Scunthorpe & Gainsborough WMB Biodiversity Action Plan

Biodiversity 2015-2020

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Revision History

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Contract

This report describes work commissioned on 6 June 2015 by Scunthorpe & Gainsborough WMB 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 Scunthorpe & Gainsborough Water Management 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.

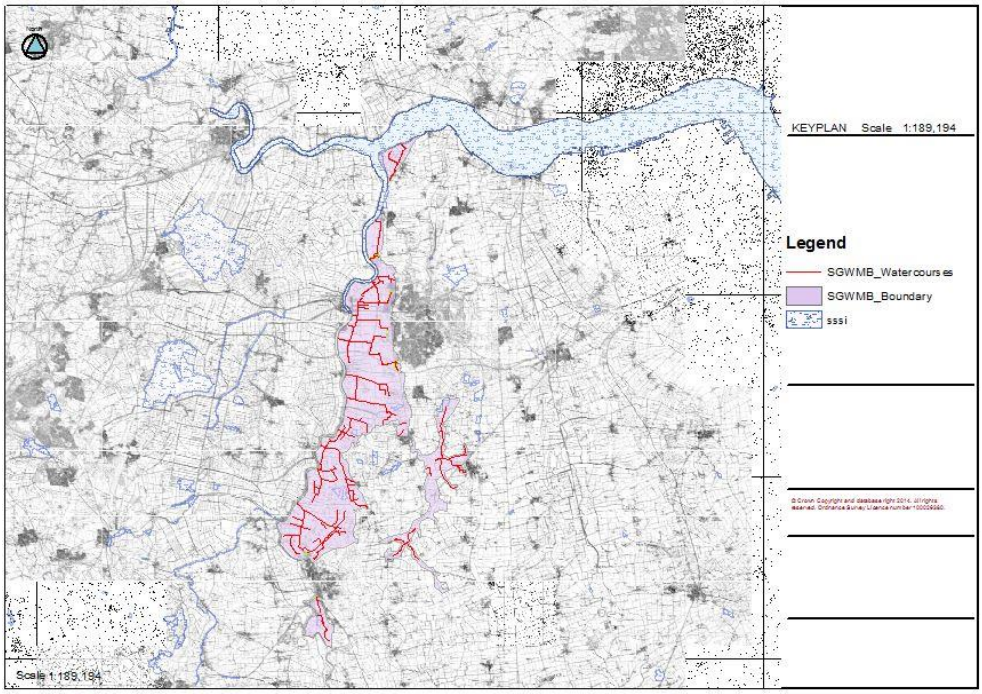
The Plan will help integrate biodiversity into the Board's activities through its annual maintenance programme and capital work projects.

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 the SSSIs within the District, Humber Estuary, Lea Marshes, Laughton Common, Tuetoes Hills and Messingham Heath.

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 Scunthorpe & Gainsborough Water Management Board 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

Scunthorpe & Gainsborough Water Management 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 Danvm DC 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.

3.1.4 Ponds

For the purpose of UK BAP priority habitat classification, ponds are defined as permanent and seasonal standing water bodies up to 2 ha in extent which meet one or more of the following criteria:

- Habitats of international importance
- Species of high conservation importance.
- Exceptional assemblages of key biotic groups
- Ponds of high ecological quality
- Other important ponds

Priority habitat ponds can be readily identified by standard survey techniques such as those developed for NVC, Common Standards Monitoring, the National Pond Survey or for specific species groups. Ponds are distinguished from other existing priority habitat types. The general principle to be applied is that where the standing water element is functionally a component of another priority habitat and that priority habitat definition takes account of the standing water element then it should be treated as part of that habitat.

Ponds are widespread throughout the UK, but high-quality examples are now highly localised, especially in the lowlands. In certain areas high quality ponds form particularly significant elements of the landscape, e.g. Cheshire Plan marl pits, the New Forest ponds, pingos of East Anglia, mid-Wales mawn pools, the North East Wales pond landscape, the forest and moorland pools of Speyside, dune slack pools, the machair pools in the Western Isles of Scotland, and examples of Habitats Directive Annex I pond habitats across Northern Ireland.

Estimates, based on the relatively small pond data sets currently available, suggest that around 20% of the c.400,000 ponds outside curtilage in the UK might meet one or more of the above criteria.

An inventory of ponds, including many high quality sites, has been established as part of the National Pond Monitoring Network and work is in progress to add further known sites to this database. The National Pond Monitoring Network (NPMN) will provide the main mechanism for monitoring priority habitat ponds. The NPMN was established in 2002 as a partnership of organisations involved in pond monitoring led by the Environment Agency and Pond Conservation.

3.1.5 Targets and Actions

The Board is the freehold owner of two ponds within its District, Westcliff Lagoon and Riddings Lagoon.

The Board has agreed two targets which will be delivered by three Board actions:

Target 1. Improve understanding of status of Board owned ponds

Action:

- Undertake surveys of both ponds using standard Pond Conservation Methodology
- Submit all records from surveys to local biological record centres and National Ponds Monitoring Network at Freshwater Habitats.org

Target 2. Maintain and improve quality of ponds within Board ownership

Action:

- Identify if quality of Board owned ponds require improvement particularly for BAP Species Action Plans

3.1.6 Indicators and reporting

The indicators for Target 1 will be the survey effort in hours and the number of records submitted to the biological records centres and National Ponds Monitoring Network. Reporting will be within the life of the plan.

Indicators for Target 2 will be improvement work undertaken which is to be within the life of this BAP.

4 Species Action Plans

4.1 European Eel

There is no Species Action Plan for European Eel (*Anguilla anguilla*) but passage for eel to and from upstream breeding grounds has been identified as a major cause of the decline in European Eel numbers across Europe. The Eels (England and Wales) Regulations 2009 attempt to address that problem.

The Board has to undertake certain measures with regard to its pumping stations to reduce the impact of barriers to migration.

4.1.1 Targets and Actions

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

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

Actions:

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

Target 2: Reduce the impacts of existing barriers to migration on escapement and recruitment

Actions:

- Secure funding to enable prioritization of existing barriers to migration for mitigation works
- Source funding to enable mitigation works and associated pre and post project monitoring programme on existing priority structures
- Undertake mitigation works on priority structures

4.1.2 Indicators and reporting

The first target action will be delivered by indicators of:

- Length of watercourse regime reviewed

The second target action will be delivered by indicators of:

- Funding secured
- Funding drawdown
- Number of structures where mitigation work to eel migration has been undertaken

Reporting will be annually and for the second target action indicators, on completion of the plan.

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
- provide training to IDB employees and contractors on legislation pertaining to water vole and habitat.

Target 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

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 managed
- Metered length of watercourse enhanced
- Number of persons trained

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 surveys undertaken

Reporting will be from 2016 onward

The third Board Target action will be shown delivered by:

- Number of records submitted to Ecological Records Centre
- Metred length of watercourse surveyed

Reporting will be delivered annually.

4.3 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 situate 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.

4.3.1 Targets and Actions

The Board agree two targets:

Target 1. Enhance Barn Owl numbers within the drainage district

Action:

- Erect three barn owl boxes at Board pump stations or Board owned land

Target 2. Monitor the use of Barn Owl boxes erected within the District.

Action:

- submit all barn own records from the drainage district to local record centres and monitor the use of barn own boxes once erected.

4.3.2 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

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

4.4 Bats

A number of Bats have specific Species Action Plans under UK BAP however this Board does not wish to concentrate on one species in particular but to ascertain bat populations and enhance bat habitat within the District

4.4.1 Targets and Actions

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

Target 1: Ascertain bat population within the District

Actions:

- Survey IDB structures for the presence of bats

Target 2: Enhance habitat for bats

This will be delivered by three actions

Actions:

- Maintain areas of open water in drainage ditches for Daubenton's Bats
- Erect bat boxes in suitable locations on Board owned pump stations to provide summer roost sites
- Retain veteran trees adjacent to IDB maintained drains

4.4.2 Indicators and Reporting

The first Board Target will be indicated delivered by the number of structures surveyed.

The second Board Target will be indicated delivered by

- Length of open watercourse retained
- Number of bat boxes erected
- Length of drain retaining veteran trees

Reporting on actions will be annually

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Dublin
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Exeter
Haywards Heath
Limerick
Newcastle upon Tyne
Newport
Saltaire
Skipton
Tadcaster
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