involvement in projects.	Area (ha) of grazing marsh enhanced	Ongoing	Environment Team	LNRS



#### 5.2.2 Reedbed

### **5.2.2.1 National and Local Targets**

#### Table 12:

National Targets	Local Targets
<ul> <li>Identify and rehabilitate by the year 2000 the priority areas of existing reedbed (targeting those of 2 ha or more) and maintain this thereafter by active management.</li> <li>Create 1200 ha of new reedbed on land of low nature conservation interest by 2010. This should be in blocks of at least 20 ha: in areas near to existing habitat; linked with existing habitat wherever possible.</li> </ul>	<ul> <li>Maintain existing area and quality as a minimum. Identify and rehabilitate by the year 2010 the priority areas of existing reedbed which are not currently at favourable conservation status.</li> <li>Create new reedbed to replace reedbeds likely to be lost due to changes to coastal management and create an additional 600 hectares of new reedbed safe from future threat of sea level rise within Norfolk by 2010.</li> </ul>

### 5.2.2.2 IDB Objectives

#### Table 13:

### **IDB Objectives**

Implement restoration of reedbeds and WLMP objectives for the River Nar, River Wensum SAC and Norfolk Valley Fens SAC and identify opportunities elsewhere to restore or enhance reedbed, particularly via the river restoration process.

### 5.2.2.3 IDB Actions

#### Table 14:

Actio	on Plan					
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners



<u> </u>	ik Rivers internal brainage board – blodiversity Action Flan					
2	2a	Continue to work in partnership with stakeholders to look for opportunities, to enhance reedbeds by appropriate water level management practice.	Area (ha) of reedbed habitat enhanced	Ongoing	Environment Team	RSPB, NE
2	2b	Identify potential sites for habitat restoration and expansion within the IDB area during Capital Scheme delivery and consider future management planning on these sites during this process.	Number of sites identified	Ongoing	Environment Team	NRT, NE, EA, Landowners
2	2c	Enhance and maintain reedbed fringe habitat on the Boards main drains.	Number of SMO audits achieved	Ongoing	IDB Ops	
2	2d	Explore opportunities to create new reedbeds and link with other reedbed projects to create corridors for wildlife.	Area (ha) of new reedbeds created	Ongoing	Environment Team	NRT, NE, EA, Landowners
2	2e	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance reedbeds and have involvement in projects.	Area (ha) of reedbed enhanced	Ongoing	Environment Team	LNRS



#### 5.2.3 Fens

### 5.2.3.1 National and Local Targets

#### Table 9:

National Targets	Local Targets
• Ensure appropriate water quality and water quantity for the continued existence of	<ul> <li>Identify Norfolk fen sites in critical need of rehabilitation by 2005, and initiate restoration by 2010.</li> <li>Ensure appropriate water quality and water quantity for the continued existence of all Norfolk SSSI fens and complete restoration by 2010.</li> </ul>

### 5.2.3.2 IDB Objectives

#### Table 10:

### **IDB Objectives**

3 Implement restoration of fens and WLMP objectives for the River Nar SSSI, River Wensum SAC, Langor drain and Norfolk Valley Fens SAC within the IDB area.

#### 5.2.3.3 IDB Actions

#### Table 11:

Actio	on Plan				
Objectiv e ref.	Action number	Measurable / Indicators	Completion date	Action Lead	Partners



<u> </u>	in third internal Brainage Board Bloarversity Action Flam					
3	3a	Continue to work in partnership with stakeholders to look for opportunities, to enhance fen habitat by appropriate water level management practice.	Area (ha) of fen habitat enhanced	Ongoing	Environment Team	RSPB, NE, NWT, Landowners
3	3b	Work in partnerships to implement Fen Restoration within the IDB area whilst undertaking ELMS objectives and Capital projects.	Area (ha) of Fen restoration achieved	Ongoing	Environment Team	NWT, NE, EA, Landowners
3	3с	Implement appropriate restoration via capital schemes for the River Nar and River Wensum SAC, Langor Drain and Norfolk Valley Fens and other NRIDB tributaries.	Area (ha) of River restoration achieved	Ongoing	Environment Team, IDB Ops	NE, Landowners
3	3d	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance fens and have involvement in projects.	Area (ha) of Fen enhanced	Ongoing	Environment Team	LNRS



### 5.2.4 Rivers, Canals and Drains

## **5.2.4.1 National and Local Targets**

### Table 9:

National Targets	Local Targets
Unknown	Unknown

# 5.2.4.2 IDB Objectives

### Table 10:

IDB Objectives	
4	Enhance and maintain habitat and species diversity on watercourses and headwaters maintained by the Board.
5	Enhance and maintain the flora and fauna of the watercourses maintained by the Board.
6	Ensure compliance to Boards Standard Maintenance Operations (SMO) to maintain rivers and drains.
7	Implement restoration of rivers and drains and WLMP objectives within the IDD.

### 5.2.4.3 IDB Actions

#### Table 11:

#### **Action Plan**



OIK TRIVOIO II	ntomai bia	inage board — bloowersity Action Flan	,			,
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
4	4a	Work with the planning department to review the boards culverting policy.	Review undertaken	2024	Environment Team	Planning Department
4	4b	Consult with Natural England with the aim to map important Spring fed wetland headwaters within the IDD.	Area (ha) of headwaters mapped.	2024	Environment Team	NE
5	5a	Identify opportunities to record species present in watercourses managed by the board.	Number of records submitted	Ongoing	Environment Team	NBIS
5	5b	Work in partnership with the EA to report pollution incidents within the IDD.	Partnership maintained	Ongoing	Environment Team	EA
6	6a	Regularly update the Boards Standard Maintenance Document.	SMO updated	2023	Environment Team	
6	6b	Ensure compliance with the IDB SMO by auditing on identified number of maintenance works jobs annually, to ensure they are being carried out to an agreed standard across the whole board.	Number of maintenance works audited	Annually	Environment Team, IDB Ops	
7	7a	Continue to work in partnership with stakeholders to deliver river restoration schemes throughout the IDD.	Number of River Restoration schemes delivered	Ongoing	Environment Team	NRT, EA, NE, Landowners
7	7b	Work with partners to deliver one Natural Flood Management Project per year as a means to minimise sediment and diffuse pollution into chalk river systems and manage downstream flood risk.	Number of Projects delivered	Ongoing	Environment Team	NRT, NWNCP, NE, EA, BCP and Landowners
7	7c	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to undertake river restoration and have involvement in projects.	Number of River Restoration	Ongoing	Environment Team	LNRS
7	7c	manage downstream flood risk.  Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to undertake river	Number of River	Ongoing	Environment	



Norfolk Rivers In	nternal Drainage Board – Biodiversity Action Plan			_
		schemes delivered		



#### 5.2.5 Wet Woodland

### **5.2.5.1 National and Local Targets**

#### Table 9:

National Targets	Local Targets
	<ul> <li>Maintain the total extent (50,000-70,000ha) and distribution of wet woodland.</li> <li>Maintain the current area (currently estimated at 24,000-30,000ha) of ancient semi-natural wet woodlands.</li> </ul>

### 5.2.5.2 IDB Objectives

#### Table 10:

### **IDB Objectives**

8 Continue to work closely with Norfolk Wildlife Trust, Natural England, the Norfolk Rivers Trust and consultants to ensure Wet Woodland is considered within the consultation process prior to maintenance, capital scheme delivery and river restoration schemes.

### 5.2.5.3 IDB Actions

#### Table 11:

Actic	n Plan				
Objectiv e ref.	Action number	Measurable / Indicators	Completion date	Action Lead	Partners



8		Consult Norfolk Wildlife Trust prior to work through or near County Wildlife Sites that are outside of the SMO.	NWT Consulted	Ongoing	Environment Team	NWT
8		Include wet woodland conservation in all aspects of IDB maintenance, capital scheme and river restoration delivery.	Number of river restoration projects that include wet woodland.	Ongoing	Environment Team	NE, NWT, NRT, EA and LA's
8	8c	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	Area (ha) of Wet Woodland enhanced.	Ongoing	Environment Team	LNRS



#### **5.2.6 Ponds**

## **5.2.6.1 National and Local Targets**

### Table 9:

National Targets	Local Targets
•Identify where high-quality pond sites are and what features characterise them using PSYM (the Predictive System for Multimeric) and maintain a net number of these sites. •Maintain the quality of flagship pond sites, a sub-set of approximately 1% of high-quality ponds, ensuring they are monitored and that their quality is maintained ensuring these flagship sites do not degrade. •Restore pond sites that are below high-quality status to deliver Species Action Plan targets. •Create new pond sites of high quality potential thus creating a new network of ponds with clean water and high biodiversity potential.	<ul> <li>Establish a more accurate figure for the extent, location and condition of ponds in Norfolk.</li> <li>Maintain the existing resource of ponds in the county.</li> <li>Promote and support the appropriate restoration of existing ponds and the creation of new ponds in locations that will benefit biodiversity.</li> <li>Develop and extend provision of management advice and awareness of the biodiversity value of ponds.</li> </ul>

### 5.2.6.2 IDB Objectives

#### Table 10:

### **IDB Objectives**

Restore ponds within the boards area that are not owned by the IDB.

### **5.2.6.3 IDB Actions**

### Table 11:

### **Action Plan**



Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
9	9a	Understand the extent of ghost ponds in Norfolk Rivers.	Report undertaken	2026	Environment team	Norfolk Ponds Project
9	9b	Ensure relevant staff are trained regarding pond restoration.	Number of staff trained	2023-24	Environment team	
9	9c	Identify opportunities to record amphibian species present in ponds.	Number of records submitted	Ongoing	Ops team, Environment team	NBIS
9	9d	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance ponds and have involvement in projects.	Number of ponds restored	Ongoing	Environment team	LNRS



### 5.3. Species Action Plans

#### 5.3.1 Barn Owl and Kestrel

### **5.3.1.1 National and Local Targets**

#### Table 15

National Targets	Local Targets
Unknown	Unknown

### 5.3.1.2 IDB Objectives

#### Table 16:

### **IDB Objectives**

Continue to enhance the range and population of Barn Owls and Kestrels by maintaining or enhancing habitat availability and creating nesting opportunities, within the catchment area.

### 5.3.1.3 IDB Actions

#### Table 17:

Actic	on Plan					
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners



_		Three Internal Plantage Pour a Production, Florida						
	10	10a	Continue to monitor nest boxes within the IDB area working in partnership with the Wildlife Conservation Partnership.	Number of boxes monitored	Ongoing	Environmen t Team	WCP	
	10		Continue to maintain, repair or replace nest boxes in the IDB area working in partnership with the Wildlife Conservation Partnership.	Number of boxes maintained, repaired or replaced	Ongoing	Environmen t Team	WCP	
	10	10c	Continue to maintain sward height during bankside maintenance mowing of 150mm.	Area (ha) maintained to sward height	Ongoing	IDB Ops	Staff, Contractors	



### 5.3.2 Hirundinidae - Sand Martins, Swallows and Swifts

### **5.3.2.1 National and Local Targets**

#### Table 15:

National Targets	Local Targets
Unknown	Unknown

### 5.3.2.2 IDB Objectives

#### Table 16:

### **IDB Objectives**

11 Enhance the population and range of Hirundinidae by installing artificial nest sites or towers within the IDD.

## 5.3.2.3 IDB Actions

#### Table 17:

Action Plan						
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
11	11a	Explore options for Sand martin artificial nesting sites within the Norfolk Rivers IDB area.	Number of artificial nesting sites	Ongoing	Environmen t team	Landowners



11	11b	I Where appartinities arise for Hallse martins and	Number of artificial nesting sites	Ongoing	Environmen t team	Landowners
----	-----	--	------------------------------------	---------	----------------------	------------



### 5.3.3 Tree Sparrow

## **5.3.3.1 National and Local Targets**

### Table 15:

National Targets	Local Targets
<ul> <li>•In the short term, halt or reverse the decline in numbers of the tree sparrow by the year 2003 so that the Breeding Bird Survey index is at least at 1996 levels.</li> <li>•In the long term, see a sustained recovery, so that the BBS index is at least 50% higher than 1996 levels, and a measurable increase in range is achieved, by 2008.</li> <li>•Expand the range from that of 1996, as measured by the frequency in random BBS squares, by 2008.</li> </ul>	•Maintain the current distribution of tree sparrow in Norfolk and by 2010 restore to any parts of the county that have lost breeding tree sparrow since 1986.

### 5.3.3.2 IDB Objectives

#### Table 16:

### **IDB** Objectives

2 Monitor and enhance Tree sparrow population and range by increasing potential nest site availability within the Norfolk Rivers IDD.

### 5.3.3.3 IDB Actions

#### Table 17:

Actio	on Plan					
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners



12	12a	Install nest boxes at suitable sites within the IDB district.	Number of nest boxes installed	Ongoing	Environmen t team	Landowners
12	1 /N	Report nesting activity and nest box sites to the NBIS.	Number of records submitted	Annually	Environmen t team	NBIS, Landowners



#### 5.3.4 Water Vole

## **5.3.4.1 National and Local Targets**

#### Table 15

Table 16.	
National	Local
UK BAP targets = Maintain the current range & achieve an increase in range (both across 10km2 areas).	Maintain and increase current range.

### 5.3.4.2 IDB Objectives

#### Table 16: IDB Objectives

i abio	ble 16. 188 ebjectives				
IDB Objectives					
13	Control mink within the IDB catchment.				
14	Better understand population and extent of water voles within the Boards area.				
15	Ensure the appropriate sensitive management of watercourses which will facilitate the maintenance and enhancement of the current distribution and abundance of the Water Vole in the IDB District.				
16	Maintain and enhance the current distribution and abundance of the water vole in the IDB District.				

#### 5.3.4.3 IDB Actions

Table 17: Species action plan

**Action Plan** 



		inage Beard Breatvereity / telleri i lair	•			
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
13	13a	Continue to contribute funding to the Water Life Recovery Trust.	Funding contributed	Annually	Environment team	Water Life Recovery Trust
13	13b	Continue to work with the Water Life Recovery Trust on mink eradication.	Number of steering group mink meetings attended each year.	Annually	Environment team	Water Life Recovery Trust
14	14a	Undertake yearly recording by operational staff and report to local biodiversity record centres.	Number and location of records collected and submitted to local biodiversity records office.	Annually	IDB Ops	NBIS
15	15a	Ensure compliance with the IDB SMO by auditing 4 jobs per year jobs, to ensure they are being carried out sensitively and to an agreed standard across the Board.	Number of maintenance works audited.	Annually	Environment team, IDB Ops	
16	16a	Take opportunities to enhance water vole habitat where appropriate during Capital or river/wetland restoration schemes.	Area (ha) of habitat enhanced.	Ongoing	Environment team	NE, EA, NWT and Landowners



#### 5.3.5 Brown Trout

## **5.3.5.1 National and Local Targets**

### Table 15:

National	Local
Unknown	Unknown

### 5.3.5.2 IDB Objectives

#### Table 16: IDB Objectives

	DB Objectives
17	Maintain current areas of spawning and juvenile habitat for Brown Trout.
18	Work in partnership to restore chalk stream habitat within the IDD.

### 5.3.5.3 IDB Actions

Table 17: Species action plan

Actic	n Plan					
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners



io <u>iit i tivoio</u> i	k Nivers internal brainage board - blodiversity Action Flan							
17	17a	Ensure compliance with the IDB SMO by auditing 4 jobs per year jobs, to ensure they are being carried out sensitively and to an agreed standard across the Board.	Number of maintenance works audited	Annually	Environment team, IDB Ops			
17	17b	Ensure the life stages, habitat requirements and migration routes for the brown trout are taken into consideration when developing river restoration projects.	Number of river restoration projects with consideration to brown trout	Ongoing	Environment team	NE, EA and Landowners		
18	18a	Continue to establish the feasibility and delivery of other river restoration projects on IDB stretch of chalk stream reaches within Norfolk Rivers IDD. Where appropriate, work in partnership with other Stakeholders to achieve this.	Number of river restoration projects undertaken on chalk streams	Ongoing	Environment Team, IDB Ops	NE, NRT, EA and Landowners		
18	18b	Work with partners to deliver one Natural Flood Management Project per year as a means to minimise sediment and diffuse pollution into chalk river systems and manage downstream flood risk.	Number of Projects delivered	Ongoing	Environment Team	NE, EA, BCP and Landowners		



### 5.3.6 White Clawed Crayfish

## **5.3.6.1 National and Local Targets**

#### Table 15:

. 6.6.6	
National	Local
Attempt to maintain the present distribution of this species by limiting the spread of crayfish plague	Maintain the present distribution of species     Limit the spread of non-native species
Attempt to maintain the present distribution of this species by limiting the spread of non-native species	Maintain and create appropriate habitat conditions
•Attempt to maintain the present distribution of this species by maintaining appropriate habitat conditions	

### 5.3.6.2 IDB Objectives

#### Table 16: IDB Objectives

IDB Objectives					
19	Maintain the present distribution of White Clawed Crayfish.				
20	Maintain and create appropriate habitat conditions for white clawed crayfish as part of ongoing river restoration programmes.				

### 5.3.6.3 IDB Actions

Table 17: Species action plan

Action Plan						
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners



IOIK IVIVOIS	Rivers internal Drainage Board – Biodiversity Action Plan							
19	19a	Identify white clawed crayfish populations within the IDD by working in partnership with the Norfolk Rivers Trust or undertaking white clawed crayfish surveys or eDNA surveying.	Number of surveys undertaken	Ongoing	Environment Team	NRT		
19	19b	Ensure compliance with the IDB SMO by auditing an identified number of maintenance works jobs annually, to ensure they are being carried out to an agreed standard across the whole board.	Number of maintenance works audited	Annually	Environment team			
19	19c	Ensure all environment officers are licenced to undertake surveys (CL11 or CL23).	Number of officers to receive licenses	Ongoing	Environment Team	NRT, NE		
19	19d	Review and ensure biosecurity measures are being maintained across the Board.	Biosecurity measures reviewed	Ongoing	Environment team	Contractors and Staff		
19	19e	Contribute to crayfish surveys and eDNA testing throughout the NRIDD.	Number of surveys undertaken	Ongoing	Environment team	NE, NRT, EA and Landowners		
20	20a	Liaise and work closely with the Norfolk Crayfish Group.	Number of Partnership meetings attended	Ongoing	Environment team	NRT, EA, NE and NWT		
20	20b	Continue to establish the feasibility and delivery of river restoration projects on IDB stretches of chalk stream reaches within Norfolk Rivers Area. Where achievable, work in partnership with other stakeholders to achieve this.	Area (ha) of river restoration projects undertaken on chalk streams	Ongoing	Environment team, IDB Ops	NRT, EA, NE and Landowners		



### 5.3.7 Bats (All Species)

## **5.3.7.1 National and Local Targets**

### Table 15:

National	Local
Unknown	Unknown

## 5.3.7.2 IDB Objectives

Table 16: IDB Objectives

IDB Objectives				
Understand the status, distribution and ecology of bats in the IDB district.		Understand the status, distribution and ecology of bats in the IDB district.		
Maintain and enhance the current distribution and abundance of bats within the Board's area.				

### 5.3.7.3 IDB Actions

Table 17: Species action plan

Actio	Action Plan					
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners



21	21a	Survey and monitor bat presence around IDD as part of the BTO Norfolk Bat Survey.	Number of surveys undertaken	Ongoing	Environment Team	вто
21	21b	Ensure training is delivered to all environment officers.	Number of officers trained	Ongoing	Environment Team	
22	22a	Install bat boxes for roosting and hibernation on suitable IDB structures.	Number of bat boxes installed	Ongoing	Environment Team, Op's team	
22	22b	Continue to work with consultants for capital schemes involving bat mitigation and habitat enhancements.	Number of capital schemes delivered including bat mitigation and habitat enhancements	Ongoing	Environment Team	Consultants, Landowners



### **5.3.8 Non Native Invasive Species**

### **5.3.8.1 National and Local Targets**

#### Table 15

National National	Local
Unknown	Unknown

### 5.3.8.2 IDB Objectives

Table 16: IDB Objectives

IDB Objectives		
Promote the prevention, control and eradication of non-native invasive species within the Board's area.		Promote the prevention, control and eradication of non-native invasive species within the Board's area.
Raise awareness of the presence and undertake control or eradication of mink in the catchment.		

### 5.3.8.3 IDB Actions

Table 17: Species action plan

Action Plan						
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
23	Establish a partnership with the NBIS to receive up to date records of Invasives within the local area.		Partnerships established	Ongoing	Environmental Team	NBIS



olk Kiveis	Rivers Internal Drainage Board – Biodiversity Action Plan							
23	23b	Continue to contribute to and work in partnership with the Norfolk Non-Native Species Initiative (E.g. Floating pennywort).	Partnerships maintained	Ongoing	Environment Team	NNNSI		
23	23c	Maintain records for all species of concern using the 'iRecord' app.	Number of reviews undertaken	Ongoing	Environment Team	NNNSI, Staff, Contactors		
23	23d	Train staff regularly in key non-native species identification.	Number of staff trained	Ongoing	Environment Team	NNNSI, Staff, Contactors		
23	23e	Ensure availability and regular review of identification guides developed for key nonnative species to be used by officers, staff and contractors on site.	Number of reviews undertaken	Ongoing	Environment Team	NNNSI, Staff, Contactors		
23	23f	Regularly review and ensure robust biosecurity measures are being maintained across the Board.	Number of reviews undertaken	Ongoing	Environment Team	Staff, Contractors		
24	24a	To continue to work in partnership with Mink control/eradication groups	Number of meetings per year	Ongoing	Environment team	WLRT		
24	24b	Maintain 10 IDB traps within the catchment	Number of traps maintained in the catchment	Ongoing	Environment team	WLRT		
24	24c	Report catches to the WLRT	Number of catches per year, Catch per unit effort	Ongoing	Environment team	WLRT		



## 6. Procedural Action Plan

### 6.1. Introduction

A number of procedural targets and actions have been established to better integrate biodiversity considerations into IDB practices and procedures.

### 6.2. Objectives and Targets

#### Table 18:

	IDB Objectives						
1	Ensure compliance to standard for biodiversity and protected species surveys						
2	Ensure compliance to Boards Standard Maintenance Operations						
3	Land Drainage consent and Bylaws						
4	Attend Local Biodiversity Forums and Meetings						
5	Raising awareness						
6	Recording						
7	Communication						
8	Monitoring						

### 6.3. IDB Actions

Table 19:





Actio	on Plan					
Objectiv e ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1 1a ensure that appropriate mitigation is delivered for capital / N		License returns to NE / Number of audits undertaken	Ongoing	Ecologist	NE
1	1b	Environmental staff to undertake regular training.	Number of staff trained	Ongoing	Ecologist	NE, NWT
2	2a	Assess an annual agreed percentage of maintenance works, to be carried out to an agreed standard and delivered across the whole board and integrated within the Quality Management System ISO 14001.	Number of audits undertaken / QMS audit	Annually	Ecologist	WT
2	2b	Regular review on SMO to ensure compliance with updated guidelines and regulations.	5 year review undertaken	Ongoing		LA's
3	3a	Through the application of Land Drainage Consents and Bylaws, seek to ensure that natural features of conservation interest and habitat importance are enhanced.	Review Planning and Bylaw strategy	2024		
4	4a	Communication and network opportunities with other organisations to facilitate actions for BAP Species and Habitats.	Meetings attended	Ongoing		
4	4b	PR and lifting profile of Board.	Newspaper/magazine articles / website blogs	Ongoing		
5	5a	Biodiversity training days organised for staff and board members.	Number of training days organised	Ongoing		
6	6a	Develop and populate a recording system for IDB priority species and habitats within the Board area, in conjunction with the Engineering team and watercourse surveys.	iRecord reports	Ongoing		NBIS
7	7a	A new Environment and Biodiversity section on the website.	Environment section produced	Ongoing		
7	7b	Share successes with media and promote public awareness.	Social media reaches,	Ongoing	ICT team,	



		Newspaper/magazine articles / website blogs		Environment Team, Ops Team	
8	Continue to develop the WMA's record base and continue to work internally and in partnership with other organisations to ensure that we have up to date information of species to help inform future works.	Partnership established with NBIS	Ongoing		NBIS



## 7. Implementation

The actions within the BAP will be executed via the following means:

- Panning for maintenance, capital and non-regular maintenance work will all take into consideration the Boards Biodiversity Action Plan targets.
- The Board, as part of the Water Management Alliance, has adopted the Environmental Management System ISO 14001, which also helps to integrate the Biodiversity Action Plan within the systems and work of the organisation.
- A simple process will be put into place to record actions and help with the reporting. Any
  new data on habitats and species will be shared with the Norfolk Biological Record Centre
  and the Suffolk Biological Record Centre.
- Carbon Net Zero is a legislative commitment set out by the UK government to be achieved by 2050. The Norfolk River's IDB will be instigating a carbon baselining exercise with a view to setting a target for achieving Carbon Net Zero on or before this date for all its operational and day to day activities.

# 8. Monitoring

Appropriate indicators have been set for each of the IDB's biodiversity actions. Indicators have been chosen which provide the IDB with ways of measuring both the current status of biodiversity and also ways of measuring achievements in delivering biodiversity objectives and targets. 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 routinely monitor biodiversity actions using the indicators and measurables and 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.

# 9. Reporting

The Board is responsible for ensuring that progress against the Plans' targets are routinely 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:

In the public domain via the IDB's website;

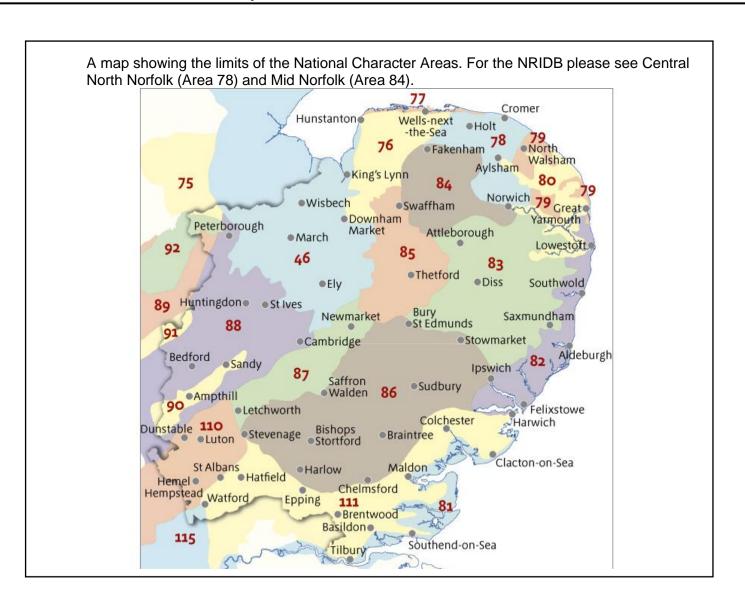


- Provided to conservation partners to assist with further local biodiversity conservation planning;
- Provided to local authorities in order to contribute towards their legislative biodiversity reporting requirements including the NERC 2006 Act, Habitats Directive, Environment Act and the Local Nature Recovery Strategies;
- The Local Biological Records Centre.
- To the Board through a comprehensive review of the plan that will take place after five years.

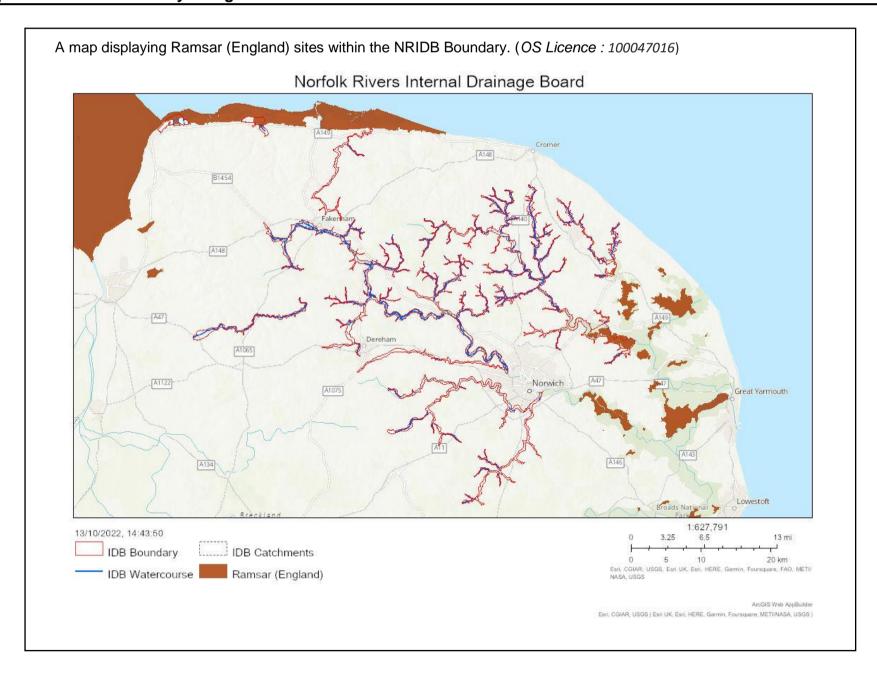


# 10. Appendices

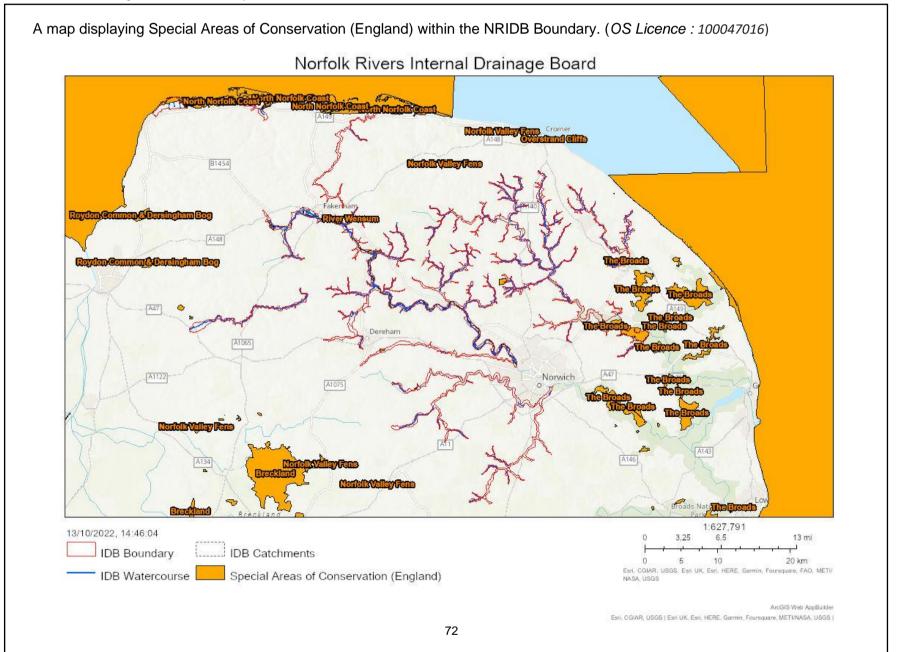
### 10.1. Appendix 1: National Character Areas Map



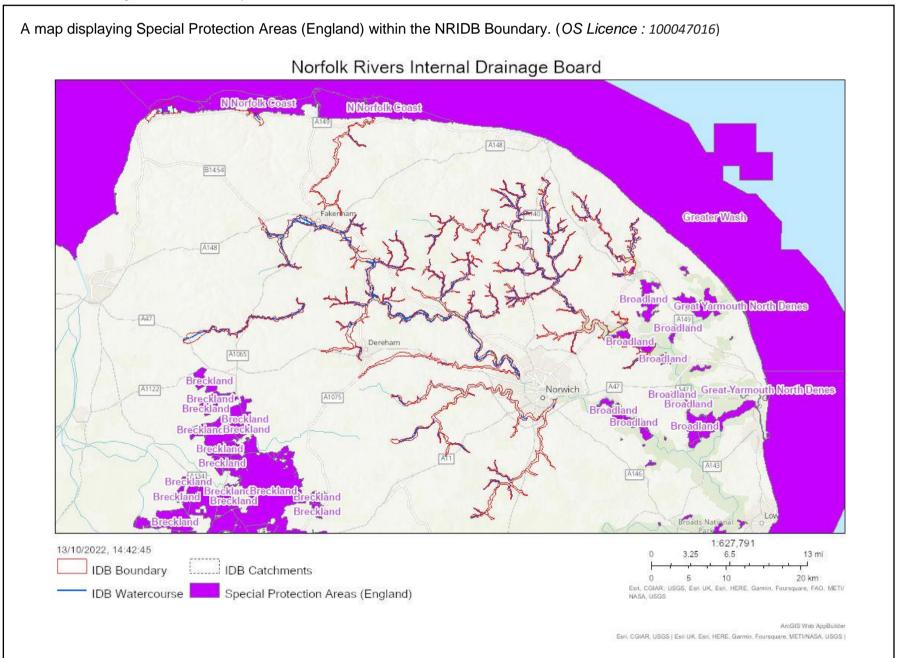




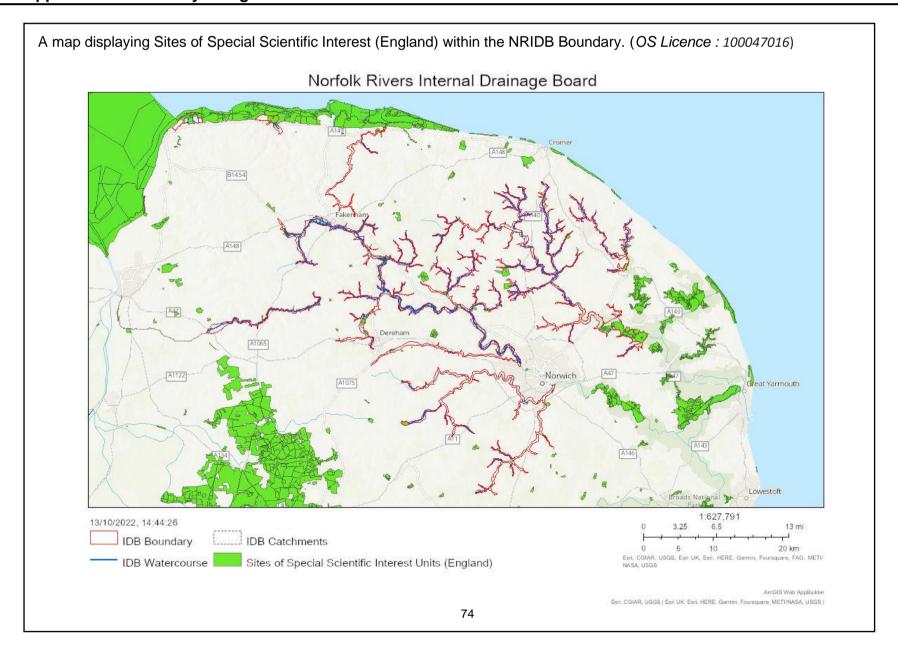




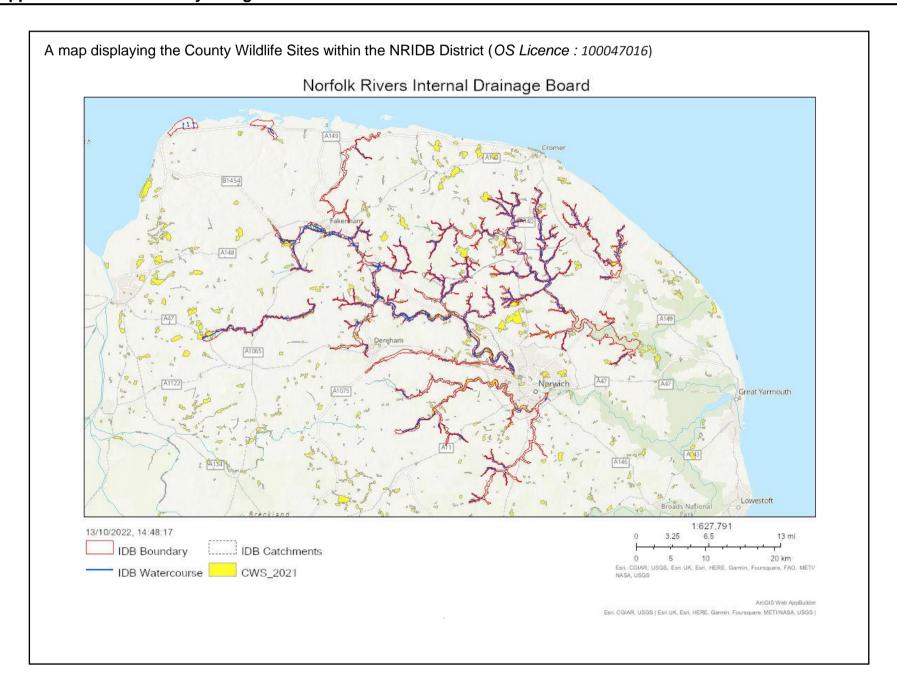














Non-Statutory site	es within the NRIDB	B District		
Adjacent River Wensum	Adjacent Fakenham Sewage Works	Alder Carr	Algarsthorpe Marshes	Anchor Wood
Antingham Ponds	Ash Wood	Bale Wood	Barnham Broom Fen	Barningham Park Estate
Bates Moor Meadow	Bawburgh / Colney Gravel Pits	Bayes Meadow	Bays River Meadow North	Bays River Meadow South
Beck Farm Meadows	Beetley & Hoe Meadows	Beetley Common	Bickerston Meadow	Big Wood Meadow
Blackbridge Wood	Blackwater Valley	Blickling Hall	Blockpightle Plantation	Bluebell Marsh
Blyth's Wood	Bowthorpe Marsh	Bowthorpe Riverside (extension)	Bradfield Common	Bradmoor Plantation
Brake Hills Plantation & Carman's Be	Breakers Yard Meadow	Bridge Marsh Meadow	Brock's Watering	Brook House Marshes
Broom Green	Broomhill Meadows	Bunwell Fen	Burnham Norton Extension	Bush Meadow Plantation
Caistor St Edmund Roman Town	Calthopre Grazing Meadow	Carlton Plantation	Carr Plantation	Carrow Abbey Marsh
Castle Acre Castle	Cawston Park	Church Meadow, Alder Carr, Three Corner Thicket and Nursery Plantation	Clippings Green Farm	Common Hills Plantation
Common South of Wickmere	Coneyfare Wood	Confluence of Yare & Blackwater	Corpusty Fen	Costessey Pits (East)
Coston Meadow	Coxford Marshy Meadows	Coxford Meadoes	Crostwick Common (North)	Crostwight Common
Crostwight Heath	Crownthorpe Carr	Dark Plantation	David Hood's Meadow	Depot Meadow
Dereham Sewage Works Meadow	Dilham Grange Carr	Dilham Meadows	Dismantled Railway	Disused Railway
Docking Borrow Pit	Drabblegate Common	Drak Plantation	Duston Common	Dyball's Allotment
Eades Hill Meadows	Earlham and Colney Marshes	East Bilney Common	Eaton Common	Eaton Island
Eaton Street Meadow	Ebridge Farm Meadows	Eel's Foot	Edgefield Heath	Fairies' Lane Meadow
Falstoff's Wood	Felbrigg Hall Estate	Fen Plantation	Fen West of East Tuddenham	Field Cottage Meadow
Fishers Common	Flight Pond	Flordon Meadow (East)	Flordon Meadow (West)	Folly Lane Meadow & Fludger's Meadow
Fox Hill Allotment & Common	Foxburrow Meadow	Gaston's & Lambert's Plantation	Gibbet Hill Plant & Bawd Heath	Glaven Farm Meadows & Little Thornage Common
Grassland Adjacent River Wensum	Grassland at Saxthorpe	Gravel Pit Lane, Holt	Gravel Pits	Great Witchingham Common
Great Wood	Green Lane	Grove Meadow	Hackford Marshes & W. Wood Mere	Hagen Beck Marshes
Hagen Beck Meadow	Hall Woods	Hapton Common	Harford Bridge Marshes	Haveringland Hall
Hellesdon Mill Meadow	Hellhoughton Common (East)	Hellhoughton Common (North)	Hellhoughton Common (South)	Helsdon Farm Pond
Hempton Moor	Hempton Pools	Hevingham Park	Hills & Holes Plantation	Hoe Gravel Pit



	- Hamage Board Bloatver		1	
Holbrigg Lane	Holly's Grove	Holt Country Park	Home & Lady's Meadows, Mannington Hall	Honing Common, North Walsham & Dilham Canal
Horning Bridge Carr	Horseford Meadow	Icehouse Grove	Intwood Carr	Ivy Farm Meadow
Kettlestone Fen	Kimberley Lake	Kimberley Park	King's Covert	Ladies Wood, Church Carr & Springs
Lake Cottage Meadow	Lake Opposite Fustyweed	Lake West of Castle Acre	Lakes Near Lyng	Land Adjacent All Saints Church
Land Adjacent to Concrete Plant	Land Adjacent to Disused Railway	Land Adjacent to East Bilney H	Land Adjacent to Fakenham Sewage Works	Land Adjacent to New Cut
Land Adjacent to River Nar	Land Adjacent to River Wensum	Land Adjacent to Warren Woods	Land Adjacent to Whitwell Common	Land Adjoining Guist Common
Land Adjacent to River Nar Land Adjacent to	Land Adjacent to River Wensum Land Adjacent to	Land Adjacent to Warren Woods Land Adjacent to	Land Adjacent to Whitwell Common Land Adjacent to	Land Adjoining Guist Common Land Adjoining
River Nar  Land North of Alder Cottage	River Wensum  Land North of Beetley Hall	Warren Woods Land North of Lower Green Meadow	Whitwell Common  Land North of Twyford Hall	Guist Common  Land North-West of Pynkney Hall
Land South of Blyth's Wood	Land South of Dillington Carr	Land South of Guist	Land South of High Kelling	Land South of River Tud
Land South of Shereford Common	Land South-West of Gravel Pit	Land West of Gressenhall Green	Land West of Oak Street, Fakenham	Land West of Worthing
Larch & Fleece Plantations	Lawn & Leechpit Plantations	Lenwade Pits (East)	Lenwade Pits (West)	Litcham Common
Little Profit	Little Wood	Littlemoor Meadow	Lodge Farm Meadows	Lolly Moor
Low Common & Plantations	Low Road Meadow	Lower Clipstone	Lower Green Meadow	Lyng Easthaugh Meadows
Marriott's Way	Marsh Plantation Lake	Marston Marshes	Meadow Adjacent to River Wensum	Meadow at Rugg's Hall
Meadows by Cushion's Common Plantation	Meadows near Blickling	Meeting House Hill Fen	Metton Carrs & Marble Hill Wood	Mileham Common
Mill Carr	Mill Farm Meadows	Mill House	Mill House Lake	Moat Meadow near Bates Moor
Moor Hall	Mossymere Wood	Muir Lane Meadow	Narford Lake	North Covert Meadow
Oak Grove	Old Carr	Old Corner Common	Old Decoy, Selbrigg Pond, The Lows	Part of Great Ryburgh Common
Paston Way & Knapton Cutting	Pasture Adjacent to Badley Moor	Pasture at Blickling Mill (Part of Moorgate Common)	Pasture at Easton College	Pastures near Watering Farm
Pensthorpe Wader Scrape & Wildflower Meadow	Pecks Plantation	Pigneys Wood	Pits Near Lyng Easthaugh	Pits Near Mill Street
Pokey Meadow	Pond by Dillington Carr	Pond Wood	Ponds Head Plantation	Potters Fen Meadow
Primrose Grove, Ringland	Priory Meadow	Pump House Woods	Quakers Farm Meadows	Racknell's Covert
Rawhall Wood	Raynham Park Lake	Red Bridge	Reepham Meadows	Reservoir Meadow
Riding School Meadow	Ringland Pits	River Bure (Stretch 1 and Stretch 2)	River Tud (West)	River Glaven
River Tud at	River Wensum	River Yare	River Yare (West	River Yare at



### Norfolk Rivers Internal Drainage Board – Biodiversity Action Plan

Easton and Honingham	Pastures		and East), Bowthorpe	Marlingford
River Yare Corridor	Rushmeadow Road Meadow	Salle Common & Adjacent Land	Sawmill Pond & Park	Scarning Meadows
School Common	Sculthorpe Moor and Meadows	Shereford Common	Silfield Newt Reserve & Oxford Common	Skeyton Beck
Small Hopes Farm	Smallburgh Carr	Smockmill Common	Softley Drive Meadow	South of Rush Meadow
South Raynham Water Meadows	South Walsham Fen	South-West of Bintree Mill	Sothrepps Common	Sovereign Lakes
Sovereign Meadow	Spa Common	Sparham House Grounds	Sparham Pools	Spixworth Bridge Meadows
Spixworth Meadows	Spixworth Bridge Meadow	Spout Common	Spring Plantation	Spruce's Planation and Carleton Corner Wood
Stakebridge Beck	Stanch Breck	Starmoor Belt	Starmoor Plantation	Starmoor Wood & Plantation (Formerly Adjacent Disused Railway)
Stiffkey Marshes	Stiffkey Meadows	Swanton Morley Gravel Pits	Swardeston Common	Tan Office Farm
Tas Pond	Tas Valley	Tasburgh Red Poll Meadow	Tat Meadows	Tatterford Common
Tattersett Marsh	Taverham Mill	Templewood Estate	The Canal & Helsdon Farm Marsh	The Carrs
The Carrs Woodland	The Cut	The Grange, Wreningham	The Heronry & Violet Grove	The Lizard & Wade's Pit
The Mermaid	The Oaks	The Old Allotments	The Tollands	The Warren
Thorpe Common and Fen	Thurgarton Wood	Thurning Meadow	Thwaite Common	Tiffey Meadow North
Tiffey Meadow South	Tiffey River Corridor	Tiffey Woods	Toll's Meadow & Friarscroft	Trowse Meadows
Turnpike Farm Pond	UEA Broad	UEA Butterfly Meadow	UEA Marsh	Upper Common, Coltishall
Vernon Wood	Walsham Wood	Walsingham Disused Railway	Warren House Lake	Warren Woods
Weaver's Way	Wells-Walsingham Railway	Wendling Carr	Wensum Meadow	Wensum Mount Farm
Wensum Pastures at Morton Hall	West Field Meadow	West Hoe Meadow	Westwick Estate Meadow	Whin Hill Stonepit
White House Meadows	Whitwell Hall	Wighton Common	Wolferton Meadow	Worthington Meadow
Wymondham Abbey Meadows	Wymondham Marshes	Yare Valley (Barford)	Yare Valley (Bawburgh)	Yare Valley (Colton Wood)
Yare Valley (Colton)	Yare Valley (Marlingford Hall)	Yare Valley (Marlingford)		



# 10.5. Appendix 5 : Species Audit Summary

COMMON NAME	SCIENTIFIC NAME	BAP PRIORITY SPECIES	LOCAL BAP SPECIES	SECTION 41	NON-BAP SPECIES IMPORTANT TO IDB
AMPHIBIANS					
Common Frog	Rana helveticus				Yes
Common Toad	Bufo bufo	Yes		Yes	Yes
Great Crested Newt	Triturus cristatus	Yes	Yes	Yes	
Natterjack Toad	Bufo calamita	Yes		Yes	
Palmate Newt	Triturus helveticus				Yes
Smooth Newt	Triturus vulgaris				Yes
BIRDS			<u>,                                    </u>		
Barn Owl	Tyto alba		Yes		
Bearded Tit	Panurus biarmicus				
Bittern	Botaurinae	Yes	Yes		
Black Tailed Godwit	Limosa limosa	Yes		Yes	
Blue Tit	Cyanistes caeruleus				
Bullfinch	Pyrrhula pyrrhula	Yes		Yes	
Carrion Crow	Corvus corone				
Chiff Chaff	Phylloscopus collybita				
Coal Tit	Periparus ater				
Common Scoter	Melanitta nigra	Yes		Yes	
Common Starling	Sturnus vulgaris	Yes		Yes	
Corn Bunting	Emberiza calandra	Yes	Yes	Yes	
Corncrake	Crex crex	Yes		Yes	
Cuckoo	Cuculidae	Yes			
Dark Bellied Brent	Branta bernicla	Yes			
Goose					
Dunnock	Prunella modularis			Yes	
Eurasian Curlew	Numenius arquata	Yes			
Eurasian Siskin	Spinus spinus				
Eurasian Sparrowhawk	Accipiter nisus				
European Nightjar	Caprimulgidae europaeus	Yes	Yes	Yes	
European Turtle Dove	Streptopelia turtur	Yes	Yes	Yes	
European White	Anser albifrons			Yes	
Fronted Goose					
Gold Crest	Regulus regulus				
Grasshopper Warbler	Locustella naevia	Yes		Yes	
Great Spotted Woodpecker	Dendrocopos major				
Green Finch	Chloris				
Grey Partridge	Perdix perdix	Yes	Yes	Yes	
Hawfinch	Coccothraustes coccothraustes	Yes		Yes	
Hen Harrier	Circus cyaneus		1	Yes	
House Martin	Delichon urbicum		1	-	
House Sparrow	Passer domesticus	Yes	<u> </u>	Yes	
Kestrel	Falco tinnunculus				Yes
Kingfisher	Alcedinidae		1		Yes
Lapwing	Vanellinae	Yes		Yes	
Lesser Redpoll	Acanthis cabaret		1	Yes	
Lesser Spotted	Dryobates minor		1	Yes	
Woodpecker					
Lesser White Throat	Sylvia curruca				



### Norfolk Rivers Internal Drainage Board – Biodiversity Action Plan

	1.44			177	
Linnet	Linaria cannabina			Yes	
Long Tailed Tit	Aegithalos caudatus	-			V -
Marsh Harrier	Circus aeruginosus				Yes
Marsh Tit	Poecile palustris	Yes		Yes	
Redshank	Tringa totanus				Yes
Reed Bunting	Emberiza schoeniclus	Yes	Yes	Yes	
Reed Warbler	Acrocephalus				Yes
B: 0	scirpaceus				
Ring Ouzel	Turdus torquatus	Yes		Yes	
Robin	Erithacus rubecula	-			
Rook	Corvus frugilegus	V			
Roseate Tern	Sterna dougallii	Yes		Yes	
Sand Martin	Riparia riparia	V.			Yes
Savis Warbler	Locustella luscinioides	Yes		Yes	
Sedge Warbler	Acrocephalus				
	schoenobaenus	-			
Skylark	Alauda		Yes	Yes	
Snipe	Gallinago gallinago	1,,			
Song Thrush	Turdus philomelos	Yes		Yes	
Spotted Flycatcher	Muscicapa striata	Yes	Yes	Yes	
Stone Curlew	Burhinidae	Yes	Yes	Yes	
Swallow	Hirundinidae				
Swift	Apodidae		Yes		
Tawny Owl	Strix aluco				
Tree Creeper	Certhiidae				
Tree Pipit	Anthus trivialis	1		Yes	
Tree Sparrow	Passer montanus	Yes	Yes	Yes	
Twite	Linaria flavirostris			Yes	
Willow Tit	Poecile montanus	Yes		Yes	
Willow Warbler	Phylloscopus trochilus				
Wood Pigeon	Columba palumbus				
Woodlark	Lullula arborea	Yes	Yes	Yes	
Wren	Troglodytidae				
Yellow Hammer	Emberiza citrinella	Yes		Yes	
Tree Sparrow					
Yellow Wagtail	Motacilla flava	Yes		Yes	
BRYOZOANS					
Crystal Moss-animal	Lophopus crystallinus				
BUTTERFLIES AND M					
Cinnebar	Tyria jacobaeae				
Dingy Skipper	Erynnis tages	Yes		Yes	
Gatekeeper	Pyronia tithonus				
Grayling	Hipparchia semele	Yes		Yes	
Grizzled Skipper	Pyrgus malvae			Yes	
High Brown Fritillary	Fabriciana adippe			Yes	
Marsh Fritillary	Euphydryas aurinia	Yes		Yes	
Pearl-bordered	Boloria euphrosyne	Yes		Yes	
Fritillary					
Red Admiral	Vanessa atalanta				
Silver Studded Blue	Pledeius argus	Yes	Yes	Yes	
Small Heath	Coenonympha pamphilus	Yes		Yes	
Wall	Lasiommata megera	Yes		Yes	
White Admiral	Limenitis camilla	Yes		Yes	
White-letter Hairstreak	Satyrium w-album	Yes		Yes	
CLUBMOSS					
Marsh Clubmoss	Lycopodiella inundata			Yes	
CRUSTACEA					
White Clawed-Crayfish	Austropotamobius	Yes	Yes	Yes	
•	•	80	•	•	



		1			
DRACONELIES AND D	pallipes				
DRAGONFLIES AND D		ı		1	
Banded Demoiselle	Calopteryx splandens				
Black Tailed Skimmer	Orthetrum cancelletum				
Common Darter	Sympetrum striolatum			1	
Norfolk Hawker	Aeshna isoceles	Yes	Yes	Yes	
Small Red Damsel Fly	Ceriagrion tenellum				
Southern Hawker	Aeshna cyanea				
FISH					
Brook Lamprey	Lampetra planerri				Yes
Brown Trout	Salmo trutta	Yes			Yes
Bull Head	Cottus gobbio				Yes
Eel	Anguilla Anguilla	Yes			Yes
European River	Lampetra fluviatilis	Yes		Yes	
Lamprey					
<b>FUNGUS AND LIVERW</b>	ORT				
Fen Puffball	Bovista paludosa	Yes			
Norfolk Flapwort	Lophozia rutheana	Yes	Yes		
Zoned Tooth Fungus	Hydnellum concrescens	Yes			
LIVERWORT					
Norfolk Flapwort	Leicolea rutheana		Yes	Yes	
MAMMALS					
Bank Vole	Clethrionomys gareolus				
Barbastelle Bat	Barbastella barbastellus	Yes	Yes	Yes	
Brandt's Bat	Myotis brandtii			1 00	
Brown Hare	Lepus europeus	Yes	Yes		
Brown Long Eared Bat	Plecotis auritus	Yes	Yes	Yes	
Daubentons Bat	Myotis daubentonii	Yes	Yes	100	
Eurasian Beaver	Castor fiber	100	100		Yes
European Badger	Meles meles				Yes
European Hedgehog	Erinaceus europeus	Yes		Yes	103
European Polecat	Mustela putorius	Yes		Yes	
Harvest Mouse	Micromys minutus	Yes		Yes	
Lesser Noctule	Nyctalus leisleri	162		162	
	Pipistrellus nathusii			+	
Nathusius's pipistrelle Bat	Pipistrellus Hatriusii				
Natterer's Bat	Myotis nattereri				
	Nyctalus noctula	Yes	Yes	Voc	
Noctule Bat	,			Yes	
Otter	Lutra lutra	Yes	Yes	Yes	
Red Squirrel	Sciurus vulgaris	Yes		Yes	
Serotine Bat	Eptesicus serotiaus	. Vari	. V		
Soprano Pipistrelle Bat	Pipistrellus pygmaeus	Yes	Yes	Yes	
Water Shrew	Neomys fodiens				
Water Vole	Arvicola terrestris	Yes		Yes	
Whiskered Bat	Myotis mystacinus				
MOLLUSC		T	T	T	
Desmoulin's Whorl Snail	Vertigo moulinsiana	Yes	Yes	Yes	
Narrow Mouther Whorl	Vertigo angustior	Yes	Yes	Yes	
Snail Shining Ramshorn	Segmentina nitida		Yes	Yes	
Snail	- Januaria inada		. 55	. 55	
REPTILES			1		
Adder	Vipera berus	Yes	No	Yes	
Common Lizard	Lacerta vivipara	Yes	No	Yes	
Grass Snake	Natrix natrix	Yes	No	Yes	
Slow Worm	Anguis fragilis	Yes		Yes	
VASCULAR PLANTS					
Annual Knawel	Scleranthus annuus	Yes		Yes	
		81			



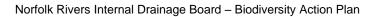
### Norfolk Rivers Internal Drainage Board – Biodiversity Action Plan

Basil Thyme	Acinos arvensis	1		Yes	
Bluebell				162	
Diuebeli	Hyacinthoides non- scripta				
Borrers Saltmarsh	Puccinellia fasciculata	Yes		Yes	
Grass	T decirienta fasciculata	163		163	
Broad-leaved Cotton	Eriophorum latifolium			Yes	
Grass	Ziropiroram rationam			100	
Broad-leaved	Filago pyramidata	Yes		Yes	
Cudweed	l maga pyraminania			100	
Common Spotted	Dactylorhiza fuchsii				
Orchid					
Corn Buttercup	Ranunculus arvensis	Yes		Yes	
Corn Cleavers	Galium tricornutum	Yes		Yes	
Cornflower	Centaurea cyanus	Yes		Yes	
Crested Cow-Wheat	Melampyrum cristatum	Yes		Yes	
Divided Sedge	Carex divisa	Yes		Yes	
Early Marsh Orchid	Dactylorhiza incarnata			Yes	
Fen Orchid	Liparis loeselii	Yes	Yes	Yes	
Greater Water Parsnip	Sium latifolium	Yes	Yes		
Holly Leaved Naiad	Najas marina	Yes	Yes	Yes	
Marsh Stitchwort	Stellaria palustris	Yes		Yes	
Milk Parsley	Peucedanum palustre				
Pyramidal Orchid	Anacamptis pyramidalis				
Red Tipped Cudweed	Filago lutescens	Yes	Yes	Yes	
Shepard's Needle	Scandix pecten-veneris	Yes	Yes	Yes	
Small Flowered	Silene gallica	Yes	Yes	Yes	
Catchfly					
Southern Marsh	Dactylorhiza				
Orchid	praetermissa				
Tassel Stonewort	Tolypella intricata				
Tower Mustard	Arabis glabra	Yes	Yes	Yes	
Tubular Water-Droplet	Oenanthe fistulosa	Yes		Yes	
Water Violet	Hottonia palustris				
Yellow Flag Iris	Iris pseudacorus				



# 10.6. Appendix 6: Biodiversity Action Plan Objectives

Nort	olk Rivers IDB Biodiversity Action Plan Objectives
1	Continue to maintain or enhance the existing extent and quality of Coastal and Floodplain Grazing Marsh through appropriate river management, delivering river restoration schemes or providing Natural Flood Management solutions.
2	Implement restoration of reedbeds and WLMP objectives for the River Nar, River Wensum SAC and Norfolk Valley Fens SAC and identify opportunities elsewhere to restore or enhance reedbed, particularly via the river restoration process.
3	Implement restoration of fens and WLMP objectives for the River Nar SSSI, River Wensum SAC, Langor drain and Norfolk Valley Fens SAC within the IDB area.
4	Enhance and maintain habitat and species diversity on watercourses and headwaters maintained by the Board.
5	Enhance and maintain the flora and fauna of the watercourses maintained by the Board.
6	Ensure compliance to Boards Standard Maintenance Operations (SMO) to maintain rivers and drains.
7	Implement restoration of rivers and drains and WLMP objectives within the IDD.
8	Continue to work closely with Norfolk Wildlife Trust, Natural England, the Norfolk Rivers Trust and consultants to ensure Wet Woodland is considered within the consultation process prior to maintenance, capital scheme delivery and river restoration schemes.
9	Restore ponds within the boards area that are not owned by the IDB.
10	Continue to enhance the range and population of Barn Owls and Kestrels by maintaining or enhancing habitat availability and creating nesting opportunities, within the catchment area.
11	Enhance the population and range of Hirundinidae by installing artificial nest sites or towers within the IDD.
12	Monitor and enhance Tree sparrow population and range by increasing potential nest site availability within the Norfolk Rivers IDD.
13	Control mink within the IDB catchment.





14	Better understand population and extent of water voles within the Boards area.
15	Ensure the appropriate sensitive management of watercourses which will facilitate the maintenance and enhancement of the current distribution and abundance of the Water Vole in the IDB District.
16	Maintain and enhance the current distribution and abundance of the water vole in the IDB District.
17	Maintain current areas of spawning and juvenile habitat for Brown Trout.
18	Work in partnership to restore chalk stream habitat within the IDD.
19	Maintain the present distribution of White Clawed Crayfish.
20	Maintain and create appropriate habitat conditions for white clawed crayfish as part of ongoing river restoration programmes.
21	Understand the status, distribution and ecology of bats in the IDB district.
22	Maintain and enhance the current distribution and abundance of bats within the Board's area.
23	Promote the prevention, control and eradication of non-native invasive species within the Board's area.
24	Raise awareness of the presence and undertake control or eradication of mink in the catchment.



## 10.7. Appendix 7: Habitats and Species Action Plans

Nor	folk Rivers IDB Biodiversity Action Plan Actions	Partners	Date			
COASTAL AND FLOODPLAIN GRAZING MARSH						
1a	Continue to work in partnership with stakeholders to look for opportunities, to enhance grazing marshes by appropriate water level management practice.	RSPB, NRT, NE, EA, Landowners	Ongoing			
1b	Deliver one Natural Flood Management Project per year.	NE, EA, BCP and Landowners	Ongoing			
1c	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance grazing marshes and have involvement in projects.	LNRS	Ongoing			
REEDB	ED					
2a	Continue to work in partnership with stakeholders to look for opportunities, to enhance reedbeds by appropriate water level management practice.	RSPB, NE	Ongoing			
2b	Identify potential sites for habitat restoration and expansion within the IDB area during Capital Scheme delivery and consider future management planning on these sites during this process.	NRT, NE, EA, Landowners	Ongoing			
2c	Enhance and maintain reedbed fringe habitat on the Boards main drains.		Ongoing			
2d	Explore opportunities to create new reedbeds and link with other reedbed projects to create corridors for wildlife.	NRT, NE, EA, Landowners	Ongoing			
2e	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance reedbeds and have involvement in projects.	LNRS	Ongoing			
FENS						



3a	Continue to work in partnership with stakeholders to look for opportunities, to enhance fen habitat by appropriate water level management practice.	RSPB, NE, NWT, Landowners	Ongoing
3b	Work in partnerships to implement Fen Restoration within the IDB area whilst undertaking ELMS objectives and Capital projects.	NWT, NE, EA, Landowners	Ongoing
3c	Implement appropriate restoration via capital schemes for the River Nar and River Wensum SAC, Langor Drain and Norfolk Valley Fens and other NRIDB tributaries.	NE, Landowners	Ongoing
3d	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance fens and have involvement in projects.	LNRS	Ongoing
RIVERS	, CANALS AND DRAINS		
4a	Work with the planning department to review the boards culverting policy.	Planning Department	2024
4b	Consult with Natural England with the aim to map important Spring fed wetland headwaters within the IDD.	NE	2024
5a	Identify opportunities to record species present in watercourses managed by the board.	NBIS	Ongoing
5b	Work in partnership with the EA to report pollution incidents within the IDD.	EA	Ongoing
6a	Regularly update the Boards Standard Maintenance Document.		2023
6b	Ensure compliance with the IDB SMO by auditing on identified number of maintenance works jobs annually, to ensure they are being carried out to an agreed standard across the whole board.		Annually
7a	Continue to work in partnership with stakeholders to deliver river restoration schemes throughout the IDD.	NRT, EA, NE, Landowners	Ongoing
7b	Work with partners to deliver one Natural Flood Management Project per year as a means to minimise sediment and diffuse pollution into chalk river systems and manage downstream flood risk.	NRT, NWNCP, NE, EA, BCP and Landowners	Ongoing



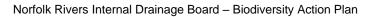
7c	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to undertake river restoration and have involvement in projects.	LNRS	Ongoing					
WET V	WET WOODLAND							
8a	Consult Norfolk Wildlife Trust prior to work through or near County Wildlife Sites that are outside of the SMO.	NWT	Ongoing					
8b	Include wet woodland conservation in all aspects of IDB maintenance, capital scheme and river restoration delivery.	NE, NWT, NRT, EA and LA's	Ongoing					
8c	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance wet woodland and have involvement in projects.	LNRS	Ongoing					
POND	S							
9a	Understand the extent of ghost ponds in Norfolk Rivers.	Norfolk Ponds Project	2026					
9b	Ensure relevant staff are trained regarding pond restoration.		2023-24					
9с	Identify opportunities to record amphibian species present in ponds.	NBIS	Ongoing					
9d	Work in partnership via the Local Nature Recovery Strategy partnerships to look for opportunities to enhance ponds and have involvement in projects.	LNRS	Ongoing					
BARN	OWL AND KESTREL							
10a	Continue to monitor nest boxes within the IDB area working in partnership with the Wildlife Conservation Partnership.	WCP	Ongoing					
10b	Continue to maintain, repair or replace nest boxes in the IDB area working in partnership with the Wildlife Conservation Partnership.	WCP	Ongoing					
10c	Continue to maintain sward height during bankside maintenance mowing of 150mm.	Staff, Contractors	Ongoing					
HIRUN	IDINIDAE - SAND MARTINS, SWALLOWS AND SWIFTS							



11a	Explore options for Sand martin artificial nesting sites within the Norfolk Rivers IDB area.	Landowners	Ongoing				
11b	Create a number of artificial nesting habitats where opportunities arise for House martins and Swallows within the IDD.	Landowners	Ongoing				
TREE S	TREE SPARROW						
12a	Install nest boxes at suitable sites within the IDB district.	Landowners	Ongoing				
12b	Report nesting activity and nest box sites to the NBIS.	NBIS, Landowners	Annually				
WATER	WATER VOLE						
13a	Continue to contribute funding to the Water Life Recovery Trust.	Water Life Recovery Trust	Annually				
13b	Continue to work with the Water Life Recovery Trust on mink eradication.	Water Life Recovery Trust	Annually				
14a	Undertake yearly recording by operational staff and report to local biodiversity record centres.	NBIS	Annually				
15a	Ensure compliance with the IDB SMO by auditing 4 jobs per year jobs, to ensure they are being carried out sensitively and to an agreed standard across the Board.		Annually				
16a	Take opportunities to enhance water vole habitat where appropriate during Capital or river/wetland restoration schemes.	NE, EA, NWT and Landowners	Ongoing				
BROWN	BROWN TROUT						
17a	Ensure compliance with the IDB SMO by auditing 4 jobs per year jobs, to ensure they are being carried out sensitively and to an agreed standard across the Board.		Annually				
17b	Ensure the life stages, habitat requirements and migration routes for the brown trout are taken into consideration	NE, EA and					



	when developing river restoration projects.	Landowners	Ongoing				
18a	Continue to establish the feasibility and delivery of other river restoration projects on IDB stretch of chalk stream reaches within Norfolk Rivers IDD. Where appropriate, work in partnership with other Stakeholders to achieve this.	NE, NRT, EA and Landowners	Ongoing				
18b	Work with partners to deliver one Natural Flood Management Project per year as a means to minimise sediment and diffuse pollution into chalk river systems and manage downstream flood risk.	NE, EA, BCP and Landowners	Ongoing				
WHITE	WHITE CLAWED CRAYFISH						
19a	Identify white clawed crayfish populations within the IDD by working in partnership with the Norfolk Rivers Trust or undertaking white clawed crayfish surveys or eDNA surveying.	NRT	Ongoing				
19b	Ensure compliance with the IDB SMO by auditing an identified number of maintenance works jobs annually, to ensure they are being carried out to an agreed standard across the whole board.		Annually				
19c	Ensure all environment officers are licenced to undertake surveys (CL11 or CL24).	NRT, NE	Ongoing				
19d	Review and ensure biosecurity measures are being maintained across the Board.	Contractors and Staff	Ongoing				
19e	Contribute to crayfish surveys and eDNA testing throughout the NRIDD.	NE, NRT, EA and Landowners	Ongoing				
20a	Liaise and work closely with the Norfolk Crayfish Group.	NRT, EA, NE and NWT	Ongoing				
20b	Continue to establish the feasibility and delivery of river restoration projects on IDB stretches of chalk stream reaches within Norfolk Rivers Area. Where achievable, work in partnership with other stakeholders to achieve this.	NRT, EA, NE and Landowners	Ongoing				
BATS (A	BATS (ALL SPECIES)						
21a	Survey and monitor bat presence around IDD as part of the BTO Norfolk Bat Survey.	вто	Ongoing				





21b	Ensure training is delivered to all environment officers.		Ongoing				
22a	Install bat boxes for roosting and hibernation on suitable IDB structures.		Ongoing				
22b	Continue to work with consultants for capital schemes involving bat mitigation and habitat enhancements.	Consultants, Landowners	Ongoing				
NON NA	NON NATIVE INVASIVE SPECIES						
23a	Establish a partnership with the NBIS to receive up to date records of Invasives within the local area.	NBIS	Ongoing				
23b	Continue to contribute to and work in partnership with the Norfolk Non-Native Species Initiative (E.g. Floating pennywort).	NNNSI	Ongoing				
23c	Maintain records for all species of concern using the 'iRecord' app.	NNNSI, Staff, Contactors	Ongoing				
23d	Train staff regularly in key non-native species identification.	NNNSI, Staff, Contactors	Ongoing				
23e	Ensure availability and regular review of identification guides developed for key non-native species to be used by officers, staff and contractors on site.	NNNSI, Staff, Contactors	Ongoing				
23f	Regularly review and ensure robust biosecurity measures are being maintained across the Board.	Staff, Contractors	Ongoing				
24a	To continue to work in partnership with Mink control/eradication groups.	WLRT	Ongoing				
24b	Maintain 10 IDB traps within the catchment.	WLRT	Ongoing				
24c	Report catches to the WLRT.	WLRT	Ongoing				