A photograph of a grassy bank with a stream covered in green duckweed. The stream flows from the upper left towards the lower right, its surface almost entirely obscured by a dense layer of small, bright green floating plants. The banks are steep and covered in lush green grass and some ferns. The lighting is bright, suggesting a sunny day.

# **Goole & Airmyn IDB Biodiversity Action Plan**

**Biodiversity 2015-2020**

**June 2016**



## Project Manager


Alison Briggs  
Goole & Airmyn IDB  
Epsom House  
Malton Way  
Adwick le Street  
Doncaster  
DN6 7FE

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## Contract

This report describes work commissioned on xx June 2016 by Goole & Airmyn Internal Drainage Board Alison Briggs BSc (Hons) Env. Sc., MSc Env. Mngt: Climate Change of JBA Consulting carried out this work.

Prepared by  ..... Alison Briggs BSc (Hons) Env. Sc., MSc. Env. Mngt: Climate Change  
Environment Officer to Shire Group of IDBs

Reviewed by ..... Ian Benn PG Dip Health & Safety and Environmental Law, MCQI  
Head of Water Level Management

## Purpose

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## Internal Drainage Board Biodiversity Action Plans

Implementation of the Natural Environment and Rural Communities Act 2006 means every Public Body has a duty to conserve biodiversity.

Internal Drainage boards were committed by Defra in its Implementation Plan of the IDB Review to produce their own Biodiversity Action Plans by April of 2010.

Many activities of an Internal Drainage Board have benefit for biodiversity, particularly through water level management and drainage ditch maintenance work.

As a result of new drivers and requirements, the 'UK Post-2010 Biodiversity Framework', published in July 2012, has succeeded the UK BAP. Devolution and the creation of country-level biodiversity strategies, has meant much of the work previously carried out under the UK BAP is now focussed at a country level. International priorities have also changed: the framework sets out the priorities for UK-level work to support the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020 and its five strategic goals and 20 'Aichi Targets', agreed at the CBD meeting in Nagoya, Japan, in October 2010; and the EU Biodiversity Strategy (EUBS), launched in May 2011.

Biodiversity action Plans will help the Board to maximise the biodiversity benefits from its activities and demonstrate its contribution to the Government's UK Post-2010 framework targets.

# 1 Internal Drainage Board Biodiversity

Although the Government has a new strategic plan to deliver biodiversity targets, the original UK BAP lists of priority species and habitats remain, an important and valuable reference source. Notably, they have been used to help draw up statutory lists of priority species and habitats in England, as required under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

This Biodiversity Action Plan (BAP) has been prepared on behalf of Goole & Airmyn Internal Drainage Board identify targets and actions to be delivered by the Board that will evidence of compliance to its environmental duties.

## 1.1 Introduction

This Plan identifies objectives for the conservation and enhancement of biodiversity within the drainage district over which the Board has control and it describes targets and actions which it is hoped will deliver those objectives.

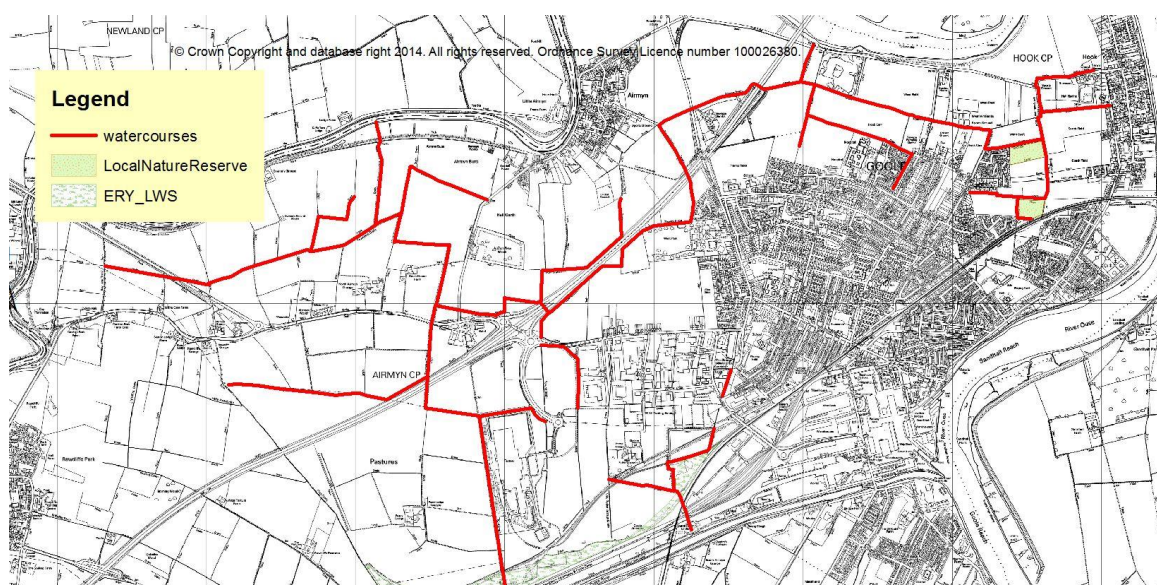
The Plan will help integrate biodiversity into the Board's activities through its annual maintenance programme and capital work projects.

The action plan will help safeguard the biodiversity of the District and it is hoped implementation of this plan will contribute to achievement of local and national targets for UK Biodiversity 2020.

The Plan is a dynamic document that will be reviewed and updated regularly with a final report being delivered autumn 2020.

The plan covers the Board's entire district as shown in figure 1.1 with particular relevance to Board maintained drains its discharge into the Humber Estuary not only a SSSI but a Special area for Conservation (SAC) and a Special Protection Area (SPA). Some Board maintained watercourses are also Water Framework Directive waterbodies as designated by the Environment Agency.

Figure 1-1: Drainage Board Area



## 1.2 Importance of Conserving Biodiversity

Biodiversity is a valuable resource and produces a range of benefits

- Provision of ecosystem services - benefits that contribute to making human life both possible and worth living; water, clean air, nutrients, pollination
- Provisioning services - food, medicine, raw materials, genetic diversity
- Cultural services - Improved health and wellbeing
- Regulating services - climate, hazard, noise, pollination, clean air, water quality and soil
- Economic benefits of added value through local economic activity

### **1.3 Aims of Goole & Airmyn Internal Drainage Board Biodiversity Action Plan**

- To ensure habitat and species action targets from the UK BAP and Local Authority BAP are translated into effective action within the District
- Identify targets for other habitats and species of local importance within the District
- Raise awareness within the Board and locally, the need for biodiversity conservation as part of water level management
- 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**

### **2.1 Objectives, Targets and Indicators**

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.

## 3 Habitat Action Plan

### 3.1 UK Broad Habitat - Standing Open Waters and Canals

#### 3.1.1 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 but fennel-leaved pondweed *Potamogeton pectinatus* and spiked water-milfoil *Myriophyllum spicatum* are characteristic throughout the UK. 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.

Bottom-dwelling invertebrates such as snails, dragonflies and water beetles are abundant and calcareous sites may support large populations of the native freshwater 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 (blanket-weed) 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.

Eutrophic Standing Waters are a preferred habitat of European Eel (*Anguilla anguilla*).

#### 3.1.2 Targets and Actions

Goole & Airmyn Internal Drainage Board has agreed two targets for the Habitat Action Plan for Eutrophic Standing Waters. These are:

1. Maintain and enhance the existing habitat and species diversity of watercourses within the Drainage District and
2. Record stands of Invasive Non-Native Species on Board maintained watercourses.

Actions: to achieve Target 1 the Board actions are:

- Ensure the appropriate management of the Goole & Airmyn IDB maintained watercourses through an Integrated Biodiversity Action Plan and Maintenance Regime by following best practice guidance according to channel prioritization
- Monitor known non-native invasive plant and animal species on and/or adjacent to Board maintained watercourses.

To achieve Target 2 the Board action is:

- Record and monitor non-native invasive plant and animal species on and/or adjacent to IDB watercourses, report to GB Non-Native Species Secretariat.

#### 3.1.3 Indicators and Reporting

For IDB actions in connection with Target 1 the indicators of delivery will be production of the integrated Plan and its implementation that incorporates environmental best practice into its maintenance activity together with the length of channel surveyed. Reporting will be annual.



Indicators of delivery in connection with Target 2 will be the metered length of watercourses assessed and necessary reports to the GB Non-Native Species Secretariat. Reporting will be delivered annually to the Board.

## 4 Species Action Plans

### 4.1 Water Vole

Water Vole (*Arvicola terrestris*) is a protected species under Section 9, Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and for which UK BAP Species Action Plan was produced as part of the UK BAP. Between years 1989-1998 there was an 88% decline in individuals in the UK, it is also vulnerable to the impacts of Invasive Non-Native Species, mainly Mink through predation. The animal itself is protected and also its places of shelter or protection, which reflects that significant decline.

#### 4.1.1 Targets and Actions

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

1. Maintain and enhance suitable habitat for water vole within Board maintained drains

**Actions:**

- ensure appropriate habitat management of IDB watercourses 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 drain maintenance priority
- provide training to IDB contractors on legislation pertaining to water vole and habitat.

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

**Actions:**

- ensure water vole surveys are conducted prior to any bank improvement, drainage or other engineering works

3. Monitor populations of water vole within the drainage district.

**Actions:**

- Submit all water vole records to East Riding ecological records centre
- undertake monitoring of all key water vole colonies

#### 4.1.2 Indicators and reporting

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

- Metered length of watercourse managed and maintained watercourse
- Length of enhanced board maintained watercourse
- Provision of training to contractors

Reporting will be ongoing through the life of the plan

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

- The number of records collated

Reporting will be from 2016 onward

The third Board Target action will be shown delivered by:

- Number of records submitted to Ecological Records Centre
- The length (m) of watercourse surveyed

Reporting will be delivered annually.



## 4.2 Barn Owl

The UK BAP does not identify Barn Owl (*Tyto alba*) as a species requiring an action plan however much of the Board's district is situated within farmland to which Barn Owl is synonymous and the Board's District includes open farmland and pockets of woodland, all good hunting ground for owl.

### 4.2.1 Targets and Actions

The Board agree one target, to monitor Barn Owl numbers within the drainage district. This will be delivered by three actions.

#### Actions:

- erect a Barn owl box on or around IDB pumping stations adjacent to the River Aire
- submit all Barn Owl records from the drainage district to East Riding Ecological Records Centre.
- Monitor the use of Barn owl boxes erected within the district

### 4.2.2 Indicators and Reporting

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

- Number of barn owl boxes erected

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

- Number of records submitted

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

- Percentage of boxes monitored

Reporting on these actions will be throughout the term of this BAP.

## 4.3 Grass Snake

Grass snake (*Natrix natrix*) is a species of principal importance in England identified under the Natural Environment & Rural Communities Act 2006 and a UK BAP Priority Species. The Government's ambition in its Biodiversity 2020: A strategy for England's Wildlife aims to halt overall biodiversity loss. The Board agreed at its meeting 14 June 2017 to add grass snake to its BAP.

### 4.3.1 Targets and Actions

The Board has identified Grass snake as a target with two action:

**Target 1:** Introduction of compost heaps at several of its station sites

#### Action:

- 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

## 4.4 Invertebrates

Several species of invertebrates are UK BAP Priority Species in England. The Board agreed at its meeting 14 June 2017 to add invertebrates to its BAP and identified one action.

### 4.4.1 Targets and Actions

The Board has identified invertebrates at an arthropodal level with one action:

**Target 1:** Creation of hibernacula

#### Action:

Using old pallets, logs, twigs, cut reed, bricks and bark creation of a bug hotel within several suitable station sites.





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**SKIPTON**

**North Yorkshire**

**BD23 3AE**

t: +44(0)1756 799919

e: [info@jbaconsulting.com](mailto:info@jbaconsulting.com)

Jeremy Benn Associates Ltd

**Registered in England**

**3246693**



**Visit our website**

[www.jbaconsulting.com](http://www.jbaconsulting.com)