

Witham and Humber Drainage Boards Nature Strategy 2026-2031

Upper Witham Drainage Board

Witham First District Internal Drainage Board

Witham Third District Internal Drainage Board

North East Lindsey Drainage Board

Statement

This Nature Strategy has been prepared by the Witham and Humber Internal Drainage Boards (IDBs) in line with the commitment set out in the Implementation Plan of the Defra Internal Drainage Board Review (2007), which encourages IDBs to produce and maintain up-to-date strategy documents for biodiversity and the natural environment.

It demonstrates the Boards' ongoing commitment, as public authorities, to conserve and enhance biodiversity in accordance with relevant legislation and policy. This includes, but is not limited to, the Environment Act 2021, the Natural Environment and Rural Communities Act 2006, the 25 Year Environment Plan, and the Environmental Improvement Plan 2023, as well as requirements associated with Biodiversity Net Gain and the Water Framework Directive.

The Strategy reflects the Boards' ambition to maximise the contribution of their functions to the protection, restoration and enhancement of biodiversity. It seeks to support priority habitats and species identified under national and local frameworks, while delivering wider environmental benefits through the Boards' day-to-day water level and land management activities. This is achieved through the establishment of clear objectives, measurable actions and, where appropriate, targets aligned with current environmental priorities.

The Boards have adopted this Nature Strategy as a formal policy and are committed to its effective implementation. The document will be kept under regular review to ensure it remains aligned with evolving legislation, policy, and best practice, and will be updated periodically as required.

…… Date ……..

This Nature Strategy is a public statement by the Boards of their biodiversity objectives and the methods by which they intend to achieve them.

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

You can contact us about this Nature Strategy by writing to the following address:

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Further information is available on the Board's website: **www.witham3idb.gov.uk**

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1.0 Introduction

1.1. 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 Nature Strategy 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.

1.2. 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 Bill (Act) 2020, 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 Bill (Act) 2021
- Conservation of Habitats and Species Regulations 2017
- Eels (England and Wales) Regulations 2009

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- Water Environment (Water Framework Directive) (England and Wales) Regulations 2003
- Natural Environment and Rural Communities Act 2006 (Section 40)
- 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

1.3. Policy & Strategic Background

The UK's approach to biodiversity has developed from international commitments into a comprehensive and structured framework guiding environmental protection, recovery and enhancement across terrestrial and aquatic environments. Global assessments, including those by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, continue to highlight accelerating declines in species and habitats, with climate change recognised as a significant long-term driver of biodiversity loss. The Kunming-Montreal Global Biodiversity Framework established ambitious global targets for 2030, including the protection of at least 30% of land and water, the restoration of degraded ecosystems, and the halting of species decline. These commitments underpin national strategies and provide a clear framework for action at regional and local levels.

At the domestic level, policy and legislation have increasingly formalised the expectation that public bodies embed biodiversity considerations within decision-making. The Biodiversity 2020 Strategy set out an early coordinated approach to reversing biodiversity loss, while the 25 Year Environment Plan advanced this by promoting landscape-scale recovery and the value of ecosystem services. These strategic priorities are now embedded in statute through the Environment Act 2021, which strengthens the duty on public authorities, including Internal Drainage Boards, to conserve and enhance biodiversity and introduces mechanisms such as biodiversity net gain and long-term environmental targets.

This Nature Strategy translates these strategic and legislative drivers into practical, locally relevant actions for the IDB. Through the enhancement of habitat quality, connectivity and condition, the Board can support priority species and habitats while contributing to the delivery of national and international biodiversity targets.

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1.4. Purpose

This Nature Strategy 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.

1.5. Vision

The IDB's vision is:

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

1.6. Aims

The aims of this Nature Strategy are:

- To ensure that opportunities for conservation and enhancement of biodiversity are fully considered throughout the IDB's operations, as required by the Natural Environment and Rural Communities Act (2006);
- To enable more effective monitoring and reporting of progress and outcomes;
- To ensure that Priority species and habitats receive effective action within defined targets within the drainage district;
- To identify targets and appropriate actions for other habitats and species of local importance within the drainage district. This includes invasive non- native species;
- To contribute to local environmental partnerships such as the Local Nature Partnership (GLNP) to ensure that programmes and priorities for biodiversity conservation are aligned and maintained in the long term;
- To raise awareness within the IDB and locally of the need for biodiversity conservation, and to communicate with the local and wider community what actions the IDB are undertaking to support biodiversity.

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2. The IDB Nature Strategy Process

2.1. The Biodiversity Audit

The Boards have conducted a biodiversity audit of its drainage districts and identified those habitats and species that would benefit from particular management or actions by the IDB.

This Nature Strategy 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 Strategy.

2.2. 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 document 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.

2.3. 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 (Bill) 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.

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3. The Upper Witham IDB Biodiversity Audit

3.1. The Upper Witham Internal Drainage District

The drainage district is generally located on the west side of Lincoln, upstream of High Bridge. It extends as a network of narrow areas of land as far as Gainsborough to the north, as far as Newark to the south-west, and as far as South Witham to the south.

The Board's District to the west of Lincoln, and to the north-west of the city as far as Gainsborough, follows the catchments of the River Till and Cricket Till, as of the Fossdyke Canal. The Board maintained watercourses in these areas are the upper reaches and tributaries of these larger channels, as well as being large-sized watercourse in their own right, such as the Catchwater Drain and the Oxpasture Drain. Settlements in and adjacent to this part of the Board's District are Upton and Willingham-by-Stow in the north; Saxilby, Skellingthorpe and North Scarle in the west.

Closer to the city the Board's area includes the Pike Drain through Whisby Nature Park. South of Lincoln, the Board maintained watercourses are found as the upper reaches and tributaries of the River Brant and River Witham in the vicinity of North Hykeham, Bassingham, Brant Broughton, Long Bennington and Grantham.

The most remote Board maintained watercourse is at South Witham which is approximately 15km south of Grantham. There are several "islands" of high ground which punctuate and are excluded from the Board's District.

The following outlines the key details of the District:

Area of Drainage District	**21,000 ha**
Area of agricultural land	**18,490 ha**
Area of other (non-agricultural) land	**2,610 ha**
Watercourses (maintained):	**324 km**
Pumping Stations	**15**
Estimated Riparian Watercourses (Based on OS data)	**TBC**

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3.2. Map of Audit Area (Drainage District)

The area covered by the drainage district of the IDB is shown below.



3.3. Geology

The geology of the Board's area is mixed, with alluvium, limestones, clays, boulder clay and sand with gravel solid and drift geologies all present. Deep underlying deposits of oil, coal and gas occur within the Board's area.

3.4. 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 majority of the Board's District lies within the Trent & Belvoir Vales character area. The exception is the part which lies south of Grantham, which is within the Kesteven Upland character area.

3.5. Landscape Designations

There are no National Parks or Areas of Outstanding Natural Beauty (AONB) in the Drainage District

3.6. Sites and Monuments

Scheduled Ancient Monuments are not directly related to Nature and Biodiversity matters. Information held by the Board and other sources has therefore not been collated. Monuments are only relevant in cases where they abut the Board maintained watercourses and such monuments would be referred to on a site by site basis as appropriate.

3.7. Tree Preservation Orders

Tree Preservation Orders (TPOs) are not directly related to Nature and Biodiversity matter since they are made on individual trees, groups or woods for landscape and amenity reasons. Information held by the Board and other sources has therefore not been collated. Orders are only relevant where they occur adjacent to the Board maintained watercourses and would be referred to on a site by site basis as appropriate.

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3.8. Statutory Nature Conservation Sites

4.8.1 Internationally Designated Sites

There are no internationally designated nature conservation sites within the District.

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.

Site name	Designation	Component of an International Site	Features Relevant to IDB
Allington Meadows	SSSI	No	• Unimproved neutral grassland

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.

Site name	Designation	Features Relevant to IDB
Whisby Nature Park	Local Nature Reserve (LNR)	• Open water • Aquatic and marginal vegetation • Marshes • Bogs • Invertebrates • Breeding and wintering waterbirds
Swanholme Lakes	LNR (also SSSI)	• Open water • Aquatic and marginal vegetation • Marshes • Bogs • Invertebrates

4.8.4 Non-statutory Nature Conservation Sites

A 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 Local Wildlife Sites are to be found within or close to the drainage district.

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Site name	Designation	Features Relevant to IDB
LINCOLNSHIRE SITES		
Upton Grange Road Verges	LWS	Road verge / green lane / path
Willingham to Fillingham Road Verges	LWS	Road verge / green lane / path
Old Wood, Skellingthorpe	LWS	Woodland / plantation
Skellingthorpe Big Wood - Old Wood House	LWS	Woodland / plantation
Burton Gravel Pits	LWS	Lake / pond / reservoir / Pit
Foal Close East	LWS	Woodland / plantation
Witham Valley South Drain	LWS	Drain / river / canal / stream / ditch / spring
Witham Leas	LWS	Woodland / plantation
Witham Marshes	LWS	Field / pasture / grassland
Spike Island	LWS	Woodland / plantation
West Common	LWS	Field / pasture / grassland
Swan Pool	LWS	Woodland / plantation
Witham Corridor, South of Bracebridge	LWS	Drain / river / canal / stream / ditch / spring
Witham Corridor, North of Bracebridge	LWS	Drain / river / canal / stream / ditch / spring
South Witham Marshes	LWS	Field / pasture / grassland
Pyewipe Junction	LWS	Woodland / plantation
Old Decoy, Skellingthorpe	LWS	Woodland / plantation
Bishop's Bridge to Fossdyke Main Drain	LWS	Drain / river / canal / stream / ditch / spring
Boultham Main Drain	LWS	Drain / river / canal / stream / ditch / spring
Boultham Mere	LWS	Lake / pond / reservoir / pit
Boultham Park	LWS	Woodland / plantation
Brayford Pool	LWS	Lake / pond / reservoir / pit
Catchwater Drain, Lincoln	LWS	Drain / river / canal / stream / ditch / spring
Fossdyke Delph	LWS	Drain / river / canal / stream / ditch / spring
Fossdyke Navigation, Pyewipe Inn to Brayford Pool	LWS	Drain / river / canal / stream / ditch / spring
Great Gowts Drain	LWS	Drain / river / canal / stream / ditch / spring
Newark Road to River Witham Drain	LWS	Drain / river / canal / stream / ditch / spring
Hykeham Railway Line, Whisby Nature Park	LWS	Brownfield / ruderal / previously developed / disused railway
Hykeham Railway Line, East	LWS	Brownfield / ruderal / previously developed / disused railway
Teal's Lake, Whisby Pits Complex	LWS	Lake / pond / reservoir / pit
Mr Nevile's Pits East, Whisby Pits Complex	LWS	Lake / pond / reservoir / pit
Mr Nevile's Pits West, Whisby Pits Complex	LWS	Lake / pond / reservoir / pit
Ski World, Whisby Pits Complex	LWS	Lake / pond / reservoir / pit
North Hykeham Gravel Pit	LWS	Lake / pond / reservoir / pit

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Richmond Lakes	LWS	Lake / pond / reservoir / pit
Whisby Nature Park, Whisby Pits Complex	LWS	Lake / pond / reservoir / pit
North Hykeham Hayfield	LWS	Field / pasture / grassland
Brant Plantation	LWS	Woodland / plantation
Brant Washlands	LWS	Field / pasture / grassland
River Witham, Bracebridge to South Hykeham	LWS	Drain / river / canal / stream / ditch / spring
North Hykeham Meadows	LWS	Field / pasture / grassland
River Witham, Aubourn to Beckingham	LWS	Drain / river / canal / stream / ditch / spring
Carlton le Moorland Grassland	LWS	Field / pasture / grassland
Beckingham Highway Trust Fields	LWS	Field / pasture / grassland
River Brant	LWS	Drain / river / canal / stream / ditch / spring
Beckingham Ranges	LWS	Field / pasture / grassland
River Witham, Long Benington	LWS	Drain / river / canal / stream / ditch / spring
River Witham, Marston to Belton	LWS	Drain / river / canal / stream / ditch / spring
Marston Grassland and Marsh	LWS	Field / pasture / grassland
Queen Elizabeth Park	LWS	Field / pasture / grassland
River Witham, Queen Elizabeth Park	LWS	Drain / river / canal / stream / ditch / spring
Belton Park and Golf Course	LWS	Parkland / wood pasture
Stoke Rochford Pumping Station	LWS	Field / pasture / grassland
Great Ponton A1 Road Verges	LWS	Road verge / green lane / path
Easton Lane Verges	LWS	Road verge / green lane / path
River Witham, Little Ponton	LWS	Drain / river / canal / stream / ditch / spring
Saltersford Valley	LWS	Field / pasture / grassland
Little Ponton Grassland	LWS	Field / pasture / grassland
Grange Farm Pasture	LWS	Field / pasture / grassland
Great Ponton Marsh	LWS	Field / pasture / grassland
Stoke Rochford Grassland	LWS	Field / pasture / grassland
River Witham, Great Ponton to Easton Park	LWS	Drain / river / canal / stream / ditch / spring
NOTTINGHAMSHIRE SITES		
Cotham Station	SINC	'Species-rich calcareous grassland and scrub developed on an ex-industrial site'
Staunton Quarry	SINC	'A valuable area of wetland, grassland and scrub communities on base-rich soils - of botanical and invertebrate zoological interest'
Langford Moor Area	SINC	'Valuable plant and animal communities along rides and in drainage ditches throughout this coniferous forestry plantation'
Railway Pond, Balderton	SINC	'Important scrub and open water habitats developed on a long disused ballast pit'
Shire Dyke, Balderton	SINC	'A representative stretch of a species-rich drain'
North Harby Verge	SINC	'A species-rich roadside verge, cut for hay'
The Ring, Thorney	SINC	A narrow strip of ancient deciduous woodland on

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		sandy soil, bordered by a species-rich drain
Thorney Drain	SINC	A shallow field drain in an arable area with notable emergent vegetation and bank-side grassland
Drinsey Nook Lane Drain, Thorney	SINC	A shallow, slow flowing drain with a notable aquatic flora
Gibbet Wood, Thorney	SINC	A partly cleared, sand-land deciduous woodland with a noteworthy flora
Shire Dyke, Barnby	SINC	Drain with noteworthy aquatic, swamp and bankside vegetation
Cowtham House Arable	SINC	Notable 'arable weeds' along a field margin
Shire Dyke, Balderton South	SINC	County boundary drain of notable botanical and zoological importance
Balderton Ballast Pit	SINC	A long established ballast pit with a noteworthy aquatic and bank-side flora
Ox Pasture Drain	SINC	A broad drainage channel with an outstanding array of aquatic species
Barnby Manor Farm Drain	SINC	A field drain noteworthy for Water Beetles
Wigsley Drain	SINC	A drain of interest for Water Beetles
Plot Wood	SINC	A characteristic sand-land woodland
Mineral Line, Cotham	SINC	'Scrub and base-rich grassland along a disused raiway line'
Witham Pastures	SINC	'A sequence of damp grasslands on alluvial soils'
Wigsley Airfield Pool	SINC	'A notable aquatic community in and around a pond of recent origin'
Wigsley Park Wood	SINC	'A typical open woodland of light freely-draining soils'
Wigsley Park Wood	SINC	'An historical wood that retains both faunal and floral interest'
Wigsley Wood	SINC	A mosaic of diverse habitats on an abandoned airfield
Wigsley Dismantled Airfield	SINC	A floodbank with notable open grassland communities
Witham Bank, Barnby	SINC	A section of the River Witham of interest for Water Beetles
River Witham	SINC	A long length of dismantled railway line with a rich diversity of characteristic and notable herbs
Fledborough to Harby Dismantled Railway	SINC	'A good mixed habitat association of acidic grassland, heath and deciduous woodland'
Newark Golf Course	SINC	A shallow drain with a notable aquatic flora bordering an open acidic woodland
Crow Wood Drain	SINC	Marshy grassland
Sleaford Road Grassland	SINC	A site supporting a butterfly species of principle importance
Cottam Restored Landfill	SINC	Notable grassland and species on a gypsum spoil heap
Ayer's Rock, Cotham	SINC	A drain of interest for Water Beetles
Shire Dyke Tributary Drain	SINC	'Species-rich calcareous grassland and scrub developed on an ex-industrial site'

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3.9. Habitat Audit Summary

This habitat audit provides an overview of the nationally and locally important habitats present within the Board's drainage district, with consideration given to those that may be influenced by the Board's land drainage, flood risk management and maintenance activities.

The assessment includes habitats recognised as UK Priority Habitats under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, alongside locally important habitats identified through regional biodiversity strategies and the Lincolnshire Local Nature Recovery Strategy (LNRS). It also considers the ecological importance of the Board's managed drainage network, recognising the contribution that engineered watercourses can make to biodiversity, habitat connectivity and wider nature recovery.

For each habitat, the audit considers its distribution and condition within the drainage district, the potential interactions with the Board's operational activities, and opportunities to maintain, enhance, restore or expand habitat where practicable. The identified opportunities are intended to inform the Board's future environmental priorities and ensure that biodiversity considerations are incorporated into the planning and delivery of its statutory functions.

Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or expanding
Arable Field Margins	Arable field margins are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can provide important feeding, nesting and refuge habitat for farmland wildlife. Buffer strips are also relevant to local nature recovery priorities.	Arable land is widespread throughout the drainage district. Field margins are common but are often narrow and intensively managed. More diverse margins can occur alongside watercourses, drainage channels and access tracks.	Margins alongside Board-maintained watercourses can provide valuable buffer habitat, helping to intercept sediment and agricultural runoff, as well as providing wildlife corridors and refuge areas.	**Low –** Management is largely the responsibility of individual landowners. However, the Board can help retain existing margins by avoiding unnecessary disturbance, considering access arrangements and promoting no net loss where its activities could affect them.
Reedbeds and Wetland habitats	Reedbeds, fens and other wetland habitats are recognised for their importance to biodiversity, supporting specialist plants, invertebrates, birds and other wetland species. They are also important within	Reedbed habitat occurs in isolated areas and as established margins alongside some watercourses and open water bodies. The extent and	Reedbed margins can provide valuable habitat alongside the drainage network, although excessive encroachment can affect conveyance and access	**Medium** – Opportunities exist to retain and selectively expand existing reedbed margins where hydraulic capacity and operational access allow. Habitat creation may also be considered through suitable restoration and enhancement

	regional nature recovery priorities.	condition of these habitats vary across the district.	for maintenance.	projects.
Wet Woodland	Wet woodland is a UK Priority Habitat under Section 41 of the NERC Act 2006. It is a relatively scarce habitat associated with wet soils and floodplain environments, supporting a range of specialist wildlife.	Wet woodland is generally limited to isolated locations, often associated with open water bodies, wetland margins and areas of permanently damp ground.	Wet woodland can provide valuable habitat and contribute to landscape connectivity. However, tree growth and encroachment may conflict with access, bank stability and maintenance requirements in certain locations.	**Low –** Opportunities to expand wet woodland are limited by the operational requirements of the drainage network. Existing areas should be retained where practicable, with potential for small-scale expansion away from critical maintenance corridors.
Engineered drains and ditches	Although engineered drainage channels are not generally classified as UK Priority Habitats in their own right, they can support significant aquatic and marginal biodiversity. They contribute to habitat connectivity, water quality and wider freshwater ecosystem functioning.	Extensive and widespread throughout the drainage district, forming the principal managed watercourse network under the Board's control. Individual channels vary considerably in their ecological condition and habitat value.	These habitats are directly managed by the Board and are central to its statutory drainage and flood risk management functions. Routine maintenance can influence aquatic vegetation, marginal habitats, water quality and species distribution.	**High –** The Board has considerable scope to influence the ecological condition of its drainage network through sensitive maintenance, appropriate cutting regimes, marginal habitat management and targeted enhancement. Opportunities should be pursued in accordance with flood risk management requirements and the ADA Biodiversity Manual.
Ponds	Ponds are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can support diverse communities of amphibians, aquatic invertebrates and wetland plants, particularly where they are well connected to surrounding habitats.	Ponds occur sporadically throughout the drainage district, including agricultural field ponds, isolated waterbodies and attenuation ponds. Their ecological condition and management vary considerably.	Board activities in the vicinity of ponds may influence local water levels, hydrology and associated habitats. Maintenance operations can also cause disturbance to wildlife where appropriate precautions are not taken.	**Low/Medium** – Direct opportunities are relatively limited, although the Board can support the retention and protection of existing ponds and explore opportunities for new pond creation through appropriate projects, including natural flood management initiatives
Natural Rivers and streams	Rivers and streams support important freshwater ecosystems and are recognised within national biodiversity and water environment objectives. Certain river habitats are also identified as UK Priority Habitats, including chalk rivers and rivers	Natural rivers and streams are present within the drainage district but represent a smaller proportion of the overall network than engineered drainage channels. Many are	The Board's influence is generally more limited than on its directly maintained watercourses. However, works undertaken on behalf of, or in proximity to, other authorities	**Low/Medium** – Opportunities are primarily associated with partnership working, sensitive delivery of works and supporting wider river restoration initiatives. Where the Board undertakes works affecting natural watercourses, opportunities to protect and enhance existing

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	supporting priority habitat features.	managed by the Environment Agency or other responsible authorities.	can affect river habitats through vegetation management, sediment disturbance, bank works and changes to channel structure.	habitat should be considered.
Coastal and floodplain grazing marsh	Coastal and floodplain grazing marsh is a UK Priority Habitat under Section 41 of the NERC Act 2006. These habitats are important for breeding and wintering birds, wetland plants and invertebrates, and are often associated with traditional grazing and seasonal flooding.	Areas of grazing marsh and floodplain meadow habitat occur within parts of the drainage district, including the Stapleford area and potentially Thurlby and other isolated locations. Their ecological value is influenced by grazing, water levels and land management.	The Board's management of water levels and drainage infrastructure can influence the hydrological conditions supporting these habitats. Appropriate water level management can help maintain their ecological value, where compatible with wider drainage requirements.	**Medium –** Opportunities may arise through partnership working with landowners and conservation organisations to support suitable water level management, retain existing habitat and explore restoration opportunities where appropriate.
Hedgerows	Hedgerows are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. Species-rich and structurally diverse hedgerows provide important nesting, feeding and commuting habitat for birds, mammals and invertebrates.	Hedgerows are widespread throughout the drainage district, although many are species-poor or intensively managed. More diverse and established sections remain in some locations, particularly alongside field boundaries and watercourses.	Hedgerows provide habitat connectivity across the agricultural landscape and can complement marginal habitats alongside Board-maintained watercourses. Maintenance activities, access requirements and vegetation management may affect their condition.	Medium – The Board can help retain existing hedgerows through sensitive operational planning, avoiding unnecessary removal and encouraging replacement planting where losses are unavoidable. Opportunities for new planting may also be considered where compatible with access and maintenance requirements.
Lowland meadows	Lowland meadows are a UK Priority Habitat under Section 41 of the NERC Act 2006. They are characterised by species-rich grassland communities and support a diverse range of wildflowers, grasses, pollinators and other invertebrates. They have experienced significant historical losses through agricultural intensification, drainage and changes in grassland management	Species-rich grassland is likely to be relatively scarce and fragmented across the drainage district, with potential occurrences on riverbanks, drainage embankments, floodplain margins, roadside verges and areas of less intensively managed grassland. Further habitat survey and mapping would help establish the extent of remaining examples.	Board-owned and managed land, including pumping station grounds, access strips and suitable watercourse embankments, may provide opportunities to retain or enhance species-rich grassland. Cutting frequency, timing and arisings management can influence the botanical diversity of these areas.	**Medium –** Opportunities exist to improve the condition of suitable grassland through reduced cutting frequency, appropriate arisings removal and targeted wildflower enhancement using locally appropriate seed mixes. Existing species-rich grassland should be prioritised for retention, with potential to create additional meadow areas on suitable Board-managed land where compatible with operational requirements.

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3.10. Species Audit Summary

The species audit provides an overview of priority, protected and other species, which are recorded within the drainage district or considered likely to occur and potentially be influenced by the Board's activities. It also identifies species of local conservation importance, including those highlighted through the Greater Lincolnshire Local Nature Recovery Strategy (LNRS) and other relevant local biodiversity priorities.

The audit considers the conservation status and significance of each species, its known or potential occurrence within the drainage district, and the extent to which the Board's activities may influence its habitat, distribution or wider conservation status. Particular consideration is given to species associated with watercourses, wetlands, grasslands, hedgerows and other habitats that may be directly or indirectly affected by land drainage, water-level management, watercourse maintenance, pumping station operations and capital works.

For each species, the audit provides a summary of relevant national and local conservation priorities, its relationship with the drainage district and the potential implications of the Board's operations. It also considers opportunities for the Board to contribute positively through appropriate maintenance practices, habitat protection and enhancement, species monitoring, invasive species management and partnership working.

The audit is intended to help identify where the Board's activities may present risks to species, where operational changes or additional safeguards may be appropriate, and where there are realistic opportunities to support biodiversity recovery. It therefore provides an evidence base for the development of the species action plans within this strategy, helping to ensure that the Board's environmental objectives are proportionate, locally relevant and aligned with its statutory duties and operational responsibilities.

The inclusion of a species within the audit does not necessarily imply that the Board has direct responsibility for its conservation or that its presence has been confirmed throughout the drainage district. Rather, it recognises the potential for the Board to influence the species, either through its management of watercourses and associated land or through collaborative work with landowners, statutory bodies and conservation organisations.

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Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or increasing populations
Water vole (Arvicola terrestris)	UK Priority Species under Section 41 of the NERC Act 2006. Legally protected under the Wildlife and Countryside Act 1981. Populations have experienced significant declines, with predation by American mink, habitat loss and fragmentation being important pressures.	Recorded throughout Lincolnshire and considered likely to occur across much of the drainage district, although populations may be less frequent in smaller headwaters and less suitable watercourses. Distribution should be informed by local records and surveys.	Directly associated with the Board's drainage network. Bank profiling, vegetation clearance, dredging and changes to bankside habitat can affect water vole populations and their burrows.	**High** – Retain suitable bankside vegetation, maintain connected habitat and avoid unnecessary disturbance to burrows. Incorporate water vole considerations into maintenance planning and undertake surveys where appropriate
Eurasian otter (Lutra lutra)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981. Otters have recovered across much of England but remain vulnerable to habitat degradation, pollution, disturbance and loss of suitable resting sites.	Scattered records occur across the drainage district, with sightings often associated with larger watercourses and main river corridors, including the River Witham.	The drainage network provides opportunities for movement and foraging. Bank maintenance, vegetation removal and works near suitable resting or breeding locations may cause disturbance.	**Medium** – Retain suitable bankside vegetation and undisturbed terrestrial cover, particularly along larger channels. Consider otter requirements when planning works and incorporate habitat enhancements where practicable
Badger (Meles meles)	Widespread in the UK and protected under the Protection of Badgers Act 1992. Although not a Section 41 Priority Species, badgers and their setts are relevant considerations when undertaking land management and construction works.	Widespread and frequently recorded throughout the drainage district.	Potential interactions include works near setts, access routes, pumping stations and earth-moving activities.	**Low –** Limited opportunities for targeted population enhancement through the Board's activities. The priority is to identify and protect setts, avoid disturbance and implement appropriate mitigation where works may affect badgers.
Great crested newt (Triturus cristatus)	European Protected Species, protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Also a UK Priority Species under Section 41 of the NERC Act 2006.	Scattered records occur within the drainage district. The relatively limited availability of ponds close to some Board operational areas may restrict suitable breeding habitat and opportunities for regular recording.	Potential interactions are most likely around pumping stations, depots, grassland areas and capital works where ponds or suitable terrestrial habitat are present.	**Low/Medium –** Retain suitable terrestrial habitat and consider the installation of hibernacula at appropriate sites. Opportunities may also arise through natural flood management schemes and the creation or enhancement of attenuation ponds.

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European eel (Anguilla anguilla)	UK Priority Species under Section 41 and classified as Critically Endangered on the IUCN Red List. European eel populations have undergone severe long-term declines, with barriers to migration, habitat loss and changes to freshwater conditions contributing to the pressures faced by the species.	Recorded and considered likely to occur throughout the Board's drainage district, particularly within the larger watercourses and connected drainage network.	Pumping stations, water-level management and structures within the drainage network can influence eel movement and survival. Pumping operations may present a risk of injury or mortality.	**Medium/High –** Continue engagement with the Environment Agency regarding eel screening exemptions and opportunities for eel-friendly pumping infrastructure. Consider eel requirements during pumping station upgrades and establish baseline information where possible.
Common toad (Bufo bufo)	UK Priority Species under Section 41 of the NERC Act 2006. Populations have declined in parts of the UK, with habitat fragmentation, loss of breeding ponds and road mortality among the recognised pressures.	Likely to occur throughout the drainage district, although existing records are relatively scattered and the extent of local populations is not fully established.	Suitable terrestrial habitat may occur around drainage channels, hedgerows, grassland, pumping stations and field boundaries. Works affecting ponds and surrounding terrestrial habitat may influence local populations.	**Medium –** Improve knowledge of local distribution and retain suitable terrestrial habitat. Opportunities include creating or enhancing ponds, maintaining connected habitats and incorporating hibernacula into suitable enhancement schemes.
Water-associated birds (various species)	Numerous water-associated and farmland bird species are protected under the Wildlife and Countryside Act 1981. Several are also Red or Amber listed under Birds of Conservation Concern, reflecting declines in breeding populations and distribution.	A range of species occurs throughout the drainage network and wider agricultural landscape. The distribution and importance of individual species varies between locations and habitats.	Maintenance activities can affect nesting and feeding habitat, particularly through vegetation cutting, bank reprofiling and dredging. The timing and method of works are important considerations during the bird breeding season	**High –** Undertake works outside the main bird nesting season where practicable, generally March to August, while recognising that active nests are protected at all times. Retain suitable vegetation, reinstate disturbed banks promptly and incorporate nesting opportunities into appropriate capital projects.
Barn owl (Tyto alba)	UK Priority Species under Section 41 of the NERC Act 2006. Barn owls are also protected under the Wildlife and Countryside Act 1981. Lincolnshire supports important populations, with drainage corridors, grassland margins and nest boxes contributing to suitable habitat.	Widespread throughout the district, particularly across low-lying agricultural areas where suitable foraging habitat and nesting opportunities are available.	Drainage channels and associated grassland margins can provide valuable hunting habitat by supporting field vole populations. Nest boxes installed on suitable trees and structures also provide breeding opportunities.	**High** – Maintain existing nest boxes and install additional boxes where suitable locations are identified. Manage grassland margins to support small mammal populations and retain suitable hunting corridors.

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Kestrel (Falco tinnunculus)	Amber listed under Birds of Conservation Concern due to declines in the UK breeding population. Protected under the Wildlife and Countryside Act 1981.	Widespread across the district, with local populations likely to fluctuate according to prey availability and suitable nesting habitat.	Grassland margins, drainage banks and field boundaries provide foraging habitat, particularly where small mammal populations are supported. Suitable trees and structures may provide nesting opportunities.	**High –** Maintain and expand the network of suitable nest boxes where appropriate. Sensitive grassland and vegetation management can support prey populations and improve foraging opportunities.
Grass snake (Natrix helvetica)	UK Priority Species under Section 41 of the NERC Act 2006 and protected under the Wildlife and Countryside Act 1981. Grass snakes are associated with wetland habitats and have experienced pressures from habitat loss and fragmentation.	Records are associated with watercourses, wetland habitats and surrounding terrestrial areas. Suitable habitat may occur throughout parts of the drainage district, although local distribution is not fully established.	Drainage channels, bankside vegetation, grassland and accumulated vegetation arisings can provide foraging, sheltering and potential egg-laying habitat.	**Medium –** Retain suitable bankside vegetation and terrestrial habitat. Where appropriate, consider installing or maintaining habitat features such as composting material or purpose-built egg-laying sites, including suitable weed baskets where these can be safely accommodated**.**
Pollinators (bees, butterflies, moths and other pollinating insects)	A range of pollinator species is of conservation concern, with several included on the UK Priority Species list. Declines are associated with habitat loss, fragmentation and reductions in flowering plants.	Likely to occur throughout the district, particularly around grassland margins, hedgerows, field boundaries, pumping station grounds and other areas containing flowering vegetation.	Cutting regimes, vegetation management and the availability of flowering plants along drainage corridors can influence pollinator abundance and habitat connectivity.	**High –** Adopt appropriate cutting regimes, retain flowering vegetation and enhance suitable areas with locally appropriate native wildflowers. Opportunities exist to improve grassland margins and pumping station grounds as pollinator habitat.
Bats (various species	All bat species in the UK are European Protected Species and receive legal protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Several species are also UK Priority Species under Section 41.	Widespread across Lincolnshire, with potential roosting and foraging habitat associated with mature trees, buildings, hedgerows and watercourses throughout the district.	Trees, buildings and structures associated with pumping stations and depots may provide roosting opportunities. Watercourses and hedgerows can provide important commuting and foraging routes.	**Medium –** Retain suitable mature trees and maintain connected vegetation corridors. Consider bat boxes and other artificial roost features where appropriate, alongside checks for potential roosts before works affecting trees or buildings.
White-clawed crayfish (Austropotamobius pallipes)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981 and Conservation of Habitats and Species Regulations 2017. The species has undergone substantial declines	Historical or local records should be used to establish the species' distribution within the district. Potential occurrences are understood to be more associated with the	Watercourse maintenance, sediment disturbance and water quality can influence suitable crayfish habitat. The presence of invasive	**Low/Medium –** Establish the current distribution through existing records and targeted surveys where appropriate. Protect suitable habitat, avoid unnecessary disturbance and consider biosecurity

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	due to habitat degradation, pollution and the spread of invasive non-native crayfish and associated disease.	northern parts of the drainage district, but this requires confirmation through reliable records and survey data.	non-native crayfish may also pose a significant threat.	measures to reduce the risk of spreading invasive crayfish and crayfish plague.

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3.11. Invasive Non-native Species Summary

The INNS audit identifies high-risk aquatic and riparian invasive non-native species recorded within, or considered likely to occur within, the drainage district and which may be influenced by, or impact upon, the Board's activities. It focuses on species that pose a threat to native biodiversity, freshwater and riparian habitats, watercourse function and the effective delivery of the Board's drainage and flood risk management responsibilities.

The audit considers the known or potential distribution of each species, its ecological and operational impacts, and the ways in which Board activities, including watercourse maintenance, vegetation management and the movement of machinery and equipment, may contribute to their introduction or spread.

For each species, brief notes are provided on its impacts, local occurrence and the potential for the Board to reduce its spread or manage its effects. This includes opportunities for improved biosecurity, early identification, targeted management and partnership working.

The audit provides the basis for the INNS action plan, helping the Board to prioritise preventative measures and minimise the environmental and operational risks associated with invasive species. Inclusion does not necessarily indicate confirmed presence throughout the district or that the Board has direct control over the species.

Priority	Definition
Low	Limited direct opportunities for the Board to influence the species population or distribution. Focus on awareness, reporting and preventing further spread.
Medium	The Board can undertake practical management or contribute meaningfully through maintenance operations and partnership working.
High	Significant opportunities or responsibilities for the Board to undertake targeted management, control or prevention.

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Common & scientific name	Location within IDB if known	Year first recorded	Local status / Extent within drainage district	IDB potential for controlling species population or range
American Mink (Neogale vison)	Falling populations but still present in areas.	1989	Significant reduction in numbers thanks to county wide trapping effort. Still established throughout much of the region. A significant predator of native wetland wildlife, particularly Water Vole and ground-nesting birds. Regional populations are subject to coordinated control and eradication efforts, with the aim of reducing mink numbers and supporting the recovery of native species.	**Low/Medium:** The Board can support regional mink control initiatives through partnership working, reporting sightings and facilitating access to suitable monitoring locations. Continue supporting the Waterlife Recovery Trust and its mink eradication programme where appropriate.
Chinese Mitten Crab (Eriocheir sinensis)	No confirmed records within the drainage district. Recorded within the Humber catchment	Not confirmed locally	An established invasive species within several English river systems, including the Humber. Capable of migrating through connected river and drainage networks. Its burrowing behaviour can destabilise banks and damage flood defence infrastructure, whilst it may also compete with native species.	**Low:** Direct population control is likely to be impractical at IDB level. The Board's role should focus on monitoring, recording and reporting sightings, particularly where burrowing activity could affect banks or drainage infrastructure.
Floating pennywort *Hydrocotyle ranunculoides*	Primarily recorded in watercourses around Lincoln, including areas associated with the Fossdyke	2010	Present within parts of the drainage district but not considered extensive. Growth during the summer can form dense mats, restricting water flow, reducing light penetration and affecting aquatic habitats. Fragments can readily establish new growth and facilitate further spread.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
Water Fern (Azolla filiculoides)	Widespread across numerous Board-maintained watercourses, particularly during the summer months.	2000's	Common and widespread within the drainage district. Seasonal growth can produce extensive surface coverage, reducing light penetration and potentially affecting aquatic vegetation and dissolved oxygen levels.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
New Zealand Pygmyweed (Crassula helmsii)	Recorded within urban areas and associated waterbodies.	2010	Established at a number of locations within the district. An aggressive aquatic and marginal plant capable of forming dense growth, displacing native vegetation and altering aquatic habitats. Small fragments can readily establish new populations, making its spread through maintenance activities a particular concern.	**Medium:** The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners and organisations.

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Himalayan Balsam (Impatiens glandulifera)	Widespread along riverbanks, drainage channels and riparian habitats throughout the district.	Widespread	Common and frequently encountered during routine maintenance activities. Rapid summer growth can outcompete native riparian vegetation. Following seasonal dieback, areas of dense infestation can be left with reduced vegetation cover, potentially increasing bank erosion. Seed dispersal and the movement of contaminated soil or plant material can facilitate further spread.	**Medium**: The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners and organisations.
Japanese Knotweed (Reynoutria japonica)	Sporadic records across the drainage district, generally associated with disturbed ground, infrastructure and watercourse banks.	2011	Present at a limited number of locations within the district. Spreads primarily through rhizomes and fragments of plant material, which can be transported through soil movement and maintenance activities. Can cause damage to infrastructure and presents significant biosecurity and waste-management considerations	**Low–Medium:** The Board's primary responsibility is to prevent further spread through identification, avoidance and appropriate biosecurity procedures. Specialist contractors should undertake treatment where required. Any excavation, movement or disposal of contaminated soil and plant material must follow relevant Environment Agency guidance and waste requirements

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3.12. 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 defense 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.

Upper Witham IDB does not have any official water level management plans, however most pumping stations in the district are operated with higher water levels over drier periods in order to enhance watercourse biodiversity.

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4. The Witham Third District Biodiversity Audit

4.1. The Witham Third Internal Drainage District

The drainage district is located on the northern and north-eastern sides of the River Witham between Lincoln and near Coningsby where there is the confluence of the River Bain with the River Witham.

In the east there is a narrow finger of land which runs north from Coningsby through Horncastle up to Goulceby, following the course of the River Bain, along which there are several isolated Board maintained watercourses. Between Coningsby and Bardney the Board's area extends on the north- eastern side of the River Witham as a series of fingers of land which follow watercourses upstream away from the River Witham.

These include watercourses located around Woodhall Spa, Stixwould, Horsington, Southrey and Bucknall. In this area some "islands" of high ground lie outside the Board's area, such as at Southery and Bardney. Between Bardney and Lincoln, the Board's area runs north from the River Witham following the valley of Barlings Eau, with watercourses maintained by the Board being numerous tributaries of this main watercourse.

The tributaries occur in the vicinity of Langworth, Sudbrooke, Welton, Faldingworth, Wickenby, Lissington and Holton cum Beckering. Finally, an arm of land which has several Board maintained watercourses runs west from near Short Ferry along the north side of the River Witham past Cherry Willingham and into Lincoln City.

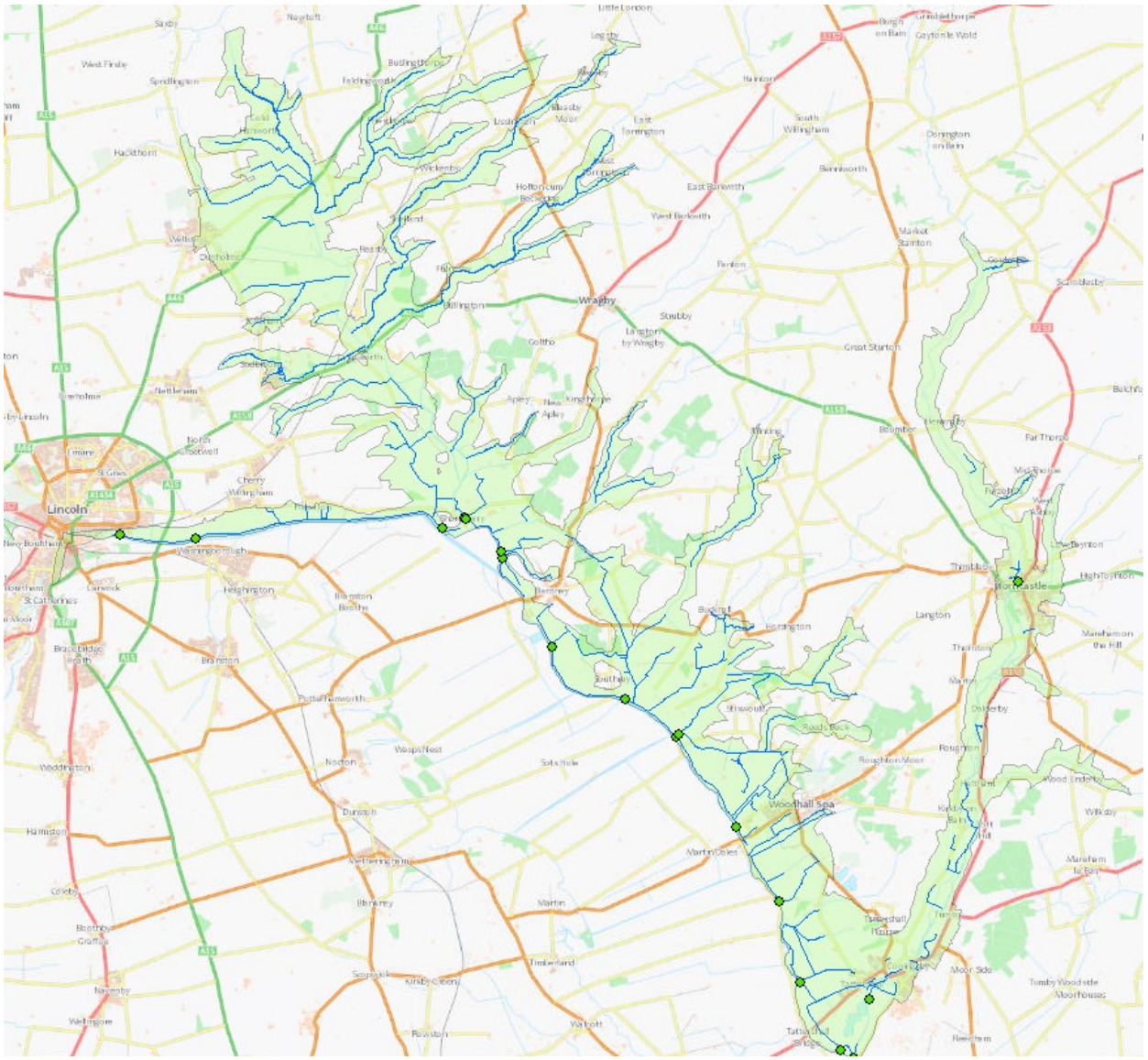
The following outlines the key details of the District:

- Total area of the drainage district: **21,100 ha**
- Area of agricultural land: **15,086 ha**
- Area of other (non-agricultural) land: **ha**
- Watercourses (maintained): **230 km**
- Pumping Stations: **15**

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4.2. Map of Audit Area (Drainage District)

The area covered by the drainage district of the IDB is shown below in Figure 1.



4.3. Geology

The geology of the Board's area is mixed. Along the immediate valley of the River Witham there are areas of fen peat; and away from this area the materials encountered are sand and gravel, boulder clay, alluvium and limestone.

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 part of the Board's area which lies immediately alongside the River Witham is within The Fens character area, however the greater part lies within the Central Lincolnshire Vale character area

4.5. Landscape Designations

There are no National Parks or Areas of Outstanding Natural Beauty (AONB) in the Drainage District

4.6. Sites and Monuments

Scheduled Ancient Monuments are not directly related to Nature and Biodiversity matters. Information held by the Board and other sources has therefore not been collated. Monuments are only relevant in cases where they abut the Board maintained watercourses and such monuments would be referred to on a site by site basis as appropriate.

4.7. Tree Preservation Orders

Tree Preservation Orders (TPOs) are not directly related to Nature and Biodiversity matter since they are made on individual trees, groups or woods for landscape and amenity reasons. Information held by the Board and other sources has therefore not been collated. Orders are only relevant where they occur adjacent to the Board maintained watercourses and would be referred to on a site by site basis as appropriate.

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4.8. Statutory Nature Conservation Sites

5.8.1 Internationally Designated Sites

There are no internationally designated nature conservation sites within the District.

5.8.2 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.

Site name	Designation	Component of an International Site	Features Relevant to IDB
Tattershall Old Gravel Pits	SSSI	No	Open water and wet woodland habitats; swamp and aquatic vegetation
Lincolnshire Limewoods	SSSI & NNR	No	Broad-leaved woodland
Tattershall Carrs	SSSI	No	Wet and dry broad-leaved woodland

5.8.3 Local Nature Reserves

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

Site name	Designation	Features Relevant to IDB
The Pingle, Coningsby	Local Nature Reserve (LNR)	• Open water • Wet woodland

5.8.4. Non-statutory Nature Conservation Sites

A 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.

Site name	Designation	Features Relevant to IDB
Gautby Road Verges	LWS	Field / pasture / grassland
Green Lane, Hemingby	LWS	Road verge / green lane / path
Hemingby Lane Verges, Sands Farm	LWS	Road verge / green lane / path
Horsemoor Lane Verge, Hemingby	LWS	Road verge / green lane / path

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Wilksby Church to Wood Enderby Road Verges	LWS	Road verge / green lane / path
Furze Hill Road Verges	LWS	Road verge / green lane / path
Barlings Park	LWS	Woodland / plantation
Gatecliff Wood	LWS	Woodland / plantation
Long Wood, Fiskerton	LWS	Woodland / plantation
Newball Wood, South	LWS	Woodland / plantation
Rand Wood	LWS	Woodland / plantation
Buslingthorpe Wood	LWS	Woodland / plantation
Friesthorpe Grassland	LWS	Field / pasture / grassland
Birch Wood, Bardney	LWS	Woodland / plantation
Bucknall Wood	LWS	Woodland / plantation
Southrey Wood North-East	LWS	Woodland / plantation
Tupholme Abbey	LWS	Field / pasture / grassland
Tupholme Grassland	LWS	Field / pasture / grassland
Chamber's Farm Meadow	LWS	Field / pasture / grassland
Cream Poke Wood	LWS	Woodland / plantation
Foxhall Wood	LWS	Woodland / plantation
Great West Wood, New Plantation and Little West Wood	LWS	Woodland / plantation
North Spring Wood	LWS	Woodland / plantation
Scotgrove Wood Central-South	LWS	Woodland / plantation
Snakeholme Pit	LWS	Field / pasture / grassland
Spring Wood, Bullington	LWS	Woodland / plantation
Asterby Cottage South	LWS	Field / pasture / grassland
Horsington Wood	LWS	Woodland / plantation
Stixwould Wood	LWS	Woodland / plantation
Greetwell Hall Wood	LWS	Woodland / plantation
Snarford Meadow	LWS	Field / pasture / grassland
Castle Leisure Park, Tattershall	LWS	Lake / pond / reservoir / pit
Mill Drain, Tattershall	LWS	Drain / river / canal / stream / ditch / spring
Scrivelsby Spinney	LWS	Woodland / plantation
Woodhall Spa Wetland	LWS	Marsh / reedbed / swamp / carr
The Ings, Coningsby	LWS	Lake / pond / reservoir / pit
Edlington Scrubbs	LWS	Woodland / plantation
Hogg Wood	LWS	Woodland / plantation
Kirkby on Bain Pits	LWS	Lake / pond / reservoir / pit
West Ashby Gravel Pit	LWS	Lake / pond / reservoir / pit
Horncastle Canal Grassland	LWS	Field / pasture / grassland
Watt's Wood	LWS	Woodland / plantation
Fiskerton Fen	LWS	Field / pasture / grassland
Bleasby Earthworks	LWS	Field / pasture / grassland
Kirkby Gravel Pits	LWS	Lake / pond / reservoir / pit

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West Ashby Meadow	LWS	Field / pasture / grassland
Goslings Corner	LWS	Field / pasture / grassland
Moorby Road Verges	LWS	Road verge / green lane / path
Inner Drains at Branston Island	LWS	Drain / river / canal / stream / ditch / spring
Old River Witham at Branston Island	LWS	Drain / river / canal / stream / ditch / spring
Harbour Wood	LWS	Woodland / plantation
South Delph	LWS	Drain / river / canal / stream / ditch / spring
Barlings Eau	LWS	Drain / river / canal / stream / ditch / spring
Original Pickering's Meadows	LWS	Field / pasture / grassland
Cold Hanworth Road Verge	LWS	Road verge / green lane / path
Sincil Dike, Washingborough	LWS	Drain / river / canal / stream / ditch / spring
South Common	LWS	Field / pasture / grassland
Witham Corridor, East of City Centre	LWS	Drain / river / canal / stream / ditch / spring
Willingham Fen West	LWS	Field / pasture / grassland
Great Gowts Drain	LWS	Drain / river / canal / stream / ditch / spring
Bardney Settling Ponds	LWS	Lake / pond / reservoir / pit
New Park Wood	LWS	Woodland / plantation
Witham Way	LWS	Road verge / green lane / path
Halstead and Stobourn Woods	LWS	Woodland / plantation
Bracken Golf Course	LWS	Golf course
The Spa Trail	LWS	Disused railway
Highall Wood	LWS	Woodland / plantation
Glebe Farm North	LWS	Field / pasture / grassland
Asterby Cottage North	LWS	Lake / pond / reservoir / pit
Chamber's Plantation	LWS	Woodland / plantation
Great Scrubbs Wood	LWS	Woodland / plantation
Hoop Lane Road Verges	LWS	Road verge / green lane / path
Camshaw's Plantation	LWS	Woodland / plantation
Austacre Wood	LWS	Woodland / plantation
Far North End Wood	LWS	Woodland / plantation
Long Wood and Little Wood	SNCI	Woodland / plantation
Hemingby Meadow	SNCI	Field / pasture / grassland
Big Triangle, Tumby	SNCI	Field / pasture / grassland
Haltham Wood	SNCI	Woodland / plantation

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4.9. Habitat Audit Summary

This habitat audit provides an overview of the nationally and locally important habitats present within the Board's drainage district, with consideration given to those that may be influenced by the Board's land drainage, flood risk management and maintenance activities.

The assessment includes habitats recognised as UK Priority Habitats under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, alongside locally important habitats identified through regional biodiversity strategies and the Lincolnshire Local Nature Recovery Strategy (LNRS). It also considers the ecological importance of the Board's managed drainage network, recognising the contribution that engineered watercourses can make to biodiversity, habitat connectivity and wider nature recovery.

For each habitat, the audit considers its distribution and condition within the drainage district, the potential interactions with the Board's operational activities, and opportunities to maintain, enhance, restore or expand habitat where practicable. The identified opportunities are intended to inform the Board's future environmental priorities and ensure that biodiversity considerations are incorporated into the planning and delivery of its statutory functions.

Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or expanding
Arable Field Margins	Arable field margins are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can provide important feeding, nesting and refuge habitat for farmland wildlife. Buffer strips are also relevant to local nature recovery priorities.	Arable land is widespread throughout the drainage district. Field margins are common but are often narrow and intensively managed. More diverse margins can occur alongside watercourses, drainage channels and access tracks.	Margins alongside Board-maintained watercourses can provide valuable buffer habitat, helping to intercept sediment and agricultural runoff, as well as providing wildlife corridors and refuge areas.	**Low –** Management is largely the responsibility of individual landowners. However, the Board can help retain existing margins by avoiding unnecessary disturbance, considering access arrangements and promoting no net loss where its activities could affect them.
Reedbeds and Wetland habitats	Reedbeds, fens and other wetland habitats are recognised for their importance to biodiversity, supporting specialist plants, invertebrates, birds and other wetland species. They are also important within	Reedbed habitat occurs in isolated areas and as established margins alongside some watercourses and open water bodies. The extent and	Reedbed margins can provide valuable habitat alongside the drainage network, although excessive encroachment can affect conveyance and access	**Medium** – Opportunities exist to retain and selectively expand existing reedbed margins where hydraulic capacity and operational access allow. Habitat creation may also be considered through suitable restoration and enhancement

	regional nature recovery priorities.	condition of these habitats vary across the district.	for maintenance.	projects.
Wet Woodland	Wet woodland is a UK Priority Habitat under Section 41 of the NERC Act 2006. It is a relatively scarce habitat associated with wet soils and floodplain environments, supporting a range of specialist wildlife.	Wet woodland is generally limited to isolated locations, often associated with open water bodies, wetland margins and areas of permanently damp ground.	Wet woodland can provide valuable habitat and contribute to landscape connectivity. However, tree growth and encroachment may conflict with access, bank stability and maintenance requirements in certain locations.	**Low –** Opportunities to expand wet woodland are limited by the operational requirements of the drainage network. Existing areas should be retained where practicable, with potential for small-scale expansion away from critical maintenance corridors.
Engineered drains and ditches	Although engineered drainage channels are not generally classified as UK Priority Habitats in their own right, they can support significant aquatic and marginal biodiversity. They contribute to habitat connectivity, water quality and wider freshwater ecosystem functioning.	Extensive and widespread throughout the drainage district, forming the principal managed watercourse network under the Board's control. Individual channels vary considerably in their ecological condition and habitat value.	These habitats are directly managed by the Board and are central to its statutory drainage and flood risk management functions. Routine maintenance can influence aquatic vegetation, marginal habitats, water quality and species distribution.	**High –** The Board has considerable scope to influence the ecological condition of its drainage network through sensitive maintenance, appropriate cutting regimes, marginal habitat management and targeted enhancement. Opportunities should be pursued in accordance with flood risk management requirements and the ADA Biodiversity Manual.
Ponds	Ponds are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can support diverse communities of amphibians, aquatic invertebrates and wetland plants, particularly where they are well connected to surrounding habitats.	Ponds occur sporadically throughout the drainage district, including agricultural field ponds, isolated waterbodies and attenuation ponds. Their ecological condition and management vary considerably.	Board activities in the vicinity of ponds may influence local water levels, hydrology and associated habitats. Maintenance operations can also cause disturbance to wildlife where appropriate precautions are not taken.	**Low/Medium** – Direct opportunities are relatively limited, although the Board can support the retention and protection of existing ponds and explore opportunities for new pond creation through appropriate projects, including natural flood management initiatives
Natural Rivers and streams	Rivers and streams support important freshwater ecosystems and are recognised within national biodiversity and water environment objectives. Certain river habitats are also identified as UK Priority Habitats, including chalk rivers and rivers	Natural rivers and streams are present within the drainage district but represent a smaller proportion of the overall network than engineered drainage channels. Many are	The Board's influence is generally more limited than on its directly maintained watercourses. However, works undertaken on behalf of, or in proximity to, other authorities	**Low/Medium** – Opportunities are primarily associated with partnership working, sensitive delivery of works and supporting wider river restoration initiatives. Where the Board undertakes works affecting natural watercourses, opportunities to protect and enhance existing

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	supporting priority habitat features.	managed by the Environment Agency or other responsible authorities.	can affect river habitats through vegetation management, sediment disturbance, bank works and changes to channel structure.	habitat should be considered.
Coastal and floodplain grazing marsh	Coastal and floodplain grazing marsh is a UK Priority Habitat under Section 41 of the NERC Act 2006. These habitats are important for breeding and wintering birds, wetland plants and invertebrates, and are often associated with traditional grazing and seasonal flooding.	Areas of grazing marsh and floodplain meadow habitat occur within parts of the drainage district, including the Stapleford area and potentially Thurlby and other isolated locations. Their ecological value is influenced by grazing, water levels and land management.	The Board's management of water levels and drainage infrastructure can influence the hydrological conditions supporting these habitats. Appropriate water level management can help maintain their ecological value, where compatible with wider drainage requirements.	**Medium –** Opportunities may arise through partnership working with landowners and conservation organisations to support suitable water level management, retain existing habitat and explore restoration opportunities where appropriate.
Hedgerows	Hedgerows are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. Species-rich and structurally diverse hedgerows provide important nesting, feeding and commuting habitat for birds, mammals and invertebrates.	Hedgerows are widespread throughout the drainage district, although many are species-poor or intensively managed. More diverse and established sections remain in some locations, particularly alongside field boundaries and watercourses.	Hedgerows provide habitat connectivity across the agricultural landscape and can complement marginal habitats alongside Board-maintained watercourses. Maintenance activities, access requirements and vegetation management may affect their condition.	Medium – The Board can help retain existing hedgerows through sensitive operational planning, avoiding unnecessary removal and encouraging replacement planting where losses are unavoidable. Opportunities for new planting may also be considered where compatible with access and maintenance requirements.
Lowland meadows	Lowland meadows are a UK Priority Habitat under Section 41 of the NERC Act 2006. They are characterised by species-rich grassland communities and support a diverse range of wildflowers, grasses, pollinators and other invertebrates. They have experienced significant historical losses through agricultural intensification, drainage and changes in grassland management	Species-rich grassland is likely to be relatively scarce and fragmented across the drainage district, with potential occurrences on riverbanks, drainage embankments, floodplain margins, roadside verges and areas of less intensively managed grassland. Further habitat survey and mapping would help establish the extent of remaining examples.	Board-owned and managed land, including pumping station grounds, access strips and suitable watercourse embankments, may provide opportunities to retain or enhance species-rich grassland. Cutting frequency, timing and arisings management can influence the botanical diversity of these areas.	**Medium –** Opportunities exist to improve the condition of suitable grassland through reduced cutting frequency, appropriate arisings removal and targeted wildflower enhancement using locally appropriate seed mixes. Existing species-rich grassland should be prioritised for retention, with potential to create additional meadow areas on suitable Board-managed land where compatible with operational requirements.

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4.10. Species Audit Summary

The species audit provides an overview of priority, protected and other species, which are recorded within the drainage district or considered likely to occur and potentially be influenced by the Board's activities. It also identifies species of local conservation importance, including those highlighted through the Greater Lincolnshire Local Nature Recovery Strategy (LNRS) and other relevant local biodiversity priorities.

The audit considers the conservation status and significance of each species, its known or potential occurrence within the drainage district, and the extent to which the Board's activities may influence its habitat, distribution or wider conservation status. Particular consideration is given to species associated with watercourses, wetlands, grasslands, hedgerows and other habitats that may be directly or indirectly affected by land drainage, water-level management, watercourse maintenance, pumping station operations and capital works.

For each species, the audit provides a summary of relevant national and local conservation priorities, its relationship with the drainage district and the potential implications of the Board's operations. It also considers opportunities for the Board to contribute positively through appropriate maintenance practices, habitat protection and enhancement, species monitoring, invasive species management and partnership working.

The audit is intended to help identify where the Board's activities may present risks to species, where operational changes or additional safeguards may be appropriate, and where there are realistic opportunities to support biodiversity recovery. It therefore provides an evidence base for the development of the species action plans within this strategy, helping to ensure that the Board's environmental objectives are proportionate, locally relevant and aligned with its statutory duties and operational responsibilities.

The inclusion of a species within the audit does not necessarily imply that the Board has direct responsibility for its conservation or that its presence has been confirmed throughout the drainage district. Rather, it recognises the potential for the Board to influence the species, either through its management of watercourses and associated land or through collaborative work with landowners, statutory bodies and conservation organisations.

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Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or increasing populations
Water vole (Arvicola terrestris)	UK Priority Species under Section 41 of the NERC Act 2006. Legally protected under the Wildlife and Countryside Act 1981. Populations have experienced significant declines, with predation by American mink, habitat loss and fragmentation being important pressures.	Recorded throughout Lincolnshire and considered likely to occur across much of the drainage district, although populations may be less frequent in smaller headwaters and less suitable watercourses. Distribution should be informed by local records and surveys.	Directly associated with the Board's drainage network. Bank profiling, vegetation clearance, dredging and changes to bankside habitat can affect water vole populations and their burrows.	**High** – Retain suitable bankside vegetation, maintain connected habitat and avoid unnecessary disturbance to burrows. Incorporate water vole considerations into maintenance planning and undertake surveys where appropriate
Eurasian otter (Lutra lutra)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981. Otters have recovered across much of England but remain vulnerable to habitat degradation, pollution, disturbance and loss of suitable resting sites.	Scattered records occur across the drainage district, with sightings often associated with larger watercourses and main river corridors, including the River Witham.	The drainage network provides opportunities for movement and foraging. Bank maintenance, vegetation removal and works near suitable resting or breeding locations may cause disturbance.	**Medium** – Retain suitable bankside vegetation and undisturbed terrestrial cover, particularly along larger channels. Consider otter requirements when planning works and incorporate habitat enhancements where practicable
Badger (Meles meles)	Widespread in the UK and protected under the Protection of Badgers Act 1992. Although not a Section 41 Priority Species, badgers and their setts are relevant considerations when undertaking land management and construction works.	Widespread and frequently recorded throughout the drainage district.	Potential interactions include works near setts, access routes, pumping stations and earth-moving activities.	**Low –** Limited opportunities for targeted population enhancement through the Board's activities. The priority is to identify and protect setts, avoid disturbance and implement appropriate mitigation where works may affect badgers.
Great crested newt (Triturus cristatus)	European Protected Species, protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Also a UK Priority Species under Section 41 of the NERC Act 2006.	Scattered records occur within the drainage district. The relatively limited availability of ponds close to some Board operational areas may restrict suitable breeding habitat and opportunities for regular recording.	Potential interactions are most likely around pumping stations, depots, grassland areas and capital works where ponds or suitable terrestrial habitat are present.	**Low/Medium –** Retain suitable terrestrial habitat and consider the installation of hibernacula at appropriate sites. Opportunities may also arise through natural flood management schemes and the creation or enhancement of attenuation ponds.
European eel (Anguilla anguilla)	UK Priority Species under Section 41 and classified as Critically Endangered on the IUCN Red List. European eel populations	Recorded and considered likely to occur throughout the Board's drainage district, particularly within	Pumping stations, water-level management and structures within the	**Medium/High –** Continue engagement with the Environment Agency regarding eel screening exemptions and opportunities for

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	have undergone severe long-term declines, with barriers to migration, habitat loss and changes to freshwater conditions contributing to the pressures faced by the species.	the larger watercourses and connected drainage network.	drainage network can influence eel movement and survival. Pumping operations may present a risk of injury or mortality.	eel-friendly pumping infrastructure. Consider eel requirements during pumping station upgrades and establish baseline information where possible.
Common toad (Bufo bufo)	UK Priority Species under Section 41 of the NERC Act 2006. Populations have declined in parts of the UK, with habitat fragmentation, loss of breeding ponds and road mortality among the recognised pressures.	Likely to occur throughout the drainage district, although existing records are relatively scattered and the extent of local populations is not fully established.	Suitable terrestrial habitat may occur around drainage channels, hedgerows, grassland, pumping stations and field boundaries. Works affecting ponds and surrounding terrestrial habitat may influence local populations.	**Medium –** Improve knowledge of local distribution and retain suitable terrestrial habitat. Opportunities include creating or enhancing ponds, maintaining connected habitats and incorporating hibernacula into suitable enhancement schemes.
Water-associated birds (various species)	Numerous water-associated and farmland bird species are protected under the Wildlife and Countryside Act 1981. Several are also Red or Amber listed under Birds of Conservation Concern, reflecting declines in breeding populations and distribution.	A range of species occurs throughout the drainage network and wider agricultural landscape. The distribution and importance of individual species varies between locations and habitats.	Maintenance activities can affect nesting and feeding habitat, particularly through vegetation cutting, bank reprofiling and dredging. The timing and method of works are important considerations during the bird breeding season	**High –** Undertake works outside the main bird nesting season where practicable, generally March to August, while recognising that active nests are protected at all times. Retain suitable vegetation, reinstate disturbed banks promptly and incorporate nesting opportunities into appropriate capital projects.
Barn owl (Tyto alba)	UK Priority Species under Section 41 of the NERC Act 2006. Barn owls are also protected under the Wildlife and Countryside Act 1981. Lincolnshire supports important populations, with drainage corridors, grassland margins and nest boxes contributing to suitable habitat.	Widespread throughout the district, particularly across low-lying agricultural areas where suitable foraging habitat and nesting opportunities are available.	Drainage channels and associated grassland margins can provide valuable hunting habitat by supporting field vole populations. Nest boxes installed on suitable trees and structures also provide breeding opportunities.	**High** – Maintain existing nest boxes and install additional boxes where suitable locations are identified. Manage grassland margins to support small mammal populations and retain suitable hunting corridors.
Kestrel (Falco tinnunculus)	Amber listed under Birds of Conservation Concern due to declines in the UK	Widespread across the district, with local populations likely to fluctuate	Grassland margins, drainage banks and field	**High –** Maintain and expand the network of suitable nest boxes where appropriate.

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	breeding population. Protected under the Wildlife and Countryside Act 1981.	according to prey availability and suitable nesting habitat.	boundaries provide foraging habitat, particularly where small mammal populations are supported. Suitable trees and structures may provide nesting opportunities.	Sensitive grassland and vegetation management can support prey populations and improve foraging opportunities.
Grass snake (Natrix helvetica)	UK Priority Species under Section 41 of the NERC Act 2006 and protected under the Wildlife and Countryside Act 1981. Grass snakes are associated with wetland habitats and have experienced pressures from habitat loss and fragmentation.	Records are associated with watercourses, wetland habitats and surrounding terrestrial areas. Suitable habitat may occur throughout parts of the drainage district, although local distribution is not fully established.	Drainage channels, bankside vegetation, grassland and accumulated vegetation arisings can provide foraging, sheltering and potential egg-laying habitat.	**Medium –** Retain suitable bankside vegetation and terrestrial habitat. Where appropriate, consider installing or maintaining habitat features such as composting material or purpose-built egg-laying sites, including suitable weed baskets where these can be safely accommodated**.**
Pollinators (bees, butterflies, moths and other pollinating insects)	A range of pollinator species is of conservation concern, with several included on the UK Priority Species list. Declines are associated with habitat loss, fragmentation and reductions in flowering plants.	Likely to occur throughout the district, particularly around grassland margins, hedgerows, field boundaries, pumping station grounds and other areas containing flowering vegetation.	Cutting regimes, vegetation management and the availability of flowering plants along drainage corridors can influence pollinator abundance and habitat connectivity.	**High –** Adopt appropriate cutting regimes, retain flowering vegetation and enhance suitable areas with locally appropriate native wildflowers. Opportunities exist to improve grassland margins and pumping station grounds as pollinator habitat.
Bats (various species	All bat species in the UK are European Protected Species and receive legal protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Several species are also UK Priority Species under Section 41.	Widespread across Lincolnshire, with potential roosting and foraging habitat associated with mature trees, buildings, hedgerows and watercourses throughout the district.	Trees, buildings and structures associated with pumping stations and depots may provide roosting opportunities. Watercourses and hedgerows can provide important commuting and foraging routes.	**Medium –** Retain suitable mature trees and maintain connected vegetation corridors. Consider bat boxes and other artificial roost features where appropriate, alongside checks for potential roosts before works affecting trees or buildings.
White-clawed crayfish (Austropotamobius pallipes)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981 and Conservation of Habitats and Species Regulations 2017.	Historical or local records should be used to establish the species' distribution within the district. Potential occurrences are	Watercourse maintenance, sediment disturbance and water quality can influence	**Low/Medium –** Establish the current distribution through existing records and targeted surveys where appropriate. Protect suitable habitat, avoid unnecessary

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	The species has undergone substantial declines due to habitat degradation, pollution and the spread of invasive non-native crayfish and associated disease.	understood to be more associated with the northern parts of the drainage district, but this requires confirmation through reliable records and survey data.	suitable crayfish habitat. The presence of invasive non-native crayfish may also pose a significant threat.	disturbance and consider biosecurity measures to reduce the risk of spreading invasive crayfish and crayfish plague.

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4.11. Invasive Non-native Species Summary

The INNS audit identifies high-risk aquatic and riparian invasive non-native species recorded within, or considered likely to occur within, the drainage district and which may be influenced by, or impact upon, the Board's activities. It focuses on species that pose a threat to native biodiversity, freshwater and riparian habitats, watercourse function and the effective delivery of the Board's drainage and flood risk management responsibilities.

The audit considers the known or potential distribution of each species, its ecological and operational impacts, and the ways in which Board activities, including watercourse maintenance, vegetation management and the movement of machinery and equipment, may contribute to their introduction or spread.

For each species, brief notes are provided on its impacts, local occurrence and the potential for the Board to reduce its spread or manage its effects. This includes opportunities for improved biosecurity, early identification, targeted management and partnership working.

The audit provides the basis for the INNS action plan, helping the Board to prioritise preventative measures and minimise the environmental and operational risks associated with invasive species. Inclusion does not necessarily indicate confirmed presence throughout the district or that the Board has direct control over the species.

Priority	Definition
Low	Limited direct opportunities for the Board to influence the species population or distribution. Focus on awareness, reporting and preventing further spread.
Medium	The Board can undertake practical management or contribute meaningfully through maintenance operations and partnership working.
High	Significant opportunities or responsibilities for the Board to undertake targeted management, control or prevention.

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Common & scientific name	Location within IDB if known	Year first recorded	Local status / Extent within drainage district	IDB potential for controlling species population or range
American Mink (Neogale vison)	Falling populations but still present in areas.	1989	Significant reduction in numbers thanks to county wide trapping effort. Still established throughout much of the region. A significant predator of native wetland wildlife, particularly Water Vole and ground-nesting birds. Regional populations are subject to coordinated control and eradication efforts, with the aim of reducing mink numbers and supporting the recovery of native species.	**Low/Medium:** The Board can support regional mink control initiatives through partnership working, reporting sightings and facilitating access to suitable monitoring locations. Continue supporting the Waterlife Recovery Trust and its mink eradication programme where appropriate.
Chinese Mitten Crab (Eriocheir sinensis)	No confirmed records within the drainage district. Recorded within the Humber catchment	Not confirmed locally	An established invasive species within several English river systems, including the Humber. Capable of migrating through connected river and drainage networks. Its burrowing behaviour can destabilise banks and damage flood defence infrastructure, whilst it may also compete with native species.	**Low:** Direct population control is likely to be impractical at IDB level. The Board's role should focus on monitoring, recording and reporting sightings, particularly where burrowing activity could affect banks or drainage infrastructure.
Floating pennywort *Hydrocotyle ranunculoides*	Primarily recorded in watercourses around Lincoln, including areas associated with the Fossdyke	2010	Present within parts of the drainage district but not considered extensive. Growth during the summer can form dense mats, restricting water flow, reducing light penetration and affecting aquatic habitats. Fragments can readily establish new growth and facilitate further spread.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
Water Fern (Azolla filiculoides)	Widespread across numerous Board-maintained watercourses, particularly during the summer months.	2000's	Common and widespread within the drainage district. Seasonal growth can produce extensive surface coverage, reducing light penetration and potentially affecting aquatic vegetation and dissolved oxygen levels.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
New Zealand Pygmyweed (Crassula helmsii)	Recorded within urban areas and associated waterbodies.	2010	Established at a number of locations within the district. An aggressive aquatic and marginal plant capable of forming dense growth, displacing native vegetation and altering aquatic habitats. Small fragments can readily establish new populations, making its spread through maintenance activities a particular concern.	**Medium:** The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners and organisations.

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Himalayan Balsam (Impatiens glandulifera)	Widespread along riverbanks, drainage channels and riparian habitats throughout the district.	Widespread	Common and frequently encountered during routine maintenance activities. Rapid summer growth can outcompete native riparian vegetation. Following seasonal dieback, areas of dense infestation can be left with reduced vegetation cover, potentially increasing bank erosion. Seed dispersal and the movement of contaminated soil or plant material can facilitate further spread.	**Medium**: The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners and organisations.
Japanese Knotweed (Reynoutria japonica)	Sporadic records across the drainage district, generally associated with disturbed ground, infrastructure and watercourse banks.	2011	Present at a limited number of locations within the district. Spreads primarily through rhizomes and fragments of plant material, which can be transported through soil movement and maintenance activities. Can cause damage to infrastructure and presents significant biosecurity and waste-management considerations	**Low–Medium:** The Board's primary responsibility is to prevent further spread through identification, avoidance and appropriate biosecurity procedures. Specialist contractors should undertake treatment where required. Any excavation, movement or disposal of contaminated soil and plant material must follow relevant Environment Agency guidance and waste requirements

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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 defense 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.

Witham Third District IDB does not have any official water level management plans, however most pumping stations in the district are operated with higher water levels over drier periods in order to enhance watercourse biodiversity.

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5. The Witham First District Biodiversity Audit

5.1. The Witham First Internal Drainage District

The Board district is an area of Lincolnshire fenland which stretches north and north-west from Chapel Hill near Billinghay as far as Lincoln, on the south and south-west side of the River Witham. It includes the fens of the villages lying to the west on the adjacent high ground ie Billinghay, Walcott, Thorpe Tilney, Timberland, Martin, Blankney, Metheringham, Dunston, Nocton, Potterhanworth, Branston, Heighington and Washingborough. A small north running side-arm of fenland lies within the Boards' area and this extends from between North Kyme and Anwick north to near Metheringham, and it includes the fens of Anwick, Ruskington, Dorrington and Digby. There are two arms of land within the Board's area which extend west away from the fens. One runs from Digby Fen, west past Digby village as far as Ashby-de-la Launde. The other runs from Anwick Fen west past Anwick village (near which there is a small "island" of high ground outside the Board's area), then south-west through the outskirts of Sleaford, to Quarrington, Rauceby Station and South Rauceby.

The following outlines the key details of the District:

- Total area of the drainage district: **16,384 ha**
- Area of agricultural land: **15,489 ha**
- Area of other (non-agricultural) land: **895 ha**
- Watercourses (maintained): **270 km**
- Pumping Stations: **13**

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5.2. Map of Audit Area (Drainage District)

The area covered by the drainage district of the IDB is shown below in Figure 1.

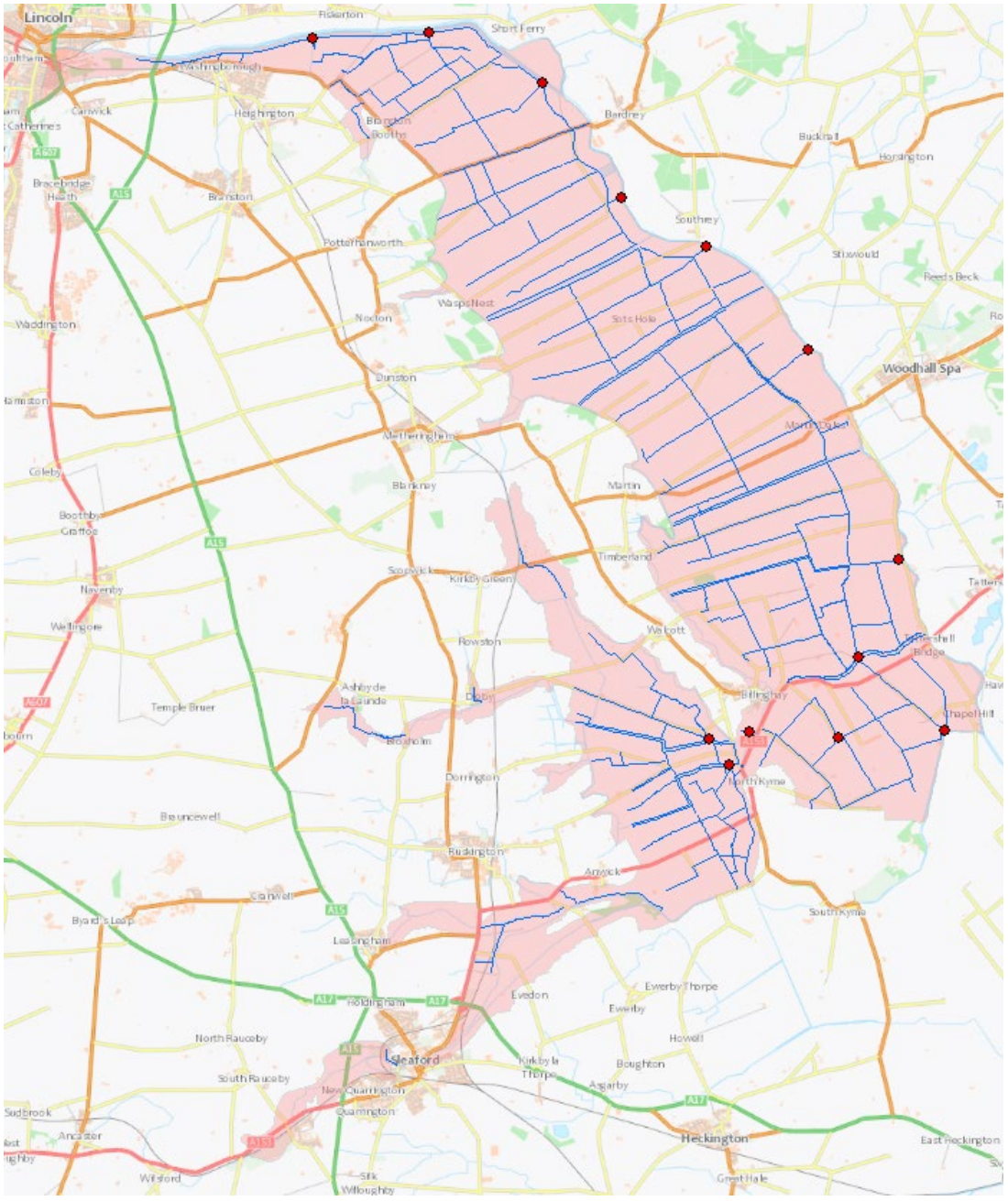


Figure 1. Witham First Internal Drainage District and Pumping Station Locations.

5.3. Geology

The geology of the Board's area which lies in the arms of fenland is fen peat. The arms of the Board's area which extend outside the fens have geology of boulder clay, sand and gravel, and limestone.

5.4. Landscape Character

Natural England has divided the whole of England into a number of Joint Character Areas (JCA) based on characteristic landforms, wildlife and land use. They are not designations and are not confined by traditional administrative boundaries. For each JCA, Natural England has prepared a profile that characterises the wildlife and natural features, identifies the influences that act upon those features and sets objectives for nature conservation.

The fenland parts of the Board's area are within The Fens character area. The arms of the Board's area which extend outside the fens, however lie within the Southern Lincolnshire Edge character area

5.5. Landscape Designations

There are no National Parks or Areas of Outstanding Natural Beauty (AONB) in the Drainage District

5.6. Sites and Monuments

Scheduled Ancient Monuments are not directly related to Nature and Biodiversity matters. Information held by the Board and other sources has therefore not been collated. Monuments are only relevant in cases where they abut the Board maintained watercourses and such monuments would be referred to on a site by site basis as appropriate.

5.7. Tree Preservation Orders

Tree Preservation Orders (TPOs) are not directly related to Nature and Biodiversity matter since they are made on individual trees, groups or woods for landscape and amenity reasons. Information held by the Board and other sources has therefore not been collated. Orders are only relevant where they occur adjacent to the Board maintained watercourses and would be referred to on a site by site basis as appropriate.

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5.8. Statutory Nature Conservation Sites

6.8.1. Internationally Designated Sites

There are no internationally designated nature conservation sites within the District.

6.8.2. 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.

Site name	Designation	Features Relevant to IDB
Potterhanworth Wood	Site of Special ScientificInterest (SSSI)	Ancient broad-leaved woodland
Wilsford & Rauceby Warren	SSSI	Unimproved limestone and sandy grassland, wet woodland, open water

6.8.3. Local Nature Reserves

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

Site name	Designation	Features Relevant to IDB
Lollycocks Field	Local Nature Reserve(LNR)	Pond, wetland vegetation
Mareham Pastures	LNR	Grassland

6.8.4. Non-statutory Nature Conservation Sites

A 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.

Site name	Designation	Features Relevant to IDB
Nocton Delph	Selected LWS	Drain / river / canal / stream / ditch / spring
Sleaford Fen	Selected LWS	Woodland / plantation
Sleaford Meadows	Selected LWS	Field / pasture / grassland
Lollycock's Field	Selected LWS	Field / pasture / grassland
Cobbler's Lock Sedge and Reed Beds	Selected LWS	Marsh / reedbed / swamp / carr
North Kyme Common	Selected LWS	Field / pasture / grassland

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North Kyme Common Pond	Selected LWS	Lake / pond / reservoir / pit
Ruskington Pit	Selected LWS	Lake / pond / reservoir / pit
Bardney Settling Ponds	Selected LWS	Lake / pond / reservoir / pit
Metheringham Delph	Selected LWS	Drain / river / canal / stream / ditch / spring
Witham Way	Selected LWS	Road verge / green lane / path
Timberland Delph	Selected LWS	Drain / river / canal / stream / ditch / spring
Canwick Road New Cemetery and St Swithin's Cemetery	Selected LWS	Field / pasture / grassland
Canwick Road Old Cemetery	Selected LWS	Field / pasture / grassland
Cow Paddle	Selected LWS	Field / pasture / grassland
Cow Paddle East	Selected LWS	Field / pasture / grassland
Cow Paddle Railway Embankment East	Selected LWS	Field / pasture / grassland
Wilsford Warren Road Verge	Selected LWS	Road verge / green lane / path
Evedon Wood	Selected LWS	Woodland / plantation
Nocton Wood	Selected LWS	Woodland / plantation
South Delph	Selected LWS	Drain / river / canal / stream / ditch / spring
Witham Corridor, East of City Centre	Selected LWS	Drain / river / canal / stream / ditch / spring
Sincil Dike, Washingborough	Selected LWS	Drain / river / canal / stream / ditch / spring
South Common	Selected LWS	Field / pasture / grassland
Canwick Park Golf Course	Selected LWS	Field / pasture / grassland

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5.9. Habitat Audit Summary

This habitat audit provides an overview of the nationally and locally important habitats present within the Board's drainage district, with consideration given to those that may be influenced by the Board's land drainage, flood risk management and maintenance activities.

The assessment includes habitats recognised as UK Priority Habitats under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, alongside locally important habitats identified through regional biodiversity strategies and the Lincolnshire Local Nature Recovery Strategy (LNRS). It also considers the ecological importance of the Board's managed drainage network, recognising the contribution that engineered watercourses can make to biodiversity, habitat connectivity and wider nature recovery.

For each habitat, the audit considers its distribution and condition within the drainage district, the potential interactions with the Board's operational activities, and opportunities to maintain, enhance, restore or expand habitat where practicable. The identified opportunities are intended to inform the Board's future environmental priorities and ensure that biodiversity considerations are incorporated into the planning and delivery of its statutory functions.

Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or expanding
Arable Field Margins	Arable field margins are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can provide important feeding, nesting and refuge habitat for farmland wildlife. Buffer strips are also relevant to local nature recovery priorities.	Arable land is widespread throughout the drainage district. Field margins are common but are often narrow and intensively managed. More diverse margins can occur alongside watercourses, drainage channels and access tracks.	Margins alongside Board-maintained watercourses can provide valuable buffer habitat, helping to intercept sediment and agricultural runoff, as well as providing wildlife corridors and refuge areas.	**Low –** Management is largely the responsibility of individual landowners. However, the Board can help retain existing margins by avoiding unnecessary disturbance, considering access arrangements and promoting no net loss where its activities could affect them.
Reedbeds and Wetland habitats	Reedbeds, fens and other wetland habitats are recognised for their importance to biodiversity, supporting specialist plants, invertebrates, birds and other wetland species. They are also important within	Reedbed habitat occurs in isolated areas and as established margins alongside some watercourses and open water bodies. The extent and	Reedbed margins can provide valuable habitat alongside the drainage network, although excessive encroachment can affect conveyance and access	**Medium** – Opportunities exist to retain and selectively expand existing reedbed margins where hydraulic capacity and operational access allow. Habitat creation may also be considered through suitable restoration and enhancement

	regional nature recovery priorities.	condition of these habitats vary across the district.	for maintenance.	projects.
Wet Woodland	Wet woodland is a UK Priority Habitat under Section 41 of the NERC Act 2006. It is a relatively scarce habitat associated with wet soils and floodplain environments, supporting a range of specialist wildlife.	Wet woodland is generally limited to isolated locations, often associated with open water bodies, wetland margins and areas of permanently damp ground.	Wet woodland can provide valuable habitat and contribute to landscape connectivity. However, tree growth and encroachment may conflict with access, bank stability and maintenance requirements in certain locations.	**Low –** Opportunities to expand wet woodland are limited by the operational requirements of the drainage network. Existing areas should be retained where practicable, with potential for small-scale expansion away from critical maintenance corridors.
Engineered drains and ditches	Although engineered drainage channels are not generally classified as UK Priority Habitats in their own right, they can support significant aquatic and marginal biodiversity. They contribute to habitat connectivity, water quality and wider freshwater ecosystem functioning.	Extensive and widespread throughout the drainage district, forming the principal managed watercourse network under the Board's control. Individual channels vary considerably in their ecological condition and habitat value.	These habitats are directly managed by the Board and are central to its statutory drainage and flood risk management functions. Routine maintenance can influence aquatic vegetation, marginal habitats, water quality and species distribution.	**High –** The Board has considerable scope to influence the ecological condition of its drainage network through sensitive maintenance, appropriate cutting regimes, marginal habitat management and targeted enhancement. Opportunities should be pursued in accordance with flood risk management requirements and the ADA Biodiversity Manual.
Ponds	Ponds are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can support diverse communities of amphibians, aquatic invertebrates and wetland plants, particularly where they are well connected to surrounding habitats.	Ponds occur sporadically throughout the drainage district, including agricultural field ponds, isolated waterbodies and attenuation ponds. Their ecological condition and management vary considerably.	Board activities in the vicinity of ponds may influence local water levels, hydrology and associated habitats. Maintenance operations can also cause disturbance to wildlife where appropriate precautions are not taken.	**Low/Medium** – Direct opportunities are relatively limited, although the Board can support the retention and protection of existing ponds and explore opportunities for new pond creation through appropriate projects, including natural flood management initiatives
Natural Rivers and streams	Rivers and streams support important freshwater ecosystems and are recognised within national biodiversity and water environment objectives. Certain river habitats are also identified as UK Priority Habitats, including chalk rivers and rivers	Natural rivers and streams are present within the drainage district but represent a smaller proportion of the overall network than engineered drainage channels. Many are	The Board's influence is generally more limited than on its directly maintained watercourses. However, works undertaken on behalf of, or in proximity to, other authorities	**Low/Medium** – Opportunities are primarily associated with partnership working, sensitive delivery of works and supporting wider river restoration initiatives. Where the Board undertakes works affecting natural watercourses, opportunities to protect and enhance existing

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	supporting priority habitat features.	managed by the Environment Agency or other responsible authorities.	can affect river habitats through vegetation management, sediment disturbance, bank works and changes to channel structure.	habitat should be considered.
Coastal and floodplain grazing marsh	Coastal and floodplain grazing marsh is a UK Priority Habitat under Section 41 of the NERC Act 2006. These habitats are important for breeding and wintering birds, wetland plants and invertebrates, and are often associated with traditional grazing and seasonal flooding.	Areas of grazing marsh and floodplain meadow habitat occur within parts of the drainage district, including the Stapleford area and potentially Thurlby and other isolated locations. Their ecological value is influenced by grazing, water levels and land management.	The Board's management of water levels and drainage infrastructure can influence the hydrological conditions supporting these habitats. Appropriate water level management can help maintain their ecological value, where compatible with wider drainage requirements.	**Medium –** Opportunities may arise through partnership working with landowners and conservation organisations to support suitable water level management, retain existing habitat and explore restoration opportunities where appropriate.
Hedgerows	Hedgerows are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. Species-rich and structurally diverse hedgerows provide important nesting, feeding and commuting habitat for birds, mammals and invertebrates.	Hedgerows are widespread throughout the drainage district, although many are species-poor or intensively managed. More diverse and established sections remain in some locations, particularly alongside field boundaries and watercourses.	Hedgerows provide habitat connectivity across the agricultural landscape and can complement marginal habitats alongside Board-maintained watercourses. Maintenance activities, access requirements and vegetation management may affect their condition.	Medium – The Board can help retain existing hedgerows through sensitive operational planning, avoiding unnecessary removal and encouraging replacement planting where losses are unavoidable. Opportunities for new planting may also be considered where compatible with access and maintenance requirements.
Lowland meadows	Lowland meadows are a UK Priority Habitat under Section 41 of the NERC Act 2006. They are characterised by species-rich grassland communities and support a diverse range of wildflowers, grasses, pollinators and other invertebrates. They have experienced significant historical losses through agricultural intensification, drainage and changes in grassland management	Species-rich grassland is likely to be relatively scarce and fragmented across the drainage district, with potential occurrences on riverbanks, drainage embankments, floodplain margins, roadside verges and areas of less intensively managed grassland. Further habitat survey and mapping would help establish the extent of remaining examples.	Board-owned and managed land, including pumping station grounds, access strips and suitable watercourse embankments, may provide opportunities to retain or enhance species-rich grassland. Cutting frequency, timing and arisings management can influence the botanical diversity of these areas.	**Medium –** Opportunities exist to improve the condition of suitable grassland through reduced cutting frequency, appropriate arisings removal and targeted wildflower enhancement using locally appropriate seed mixes. Existing species-rich grassland should be prioritised for retention, with potential to create additional meadow areas on suitable Board-managed land where compatible with operational requirements.

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5.10. Species Audit Summary

The species audit provides an overview of priority, protected and other species, which are recorded within the drainage district or considered likely to occur and potentially be influenced by the Board's activities. It also identifies species of local conservation importance, including those highlighted through the Greater Lincolnshire Local Nature Recovery Strategy (LNRS) and other relevant local biodiversity priorities.

The audit considers the conservation status and significance of each species, its known or potential occurrence within the drainage district, and the extent to which the Board's activities may influence its habitat, distribution or wider conservation status. Particular consideration is given to species associated with watercourses, wetlands, grasslands, hedgerows and other habitats that may be directly or indirectly affected by land drainage, water-level management, watercourse maintenance, pumping station operations and capital works.

For each species, the audit provides a summary of relevant national and local conservation priorities, its relationship with the drainage district and the potential implications of the Board's operations. It also considers opportunities for the Board to contribute positively through appropriate maintenance practices, habitat protection and enhancement, species monitoring, invasive species management and partnership working.

The audit is intended to help identify where the Board's activities may present risks to species, where operational changes or additional safeguards may be appropriate, and where there are realistic opportunities to support biodiversity recovery. It therefore provides an evidence base for the development of the species action plans within this strategy, helping to ensure that the Board's environmental objectives are proportionate, locally relevant and aligned with its statutory duties and operational responsibilities.

The inclusion of a species within the audit does not necessarily imply that the Board has direct responsibility for its conservation or that its presence has been confirmed throughout the drainage district. Rather, it recognises the potential for the Board to influence the species, either through its management of watercourses and associated land or through collaborative work with landowners, statutory bodies and conservation organisations.

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Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or increasing populations
Water vole (Arvicola terrestris)	UK Priority Species under Section 41 of the NERC Act 2006. Legally protected under the Wildlife and Countryside Act 1981. Populations have experienced significant declines, with predation by American mink, habitat loss and fragmentation being important pressures.	Recorded throughout Lincolnshire and considered likely to occur across much of the drainage district, although populations may be less frequent in smaller headwaters and less suitable watercourses. Distribution should be informed by local records and surveys.	Directly associated with the Board's drainage network. Bank profiling, vegetation clearance, dredging and changes to bankside habitat can affect water vole populations and their burrows.	**High** – Retain suitable bankside vegetation, maintain connected habitat and avoid unnecessary disturbance to burrows. Incorporate water vole considerations into maintenance planning and undertake surveys where appropriate
Eurasian otter (Lutra lutra)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981. Otters have recovered across much of England but remain vulnerable to habitat degradation, pollution, disturbance and loss of suitable resting sites.	Scattered records occur across the drainage district, with sightings often associated with larger watercourses and main river corridors, including the River Witham.	The drainage network provides opportunities for movement and foraging. Bank maintenance, vegetation removal and works near suitable resting or breeding locations may cause disturbance.	**Medium** – Retain suitable bankside vegetation and undisturbed terrestrial cover, particularly along larger channels. Consider otter requirements when planning works and incorporate habitat enhancements where practicable
Badger (Meles meles)	Widespread in the UK and protected under the Protection of Badgers Act 1992. Although not a Section 41 Priority Species, badgers and their setts are relevant considerations when undertaking land management and construction works.	Widespread and frequently recorded throughout the drainage district.	Potential interactions include works near setts, access routes, pumping stations and earth-moving activities.	**Low –** Limited opportunities for targeted population enhancement through the Board's activities. The priority is to identify and protect setts, avoid disturbance and implement appropriate mitigation where works may affect badgers.
Great crested newt (Triturus cristatus)	European Protected Species, protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Also a UK Priority Species under Section 41 of the NERC Act 2006.	Scattered records occur within the drainage district. The relatively limited availability of ponds close to some Board operational areas may restrict suitable breeding habitat and opportunities for regular recording.	Potential interactions are most likely around pumping stations, depots, grassland areas and capital works where ponds or suitable terrestrial habitat are present.	**Low/Medium –** Retain suitable terrestrial habitat and consider the installation of hibernacula at appropriate sites. Opportunities may also arise through natural flood management schemes and the creation or enhancement of attenuation ponds.
European eel (Anguilla	UK Priority Species under Section 41 and classified as Critically Endangered on the	Recorded and considered likely to occur throughout the Board's	Pumping stations, water-level management and	**Medium/High –** Continue engagement with the Environment Agency regarding eel

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anguilla)	IUCN Red List. European eel populations have undergone severe long-term declines, with barriers to migration, habitat loss and changes to freshwater conditions contributing to the pressures faced by the species.	drainage district, particularly within the larger watercourses and connected drainage network.	structures within the drainage network can influence eel movement and survival. Pumping operations may present a risk of injury or mortality.	screening exemptions and opportunities for eel-friendly pumping infrastructure. Consider eel requirements during pumping station upgrades and establish baseline information where possible.
Common toad (Bufo bufo)	UK Priority Species under Section 41 of the NERC Act 2006. Populations have declined in parts of the UK, with habitat fragmentation, loss of breeding ponds and road mortality among the recognised pressures.	Likely to occur throughout the drainage district, although existing records are relatively scattered and the extent of local populations is not fully established.	Suitable terrestrial habitat may occur around drainage channels, hedgerows, grassland, pumping stations and field boundaries. Works affecting ponds and surrounding terrestrial habitat may influence local populations.	**Medium –** Improve knowledge of local distribution and retain suitable terrestrial habitat. Opportunities include creating or enhancing ponds, maintaining connected habitats and incorporating hibernacula into suitable enhancement schemes.
Water-associated birds (various species)	Numerous water-associated and farmland bird species are protected under the Wildlife and Countryside Act 1981. Several are also Red or Amber listed under Birds of Conservation Concern, reflecting declines in breeding populations and distribution.	A range of species occurs throughout the drainage network and wider agricultural landscape. The distribution and importance of individual species varies between locations and habitats.	Maintenance activities can affect nesting and feeding habitat, particularly through vegetation cutting, bank reprofiling and dredging. The timing and method of works are important considerations during the bird breeding season	**High –** Undertake works outside the main bird nesting season where practicable, generally March to August, while recognising that active nests are protected at all times. Retain suitable vegetation, reinstate disturbed banks promptly and incorporate nesting opportunities into appropriate capital projects.
Barn owl (Tyto alba)	UK Priority Species under Section 41 of the NERC Act 2006. Barn owls are also protected under the Wildlife and Countryside Act 1981. Lincolnshire supports important populations, with drainage corridors, grassland margins and nest boxes contributing to suitable habitat.	Widespread throughout the district, particularly across low-lying agricultural areas where suitable foraging habitat and nesting opportunities are available.	Drainage channels and associated grassland margins can provide valuable hunting habitat by supporting field vole populations. Nest boxes installed on suitable trees and structures also provide breeding opportunities.	**High** – Maintain existing nest boxes and install additional boxes where suitable locations are identified. Manage grassland margins to support small mammal populations and retain suitable hunting corridors.

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Kestrel (Falco tinnunculus)	Amber listed under Birds of Conservation Concern due to declines in the UK breeding population. Protected under the Wildlife and Countryside Act 1981.	Widespread across the district, with local populations likely to fluctuate according to prey availability and suitable nesting habitat.	Grassland margins, drainage banks and field boundaries provide foraging habitat, particularly where small mammal populations are supported. Suitable trees and structures may provide nesting opportunities.	**High –** Maintain and expand the network of suitable nest boxes where appropriate. Sensitive grassland and vegetation management can support prey populations and improve foraging opportunities.
Grass snake (Natrix helvetica)	UK Priority Species under Section 41 of the NERC Act 2006 and protected under the Wildlife and Countryside Act 1981. Grass snakes are associated with wetland habitats and have experienced pressures from habitat loss and fragmentation.	Records are associated with watercourses, wetland habitats and surrounding terrestrial areas. Suitable habitat may occur throughout parts of the drainage district, although local distribution is not fully established.	Drainage channels, bankside vegetation, grassland and accumulated vegetation arisings can provide foraging, sheltering and potential egg-laying habitat.	**Medium –** Retain suitable bankside vegetation and terrestrial habitat. Where appropriate, consider installing or maintaining habitat features such as composting material or purpose-built egg-laying sites, including suitable weed baskets where these can be safely accommodated**.**
Pollinators (bees, butterflies, moths and other pollinating insects)	A range of pollinator species is of conservation concern, with several included on the UK Priority Species list. Declines are associated with habitat loss, fragmentation and reductions in flowering plants.	Likely to occur throughout the district, particularly around grassland margins, hedgerows, field boundaries, pumping station grounds and other areas containing flowering vegetation.	Cutting regimes, vegetation management and the availability of flowering plants along drainage corridors can influence pollinator abundance and habitat connectivity.	**High –** Adopt appropriate cutting regimes, retain flowering vegetation and enhance suitable areas with locally appropriate native wildflowers. Opportunities exist to improve grassland margins and pumping station grounds as pollinator habitat.
Bats (various species	All bat species in the UK are European Protected Species and receive legal protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Several species are also UK Priority Species under Section 41.	Widespread across Lincolnshire, with potential roosting and foraging habitat associated with mature trees, buildings, hedgerows and watercourses throughout the district.	Trees, buildings and structures associated with pumping stations and depots may provide roosting opportunities. Watercourses and hedgerows can provide important commuting and foraging routes.	**Medium –** Retain suitable mature trees and maintain connected vegetation corridors. Consider bat boxes and other artificial roost features where appropriate, alongside checks for potential roosts before works affecting trees or buildings.
White-clawed crayfish (Austropotamobius pallipes)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981 and Conservation of Habitats and Species Regulations 2017. The species has undergone substantial declines	Historical or local records should be used to establish the species' distribution within the district. Potential occurrences are understood to be more associated with the	Watercourse maintenance, sediment disturbance and water quality can influence suitable crayfish habitat. The presence of invasive	**Low/Medium –** Establish the current distribution through existing records and targeted surveys where appropriate. Protect suitable habitat, avoid unnecessary disturbance and consider biosecurity

	due to habitat degradation, pollution and the spread of invasive non-native crayfish and associated disease.	northern parts of the drainage district, but this requires confirmation through reliable records and survey data.	non-native crayfish may also pose a significant threat.	measures to reduce the risk of spreading invasive crayfish and crayfish plague.

5.11. Invasive Non-native Species Summary

The INNS audit identifies high-risk aquatic and riparian invasive non-native species recorded within, or considered likely to occur within, the drainage district and which may be influenced by, or impact upon, the Board's activities. It focuses on species that pose a threat to native biodiversity, freshwater and riparian habitats, watercourse function and the effective delivery of the Board's drainage and flood risk management responsibilities.

The audit considers the known or potential distribution of each species, its ecological and operational impacts, and the ways in which Board activities, including watercourse maintenance, vegetation management and the movement of machinery and equipment, may contribute to their introduction or spread.

For each species, brief notes are provided on its impacts, local occurrence and the potential for the Board to reduce its spread or manage its effects. This includes opportunities for improved biosecurity, early identification, targeted management and partnership working.

The audit provides the basis for the INNS action plan, helping the Board to prioritise preventative measures and minimise the environmental and operational risks associated with invasive species. Inclusion does not necessarily indicate confirmed presence throughout the district or that the Board has direct control over the species.

Priority	Definition
Low	Limited direct opportunities for the Board to influence the species population or distribution. Focus on awareness, reporting and preventing further spread.
Medium	The Board can undertake practical management or contribute meaningfully through maintenance operations and partnership working.
High	Significant opportunities or responsibilities for the Board to undertake targeted management, control or prevention.

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Common & scientific name	Location within IDB if known	Year first recorded	Local status / Extent within drainage district	IDB potential for controlling species population or range
American Mink (Neogale vison)	Falling populations but still present in areas.	1989	Significant reduction in numbers thanks to county wide trapping effort. Still established throughout much of the region. A significant predator of native wetland wildlife, particularly Water Vole and ground-nesting birds. Regional populations are subject to coordinated control and eradication efforts, with the aim of reducing mink numbers and supporting the recovery of native species.	**Low/Medium:** The Board can support regional mink control initiatives through partnership working, reporting sightings and facilitating access to suitable monitoring locations. Continue supporting the Waterlife Recovery Trust and its mink eradication programme where appropriate.
Chinese Mitten Crab (Eriocheir sinensis)	No confirmed records within the drainage district. Recorded within the Humber catchment	Not confirmed locally	An established invasive species within several English river systems, including the Humber. Capable of migrating through connected river and drainage networks. Its burrowing behaviour can destabilise banks and damage flood defence infrastructure, whilst it may also compete with native species.	**Low:** Direct population control is likely to be impractical at IDB level. The Board's role should focus on monitoring, recording and reporting sightings, particularly where burrowing activity could affect banks or drainage infrastructure.
Floating pennywort *Hydrocotyle ranunculoides*	Primarily recorded in watercourses around Lincoln, including areas associated with the Fossdyke	2010	Present within parts of the drainage district but not considered extensive. Growth during the summer can form dense mats, restricting water flow, reducing light penetration and affecting aquatic habitats. Fragments can readily establish new growth and facilitate further spread.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
Water Fern (Azolla filiculoides)	Widespread across numerous Board-maintained watercourses, particularly during the summer months.	2000's	Common and widespread within the drainage district. Seasonal growth can produce extensive surface coverage, reducing light penetration and potentially affecting aquatic vegetation and dissolved oxygen levels.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
New Zealand Pygmyweed (Crassula helmsii)	Recorded within urban areas and associated	2010	Established at a number of locations within the district. An aggressive aquatic and marginal plant capable of forming dense growth, displacing native vegetation and altering aquatic	**Medium:** The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic

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	waterbodies.		habitats. Small fragments can readily establish new populations, making its spread through maintenance activities a particular concern.	vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners and organisations.
Himalayan Balsam (Impatiens glandulifera)	Widespread along riverbanks, drainage channels and riparian habitats throughout the district.	Widespread	Common and frequently encountered during routine maintenance activities. Rapid summer growth can outcompete native riparian vegetation. Following seasonal dieback, areas of dense infestation can be left with reduced vegetation cover, potentially increasing bank erosion. Seed dispersal and the movement of contaminated soil or plant material can facilitate further spread.	**Medium**: The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners and organisations.
Japanese Knotweed (Reynoutria japonica)	Sporadic records across the drainage district, generally associated with disturbed ground, infrastructure and watercourse banks.	2011	Present at a limited number of locations within the district. Spreads primarily through rhizomes and fragments of plant material, which can be transported through soil movement and maintenance activities. Can cause damage to infrastructure and presents significant biosecurity and waste-management considerations	**Low–Medium:** The Board's primary responsibility is to prevent further spread through identification, avoidance and appropriate biosecurity procedures. Specialist contractors should undertake treatment where required. Any excavation, movement or disposal of contaminated soil and plant material must follow relevant Environment Agency guidance and waste requirements

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5.12. 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 defense 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.

Witham First District IDB does not have any official water level management plans, however most pumping stations in the district are operated with higher water levels over drier periods in order to enhance watercourse biodiversity.

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6. The North East Lindsey IDB Biodiversity Audit

6.1. The North East Lindsey Internal Drainage District

The Board district is an area mainly within North East Lincolnshire, directly to the south of the Humber Estuary from South Ferriby to the West, down to Humberston Fitties in the South East.

The district includes the areas of Barrow Haven, including Far Ings Nature Reserve, and New Holland to the north and follows the E.A. East Halton and Skitter Beck from Keelby, through Ulceby Skitter, past East Halton to the outfall into the estuary.

Further south, Immingham, areas of Habrough, Stallingborough, Great Coates, Healing and the Pyewipe area of Grimsby all fall within the district, in addition to the River Freshney and Laceby Beck, with a small area of Laceby and Waltham included also.

At the southernmost area of the district, Little Buck Beck Branches 3 & 4 lead from west from Holton le Clay into Buck Beck, with Branches 1 & 2 north of Humberston. The district ends between the Humberston Fitties and RSPB Tetney Marshes.

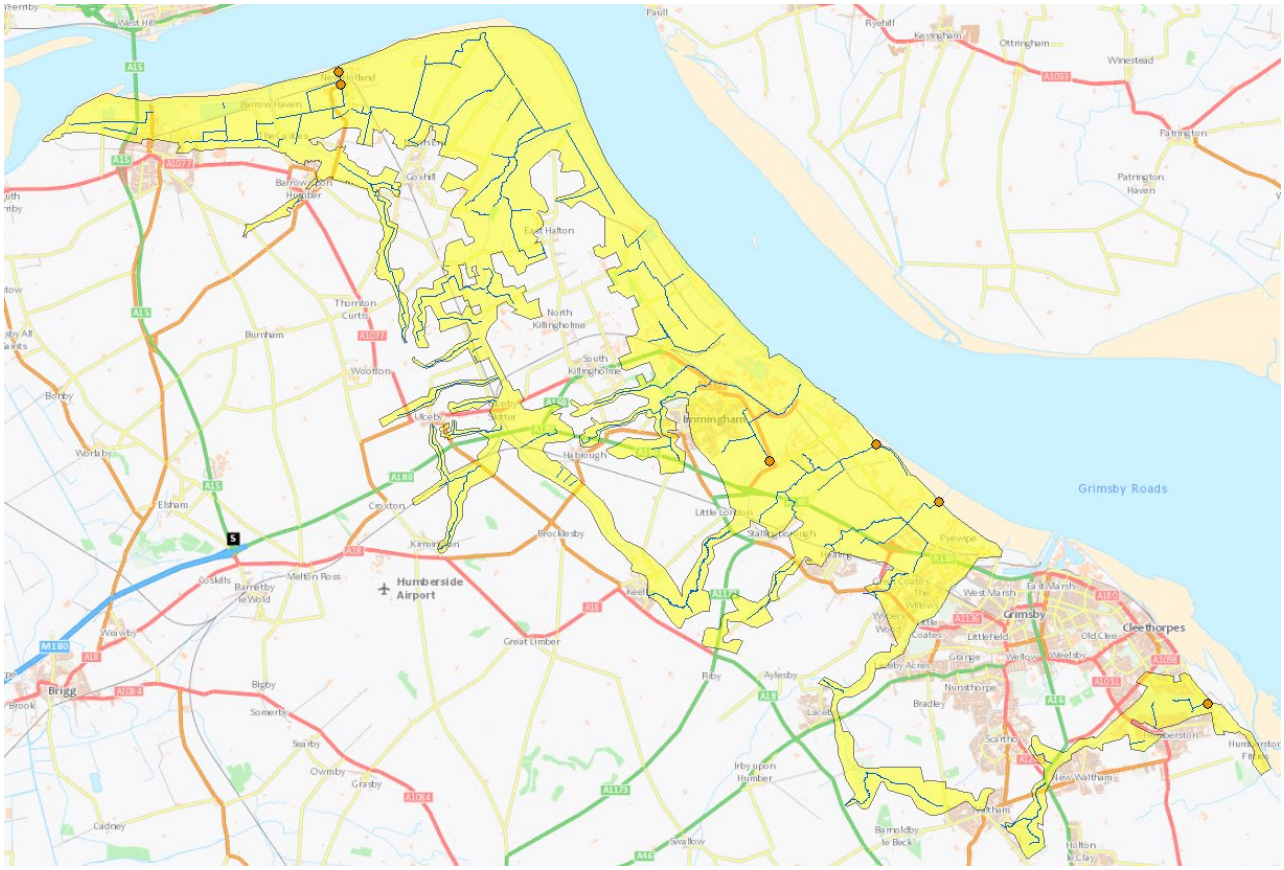
The following outlines the key details of the District:

- Total area of the drainage district: **16,384 ha**
- Area of agricultural land: **15,489 ha**
- Area of other (non-agricultural) land: **895 ha**
- Watercourses (maintained): **270 km**
- Pumping Stations: **13**

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6.2. Map of Audit Area (Drainage District)

The area covered by the drainage district of the IDB is shown below.



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6.3. Geology

The bedrock geology of the Board's area consists entirely of chalk, formed approximately 66-100 million years ago in the Creataceous Period. The superficial geological deposits are alluivium – clay, silt and sand, likely formed up to 2 million years ago in the Quaternary Period when the local environment was previously dominated by rivers. There is a 'strip' of sand and gravel fluvial deposit running from the East Halton area south to Kirmington, reflecting a previous river path.

6.4. 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. They are not designations and are not confined by traditional administrative boundaries. For each NCA, Natural England has prepared a profile that characterises the wildlife and natural features, identifies the influences that act upon those features and sets objectives for nature conservation.

The parts of Board area abutting the estuary are within the Humber Estuary NCA, characterised by the open and expansive waters of the Humber where it flows in to the North Sea and the adjacent low-lying land. Further inland, the Board area is within the Lincolnshire Coast and Marshes area, characterised by a wide coastal plain which extends from Barton-upon-Humber in the north, across to Grimsby at the mouth of the Humber and south to Skegness.

6.5. Landscape Designations

There are no National Parks or Areas of Outstanding Natural Beauty (AONB) in the Drainage District. However, the area of the district between Laceby and Barnoldby le Beck is close to the Lincolnshire Wold AONB, with the source of Laceby Beck being with 200 metres of the boundary.

6.6. Sites and Monuments

Scheduled Ancient Monuments are not directly related to Nature and Biodiversity matters. Information held by the Board and other sources has therefore not been collated. Monuments are only relevant in cases where they abut the Board maintained watercourses and such monuments would be referred to on a site by site basis as appropriate.

6.7. Tree Preservation Orders

Tree Preservation Orders (TPOs) are not directly related to Nature and Biodiversity matter since they are made on individual trees, groups or woods for landscape and amenity reasons. Information held by the Board and other sources has therefore not been collated. Orders are only relevant where they occur adjacent to the Board maintained watercourses and would be referred to on a site by site basis as appropriate.

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6.8. Statutory Nature Conservation Sites

7.8.1. Internationally Designated Sites

There are no internationally designated nature conservation sites within the District.

7.8.2. 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.

Site name	Designation	Features Relevant to IDB
Humber Estuary	SSSI	Estuary, saltmarsh, non-breeding birds
North Killingholme Haven Pits	SSSI	Saline coastal lagoon, waterbirds & non-breeding birds
Far Ings	NNR	Reed bed, migrating birds

eserves

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

Site name	Designation	Features Relevant to IDB
Far Ings	LNR	Reed bed, migrating birds
Waters Edge	LNR	Meadow, reed bed, ponds
Cleethorpes Country Park	LNR	Meadow, watercourse

ture Conservation Sites

A 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.

Site name	Designation	Features Relevant to IDB
Stallingborough Meadow	Selected LWS	Woodland / plantation
Goxhill Meadows	Selected LWS	Field / pasture / grassland
Sykes Lane Meadows	Selected LWS	Field / pasture / grassland
Station Road Field	Selected LWS	Field / pasture / grassland
Rosper Road Pools	Selected LWS	Field / pasture / grassland

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Halton Marsh Clay Pits	Selected LWS	Lake / pond / reservoir / pit
Tioxide West Field	Selected LWS	Brownfield / ruderal / previously developed / disused railway
Freshney Parkway North	Selected LWS	Drain / river / canal / stream / ditch / spring
Freshney Parkway	Selected LWS	Field / pasture / grassland
Stallingborough Meadows East	Selected LWS	Field / pasture / grassland
Cleethorpes Sand Dunes Far South	Selected LWS	Sand dune / sand dune grassland
Laceby Beck North	Selected LWS	Drain / river / canal / stream / ditch / spring
Homestead Park Pond	Selected LWS	Lake / pond / reservoir / pit
Stallingborough Fish Ponds	Selected LWS	Lake / pond / reservoir / pit
Laporte Road Brownfield Site	Selected LWS	Brownfield / ruderal / previously developed / disused railway
Barton Broads	Selected LWS	Lake / pond / reservoir / pit
East Marsh	Selected LWS	Marsh / reedbed / swamp / carr
Abbot's Lodge Grassland	Selected LWS	Field / pasture / grassland
Cleethorpes Country Park	Selected LWS	Field / pasture / grassland
Old Sand Dunes North West	Selected LWS	Sand dune / sand dune grassland
River Freshney Headwaters	Selected LWS	Drain / river / canal / stream / ditch / spring
Buck Beck East	Selected LWS	Drain / river / canal / stream / ditch / spring
Sweedale Croft Drain	Selected LWS	Drain / river / canal / stream / ditch / spring
Burkinshaw's Covert	Selected LWS	Woodland / plantation
Healing Cress Beds	Selected LWS	Field / pasture / grassland
Laceby Carr Plantation and Pond	Selected LWS	Woodland / plantation
Barrow Blow Wells	Selected LWS	Woodland / plantation
Far Ings	Selected LWS	Field / pasture / grassland
Goxhill Marsh South	Selected LWS	Marsh / reedbed / swamp / carr
Waters' Edge	Selected LWS	Field / pasture / grassland
Barton Cliff New Quarry	Selected LWS	Field / pasture / grassland
A15/A1077 Road Verges	Selected LWS	Road verge / green lane / path
South Cloister Covert	Selected LWS	Woodland / plantation
Chase Hill Wood	Selected LWS	Woodland / plantation
Roxton Wood	Selected LWS	Woodland / plantation
Roxton Wood Road Verges	Selected LWS	Road verge / green lane / path

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6.9. Habitat Audit Summary

This habitat audit provides an overview of the nationally and locally important habitats present within the Board's drainage district, with consideration given to those that may be influenced by the Board's land drainage, flood risk management and maintenance activities.

The assessment includes habitats recognised as UK Priority Habitats under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, alongside locally important habitats identified through regional biodiversity strategies and the Lincolnshire Local Nature Recovery Strategy (LNRS). It also considers the ecological importance of the Board's managed drainage network, recognising the contribution that engineered watercourses can make to biodiversity, habitat connectivity and wider nature recovery.

For each habitat, the audit considers its distribution and condition within the drainage district, the potential interactions with the Board's operational activities, and opportunities to maintain, enhance, restore or expand habitat where practicable. The identified opportunities are intended to inform the Board's future environmental priorities and ensure that biodiversity considerations are incorporated into the planning and delivery of its statutory functions.

Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or expanding
Arable Field Margins	Arable field margins are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can provide important feeding, nesting and refuge habitat for farmland wildlife. Buffer strips are also relevant to local nature recovery priorities.	Arable land is widespread throughout the drainage district. Field margins are common but are often narrow and intensively managed. More diverse margins can occur alongside watercourses, drainage channels and access tracks.	Margins alongside Board-maintained watercourses can provide valuable buffer habitat, helping to intercept sediment and agricultural runoff, as well as providing wildlife corridors and refuge areas.	**Low –** Management is largely the responsibility of individual landowners. However, the Board can help retain existing margins by avoiding unnecessary disturbance, considering access arrangements and promoting no net loss where its activities could affect them.
Reedbeds and Wetland habitats	Reedbeds, fens and other wetland habitats are recognised for their importance to biodiversity, supporting specialist plants, invertebrates, birds and other wetland species. They are also important within	Reedbed habitat occurs in isolated areas and as established margins alongside some watercourses and open water bodies. The extent and	Reedbed margins can provide valuable habitat alongside the drainage network, although excessive encroachment can affect conveyance and access	**Medium** – Opportunities exist to retain and selectively expand existing reedbed margins where hydraulic capacity and operational access allow. Habitat creation may also be considered through suitable restoration and enhancement

	regional nature recovery priorities.	condition of these habitats vary across the district.	for maintenance.	projects.
Wet Woodland	Wet woodland is a UK Priority Habitat under Section 41 of the NERC Act 2006. It is a relatively scarce habitat associated with wet soils and floodplain environments, supporting a range of specialist wildlife.	Wet woodland is generally limited to isolated locations, often associated with open water bodies, wetland margins and areas of permanently damp ground.	Wet woodland can provide valuable habitat and contribute to landscape connectivity. However, tree growth and encroachment may conflict with access, bank stability and maintenance requirements in certain locations.	**Low –** Opportunities to expand wet woodland are limited by the operational requirements of the drainage network. Existing areas should be retained where practicable, with potential for small-scale expansion away from critical maintenance corridors.
Engineered drains and ditches	Although engineered drainage channels are not generally classified as UK Priority Habitats in their own right, they can support significant aquatic and marginal biodiversity. They contribute to habitat connectivity, water quality and wider freshwater ecosystem functioning.	Extensive and widespread throughout the drainage district, forming the principal managed watercourse network under the Board's control. Individual channels vary considerably in their ecological condition and habitat value.	These habitats are directly managed by the Board and are central to its statutory drainage and flood risk management functions. Routine maintenance can influence aquatic vegetation, marginal habitats, water quality and species distribution.	**High –** The Board has considerable scope to influence the ecological condition of its drainage network through sensitive maintenance, appropriate cutting regimes, marginal habitat management and targeted enhancement. Opportunities should be pursued in accordance with flood risk management requirements and the ADA Biodiversity Manual.
Ponds	Ponds are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. They can support diverse communities of amphibians, aquatic invertebrates and wetland plants, particularly where they are well connected to surrounding habitats.	Ponds occur sporadically throughout the drainage district, including agricultural field ponds, isolated waterbodies and attenuation ponds. Their ecological condition and management vary considerably.	Board activities in the vicinity of ponds may influence local water levels, hydrology and associated habitats. Maintenance operations can also cause disturbance to wildlife where appropriate precautions are not taken.	**Low/Medium** – Direct opportunities are relatively limited, although the Board can support the retention and protection of existing ponds and explore opportunities for new pond creation through appropriate projects, including natural flood management initiatives
Natural Rivers and streams	Rivers and streams support important freshwater ecosystems and are recognised within national biodiversity and water environment objectives. Certain river habitats are also identified as UK Priority Habitats, including chalk rivers and rivers	Natural rivers and streams are present within the drainage district but represent a smaller proportion of the overall network than engineered drainage channels. Many are	The Board's influence is generally more limited than on its directly maintained watercourses. However, works undertaken on behalf of, or in proximity to, other authorities	**Low/Medium** – Opportunities are primarily associated with partnership working, sensitive delivery of works and supporting wider river restoration initiatives. Where the Board undertakes works affecting natural watercourses, opportunities to protect and enhance existing

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	supporting priority habitat features.	managed by the Environment Agency or other responsible authorities.	can affect river habitats through vegetation management, sediment disturbance, bank works and changes to channel structure.	habitat should be considered.
Coastal and floodplain grazing marsh	Coastal and floodplain grazing marsh is a UK Priority Habitat under Section 41 of the NERC Act 2006. These habitats are important for breeding and wintering birds, wetland plants and invertebrates, and are often associated with traditional grazing and seasonal flooding.	Areas of grazing marsh and floodplain meadow habitat occur within parts of the drainage district, including the Stapleford area and potentially Thurlby and other isolated locations. Their ecological value is influenced by grazing, water levels and land management.	The Board's management of water levels and drainage infrastructure can influence the hydrological conditions supporting these habitats. Appropriate water level management can help maintain their ecological value, where compatible with wider drainage requirements.	**Medium –** Opportunities may arise through partnership working with landowners and conservation organisations to support suitable water level management, retain existing habitat and explore restoration opportunities where appropriate.
Hedgerows	Hedgerows are recognised as a UK Priority Habitat under Section 41 of the NERC Act 2006. Species-rich and structurally diverse hedgerows provide important nesting, feeding and commuting habitat for birds, mammals and invertebrates.	Hedgerows are widespread throughout the drainage district, although many are species-poor or intensively managed. More diverse and established sections remain in some locations, particularly alongside field boundaries and watercourses.	Hedgerows provide habitat connectivity across the agricultural landscape and can complement marginal habitats alongside Board-maintained watercourses. Maintenance activities, access requirements and vegetation management may affect their condition.	Medium – The Board can help retain existing hedgerows through sensitive operational planning, avoiding unnecessary removal and encouraging replacement planting where losses are unavoidable. Opportunities for new planting may also be considered where compatible with access and maintenance requirements.
Lowland meadows	Lowland meadows are a UK Priority Habitat under Section 41 of the NERC Act 2006. They are characterised by species-rich grassland communities and support a diverse range of wildflowers, grasses, pollinators and other invertebrates. They have experienced significant historical losses through agricultural intensification, drainage and changes in grassland management	Species-rich grassland is likely to be relatively scarce and fragmented across the drainage district, with potential occurrences on riverbanks, drainage embankments, floodplain margins, roadside verges and areas of less intensively managed grassland. Further habitat survey and mapping would help establish the extent of remaining examples.	Board-owned and managed land, including pumping station grounds, access strips and suitable watercourse embankments, may provide opportunities to retain or enhance species-rich grassland. Cutting frequency, timing and arisings management can influence the botanical diversity of these areas.	**Medium –** Opportunities exist to improve the condition of suitable grassland through reduced cutting frequency, appropriate arisings removal and targeted wildflower enhancement using locally appropriate seed mixes. Existing species-rich grassland should be prioritised for retention, with potential to create additional meadow areas on suitable Board-managed land where compatible with operational requirements.

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6.10. Species Audit Summary

The species audit provides an overview of priority, protected and other species, which are recorded within the drainage district or considered likely to occur and potentially be influenced by the Board's activities. It also identifies species of local conservation importance, including those highlighted through the Greater Lincolnshire Local Nature Recovery Strategy (LNRS) and other relevant local biodiversity priorities.

The audit considers the conservation status and significance of each species, its known or potential occurrence within the drainage district, and the extent to which the Board's activities may influence its habitat, distribution or wider conservation status. Particular consideration is given to species associated with watercourses, wetlands, grasslands, hedgerows and other habitats that may be directly or indirectly affected by land drainage, water-level management, watercourse maintenance, pumping station operations and capital works.

For each species, the audit provides a summary of relevant national and local conservation priorities, its relationship with the drainage district and the potential implications of the Board's operations. It also considers opportunities for the Board to contribute positively through appropriate maintenance practices, habitat protection and enhancement, species monitoring, invasive species management and partnership working.

The audit is intended to help identify where the Board's activities may present risks to species, where operational changes or additional safeguards may be appropriate, and where there are realistic opportunities to support biodiversity recovery. It therefore provides an evidence base for the development of the species action plans within this strategy, helping to ensure that the Board's environmental objectives are proportionate, locally relevant and aligned with its statutory duties and operational responsibilities.

The inclusion of a species within the audit does not necessarily imply that the Board has direct responsibility for its conservation or that its presence has been confirmed throughout the drainage district. Rather, it recognises the potential for the Board to influence the species, either through its management of watercourses and associated land or through collaborative work with landowners, statutory bodies and conservation organisations.

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Habitat	National and local conservation importance	Presence and significance within drainage district	Relevance to IDB activities	Potential for maintaining, restoring or increasing populations
Water vole (Arvicola terrestris)	UK Priority Species under Section 41 of the NERC Act 2006. Legally protected under the Wildlife and Countryside Act 1981. Populations have experienced significant declines, with predation by American mink, habitat loss and fragmentation being important pressures.	Recorded throughout Lincolnshire and considered likely to occur across much of the drainage district, although populations may be less frequent in smaller headwaters and less suitable watercourses. Distribution should be informed by local records and surveys.	Directly associated with the Board's drainage network. Bank profiling, vegetation clearance, dredging and changes to bankside habitat can affect water vole populations and their burrows.	**High** – Retain suitable bankside vegetation, maintain connected habitat and avoid unnecessary disturbance to burrows. Incorporate water vole considerations into maintenance planning and undertake surveys where appropriate
Eurasian otter (Lutra lutra)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981. Otters have recovered across much of England but remain vulnerable to habitat degradation, pollution, disturbance and loss of suitable resting sites.	Scattered records occur across the drainage district, with sightings often associated with larger watercourses and main river corridors, including the River Witham.	The drainage network provides opportunities for movement and foraging. Bank maintenance, vegetation removal and works near suitable resting or breeding locations may cause disturbance.	**Medium** – Retain suitable bankside vegetation and undisturbed terrestrial cover, particularly along larger channels. Consider otter requirements when planning works and incorporate habitat enhancements where practicable
Badger (Meles meles)	Widespread in the UK and protected under the Protection of Badgers Act 1992. Although not a Section 41 Priority Species, badgers and their setts are relevant considerations when undertaking land management and construction works.	Widespread and frequently recorded throughout the drainage district.	Potential interactions include works near setts, access routes, pumping stations and earth-moving activities.	**Low –** Limited opportunities for targeted population enhancement through the Board's activities. The priority is to identify and protect setts, avoid disturbance and implement appropriate mitigation where works may affect badgers.
Great crested newt (Triturus cristatus)	European Protected Species, protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Also a UK Priority Species under Section 41 of the NERC Act 2006.	Scattered records occur within the drainage district. The relatively limited availability of ponds close to some Board operational areas may restrict suitable breeding habitat and opportunities for regular recording.	Potential interactions are most likely around pumping stations, depots, grassland areas and capital works where ponds or suitable terrestrial habitat are present.	**Low/Medium –** Retain suitable terrestrial habitat and consider the installation of hibernacula at appropriate sites. Opportunities may also arise through natural flood management schemes and the creation or enhancement of attenuation ponds.

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European eel (Anguilla anguilla)	UK Priority Species under Section 41 and classified as Critically Endangered on the IUCN Red List. European eel populations have undergone severe long-term declines, with barriers to migration, habitat loss and changes to freshwater conditions contributing to the pressures faced by the species.	Recorded and considered likely to occur throughout the Board's drainage district, particularly within the larger watercourses and connected drainage network.	Pumping stations, water-level management and structures within the drainage network can influence eel movement and survival. Pumping operations may present a risk of injury or mortality.	**Medium/High –** Continue engagement with the Environment Agency regarding eel screening exemptions and opportunities for eel-friendly pumping infrastructure. Consider eel requirements during pumping station upgrades and establish baseline information where possible.
Common toad (Bufo bufo)	UK Priority Species under Section 41 of the NERC Act 2006. Populations have declined in parts of the UK, with habitat fragmentation, loss of breeding ponds and road mortality among the recognised pressures.	Likely to occur throughout the drainage district, although existing records are relatively scattered and the extent of local populations is not fully established.	Suitable terrestrial habitat may occur around drainage channels, hedgerows, grassland, pumping stations and field boundaries. Works affecting ponds and surrounding terrestrial habitat may influence local populations.	**Medium –** Improve knowledge of local distribution and retain suitable terrestrial habitat. Opportunities include creating or enhancing ponds, maintaining connected habitats and incorporating hibernacula into suitable enhancement schemes.
Water-associated birds (various species)	Numerous water-associated and farmland bird species are protected under the Wildlife and Countryside Act 1981. Several are also Red or Amber listed under Birds of Conservation Concern, reflecting declines in breeding populations and distribution.	A range of species occurs throughout the drainage network and wider agricultural landscape. The distribution and importance of individual species varies between locations and habitats.	Maintenance activities can affect nesting and feeding habitat, particularly through vegetation cutting, bank reprofiling and dredging. The timing and method of works are important considerations during the bird breeding season	**High –** Undertake works outside the main bird nesting season where practicable, generally March to August, while recognising that active nests are protected at all times. Retain suitable vegetation, reinstate disturbed banks promptly and incorporate nesting opportunities into appropriate capital projects.
Barn owl (Tyto alba)	UK Priority Species under Section 41 of the NERC Act 2006. Barn owls are also protected under the Wildlife and Countryside Act 1981. Lincolnshire supports important populations, with drainage corridors, grassland margins and nest boxes contributing to suitable habitat.	Widespread throughout the district, particularly across low-lying agricultural areas where suitable foraging habitat and nesting opportunities are available.	Drainage channels and associated grassland margins can provide valuable hunting habitat by supporting field vole populations. Nest boxes installed on suitable trees and structures also provide breeding opportunities.	**High** – Maintain existing nest boxes and install additional boxes where suitable locations are identified. Manage grassland margins to support small mammal populations and retain suitable hunting corridors.

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Kestrel (Falco tinnunculus)	Amber listed under Birds of Conservation Concern due to declines in the UK breeding population. Protected under the Wildlife and Countryside Act 1981.	Widespread across the district, with local populations likely to fluctuate according to prey availability and suitable nesting habitat.	Grassland margins, drainage banks and field boundaries provide foraging habitat, particularly where small mammal populations are supported. Suitable trees and structures may provide nesting opportunities.	**High –** Maintain and expand the network of suitable nest boxes where appropriate. Sensitive grassland and vegetation management can support prey populations and improve foraging opportunities.
Grass snake (Natrix helvetica)	UK Priority Species under Section 41 of the NERC Act 2006 and protected under the Wildlife and Countryside Act 1981. Grass snakes are associated with wetland habitats and have experienced pressures from habitat loss and fragmentation.	Records are associated with watercourses, wetland habitats and surrounding terrestrial areas. Suitable habitat may occur throughout parts of the drainage district, although local distribution is not fully established.	Drainage channels, bankside vegetation, grassland and accumulated vegetation arisings can provide foraging, sheltering and potential egg-laying habitat.	**Medium –** Retain suitable bankside vegetation and terrestrial habitat. Where appropriate, consider installing or maintaining habitat features such as composting material or purpose-built egg-laying sites, including suitable weed baskets where these can be safely accommodated**.**
Pollinators (bees, butterflies, moths and other pollinating insects)	A range of pollinator species is of conservation concern, with several included on the UK Priority Species list. Declines are associated with habitat loss, fragmentation and reductions in flowering plants.	Likely to occur throughout the district, particularly around grassland margins, hedgerows, field boundaries, pumping station grounds and other areas containing flowering vegetation.	Cutting regimes, vegetation management and the availability of flowering plants along drainage corridors can influence pollinator abundance and habitat connectivity.	**High –** Adopt appropriate cutting regimes, retain flowering vegetation and enhance suitable areas with locally appropriate native wildflowers. Opportunities exist to improve grassland margins and pumping station grounds as pollinator habitat.
Bats (various species	All bat species in the UK are European Protected Species and receive legal protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. Several species are also UK Priority Species under Section 41.	Widespread across Lincolnshire, with potential roosting and foraging habitat associated with mature trees, buildings, hedgerows and watercourses throughout the district.	Trees, buildings and structures associated with pumping stations and depots may provide roosting opportunities. Watercourses and hedgerows can provide important commuting and foraging routes.	**Medium –** Retain suitable mature trees and maintain connected vegetation corridors. Consider bat boxes and other artificial roost features where appropriate, alongside checks for potential roosts before works affecting trees or buildings.
White-clawed crayfish (Austropotamobius pallipes)	UK Priority Species under Section 41 and legally protected under the Wildlife and Countryside Act 1981 and Conservation of Habitats and Species Regulations 2017. The species has undergone substantial declines	Historical or local records should be used to establish the species' distribution within the district. Potential occurrences are understood to be more associated with the	Watercourse maintenance, sediment disturbance and water quality can influence suitable crayfish habitat. The presence of invasive	**Low/Medium –** Establish the current distribution through existing records and targeted surveys where appropriate. Protect suitable habitat, avoid unnecessary disturbance and consider biosecurity

	due to habitat degradation, pollution and the spread of invasive non-native crayfish and associated disease.	northern parts of the drainage district, but this requires confirmation through reliable records and survey data.	non-native crayfish may also pose a significant threat.	measures to reduce the risk of spreading invasive crayfish and crayfish plague.

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6.11. Invasive Non-native Species Summary

The INNS audit identifies high-risk aquatic and riparian invasive non-native species recorded within, or considered likely to occur within, the drainage district and which may be influenced by, or impact upon, the Board's activities. It focuses on species that pose a threat to native biodiversity, freshwater and riparian habitats, watercourse function and the effective delivery of the Board's drainage and flood risk management responsibilities.

The audit considers the known or potential distribution of each species, its ecological and operational impacts, and the ways in which Board activities, including watercourse maintenance, vegetation management and the movement of machinery and equipment, may contribute to their introduction or spread.

For each species, brief notes are provided on its impacts, local occurrence and the potential for the Board to reduce its spread or manage its effects. This includes opportunities for improved biosecurity, early identification, targeted management and partnership working.

The audit provides the basis for the INNS action plan, helping the Board to prioritise preventative measures and minimise the environmental and operational risks associated with invasive species. Inclusion does not necessarily indicate confirmed presence throughout the district or that the Board has direct control over the species.

Priority	Definition
Low	Limited direct opportunities for the Board to influence the species population or distribution. Focus on awareness, reporting and preventing further spread.
Medium	The Board can undertake practical management or contribute meaningfully through maintenance operations and partnership working.
High	Significant opportunities or responsibilities for the Board to undertake targeted management, control or prevention.

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Common & scientific name	Location within IDB if known	Year first recorded	Local status / Extent within drainage district	IDB potential for controlling species population or range
American Mink (Neogale vison)	Falling populations but still present in areas.	1989	Significant reduction in numbers thanks to county wide trapping effort. Still established throughout much of the region. A significant predator of native wetland wildlife, particularly Water Vole and ground-nesting birds. Regional populations are subject to coordinated control and eradication efforts, with the aim of reducing mink numbers and supporting the recovery of native species.	**Low/Medium:** The Board can support regional mink control initiatives through partnership working, reporting sightings and facilitating access to suitable monitoring locations. Continue supporting the Waterlife Recovery Trust and its mink eradication programme where appropriate.
Chinese Mitten Crab (Eriocheir sinensis)	No confirmed records within the drainage district. Recorded within the Humber catchment	Not confirmed locally	An established invasive species within several English river systems, including the Humber. Capable of migrating through connected river and drainage networks. Its burrowing behaviour can destabilise banks and damage flood defence infrastructure, whilst it may also compete with native species.	**Low:** Direct population control is likely to be impractical at IDB level. The Board's role should focus on monitoring, recording and reporting sightings, particularly where burrowing activity could affect banks or drainage infrastructure.
Floating pennywort *Hydrocotyle ranunculoides*	Primarily recorded in watercourses around Lincoln, including areas associated with the Fossdyke	2010	Present within parts of the drainage district but not considered extensive. Growth during the summer can form dense mats, restricting water flow, reducing light penetration and affecting aquatic habitats. Fragments can readily establish new growth and facilitate further spread.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
Water Fern (Azolla filiculoides)	Widespread across numerous Board-maintained watercourses, particularly during the summer months.	2000's	Common and widespread within the drainage district. Seasonal growth can produce extensive surface coverage, reducing light penetration and potentially affecting aquatic vegetation and dissolved oxygen levels.	**Medium:** The Board can contribute to control through targeted management, early identification and partnership working. Continue implementing the Board's biosecurity policy, prioritising locations where infestations could affect conveyance, maintenance or ecological interests.
New Zealand Pygmyweed (Crassula helmsii)	Recorded within urban areas and associated waterbodies.	2010	Established at a number of locations within the district. An aggressive aquatic and marginal plant capable of forming dense growth, displacing native vegetation and altering aquatic habitats. Small fragments can readily establish new populations, making its spread through maintenance activities a particular	**Medium:** The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners

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			concern.	and organisations.
Himalayan Balsam (Impatiens glandulifera)	Widespread along riverbanks, drainage channels and riparian habitats throughout the district.	Widespread	Common and frequently encountered during routine maintenance activities. Rapid summer growth can outcompete native riparian vegetation. Following seasonal dieback, areas of dense infestation can be left with reduced vegetation cover, potentially increasing bank erosion. Seed dispersal and the movement of contaminated soil or plant material can facilitate further spread.	**Medium**: The Board should prioritise avoidance and biosecurity to prevent further spread through machinery, equipment and the movement of aquatic vegetation or sediment. Targeted control may be appropriate in partnership with relevant landowners and organisations.
Japanese Knotweed (Reynoutria japonica)	Sporadic records across the drainage district, generally associated with disturbed ground, infrastructure and watercourse banks.	2011	Present at a limited number of locations within the district. Spreads primarily through rhizomes and fragments of plant material, which can be transported through soil movement and maintenance activities. Can cause damage to infrastructure and presents significant biosecurity and waste-management considerations	**Low–Medium:** The Board's primary responsibility is to prevent further spread through identification, avoidance and appropriate biosecurity procedures. Specialist contractors should undertake treatment where required. Any excavation, movement or disposal of contaminated soil and plant material must follow relevant Environment Agency guidance and waste requirements

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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 defense 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.

North East Lindsey IDB does not have any official water level management plans, however most pumping stations in the district are operated with higher water levels over drier periods in order to enhance watercourse biodiversity

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7. Habitat and Species Action Plans

7.1. Introduction

Action plans comprise the objectives, targets and actions that the IDB has identified for each habitat and species to be included within the Nature Strategy. The following sections contain action plans for each of the habitats and species that have been prioritised by the IDB.

7.2. Habitat Action Plans

8.2.1. Arable Field Margins

National Targets	Local Targets
Improve the extent, condition and connectivity of wildlife-rich farmland habitats, supporting the recovery of pollinators, farmland birds and other declining species. Contribute towards the Environment Act 2021 target to halt the decline in species abundance by 2030 and the wider ambition to restore 500,000 hectares of wildlife-rich habitat outside protected sites by 2042.	Priority 37 promotes more nature-friendly farming and land management. Actions 94 and 95 specifically identify the creation of wildflower-rich field margins and sympathetic management to support pollinators, farmland birds and scarce arable plants. Actions 111 and 112 further promote reduced chemical inputs and nectar-rich habitats on suitable farmland areas.

8.2.1.1. IDB Objectives

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IDB Objectives	
1	Identify opportunities to establish or enhance arable field margins on Board-owned and managed land, particularly around pumping stations, depots and other suitable operational sites
2	Ensure field margin management is compatible with operational access, drainage infrastructure and maintenance requirements.

8.2.1.2. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Review Board-owned and managed land to identify suitable opportunities for field margin creation or enhancement.	Number of sites assessed; area identified as suitable for enhancement.	November 2027	Environment Officer	Operations
2	1b	Establish or enhance wildflower-rich field margins at suitable Board sites, using appropriate locally sourced seed mixes where practicable	Area (ha) of field margins created or enhanced; number of sites improved.	Ongoing	Environment Officer/IDB Ops	Local Wildlife Organisations

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8.2.2. Reedbeds and wetland habitats

8.2.2.1. National and Local Targets

National Targets	Local Targets
Protect, restore and expand wetland habitats, including reedbeds, fen, wet grassland and open water. Improve habitat condition and connectivity to support wetland species, improve water quality, increase water storage and contribute to natural flood management.	Freshwater Wetlands Priority 20 promotes the creation of larger wetland mosaics, including reedbeds, wet woodland, wet grassland, lowland fen and open water (Action 48). Priority 21 promotes the appropriate management of existing wetlands, including enhancing reedbeds for breeding birds through improved water quality, rotational reed harvesting and water-level management (Action 51). Further actions include identifying wetland creation opportunities for flood risk reduction and water quality improvement (Actions 49 and 50).

8.2.2.2. IDB Objectives

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IDB Objectives	
1	Identify opportunities to protect, restore and create reedbeds and other wetland habitats on suitable Board-owned or managed land.
2	Improve the biodiversity value of existing wetland habitats through appropriate vegetation and water-level management.
3	Incorporate wetland creation and enhancement into suitable capital projects, redundant asset restoration and wider environmental schemes.

8.2.2.3. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Review Board-owned and managed land to identify suitable opportunities for reedbed and wetland creation or enhancement.	Number of sites assessed; area (ha) identified as suitable for enhancement.	November 2028	Environment Officer	Ops, Landowners
2	2a	Review management of existing wetland habitats and identify opportunities for appropriate water-level management, rotational cutting and vegetation management	Number of sites reviewed; area (ha) under improved management; number of sites adopting revised management practices.	Ongoing	Environment Officer/ Ops	EA, Natural England, Landowners
3	3a	Identify opportunities to create or restore reedbeds and wetland habitats as part of suitable capital projects and the restoration of redundant assets.	Number of projects incorporating wetland creation or restoration; area (ha) created or restored.	Ongoing	Environment Officer/Project Manager	EA, Natural England, Landowners

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8.2.3. Wet Woodland

8.2.3.1. National and Local Targets

National Targets	Local Targets
Protect, restore and expand native woodland, including wet woodland, to improve habitat condition, biodiversity and ecological connectivity. Support the recovery of woodland-dependent species and promote woodland creation where it provides wider benefits for water management, climate resilience and carbon storage.	Wet woodland is identified as a priority habitat within the Woodland and Trees theme. The LNRS highlights the need to protect existing woodland, improve its condition and reconnect fragmented woodland habitats. It also identifies wet woodland creation as part of wider wetland mosaics under Freshwater Wetlands Priority 20, Action 48, which promotes the creation of different wetland habitats, including wet woodland, on suitable land.

8.2.3.2. IDB Objectives

	IDB Objectives
1	Protect existing wet woodland on Board-owned or managed land, avoiding unnecessary clearance or disturbance.
2	Identify suitable opportunities to create or expand wet woodland, particularly where this can complement existing wetland habitats.
3	Encourage natural regeneration and appropriate native tree planting where compatible with drainage, access and infrastructure requirements.

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8.2.3.3. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Review Board-owned and managed land to identify existing wet woodland and opportunities for its protection or enhancement.	Number of sites assessed; area (ha) of existing wet woodland identified.	November 2028	Environment Officer	Ops, Landowners
2	**2a**	Identify suitable opportunities for wet woodland creation or expansion, particularly alongside existing wetlands and watercourses.	Number of potential sites identified; area (ha) considered suitable for creation.	Ongoing	Environment Officer	Natural England, Landowners
3	**3a**	Promote appropriate management of existing wet woodland, including retention of deadwood, natural regeneration and a diverse native tree structure where practicable.	Number of sites adopting improved management; area (ha) under enhanced management.	Ongoing	Environment Officer/Ops	Landowners

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8.2.5 Engineered Drains and ditches

8.2.3.4. National and Local Targets

National Targets	Local Targets
Improve the ecological condition of freshwater habitats, protect aquatic and marginal species and improve connectivity between wetland habitats. Promote environmentally sensitive watercourse management that balances biodiversity recovery with drainage and flood risk management requirements.	Priority 24 specifically promotes the appropriate management of ditches to increase populations and distribution of rare and scarce aquatic and marginal plants, particularly within the Fens and Humberhead Levels. Action 57 promotes maintaining high-quality water and ensuring ditches remain wet throughout the year through appropriate water-level management, reduced nutrient inputs and sensitive cutting and vegetation removal. Freshwater Wetlands Priority 21, Action 52, also supports sensitive ditch management to improve water quality and biodiversity.

8.2.3.5. IDB Objectives

	IDB Objectives
1	Improve the biodiversity value of Board-maintained watercourses while maintaining their primary drainage and flood risk management functions.
2	Promote consistent environmental management practices among operational staff and contractors

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8.2.3.6. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Review watercourse maintenance practices and identify opportunities to improve biodiversity through rotational or phased cutting, retention of marginal vegetation and other sensitive management techniques.	Length (km) of watercourse managed using environmentally sensitive practices; number of maintenance programmes reviewed.	November 2027 then ongoing	Environment Officer/Operations	Ops, EA
2	**1b**	Identify opportunities to incorporate aquatic and marginal habitat enhancements into routine maintenance and capital works, where compatible with drainage requirements.	Number of projects incorporating habitat enhancements; length (km) of watercourse improved.	November 2031	Environment Officer/Operations	EA, Landowners
3	**2a**	Provide environmental guidance and regular briefings to operational staff and contractors on sensitive watercourse management and relevant ecological considerations.	Number of staff and contractors receiving environmental briefings; guidance produced and reviewed.	Ongoing	Environment Officer	Ops, Contractors

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8.2.4. Ponds

8.2.4.1. National and Local Targets

National Targets	Local Targets
National policy aims to protect and enhance existing ponds and other freshwater habitats, while creating new ponds where opportunities arise. Improving pond condition, water quality and connectivity can support amphibians, invertebrates, aquatic plants and other freshwater species. These objectives contribute to wider commitments to halt the decline in species abundance by 2030 and restore nature across England.	The Greater Lincolnshire Local Nature Recovery Strategy identifies freshwater wetlands as a priority for nature recovery. Its priorities include protecting and enhancing existing wetland habitats, improving their condition and creating new wetland features where appropriate. Ponds can contribute to these objectives by providing additional freshwater habitat, supporting species movement and forming part of wider wetland habitat networks

8.2.4.2. IDB Objectives

	IDB Objectives
1	Protect and improve the biodiversity value of existing ponds on Board-owned or managed land.
2	Identify opportunities to create new ponds or enhance existing ponds through maintenance, restoration and capital works.

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8.2.4.3. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Identify and review existing ponds on Board-owned or managed land, recording their condition, biodiversity value and opportunities for improvement.	Number of ponds surveyed; number of sites with identified enhancement opportunities.	November 2027	Environment Officer	Ops, Landowners
2	**2a**	Incorporate pond creation, restoration or enhancement into suitable Board projects.	Number of projects incorporating pond creation or enhancement	November 2031	Environment Officer, Engineering Team	Ops, Landowners

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8.2.5. Hedgerows

8.2.5.1. National and Local Targets

Hedgerows are important nationally, regionally and in Lincolnshire and Nottinghamshire for plants and animals that use the habitat. Hedgerows also form excellent extensive and interlinked wildlife corridors across areas of arable dominated land.

National Targets	Local Targets
National targets for hedgerows include the maintenance of the net extent of hedges in the UK; ensure that hedgerows remain, on average, atleast as rich in native woody species; reverse the unfavourable condition of over-managed hedgerows across the UK by reducing the proportion of land managers who trim most of their hedges annually to 60%; halt further decline in the condition of herbaceous hedgerow flora and improve their condition; and achieve a net increase in the length of hedgerows of an average of 800 km per year	Targets for hedgerows in Lincolnshire are to establish a baseline for the exiting extent and condition of ancient and species-rich hedges;to maintain the current extent of ancient and species-rich hedges; to achieve favourable condition of ancient and species-rich hedges; and to restore/create 100km per year of hedgerows. Targets for hedgerows in Nottinghamshire are to develop an inventory of ancient and species-rich hedges; prevent further loss of ancient and species-rich hedges; achieve favourable condition of ancient and species-rich hedges; and increase the net length of ancient and species-rich hedges.

8.2.5.2. IDB Objectives

	IDB Objectives
1	Ensure no net loss of hedges as a result of IDB activities
2	Identify location and extent of hedgerows alongside Board maintained watercourses

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8.2.5.3. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Identify location and extent of hedgerows alongside Board maintained watercourses	Length (m) of hedgerows surveyed	If required	IDB Ops	Landowners
2	1b	Ensure no net loss of hedgerows alongside Board maintained watercourses through IDB operations	Length (m) of hedgerow remaining intact	Ongoing	IDB Ops	Landowners

8.2.1. Natural Rivers and Streams

8.2.1.1. National and Local Targets

National Targets	Local Targets
National policy seeks to restore and improve the ecological condition of rivers and streams, supporting more natural river processes, better water quality and improved connectivity between aquatic and riparian habitats. This includes restoring natural channel features, improving habitat diversity, reducing pollution and reconnecting rivers with their floodplains where appropriate.	Restore natural processes and morphologies of rivers and streams to increase biodiversity and provide wider benefits, including reduced flooding, improved water quality and water storage. Appropriately manage rivers and their riparian and floodplain habitats to increase biodiversity and maximise wider environmental benefits.

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8.2.1.2. IDB Objectives

IDB Objectives	
1	Protect and enhance the biodiversity of natural rivers, streams and their associated riparian habitats within the drainage district.
2	Work with landowners, the Environment Agency and conservation partners to support river restoration and wider catchment-scale nature recovery

8.2.1.3. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Identify and review natural rivers, streams and associated riparian habitats within the drainage district, recording their ecological condition, biodiversity value and opportunities for enhancement.	Number of watercourses or sites reviewed; number of sites with identified enhancement opportunities.	November 2028	Environment Officer	EA, Ops
2	2a	Identify opportunities to incorporate riparian and in-channel habitat enhancements into suitable Board maintenance and capital works, where compatible with drainage and flood risk management requirements.	Number of projects incorporating habitat enhancements; length (km) or area (ha) of habitat improved.	Ongoing	Environment Officer	EA, Ops, Landowners

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3	**3a**	Contribute to relevant catchment partnerships and nature recovery initiatives, sharing local knowledge of drainage networks and identifying opportunities to align Board activities with wider environmental objectives.	Number of partnership meetings or initiatives contributed to; number of opportunities identified through partnership working.	Ongoing	Environment Officer	EA, GLNP

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8.8 Coastal and floodplain grazing marsh

8.2.1.1. National and Local Targets

National Targets	Local Targets
National policy seeks to protect, restore and expand coastal and floodplain grazing marsh, a priority habitat that supports important populations of breeding waders, wintering wildfowl, amphibians, invertebrates and wetland plants. Maintaining appropriate grazing and cutting regimes, suitable water levels and networks of ditches and other wetland features is important to maintaining the ecological value of these habitats.	The Greater Lincolnshire Local Nature Recovery Strategy identifies coastal and floodplain grazing marsh as an important habitat across the county, particularly within the Lincolnshire Coast and Marshes, The Fens and Humberhead Levels. It supports important populations of wintering wildfowl and breeding waders, including threatened species such as curlew and lapwing.

8.2.1.2. IDB Objectives

	IDB Objectives
1	Protect and enhance the biodiversity value of coastal and floodplain grazing marsh and its associated ditches and wetland features within the drainage district..
2	Identify opportunities to improve the condition and extent of grazing marsh through appropriate water-level management, vegetation management and habitat enhancement.
3	Work with landowners, the Environment Agency and conservation partners to support grazing marsh restoration and wider wetland nature recovery.

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8.2.1.3. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Identify and review areas of coastal and floodplain grazing marsh within the drainage district, recording their condition, biodiversity value and opportunities for enhancement.	Number of sites reviewed; number of sites with identified enhancement opportunities.	November 2028	Environment Officer	Landowners, EA
2	**2a**	Identify opportunities to incorporate grazing marsh and associated wetland enhancements into suitable Board projects, including improvements to ditch networks, marginal vegetation and wet grassland habitats.	Number of projects incorporating grazing marsh or wetland enhancements; area (ha) of habitat created or improved	November 2031	Environment Officer/Operations	EA, Landowners
3	**3a**	Identify and support partnership opportunities for grazing marsh restoration, wetland creation and improved connectivity between existing wetland habitats.	Number of partnership initiatives supported; number of grazing marsh or wetland restoration projects contributed to.	Ongoing	Environment Officer	Ops, GLNP, Landowners

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Lowland Meadows

8.2.1.4. National and Local Targets

National Targets	Local Targets
National policy seeks to protect, restore and expand species-rich lowland meadows, which are a priority habitat that has suffered significant declines in extent and condition. These habitats support a diverse range of wildflowers, grasses, pollinators and other invertebrates, as well as birds and mammals that depend on grassland for feeding and shelter.	The Greater Lincolnshire Local Nature Recovery Strategy identifies grassland and heathland as a key theme for nature recovery. Its priorities include protecting and improving existing species-rich grasslands, restoring degraded grassland and creating new areas of wildlife-rich grassland to strengthen habitat networks.

8.2.1.5. IDB Objectives

	IDB Objectives
1	Protect and enhance existing areas of species-rich lowland meadow and other valuable grassland habitats on Board-owned or managed land
2	Identify opportunities to create or restore species-rich grassland through appropriate management of Board land and suitable capital or maintenance projects

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8.2.1.6. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Identify and review existing areas of species-rich grassland on Board-owned or managed land, recording their condition, biodiversity value and opportunities for improvement.	Number of sites surveyed; number of sites with identified enhancement opportunities.	November 2028	Environment Officer	Ops
2	**2a**	Identify suitable opportunities to establish or restore species-rich grassland, including through the restoration of redundant infrastructure sites and improvements to pumping station grounds and other Board land.	Number of projects incorporating grassland creation or restoration; area (ha) of grassland created or improved.	November 2031	Environment Officer/Operations	EA, Landowners

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8.3. Species Action Plans

Priority Category	Description
Must	The species is directly impacted by our work (e.g., protected and live in the drainage channel).
Should	Species that are declining and therefore we should support them.
Could	Not in dire need of help, but we would like to support them, they might be 'easy wins.

8.3.1. Water Vole

8.3.1.1. National and Local Targets

Water voles occur throughout Britain but they are confined mainly to lowland areas near water. Once nationally common and widespread, this species has suffered a significant decline in numbers and distribution, mainly thought to be due to increasing numbers of American Mink (*Neovison vison*). As reaches of rivers, stream and drains become unsuitable for habitation, or water voles are lost from, the distribution of water voles becomes discontinuous and existing sites become isolated and vulnerable.

National Targets	Local Targets
National targets for water voles are to maintain the current distribution and abundance of the species in order to arrest the decline in Britain,and to restore water voles to their former widespread distribution	Targets for water voles in the Lincolnshire are to maintain the current distribution of the species. Targets for water voles in Nottinghamshire are to maintain the current extent of water voles, and restore water voles totheir former widespread distribution.

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8.3.1.2. IDB Objectives

IDB Objectives	
1	Protect known water vole populations and avoid unnecessary disturbance or damage to occupied burrows during Board activities
2	Promote watercourse maintenance practices that retain and improve suitable water vole habitat while maintaining drainage and flood risk management function
3	Support the recovery and long-term stability of water vole populations through continued mink monitoring and control initiatives

8.3.1.3. IDB Actions

Action Plan						
Objective ref.	Action ref	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Ensure that proposed works with the potential to affect water voles are appropriately assessed, with ecological surveys and any necessary licences or mitigation measures obtained before works commence.	Number of relevant projects subject to ecological assessment; compliance with applicable licence requirements.	Ongoing	Environment	N/A
2	2a	Continue to promote sensitive watercourse maintenance, including the retention of suitable marginal vegetation and avoid unnecessary disturbance to bankside habitats where possible.	Length (km) of watercourse managed using water vole-sensitive practices; number of operational staff briefed.	Ongoing	Environment	Ops
3	3a	Continue to support the Lincolnshire Mink Trapping Programme and wider Operation Water Vole initiative through landowner engagement, hosting monitoring rafts and supporting coordinated mink monitoring and control.where the design of the system allows.	Number of monitoring rafts hosted or supported; number of partnership activities contributed to.	Ongoing	Environment	Waterlife Recovery Trust, Landowners

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8.2.1. Badger

8.2.1.1. National and Local Targets

The Protection of Badgers Act 1992 protects badgers and their setts and imposes legislative duties on IDB's. The nature of drainage board operations has direct impacts on badger habitat, and members of the board operate under a CL27 Natural England licence for working around badgers.

8.2.1.1. IDB Objectives

IDB Objectives	
1	Maintain existing badger habitat within the drainage network where flood risk allows and in-line with legislation and licensing regulations.
2	Maximize awareness and education of badger ecology, their habitats and licensing regulations within the IDB to enable no unlawful actions against badgers.

8.2.1.2. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Follow CL27 Natural England badger licencing terms and regulations for operating around badgers and their setts whilst undertaking maintenance and other work.	Recording	Ongoing	IDB Ops/Environment	Natural England
2	2a	Implement an annual training schedule delivered to all field workers ensuring awareness of badgers and all relevant legislation and licencing.	Annual Training	Ongoing	IDB Ops/Environment	Ops

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8.2.2. Otter

8.2.2.1. National and Local Targets

Formerly widespread throughout the UK, the otter underwent a rapid decline in numbers from the 1950s to 1970s and was effectively lost from midland and south-eastern counties of England by the 1980s. Populations remained in Wales, south-west England and much of Scotland, where sea loch and coastal colonies comprise one of the largest populations in Europe. The decline has now slowed and sightings are being reported in former habitats, due to natural spread and/or releases, however persecution still remains an issue.

Otters are increasingly common in a regional context and are spreading in Lincolnshire and Nottinghamshire in terms of distribution and numbers.

National Targets	Local Targets
National BAP Targets for otters are to maintain and expand existing otter populations, and to restore breeding otters to all catchments and coastalareas where they have been recorded since 1960.	Targets for otters in Lincolnshire are to maintain the existing populations, maintain the existing extent of suitable habitat, survey the Ancholme valley in order to determine if they are present, and to expand the range of otters in the county to all catchments if not found in the Ancholme valley. Targets for otters in Nottinghamshire are to establish a baseline by undertaking surveys, restoring otters to rural catchments and enhancing riparian habitat to encourage expansion of otters.

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8.2.2.2. IDB Objectives

IDB Objectives	
1	Collection and maintenance of otter records within the Board's District
2	Investigate the creation of otter holts in the District

8.2.2.3. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Continue with current system of employees and contractors recording otters	Recording via the iRecord app or other preferred method	Ongoing	IDB Ops/Environment	-
2	2a	Investigate the locations of suitable sites of creation of holts	Number of sites identified	Ongoing	IDB Ops/Environment	Landowners

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8.2.3. Water Associated Birds

8.2.3.1. National and Local Targets

National Targets	Local Targets
National policy aims to protect and improve habitats that support water-associated birds, including rivers, drains, ponds, reedbeds, wetlands, coastal habitats and floodplain grazing marsh. These habitats provide important nesting, feeding, roosting and overwintering opportunities for species such as kingfisher, reed bunting, mute swan, herons, water rails, waders and wildfowl.	Local strategy includes specific priorities for species such as redshank, with actions aimed at improving breeding habitat through the creation and management of wet grassland, maintaining suitable water levels, reducing disturbance and managing vegetation appropriately. Wider wetland priorities also support the restoration and enhancement of reedbeds, wet grassland, ditches and other habitats used by breeding and wintering birds..

8.2.3.2. IDB Objectives

	IDB Objectives
1	Protect known and potential breeding, feeding and roosting habitats for water-associated birds from avoidable disturbance or damage during Board activities.
2	Identify opportunities to improve and create suitable wetland, marginal and bankside habitats for breeding and wintering birds

8.2.3.3. IDB Actions

Action Plan

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Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	**1a**	Ensure that proposed works with the potential to affect important bird habitats or active nesting sites are appropriately assessed, with suitable ecological advice and mitigation measures incorporated where necessary.	Number of relevant projects subject to ecological assessment; number of projects incorporating appropriate mitigation measures.	Ongoing	Environment Officer	Ops
2	**2a**	Identify opportunities to enhance bird habitats through suitable Board projects, including improvements to reedbeds, marginal vegetation, wet grassland, bankside habitats and water features.	Number of habitat enhancement opportunities identified; number of projects incorporating bird habitat improvements	November 2031	Environment Officer	Landowners/Ops

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8.2.4. Barn Owl

8.2.4.1. National and Local Targets

National Targets	Local Targets
Number of habitat enhancement opportunities identified; number of projects incorporating bird habitat improvements	The Greater Lincolnshire Local Nature Recovery Strategy recognises barn owls as one of the important species identified through local engagement with land managers and the public. Its wider priorities for farmland, grassland and ecological networks provide opportunities to improve the habitats on which barn owls depend

8.2.4.2. IDB Objectives

	IDB Objectives
1	Collection and maintenance of barn owl records within the Board district
2	Manage and maintain current nest box sites, and investigate suitable locations for new boxes

8.2.4.3. IDB Actions

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Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Continue with current system of employees and contractors recording barn owl	Recording via the iRecord app or other preferred method	Ongoing	IDB Ops/Environment	-
2	**2a**	Identify suitable locations for barn owl nesting boxes and maintain those already in situ	Number of sites identified	Ongoing	IDB Ops/Environment	Landowners and Wildlife Conservation Trust

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8.2.5. Grass Snake

8.2.5.1. National and Local Targets

National Targets	Local Targets
National conservation priorities focus on protecting existing populations, maintaining suitable habitats and improving connectivity between sites. Grass snakes are commonly associated with wetland habitats, ponds, ditches, rough grassland, scrub and woodland edges. They rely on a combination of habitats for feeding, basking, sheltering, hibernation and egg-laying	The Greater Lincolnshire Local Nature Recovery Strategy identifies species recovery and the improvement of connected habitat networks as key priorities. Although grass snakes are not necessarily the focus of a standalone local species action, the strategy's priorities for freshwater wetlands, ponds, grasslands and ecological networks provide opportunities to support their populations

8.2.5.2. IDB Objectives

	IDB Objectives
1	Collection and maintenance of grass snake records within the Board District
2	Maintain and increase population bypromoting suitable habitat

8.2.5.3. IDB Actions

Action Plan

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Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	**1a**	Continue with current system of employees and contractors recording grass snakes	Recording via the iRecord app or other preferred method	Ongoing	IDB Ops/Environment	
2	**2a**	Continue current weed raking practices	Length of channel weedraked (km)	Ongoing	IDB Ops/Environment	

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8.2.6. Eel

8.2.6.1. National and Local Targets

National Targets	Local Targets
None	None

8.2.6.2. IDB Objectives

	IDB Objectives
1	Collection and maintenance of eel records within the Board District
2	Comply with The Eel Regulations (England and Wales) 2009

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8.2.6.3. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Continue with current system of employees and contractors recording eels	Recording via the iRecord app or other preferred method	Ongoing	IDB Ops/Environment	
2	**2a**	Identify which structures are critical to passage of eels in the IDB watercourse systems and consider eel friendly pumps/passes in these areas	Number of structures	Ongoing	IDB Ops/Environment	Environment Agency

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8.2.7. Toad

8.2.7.1. National and Local Targets

The common toad is a UK Priority Species.
Toads are found throughout the UK. The common toad is widespread in Nottinghamshire and in Lincolnshire too, but becomes more scarce in the Fens.

National Targets	Local Targets
None, however Toads are listed under Schedule 5 of the Wildlife and Countryside Act (1981) and as amended.	None

8.2.7.2. IDB Objectives

	IDB Objectives
1	Collection and maintenance of toad records within the Board District

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8.2.7.3. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	1a	Continue with current system of employees and contractors recording toad	Recording via the iRecord app or other preferred method	Ongoing	IDB Ops/Environment	

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8.2.8. Bats

8.2.8.1. National and Local Targets

Some species of bats are UK Priority Species and all species are grouped as Priority Species in Lincolnshire. Bats are widespread in Britain and also in Lincolnshire where 11 species have been recorded.

National Targets	Local Targets
National targets for bats include the maintenance of existing populations and geographical ranges, and restoring populations to earlier levels	Targets for bats in Lincolnshire are to survey and monitor the status of populations, to maintain and enhance existing populations,enhance bat foraging habitats, promote understanding of bats, and encourage appropriate building techniques.

8.2.8.2. IDB Objectives

	IDB Objectives
1	Collection and maintenance of bat records within the Board District
2	Investigate suitable roosting sites increase pot… …est sit…

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8.2.8.3. IDB Actions

Action Plan						
Objective ref.	**Action number**	**Action**	**Measurable / Indicators**	**Completion date**	**Action Lead**	**Partners**
1	**1a**	Continue with current system of employees and contractors recording bats	Recording via the iRecord app or other preferred method	Ongoing	IDB Ops/Environment	-
2	**2a**	Assess suitability of Board buildings for bat box siting	Number of buildings assessed	Ongoing	IDB Ops/Environment	Lincolnshire Bat Group
2	**2b**	Commence installation programme of bat boxes	Number of boxes installed	Ongoing	IDB Ops/Environment	Lincolnshire Bat Group

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8.2.9. White-Clawed Crayfish

8.2.9.1. National and Local Targets

The white-clawed crayfish is a UK Priority Species and is a Priority Species in Lincolnshire and Nottinghamshire.
This species is still relatively widespread in the UK but there has been a severe recent decline. There are still populations in Nottinghamshire in the headwaters of one watercourse and in two standing waterbodies but none of these are within the Board area. In Lincolnshire white-clawed crayfish are now restricted to a short length of the Upper River Witham and tributaries.

This species is listed in Appendix III of the Bern Convention and Annexes II and V of the EC Habitats Directive. It is classed as *Globally Threatened* by IUCN/WCMC. It is protected under Schedule 5 of the Wildlife & Countryside Act (1981 and as amended) in respect of taking from the wild and sale.

This species is very rare in the Board district, only occurring in the extreme south. The information is not available to state whether there has been a significant trend in the population in the recent past but in line with the national picture there is likely to have been a decline.

National Targets	Local Targets
The national target for white-clawed crayfish is to maintain the present geographical distribution of this species.	Targets for white-clawed crayfish in Lincolnshire are to undertake surveys of suitable habitats, to maintain the Upper Witham population, to limit the spread of non-native crayfish species, to carry out habitat enhancement schemes within the Upper Witham. Targets for white-clawed crayfish in Nottinghamshire are to maintain the current county distribution of the species, and to establish thecurrent distribution of the species in the county then use this information to establish a target for expansion – applicable to UWIDB

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8.2.9.2. IDB Objectives

IDB Objectives	
1	Collection and maintenance of all crayfish records within the Board district
2	Contribute to habitat enhancements schemes in the Upper Witham

8.2.9.3. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Continue with current system of employees and contractors recording white-clawed crayfish and non-native crayfish	Recording via the iRecord app or other preferred method	Ongoing	IDB Ops/Environment	
2	2a	Work with partners to identify suitable sites, create suitable habitat and undertake suitable management	Number of schemes	Ongoing	IDB Ops/Environment	EA/Natural England

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9. Procedural Action Plan

9.2. Introduction

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

9.3. Objectives and Targets

	IDB Objectives
1	Promote environmental best practice in all Board functions
2	To improve IDB employees knowledge of biodiversity support through training
3	Promote the Board's environmental work

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9.4. IDB Actions

Action Plan						
Objective ref.	Action number	Action	Measurable / Indicators	Completion date	Action Lead	Partners
1	1a	Ensure all operative staff have received biodiversity training within 6 months from their start date or as part of their induction, and refresher training provided annually.	Numbers of staff and trained	Ongoing	Environment	
2	2a	Publicise major and successful examples of Nature Strategy related work undertaken by the Board	Number of articles published	Ongoing	Environment	ADA

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10. Implementation

The actions within the Nature Strategy will be executed via the following means:

1) The actions which can be delivered through adaptions or inclusions to general maintenance programmes will be identified and integrated accordingly into board operations and feedback will be delivered to ADA where appropriate.

2) Actions which require independent and additional execution such as bat and bird box erection and surveys or training will identified, resources planned and engaged and / or planned in to the relevant resources' work schedules.

3) Actions which can be executed through capital works programmes will be integrated into the relevant project plans.

4) Actions which can be delivered through collaboration with partners will be formally agreed in writing with such partners with responsibilities, timescales and reporting requirements defined.

5) Actions which can be delivered through developer or consented works will be identified and integrated into project plans.

11. 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 should 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.

12. Reporting

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

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.

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.

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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:

- Provided to conservation partners to assist with further local biodiversity conservation planning;
- In the public domain via the IDB website through the Environment Section of the Board report.
- Provided to local authorities in order to contribute towards their legislative biodiversity reporting requirements including the NERC 2006 Act, Habitats Directive, Environment Bill and the Local Nature Recovery Strategies;
- The Local Biological Records Centre (Lincolnshire Environment Records Centre).

13. Useful links

Greater Lincolnshire Nature Partnership – glnp.org.uk

Joint Nature Conservation Committee – jncc.gov.uk

DEFRA - www.gov.uk/government/organisations/department-for-environment-food-rural-affairs

Association of Drainage Authorities (ADA) – www.ada.org.uk

Local Nature Recovery Strategy - www.glincslnrs.org.uk

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