

**Doncaster
East IDB
Biodiversity
Action Plan**

Biodiversity 2015-2020

September 2015

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This report describes work commissioned on 17 June 2015 by Doncaster East IDB 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 Doncaster East IDB ("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, the Board's Environment Committee approved the Habitat and Species Action Plans at its October 2015 meeting, this Plan received full Board approval on 6 November 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.

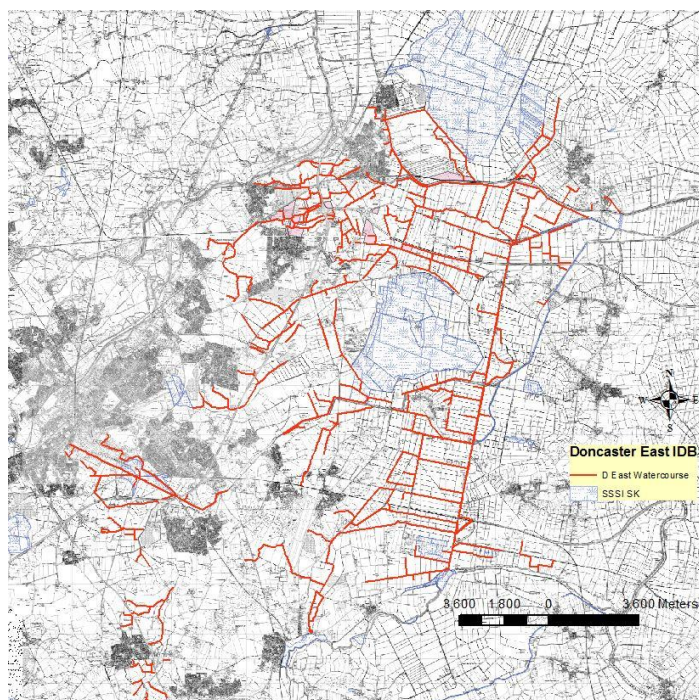
The Plan will help integrate biodiversity into the Board's activities through its annual maintenance programme and capital work projects.

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 two SSSI within the District, Thorne, Crowle & Goole Moors and Hatfield Moors SSSIs

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 Doncaster East IDB 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

Doncaster East IDB 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
- Monitor known non-native invasive plant and animal species on and/or adjacent to Board maintained watercourses

Target 2. Record stands 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 this Plan update, production and implementation that incorporates environmental best practice into its maintenance activity together with the indicator for monitoring of known INNS which will relate to the metered length of channel surveyed.

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 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. In its 2010-2015 BAP the Board installed three Barn Owl boxes, take up by Barn Owl has been positive however the Board acknowledged it could do more.

4.1.1 Targets and Actions

The Board agree two targets:

Target 1. Increase availability of Barn Owl nesting sites

Action:

- Erect three barn owl boxes at Board pump stations
- Monitor Barn owl nest boxes for use and activity

Target 2. Improve understanding of Barn owl distribution within the Drainage District

Action:

- Record all sightings of Barn owls within the district
- submit all barn owl records from the drainage district to local record centres

4.1.2 Indicators and Reporting

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

- Number of barn owl boxes erected

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

- Number of records submitted
- Number of monitoring visits

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

4.2 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.

4.2.1 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 IDB employees and contractors on legislation pertaining to Water Vole and their habitat
- 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 Doncaster Biodiversity officer
- undertake monitoring of all key water vole colonies

4.2.2 Indicators and reporting

The first Board Target action will be shown delivered by 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 employees 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.

4.3 Great Crested Newt

A Species Action Plan existed under the UK BAP Species for Great Crested Newt (*Triturus cristatus*). One of the main reasons for decline and it is under continued threat from development, habitat fragmentation, fish introductions and lack of habitat management as well as pond loss. Many drains maintained by the Board are slow moving and contain floating plant species favoured by Newt for securing eggs. This SAP will link into HAP Standing Open Waters and Canals

4.3.1 Targets and actions

The Board identified one targets for Great Crested Newt being delivered by six actions:

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

Actions:

- Seek to retain appropriate aquatic plants used by GCN to deposit eggs,

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

Actions:

- Provide training to Board employees and contractorson legislation pertaining to GCN and habitat
- ensure GCN surveys are conducted prior to any drainage or other engineering works in close proximity to ponds.

Target 3. Monitor populations of Great Crested Newt within the District

Action:

- submit all GCN records from the district to Doncaster Biological record centre.

4.3.2 Indicators and Reporting

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

- the area (in m²) of plants retained.

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

- the provision of training and
- the number of surveys undertaken.

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

- the number of records submitted.

Reporting will be an ongoing action.

4.4 Common Toad and Common Frog

There is no UK Species Action Plans for these herpetiles however Common Toad would benefit from recognition of its habitat and management is required at the wider landscape scale both aquatic and terrestrial. Producing a Species Action Plan for Common Frog and Common Toad links into the Habitat Action Plan of Standing open waters and canals. Both animals suffer from habitat fragmentation and countering these effects at a local scale is high priority.

4.4.1 Targets and Actions

The Board has identified one target for Common Frog and Common Toad with two actions:

Target 1. Ensure all Board maintenance work considers the terrestrial and aquatic habitat of Common Frog and Common Toad

Actions:

- provide training to Board employees and contractors on the lifecycle of both species and the varying types of habitat required
- record sightings of all stages of life cycle with local biodiversity records centre.

4.4.2 Indicators and reporting

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

- Number of employees trained
- Number of records submitted

Reporting will be ongoing throughout the life of the BAP

4.5 Bats

A number of Bat species have their own Species Action Plans. This Board does not wish to concentrate on any one species. The Board's understanding of distribution of Bat species within its district is not well documented. This Species Action Plan will build Board knowledge

4.5.1 Targets and Actions

The Board has identified two targets for Bat with four related actions

Target 1: Enhance habitat for bats

Actions:

- Undertake Bat surveys along IDB maintained drains
- Maintain areas of open water in drainage ditches for Daubenton's Bats
- Erect 3 bat boxes in suitable locations to provide summer roost sites

Target 2: Ascertain the status of Bat populations within the district

Actions:

- Survey trees, IDB structures for the presence of bats prior to commencement of improvement or capital works
- Report all records to Doncaster biodiversity records centre.

4.5.2 Indicators and reporting

Board Target Action 1 will be shown delivered by indicators of:

- Number of surveys
- Area of open water retained
- Erection of boxes

Board Target Action 2 will be shown delivered by indicator:

- Number of structures and trees surveyed
- Number of records submitted

Reporting will be undertaken annually

4.6 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 30 June 2017 to add grass snake to its BAP.

4.6.1 Targets and Actions

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

Target 1: Introduction of compost heads 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

4.7 Invertebrates

Several species of invertebrates are UK BAP Priority Species in England. The Board agreed at its meeting 30 June 2017 to add invertebrates to its BAP and identified one action.

4.7.1 Targets and Actions

The Board has identified invertebrates at a 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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