ALCONBURY AND ELLINGTON INTERNAL DRAINAGE BOARD

BIODIVERSITY ACTION PLAN

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This Biodiversity Action Plan has been prepared by the Alconbury and Ellington Internal Drainage Board (A&E IDB) 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 A&E IDB'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 A&E IDB 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 A&E IDB to maximise the biodiversity benefits from its activities and demonstrate its contribution to the Government's UK Biodiversity Action Plan targets.

The Alconbury and Ellington IDB 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.

Date

……. …….

Mr Harry Raby, Chairman
Alconbury and Ellington Internal Drainage Board

Date

…… ……..

Mrs F. Bowler, Clerk
Alconbury and Ellington Internal Drainage Board

This Biodiversity Action Plan is a public statement by the A&E IDB 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.

You can contact us about this Biodiversity Action Plan by writing to the following address:

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1 IDB BIODIVERSITY – AN INTRODUCTION

1.1 Introduction

The Alconbury and Ellington Internal Drainage Board has conducted a biodiversity audit of its district and identified those habitats and species that would benefit from particular management or actions. Using this information, which is presented in later sections, the A&E 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 Plan is an evolving document that will be reviewed and updated on a regular basis. It covers the entire drainage district of the Alconbury and Ellington IDB, as shown in Figure 1 overleaf.

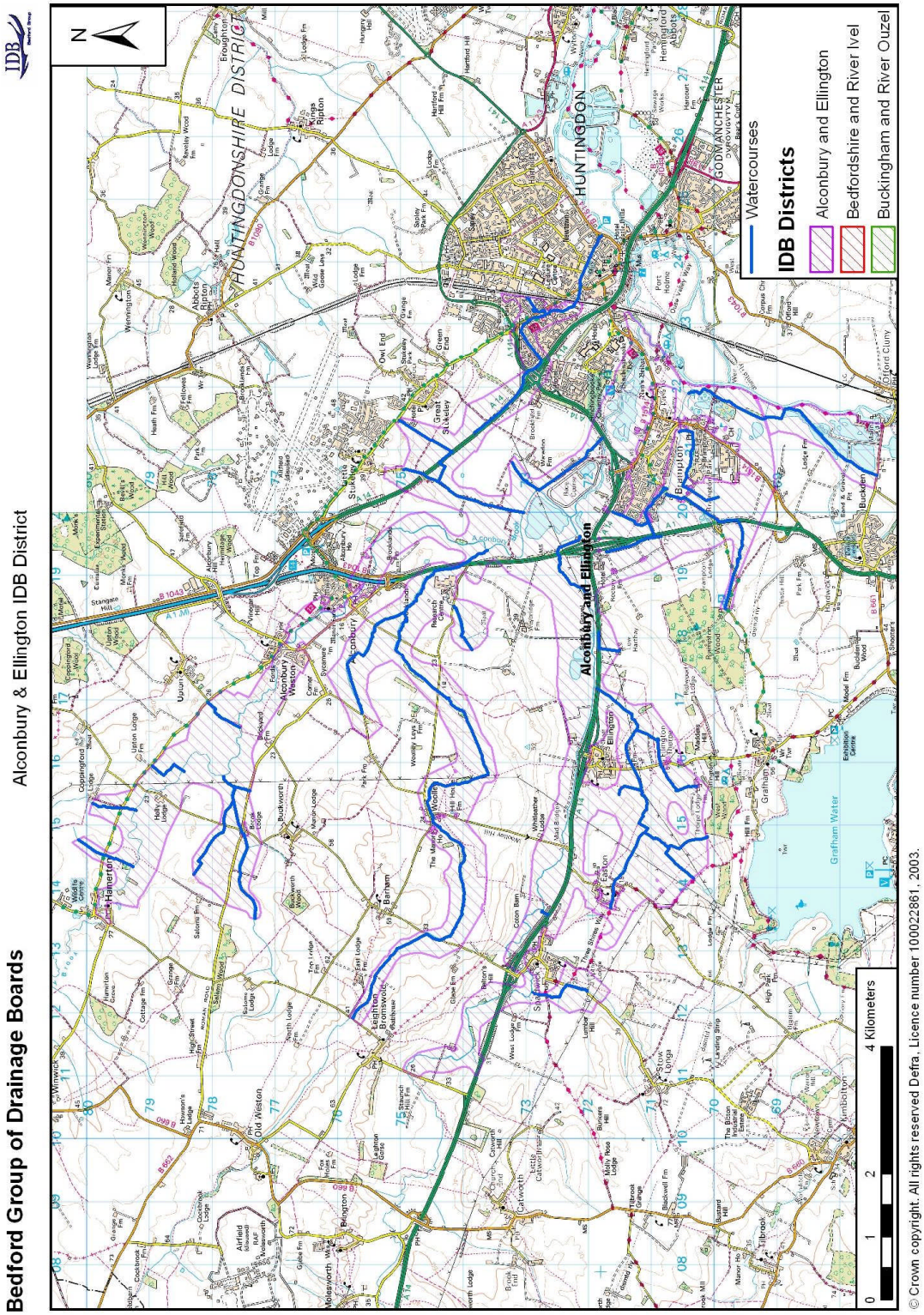
1.2 What is Biodiversity?

The Convention on Biodiversity, agreed at the Earth Summit in Rio de Janeiro in 1992, defined biodiversity as:

"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.

Figure 1. Alconbury and Ellington IDB district



1.3 The Importance of Conserving Biodiversity

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

This A&E 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

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 know 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). The 2002 World Summit in Johannesburg on Sustainable Development subsequently endorsed this target.

1.6 Biodiversity – The National Context

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.

1.7 Local Biodiversity Action Plans

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

Section 12 of The Land Drainage Act 1991 obliges Internal Drainage Boards to further the conservation of wildlife and geological and physiograpical features of special interest, consistent with any enactments relating to their functions. Subsequently, 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 A&E 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 A&E IDB Biodiversity Action Plan

The aims of this A&E 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 A&E 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 A&E IDB's operations, and
- To monitor and report on progress in biodiversity conservation.

2 THE IDB BAP PROCESS

2.1 The Biodiversity Audit

To produce this A&E 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 A&E IDB and by other biodiversity partners.

2.2 Evaluating and Prioritising Habitats and Species

The Biodiversity Audit identified those priority habitats and species in the UK Biodiversity Action Plan and the Local Biodiversity Action Plan 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 A&E IDB BAP is reviewed.

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

2.3 Setting Objectives, Targets and Indicators

For each habitat and species identified as being important to the A&E 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 A&E 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 A&E IDB 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

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

Achievement of the Plan targets will be measured by a programme of monitoring which the A&E IDB 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

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 A&E 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

The following Sections summarise the results of the Biodiversity Audit, undertaken in 2009. 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

The Cambridgeshire and Peterborough Biodiversity Action Plan covers the A&E IDB district. Originally this BAP had 23 habitat action plans and 15 species action plans. The LBAP is currently being reviewed, and the new list of species has not been finalised.

3.3 A&E IDB Biodiversity Audit Boundary

The Biodiversity Audit covers the district of the Alconbury and Ellington IDB, as shown in Figure 1.

3.4 Sources of Data - Habitats

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

- MAGIC Data base
- Cambridgeshire and Peterborough Biological Records Centre
- Biodiversity Co-ordinator for Cambridgeshire
- JBA Consulting – BAP Habitats within the Alconbury and Ellington IDB

3.5 Sources of Data - Species

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

- NBN Gateway
- Cambridgeshire and Peterborough Biological Records Centre
- Biodiversity Co-coordinator for Cambridgeshire
- Cambridge Bird Reports

4 NATURE CONSERVATION SITES

4.1 The Drainage District

The drainage district covers an area of 3850 Ha and contains 63 km of IDB-maintained watercourses of which 3.3 km are Critical Watercourses and 2.1 km are Strategic Ordinary Watercourses. It is situated in the low lying land to the west of Huntingdon. To the south of Huntingdon it is bordered by the River Great Ouse. Thirty seven km of Main River, managed by the Environment Agency, runs through or adjacent to the district.

4.2 Geology

The land is predominantly comprised of the moderately permeable calcareous clayey soils overlying chalky boulder clay.

4.3 Landscape

4.3.1 Landscape Designations

No landscape designations apply to the 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. Information on Joint Character Areas can is found at: www.countryside.gov.uk/LAR/Landscape/CC/jca.asp.

A&E IDB district is situated within the Bedfordshire and Cambridgeshire Claylands JCA with a gently undulating topography and plateau areas divided by broad shallow

valleys. Predominantly arable, fields are bounded by either open ditches or sparse, trimmed hedges. The river corridors of the Great Ouse hold flood-plain grassland, riverine willows and larger hedges.

4.3.3 Sites and Monuments Records

There are 3 Scheduled Monuments within the District.

Table 1: Scheduled Monuments

Scheduled Monument	Grid Reference	Description
CB190	TL 511 861	Earthworks SE of Leighton Bromswold Church
CB121	TL 520861	Sites discovered by aerial photography in the village of Brampton
CB203	TL 518 489	Alconbury Bridge

4.3.4 Tree Preservation Orders

None known

4.4 Statutory Nature Conservation Sites

4.4.1 International Sites

No internationally designated sites are present or immediately adjacent to the A&E IDB district.

The closest internationally designated site is Portholme Meadow SAC designated as the largest traditionally managed meadow in the UK. It is approximately 250 metres from the closest point to the IDB district and 1.2 km to the closest watercourse managed by the A&E IDB.

4.4.2 National Sites

There are two nationally designated sites are present within the A&E IDB district, Brampton Meadow and Brampton Racecourse and one, Brampton Wood, immediately upstream of one of the IDB's watercourses. The location of the sites is shown in Appendix 1. None is the subject of a WLMP. Brampton Racecourse is within the floodplain of the Alconbury Brook which is Main River.

Table 3. National Designations

Site name	Grid Reference	Reason for designation
Brampton Meadow	TL192 720	A small species-rich meadow with plant communities typical of calcareous clay pasture
Brampton Racecourse	TL203 722	Extensive area of unimproved neutral grassland within the floodplain of the Alconbury Brook.
Brampton Wood (bordering)	TL 180 701	One of the largest blocks of ancient woodland in Cambridgeshire comprising wet ash-maple woodland

4.4.3 Local Nature Reserves

There are no Local Nature Reserves, designated by local authorities under Section 21 of the National Parks and Access to the Countryside Act 1949, within the district.

4.5 Non-statutory Local Sites

There are five County Wildlife Sites, within the A&E IDB district and one adjoining.

Table 4. Non-Statutory Designations

Site name	Grid Reference	Features Relevant to IDB
Brampton Flood Meadows	TL 2169	Supports at least 0.05ha of MG 4 grassland, a population of *Ranunculus lingua (*rare in the county) and frequent numbers of 8 neutral grassland indicator species.
Bromholme Ballast Pits	TL 229 707	Supports an area of more than 0.1 ha with 2 or more fen types.
Buckden Gravel Pits	TL2168	Type 10A standing water body with 5 submerged or floating species. Qualifies as a habitat mosaic with semi-improved grassland, swamp, open water and hedgerows
Ellington Brook Pollard Willows	TL122729	At least 5 mature pollard willows in association with other semi-natural habitat
Hinchingbrooke Gravel Pits	TL 2171	A site larger than 10 ha supporting mature trees, scrub, hedgerows, marshy grassland, swamp and open water.
River Great Ouse (adjoining)	TL37	A major river not grossly modified with >0.5 ha S6 swamp, >0.05 ha MG153 grassland, *Nymphoides peltata* and a breeding nationally rare dragonfly.

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 location of the sites is shown in Appendix 2.

5 HABITAT AUDIT

5.1 Habitat Audit Summary

This summary lists the UK BAP priority habitats, defined by the Report on the Species and Habitats Review (2007), within the A&E IDB district as identified by the information gathering exercise Also listed are habitats considered as of local importance and/or featured in the county Local BAP. Habitats that are of potential importance for the A&E IDB, where water level management or other activities may be of benefit, are identified. Finally, the potential for the A&E IDB to maintain, restore or expand its important habitats is identified.

Table 5. Habitat Audit Summary

UK BAP Priority Habitat	Local Biodiversity Action Plan Habitat	Habitat of Importance for A&E IDB	Location of Habitat of Importance for A&E IDB	A&E IDB Potential for Maintaining, Restoring or Expanding Habitat
Arable Field Margins		Field margins	Throughout	Promote sensitive management
Ancient and/or species-rich hedgerows	Hedgerows	Hedgerows	Throughout	Maintain through sensitive management
Rivers	Rivers and Streams	Rivers and Watercourses	River Great Ouse	Limited to outfall areas
Ponds	Ponds, Lakes and Reservoirs	Ponds,	Across the district	Promote by sensitive management, creation via planning duties
Coastal and Floodplain Grazing Marsh	Floodplain grazing marsh	Floodplain grazing marsh	Brampton Flood Meadows and Buckden Gravel Pits	Limited, primarily under EA control
Lowland Meadows	Neutral grassland	Meadow	Brampton Racecourse SSSI , Brampton Meadow SSSI	Limited, former is primarily under EA control; latter is not water table dependent.
Wet woodland	Wet woodland	Outside district		None apparent

6 SPECIES AUDIT

6.1 Species Audit Summary

This summary lists the UK BAP priority species, defined by the Report on the Species and Habitats Review (2007), within the A&E IDB district as identified by the information gathering exercise Also listed are species considered as of local importance and/or featured in the county Local BAP. Species that are of potential importance for the A&E IDB, where water level management or other activities may be of benefit, are identified. Finally, the potential for the A&E IDB to maintain or increase the population or range of species of importance is identified.

Table 6. Species Audit Summary

Common Name	UK BAP Priority Species	LBAP species	Non-BAP Species but Important in A&E IDB District	Location of Species of Importance for IDB	A&E IDB Potential for Maintaining or Increasing Species Population or Range
Water Vole *Arvicola terrestris*	Yes	Yes		Ditches, rivers	Undertake ditch management to benefit water vole
Otter *Lutra lutra*	Yes	Yes		Ditches, rivers	Undertake ditch management to benefit otter
Kingfisher *Alcedo attheis*	No	No	Yes	Ditches, rivers	Maintain nesting banks
Barn owl *Tyto alba*	No	No	Yes	Grassy banks and field margins	Increase range via new nest box introductions and bank management
European eel *Anguilla anguilla*	No	No	No	Ditches	Ensure easy passage of elvers

* The Cambridgeshire Species Action Plan is currently under review.

7 HABITAT AND SPECIES ACTION PLANS

7.1 Habitat and Species Action Plans

The Action Plans contained in the following sections comprise the objectives, targets and actions that the A&E IDB has identified for each habitat and species in so far as they are relevant to the pursuance of its functions. These have been identified in collaboration with the Cambridgeshire and Peterborough Biodiversity Partnership whose input the A&E IDB gratefully appreciates. These plans will be reviewed and updated periodically.

A Procedural Action Plan has also been devised.

8 ARABLE MARGINS

8.1 Introduction

The farmed countryside can be important for wildlife with the majority of, though not all, species using the land being found on the margins of cropped land, including ditches, hedges and field margins. Species which may be present include the suite of farmland birds, many of which are themselves UK BAP Priority species including grey partridge, skylark and yellowhammer, arable wildflowers and invertebrates. The value of arable land for wildlife has declined, largely due to the intensification of

production including cropping regimes, herbicide and pesticide use and reduction of marginal habitats.

8.2 National Status

Agricultural land comprises 67% of the total land area of the United Kingdom and of this 33% is in arable production. In Eastern England the figures are 71% and 86% respectively (Source: Defra). Within Cambridgeshire 70% of the land area is under arable production (Source: Cambridgeshire Environment Report, 1990).

Arable Field Margins are the subject of a UK Biodiversity Action Plan whose targets relate to improved management via Agri-Environmental Schemes.

8.3 Local Status

Arable field margins are currently excluded from the Cambridgeshire BAP which covers arable fields.

8.4 Status within the Drainage District

Arable field margins are common within the A&E IDB district.

8.5 A&E IDB Objectives and Targets

1. Encourage the enhancement of habitats adjacent to watercourses and reduce soil wash off into the watercourses. (This will not preclude their use for maintenance access on occasion.)

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Enhance adjacent habitats	1.1	Encourage use of buffer strips adjacent to watercourse by promoting the Environmental Stewardship Scheme*	Landowner	As approached	Number of approaches	As approached

*NB This will not preclude the margins being used on occasion

8.6 Associated Species

The following species will also benefit from this habitat action plan
Farmland birds including UK BAP Priority Species grey partridge, yellow hammer, reed bunting, and skylark; Schedule 1 species Barn owl.

9 PONDS

9.1 Introduction

Ponds can vary in size from 1 sq m to 2 ha and may be permanent or temporary features providing that they hold water for at least four months of the year. They hold a varied range of species and are particularly important for UK BAP species holding 80-90 species.

9.2 National Status

It is estimated (Pondlife data) that there are around 385 000 ponds in the UK in upland and lowland locations within a range of habitats. Despite the apparently high number the habitat is at risk as there has been a significant long-term loss of ponds either despite the loss slowing in recent years.

Ponds are the subject of a UK Biodiversity Action Plan. Not all ponds qualify however and there are criteria to determine what should be included as a priority pond. These criteria relate to inclusion within the Habitats Directive, presence of protected and other species of high conservation importance, important assemblages of species, high ecological quality (based on plant and invertebrate scores) and other important ponds.

9.3 Local Status

There are few natural ponds in Cambridgeshire and their decline is due to land drainage, river channelisation and in-filling. Many of those present are nutrient –rich which may limit the range of aquatic plants and invertebrates.

9.4 Status within the Drainage District

A very limited number of ponds are present within the A&E IDB district but no estimates are available.

9.5 A&E IDB Objectives and Targets

1. Provide support for the Pond LBAP.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Identify areas where ponds of high quality potential could be created	1.1	Via development control and reporting to partners	Wildlife Trust / Landowners	Ongoing	Action undertaken	On completion

9.6 Associated Species

Many species are associated with ponds including foraging bats, amphibians, grass snakes, fish, and a range of invertebrate and plant species. The precise range will depend on the water quality.

10 HEDGEROWS

10.1 Introduction

Hedgerows provide strong landscape features and are important in their own right, as well as for biodiversity (for example by providing habitats for a range of invertebrates and birds and foraging for bats) and also for cultural and archaeological reasons. They have the important function of providing a wildlife corridor for many animals including snakes, small mammals and invertebrates thus allowing dispersal and providing a refuge for many woodland and farmland plants and animals. They are often the most important feature in the agricultural lowlands.

Hedgerows are a primary habitat for at least 47 species of conservation concern in the U.K. The Hedgerows Regulations 1997 provides protection for 'Important' hedges

10.2 National Status

It is estimated that the total UK resource of hedges is around 450 000 km, of which 329 000 km is in England. It has been estimated that 42% of these hedges are either ancient of species-rich. Between 1984 and 1990, the net loss of hedgerow length in England has been estimated as 21% (UK Steering Group).

Hedgerows are the subject of a UK Biodiversity Action Plan.

10.3 Local Status

Hedgerows in Cambridgeshire provide a major semi-natural habitat within an intensively managed agricultural landscape. The Cambridgeshire Environment Report (1990) estimated that there are around 8000 km of hedges in Cambridgeshire with a loss of 30% between 1984 and 1990.

Hedgerows are the subject of a Cambridgeshire BAP. The objectives are to halt the loss of hedgerows, achieve favourable management of all hedgerows and plant new hedgerows, particularly to help landscape connectivity.

10.4 Status within the Drainage District

Hedgerows are present alongside many watercourses within the A&E IDB district

10.5 A&E IDB Objectives and Targets

1. To maintain and enhance the hedges that are affected by the IDB's activities so as to ensure no net loss.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Ensure no net loss of hedges as a result of the A&E IDB activities	1.1	Ensure that compensation planting takes place if any hedges are removed	Landowners	If required	Length	Annual
		1.2	Prevent damage to existing hedges*.	Landowners	Ongoing	Length remaining intact	Annual

*(NB This excludes management to allow watercourse maintenance

10.6 Associated Species

The following species will also benefit from this habitat action plan:
Woodland and farmland birds including song thrush, turtle dove and bullfinch.

11 RIVERS AND WATERCOURSES

11.1 Introduction

Natural rivers provide important habitats for a range of species depending on their gradient, geology, water quality and flow. Specific features such as riffles, pools or margins, hold different assemblages of plants and animals. Drainage ditches tend to be less diverse but, depending upon the substrate may still provide a range of features

11.2 National Status

There are few natural rivers remaining in lowland Britain and they are used for conveyance, abstraction (for drinking, industry and irrigation) and recreation and also accept discharges. They also act as linear corridor and this is particularly important in intensively farmed areas.

Rivers are listed as a UK Biodiversity Action Plan habitat. There are no revised targets for this group.

11.3 Local Status

There are over 600 km of main rivers in Cambridgeshire and Peterborough together with smaller rivers and streams. Rivers in Cambridgeshire are nutrient-rich taking water from the catchments primarily to the west, but also to the south, of the County. These lowland watercourses are dominated by higher plants, including locally important species such as fringed water lily, and coarse fish such as chub and dace.

Rivers and Stream are listed as a Cambridgeshire Biodiversity Action Plan habitat. Targets include improving river-based habitat conditions and ecological status by 1 km per year, restoring degraded habitats and seek positive management and creating and enhancing riparian habitats.

11.4 Status within the Drainage District

The A&E IDB manages 63 km of watercourses within its district, partly semi urban but primarily rural. These are generally small watercourses with a long history of management.

The River Great Ouse CWS borders the eastern boundary of the A&E IDB but this is the responsibility of the Environment Agency

11.5 A&E IDB Objectives and Targets

1. To manage watercourses according to best practice so as to maintain the biodiversity interest, including within the riparian zone, while retaining the important land drainage function.
2. To control invasive plant species.
3. To ensure that the A&E IDB does not adversely affect designated sites.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Maintain and enhance the biodiversity interests of the watercourses	1.1	Maintain the current regimes which supports the biological interest of the watercourse CWS	Landowners	Ongoing	Length managed	Annually
		1.2	Revise the management protocol for all works on watercourses based on the ADA Drainage Manual and other guidance		2011	Completed document	As completed
2	Control stands of invasive non-native plant species	2.1	Identify and treat	Landowner	As required	Area treated	As completed
3.	Ensure that the A&E IDB does not adversely affect designated sites	3.1	Discuss works in advance	Wildlife Trust, Natural England	Ongoing	Consult-ation held	Annually

11.6 Associated Species

The following species will also benefit from this habitat action plan
Water vole
Otter
Kingfisher
Sedge warbler
Reed bunting

12 WATER VOLE

12.1 Introduction

Water voles are the largest of the vole family in the U.K. and are found in both the uplands and lowlands of Britain. They are herbivorous, feeding on the aerial shoots and leaves of marginal and bankside plants on well- vegetated watercourses. A colonial animal, water voles are territorial in the breeding season which lasts from March to September. Each female may have between two and five litters annually each with five to eight young. Living in burrows in the bank, the voles do not hibernate but spend the winter underground. There is an over-winter mortality of around 70%.

12.2 Legal Protection Status

From April 2008 water voles and their resting places are fully protected in England by the Wildlife and Countryside Act 1981 and as amended. It is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places and to disturb them in their breeding or resting places. Licences issued by Natural England may be available to undertake actions that would normally be unlawful, but these are not available for development or land drainage purposes.

12.3 National Status

Once common and widespread, this species has suffered a significant decline in both 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 was estimated that this loss will rise to 94% by 2000. A recent population estimate based on the number of latrines found suggested a total GB pre-breeding population of 1,200,000 animals.

Declines have occurred from a number of factors: habitat degradation and loss, fragmentation of population and predation (particularly from mink).

12.4 Local Status

No recent records within the Vice County of Huntingdonshire have been found. In 1998 a survey of 8 watercourses within Huntingdonshire District Council and South Cambridgeshire found water voles on only 7% of the stretches surveyed (Cambridgeshire Biodiversity Action Plan, 2003).

12.5 Status within the Drainage District

The Biodiversity Audit identified that water voles have been present within the A&E IDB district but there are no records within the last ten years.

12.6 National UK BAP Targets

These include:

- Arrest the decline and maintain the current distribution and status of the water vole.
- Restore water voles to the pre-1970 distribution by 2010.
- Ensure the management of watercourses and wetlands in order to maintain the restored population.
- Maintain the current range (730 occupied 10 km squares of the water vole in the UK.
- Achieve an increase in range of 50 new occupied 10 km squares in the UK by 2010.

12.7 Local Biodiversity Action Plan Targets

No targets are available as the Cambridgeshire species plans are currently under review.

12.8 A&E IDB Objectives and Targets

1. Establish baseline information on distribution and numbers of the species.
2. Provide appropriate habitat conditions for water voles to breed successfully.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Monitor water vole populations	1.1	Maintain a data base of any sightings of water vole	Wildlife Trust	On going	Data supplied to CPBRC	Annual
2	Manage ditches according to best practice	2.1	Include management for water vole within the management protocol (5.2)		2011	Completed document	As completed
		2.2	Assume water voles are present when undertaking works in potentially suitable habitat and manage according to protocol		Ongoing	Length of watercourse under sensitive management	Annual
3	Control mink if necessary	3.1	Carry out mink control	Wildlife Trust	On-going as necessary	No of mink caught	Annual

13 OTTER

13.1 Introduction

Otters are large mammals, approximately 1.2 metres long. They are widely spread across Britain in marine as well as in inland waters and are capable of travelling long distances over land. Generally solitary, the size of the territory depends on the position in the hierarchy and cubs share the mother's territory for around a year. Breeding may occur at any time of the year and between 2-3 young are typically born in a holt lined with vegetation.

13.2 Legal Protection Status

Otters and their resting places are fully protected in England by the Wildlife and Countryside Act 1981 and as amended and under the Conservation (Natural Habitats, etc.) Regulations 1994. It is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places and to disturb them in their breeding or resting places. The otter is listed on Appendix 1 of CITES and Appendix II of the Bern Convention Schedule 2 of the (Regulation 38).

Licences issued by Natural England may be available to undertake actions that would normally be unlawful.

13.3 National Status

Formerly widespread throughout the UK, the otter underwent a rapid decline from the 1950s to 1970s and was effectively lost from midland and south-eastern counties of England by the 1980s. Strong populations remain in Wales, south-west England and much of Scotland, where sea loch and coastal colonies comprise one of the largest populations in Europe. There is also a significant population of otters in Northern Ireland. The decline now appears to have halted and sightings are being reported in former habitats.

The decline has been attributed to loss of habitat, lack of food resources, effect of pollutants eg PCBs and heavy metals and accidental mortality including road kills.

13.4 Local Status

Otters now use all the main watercourses in Cambridgeshire and populations are increasing.

13.5 Status within the Drainage District

The Biodiversity Audit identified otter records within a number of areas in the A&E IDB district including the Ellington Brook, Hinchingbrooke Country Park, Brampton Brook, Brampton racecourse and the Alconbury Brook.

13.6 National UK BAP Targets

These include:

- Maintain the current distribution of the otter throughout the UK.
- Expand the distribution of otters to achieve 85% occupancy of 10 km squares by 2015 (878 occupied 10-km squares).

13.7 Local Biodiversity Action Plan Targets

No targets are available as the Cambridgeshire species plans are currently under review.

13.8 A&E IDB Objectives and Targets

1. Establish baseline information on distribution and numbers of the species.
2. Provide appropriate habitat conditions for otters to breed successfully.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Monitor population	1.1	Maintain a data base of any sightings of otter	Wildlife Trust	On-going	Data supplied to CPBRC	Annual
2	Improve breeding habitat	2.1	Provide an artificial holt	Wildlife Trust	On-going	Provided	As completed

14 KINGFISHER

14.1 Introduction

A characteristic bird on watercourses, kingfishers are a fish-eating species which nests in holes in earth banks

14.2 Legal Protection Status

Kingfishers are listed on Schedule 1 of the Wildlife and Countryside Act 1981 and as amended which provides not only for the protection of nests, eggs and young but also for the disturbance while on the nest.

Kingfishers do not have a UK Biodiversity Action Plan or a Local Action Plan. It is however considered to be a key species.

14.3 National Status

An amber listed species in the 'Birds of Conservation Concern' kingfishers declined along linear waterways (its principal habitat) until the mid 1980s, since when it seems to have recovered completely. The decline was associated with a contraction of range in England (BTO data). No long term trend in the population size has been noted.

14.4 Local Status

Kingfishers occur along all the main watercourses in Cambridgeshire.

14.5 Status within the Drainage District

Known to occur at Brampton, Alconbury Brook, Hinchingbrooke Gravel Pits and Buckden Gravel Pits. It is likely to breed through out the district where habitat conditions are suitable.

14.6 A&E IDB Objectives and Targets

1. Establish baseline information on distribution and numbers of the species.
2. Maintain appropriate habitat conditions for kingfisher to breed successfully.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Monitor population	1.1	Maintain a data base of any sightings of kingfisher		On-going	Data supplied to CPBRC	Annual
2	Maintain potential nest sites	8.1	Keep earth cliffs where present		On-going	No of cliffs present and retained	Annual

15 BARN OWL

15.1 Introduction

The barn owl is a distinctive bird of open countryside hunting rough grassland, particularly along the banks of watercourses, field margins and road verges, using its acute hearing to detect its small mammal prey. It usually nests in dark chambers within buildings, large cavities in old trees, and purpose-made nestboxes.

15.2 Legal Protection Status

The Barn Owl is protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or intentionally to destroy its nest, eggs or young. The Act affords special protection to this species making it unlawful to intentionally or recklessly disturb it whilst preparing to nest or is at the nest with eggs or young or to disturb their dependent young.

Barn owls do not have a UK Biodiversity Action Plan or a Local Action Plan. It is however considered to be a key species.

15.3 National Status

An amber listed species in the 'Birds of Conservation Concern' barn owl numbers crashed throughout much of Europe in the 20th century, undergoing a major decline in England and Wales between 1932 and 1985 from an estimated 12,000 to 3,800 breeding pairs. A more recent survey completed in 1997, indicated a similar breeding population of 4,000 pairs suggesting that although numbers remained very low, that the decline may have begun to slow.

Factors that are implicated in this decline include a decrease in its food supply, largely caused by the loss of rough grassland habitat from areas of low-lying farmland (including field margins associated with the banks of ditches, rivers and other watercourses), increasing use of agricultural pesticides and road mortality.

15.4 Local Status

Barn owls occur throughout Cambridgeshire which has one of the highest populations in the England with around 400 pairs.

15.5 Status within the Drainage District

Barn owl has been recorded from Ellington, Alconbury Weston, and Brampton. It is likely to be present wherever there is suitable foraging and breeding habitat.

15.6 A&E IDB Objectives and Targets

1. Establish baseline information on distribution and numbers of the species.
2. Provide appropriate habitat conditions for barn owl to breed successfully.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Monitor population	1.1	Maintain a data base of any sightings of barn owl		On going	Data supplied to CPBRC	Annual
2	Provide artificial nest boxes in areas of suitable habitat potential nest sites	2.1	Install a box	Wildlife Conservation Partnership	On going	Box provided	As completed
	Create and manage a network of rough, tussocky grassland habitat corridors within the IDB district.	2.2	Provide buffer strips (x-ref 8 Arable margins) and maintain a rough-tussocky sward to channel banks	Farmers	On going	Length provided	Annual

15.7 Other benefits

This Action Plan will also benefit the kestrel.

16 EUROPEAN EEL

16.1 Introduction

The European eel is a species that breeds in the Sargasso Sea and returns to Britain to mature. They may spend between 15 and 20 years in British rivers before returning to the sea and their spawning grounds to reproduce.

16.2 Legal Protection Status

This species is listed on Appendix II of the CITES Convention.

European eels do not have a UK Biodiversity Action Plan. It is the subject of Eel Management Plan and is considered to be a key species within the A&E IDB district.

16.3 National Status

The eel was once a common species around Britain, being present in most rivers, streams and lakes that are accessible from the sea. Commercial eel fisheries were the most valuable inland fisheries in England and Wales and provided significant benefits to the rural economy. However, there is considerable concern about the status of eel stocks in the UK and Europe. Since the 1980s the numbers of young elvers returning to European rivers has declined to around 1% of historic levels. This is thought to be related in part to oceanographic changes between the spawning grounds near the Caribbean and the coast of Europe, and to other factors such as pollution, parasites, barriers to freshwater migration and over-fishing.

16.4 Local Status

The eel is the subject of a Management Plan for the Anglian Region of the Environment Agency.

16.5 Status within the Drainage District

Not known.

16.6 A&E IDB Objectives and Targets

1. Seek to ensure access to the watercourses within the A&E IDB district.

Target Ref.	Target	Action ref.	A&E IDB Action	Partner	Date	Indicator	Reporting
1	Maintain access to water courses for elvers	1.1	Identify any possible obstructions and discuss with EA to formulate a means of providing access	EA	2011	Action completed	Upon completion

17 PROCEDURAL ACTION PLAN

17.1 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 but will also include protocols for protected species and other non BAP matters such as pollarding willows.

17.2 Objectives and Targets

Target Ref	Target	Action Ref	A&E IDB Action	Partners	Date	Indicators	Reporting
1	Develop best practice	1.1	Revise the existing management protocol for all works on watercourses based on the ADA Drainage Manual and other guidance		2011	Completed document	As completed
		1.2	Provide protected species training		Ongoing	Number of staff trained	Annually
		1.3	Require developers to follow best practice via consents procedures	Planning Authorities	Ongoing	Applications reviewed	Annually
2.	Data management	2.1	Establish data base for important wildlife records	CPBRC	Ongoing	Data base regularly maintained	Annually

18 IMPLEMENTATION

18.1 Implementation

With some exceptions, for example the erection of artificial barn owl boxes, the habitat and species action plans can be delivered through minor changes to routine activities and through recording of observations made during the undertaking of such works.

As part of this BAP, a management protocol for all works on the drainage ditches based on the ADA Drainage Manual and other guidance will be prepared.

It is hoped that collaboration with the Wildlife Trust will facilitate the collection of data.

19 MONITORING

19.1 Monitoring

Monitoring of the A&E IDB 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.

Species and habitats vary naturally over time. Monitoring will result in new information, such as the presence of species missed during earlier surveys. Any new information will be incorporated into the A&E IDB BBAP as appropriate

20 REVIEWING AND REPORTING PROGRESS

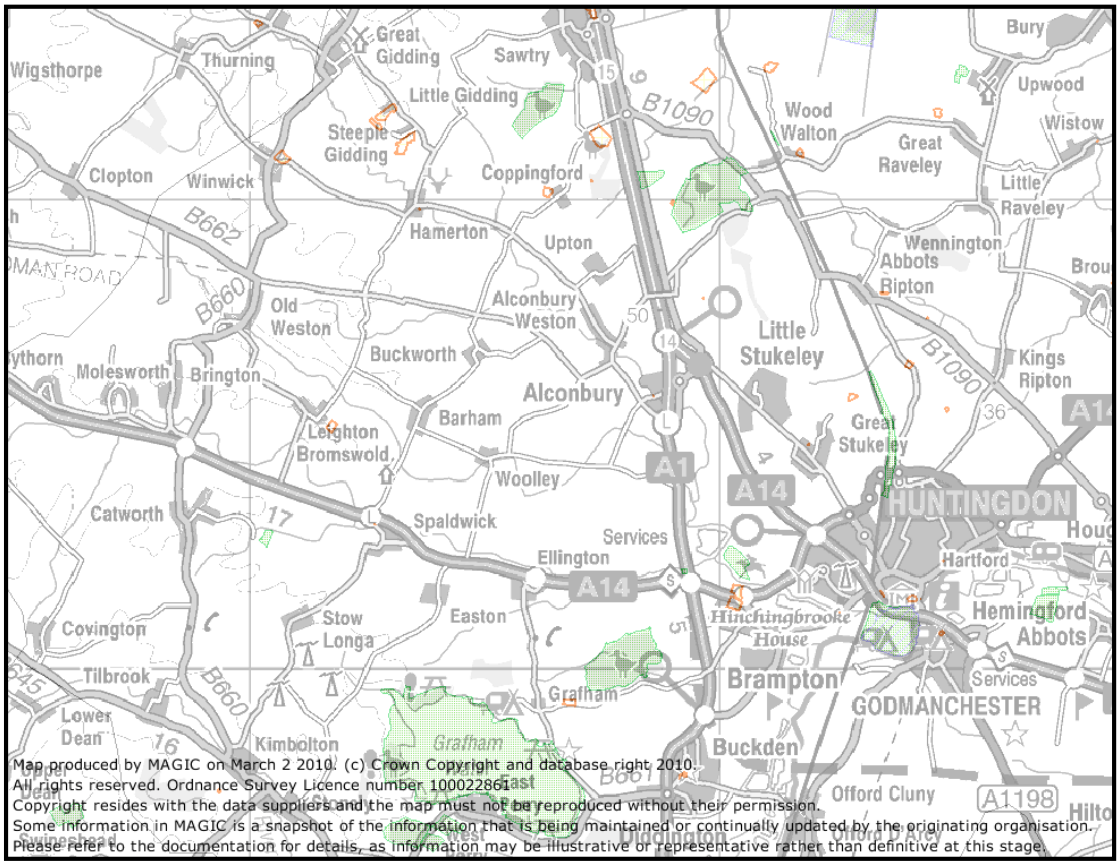
20.1 Reviewing and Reporting Progress

Progression of the BAP requires monitoring and reporting to the public, BAP Working Group and also to the UK BAP.

Progress towards each of the targets is likely to be assessed annually and it is anticipated that the A&E IDB BAP will be fully reviewed after five years. However the production and long-term development of the BAP is a flexible process.

Annual reporting will be undertaken through meetings of the A&E IDB and through the national Biodiversity Action Plan Reporting System BARS. Targets and actions for individual action plans have been written so that they fit into the national BARS which is the approved system for reporting. Using BARS annual progress reports can be produced and made available.

APPENDIX 1: LOCATIONS OF STATUTORY CONSERVATION SITES AND SCHEDULED MONUMENTS WITHIN AND ADJACENT TO A&E IDB DISTRICT.



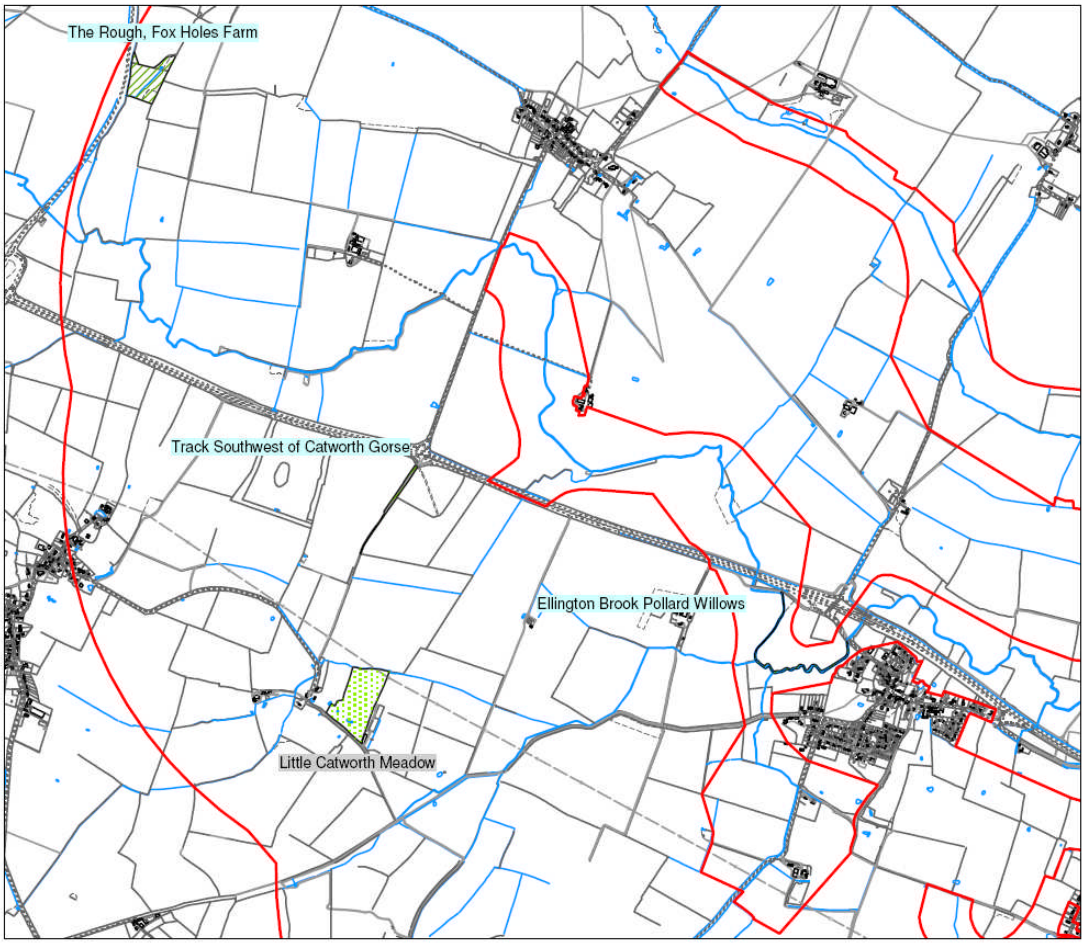
APPENDIX 2: LOCATION OF COUNTY WILDLIFE SITES WITHIN AND ADJACENT TO A&E IDB DISTRICT

Alconbury IDB1

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
Supplied Grid Reference

County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

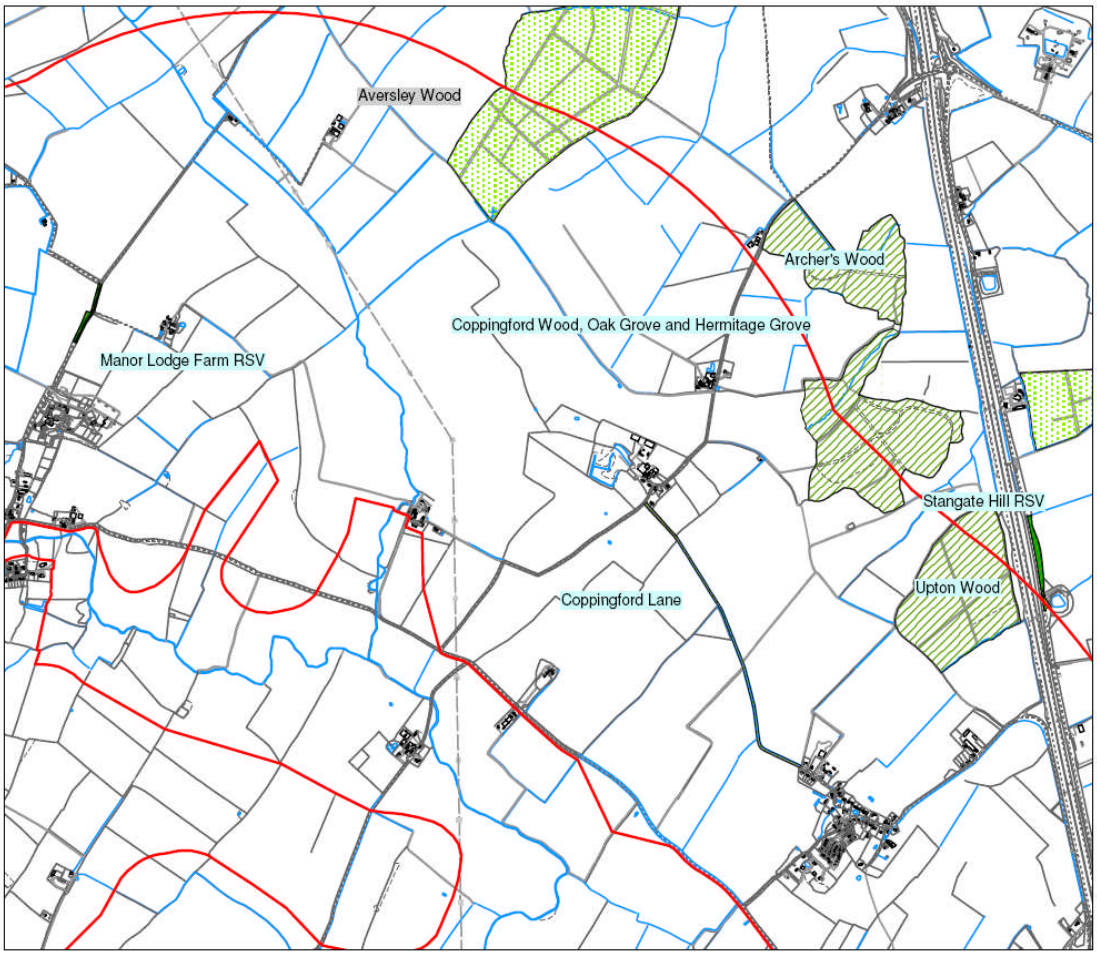
N

Alconbury IDB2

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
Supplied Grid Reference

County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

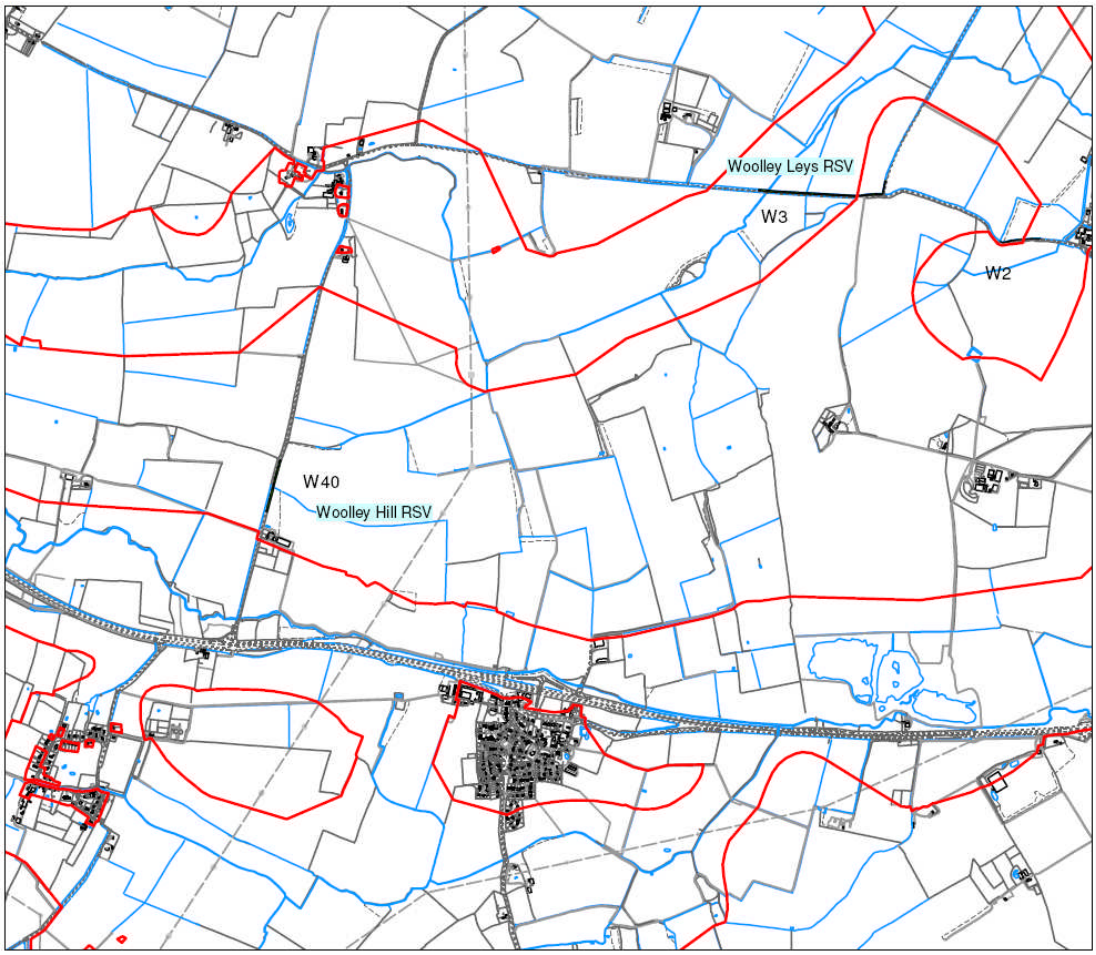
N

Alconbury IDB3

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
Supplied Grid Reference

County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

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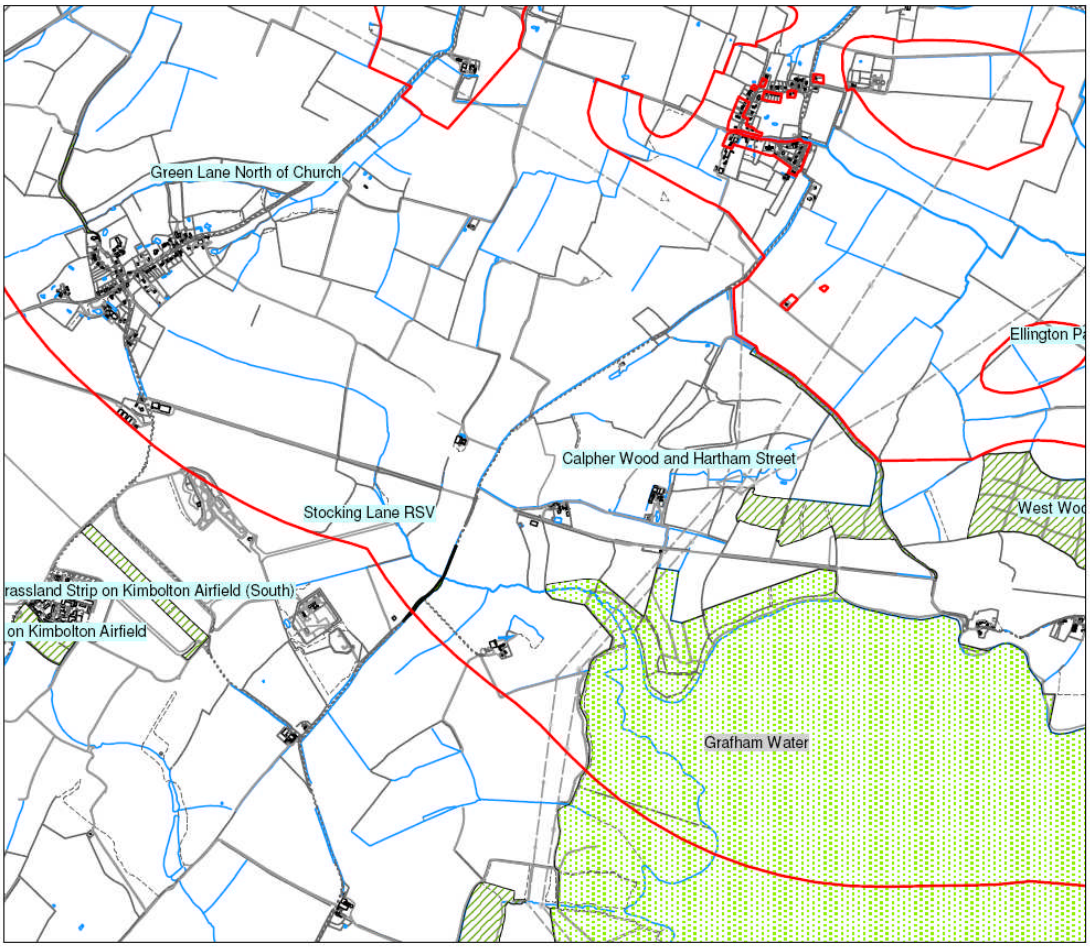
Alconbury IDB4

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE

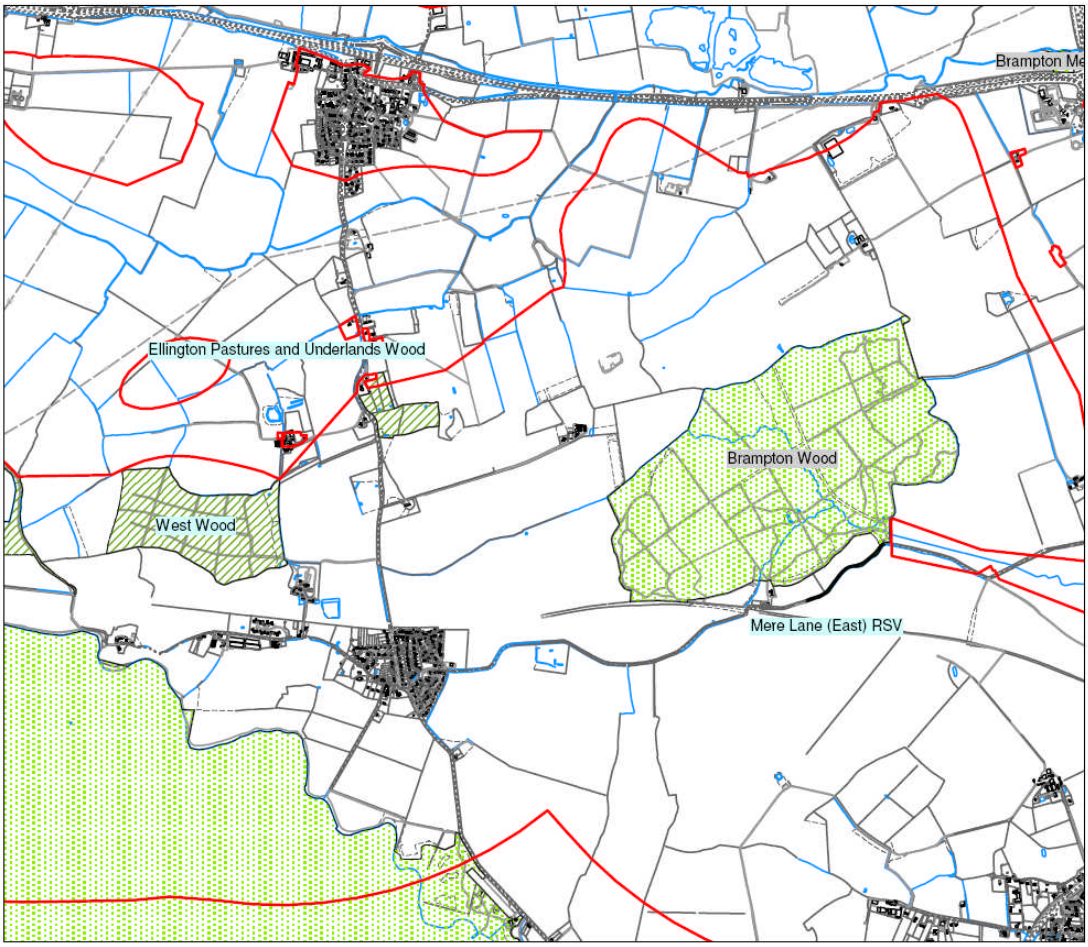


Alconbury IDB5

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
Supplied Grid Reference

County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

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Alconbury IDB6

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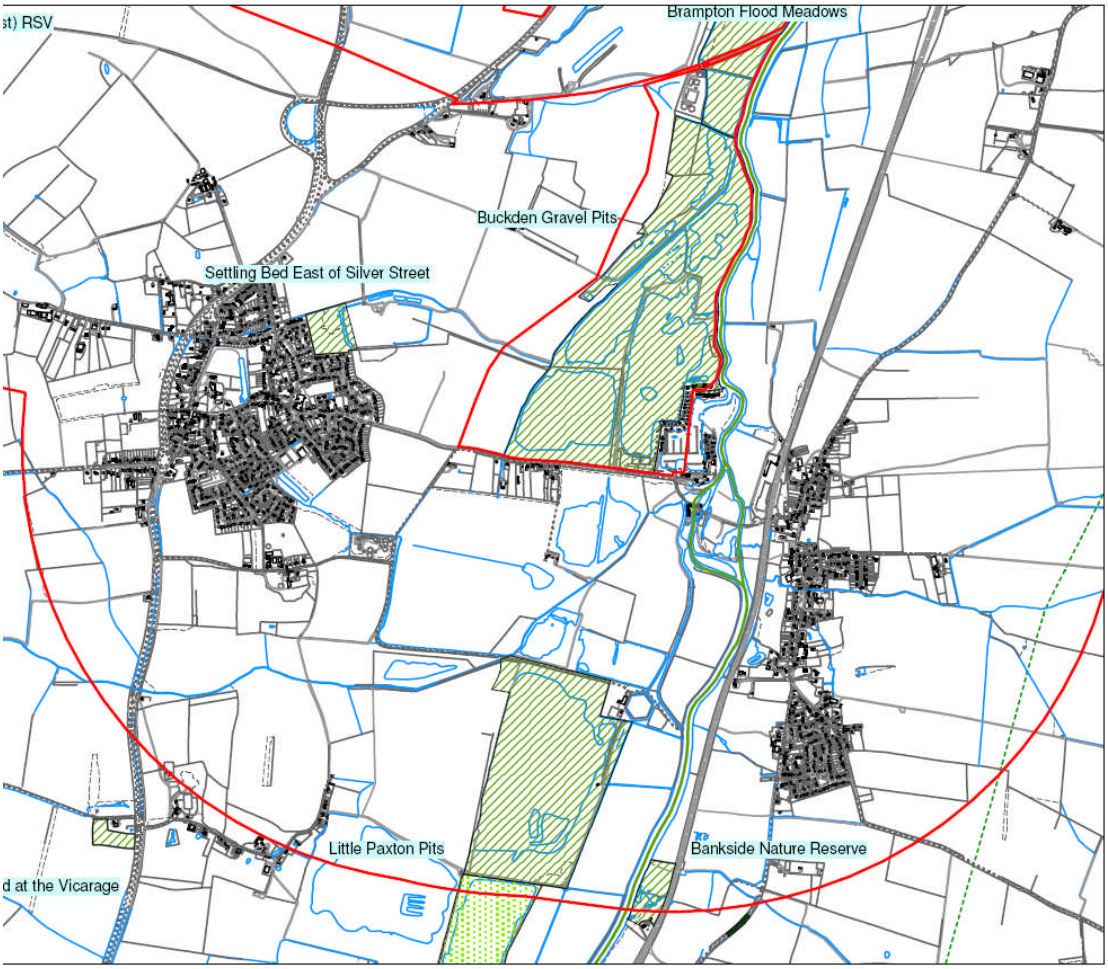
CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
Supplied Grid Reference

County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

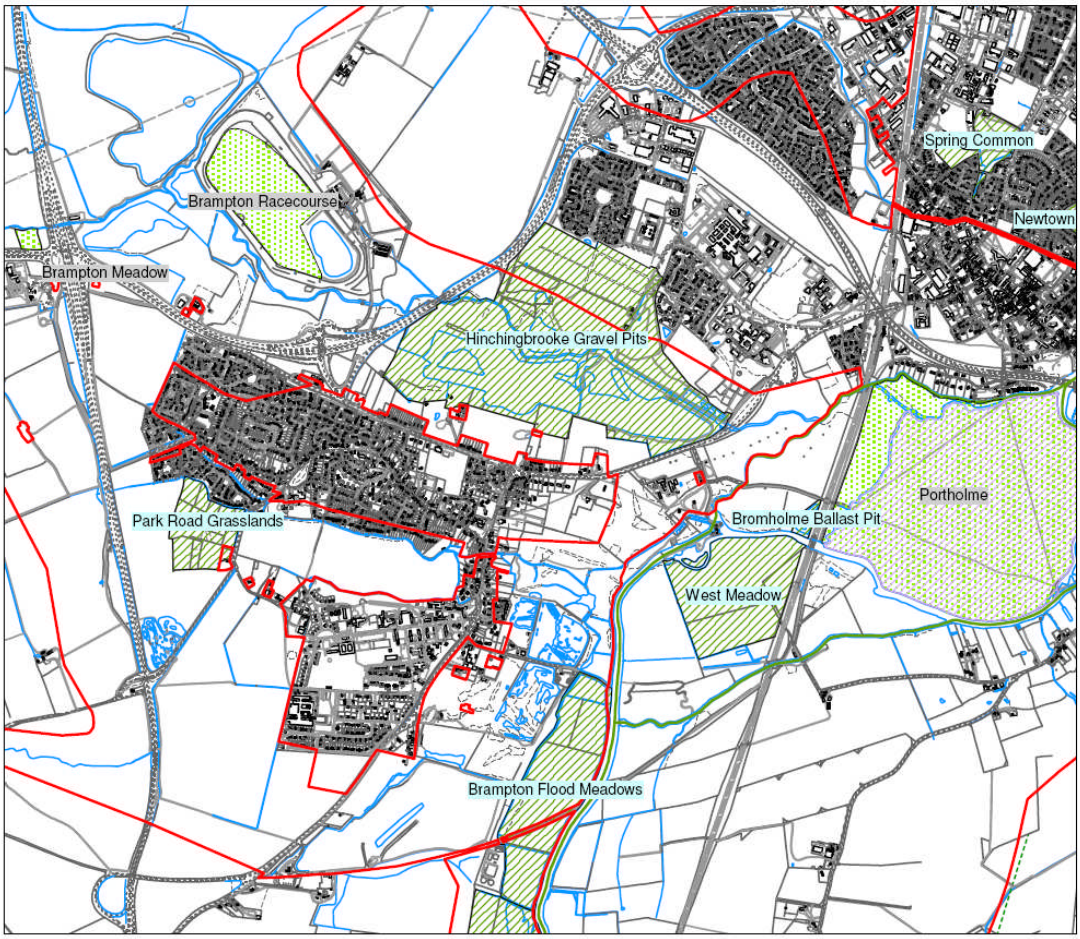
N

Alconbury IDB7

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
Supplied Grid Reference

County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

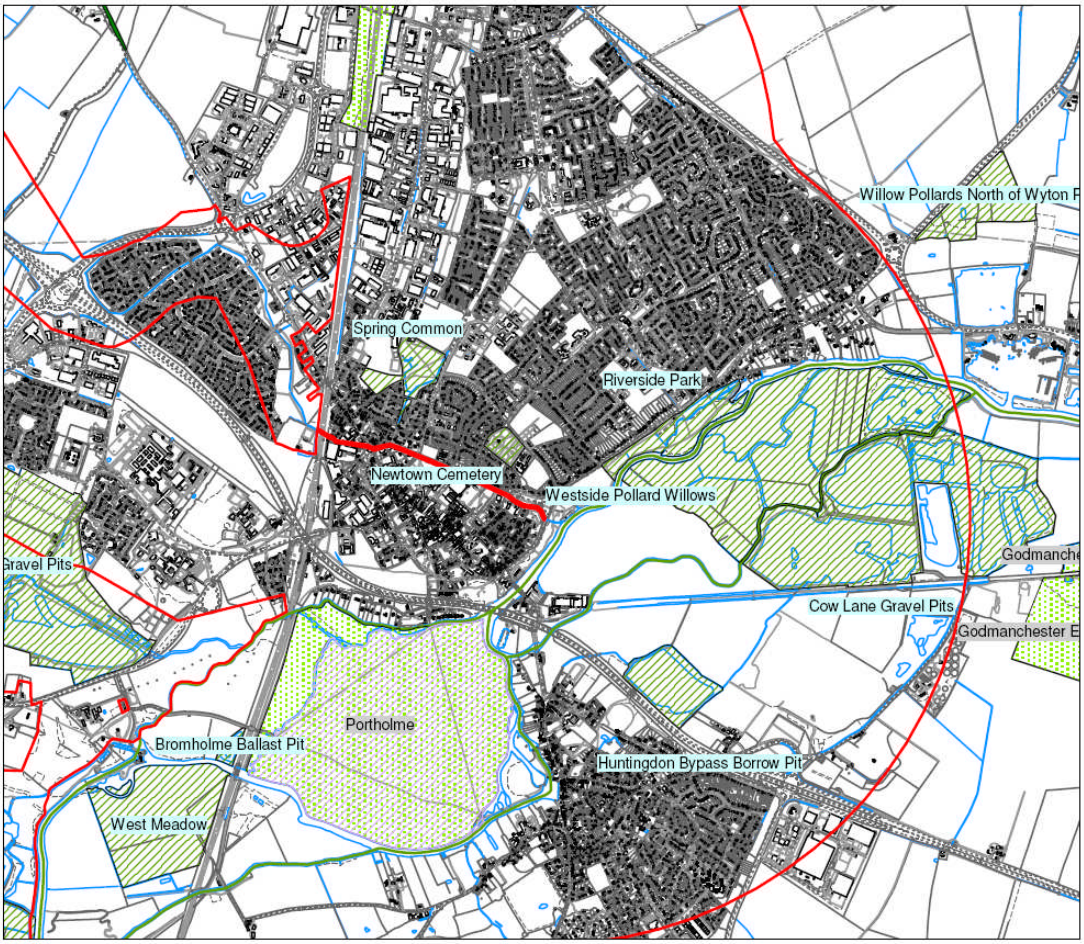
N

Alconbury IDB8

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
Supplied Grid Reference

County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

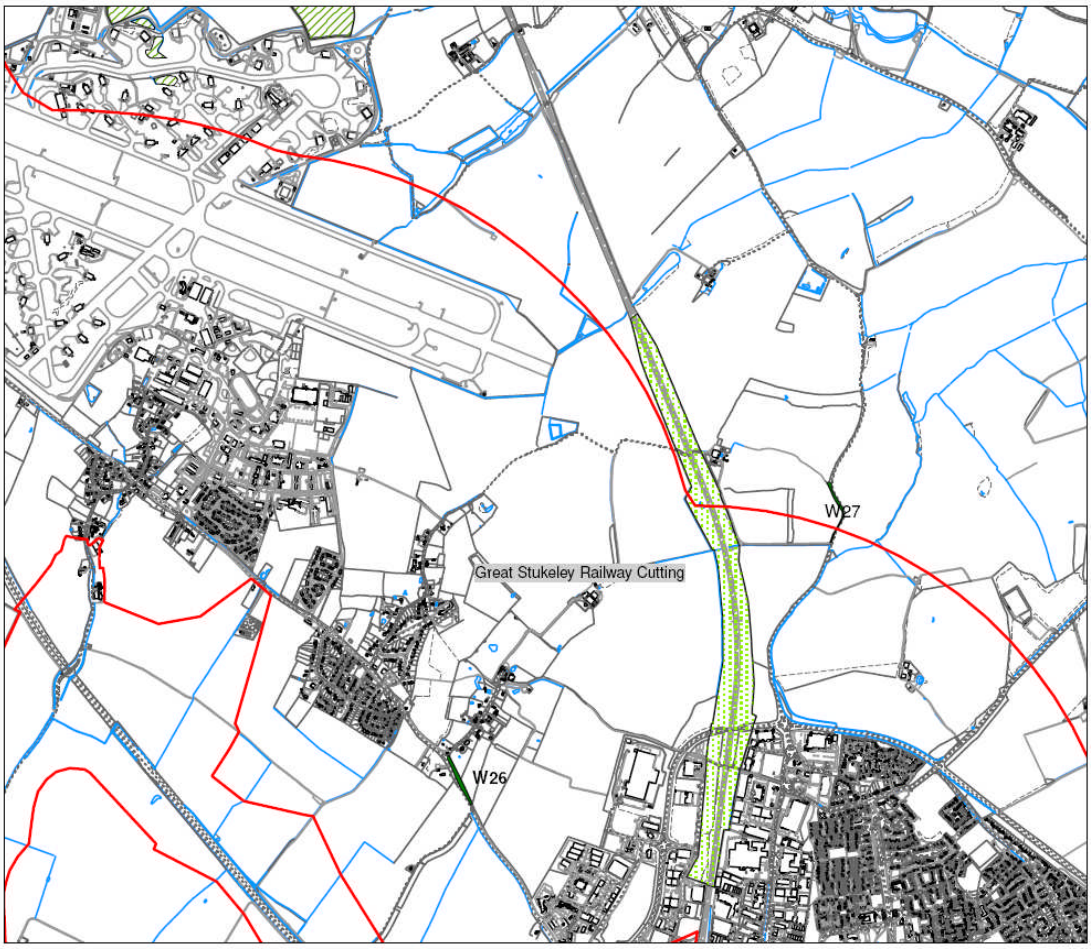
N

Alconbury IDB9

1:25000

CPBRC
The Manor House
Broad Street
Cambourne
Cambridgeshire
CB23 6DH

CPBRC
CAMBRIDGESHIRE & PETERBOROUGH
BIOLOGICAL RECORDS CENTRE



Search Area
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County Wildlife Site
SSSI
LNR
City Wildlife Site (Cambridge City)

N