Goole & Airmyn Drainage Board Biodiversity Action Plan 2025 - 2030

Draft Report

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Prepared for:
Goole and Airmyn IDB

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Goole & Airmyn
Internal Drainage Board

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This report describes work commissioned by Goole & Airmyn Internal Drainage Board. Catherine Porter of JBA Consulting carried out this work.

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Abbreviations

AONB	Areas of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
BNG	Biodiversity Net Gain
ERYC	East Riding of Yorkshire Council
ERYBAPS	East Riding of Yorkshire Biodiversity Action Plan Strategy
GIS	Geographic Information System
IDB	Internal Drainage Board
INNS	Invasive Non-Native Species
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
LMDW	Lowland Mixed Deciduous Woodland
LNR	Local Nature Reserve
LNRS	Local Nature Recovery Strategies
MAGIC	Multi-Agency Geographic Information for the Countryside
NERC	Natural Environment and Rural Communities
NEYEDC	North and East Yorkshire Ecological Data Centre
NVC	National Vegetation Classification
OSGR	Ordnance Survey Grid Reference
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

1 Internal Drainage Board Biodiversity

1.1 Internal Drainage Board Biodiversity Action Plans

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

Importantly, it reflects the Board's aspiration to maximise the support it provides to biodiversity, particularly priority UK species and habitats, and the wider environment in general through its day-to-day activities, by setting clear objectives, actions and targets.

The Board has adopted this Biodiversity Action Plan as one of its policies and is committed to its implementation. It will review the plan periodically and update it as appropriate. It covers the entire drainage district of the IDB, as shown in Figure 1-1.

1.1.1 Goole & Airmyn IDB BAP

A Goole & Airmyn IDB BAP was first produced in 2015 with the latest BAP covering the years 2015-2020. This Biodiversity Action Plan follows on from the previous 2015-2020 BAP, reviewing and building on the targets and actions set within that BAP. The duration of this BAP will run between 2025-2030.

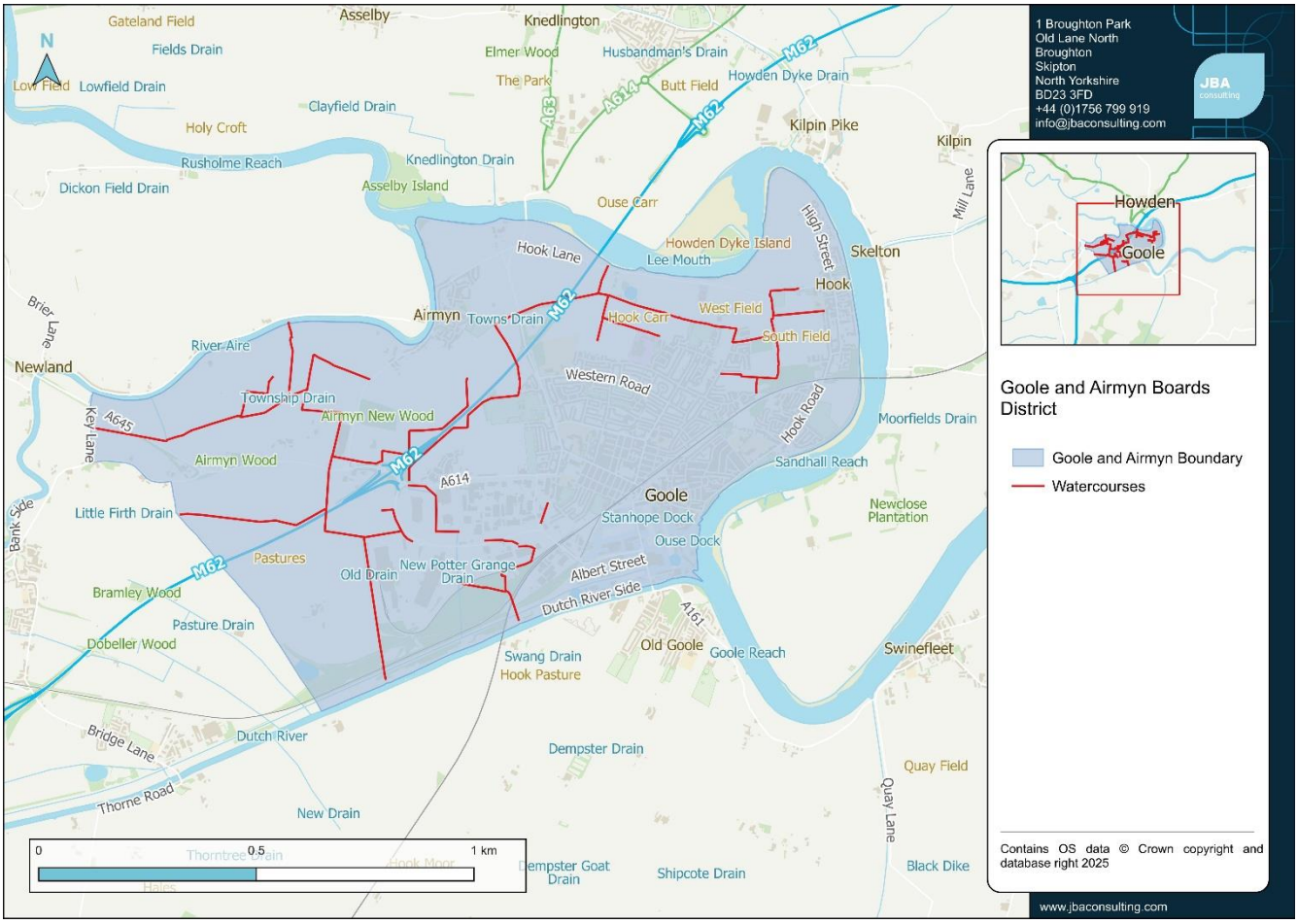

Figure 1-1: Goole and Airmyn IDB District.

1.2 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 BAP 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.

1.3 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 (NERC) Act 2006 places a duty on IDBs, as a public body, to conserve biodiversity. The Environment Act 2021 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 exhaustive) relevant to the work of IDBs:

- The Environment Act 2021
- Conservation of Habitats and Species Regulations 2017 (as amended)
- Eels (England and Wales) Regulations 2009
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2003
- Natural Environment and Rural Communities (NERC) Act 2006 (Section 40)
- Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)
- 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

1.4 Policy & Strategic Background

The 25 Year Environment Plan, designated as an Environmental Improvement Plan under the Environment Act 2021, defines four priority areas of environmental conservation: air quality, waste and resource efficiency, water, and biodiversity. The main focus of the Environment Act 2021 ("the Act") is to make the Government’s commitment to delivering the targets set against these four priorities legally binding. There are a number of elements of the Act which require IDB action and compliance, as set out below.

Section 102 of the Act strengthens Section 40 of the NERC Act 2006 and relates to the conservation and enhancement of biodiversity through the exercise of functions in relation to England. Section 102 requires public authorities to actively carry out Strategic Assessments, detailing how they can enhance and conserve biodiversity, and then take that action. To demonstrate this, the IDB will produce 5-yearly BAPs and will regularly

engage with relevant stakeholders to keep up to date with new local strategies or priorities and incorporate these into the BAPs.

Part 6 of the Act requires the development of Local Nature Recovery Strategies (LNRS). LNRS are expected to be led mainly, but not always, by local authorities, but will be developed and delivered in partnership with a wide range of local stakeholders. The main outputs of the LNRS are to provide a list of priority opportunities for habitat improvement and restoration in the strategy area, and produce a local habitat map containing existing nature sites and habitats, and locations of the priorities for future habitat improvement and restoration. IDBs will have to give regard to any relevant LNRS when considering the actions they can take 'when complying with their biodiversity duty to further' the conservation and enhancement of biodiversity, and so will be expected to align the IDB BAP, environmental policy and best practice manual with those priorities set out in the LNRS.

The Act mandates that Biodiversity Net Gain (BNG) should be delivered at a minimum of 10% through the planning system. BNG became mandatory from the 12 February 2024 under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2023). This means a development will result in more or better-quality natural habitat than was there before development. Most IDB works would be permitted development, which are exempt from BNG under the Environment Act. If IDBs are planning non-exempt development, they will be subject to BNG, including the management of the site to deliver the required outcomes for at least 30 years following project completion. The need for off-site biodiversity net gain sites to offset local development may present opportunities to IDBs. Biodiversity net gain requirements could create a strategic opportunity for IDBs to offer reliable long-term maintenance contracts for registered net gain sites linked to IDB channels and networks, including strategic sustainable drainage systems within the district. There could be opportunities for IDBs who own or lease land to make it available for off-site biodiversity net gain projects.

Section 109 and 110 of the Act provides for the development of species conservation and protected sites strategies, which may be prepared by Natural England with the purpose of improving the conservation status of any species of flora, fauna or a protected site. If and when they are developed through regulation, IDBs will be expected to co-operate with Natural England in the development and implementation of such strategies if they relate to areas under IDB management. The IDB will also have a duty to have regard to (which includes planning and taking auditable action) any relevant strategies whilst carrying out its functions, including when consenting the work of others.

Biodiversity Action Plans will help the Board to maximise the biodiversity benefits from its activities and demonstrate its contribution to the Environment Act 2021 targets.

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 of Goole & Airmyn IDB Biodiversity Action Plan

The aims of this BAP are:

- To ensure habitat and species action targets from relevant national and local policies/strategies are translated into effective action within the district.
- To ensure Board maintenance does not adversely impact on any protected terrestrial or aquatic species, or protected sites.
- Identify targets for other habitats and species of local importance within the District.
- Raise awareness within the Board and locally on the need for biodiversity conservation as part of water level management, including contractor training.
- Ensure that opportunities for conservation and enhancement of biodiversity are considered throughout all Board operations.
- Monitor and report on progress in biodiversity conservation.

2 IDB BAP Process

In the production of this BAP a five-stage process has been followed:

1. Conducting a Biodiversity Audit,
2. Evaluating and prioritising habitats and species,
3. Defining Objectives and Actions - Habitat and Species Action Plans,
4. Implementation,
5. Monitoring and Reporting.

2.1 Biodiversity Audit

To produce the Goole & Airmyn IDB BAP, information on the habitats and species present in the district were first obtained. This involved the collation of existing data held by the IDB and other freely available data sources.

Priority habitats and species in England, as identified in section 41 of the NERC Act 2006 as Habitats and Species of Principal Importance, that can be found in the Goole & Airmyn drainage district were identified, as well as additional non-priority habitats and species deemed to be important within the district.

Sources of data used were:

- Natural England GIS data (www.gis.naturalengland.org.uk/pubs/gis/GIS_register.asp)
- Natural England Designated Sites View (https://designatedsites.naturalengland.org.uk/SiteSearch.aspx)
- JNCC UK Biodiversity Action Plan (https://jncc.gov.uk/our-work/uk-bap/)
- Habitats and Species of Principal Importance (https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england)
- Local Biodiversity Action Plans (LBAP)
- Natural England Priority Habitat Inventory (https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::priority-habitats-inventory-england/about)
- Goole & Airmyn Internal Drainage Board: BAP 2015 - 2020 (JBA Consulting, 2016)

2.2 Prioritising Habitats and Species

There are 56 habitats, and 943 species listed under Section 41 of the NERC Act as Habitats and Species of Principal Importance in England, therefore key species and habitats have been prioritised in the production of this IDB BAP. Those habitats and species which the IDB has the opportunity to enhance and conserve through their own work, such as those associated with aquatic and riparian environments have been targeted.

Additionally, LNRS and other local strategies, when these become available, will be considered when shortlisting biodiversity priorities.

2.3 Objectives, Targets and Indicators

Following on from previous work, the Goole & Airmyn IDB (the Board) has agreed Habitat and Species Action Plans over which it has control and conservation objectives expressing the Board's aims for benefitting that particular habitat or species. The targets focus Board programmes of action and identify outcomes that can be measured and monitored.

2.4 Implementation

Once targets have been set for habitats and species, it is important that the actions to deliver the BAP are described. The Plan sets out how the Board intends to implement the actions in the plan, which may be implemented in several ways including, integrating into existing systems, maintenance and management regimes, through capital works programmes, specific surveys, training and activities, collaboration with partners and developer or consented works.

2.5 Monitoring and Reporting

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

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

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

3 Biodiversity Audit

3.1 Goole & Airmyn Drainage District

The drainage district covers an area of 18.42km² and the IDB maintain 24 km of managed watercourses across the East Riding of Yorkshire Council (ERYC) area. The Board is responsible for five pumping stations and oversees one water level management structure.

3.2 Landscape Designations

There are no National Parks or Areas of Outstanding Natural Beauty (AONBs) within the Goole and Airmyn drainage district, nor within 5km of the district boundary.

3.3 Statutory Nature Conservation Sites

3.3.1 Internationally, Nationally and Locally Statutory Designated Sites

There is one Local Nature Reserve (LNR) within the Goole and Airmyn drainage district; Mayfield and Broom Park. There are also two further LNRs within 2km of the district boundary:

- Sugar Mill Ponds
- Howden Marsh

There are no Sites of Special Scientific Interest (SSSI) within the drainage district, however the following SSSIs are present within 2km of the district boundary:

- Humber Estuary SSSI
- Barn Hill Meadows SSSI
- Eskamhorn Meadows SSSI

There are no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites within the district, however the Humber Estuary SAC, SPA and Ramsar is directly adjacent to the district boundary.

Table 3-1 below details what these sites are designated for.

Table 3-1: Statutory nature conservation sites within 2km of the Board's district.

SSSI	Reason for designation
Humber Estuary SSSI, SAC, SPA and Ramsar	**SSSI**: "The Humber Estuary is a nationally important site with a series of nationally important habitats. These are the estuary itself (with its component habitats of intertidal mudflats and sandflats and coastal saltmarsh) and the associated saline lagoons, sand dunes and standing waters…The estuary supports nationally important numbers of 22 wintering waterfowl and nine passage

SSSI	Reason for designation
	waders, and a nationally important assemblage of breeding birds of lowland open waters and their margins. It is also nationally important for a breeding colony of grey seals *Halichoerus grypus*, river lamprey *Lampetra fluviatilis* and sea lamprey *Petromyzon marinus*, a vascular plant assemblage and an invertebrate assemblage." (Natural England, 2004). **SAC**: Qualifying habitats: • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • Coastal lagoons • Dunes with Hippophae rhamnoides • Embryonic shifting dunes • Estuaries • Mudflats and sandflats not covered by seawater at low tide • Fixed dunes with herbaceous vegetation (`grey dunes`) • Salicornia and other annuals colonising mud and sand • Sandbanks which are slightly covered by sea water all the time • Shifting dunes along the shoreline with Ammophila arenaria (`white dunes') Qualifying species: • Grey seal *Halichoerus grypus* • River lamprey *Lampetra fluviatilis* • Sea lamprey *Petromyzon marinus* (Natural England, 2009). **SPA**: "The estuary supports important numbers of waterbirds (especially geese, ducks and waders) during the migration periods and in winter. In summer, it supports important breeding populations of bittern *Botaurus stellaris*, marsh harrier *Circus aeruginosus*, avocet *Recurvirostra avosetta* and little tern *Sterna albifrons*." (Natural England, 2007). **Ramsar**: "The Humber Estuary is the largest macro-tidal estuary on the British North Sea coast. It drains a catchment of some 24,240 square kilometres and is the

SSSI	Reason for designation
	site of the largest single input of freshwater from Britain into the North Sea. It has the second-highest tidal range in Britain (max 7.4 m) and approximately one-third of the estuary is exposed as mud or sand flats at low tide. The inner estuary supports extensive areas of reedbed with areas of mature and developing saltmarsh backed in places by limited areas of grazing marsh in the middle and outer estuary. On the north Lincolnshire coast the saltmarsh is backed by low sand dunes with marshy slacks and brackish pools. The Estuary regularly supports internationally important numbers of waterfowl in winter and nationally important breeding populations in summer." (JNCC, 2008).
Barn Hill Meadows SSSI	"Designated for its herb-rich, unimproved, neutral grassland…Boundary hedgerows and ditches form an integral part of the site" (Natural England, 1987).
Eskamhorn Meadows SSSI	"Eskamhorn Meadows SSSI is a nationally important site for species-rich neutral grassland. The relevant National Vegetation Classification (NVC) types are predominantly MG4 meadow foxtail *Alopecurus pratensis* – great burnet *Sanguisorba officinalis* grassland, and a community transitional between this type and the MG5 crested dog's-tail *Cynosurus cristatus* – common knapweed *Centaurea nigra* grassland. The site also supports small areas of MG5 and MG13 creeping bent *Agrostis stolonifera* – marsh foxtail *Alopecurus geniculatus* grassland." (Natural England, 2010).

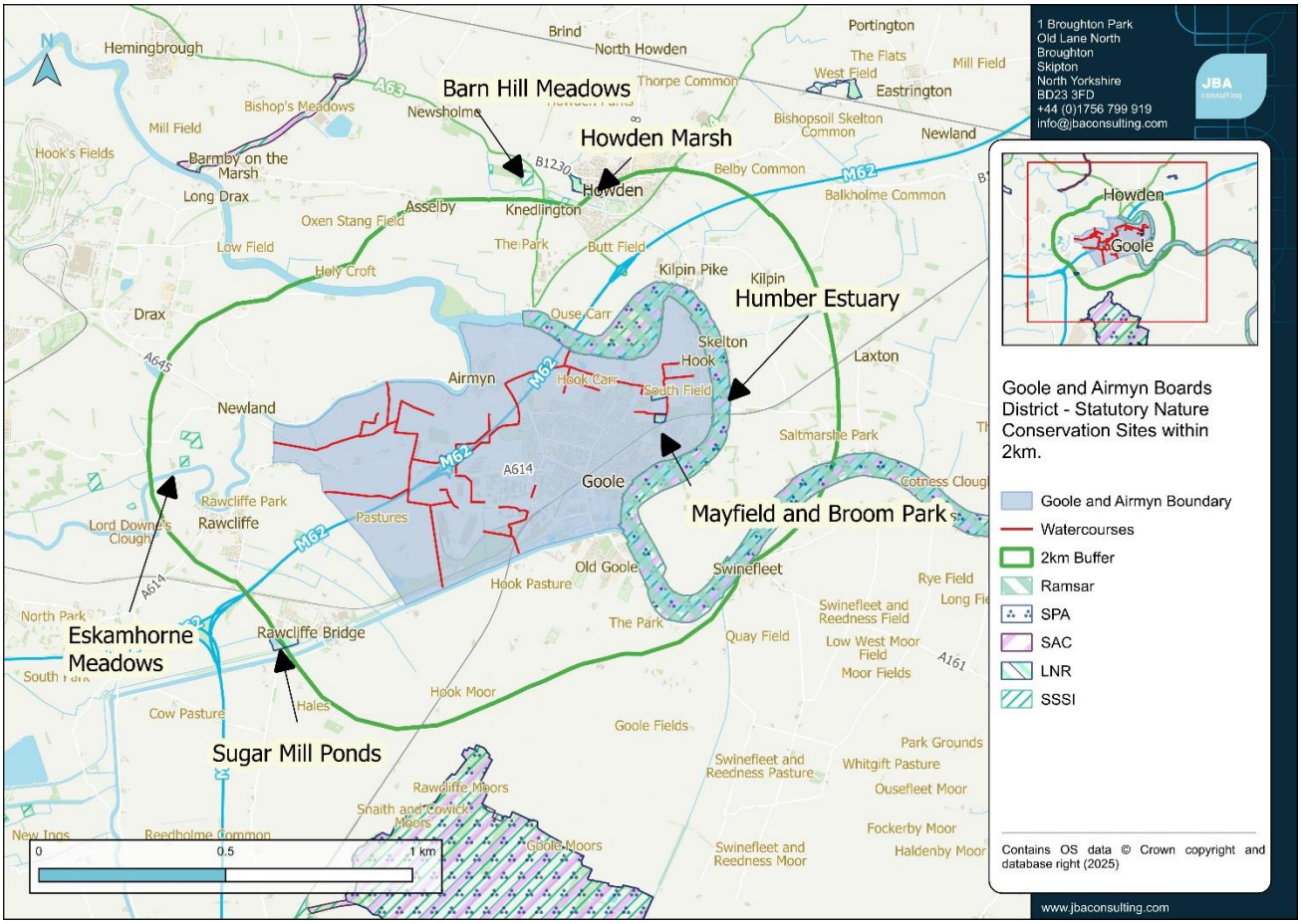

Figure 3-1: Statutory nature conservation sites within 2km of the Board's district.

3.4 Non-Statutory Nature Conservation Sites

Oakhill Nature Reserve is the only non-statutory nature conservation site within the Goole and Airmyn District. The Friends of Oakhill Website describes the nature reserve as follows:

"Oakhill and the associated pools known as the Brickponds, form a gem of a site nestled between the Canal, Port and Railway. It is one of the best Dragonfly and Damselfly sites in Yorkshire and the ever-growing wild bird population promotes a healthy and increasing natural habitat. Oakhill is now also home to nationally threatened declining bird species such as the Willow Tit.

With over 200 plant and wildflower species recorded and increasing wildlife residents it makes this site a perfect place for all nature lovers to enjoy for many years to come." (Friends of Oakhill, 2016).

3.5 Habitat Audit Summary

This habitat audit summary lists the UK priority habitats (Habitats of Principal Importance) that occur within the drainage district and are identified as likely to be influenced by the Board's activities. A map of these habitats is provided in Figure 3-2 below. Also listed are habitats deemed to be of local importance and/or featured in local nature strategies that occur in the drainage district. Finally, brief notes are included on the potential for the IDB to maintain, restore or expand its important habitats. Local habitat data information is available in the East Riding of Yorkshire Biodiversity Action Plan Strategy (ERYBAPS) (ERYC, 2010).

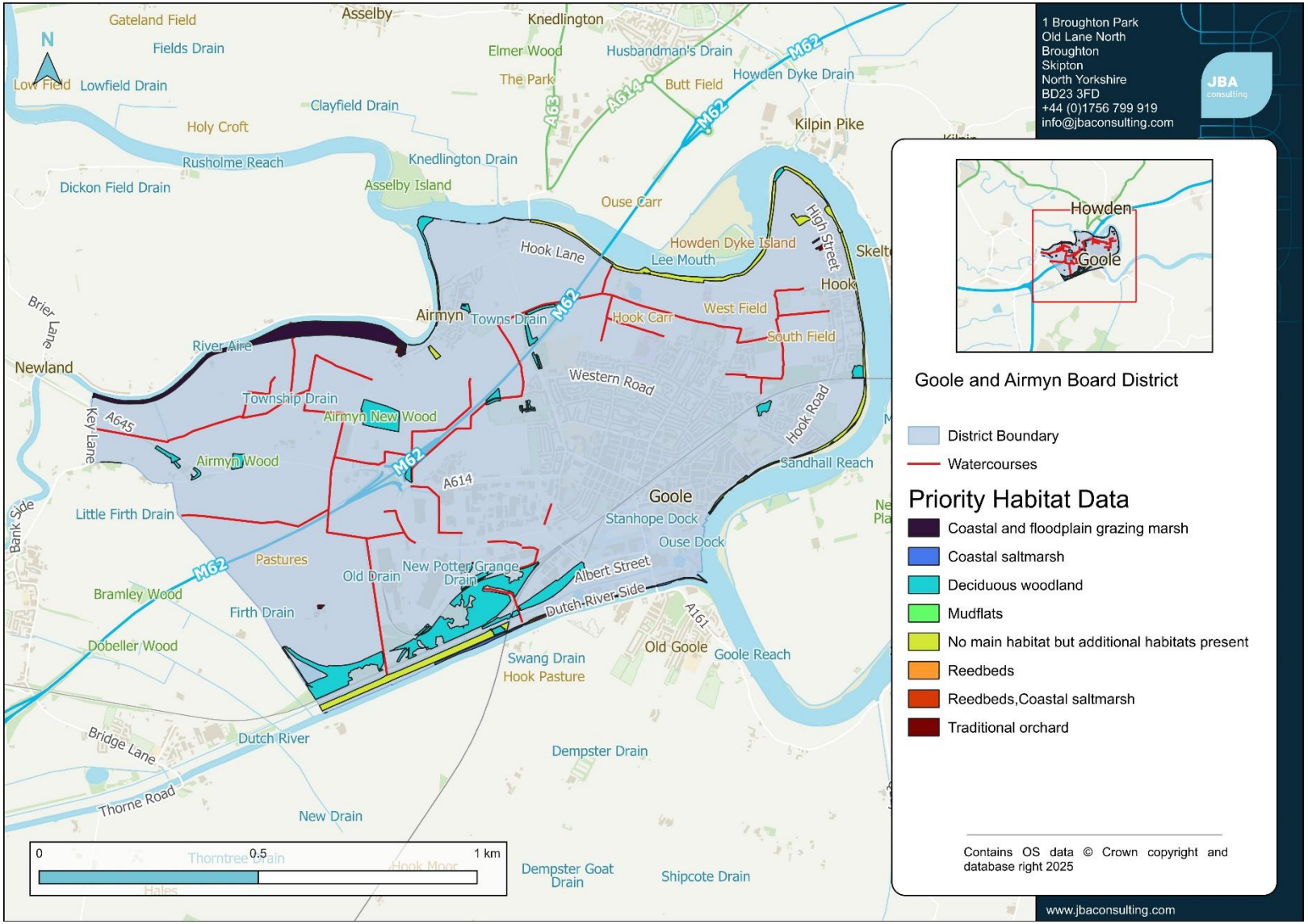

Figure 3-2: Priority Habitat Map for the Goole and Airmyn IDB District

Table 3-2: Habitat Audit.

UK Broad Priority Habitat	National Status & Extent	Local Priority Habitat	Local Status and Extent	Habitat of Importance for IDB	IDB Potential for Maintaining, Restoring or Expanding Habitat (high/medium/low)
Standing open waters and canals	Declining, estimated 400,000 ponds in the UK	Eutrophic standing water / Ponds	Widespread with Hornsea Mere SSSI/SPA totalling 230 ha of this habitat. Within the district primarily as drainage ditches.	Eutrophic standing water / Ponds	Medium
Arable and Horticulture	Trend is increasing, estimated over 105,200ha in the UK	Arable farmland (field margins)	Widespread throughout the County.	Arable field margins	High
Boundary and Linear Features	Stable	Hedgerows	Widespread.	Hedgerows	High
Improved grassland	Trend not known, estimated 230,000ha in the UK	Coastal and floodplain grazing marsh	Widespread in the East Riding e.g. Swine Moor, Figham Common, Thornton Ings, Broomfleet Island. 23.58 ha within the Goole and Airmyn IDB drainage district alone.	Grazing marsh	Medium
Littoral	Declining,	Coastal	465 ha of coastal	Saltmarsh	Low

UK Broad Priority Habitat	National Status & Extent	Local Priority Habitat	Local Status and Extent	Habitat of Importance for IDB	IDB Potential for Maintaining, Restoring or Expanding Habitat (high/medium/low)
sediment	estimated 32,500ha coastal saltmarsh (including transitional communities) in England. Estimated 270,000ha of intertidal flats in the UK. Trend unknown.	saltmarsh / Intertidal mudflats	saltmarsh on the Humber. Mudflats associated with Humber SSSI/SPA/SAC.	Mudflats	

UK Broad Priority Habitat	National Status & Extent	Local Priority Habitat	Local Status and Extent	Habitat of Importance for IDB	IDB Potential for Maintaining, Restoring or Expanding Habitat (high/medium/low)
Broadleaved, Mixed and Yew Woodland	250,000ha of Lowland Mixed Deciduous Woodland (LMDW) in the UK. It has declined in area by clearance, overgrazing and replanting with non-native species, by about 30–40% over the last 50 years Estimated 24,600ha traditional orchard area. Trend unknown.	LMDW / Traditional orchard	A few small sites of traditional orchard.	Deciduous woodland Traditional orchards	Medium Low
Fen, Marsh and Swamp	Increasing, estimated	Reedbeds	Widespread and present in the East	Reedbeds	Low

UK Broad Priority Habitat	National Status & Extent	Local Priority Habitat	Local Status and Extent	Habitat of Importance for IDB	IDB Potential for Maintaining, Restoring or Expanding Habitat (high/medium/low)
	5,200ha in England		Riding across Hornsea Mere SSSI, Leven Canal SSSI, Market Weighton Canal Washland, Saltmarsh Delph. At least 0.15 ha within the drainage district.		

3.6 Species Audit Summary

This species audit summary will include priority species (Species of Principal Importance) that occur in association with the UKBAP habitats identified in Section 3.5, within the East Riding. These species have been identified as likely to be influenced by the Board's activities. Also, listed are species deemed to be of local importance and/or identified by local nature strategies. Finally, the potential for the IDB to improve the status of the species in the drainage district is considered. Local species data information is available in the East Riding of Yorkshire Biodiversity Action Plan Strategy (ERYBAPS) (ERYC, 2010).

Table 3-3: Species Audit.

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Birds				
Dark-bellied Brent Goose *Branta bernicla*	Conservation status: Amber Increasing 69.3% Expansion (Wintering) 1981–84 to 2007–11 (BTO, 2025).	East Riding supports the main regional wintering population of dark-bellied brent goose (ERYC, 2010).	Intertidal mudflats.	Low
Grey Partridge *Perdix perdix*	Conservation status: Red Declining 92% decline1967–	Likely regionally important populations in the county (ERYC, 2010).	Arable field margins and hedgerows.	Medium

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
	2022 (BTO, 2025).	MAGIC Map lists records between 2005-2009 locally.		
Cuckoo *Cuculus canorus*	Conservation status: Red Declining 35% decline 1995–2022 (BTO, 2025).	Unknown.	Hedgerows.	Low
Turtle Dove *Streptopelia turtur*	Conservation status: Red Declining 99% decline 1967–2022 (BTO, 2025).	Anecdotally present within Oakhill nature reserve. MAGIC Map lists records between 2005-2009 locally.	Hedgerows.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Lapwing *Vanellus vanellus*	Conservation status: Red Declining 62% decline 1967-2022 (BTO, 2025).	Nationally important breeding populations nearby within Lower Derwent Valley National Nature Reserve (ERYC, 2010). MAGIC Map lists records between 2005-2009 locally.	Spring crops and permanent grassland with low chemical input. Short, tussocky sward. Arable land, cropped fields. Coastal and floodplain grazing marsh. Intertidal mudflats.	Medium
Curlew *Numenius arquata*	Conservation status: Red Declining UK breeding population: 50% decline 1995–2022 UK winter population: 32%	Curlew occur in internationally important numbers on the Humber Estuary outside the breeding season (ERYC, 2010). MAGIC Map lists	Arable field margins, coastal and floodplain grazing marsh and Intertidal mudflats.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
	decline 1996/97–2021/22 (BTO, 2025).	records between 2005-2009 locally.		
Black Tailed-Godwit *Limosa limosa*	Conservation status: Red Breeding declining wintering increasing. UK winter population: 138% increase 1996/97–2021/22 (BTO, 2025).	Black Tailed Godwit occur in internationally important numbers on the Humber Estuary outside the breeding season (ERYC, 2010).	Coastal and floodplain grazing marsh. Intertidal mudflats.	Low
Bittern *Botaurus stellaris*	Conservation status: Amber Increasing. 227 pairs counted in 2019 (BTO, 2025).	Positive trend following re-establishment (ERYC, 2010).	Eutrophic standing waters and reedbeds.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Barn Owl *Tyto alba*	Conservation status: Green Increasing UK breeding population: 208% increase 1995–2022 (BTO, 2025).	Present within district. Nearby the Lower Derwent Valley supports the largest population density of breeding barn Owl in the UK. Relatively widespread although local declines evident (ERYC, 2010).	Arable land, field margins and hedgerows.	High
Marsh Tit *Poecile palustris*	Conservation status: Red Declining UK breeding population: 80% decline 1967–	Status unknown.	Lowland mixed deciduous woodland.	Medium

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
	2022 (BTO, 2025).			
Skylark *Alauda arvensis*	Conservation status: Red Declining 11% decline 1995-2022 (BTO, 2025)	Likely regionally important populations in the county (ERYC, 2010).	Set-aside. Arable land/ field margins. Coastal saltmarsh.	Medium
Common Grasshopper Warbler *Locustella naevia*	Conservation status: Red Declining UK breeding population: No population change in UK 1995–2022 (BTO, 2025).	Status unknown.	Reedbeds.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Common Starling *Sturnus vulgaris*	Conservation status: Red Declining UK breeding population: 54% decline 1995–2022 (BTO, 2025)	Status unknown.	Hedgerows.	Low
Song Thrush *Turdus philomelos*	Conservation status: Amber Declining UK breeding population:48% decline 1967–2022 (BTO, 2025).	Status unknown.	Traditional orchards and lowland mixed deciduous woodland.	Medium

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Tree Sparrow *Passer montanus*	Conservation status: Red Increasing UK breeding population: 62% increase 1995–2022 (BTO, 2025).	Likely regionally important populations in the county (ERYC, 2010). MAGIC Map lists records between 2005-2009 locally.	Eutrophic standing waters, arable field margins and hedgerows.	Medium
Dunnock *Prunella modularis*	Conservation status: Amber Declining UK breeding population: 40% decline 1967–2022 (BTO, 2025).	Status unknown.	Hedgerows.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Yellow Wagtail *Motacilla flava*	Conservation status: Red Declining UK breeding population: 74% decline 1967–2022 (BTO, 2025).	Likely regionally important populations in the county (ERYC, 2010). MAGIC Map lists records between 2005-2009 locally.	Arable field margins, coastal and floodplain grazing marsh and reedbeds.	Medium
Common Bullfinch *Pyrrhula pyrrhula*	Conservation status: Amber Increasing UK breeding population: 49% decrease 1967–2022 (BTO, 2025).	Status unknown.	Traditional orchards and lowland mixed deciduous woodland.	Medium

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Twite *Linaria flavirostris*	Conservation status: Red Declining The UK wide population decline between 1999 and 2013 was not statistically significant (BTO, 2025)	Status unknown.	Coastal saltmarsh.	Low
Linnet *Linaria cannabina*	Conservation status: Red Declining UK breeding population: 23% decline 1995–2022 (BTO, 2025).	Likely regionally important populations in the county (ERYC, 2010).	Arable field margins, hedgerows and coastal saltmarsh.	Medium

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Corn Bunting *Emberiza calandra*	Conservation status: Red Stable. UK breeding population: 83% decline 1967–2022 (BTO, 2025).	Likely regionally important populations in the county (ERYC, 2010). MAGIC Map lists records between 2005-2009 locally.	Arable field margins and reedbeds.	Medium
Yellowhammer *Emberiza citrinella*	Conservation status: Red Declining UK breeding population: 64% decline 1967–2022 (BTO, 2025).	Likely regionally important populations in the county (ERYC, 2010).	Arable field margins and hedgerows.	Medium

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Reed Bunting *Emberiza schoeniclus*	UK breeding population: no population change in UK 1967–2022 (BTO, 2025).	Status unknown.	Coastal and floodplain grazing marsh and reedbeds.	Low
Mammals				

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Water Vole *Arvicola amphibius*	Conservation status: Endangered Approx. population of 132,000	'Water Vole has a regional stronghold in agricultural drainage dykes in Holderness and the River Hull Headwaters' (ERYC, 2010). Historically present within the district. Current population status unknown.	Waterbodies. Evidence of Water Vole activity was last recorded within the District in 2016.	Medium
Otter *Lutra lutra*	Conservation status: Least concern	'Otter also has a stronghold in the [nearby] Lower Derwent Valley' (ERYC, 2010).	Likely to occupy larger river systems but could use the smaller watercourses for foraging and commuting opportunities.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
West European Hedgehog *Erinaceus europaeus*	Conservation status: Least concern	'Particularly [found] in and around towns and villages' (ERYC, 2010).	Hedgerows and lowland mixed deciduous woodland.	Low
Brown Hare *Lepus europaeus*	Conservation status: UK Red List Declining.	'Brown hare still occurs in most Parishes' (ERYC, 2010).	Arable field margins and hedgerows.	Low
Harvest Mouse *Micromys minutus*	Conservation status: UK Red List. Declining.	Status unknown.	Hedgerows.	Low
Brown Long-eared Bat *Plecotus auritus*	Conservation status: Least concern	Status unknown.	Linear features (hedgerows, watercourses) Woodlands.	Medium
Herptiles				
Great Crested Newt *Triturus cristatus*	Conservation status: Least concern	Considered likely to be present within Oakhill Nature	Ponds. Historic records (within the last 10 years) of Great Crested Newt in	Medium

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
		Reserve. GCN licence return submitted 2014 confirming presence at: OSGR SE728231 and SE722224.	the District - records of licence returns.	
Common Toad *Bufo bufo*	Conservation status: Least concern	'Particularly [found] in and around towns and villages' (ERYC, 2010).	Water bodies.	Medium
Grass Snake *Natrix helvetica*	Conservation status: Least concern	Status unknown.	Water bodies.	Medium
Fish				
European Eel *Anguilla anguilla*	Conservation status: Critically endangered.	Local status is unknown.	Watercourses - unknown population	Medium
Invertebrates				

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Scarce Pug *Eupithecia extensaria*	Conservation status: rare (Red Data Book 2).	Local status: may be extinct. Larval foodplant is Sea Wormwood *Seriphidium maritimum* (Yorkshire Moths, 2025).	Coastal saltmarsh.	Low
Sea Aster Mining Bee *Colletes halophilus*	Conservation status: Near threatened. Declining. Nationally Notable A (rare) (Falk, 1991).	Present	Coastal saltmarsh.	Low
White-letter Hairstreak *Satyrium w-album*	Conservation status: VU (Butterfly Red List, 2021)(Butterfly	Present, likely under-recorded	Lowland mixed deciduous woodland.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
	Conservation, 2025). Declining.			
Oak Hook-tip *Watsonalla binaria*	Widespread	Locally frequent (Yorkshire Moths, 2025a).	Lowland mixed deciduous woodland.	Low
Small Red-eyed Damselfly *Erythromma viridulum*	NE - Recent Colonist (RC) (JNCC, 2008d).	Recent colonist, scarce breeder. Expanding. (Ashton, 2013).	Eutrophic standing water.	Medium
Plants				
Greater Water Parsnip *Sium latifolium*	Substantial declines (BSBI, 2020)	Unknown; presence possible. Locally distributed (ERYC, 2010).	Ponds and reedbeds.	Low
Annual Knawel *Scleranthus annuus*	Significant declines (BSBI, 2020)	Unlikely to be present.	Arable field margins.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
Caraway *Carum carvi*	Declining (BSBI, 2020).	Unlikely to be present.	Arable field margins.	Low
Corn Buttercup *Ranunculus arvensis*	Dramatic decline (BSBI,2020).	Unknown; presence possible.	Arable field margins.	Low
Shepherd's Needle *Scandix pecten-veneris*	Declining (BSBI, 2020).	Unknown; presence possible.	Arable field margins.	Low
Cornflower *Centaurea cyanus*	Substantial increase this century (BSBI, 2020).	Unknown; presence possible.	Arable field margins.	Low
Divided Sedge *Carex divisa*	Declining (BSBI, 2020).	Wetland species present within the Humber Estuary SSSI. Rare. The East Riding supports regionally important populations of	Coastal saltmarsh.	Low

Common & Scientific Name	National Status	Local Status	Supporting habitats for Species of Importance within drainage district	IDB Potential for Maintaining or Increasing Species Population or Range (High/medium/low)
		divided sedge. (ERYC, 2010).		

4 Habitat Action Plan

4.1 Habitats of Principle Importance

As detailed in the Habitat Audit summary (Table 3-2), the Habitats of Principal Importance present within the Goole and Airmyn IDB boundary are:

- Deciduous Woodland
- Reedbeds
- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Traditional Orchards
- Mudflats

As well as the above habitats identified using the Habitats of Principal Importance inventory, the following important habitats are also deemed to be present within the Board's boundary:

- Eutrophic standing waters
- Hedgerows
- Arable Farmland (Arable Field Margins)
- Ponds

The above habitats will be addressed within the following sections, apart from deciduous woodland, traditional orchards and littoral habitats for which the IDB has little remit to influence or cover a very small area of the Board's boundary. In the case of the latter, these habitats are protected via other means e.g. HRAs for works taking place on the Humber Estuary.

4.2 UK Broad Habitat - Standing Open Waters and Canals

4.2.1 Ponds

High-quality ponds are very localised and in areas these ponds form particularly significant elements of the landscape. Priority Habitat ponds are determined based on several criteria, as detailed in the UK BAP Priority Habitat Descriptions Ponds (JNCC, 2008a). Standing open water bodies can be either of human or natural origin. Ponds are small bodies of water between 1m² and 2ha in area, which hold water for more than four months in a year. They are of great importance for wildlife, supporting a large number of invertebrates as well as other species.

The Priority Habitat inventory does not list ponds are being present within the Board's boundary; however, Oakhill Nature reserve (located to the south of the A161), houses the Brick Ponds (a UK BAP Priority Habitat, which are considered likely to support Great Crested Newt). Other UK BAP Priority Habitat ponds are likely to be present within the Board's boundary.

4.2.1.1 Targets and Actions

The Board has agreed one target which will be achieved by a single action.

Target 1. Ensure any IDB works do not have a detrimental impact upon ponds within the district.

Action:

- Any works within or in close proximity (i.e. within 15m) to a pond will require an ecological assessment by a suitably qualified ecologist to ensure the works will not impact upon the habitat.

4.2.1.2 Indicators and Reporting

For Target 1 the indicators of delivery will be the number of surveys undertaken.

Reporting will be ongoing, as surveys are completed.

4.2.2 Eutrophic Standing Water

Physical and chemical status
Eutrophic standing waters are highly productive because plant nutrients are plentiful, either naturally or as a result of artificial enrichment. These water bodies are characterised by having dense, long-term populations of algae in mid-summer, often making the water green. Their beds are covered by dark anaerobic mud, rich in organic matter. Many lowland water bodies in the UK are now heavily polluted with high nutrient concentrations. Eutrophic waters are most typical of hard water areas of the lowlands of southern and eastern Britain.

Biological status
In their natural state, eutrophic waters have high biodiversity. Planktonic algae and zooplankton are abundant in the water column, submerged vegetation is diverse and numerous species of invertebrate and fish are present. Plant assemblages differ according to geographical area and nutrient concentration. Common floating-leaved plants include Yellow Water Lily *Nuphar lutea* and there is often a marginal fringe of reedswamp, which is an important component of the aquatic ecosystems.

Benthic invertebrates such as snails, dragonflies and water beetles are abundant**,** and calcareous sites may support large populations of the native freshwater White-clawed Crayfish *Austropotamobius pallipes*. Coarse fish such as Roach *Rutilus rutilus*, Tench *Tinca tinca* and Pike *Esox lucius* are typical of eutrophic standing waters, but salmonids also occur naturally in some. Amphibians, including the protected Great Crested Newt *Triturus cristatus*, are often present and the abundance of food can support internationally important bird populations.

In water bodies which are heavily enriched as a result of human activity, biodiversity is depressed because planktonic and filamentous algae (blanketweed) increase rapidly at the expense of other aquatic organisms. Sensitive organisms, such as many of the pondweed

Potamogeton and stonewort *Chara* species, then disappear and water bodies may reach a relatively stable but biologically impoverished state.

The Board identified this habitat in its 2015-2020 BAP and implemented actions, the below targets build on those actions.

4.2.2.1 Targets and Actions

The Board has agreed two targets for the Habitat Action Plan for Eutrophic Standing Waters.

Target 1. Maintain and enhance the existing habitat and species diversity of watercourses within the Drainage District

Action:

- Ensure the appropriate management of the Board maintained watercourses through an Integrated Biodiversity Action Plan and Maintenance Regime by following best practice guidance and providing Contractor training.
- Identify and assess potential environmental impacts of all new discharges into Board maintained watercourses.
- Ensure any Board consents cause minimum environmental damage to the aquatic habitat.

Target 2. Ensure no further spread of Invasive Non-native Species (INNS) along and within Board maintained watercourses and aim to control these species.

Action:

- Record and monitor non-native invasive plant and animal species.
- Report INNS findings to local record centres.
- Contractor training on non-native invasive species.

4.2.2.2 Indicators and Reporting

For IDB actions in connection with Target 1, the indicators of delivery will be:

- This Plan production.
- The number of new discharges assessed.
- The number of consents assessed.

Indicators of delivery for Target 2 will be:

- The number of records submitted to local record centres.
- Measures put in place to reduce spread.

Reporting on all actions will be annually.

4.3 UK Broad Habitat - Arable and Horticultural

4.3.1 Arable Field Margins

Arable field margins are herbaceous strips or blocks around arable fields that are managed specifically to provide wildlife benefits. Arable field margins are usually on the 2-12m outer margin of the arable field. The following margin types are included: cultivated, low-input margins; margins sown to provide seed for wild birds; margins sown with wildflowers or agricultural legumes and managed to allow flowering to provide pollen and nectar resources for invertebrates; and, margins providing permanent, grass strips with mixtures of tussocky and fine-leaved grasses. Arable margins provide important habitat for a number of birds, butterflies, and numerous other invertebrates as well as supporting threatened and important species of arable flora.

The known amount of arable field margins across the Board's district is unknown, but there is likely to be several kilometres.

4.3.1.1 Targets and Actions

The Board has agreed two targets which will be delivered by four actions.

Target 1. Maintain and improve the quality of current arable field margins within the Board's district.

Actions:

- Encourage appropriate management techniques for field margins adjacent to IDB watercourses.
- Reduce disturbance to ground nesting birds using arable field margins adjacent to IDB watercourses from IDB operations.

Target 2. Maintain and expand the current extent of arable field margins within the Board's district.

Actions:

- Encourage the creation of arable field margins adjacent to IDB watercourses.
- Encourage an increase in margins containing plant species which provide seed for wild birds and sources of nectar and pollen.

4.3.1.2 Indicators and Reporting

The indicators of delivery for Target 1 will be:

- The number of landowners advised regarding appropriate management techniques.
- The start date for annual maintenance to avoid disturbance to ground nesting birds.

For Target 2, the indicators of delivery will be the number of landowners advised.

Reporting on all actions will be annually.

4.4 UK Broad Habitat - Boundary and Linear Features

4.4.1 Hedgerows

A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide (Bickmore, 2002). Any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat, where each UK country can define the list of woody species native to their respective country. Climbers such as Honeysuckle *Lonicera periclymenum* and Bramble *Rubus fruticosus* agg. are recognised as integral to many hedgerows, however, they require other woody plants to be present to form a distinct woody boundary feature; as such they are not included in the definition of woody species. The definition is limited to boundary lines of trees or shrubs and excludes banks or walls without woody shrubs on top of them.

The Board maintains a number of kilometres of hedgerow adjacent to Board maintained watercourses, many running parallel with the public highway.

4.4.1.1 Targets and Actions

The Board agreed two targets which will be delivered by four actions.

Target 1. Identify and determine status of hedgerows alongside Board maintained watercourses.

Actions:

- Survey Board maintained hedgerows alongside and adjoining IDB watercourses.
- Identify ancient and species-rich hedgerows.

Target 2. Ensure no net loss of hedgerow though the operations of the Board.

Actions:

- Monitor all maintenance and new capital works to ensure any hedgerow removal is compensated by re-planting species-rich hedgerows.
- Ensure no damage to existing hedgerows caused by the operations of the Board.

4.4.1.2 Indicators and Reporting

The indicators for Target 1 will be:

- The length of hedgerow surveyed.

Indicators for Target 2 will be

- The number of capital schemes monitored.
- The length of protected/remaining hedgerow intact.

Reporting will be on an annual basis.

4.5 UK Broad Habitat - Improved Grassland

4.5.1 Coastal and Floodplain Grazing Marsh

Grazing marsh is defined as periodically inundated pasture, or meadow, with ditches which maintain the water levels. Nearly all areas are grazed and some are cut for hay or silage. This habitat does not contain extensive tall fen species, such as reedbeds. This habitat is important habitat for a number of breeding waders and wintering wildfowl.

Floodplain Grazing Marsh priority habitat within the Board's district lines the River Aire to the north-west of the district, bordering Board maintained watercourses.

4.5.1.1 Targets and Actions

The Board agreed two targets which will be delivered by two actions.

Target 1. Maintain current extent and quality of grazing marshes adjacent to IDB watercourses within the Goole & Airmyn IDB district.

Action:

- Any proposed works will need to identify if floodplain grazing marsh is present within the works area. If the priority habitat is present, works will need to ensure that this habitat is not negatively impacted upon.

Target 2. Enhance the habitat within works areas.

Action:

- In areas where works are taking place within this priority habitat, improvements to the habitat should be sought. This could include improving marginal species richness along the watercourses either via reducing/altering the cutting regime or carrying out marginal planting.

4.5.1.2 Indicators and Reporting

The indicators for Target 1 will be:

- The number of works that identified floodplain grazing marsh and did not cause any adverse impacts.

Target 2 indicators will be:

- The amount of habitat improvements carried out annually.

Reporting will be on an annual basis.

4.6 UK Broad Habitat - Fen, Marsh and Swamp

4.6.1 Reedbeds

Reedbeds are wetlands dominated by stands of Common Reed *Phragmites australis*, where the water table is at or above ground level for most of the year. They support a distinctive breeding bird assemblage including nationally rare species such as the Bittern *Botaurus stellaris*, Marsh Harrier *Circus aeruginosus* and Cetti's Warbler *Cettia cetti*. Reedbeds are also used as winter roost sites for several raptor species and support an assemblage of invertebrates.

Reedbed is present within the district in small discrete stands e.g. bordering the River Ouse.

4.6.1.1 Targets and Actions

The Board has agreed to one target which will be delivered by two actions.

Target 1. Maintain current extent and quality of reedbeds adjacent to IDB watercourses within the district.

Actions:

- Encourage appropriate management techniques for reedbeds.
- Works taking place within reedbed habitat will need to ensure the habitat is not negatively impacted upon.

4.6.1.2 Indicators and Reporting

The above target indicators will be the number of landowners advised and the number of works that took place within reedbeds that did not lead to any impacts.

Reporting will be on annual basis.

5 Species Action Plan

5.1 Species of Principal Importance

Species of Principal Importance under the NERC Act (2006) that are present within the Goole and Airmyn IDB district, as detailed in Table 3-3, include:

- Birds
  - Dark-bellied Brent Goose *Branta bernicla*
  - Grey Partridge *Perdix perdix*
  - Cuckoo *Cuculus canorus*
  - Turtle Dove *Streptopelia turtur*
  - Lapwing *Vanellus vanellus*
  - Curlew *Numenius arquata*
  - Black Tailed-Godwit *Limosa limosa*
  - Bittern *Botaurus stellaris*
  - Marsh Tit *Poecile palustris*
  - Skylark *Alauda arvensis*
  - Common Grasshopper Warbler *Locustella naevia*
  - Common Starling *Sturnus vulgaris*
  - Song Thrush *Turdus philomelos*
  - Tree Sparrow *Passer montanus*
  - Dunnock *Prunella modularis*
  - Yellow Wagtail *Motacilla flava*
  - Common Bullfinch *Pyrrhula pyrrhula*
  - Twite *Linaria flavirostris*
  - Linnet *Linaria cannabina*
  - Corn Bunting *Emberiza calandra*
  - Yellowhammer *Emberiza citrinella*
  - Reed Bunting *Emberiza schoeniclus*
- Mammals
  - Water Vole *Arvicola amphibius*
  - Otter *Lutra lutra*
  - West European Hedgehog *Erinaceus europaeus*
  - Brown Hare *Lepus europaeus*
  - Harvest Mouse *Micromys minutus*
  - Brown Long-eared Bat *Plecotus auritus*
- Herptiles
  - Great Crested Newt *Triturus cristatus*
  - Common Toad *Bufo bufo*
  - Grass Snake *Natrix helvetica*
- Fish
  - European Eel *Anguilla anguilla*

- Invertebrates
    - Scarce Pug *Eupithecia extensaria*
    - Sea Aster Mining Bee *Colletes halophilus*
    - White-letter Hairstreak *Satyrium w-album*
    - Oak Hook-tip *Watsonalla binaria*
- Plants
    - Greater Water Parsnip *Sium latifolium*
    - Annual Knawel *Scleranthus annuus*
    - Caraway *Carum carvi*
    - Corn Buttercup *Ranunculus arvensis*
    - Shepherd's Needle *Scandix pecten-veneris*
    - Cornflower *Centaurea cyanus*
    - Divided Sedge *Carex divisa*

Not identified as Species of Principal Importance but are considered an important species within the Board's district include:

- Barn Owl *Tyto alba*
- Small Red-eyed Damselfly *Erythromma viridulum*

To ensure targets and actions are achievable within the 5-year period of this BAP, not all species listed above have been included in the Species Action Plans below. Instead, specific species have been identified where actions and targets are more achievable within the Board's district.

5.2 Birds

5.2.1 Lapwing

Lapwing are a section 41 Species of Principal Importance and are deemed likely to be present within the Board's district due to the habitats this species occupies. Lapwing are associated with farmland habitats and due to their significant population declines they are a Red List species. They are a ground nesting bird, forming simple scrapes in mud or sand.

5.2.1.1 Targets and Actions

The Board has agreed to one target which will be achieved by a single action.

Target 1. To understand the distribution of Lapwing within the Board's district.

Action:

- Record all sightings of Lapwing when undertaking site visits within the Board's district. Submit these records to the local records centre.

5.2.1.2 Indicators and Reporting

Indicators for the above target will be the number of records.

Reporting will be annually.

5.2.2 Barn Owl

Section 41 does not identify Barn Owl as a species of principal importance, however, much of the Board's district is situated within farmland which Barn Owl occupy and the Board's district includes open farmland and pockets of woodland, offering suitable foraging ground for Barn Owl. In addition, Barn Owl is listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended) and Barn Owl pellets have been recorded at Downes Ground Pumping Station.

The Board identified this species in its 2015-2020 BAP and implemented actions, the below targets build on those actions.

5.2.2.1 Targets and Actions

The Board has agreed to two targets which will be delivered by two actions.

Target 1. Enhance Barn Owl numbers within the Board's district.

Action:

- Erect at least one Barn Owl boxes within the Board's district.

Target 2. Monitor the use of the Barn Owl box at Downes Ground Pumping Station as well as the additional box erected.

Action:

- Monitor the Barn Owl boxes, including maintenance, and submit all Barn Owl records from the Board's district to local record centres.

5.2.2.2 Indictors and Reporting

Target 1 indicators will be represented by:

- The number of Barn Owl boxes erected.

Target 2 indicators will be represented by:

- The number of monitoring visits and records submitted.

Reporting on these actions will be annually.

5.3 Mammals

5.3.1 Water Vole

Water Vole is a protected species under Section 9, Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and a Section 41 Species of Principal Importance. They primarily occupy well vegetated, shallow, sloping banks alongside watercourses where burrowing is feasible into an earth bank. Water Vole numbers and their distribution has declined significantly with several locations across Britain with no Water Vole populations.

Previous signs of Water Vole activity were recorded in June 2004, on Towns Drain, where four suspected burrows were found. More recently, evidence of Water Vole has been recorded on both Hook Drain and Southfield Lane Drain in April 2016, where burrows, latrines and feeding remains were found (14 latrines and 30 burrows in total). The habitat here and within the district more widely is considered suitable to support Water Vole, although American Mink *Neovison vison* (which predate Water Vole) are believed to be established within the District.

The Board identified this species in its 2015-2025 BAP and the below targets and actions build upon these previous actions.

5.3.1.1 Targets and Actions

The Board has agreed to three targets which will be delivered by six actions.

Target 1. Maintain and enhance suitable habitat for Water Vole within Board maintained watercourses.

Actions:

- Ensure appropriate habitat management of Board maintained watercourses through environmental best practice guidance with known Water Vole populations.
- Review maintenance regimes and identify watercourses where mowing and weed cutting regime can be altered to enhance and increase Water Vole habitat in accordance with Board watercourse maintenance priority.
- Aim to implement American Mink control at suitable locations across the district.

Target 2. Ensure all Board works comply with relevant legislation protecting Water Vole and its habitat.

Actions:

- Provide training to Board Contractors on legislation pertaining to Water Vole, its habitat and best practice maintenance.

Target 3. Monitor populations of Water Vole within the drainage district.

Actions:

- Undertake monitoring of all key Water Vole populations within the drainage district. This should be completed by a suitably qualified ecologist.
- Submit all Water Vole records to local record centres.

5.3.1.2 Indicators and Reporting

Target 1 indicators will be represented by:

- Length (m) of watercourse assessed
- Length (m) of watercourse enhanced

Target 2 indicators will be represented by:

- The number of Contractor employees trained

Target 3 indicators will be represented by:

- The number of surveys undertaken
- Number of records submitted to Biological Records Centre

Reporting will be ongoing throughout the life of the BAP.

5.3.2 Bats

In Britain, all bat species and their roosts are legally protected under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Species of Principal Importance likely to be present within the Board's district is the Brown Long-eared Bat.

The target and action detailed below are for bats generally within the District.

5.3.2.1 Targets and Actions

The Board has agreed to one target which will be delivered by one action.

Target 1. Support bat populations within the Board's district.

Action:

- Aim to install two bat boxes within the Board's district, this could be erected to suitable trees.

5.3.2.2 Indicators and Reporting

Target 1 indicators will be represented by:

- The successful installation of two bat boxes.

Reporting will be on an annual basis.

5.4 Herptiles

5.4.1 Great Crested Newts

A Species Action Plan for Great Crested Newts *Triturus cristatus* existed under the UK BAP and they are a Species of Principal Importance under section 41 of the NERC Act (2006). One of the main reasons for ongoing decline is that it is under continued threat from development, habitat fragmentation, fish introductions and lack of habitat management as well as pond loss. Many watercourses maintained by the Board are slow moving and contain floating plant species favoured by Newt for securing eggs. In addition, Great Crested Newt are considered likely present at Oakhill Nature Reserve within the Board's district.

5.4.1.1 Targets and Actions

The Board identified three targets which will be delivered by five actions.

Target 1. Maintain suitable breeding habitat for Great Crested Newts within the district.

Actions:

- Identify standing waterbodies within the district that could support Great Crested Newts.
- Assess the feasibility of undertaking restoration work to these standing waterbodies to improve habitat for Great Crested Newts.

Target 2. Ensure all IDB works comply with relevant legislation protecting Great Crested Newts and their habitats.

Actions:

- Provide training to Board contractors on Great Crested Newts legislation and habitat.

Target 3. Gather data on the distribution of Great Crested Newts within the Board's district.
Action:

- Approach local nature conservation bodies, key contacts and local groups such as the Friends of Oakhill (and where necessary North and East Yorkshire Ecological Data Centre (NEYEDC)), to establish the distribution of GCN within the District and if possible, an indication of population size.
- Complete eDNA surveys to ascertain likely presence/absence of critical ponds where GCN are suspected to be present.

5.4.1.2 Indicators and Reporting

Indicators for Target 1 will be:

- The number of suitable waterbodies surveyed.

Indicators for Target 2 will be:

- The provision of training.

Indicators for Target 3 will be:

- The number of contacts approached for data.
- The number of eDNA surveys completed.

Reporting will be an ongoing action, as tasks are undertaken.

5.4.2 Grass Snake

Grass snake *Natrix natrix* is a Species of Principal Importance in England identified under the NERC Act 2006 and a UK BAP Priority Species. The Board agreed at its meeting 14 June 2017 to add Grass Snake to its BAP.

5.4.2.1 Targets and Actions

The Board has identified one target for Grass Snake which will be delivered by two actions:

Target 1. Maintain compost heaps at several of its station sites.

Actions:

- Using piles of vegetation taken from the watercourse and left to dry. Compost heaps will be exposed to direct sunlight and left undisturbed from June-September.
- Where possible the heaps will remain over winter as hibernacula.

5.4.2.2 Indicators and Reporting

The indicator for the above target will be represented by the number of compost piles established.

All reporting will be on completion of the work.

5.5 Fish

5.5.1 Eel

Eel is protected under the Eel (England and Wales) Regulations 2010. European Eel is Critically Endangered on the IUCN red list of threatened species. IDB pump stations prohibit safe passage of Eel from a pumped catchment and form a barrier to passage into the catchment. Some upstream catchments have altered considerably from that which would have existed before pump stations were built.

5.5.1.1 Targets and Actions

The Board has identified one target for Eel which will be delivered by a single action.

Target 1. Maintain and enhance suitable habitat for European Eel within the drainage district.

Actions:

- Review maintenance regimes and identify watercourses where the desilting and weed cutting regime can be altered to enhance and increase European Eel habitat.

5.5.1.2 Indicators and Reporting

The indicator for the above target will be represented by the length of watercourse surveyed.

All reporting will be on completion of the work.

5.6 Invertebrates

Several species of invertebrates are section 41 Species of Principal Importance and are deemed likely to be present within the Board's district due to the presence of associated Habitats of Principal Importance. Many of these species are in decline and/or listed as Red List species. The Board agreed at its meeting 14 June 2017 to add invertebrates to its BAP.

5.6.1.1 Targets and Actions

The Board has identified one target for invertebrates with two actions:

Target 1. Establish presence/absence of target priority invertebrates

Actions:

- Check species atlases in detail to gauge which species are present within the District.
- Engage local invertebrate charities to establish if monitoring has been undertaken within the District or could be undertaken before 2030, where appropriate.

5.6.1.2 Indicators and Reporting

The indicator for the above target will be the number of target priority species reviewed.

All reporting will be on completion of the work.

5.7 Plants

Approximately 150 species of plants receive legal protection through Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). There are various levels of protection according to the rarity of the species.

5.7.1.1 Targets and Actions

Target 1. Increase the diversity of plant species across the District.

Actions:

- Where re-seeding is required post works, use an appropriate diverse species mix, with a range of grasses and herbs and the inclusion of appropriate priority species.

Target 2. Protect existing target species

Actions:

- Where works take place within Saltmarsh habitat, the habitat should be surveyed for the presence of Divided Sedge; where Divided Sedge is identified within the Board's District, measures should be put in place to protect this species.
- Where works take place within ponds or reedbed habitat, the habitat should be surveyed for the presence of Greater Water Parsnip; where Greater Water

Parsnip is identified within the Board's District, measures should be put in place to protect this species.

Target 3. Increase the presence of arable weeds within the district.

Actions:

- Encourage appropriate management techniques for field margins adjacent to IDB watercourses to increase the presence of arable weeds.

5.7.1.2 Indicators and Reporting

Indicators for Target 1 will be:

- The area of land appropriately re-seeded.

Indicators for Target 2 will be:

- The number of surveys undertaken and the success of measures to protect Divided Sedge and Great Water Parsnip (where present).

Indicators for Target 3 will be:

- The number of landowners advised regarding appropriate management techniques.

Reporting will be an ongoing action, as tasks are undertaken.

5.8 Biodiversity

One of the targets identified in B2020: A Strategy for England's Wildlife is to halt biodiversity loss. The Board has a general duty under Section 61 of the Land Drainage Act 1991 (as amended) and under NERC Act (2006) to conserve and enhance biodiversity as part of function.

5.8.1 Targets and Actions

The Board has identified five targets for general biodiversity which will be delivered by nine actions.

Target 1. Promote environmental best practice when undertaking all drainage works

Actions:

- Provide training to IDB contractors in environmental best practice.
- Publicise examples of environmental best practice.

Target 2. Control culverting of watercourses

Action:

- Review land drainage consents and advise appropriately taking into account non-culverting policy.

Target 3. Improve understanding of species populations present within the drainage district

Actions:

- Undertake surveys for species, specifically protected species/priority species, where appropriate.
- Submit all records to local biological records centre.

Target 4. Maintain biodiversity within the drainage district

Action:

- Provision of environmental consideration advice for any Board works.
- Adhere to Check-Clean-Dry to avoid the spread of invasive non-native species, provide toolbox talks to all site contractors.

Target 5. Encourage biodiversity improvements across the district.

Actions:

- Install bird and bat boxes.
- Adjust maintenance regime to improve bankside vegetation.

5.8.2 Indicators and reporting

The Board Target action will be shown delivered by indicators of:

- Number of contractor employees trained
- Number of articles released.
- Number of consents reviewed.
- Number of surveys and records.
- Number of toolbox talks provided.
- Erection of bird and bat boxes.
- Number of watercourses where the maintenance regime was altered to improve bankside vegetation.

Reporting will be ongoing throughout the life of the BAP.

6 Implementation and Monitoring

The actions detailed in the habitat and species actions plans in the previous sections will be implemented predominantly through minor changes to IDB management and maintenance methods. As well as through additional ecological surveying and monitoring.

Monitoring of this BAP will be required to ensure that the actions detailed in the habitat and species action plans are being implemented. Monitoring of the indicators detailed in the action plans will be undertaken and recorded, generally on an annual basis.

Species and habitats vary naturally over time and monitoring will result in new information. Any new information will be incorporated into the IDB BAP as appropriate.

7 Reviewing and reporting

Progress towards each of the targets is likely to be assessed annually and it is anticipated that the Goole and Airmyn IDB BAP will be fully reviewed every five years. However, the production and long-term development of the BAP is a flexible process.

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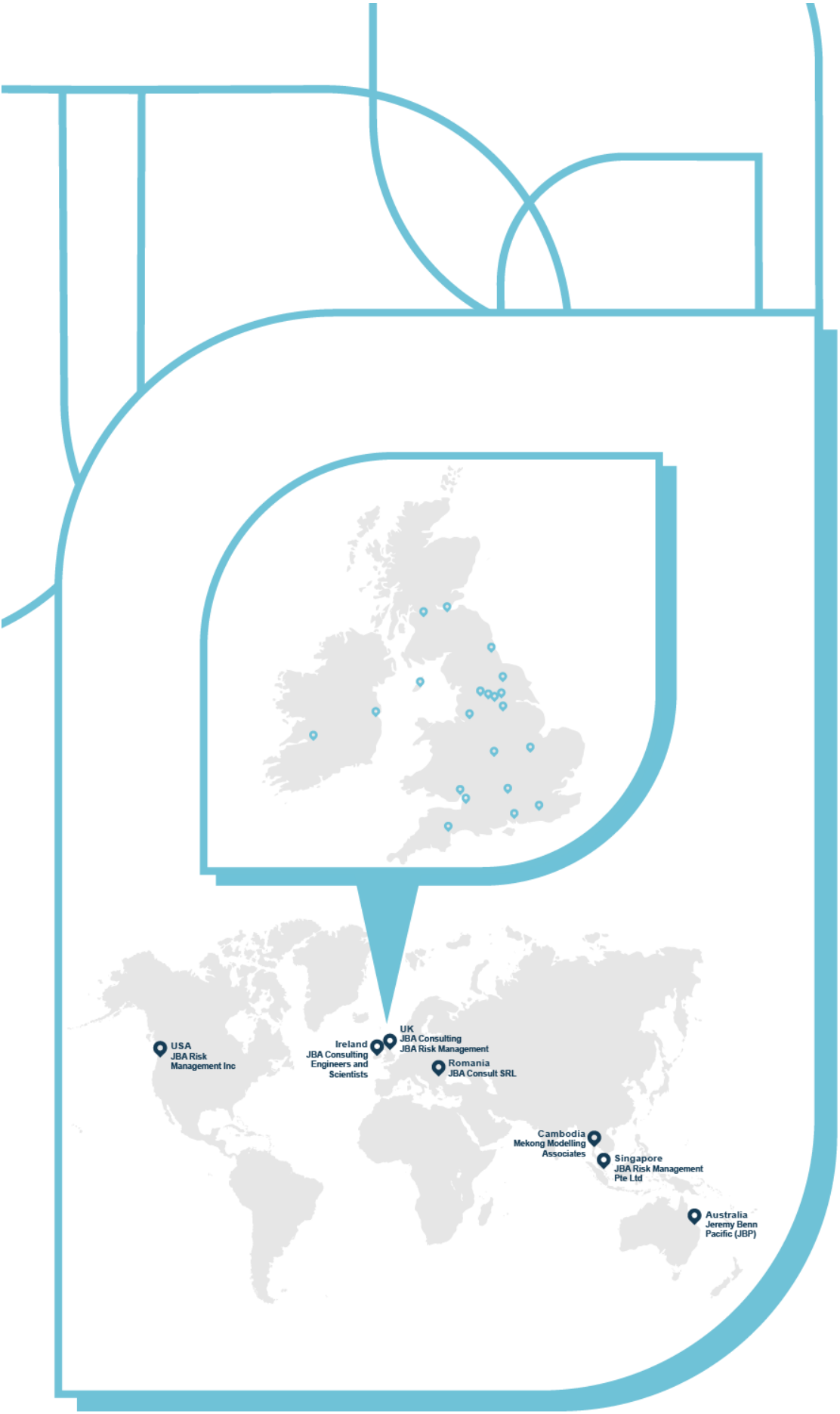

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