



*Welland & Deepings Internal  
Drainage Board*

**BIODIVERSITY ACTION PLAN**

**2015**

This Biodiversity Action Plan has been prepared by the Welland & Deepings Internal Drainage Board in accordance with the commitment in the Implementation Plan of the DEFRA Internal Drainage Board Review for IDBs to produce their own Biodiversity Action Plans by April, 2010.

It also demonstrates the Board's commitment to fulfilling its duty as a public body under the Natural Environment and Rural Communities Act 2006 to conserve biodiversity.

Many of the Board's activities have benefits for biodiversity, not least its water level management and ditch maintenance work. It is hoped that this Biodiversity Action Plan will help the Board to maximise the biodiversity benefits from its activities and demonstrate its contribution to the Government's UK Biodiversity Action Plan targets.

The Board has adopted the 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.

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Approved by the Board on 4<sup>th</sup> June 2015

.....  
T. C. PURLLANT  
Chairman of the Board

This Biodiversity Action Plan is a public statement by the Board of its biodiversity objectives and the methods by which it intends to achieve them.

We would welcome appropriate involvement in the delivery of the Plan from interested organisations, companies, and individuals.

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## 1 IDB BIODIVERSITY – AN INTRODUCTION

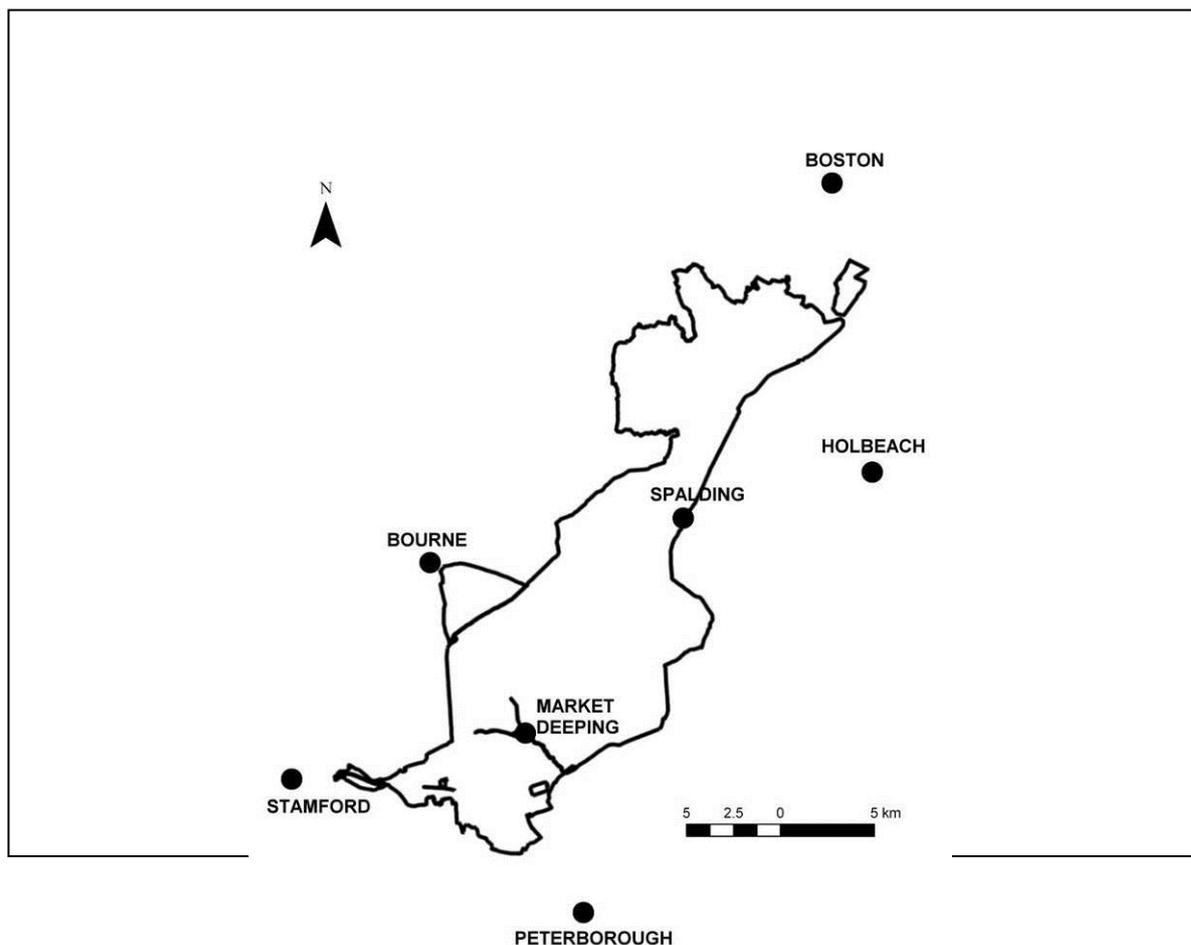
### 1.1 Introduction

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The IDB has conducted a biodiversity audit of its district and identified those habitats and species that would benefit from particular management or actions by the IDB. Using this information, which is presented in later sections, the IDB's Biodiversity Action Plan has been developed. The Plan identifies objectives for the conservation and enhancement of biodiversity within the drainage district, and goes on to describe targets and actions that will hopefully deliver these objectives. The intention is to integrate, as appropriate, biodiversity into the Board's activities, such as annual maintenance programmes and capital works projects.

The action plan will help to safeguard the biodiversity of the drainage district now and for future generations. In particular, it is hoped that implementing the plan will contribute to the achievement of local and national targets for UK BAP priority species and habitats. Species and habitats which are not listed in the UK BAP but may be locally significant for a variety of reasons have also been considered.

The current Plan is a version of an evolving document which has been developed following a review and update of the 2010 Plan. Further reviews and updates will be made on a regular basis. It covers the entire drainage district of the IDB, as shown in Figure 1.



### 1.2 What is Biodiversity?

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The Convention on biodiversity as:

... in 1992 defined

*“The variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.”*

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.

### **1.3 The Importance of Conserving Biodiversity**

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Biodiversity is a vital resource and it is essential to acknowledge its importance to our lives along with the range of benefits that it produces:

- Supply of ecosystem services – water, nutrients, climate change mitigation, pollination
- Life resources – 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

### **1.4 The Biodiversity Action Planning Framework**

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This IDB Biodiversity Action Plan is part of a much larger biodiversity framework that encompasses international, national and local levels of biodiversity action planning and conservation.

### **1.5 Biodiversity – The International Context**

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The international commitment to halt the worldwide loss of habitats and species and their genetic resources was agreed in 1992 at United Nations Conference on the Environment and Development, commonly known as the Rio Earth Summit. Over 150 countries, including the United Kingdom, signed the Convention on Biological Diversity, pledging to contribute to the conservation of biodiversity at the global level. These states made a commitment to draw up national strategies to address the losses to global biodiversity and to resolve how economic development could go hand in hand with the maintenance of biodiversity.

The Rio Convention includes a global commitment to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level ([www.biodiv.org/convention/default.html](http://www.biodiv.org/convention/default.html)). The 2002 World Summit in Johannesburg on Sustainable Development subsequently endorsed this target.

### **1.6 Biodiversity – The National Context**

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The UK Biodiversity Action Plan (UK BAP) is the UK commitment to Article 6A of the Rio Convention on Biological Diversity. It describes the UK's priority species and habitats, and seeks to benefit 65 priority habitats and 1149 species in total. It identifies other key areas for action such as the building of partnerships for conserving biodiversity and gathering vital biodiversity data.

In England, *Working with the Grain of Nature* sets out the Government's strategy for conserving and enhancing biological diversity, and establishes programmes of action for integrating biodiversity into policy and planning for key sectors, together with appropriate targets and indicators. The Strategy has a Water and Wetlands Working Group and an associated programme of action that includes:

- Integrating biodiversity into whole-catchment management.
- Achieving net gain in water and wetland BAP priority habitats through Water Level Management Plans, Catchment Flood Management Plans, and sustainable flood management approaches.

As of July 2012, the UK Biodiversity Action Plan was renamed the “UK Post-2010 Biodiversity Framework” but for brevity and for use in this document, it is still referred to as the UK BAP.

### **1.7 Local Biodiversity Action Plans**

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For the UK Biodiversity Action Plan to be implemented successfully it requires some means of ensuring that the national strategy is translated into effective action at the local level. The UK targets

for the management, enhancement, restoration, and creation of habitats and species populations have therefore been translated into targets in Local Biodiversity Action Plans (LBAPs), which tend to operate at the county level.

## **1.8 Internal Drainage Boards and Biodiversity**

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The Natural Environment and Rural Communities Act 2006 places a duty on IDBs to conserve biodiversity. As a public body, every IDB must have regard in exercising its functions, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

The Act states that conserving biodiversity includes restoring or enhancing a population or habitat. In so doing, an IDB should have regard to the list published by the Secretary of State of living organisms and types of habitat that are of principal importance for the purpose of conserving biodiversity. In effect, this list comprises the Biodiversity Action Plan priority species and habitats for England.

In 2007, the Government's IDB Review Implementation Plan established a commitment that IDBs should produce their own Biodiversity Action Plans.

This IDB Biodiversity Action Plan has been produced to help fulfil these requirements and seeks to set out targets and actions that complement the UK Biodiversity Action Plan and Local Biodiversity Action Plans.

## **1.9 The Aims of the IDB Biodiversity Action Plan**

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The aims of this IDB BAP are:

- To ensure that habitat and species targets from the UK Biodiversity Action Plan and the local LBAP are translated into effective action within the drainage district.
- To identify targets for other habitats and species of local importance within the drainage district.
- To develop effective local partnerships to ensure that programs for biodiversity conservation are maintained in the long term.
- To raise awareness within the IDB and locally of the need for biodiversity conservation, and to provide guidance to landowners, occupiers and their representatives on biodiversity and inland water management.
- To ensure that opportunities for conservation and enhancement of biodiversity are fully considered throughout the IDB's operations, and
- To monitor and report on progress in biodiversity conservation.

## 2 THE IDB BAP PROCESS

### 2.1 The Biodiversity Audit

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To produce this IDB Biodiversity Action Plan, information on the habitats and species present in the catchment was first obtained. This “Biodiversity Audit” involved the collation of existing data held by the IDB and by other biodiversity partners.

### 2.2 Evaluating and Prioritising Habitats and Species

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The Biodiversity Audit identified those priority habitats and species in the UK Biodiversity Action Plan and the Local Biodiversity Action Plans that can be found in the drainage district. Additional non-BAP habitats and species deemed to be important within the drainage district were also identified.

Further habitats and species, together with additional targets and actions, may be added in the future, as knowledge is improved and delivery of the IDB BAP is reviewed.

A range of criteria was then used to select those species and habitats that are of particular importance to the IDB – that is to say, those habitats and species that could benefit from IDB actions. The criteria used included their national and local status, the opportunities for effective IDB action and the resources available.

### 2.3 Setting Objectives, Targets and Indicators

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For each habitat and species identified as being important to the IDB, conservation objectives and targets have been drawn up and set out in the Plan. The objectives express the IDB’s broad aims for benefiting a particular habitat or species. The related targets have been set to focus IDB programmes of action and to identify outcomes that can be monitored to measure achievement. For each target an indicator has been set – a measurable feature of the target that, when monitored over time, allows delivery to be assessed.

In order for this BAP to be as effective as possible the targets and actions have been devised to be SMART (Specific, Measurable, Achievable, Relevant and Time-limited). The targets are ambitious, but are also considered to be proportionate and practicable given the resources available.

Procedural targets and actions have also been considered. These are targets that the Board will use to measure the way in which it considers and incorporates biodiversity across the whole range of its operations. These may involve changes to administrative, management and operating procedures.

### 2.4 Implementation

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Once targets have been set for habitats and species, it is important that the actions to deliver the Biodiversity Action Plan are described. The Plan sets out how the Board intends to implement the actions in the plan, often in partnership with other organisations or individuals.

### 2.5 Monitoring

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Achievement of the Plan targets will be measured by a programme of monitoring which the Board will undertake, in some instances with assistance from its partners, and the methods to be used are described in the Plan.

### 2.6 Reporting and Reviewing Progress

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It is important to review the implementation of the BAP, assess changes in the status of habitats and species and the overall feasibility of objectives and targets. In addition, it is vital that the successful achievement of targets is recorded and the gains for biodiversity registered in the public domain.

The Plan sets out the methods the IDB will be using to review the delivery of targets and to communicate progress to partner organisations and the public.

### 3 THE BIODIVERSITY AUDIT

#### 3.1 Introduction

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The following Sections 4, 5 and 6 summarise the results of the Biodiversity Audit, undertaken in 2009 and 2015. Section 4 provides information about the drainage district and a list of the nature conservation sites that occur within or bordering its boundaries. Sections 5 and 6 list respectively the habitats and species occurring within the district that are of potential importance to the IDB.

#### 3.2 Local Biodiversity Action Plans

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The following Local Biodiversity Action Plan(s) cover the IDB's drainage district:

- Lincolnshire
- Cambridgeshire & Peterborough

#### 3.3 IDB Biodiversity Audit Boundary

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The Biodiversity Audit covers the entire district of the IDB, as shown in Figure 1 and Appendix 1. Where data has been obtained that shows a record of a species in a 1km square or 10km square which the district wholly or partially covers, this has been included in the area of the audit.

#### 3.4 Sources of Data - Habitats

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Information on habitats of relevance occurring within the drainage district was obtained from the following sources:

- The conservation files of Welland & Deepings IDB
- Cambridgeshire & Peterborough Biological Records Centre
- Greater Lincolnshire Nature Partnership

#### 3.5 Sources of Data - Species

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Information on species of relevance occurring within the drainage district was obtained from the following sources:

- The conservation files of Welland & Deepings IDB
- Ecological surveys undertaken by Welland & Deepings IDB
- Protected species surveys undertaken by Welland & Deepings IDB
- Cambridgeshire & Peterborough Biological Records Centre
- Greater Lincolnshire Nature Partnership

## 4 NATURE CONSERVATION SITES

### 4.1 The Drainage District

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The drainage district covers an area of 32,400 ha and contains 631 km of IDB-maintained watercourses.

It is largely located in the south Lincolnshire Fens, with a small part in the fens and valley of the River Welland in Cambridgeshire. The Board's area extends from near Kirton and Donington in the north, south to Spalding and Crowland, and west to Bourne; and in the south the Board's area includes Market Deeping and it borders Peterborough and Stamford. The district is shown on the map attached as Appendix 1.

### 4.2 Geology

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The majority of the Board's area has drift geology of fenland alluvium. In the south-west there are areas of fen peat and gravel, and towards Stamford there are small areas of clay and limestone.

### 4.3 Landscape

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#### 4.3.1 Landscape Designations

There are no National Parks or Areas of Outstanding Natural Beauty in the drainage district.

#### 4.3.2 Landscape Character

Natural England has divided the whole of England into a number of Joint Character Areas (JCA) based on characteristic landforms, wildlife and land use. They are not designations and are not confined by traditional administrative boundaries. For each JCA, Natural England has prepared a profile that characterises the wildlife and natural features, identifies the influences that act upon those features and sets objectives for nature conservation.

The majority of the Board's area lies within The Fens character area. The small part which lies between Stamford and Market Deeping is within the Kesteven Uplands character area.

#### 4.3.3 Sites and Monuments Records

Scheduled Ancient Monuments (SAM) are not directly related to Biodiversity matters. Information held by the Board and other sources has not therefore been collated. SAM are only relevant where they abut the Board's watercourses and they would be referred to on a site by site basis as appropriate.

#### 4.3.4 Tree Preservation Orders

Tree Preservation Orders (TPO) are not directly related to Biodiversity matters since they are made on individual trees, groups or woods for landscape and visual amenity reasons. Information held by the Board and other sources has not therefore been collated. TPO are only relevant where they occur adjacent to the Board's watercourses and they would be referred to on a site by site basis as appropriate.

#### 4.4 Statutory Nature Conservation Sites

##### 4.4.1 International Sites

The following internationally-designated nature conservation site is found within the district:

**Table 1. International Designations**

Site name	Designation	Features Relevant to IDB
Baston Fen (Counter Drain)	Special Area of Conservation (SAC)	Open water of a fenland drain with high population of spined loach. A water level management plan has been prepared for this site.

##### 4.4.2 National Sites

The following nationally-designated nature conservation sites are found within the district:

**Table 2. National Designations**

Site name	Designation	Features Relevant to IDB
The Wash	National Nature Reserve (but not part of the Site of Special Scientific Interest)	A small rectangular area of land which is part of the NNR lies within the Board's area to the south-east of Kirton in the vicinity of College Farm, on the landward side of the sea bank
Baston & Thurlby Fens TF 130 167 & 124 166	Site of Special Scientific Interest (SSSI)	Spined loach; washland, fen and open water habitats; aquatic plants; dragonflies. A Water Level Management Plan has been prepared for this site
Deeping Gravel Pits TF 180 082	SSSI	Breeding and wintering birds; fen; aquatic plants
Cross Drain TF 149 152 – 172 123	SSSI	Open water habitat with diverse and rare aquatic invertebrates and plants. A Water Level Management Plan has been prepared for this site
Cowbit Wash TF 240 191	SSSI	None; this is a geological site. A Water Level Management Plan has been prepared for this site
Langtoft Gravel Pits TF 114 110	SSSI	Open water, aquatic vegetation, fen vegetation, willow scrub
Surfleet Lows TF 252 285	SSSI	Wet grassland, wet woodland, open water, fen vegetation

##### 4.4.3 Local Nature Reserves

The following Local Nature Reserves, which are designated by local authorities under Section 21 of the National Parks and Access to the Countryside Act 1949, are found within the district:

**Table 3. Local Designations**

Site name	Designation	Features Relevant to IDB
Vernatts TF 249 240	Local Nature Reserve	Open water, marsh and fen habitats; water vole

#### 4.5 Non-statutory Local Sites

A number of sites have been identified locally as being important for wildlife. Whilst these designations do not have statutory status, the sites themselves are important for their contribution to biodiversity and planning policy requires that they are given consideration. The following local sites are those with those features that may be affected by water level management and other IDB activities and which are to be found within or bordering the drainage district: Sites with no features that may be affected by IDB activities are not listed.

**Table 4. Non-Statutory Designations**

Site name	Designation	Features Relevant to IDB
River Welland (the entire length within the Board's area), shared between Lincs and Cambs	Site of Nature Conservation Importance (SNCI)/County Wildlife Site/ Local Wildlife Site	Large open water body and wintering birds
Stamford Canal TF 132 098	SNCI	Open water
Tallington Lakes TF 101 095	SNCI	Open water
Sutterton Brickworks TF 273 358	SNCI	Open water
New Gate House Field TF 229 280	SNCI	Grassland
Surfleet Bank Pond TF 274 307	SNCI	Open water
Priory Farm Stamford TF 045 073	SNCI	Damp grassland
River Welland Borough Fen TF190 083	SNCI	River and grassland
Gravel Drain TF 125164-131152	Local Wildlife Site (LWS)	Open water of a fen drain, scattered scrub and rough grass
Thurlby Fen Slupe TF 124 166	Lincolnshire Wildlife Trust Nature Reserve	Open water, fen vegetation, invertebrates
Counter Drain South Ditch & Banks TF 134170-143175	LWS	Open water of a fen drain, rough grass and scattered scrub
Baston Common Sand & Gravel Pits TF 132 143	SNCI	Open water, reedbeds, breeding birds
Neal's Soke Dyke TF 135170-149151	LWS	Open water of a fen drain, rough grass and notable water plants
Uffington Drain TF 139173-152153	LWS	Open water of a fen drain, scattered scrub and rough grass
North Drove Drain TF 149151-213219	LWS	Open water of a fen drain, reedbed, scattered scrub and rough grass
Locks Dyke South TF 152165-156157	LWS	Open water of a fen drain, reedbed and rough grass
Tallington Drain TF 152154-160141	LWS	Open water of a fen drain, scattered scrub and rough grass
Pinchbeck Fen Slupe TF 188 234	Lincolnshire Wildlife Trust Nature Reserve & LWS	Grassland, marsh, aquatic vegetation
Guthram Gowt (River Glen) TF 174 208 – 193 240	SNCI	Aquatic and marginal vegetation, breeding birds

Risegate Eau TF197297-282317	LWS	Open water of a fen drain, reedbed, scattered scrub and rough grass, with rare plant
Crowland Ponds TF 229 107 – 232 125	LWS	Open water
The Lake Crowland Wash TF 230 106	LWS	Open water and invertebrates
Crowland Falls Pits TF 240 125	SNCI	Open water, reedbeds
High Bank Gull TF 249 147	LWS	Open water, reedbeds
Vernatts Drain TF 213 220 – 282 294	LWS	Open water
Pinchbeck Marsh TF 270 270	LWS	Ditches
Surfleet Seas End TF 282 293	LWS	Saltmarsh
The Chasm & Northorpe Slupe TF142 177	LWS	Grassland
Bell Mere Pool TF 283 357	LWS	Open water
Deeping Lakes TF 181 079	LWS and Lincolnshire Wildlife Trust Nature Reserve	Open water
New River TF 260 152	LWS	Open water
Spalding Cemetery TF 249 237	LWS	Churchyard
South Drove Drain TF 238 170	LWS	Open water
River Glen Corridor TF 189 235	LWS	Open water
Banks Cradge Drain TF 179 220	LWS	Open water
Blue Gowt Drain North TF 274 286	LWS	Open water
Blue Gowt Drain North of Pode Hole TF 209 227	LWS	Open water
Blue Gowt Drain West Marsh Road TF 261 260	LWS	Open water
Fred's Pit Crowland TF 237 124	LWS	Open water
Fourth District Main Drain TF 204 219	LWS	Open water
Newborough Drain TF 221 084	LWS	Open water
Willow Tree Fen TF 178 214	Lincolnshire Wildlife Trust Nature Reserve	Grassland, fenland, open water
Willow Tree Fen Northern Ponds TF 173 224	LWS	Open water
Baston Fen TF 132 170	LWS	Fenland
Surfleet Lows TF 251 286	Lincolnshire Wildlife Trust Nature Reserve	Grassland
Boston Road Brickpits TF 247 319	Lincolnshire Wildlife Trust Nature Reserve, LWS	Open water, reedbeds

Asholt Drain TF176072 --TF214092	County (CWS)	Wildlife	Site	Good aquatic flora
Ashton Meadows and Hedges TF095058 -TF103059	CWS			Willows and hedgerow
Bainton Pits TF107069	CWS			Flora and invertebrates
Deeping Gate Meadows TF150093	CWS			Hedgerows and rare plants
Follybank Crossing Meadows TF173070	CWS			Willows and natural habitat
Hayes Wood TF133030	CWS			Ancient Woodland
Hermitage Field TF160067-TF169068	CWS			Willows and hedgerow
Marholm Copse TF138030	CWS			Plants
Marholm Crossing and Brook Drain TF163027 -TF120060	CWS			None specific – rare moth
Maxey Quarry TF128075	CWS			Fen habitat
Paradise Willows TF158073	CWS			Willows
Rice Wood TF119048	CWS			Ancient Woodland
Torpe Manor Field TF111054	CWS			Flora
Stamford Rd. / Heath Rd. / Ailsworth Rd. / King St. Verges TF101040-TF131277, TF122041-TF121002, TF113046-TF11303	CWS			Flora
Stamford Road Parkland TF133027	CWS			Pasture woodland
Steeping Wood TF142036	CWS			Ancient Woodland
Woodcroft Lodge Parkland TF128036	CWS			Mature trees

## 5 HABITAT AUDIT

### 5.1 Habitat Audit Summary

This habitat audit summary lists the broad habitat types and UK BAP priority habitats that occur within the IDB district as identified by the information gathering exercise. Also listed are habitats deemed to be of local importance and/or featured in the county Local Biodiversity Action Plan that occur in the IDB district. Habitats that are of potential importance for the IDB, where water level management or other IDB activities may be of benefit, are identified. Finally, brief notes are included on the potential for the IDB to maintain, restore or expand its important habitats.

**Table 5. Habitat Audit Summary**

Broad Habitat Types	UK BAP Priority Habitat	Local Biodiversity Action Plan Habitat	Habitat of Importance for IDB	Location of Habitat of Importance for IDB	IDB Potential for Maintaining, Restoring or Expanding Habitat
Fen, marsh & swamp	Reedbeds	Reedbeds	Reedbeds	Isolated open water bodies. Extensive reed margins on some watercourses	Potential to expand reedbed habitat by extending existing margins
Broadleaved, mixed and yew woodland	Wet woodland	Wet woodland	Wet woodland	Marginal to isolated open water bodies and some larger channels	Very limited potential to expand this habitat by extending existing areas
Rivers and streams & Standing open water and canals	N/A	Rivers, canals and drains	Drains	All of the Board's watercourses with permanent water	Potential to restore permanent water to dry or only seasonally wet drains, and to create new watercourses to offset loss to culverting
N/A	N/A	Veteran Trees	Veteran Trees	Along some watercourses in the south-west of the Board's area with very few elsewhere	Retention and appropriate management of veteran trees along watercourses

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## **5.2 Habitats of Importance for the IDB**

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The following section provides more information on the status and location of the habitats within the drainage district that are of importance for the IDB and may benefit from water level management or other IDB activities.

### **5.2.1 Reedbeds**

Reedbeds within the Board's watercourses are linear features, often of considerable length but of limited width. Other reedbeds in the area are associated with bodies of standing water, such as old pits, where the reeds form marginal stands. It is known that extensive stands occur on at least the North and South Drove Drains, Blue Gowt Drain and Vernatts Drain, and probably on many others. Pre-cleansing conservation surveys from 2010 onwards identified that wet reedbed margins are present at 51 watercourses with an approximate total area of c4ha, although individual stands vary greatly in size.

### **5.2.2 Wet Woodland**

Wet woodlands are those which are dominated by species of willow, with alder and less often by or with downy birch. Their ground flora resembles reedbed, fen and marsh vegetation, so woodlands which are composed of willows but which have a dry land ground flora are excluded from this habitat category. Wet woodlands in the Board's area typically occur as small and very small stands at sites where there are also open water, reedbed and fen habitats.

### **5.2.3 Drains**

Watercourses which retain at least some depth of water all year round fall into this habitat category, which therefore excludes those which are dry or only seasonally wet. The drains occur throughout the Board's area.

### **5.2.4 Veteran Trees**

This habitat comprises old pollard willows (chiefly white willow and crack willow) and fewer old pollard ash trees, which almost exclusively occur on the banks of watercourses in the south-west of the Boards' area, between Stamford, Peterborough and Market Deeping, with much fewer such trees elsewhere. To date, veteran trees have been identified on Beldham Dyke, Welland Soke Dyke, Maxey Outgang Drain, Bainton Brook and Kelhams Drain. Outside of the south-west area, individual veteran willow pollards have been identified at Crowland No 4 and 6<sup>th</sup> District Cradge Dyke.

## 6 SPECIES AUDIT

### 6.1 Species Audit Summary

This species audit summary lists the BAP priority species that occur within the IDB district as identified by the information gathering exercise. Also listed are species deemed to be of local importance and/or identified in the county Local Biodiversity Action Plans that occur in the IDB district. Species that are of potential importance for the IDB, where water level management or other IDB activities may be of benefit, are identified. Finally, brief notes are included on the potential for the IDB to maintain or increase the population or range of species of importance.

**Table 6. Species Audit Summary**

Common Name	Group	Order	Scientific Name	UK BAP Priority Species	Local Biodiversity Action Plan(s) Species	Non-BAP Species But Important in IDB District	Location of Species of Importance for IDB	IDB Potential for Maintaining or Increasing Species Population or Range
Water Vole	Terrestrial mammals	Terrestrial mammals	<i>Arvicola amphibius</i>	Yes	Local Biodiversity Action Plans for Lincolnshire, Cambs & Peterborough	No	Widespread throughout the Board's area	Creating suitable habitat

Internal Drainage Board – Biodiversity Action Plan

Otter	Terrestrial mammals	Terrestrial mammals	<i>Lutra lutra</i>	Yes	Local Biodiversity Action Plan for Cambs & Peterborough	No	Probably throughout the Board's area but scattered and not common	Surveying for suitability of sites for artificial holts
Reed bunting	Birds	Bird	<i>Emberiza schoeniclus schoeniclus</i>	Yes	Local Biodiversity Action Plan for Lincolnshire	No	Likely to be breeding throughout the Board's area	Creating suitable habitat
Barn owl	Birds	Bird	<i>Tyto alba</i>	No	Local Biodiversity Action Plan for Lincolnshire	Yes	Channel banks. Owl boxes at 19 locations (12 on poles; 6 at pumping stations and 1 at a stores site)	Maintain existing nesting sites
Greater water-parsnip	Vascular plants	Flowering plant	<i>Sium latifolium</i>	Yes	Local Biodiversity Action Plan for Lincolnshire	No	A few designated conservation sites	Extend range by re-introducing plants to suitable locations
Grass snake	Reptile	Reptile	<i>Natrix natirx</i>	Yes	No	No	Throughout the Board's area	Creating suitable habitat
Bats	Terrestrial mammals	Terrestrial mammals	<i>Chiroptera</i>	Yes	Local Biodiversity Action Plans for Lincolnshire, and Cambs & Peterborough	No	Drains for foraging and commuting, and possibly buildings for roosting	Provide suitable roosting sites
Eel	Fish	Fish	<i>Anguilla anguilla</i>	Yes	Local Biodiversity Action Plan for Lincolnshire	No	Probably throughout the Board's area	Continue to establish baseline

Ribbon-leaved water plantain	Vascular plants	Flowering Plant	<i>Alisma gramineum</i>	Yes	Local Biodiversity Action Plan for Cambs & Peterborough	No	Restricted in recent times to Blue Gowt Outfall, Counter Drain and Vernatts Drain	Extend range by re-introducing plants to suitable locations
Spined loach	Fish	Fish	<i>Cobitis taenia</i>	Yes	Local Biodiversity Action Plan for Lincolnshire	No	Present in a few drains	Continue to establish baseline
Common Toad	Amphibian	Amphibian	<i>Bufo bufo</i>	Yes	No	No	Possibly widespread in the Board's area	Continue to establish baseline

## 6.2 Species of Importance for the IDB

The following section provides more information on the status and location of the species within the drainage district that are of importance for the IDB and may benefit from water level management or other IDB activities.

### 6.2.1 Water Vole

Water voles are widespread throughout the Board's area. Data from the Board's files shows the number of sites rising steadily since 2001. It is not known if this increase is due to a spread of water voles or better recording, or both.

In the period 1999-2014, water voles were recorded from many watercourses, including: 4<sup>th</sup> District, Atkinsons, Barholme, Baston Fen, Baston & Langtoft Nos 1, 10, 15, 18, 19, 21, Baston Vickers, Bell Farm, Blue Gowt No1, Blue Gowt No 2, Bourne Eau Soke Dyke, Bourne Allotment 2, Calthrops, Captains Drain, Chimney Farm, Church Farm, Coll Drain, Coolins, Congreaves, Cressy Outfall, Counter Drain Washes Outfall, Cowbit 4, 5, 6, 9 & 11, Cross Drain, Crowland 4, 5, 8, 10, & 11, Crowland Common 9, Crowland Common Main Drain, Crowland Low Wash Soke Dyke, Counter Drain Washes, Decoy, Delph Diversion, Delph Drain, Duke of York, Edward Road Dyke, Elders, Eldreths Farm, Fantail, Fantail Diversion, Fantail Mill, Fitzwilliams, Flaxpit, 5<sup>th</sup> & 6<sup>th</sup> District Cradge Dykes, 5<sup>th</sup> Drove Drain, Frognall Drain, Gallery Walk, Glen Soke, Gravel Drain, Grays Farm, Gull House, Half Way House, Hall Meadow Drain, Hall Meadow Arm, Harrow Farm, Hides, Hills, Hop Pole, Hospital Farm, Locks Drain, Long Drove Drain, Marlode, Marlode Extension, Main Drain, Maxey Outgang, Middle Drain, Neal's Soke Dyke, New River, North Drove, North Soke Dyke (KFM), Oak Tree, Old Beach Drain West, Old Beach Connection, Old Pinchbeck, Old Sea Drain, Parrs, Partition Drain, Pasture Drain, Pennygate, Pennygate Pup, Pepper Hill Farm, Picks Deeping High Bank Farm, Picks Home Farm, Porters Farm, Raisens, Railway Delph, Reedy Graft, Riddingtons, Risegate Eau, Roman Bank, Sandygate Dyke, Shoals, South Drove, Spalding Cemetery, Station Farm 1 & 2, Stonehouse Farm, Stowgate Farm, The Delph, Three Towns, Thurlby Main Drain, Tunnel Bank, Two Towns, Uffington, Wards Farm, Welland Soke Dyke, Wensor Farm, West Drain.

### **6.2.2 Barn Owl**

Barn owls probably occur across the Board's area, making use of the grasslands of the watercourse banks for hunting. The extensive network of watercourses with their rough grassland banks within the arable dominated landscape of the Board's area doubtless helps to maintain to population of barn owls.

### **6.2.3 Otter**

In keeping with the general expansion of otters within Lincolnshire and neighbouring counties, due to release and natural spread, otters are now probably resident within the Board's area but remain elusive and sightings and signs are sparse. Recent records are from Vernatts Drain (2008) and Surfleet Reservoir, Blue Gowt Outfall, Surfleet Seas End and Bainton Brook.

### **6.2.4 Reed Bunting**

Reed buntings are probably widespread throughout the Board's area wherever the tall marginal vegetation of the watercourses, including reed fringes, is of sufficient size and appropriate quality from the bird's perspective. The distribution of drains enables reed buntings to occur across tracts of arable dominated land which they would not otherwise find suitable. There are records of known breeding at Vernatts Drain.

### **6.2.5 Greater water-parsnip**

This is a scarce plant nationally and is rare in the Board's area, only occurring at a few locations within designated sites or nature reserves, where some populations have been established following introduction.

### **6.2.6 Grass snake**

On account of many records from widespread sites, grass snakes are probably widespread throughout the Board's area. Many recent records have arisen following the publication of the Board's original BAP.

Sightings in the period 2001-2014 have been made at the following watercourses: Langtoft No 9 &10, Gravel Drain, Coll Drain, Parrs, Greatford Cut, Crowland Common Main Drain, Vernatts Drain, Reedy Graft, Worth's Farm, Cressy Outfall, Baston Fen Drain, Spalding Cemetery Drain, Captains Drain, Hill Marsh Drain, Cowbit Washes Soke Dyke, Partition Drain, Bourne Eau Soke Dyke, Risegate Eau, Crowland Road Drain, Old Sea Drain, Owens Farm Dyke, Cowbit Washes 4, Hospital Farm, Neal's Soke Dyke, Oak Tree Farm, Grays Farm, Maxey Cut, The Delph, Hills Drain, Delph Diversion, Cross Drain, No8 Wash, Baston Nos 2, 3, 4 & 15, Pennygate, Raisens, Edward Road, South Drove, Counter Drain, Pode Hole Depot & Drain, Hides Farm, Christians, New River, Crowland Washes Soke, 4<sup>th</sup> District Drain, Barholm, Clayfield, North Drove Bank, Baston Vicars, Sir John's, Stowgate Road, Crowland No 7, and Bourne South Fen Pumping Station Basin and Surfleet Marsh Pumping Station. Known breeding site are heaps of cut weed on Vernatts Drain, and North & South Drove Drains.

### **6.2.7 Bats**

Bats are probably widespread throughout the Board's area, using the watercourses for foraging and commuting. Buildings may be used for roosting. There is a 1999 record of Barbastelle bats from Bourne South Fen pumping station.

### **6.2.8 Ribbon-leaved water plantain**

This is a rare plant nationally and records have been made sporadically from Blue Gowt Outfall and Counter Drain, and recently from the Vernatts Drain. During 2009 the Board have assisted the Environment Agency and Natural England with the re-introduction of the plant into the Baston Fen Nature Reserve.

### **6.2.9 Eel**

Eels are probably widespread through the Board's area. Many recent records have arisen following the publication of the Board's original BAP. Records from 2010-2014 are from Bainton Brook, Baston No 3, Baston & Langtoft Nos 15 & 19, Blue Gowt and Outfall, Captains Drain, Counter Drain, Cross Drain, Cross Dyke No 1, Crowland Common Main Drain, Delph Diversion, Latham Lode, Marlode, Maxey Outfall, Maxey Outgang, Old Beach West, Paradise, Pasture Drain, Risegate Eau, Spalding Cemetery Drain, Three Towns, Two Towns, Vernatts Drain,

### **6.2.10 Spined Loach**

Records of this species are known from Gravel Drain and Counter Drain.

### **6.2.11 Common Toad**

This species is likely to be widespread in the Board's area. Records from 2001-2014 are from Old Sea Drain, Blue Gowt Museum, Baston/Langtoft No11, Westlode, Edward Road, South Drove Bank, Cemetery Drain Arm, Podge Hole Basin and Yard, Hills Main, Delph Drain Tongue End, Three Towns Drain, Old Lode, Mill Dyke, Latham Lode and Coll Drain.

## 7.HABITAT AND SPECIES ACTION PLANS

### **7.1 Habitat and Species Action Plans**

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The following sections contain action plans for each of the habitats and species that have been prioritised for action by the IDB. The plans set out the objectives, targets and actions that the IDB believes are appropriate for each. The plan covers a period of five years but will be reviewed and updated periodically.

## 8. HABITAT ACTION PLANS

### Reedbeds

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Reedbeds are important nationally, regionally and in Lincolnshire and Cambridgeshire for plants and animals which are specially adapted to this habitat, including bittern, marsh harrier, reed warbler and invertebrates.

Reedbeds is a UK Biodiversity Priority Habitat and is the subject of a UK Habitat Action Plan. Reedbeds is included in the Lincolnshire BAP under the heading of Reedbeds & Bittern. Reedbeds is included in the Cambridgeshire BAP.

### National UK BAP Targets

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National BAP Targets for reedbeds are to rehabilitate priority areas of existing reedbed (targeting those of 2ha or more); maintain priority areas of existing reedbed by active management; and to create 1,200 ha of new reedbed on land of low nature conservation interest.

### Local Biodiversity Action Plan Targets

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Targets for reedbeds (irrespective of whether bitterns occur) in the Lincolnshire BAP are to update the baseline for location, extent and condition of the habitat; achieving favourable condition of the habitat on 95% of SSSIs and LWSs with reedbeds; and expand the area of the habitat by 500 ha. Targets for reedbeds in the Cambridgeshire BAP are to designate and manage for conservation all reedbeds of nature conservation importance and to create new areas of reedbeds, including at least one substantially sized area in the longer term.

### Local Status

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In Lincolnshire reedbeds are now rare. Large areas of the habitat are confined to a few sites and there are many smaller examples, such as in pits and along watercourses. In Cambridgeshire there are significant stands of common reed at a few fenland nature reserves and other sites, and there is likely to be a significant total area of reedbed which is marginal to open waterbodies and watercourses.

### Status within the Drainage District

The Biodiversity Audit identified some areas of this habitat in the drainage district where common reed forms a margin to the channel on one or both sides. Pre-cleansing conservation surveys from 2010 onwards identified that wet reedbed margins are present at 51 watercourses with an approximate total area of c4ha, although individual stands vary greatly in size.

### IDB Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue to identify location and extent of watercourse margins which are dominated by common reed	1.1	Record in the field the location of stands of common reed, and record length and width	-	2015 onwards as a rolling programme	Reed stand length and width (m), and area (sqm)	2015 onwards
		1.2	Map location and extent of reedbed margins on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	2015 onwards
2	Create 500 m <sup>2</sup> of new reedbed habitat in the drainage district (carried over from 2010)	2.1	Extend existing stands of common reed	Landowners	2015 onwards as a rolling programme	Reed stand length and width (m), and area (sqm)	Annual
		2.2	Create new stands of common reed which are not associated with existing stands	Landowners	2015 onwards as a rolling programme	Reed stand length and width (m), and area (sqm)	Annual

### Associated Species

Reed bunting, reed warbler

## **Wet Woodland**

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Wet Woodlands are important nationally, regionally and in Lincolnshire and Cambridgeshire for plants and animals which are specially adapted to this habitat, including mosses and invertebrates.

Wet Woodlands is a UK Biodiversity Priority Habitat and is the subject of a UK Habitat Action Plan. Wet Woodlands are included in the Lincolnshire and Cambridgeshire BAPs.

### **National UK BAP Targets**

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National BAP Targets for Wet Woodlands are to maintain the total extent and distribution of this habitat, create and/or restore new wet woodland on un-wooded sites or by conversion of plantations, and to achieve favourable condition in wet woodlands on designated and other sites.

### **Local Biodiversity Action Plan Targets**

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Targets for Wet Woodlands in the Lincolnshire BAP are to update the existing baseline for extent and condition, ensure no net loss of wet woodland habitat occurs, and create or restore 15ha of wet woodland. Targets for Wet Woodlands in the Cambridgeshire BAP are to maintain the current extent of the habitat, maintain the current condition of the habitat on designated sites, achieve favourable or recovering condition of the habitat on the majority of designated sites, restore degraded areas of the habitat and create new areas of the habitat.

### **Local Status**

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Wet Woodlands occur throughout Lincolnshire and Cambridgeshire but extensive areas are scarce. Large areas of the habitat are confined to a few sites and there are many smaller examples, such as in and beside old mineral workings and along watercourses.

### **Status within the Drainage District**

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The Biodiversity Audit identified only very small areas of this habitat in the drainage district. The information is not available to state whether the extent of the habitat has changed in the recent past.

**IDB Objectives and Targets**

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue to identify location and extent of wet woodlands	1.1	Record in the field the location of stands of wet woodland, and record length and width	-	2015 onwards as a rolling programme	Woodland stand length and width (m), and area (sqm)	2015 onwards
		1.2	Map location and extent of wet woodlands on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	2015 onwards

**Associated Species**

Water vole, otter

## **Drains**

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Drains and extensive systems of drains are important nationally, regionally and in Lincolnshire and Cambridgeshire for aquatic and riparian plants and animals, including invertebrates.

Drains are not a UK Biodiversity Priority Habitat. Drains are included in the Lincolnshire BAP under the heading of Rivers, canals and drains. Drains (ditches) are included in the Cambridgeshire BAP under the general heading of Wetlands.

### **National UK BAP Targets**

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There is no UK BAP Habitat Action Plan.

### **Local Biodiversity Action Plan Targets**

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Targets for Drains (as an integral part of the Rivers, Canals and Drains HAP) in the Lincolnshire BAP are to achieve good or high ecological value in 31% of the waterways habitat, restore 150km of degraded riparian habitat, and ensure no net loss of IDB managed watercourses. Targets for Drains in the Cambridgeshire BAP are to bring drains within SSSIs into favourable management, bring key drains into conservation management, and to introduce buffer zones.

### **Local Status**

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Drains occur throughout Lincolnshire and Cambridgeshire and are most extensive in the Fens, Isle of Axholme, and in the Lindsey Middle Marsh and Outmarsh of Lincolnshire. There is considerable variation in size of drain channels and the degree to which they hold water.

### **Status within the Drainage District**

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Drains are widespread within in the drainage district. The information is not available to state whether the extent of the habitat has changed in the recent past. Recent work to old silted grips has resulted in these watercourses now being of better water carrying quality.

**IDB Objectives and Targets**

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue to ensure no net loss of length of watercourse within the drainage district	1.1	Resist culverting of watercourses	Local Authorities	2015 onwards as a rolling programme	Number of applications for watercourses culverting	Annual
		1.2	Investigate the creation of new lengths of watercourses to equal or exceed lengths lost to culverting, at least in the same catchment as the culverting	Landowners	2015 onwards as a rolling programme	Length (m) of watercourse created	Annual

**Associated Species**

Water vole, otter, reed bunting, reed warbler, invertebrates, toad, grass snake, eel, spined loach

## **Veteran Trees**

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Veteran Trees are important nationally, regionally and in Lincolnshire and Cambridgeshire for plants and animals which are dependent on this habitat, including lichens, mosses and invertebrates.

Veteran Trees which occur as isolated features along watercourses as understood by this BAP is not recognised by the UK BAP, which only considers veteran trees in the context of Broad-leaved Woodland, and Parklands and Wood-pastures. The Lincolnshire BAP similarly does not consider veteran trees which occur in the ordinary landscape and along watercourses; again it concentrates on woodlands, wood-pastures and parklands. The Cambridgeshire BAP does however consider pollarded trees which occur along watercourses as part of the Habitat Action Plan for Veteran Trees and Parklands.

## **National UK BAP Targets**

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N/A.

## **Local Biodiversity Action Plan Targets**

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N/A for Lincolnshire. Objectives and targets for veteran trees in the Cambridgeshire BAP are to identify isolated veteran trees, to halt the loss of such features; to increase protection for isolated veteran trees; and to instigate appropriate management of isolated veteran trees.

## **Local Status**

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Veteran Trees occur within woodlands and parklands in Lincolnshire and Cambridgeshire and are also likely to occur along watercourses and in hedges.

### Status within the Drainage District

The presence of veteran trees along watercourses in the south-western corner of the Board's area, where the landscape is different from the dominant fenland, has been confirmed by various pre-works tree and conservation surveys since 2010. The same surveys have identified only very few veteran trees outside this area. The information is not available to state whether the extent and numbers of the veteran tree habitat has changed in the recent past.

### IDB Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Identify location and extent of veteran trees along the Board maintained watercourses as part of other surveys	1.1	Record in the field the location and nature of veteran trees	-	2015 onwards as a rolling programme	Number of trees	2015 onwards
		1.2	Map location and extent of veteran trees on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	2015 onwards
2	Appropriately manage waterside veteran trees	2.1	Manage veteran trees as part of scheduled tree works to watercourses	Landowners	2015 onwards as a rolling programme	Number of trees	2015 onwards
		2.2	Record management actions undertaken	-	2015 onwards as a rolling programme	Number of trees	2015 onwards

### Associated Species

Bats

## 9. SPECIES ACTION PLANS

### **Water Vole**

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Water vole is a UK BAP Priority Species and is a Priority Species in the Lincolnshire and Cambridgeshire BAPs.

Water voles occur throughout Britain but they are confined mainly to lowland areas near water. Once nationally common and widespread, this species has suffered a significant decline in numbers and distribution. A national survey in 1989-90 failed to find signs of voles in 67% of sites where they were previously recorded and it is estimated that this will rise to 94% by the turn of the century. As reaches of rivers, stream and drains become unsuitable for habitation, or water voles are lost from them, the distribution of water voles becomes discontinuous and existing sites become isolated and vulnerable.

The same picture holds true in a regional context but water voles remain widespread in Lincolnshire, with little or no evidence of the severe national decline being seen. In Cambridgeshire the situation is more similar to the national picture although there is a paucity of information. A 2010 national review of the distribution and densities of water voles identified two Regional Key Areas in Lincolnshire, one being the Coastal Grazing Marsh and the other being the area of the Welland & Deepings.

### **Legal Protection Status**

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Water vole is fully protected under Section 9 of the Wildlife & Countryside Act (1981 and as amended).

### **National UK BAP Targets**

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National BAP Targets for water voles are to maintain the current distribution and abundance of the species in order to arrest the decline in Britain, and to restore water voles to their former widespread distribution.

### **Local Biodiversity Action Plan Targets**

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Targets for water voles in the Lincolnshire BAP are to maintain and ideally increase the current distribution of the species and to carry out surveys and monitoring work. In Cambridgeshire the targets for water vole are to arrest the decline of the species thereby maintaining their current extent, restoring populations to former localities, manage and restore wetland habitats to benefit water voles, continue conservation research into the species and provide education about water voles.

### **Local Status**

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Water voles remain widespread in Lincolnshire, with little or no evidence of the severe national decline being seen. In Cambridgeshire their status is thought to be like the national status. A 2010 national review of the distribution and densities of water voles identified two Regional Key Areas in Lincolnshire, one being the Coastal Grazing Marsh and the other being the area of the Welland & Deepings.

### **Status within the Drainage District**

Water voles are widespread throughout the Board's area. In the period 2002-2009 records were made from many watercourses. The information is not available to state whether there has been a significant trend in the population in the recent past. A 2010 national review of the distribution and densities of water voles identified two Regional Key Areas in Lincolnshire, one being the area of the Welland & Deepings.

### **Objectives and Targets**

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue collection and maintenance of water vole records within the Board's area	1.1	Continue with current system of employees and contractors recording water voles	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of water vole records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual
2	Ensure routine maintenance of water vole habitat is carried out sympathetically for this species	2.1	Continue with current system of undertaking pre-cleansing works water vole surveys	-	2015 onwards as a rolling programme	Distance (km) of watercourses surveyed	Annual
3	Investigate creation of new water vole habitat	3.1	Identify suitable locations for creation of water vole habitat, working with adjacent landowners to increase the area of habitat available for vole	Landowners	2015 onwards as a rolling programme	Number of potential sites identified	Annual

## **Otter**

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Otter is a UK BAP Priority Species and is a Priority Species in Cambridgeshire BAP. Otter is no longer a Lincolnshire BAP Priority Species and does not now have its own Species Action Plan because it is known to occur in most if not every river catchment in the county and it is likely to continue to spread.

Formerly widespread throughout the UK, the otter underwent a rapid decline in numbers from the 1950s to 1970s and was effectively lost from midland and south-eastern counties of England by the 1980s. Populations remained in Wales, south-west England and much of Scotland, where sea loch and coastal colonies comprise one of the largest populations in Europe. The decline has now been halted and sightings are being reported in former habitats, due to natural spread and/or releases.

Otters are increasingly common in a regional context and are spreading in Cambridgeshire and Lincolnshire in terms of distribution and numbers.

### **Legal Protection Status**

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The otter is listed on Appendix 1 of CITES, Appendix II of the Bern Convention and Annexes II and IV of the Habitats Directive. It is protected under Schedule 5 of the Wildlife & Countryside Act (1981 and as amended) and Schedule 2 of the Conservation (Natural Habitats, etc.) Regulations, 1994 (Regulation 38). The European sub-species is also listed as globally threatened on the IUCN/WCMC RDL.

### **National UK BAP Targets**

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National BAP Targets for otters are to maintain and expand existing otter populations, and to restore breeding otters to all catchments and coastal areas where they have been recorded since 1960.

### **Local Biodiversity Action Plan Targets**

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In the Cambridgeshire BAP the targets for otters are to restore to all catchments by facilitating increases and expansions, reduce threats to otters, to improve knowledge of otters to further conservation, and provide education about otters.

### **Local Status**

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Otters are spreading in Cambridgeshire and Lincolnshire in terms of distribution and numbers.

### Status within the Drainage District

Otters are probably widespread but only scattered throughout the Board's area. An artificial otter holt has been created at the Spalding power station site. Surveys in the Board's area following the production of the original 2010 BAP have so far been unsuccessful in identifying any suitable sites for otter holts but this target is carried forward.

### Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue collection and maintenance of otter records within the Board's area	1.1	Continue with current system of employees and contractors recording otters	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of otter records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual
2	Create artificial otter holts	2.1	Locate suitable sites for creation of holts	Landowner	2015 onwards as a rolling programme	Number of sites identified	Annual

## **Reed Bunting**

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Reed bunting is a UK BAP Priority Species and is a Priority Species in the Lincolnshire BAP as part of a suite of farmland birds. Reed bunting is not included within the Cambridgeshire BAP.

Reed buntings inhabit reedbeds and other wetland habitats, as well as drier farmland sites such as overgrown ditches and hedges. The species is found throughout Britain and Ireland, although it is scarcer in the uplands and the far north and west. There are also some gaps in distribution elsewhere but with no clear pattern. A decline in numbers has occurred in recent years. In Britain, BTO census results show a relatively high population level from the late 1960s to the mid 1970s, followed by a decrease of more than 50% to a new, more stable lower level during the early 1980s. The species also decreased in range by around 12% between 1968-72 and 1988-91. Reed bunting is not a species of conservation concern elsewhere in Europe where it is common and widespread.

Reed bunting is a common resident and passage Lincolnshire and Cambridgeshire bird, although there has been a decline in recent years.

## **Legal Protection Status**

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Reed bunting is protected under the Wildlife and Countryside Act (1981 and as amended), the Wildlife (Northern Ireland) Order 1985 and EC Birds Directive, and is listed on Appendix II of the Bern Convention.

## **National UK BAP Targets**

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National BAP Targets for reed buntings are to, in the short term, halt or reverse the decline in numbers and, in the long term, recover numbers in wetland and farmland habitats.

## **Local Biodiversity Action Plan Targets**

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Targets for reed buntings, as part of a suite of lowland farmland birds, in the Lincolnshire BAP are to determine current population extent and status, determine appropriate future action, and to identify important breeding sites and to ensure their appropriate management. Not applicable for Cambridgeshire.

## Local Status

Reed bunting is a common resident and passage Lincolnshire and Cambridgeshire bird, although there has been a decline in recent years.

## Status within the Drainage District

Reed buntings are probably widespread throughout the Board's area wherever the tall marginal vegetation of the watercourses, including reed fringes, is of sufficient size and appropriate quality from the bird's perspective. The distribution of drains enables reed buntings to occur across tracts of arable dominated land which they would not otherwise find suitable.

## Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continued collection and maintenance of reed bunting records within the Board's area	1.1	Continue with current system of employees and contractors recording reed buntings	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of reed bunting records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual
2	Extend population by increasing length of reed fringe (carried over from 2010)	2.1	Increase extent of marginal common reed by 500 m <sup>2</sup>	Landowners	2015 onwards as a rolling programme	Length of new reed margin created	Annual

## **Barn Owl**

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Barn owl is a Priority Species in the Lincolnshire BAP as part of a suite of farmland birds. Barn owl is not a UK BAP Priority Species. Barn owl is not included within the Cambridgeshire BAP.

Barn owls are widespread throughout the UK except for the far north of Scotland and the larger mountainous areas. Barn owl is a common resident Lincolnshire and Cambridgeshire bird.

## **Legal Protection Status**

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Barn owls are fully protected under Schedule 1 of the Wildlife and Countryside Act (1981 and as amended).

## **National UK BAP Targets**

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Not applicable

## **Local Biodiversity Action Plan Targets**

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Targets for barn owls, as part of a suite of lowland farmland birds, in the Lincolnshire BAP are to identify appropriate monitoring methods and then implement monitoring and to stabilise populations. Not applicable for Cambridgeshire.

## **Local Status**

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Barn owl is a common resident Lincolnshire and Cambridgeshire bird.

## **Status within the Drainage District**

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Barn owls probably occur across the Board's area, making use of the grasslands of the watercourse banks for hunting. The extensive network of watercourses with their rough grassland banks within the arable dominated landscape of the Board's area doubtless helps to maintain the population of

barn owls. Several barn owl boxes have been installed within the Board's area since the preparation of the 2010 BAP and it is believed that, subject to discussions with the Hawk & Owl Trust, the area has probably now reached saturation point as far as providing new owl boxes is concerned since increasingly they are being used by jackdaws and kestrels and other birds; therefore the former Target from the 2010 BAP which related to providing additional owl boxes has been removed for this BAP revision; it can be reinstated for future revisions. Suitable and appropriate one-off opportunities for providing barn owl boxes would continue to be considered.

### Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue collection and maintenance of barn owl records within the Board's area	1.1	Continue with current system of employees and contractors recording barn owls	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Continue with current system of checking use of and maintaining existing owl boxes	Landowners	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.3	Map location and extent of barn owl records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual

## **Grass Snake**

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Grass snake is a UK BAP Priority Species. It is not yet included in the Lincolnshire and Cambridgeshire BAPs.

Grass snakes are found throughout England but becoming scattered to the north, often being seen close to water. They are found in the lowland parts of Wales and are only scattered and in the lowlands in Scotland. Grass snakes are widespread in Lincolnshire, including the Fens and also in Cambridgeshire although apparently scarce to absent in the Fens.

## **Legal Protection Status**

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Grass snakes are protected under Schedule 5 of the Wildlife and Countryside Act (1981 and as amended).

## **National UK BAP Targets**

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National BAP targets are not yet available; although actions recommended by experts are: population monitoring; appropriate landscape scale habitat management; and recognition of the species habitat requirements at a landscape scale.

## **Local Biodiversity Action Plan Targets**

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Not available since the species is not included in the relevant local plans.

## **Local Status**

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In Lincolnshire and Cambridgeshire, grass snakes are widespread, although apparently scarce to absent in the Cambridgeshire Fens.

## **Status within the Drainage District**

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Many recent records of grass snakes have arisen following the publication of the Board's original 2010 BAP; grass snakes are therefore probably widespread throughout the Board's area. Since the production of the original 2010 BAP for the Board, new large heaps of cut weed have been provided at Bourne Fen, Counter Drain and South Drove Drain in line with the original targets for grass snake.

### Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continued collection and maintenance of grass snake records within the Board's area	1.1	Continue with current system of employees and contractors recording grass snakes	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of grass snake records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual
2	Maintain and increase population by promoting suitable habitat	2.1	Continue current weed raking practices	-	2015 onwards as a rolling programme	Length of channel weed raked (km)	Annual
		2.2	Continue current bank management practices	-	2015 onwards as a rolling programme	Length of bank managed (km)	Annual
		2.3	Provide 3 more large heaps of cut weed similar to those known to be used as nest sites	Landowners	2015 onwards as a rolling programme	Number of weed heaps	Annual

## **Eel**

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Eel is a UK BAP Priority Species. It is not included in the Cambridgeshire BAP. Eel is included within the Lincolnshire BAP as part of a suite of freshwater fish.

Eels are found throughout the UK and are widespread in Lincolnshire and Cambridgeshire.

### **Legal Protection Status**

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Eel Regulations 2009.

### **National UK BAP Targets**

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National BAP targets are not yet available; although actions recommended by experts are: to establish a monitoring programme, investigate reasons for decline, enable passage along watercourses, and allow eel escapement and carry out ecological research.

### **Local Biodiversity Action Plan Targets**

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Not applicable to Cambridgeshire. In Lincolnshire, targets are to maintain all known populations, enable passage along watercourses through removing or adapting existing barriers and to increase habitat quantity and quality.

### **Local Status**

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Eels are widespread in Lincolnshire and Cambridgeshire.

### **Status within the Drainage District**

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Eels are probably widespread through the Board's area. Many recent records of eels have arisen following the publication of the Board's original BAP.

**Objectives and Targets**

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Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue collection and maintenance of eel records within the Board's area	1.1	Continue with current system of employees and contractors recording eels	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of eel records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual

### **Common Toad**

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The common toad is a UK BAP Priority Species. It is not yet included in the Lincolnshire and Cambridgeshire BAPs.

Toads are found throughout the UK. The common toad is widespread in Lincolnshire and Cambridgeshire but becomes scarcer in the Fens.

### **Legal Protection Status**

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Toads are listed under Schedule 5 of the Wildlife and Countryside Act (1981 and as amended).

### **National UK BAP Targets**

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National BAP targets are not yet available; although actions recommended by experts are: research into causes of recent population declines; population monitoring; and recognition of the species aquatic and terrestrial habitat requirements at a landscape scale.

### **Local Biodiversity Action Plan Targets**

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Not available since the species is not included in the relevant local plans.

### **Local Status**

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In Cambridgeshire and Lincolnshire, toads are widespread but become scarcer in the Fens.

### **Status within the Drainage District**

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Toads are probably widespread through the Board's area. More records have arisen since the publication of the Board's 2010 BAP, with some sites being now well known and long-established eg Pode Hole and the Blue Gowt at Pinchbeck Engine Museum.

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**Objectives and Targets**


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Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continued collection and maintenance of toad records within the Board's area	1.1	Continue with current system of employees and contractors recording toads	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Expand current system of recording toads to specify presence of toad spawn	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.3	Map location and extent of toad records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual

### **Ribbon-leaved Water plantain**

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This is a rare plant nationally and which is a UK BAP Priority Species. It is not included within the Lincolnshire BAP although it is a Cambridgeshire Priority Species.

### **Legal Protection Status**

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Protected under Schedule 8 of the Wildlife & Countryside Act (1981 and as amended).

### **National UK BAP Targets**

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National BAP targets for this species are to maintain all known populations in a viable state and to restore to three formerly occupied sites.

### **Local Biodiversity Action Plan Targets**

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In the Cambridgeshire BAP the targets for this species are to introduce this species to two sites in the county; monitor these sites to gain data for future expansion; and to restore this species to previously known sites. Not applicable for Lincolnshire.

### **Local Status**

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A rare Lincolnshire plant. Formerly present in Cambridgeshire.

### **Status within the Drainage District**

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Present sporadically in Blue Gowt Outfall, Counter Drain and Vernatts Drain. A recent reintroduction at Baston Fen Nature Reserve was unfortunately unsuccessful.

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### Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue collection and maintenance of ribbon-leaved water plantain records within the Board's area	1.1	Continue with current system of employees and contractors recording this species	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of this species on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual
2	Restore or introduce this species to 1 site (carried over from 2010)	2.1	Identify suitable watercourse locations for this species	Landowners, Natural England	2015 onwards as a rolling programme	Number of site identified	Annual
		2.2	Introduce 1 new population	Landowners, Natural England	2015 onwards as a rolling programme	Number of populations introduced	Annual

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### **Greater Water-parsnip**

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This is a scarce and declining plant nationally and which is a UK BAP Priority Species. It is included within the Lincolnshire BAP but it is not a Cambridgeshire Priority Species.

### **Legal Protection Status**

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This plant has general protection for wild plants under the Wildlife and Countryside Act (1981 and as amended).

### **National UK BAP Targets**

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National BAP targets for this species are to maintain the range of greater water-parsnip in the UK; ensure that viable populations are maintained at all extant sites; regenerate plants from the seed-bank on five suitable historic sites in England; and achieve the spread of greater water-parsnip from extant sites.

### **Local Biodiversity Action Plan Targets**

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In the Lincolnshire BAP the targets for this species are to maintain the range in the county, ensure that viable populations are present at existing sites, and to regenerate plants from the seed bank ready for future introductions and create a good number of self-sustaining new populations. The plant was introduced at 15 sites in Lincolnshire in the period 2004-2010, with supplementary introductions in 2011.

### **Local Status**

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A scarce plant in Lincolnshire and Cambridgeshire.

### **Status within the Drainage District**

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Present at a few designated nature conservation sites.

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**Objectives and Targets**

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continued collection and maintenance of greater water-parsnip records within the Board's area	1.1	Continue with current system of employees and contractors recording this species	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of this species on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual
2	Restore or introduce this species to 1 site (carried over from 2010)	2.1	Identify suitable watercourse locations for this species	Landowners, Natural England	2015 onwards as a rolling programme	Number of site identified	Annual
		2.2	Introduce 1 new population	Landowners, Natural England	2015 onwards as a rolling programme	Number of populations introduced	Annual

## **Bats**

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Some species of bats are UK BAP Priority Species. All bat species are grouped as Priority Species in the Lincolnshire BAP. Pipistrelle bat is part of the Cambridgeshire BAP as part of the wider Cities, Towns and Villages Plan.

Bats are widespread in Britain and also in Cambridgeshire and Lincolnshire, where 11 species have been recorded.

## **Legal Protection Status**

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All species of bats are protected under Section 9 of The Wildlife and Countryside Act (1981 Schedule 5); as amended by The Environmental Protection Act 1990, and The Conservation (Natural Habitats, &c) Regulations 1994. Bats, and their roost sites, are also protected at all times from 'reckless' disturbance or damage, along with 'intentional' damage, under The Countryside & Rights of Way Act 2000, irrespective of whether bats are present.

## **National UK BAP Targets**

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National BAP Targets for bats include the maintenance of existing populations and geographical ranges, and restoring populations to earlier levels.

## **Local Biodiversity Action Plan Targets**

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Targets for bats in the Lincolnshire BAP are to survey and monitor the status of populations, to maintain and enhance existing populations, enhance bat foraging habitats, promote public understanding of bats, and encourage appropriate building techniques. Targets for pipistrelle bat in the Cambridgeshire BAP are to maintain existing populations and ranges; restore populations to previous levels; identify roosts and important feeding areas; collect and collate records; identify sites for artificial roosts; and to increase public participation in surveys and monitoring.

## **Local Status**

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Bats are widespread in Cambridgeshire and Lincolnshire.

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**Status within the Drainage District**


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Bats are probably widespread throughout the Board's area, using the watercourses for foraging and commuting. Daubenton's bats are known from July 2013 to use Vernatts Drain and drains at Pode Hole for foraging but roosts sites so far have not been found. Buildings may be used for roosting. The information is not available to state whether there has been a significant trend in the population in the recent past. Bat boxes have been installed on trees on the North Drove Drain.

**Objectives and Targets**


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Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue collection and maintenance of bat records within the Board's area	1.1	Continue with current system of employees and contractors recording bats	-	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Survey Board buildings for bats	Bat Group	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.3	Map location and extent of bat records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual
2	Provide suitable roosting sites	2.1	Assess suitability of Board buildings for bat box siting	Bat Group	2015 onwards as a rolling programme	Number of buildings assessed	Annual
		2.2	Assess suitability of mature trees along watercourses for bat box siting	Bat Group, Landowners	2015 onwards as a rolling programme	Number of trees assessed	Annual

		2.3	Install 10 bat roosting boxes	Bat Group, Landowners	2015 onwards as a rolling programme	Number of boxes installed	Annual
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### **Spined Loach**

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Spined loach is a UK BAP Priority Species. It is included in the Lincolnshire BAP as part of a generic freshwater fish species action plan but is not yet included in the Cambridgeshire BAP.

This species has a UK distribution which is centred in the Fens with outlying areas in the Midlands, East Anglia and the Home Counties. There is a scattered distribution in Lincolnshire and Cambridgeshire which is centred on some of the larger river and drain systems, ie Trent, Witham, Welland, Nene and Great Ouse.

### **Legal Protection Status**

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This species is listed in Annex II of the Council Directive 92/42/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna.

### **National UK BAP Targets**

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National BAP targets are not yet available; although actions recommended by experts are: further surveys; genetic research; assessment of impact of climate change; establishment of refuge populations; strengthening of legal protection; and appropriately managing water quality and other habitat features.

### **Local Biodiversity Action Plan Targets**

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Not yet available for Cambridgeshire. In Lincolnshire, targets which are applicable to spined loach are the maintenance of existing populations and improvements in river habitat quality and quantity.

### **Local Status**

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There is a scattered distribution in Lincolnshire and Cambridgeshire.

**Status within the Drainage District**

There is a scattered distribution in major rivers and drains in the south of the Board's area between Bourne and Spalding.

**Objectives and Targets**

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Continue collection and maintenance of spined loach records within the Board's area	1.1	Continue with current system of employees and contractors and other agencies recording spined loach	Environment Agency	2015 onwards as a rolling programme	Recording forms returned to office	Annual
		1.2	Map location and extent of spined loach records on GIS	-	2015 onwards as a rolling programme	Number of GIS polygons	Annual

## 10. PROCEDURAL ACTION PLAN

### Introduction

A number of procedural targets and actions have been established within this Procedural Action Plan. These are intended to integrate biodiversity considerations into IDB practices and procedures.

### Objectives and Targets

Target Reference	Target	Action Reference	IDB Actions	Partners	Date	Indicators	Reporting
1	Collect information on UK and county BAP Priority Species which are not included in this plan	1.1	Continue recording of animals such as hare and skylark as part of routine works	Contractors	Ongoing	Number of records	Annually
		1.2	Map location of such species records on GIS	Contractors	Ongoing	Number of records	Annually
2	Collect information on animals which are not UK and county BAP Priority Species and which are not included in this plan	2.1	Continue recording of animals such as badger, deer and mink as part of routine works	Contractors	Ongoing	Number of records	Annually
		2.2	Map location of such species records on GIS	Contractors	Ongoing	Number of records	Annually
3	Provide BAP related training	3.1	Establish programme of short courses for Board staff	Natural England, Wildlife Trusts, EA	Ongoing	Staff and course numbers	Annually

		3.2	Establish programme of short courses for Contractors	Natural England, Wildlife Trusts, EA	Ongoing	Contractors and course numbers	Annually
4	Promote best practice in all Board functions	4.1	Require developers to follow environmental best practice guidelines	Developers, Local Authorities	Ongoing	Number of developers advised	Annually
		4.2	Advise landowners on environmental best practice	Landowners	Ongoing	Number of landowners advised	Annually
5	Promote the Board's BAP work	5.1	Publicise major and successful examples of BAP related work undertaken by the Board on its web site	-	Ongoing	Number of articles published	Annually

## **11. IMPLEMENTATION**

### **11.1 Implementation**

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The actions detailed in the habitat and species action plans will be implemented predominantly through minor changes to Board management and maintenance methods. Any capital works undertaken will also allow implementation of BAP actions.

Partnership working will also allow several actions to be implemented.

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## **12. MONITORING**

### **12.1 Monitoring**

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Monitoring of the Board's 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.

## **13. REVIEWING AND REPORTING PROGRESS**

### **13.1 Reviewing and Reporting Progress**

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Progression of the Board's BAP requires reporting to the Board, to the Lincolnshire BAP and to the UK BAP.

Progress towards each of the targets is likely to be assessed annually and it is anticipated that the Board's BAP will be fully reviewed after 5 years. The production and long-term development of the BAP is a flexible process.

Annual reporting will be done through Board meetings, and through the Biodiversity Action Reporting System (BARS). As far as possible, targets and actions for the individual plans have been written so they fit the national BARS, which is the approved system for reporting. Using BARS, annual progress reports will be produced.

## APPENDIX 1 WELLAND AND DEEPINGS IDB AREA

