

A photograph of a pond with purple flowers in the foreground and trees in the background. The flowers are in the foreground, and the pond is in the middle ground. The background shows a line of trees and a grassy bank.

**Goole Fields  
District  
Drainage  
Board  
Biodiversity  
Action Plan**

**Biodiversity 2015-2020**

**September 2015**



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## Revision History

Revision Ref / Date Issued	Amendments	Issued to
Draft report September 2015		M. Doherty (Chairman)

## Contract

This report describes work commissioned on 6 June 2015 by Danvm Drainage Commissioners Alison Briggs BSc (Hons) Env.Sc., MSc Env .Mngt: Climate Change of JBA Consulting carried out this work.

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## Purpose

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## Internal Drainage Board Biodiversity Action Plans

Following implementation of the Natural Environment and Rural Communities Act 2006, every public body has 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 now has a 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 Fields District Drainage Board ("the Board") to build on the achievements and successes through implementation of its first BAP 2010-2015.

## 1.1 Introduction

A report on the success of BAP 2010-2015 was delivered to the Board at its meeting June 2015.

Building on those successes, 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.

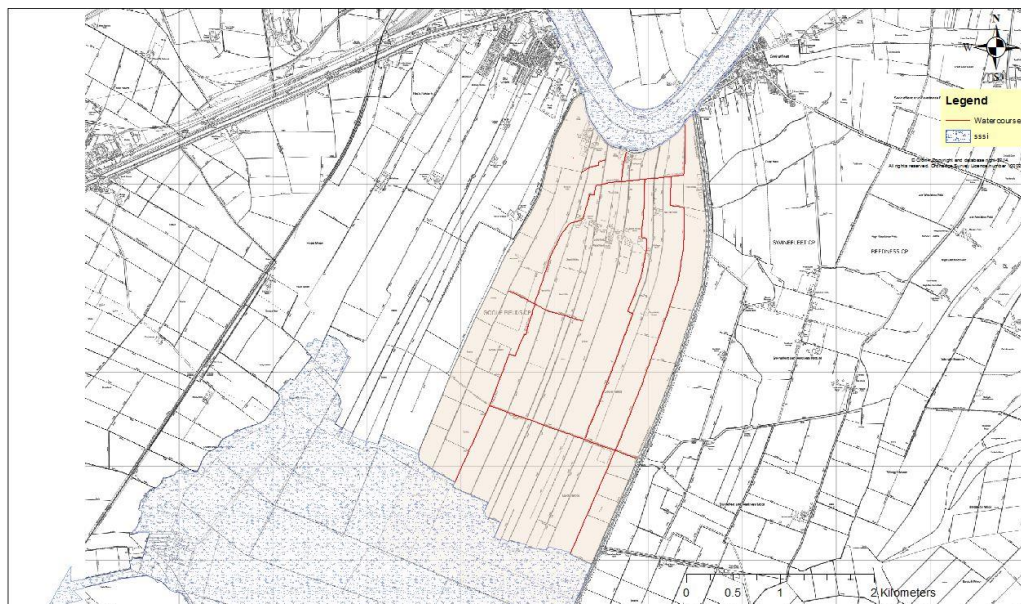
The Plan will help integrate biodiversity into the Board's activities through its annual maintenance programme and capital work projects.

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 and proximity of two internationally important areas of conservation protection, Thorne, Crowle & Goole Moors and the Humber Estuary.

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 Danvm Drainage Commissioners DB 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

Following on from achievements made in the 2010-2015 BAP 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.

#### 3.1.2 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

**Target 2.** Control of Invasive Non-Native Species on Board maintained watercourses.

##### Action:

- 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 a plan that integrates Biodiversity with appropriate environmental best practice maintenance of Board maintained drains.

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.

The Board identified this species in its 2010-2015 BAP and implemented actions designed to ensure its actions did not have a detrimental effect on this species but also where possible Board actions would ensure a positive effect. Building on those actions the Board has agreed specific targets and actions for 2015-2020.

#### 4.1.1 Targets and Actions

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

**Target 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

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

**Actions:**

- Provide training to Board maintenance contractors on legislation pertaining to Water vole and their habitats
- ensure water vole surveys are conducted prior to any bank improvement, drainage or other engineering works

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

**Actions:**

- Submit all water vole records to East Yorkshire 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 six indicators of:

- Metered length of watercourse assessed
- Metered length of watercourse enhanced

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 contractors trained
- The number of records collated

Reporting will be from 2016 onward

The third Board Target action will be shown delivered by:

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

Reporting will be delivered annually.

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