# HARLOW DISTRICT COUNCIL

# LOCAL WILDLIFE SITE REVIEW 2010

## FINAL

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EECOS Abbotts Hall Farm, Great Wigborough, Colchester, Essex, CO5 7RZ 01621 862986, eecos@essexwt.org.uk

> Company Registered No. 2853947 VAT Registered No. 945 7459 77



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## **IMPORTANT NOTES**

#### Nomenclature

The terms "Site of Importance for Nature Conservation" (SINC), "Wildlife Sites" and "County Wildlife Site" (CoWS) used in previous reports are here replaced by the currently generally accepted term of "Local Wildlife Site" (LoWS). The term should be viewed in a national context, with "Local" referring to county level significance.

#### Rationale

It is hoped that this identification of Local Wildlife Sites is not seen as a hindrance to the livelihood of those landowners affected, or an attempt to blindly influence the management of such sites. It is an attempt to describe the wildlife resource we have in the county as a whole, which has been preserved thus far as a result of the management by landowners. The Essex Wildlife Trust and the Local and Unitary Authorities of Essex hope to be able to help landowners retain and enhance this biodiversity for the future. In recent years, the existence of a Local Wildlife Site on a farm has been seen as an advantage when applying for grant-aid from agri-environment schemes, with such grants favouring areas with a proven nature conservation interest.

#### Public Access

Identification as a Local Wildlife Site within this report does not confer any right of public access to the site, above and beyond any Public Rights of Way that may exist. The vast majority of the Sites in the county are in private ownership and this should be respected at all times. Those few sites that are described as being appropriate for environmental education already have some public access.

#### Land Ownership

It has always been the intention of the Essex Wildlife Trust to contact all landowners of LoWS, advising them of this identification and promoting nature conservation management of the site. To that end, the Essex Wildlife Trust has appointed a Local Wildlife Sites Officer to administer this suite of sites across the county. Currently, all the major forces behind nature conservation in Essex are working on the Local Area Agreement, focussing on National Indicator 197 (Local Wildlife Sites), which will gradually involve contact with those LoWS landowners that can be traced. While this lengthy undertaking is in progress it is requested that the Essex Wildlife Trust is contacted prior to any formal approach regarding any Site identified within this report.

#### Boundaries

Whilst every attempt has been made to ensure accurate mapping of the site boundaries, the accompanying maps should be considered as being illustrative only. This is especially true for any SSSIs (Sites of Special Scientific Interest), which are included within LoWS site boundary maps to help interpret the context of LoWS in the wider countryside. Definitive SSSI boundaries are maintained by Natural England. The Essex Wildlife Trust should be consulted over the precise boundary of all Local Wildlife Sites, should any dispute occur or precise determination be required.

Sites are mapped onto 1:10 000 scale Ordnance Survey raster maps since these are felt to give a better overall impression of the site's location to the general public. More detailed mapping at 1:2500 scale of LoWS is held by Harlow Council and the Essex Local wildlife Sites Project, hosted by the Essex wildlife Trust.

#### Planning – development proposals

The information within this report should be used to inform decision making on planning applications. Over the passage of time, some Local Wildlife Sites may be degraded or damaged to the extent that they would no longer meet the selection criteria. Similarly, new Sites may be identified and periodically added to the list held by the Local Authority. For these reasons, the Essex Wildlife Trust should be consulted on all planning proposals affecting areas of open countryside (including semi-natural habitats in urban areas), regardless of whether or not they affect a Site identified within this report. This report will allow a greater understanding of the wildlife resources of the district and will make the consultation process much faster and more cost-effective.

#### Planning – status of the Review

This Review is a technical report which will inform and support the policies in the existing Local Plan as well as those emerging in the Local Development Framework (LDF). The Review has identified some sites in the current Local Plan that no longer meet the selection criteria for LoWS. This will be a material consideration when assessing development proposals affecting those sites. Likewise the Review identifies new sites for inclusion within the LoWS network. This will also be a material consideration in the assessment of future planning proposals that affect such sites.

Consequently, the relevant documents of the LDF will reflect the LoWS status of sites that have been considered and identified in the Review and will be afforded the appropriate level of protection in the emerging policies.

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## 1. INTRODUCTION

#### 1.1 General Introduction

- 1.1.1 This report has been produced by Essex Ecology Services Ltd. (EECOS), the ecological consultancy of the Essex Wildlife Trust, on behalf of Harlow District Council. The report reviews the existing Wildlife Sites that were identified in a 2002 Wildlife Site Review and identifies any additional areas that should now be designated as Local Wildlife Sites (LoWS). This report contains a register of all the sites in Harlow District that are considered to be LoWS, some 42 in total, along with a few 'Potential' LoWS that currently do not merit full LoWS status.
- 1.1.2 This report makes a number of recommendations that will inform the Local Development Framework (LDF) and other management practices.

#### 1.2 Background

- 1.2.1 During the early 1990s, the Essex Wildlife Trust undertook a county wide land use survey combined with an exercise to identify the most important wildlife habitats present within each district. These important wildlife habitats were identified as "Sites of Importance for Nature Conservation" [SINC], with the results summarised in "Nature conservation A Reference Guide" produced in individual district volumes. This was an attempt to provide a unified approach to nature conservation across the county, providing a network of sites that would stand up to scrutiny at a county, regional and national level. At this time Harlow Council undertook its own assessment resulting in the identification of 35 sites. These were identified under Policy NE14 of the 1995 Local Plan. As such, Harlow did not adopt the suite of SINCs identified by the Essex Wildlife Trust and the SINC policy *per se*, although the 17 SINCs were essentially represented within the 35 Harlow Wildlife Sites.
- 1.2.2 In the intervening years these SINC sites have been referred to as County Wildlife Sites and, in some places, Wildlife Sites, but in Essex the term Local Wildlife Sites (or LoWS) has now been adopted and is used throughout this report to refer to sites of this designation, irrespective of the terminology that was used at the time. Notwithstanding this, it should be stressed that LoWS should be viewed as being of county importance, reflecting the natural variation in type and quality of woods, grasslands, water bodies, heaths and other habitats across the county.

1.2.3 Leading up to the adoption of the Replacement Harlow Local Plan in 2006, Harlow Council undertook its own review of important wildlife sites within the district, and these were detailed in a supporting document entitled "Wildlife Sites". This 2002 review saw the adoption of 38 Wildlife Sites (including four proposed Local Nature Reserves), noting that an additional 4 Sites should actually be deleted from the register currently in use at that time.

#### 1.3 Objectives of the Review

1.3.1 The principal objective of this report is to update the LoWS network within Harlow District, unifying the parallel site classification systems identified by the Essex Wildlife Trust and Harlow Council. This review has been carried out in the light of changes to the information available about the sites and by applying the new site selection criteria for Essex, adopted in January 2010 (see Annex Report 1). This updated information will inform the preparation of the LDF.

#### 1.4 Review Methodology

- 1.4.1The following section is an overview of the methodology that has been adopted for this review. More detail on the specific steps undertaken can be found in Annex Report 1. This Annex provides an ideal protocol for the process of identifying and notifying Local Wildlife Sites, which is summarised in the following table:
  - 1. Identification of potential sites for assessment
    - a) Consult Essex Wildlife Sites Project 'potential' LoWS register;
    - b) Complete local consultation.
  - 2. Arranging access for survey
    - a) Where possible, identify LoWS owners (e.g. land registry search);
    - b) Strive to contact LoWS owners to arrange access for survey;
  - 3. Site survey and assessment
    - a) Field survey using standard EWSP monitoring form;
    - b) Collate supporting data (e.g. biological records)
  - 4. Site evaluation and selection
    - a) Evaluate sites against selection criteria;
    - b) Review candidate sites by Local Selection Panel;
    - c) Endorsement by EWSP Advisory Group.
  - 5. Notification
    - a) Supply notification sheet to LoWS owners.

- 1.4.2 For this specific review:
  - All of the existing sites listed in the 2002 Wildlife Site Review and the original Essex Wildlife Trust SINCs in 1991 were identified.
  - A desk study was undertaken to identify significant species or habitats that were known to EECOS, Essex Wildlife Trust and Harlow Council Staff since 1991.
    Other sites that have been afforded attention via county or national Biodiversity Action Plans were also identified.
  - 3. A consultation exercise was undertaken with key stakeholders to identify potential new LoWS.
  - 4. Harlow Council was identified as the land owner of the majority of areas of interest where specific further survey work was required. Where this was not the case, attempts were made to identify the landowners on the ground from adjacent properties.
  - 5. Field surveys of each identified site were undertaken.
  - 6. All of the identified sites (existing and potential new sites) were then assessed against the current selection criteria (see paragraph 1.5) to determine whether or not they qualified for LoWS status.

#### Desk Study

1.4.3 The desk survey was undertaken by reviewing information about potential sites from other information sources such county or national Biodiversity Action Plans (BAPs) and correspondence received by the Essex Wildlife Trust over the intervening years concerning individual sites. Given the strong link between UK/Essex BAPs and the site selection criteria, any site associated with a BAP habitat or species was evaluated further as a matter of course. Aerial photography, most notably that available via web-sites, was also used to identify other areas of land of potential interest. This method is particularly useful for locating areas of semi-natural habitat not visible from public rights of way or other public vantage points that might otherwise have gone un-noticed or required much more labour-intensive field-byfield survey work to discover. Clarification of site boundaries, most notably ancient woods and hedgerow patterns, was assisted by reference to the First Edition 6" Ordnance Survey maps of the early 1880s accessed via the web-site www.oldmaps.co.uk. Reference was also made to the 1777 Chapman and André map of Essex, although it is recognised that a good deal of interpretation and caution is needed for this very early map work.

#### Field Survey Work

- 1.4.4 Officers from EECOS undertook field surveys of each of the potential sites under the provisions of Sections 324(1) and 325(1) of the Town and Country Planning Act 1990. These warrants effectively gave rights of access at reasonable times of the day and week and by using reasonable routes and methods to land not otherwise accessible via the public rights of way network or where it was not possible to identify the owner.
- 1.4.5 Areas of land adjudged to be of significant wildlife value were assessed in more detail, as conditions permitted, with a short description and plant species list compiled. Other nature history notes, such as bird life and insects, were also noted if appropriate. What constitutes "significant" wildlife value is to an extent a matter of experience and judgement but some of the following key habitat qualities include:
  - possible ancient status for woodland
  - flower-rich grasslands
  - potential to support reptiles and amphibians
  - the micro-topography and weedy flora characteristic of post-industrial "brownfield" sites and the ecological relationship between adjacent sites.
- 1.4.6 All surveyors engaged on the project have had previous experience of LoWS identification in other districts/counties, including the Essex Wildlife Trust's 1991 assessment, and so had a working knowledge of the district and also the site selection criteria and what might intrinsically qualify for inclusion.

#### **Consultation**

- 1.4.7 A consultation process has sought comments from relevant local experts on the existing suite of Sites and also the draft suite of LoWS as this was developed. These comments have been incorporated as far as possible within the final list of sites, while maintaining the rigour of the published LoWS selection criteria.
- 1.4.8 EECOS gratefully acknowledges the input from the following persons and organisations, which were consulted as part of this review process:

#### Darren Fazackerly – Harlow Council

Glenn Mulleady – Harlow Council Colin Lincoln – volunteer warden with Harlow Council Ken Adams – Essex Field Club Peter Harvey - Essex Field Club

Opinions were also sought from Natural England and the Essex Amphibian and Reptile Group.

#### 1.5 The Selection Criteria

- 1.5.1 The LoWS selection criteria have been developed through reviews undertaken in other Essex districts and modified in line with national guidelines and following a wide consultation exercise. The LoWS selection criteria were published early in 2009, with minor amendments in January 2010 can be found in Annex Report 1 and on <u>www.localwildlifesites.org.uk</u> where updated versions will periodically appear. The following section is a summary of the general philosophy behind the criteria.
- 1.5.2 The current selection criteria are divided into two parts: habitats and species. There are currently 31 criteria concerned with habitats and these strongly reflect the "Priority Habitats" identified in the UK Biodiversity Action Plan (BAP) (<u>http://www.jncc.gov.uk/page-5220</u>). These include river floodplain grassland, broadleaved woodland, hedgerows, ponds, species-rich grassland and heaths. Within any given habitat type, a site needs to display certain qualities in order to be considered for selection as a LoWS. So, whilst many woods might fall within the remit of the "Lowland Mixed Deciduous Woodland" BAP, only woods that satisfy other conditions may be considered. These woods might be deemed to be "ancient" (Habitat Criterion HC1) or, if recent in origin, they need to display a good woodland structure and flora/fauna (Habitat Criterion 2).
- 1.5.3 Two criteria consider habitat mosaics (e.g. a small piece of wet wood adjacent to an area of marshland and reedbed) where any one individual component does not satisfy its associated habitat criterion, but where in combination, the complex of habitats is deemed to be important. The role of chains of sites as potential wildlife corridors is also considered within the selection process. A final criterion considers the special case of highly urbanised sites, where absolute wildlife value may be diminished because of their isolation or intense public pressure. This criterion recognises that such sites have an important role to play in environmental education

and providing opportunities for regular interaction with the natural world for local residents.

1.5.4 There are also 20 criteria for individual species or species assemblages, covering flowering plants, lichens, mosses, birds, mammals, reptiles, amphibians and invertebrates. The assessment of how important these populations are takes into account national rarity, local scarcity (even if nationally more common), their status as UK BAP Priority species and protection within UK legislation. Unusually diverse assemblages of relatively common species can also be considered for selection. For all single species or species assemblage cases, the site under consideration must possess sufficient suitable habitat to make it reasonably certain that a sustainable population can be maintained. Again, not all such populations will be selected: the criteria aim to conserve the most significant (at a local or regional level) populations. For example, it would be unfeasible to select all ponds where Great Crested Newts have been recorded. Rather, the criteria look for sites with a reasonably large breeding population where the pond is surrounded by sufficient terrestrial habitat that can provide over-wintering habitat and suitable foraging grounds.

#### 1.6 Summary of Selection Criteria

1.6.1 The following is a list of the habitat and species criteria described in greater detail in Annex Report 1:

Habitat Criterion 1 (HC1) – Ancient Woodland Sites Habitat Criterion 2 (HC2) – Lowland Mixed Deciduous Woodland on Non-ancient Sites Habitat Criterion 3 (HC3) – Other Priority Habitat Woodland Types on Non-ancient Sites Habitat Criterion 4 (HC4) - Wood-pasture and Parkland Habitat Criterion 5 (HC5) – Woody Scrub Habitat Criterion 6 (HC6) – Veteran Trees Habitat Criterion 7 (HC7) – Old Orchards Habitat Criterion 8 (HC8) – Hedgerows and Green Lanes Habitat Criterion 9 (HC9) - Lowland Meadows Habitat Criterion 10 (HC10) - River Floodplain Habitat Criterion 11 (HC11) - Other Neutral Grasslands Habitat Criterion 12 (HC12) - Lowland Calcareous Grassland Habitat Criterion 13 (HC13) – Heathland and Acid Grassland Habitat Criterion 14 (HC14) - Lowland Fen Vegetation Habitat Criterion 15 (HC15) - Reedbeds Habitat Criterion 16 (HC16) - Lakes and Reservoirs Habitat Criterion 17 (HC17) - Ponds Habitat Criterion 18 (HC18) - Rivers Habitat Criterion 19 (HC19) - Extended Riverine Habitat Habitat Criterion 20 (HC20) - Complex Riverine Habitats

Habitat Criterion 21 (HC21) – Coastal Grazing Marsh Habitat Criterion 22 (HC22) – Tidal Transition Zones Habitat Criterion 23 (HC23) – Saltmarsh and Mudflats Habitat Criterion 24 (HC24) – Saline Lagoons and Borrow Dyke Habitats Habitat Criterion HC25 (HC25) – Sand Dune and Shingle Beach Vegetation Habitat Criterion 26 (HC26) – Maritime Cliffs and Slopes Habitat Criterion 27 (HC27) – Post-industrial Sites Habitat Criterion 28 (HC28) – Small-Component Mosaics Habitat Criterion 29 (HC29) – Habitat Extension Mosaics Habitat Criterion 30 (HC30) – Wildlife Corridors Habitat Criterion 31 (HC31) – Accessible Natural Greenspace Species Criterion 1 (SC1) - Vascular Plants Species Criterion 2 (SC2) – Bryophytes Species Criterion 3 (SC3) – Lichens Species Criterion 4 (SC4) - Fungi Species Criterion 5 (SC5) – Notable Bird Species Species Criterion 6 (SC6) – Exceptional Populations of Common Bird Species Species Criterion 7 (SC7) – Dormouse Species Criterion 8 (SC8) - Barbastelle (and other Annex II) bats Species Criterion 9 (SC9) - Other Bat Breeding Colonies Species Criterion 10 (SC10) – Bat Hibernation Sites Species Criterion 11 (SC11) - Protection of Otter Holts Species Criterion 12 (SC12) - Breeding Water Vole Colonies Species Criterion 13 (SC13) - Hotspots for Amphibian Diversity Species Criterion 14 (SC14) - Palmate Newts Species Criterion 15 (SC15) - Great Crested Newts Species Criterion 16 (SC16) - Hotspots for Reptile Diversity Species Criterion 17 (SC17) – White-clawed Crayfish Species Criterion 18 (SC18) – UK BAP Priority Invertebrates Species Criteria 19 (SC19) – Important invertebrate assemblages Species Criteria 20 (SC20) – Notable 'flagship' macro-invertebrates

#### 1.7 Limitations of the Survey

#### **General Limitations**

- 1.7.1 For many of the sites there is still a lack of data available regarding invertebrate populations and other species information. Every reasonable effort has been made to obtain the additional information necessary to fully assess existing and proposed sites, but this information will be continually updated which may affect the status of some sites.
- 1.7.2 For some groups, such as invertebrates, the state of our knowledge concerning their distribution and ecological requirements is still quite limited, so that whilst criteria are now in place to select sites on the grounds of their invertebrate interest, the actual ability to do so is still at an early stage, particularly for the less well-studied groups. However, development of the various biodiversity initiatives across the county and the production of a draft Essex Red Data List have helped in focusing on the needs

of these populations and identifying their key population localities. These data should continue to feed into subsequent LoWS reviews, improving the effectiveness of their nature conservation role.

#### Field Survey Limitations

- 1.7.3 The scope of the review limited each site to a single visit and while efforts were made to visit each site at the most appropriate season inevitably some features of some sites were not visible at the time of the visit. It is hoped that the additional consultation with local naturalists has filled many such gaps in the knowledge base.
- 1.7.4 Despite this, there were a number of scenarios when it would have been neither appropriate nor even legal to try and exercise such rights of access. These include accessing private residential gardens and railway land; surveyors used their discretion in applying the general principle of gaining access to areas of open countryside for the purposes of this survey. Where possible, surveyors still attempted to make contact with the relevant landowners and EECOS wishes to thank all those people who have assisted this survey by granting permission to enter onto their land. Harlow is unique in Essex in having the majority of its "open countryside" under the ownership of the Council, having inherited it from the development corporation that created the new town; this helped with the survey of sites.

## 2. RESULTS

#### 2.1 Changes to Local Wildlife Sites

- 2.1.1 Thirty-eight sites, or 250.6 hectares, were identified in the 2002 Wildlife Site Review, plus a further four sites that had been recommended for deletion. This 2010 review has seen a net increase of 4 Sites to give a new total of 42 Local Wildlife Sites totalling 300.0 hectares. The bulk of the increase in land area has come from the greatly enlarged river floodplain site Ha5 Eastwick and Parndon Meads.
- 2.1.2 Within this there are a number of changes. These are as follows:
  - 8 of the sites identified in the 2002 Wildlife Site Review have been de-selected because they fail to meet the revised selection criteria.
  - 10 completely new sites have been identified and added to the register
  - The boundaries of some existing sites have been amended
  - Some sites have been amalgamated where they lie next to each other or are otherwise sufficiently connected.
  - SSSIs have been removed from the LoWS network
  - The sites have been renumbered to conform with the Essex convention

#### 2.2 The New Local Wildlife Site Network

- 2.2.1 The revised summary list of Harlow LoWS is presented in Appendix 1 with the full Register in Appendix 2. Within the Register, each Site has a suitably scaled location map (N.B. the scale varies between maps), code number, name, area in hectares and central grid reference. The maps show the LoWS under discussion in green, with any other adjacent Harlow LoWS shown in pale yellow, along with any potential LoWS (green hatching) and SSSIs (mustard yellow). The citation for each site then describes the characteristic vegetation, identifies key species and habitat qualities. This is followed by an indication of any UK and Essex BAP habitats that are present. The relevant selection criteria codes are then listed (see separate document Annex Report 1 for the interpretation of these codes).
- 2.2.2 The rationale statement provides guidance on why the site has been selected i.e. the basis on which it has been matched against the previously listed criteria codes. Finally, there are details of when the site was first designated and then reviewed (if

applicable). This is somewhat more complicated for Harlow than for other Essex districts since two parallel systems (Essex wildlife Trust SINCs and Harlow Council designated sites) have been in place for many years. To simplify this, three points in time are recognised: the original Essex Wildlife Trust SINC review of 1991, the 2002 Wildlife Site Review and the present (2010) review conducted by EECOS.

#### 2.3 Summary of Additions

- 2.3.1 Additions come from a variety of sources. There are a few small fragments of ancient and secondary woodland that went undetected or unappreciated during previous reviews. Several grasslands have been added, notably churchyards, which have been surveyed at more favourable times of year than when previously reviewed or were subjected to a better level of surveying afforded by the improved rights of access of this current study. One site (30, Brenthall and Barnsley Wood, Perry Spring and Reservoir) has been split into three: Ha33 Perry Spring, Ha35 New Hall Reedbeds and Ha37 Brenthall/Barnsley Woods.
- 2.3.2 Although some additions result from amendments to site boundaries, 10 completely new sites that have been added to the LoWS register. These are:
  - Ha2 Pinnacles Wood probable ancient woodland and recent scrub woodland
  - Ha3 Upper Wood urban ancient woodland
  - Ha6 St Mary the Virgin, Great Parndon unimproved/semi-improved churchyard grassland
  - Ha11 St Mary's, Little Parndon unimproved/semi-improved churchyard grassland
  - Ha14 Parndon Wood Link mature broadleaved woodland and hedgerow
  - Ha16 Parndon Wood North old woodland strip
  - Ha17 The Ravine long, linear wooded ravine
  - Ha24 St Andrews Church, Netteswellbury unimproved/semi-improved grassland
  - Ha26 Brays Grove urban woodland; old and may be ancient at least in part
  - Ha42 Chalk Lane Embankment species-rich site; important orchid population

#### 2.4 Changes to Old LoWS Network

2.4.1 The following table provides a brief summary of the Wildlife Sites identified in the 2002 Wildlife Site Review, noting if they have been deleted or been subject to any other amendments. Annex Report 2 documents these changes in more detail.

Harlow Woods SSSI Hunsdon Mead SSSI Stort Valley LNR

Hawkenbury Meadow LNR

(1) Third Avenue, Elizabeth way (2) Burnside Meadow (3) Kingsdon Lane Ponds (4) Edinburgh Way pond (5) Marsh east of Wyldwood (6) Harlow Common (7) ClavPit Nr The House (8) Hawkenbury Meadow LNR (9) Church End Pond (10) Third Avenue Meadow (11) Burnett Wood (12) Latton Common (13) Stewards Meadow (14) Maples/Burnett park (15) Town Park Ditches (16) Dadds Wood (17) Gravel Pit Spring (18) Vicarage Wood (19) Harolds Grove (20) Peldon Road (21) Pincey Brook Meadows (22) Little Pynchons (23) Second Avenue (24) Mead to west of Allende Avenue (25) Netteswell Rectory (26) Third Avenue (27) Fennels Field (28) Gilden Way Meadow (29) New Pond Spring (30) Brenthall & Barnsley Wood (31) Feltimores Meadow (32) Markhall Wood

(33) Netteswell Plantation

SSSI removed from LoWS network SSSI removed from LoWS network Separated into Ha13 Parndon Moat Marsh, Ha21 Marshgate Spring and Ha23 Maymead Marsh see (8), below

Unchanged Deleted in 2002 review Unchanged Deleted - does not meet criteria Unchanged Site modified by additions and deletions Unchanged Unchanged Downgraded to Potential LoWS Addition of grassland Minor boundary revision Unchanged Unchanged Deleted in 2002 review Unchanged, name changed to Ha22 Town Park Marsh Deleted in 2002 review Unchanged Unchanged Unchanged Amalgamated into Ha8 Canons Brook Complex Minor woodland addition Deleted in 2002 review Deleted – does not meet criteria Amalgamated into Ha5 Eastwick and Parndon Meads Downgraded to Potential LoWS Amalgamated into Ha8 Canons Brook Complex Additions at western and eastern ends; renamed Downgraded to Potential LoWS Addition of woodland to south Reedbed component separated into Ha33 New Hall Reedbeds; Perry Spring separated into new site Ha33 Minor addition to north; partial deletion on western boundary Minor boundary amendments Minor addition

(34) Eastwick Mead	Amalgamated into Ha5 Eastwick and Parndon Meads
(35) Latton Island	Amalgamated into Ha23 Maymead Marsh
(36) Gravel Pit Spring, New Hall Farm	Essentially unchanged
(37) The Moors	Deletion of eastern grassland
(38) Former 3M Research Ltd	Downgraded to Potential LoWS
(39) Fountains Farm Pond, Tye Green	Deleted – does not meet criteria
(40) Maunds Wood, Parington Road	Minor addition at southern end
(41) Ram Gorse	Unchanged
(42) Burnt Mill Lane	Deleted – does not meet criteria

2.4.2 The following list summarises the status of the earlier (1991) SINCs identified by the

Essex Wildlife Trust:

W1 Harolds Grove	Retained as LoWS Ha1
W2 Burnett Wood	Retained as Ha10
W3 Hospital/Risden's and Parndon Woods SSSI	SSSIs removed from LoWS system
W4 Maunds Wood	Retained and extended; now LoWS Ha19
W5 Netteswell Plantation and Wood	Retained as Ha20, with boundary amendments
W6 Vicarage Wood	Retained as LoWS Ha26
W7 Markhall Wood	Retained as LoWS Ha30
W8 Barnsley/Brenthall Woods	Retained at LoWS Ha37
W9 Marsh Lane Wood	Transferred into LoWS Ha40
G1 Parndon Mill Mead	Amalgamated into LoWS Ha5
G2 Harlow Station Marsh	Retained as LoWS Ha13 Parndon Moat Marsh
G3 Todd Brook Meadows	Included within LoWS Ha18
G4 Harlow Footbridge Fen	Partial loss to building; remainder retained as LoWS Ha21 Marshgate Spring
G5 Maymead Marsh and Meadow	Incorporated into LoWS Ha23
G6 Latton Common	Essentially unchanged as LoWS Ha29
G7 Harlow Common	Retained with additions and deletions as Ha38
M1 Marsh Lane Claypit and Copse	Woodland of the pit is retained as Ha39.

#### 2.5 Summary of Deletions

2.5.1 A number of sites no longer meet the current selection criteria and are unlikely to reach the threshold for LoWS designation, even with management, so they are recommended for deletion. Four of these sites have been demoted to the level of Potential Local Wildlife Sites (see Section 2.6 below).

#### 2.6 Potential Local Wildlife Sites

2.6.1 Those sites identified as Potential Local Wildlife Sites (PLoWS) do not form part of the LoWS network as they require either further survey work or a change in management (either more or less management) in order to achieve LoWS status. Although virtually any piece of semi-natural vegetation has the potential to be improved for wildlife, the list of PLoWS given in Appendix 3 is restricted to those "near misses" that just failed to make it onto the full LoWS Register. Some of the PLoWS are former Wildlife Sites that have deteriorated in quality and need restorative management in order to be able to re-consider them in the future. This issue is discussed further in chapter 3.

2.6.2 Many other sites were surveyed during this project that did not make the grade even of Potential Wildlife site. Some of the key sites that failed to make the grade are discussed in Section 2.9, below.

#### 2.7 Removal of SSSI from LoWS network

2.7.1 One fundamental change from the old SINC system that applied in Essex is that areas designated as Sites of Special Scientific Interest (SSSI) are no longer included in the LoWS network, in line with national guidance. In the 2002 Local Plan Wildlife Sites document this distinction had already been made. The following sites are removed from the LoWS network:

Harlow Woods SSSI Hunsdon Mead SSSI

For reference, these two SSSIs are identified in Appendix 4. Natural England should be consulted for precise boundary details and detailed descriptions, with the information provided here for convenient reference only.

#### 2.8 Site Numbering

2.8.1 Site numbering has also been changed in order to bring it in line with the rest of the county. The initial 1991 survey for SINCs the sites were roughly grouped into habitat categories of Woodland, Grassland, Mosaic, Freshwater, Coastal or Heathland, with an appropriate letter code and sequential number. The Wildlife Site Review 2002 gave a number sequence and simplified the system by having no indication of the habitat(s) present on the site, but were ordered seemingly randomly. A simplified county-wide system has been introduced whereby each site has a borough/district and number code, with all Harlow Sites now being prefixed "Ha" and ordered by scanning from west to east across the district.

#### 2.9 Other Areas of Land Surveyed

- 2.9.1 During the course of the survey, numerous other pieces of land were assessed for their wildlife value. The following section is a summary of the most significant of such sites, with a brief explanation as to why they were not considered even for Potential LoWS status.
- 2.9.2 St Mary's Church, Churchgate Street, Old Harlow

St Mary's Church, Old Harlow is clearly of historic importance to the district. This is a closely mown churchyard. The main area of botanical interest was found to be just to the west side of the church. Two species of interest, Burnet-saxifrage and Lady's Bedstraw were recorded in a localized area of the churchyard. The remainder of the site appeared to be of lesser floristic interest. This site would benefit from selective areas of habitat being allowed to develop longer grass swards to allow plants to seed.

#### 2.9.3 Water Lane Playing Field

This site is reported to support a population of Bee Orchids. This alone is not sufficient to qualify a site for LoWS status.

#### 2.9.4 Woodland north of Little Cattins

This belt of woodland appears on the late 19<sup>th</sup> century Ordnance Survey maps. Although mature woodland, it rather lacks the diverse ground flora assemblage and structure that would be looked for in a candidate LoWS.

#### 2.9.5 Longmans Meadow

This piece of grassland lies at the western end of Marshgate Spring. The site is rather more elevated and more freely draining than the adjacent marsh and hence has developed a species-poor rough grassland sward. It is not without some localised wildlife value and acts as a useful buffer zone between the marsh and the adjacent industrial developments to the west.

#### 2.9.6 Jean MacAlpine Park

This site is mainly managed as an amenity area. The grassland has limited species diversity. Many introduced native and non-native trees are present. It is clearly an important open space in the district and not without some wildlife value but is deemed to be of insufficient quality to become a LoWS.

#### 2.9.7 Oakwood North & Oakwood South

These two areas of woodland comprise rather uniform stands of recent secondary woodland and some plantation. They are lacking in the structural diversity and ground flora that would be required for LoWS status. The wildlife value of these woods could be improved by investing a good deal of time and effort in remedying these shortcomings but it is suggested that such investments would be better used elsewhere in the district.

#### 2.9.8 Compound area opposite St Marys, Little Parndon

This is a fragment of an scheduled monument site. It was not possible to gain access to the site directly but it appears to be mainly recent secondary scrub woodland growth. This will attract some wildlife e.g. nesting birds and insects, but is not thought to be close to LoWS status quality.

#### 2.9.9 Woodland south & west of Flex Way Caravan site

Some older trees are present, but site suffered from much tipping of household waste and lacked structural and floral diversity.

#### 2.9.10 Former track on west side of Markhall Wood

This shows on 19<sup>th</sup> century maps as a track running north from Latton. Although there are some large trees along the route, the track is now modified as a prepared surface for pedestrians and cyclists through an urbanised part of the district.

#### 2.9.11 Wood/Scrub east of Gravelpit Springs, Latton

This area lacked a good canopy structure; there are only scattered trees within the site. This is a very open habitat with nettle/ruderal vegetation dominating the ground flora.

#### 2.9.12 Second Avenue Roadside Verge

This is a long linear strip of grassland partly on a bank, to the north side of the A1025 Second Avenue road. The site has limited species richness and diversity.

#### 2.9.13 Marsh Lane Track

Some substantial hedges are found along the east side of this track, but west side lacks hedgerows. The track way is also surfaced and accessible to vehicles.

#### 2.9.14 Hedgerow, Gilden Way to Barnsley Wood

This long hedgerow runs north-south to the west of Hubbards Hall Farm. It shows up on old Ordnance survey maps as a significant linear feature. Today, it is rather fragmented and not especially species-rich.

#### 2.9.15 St Mary Magdalene Churchyard, Harlow Common

This is a small ancient yard, with a much larger and seemingly more recent burial ground behind. The flora of the churchyard is not of any particular note.

#### 2.9.16 Linking Ground Between Harlow and Latton Commons

Given that the two adjacent LoWs are notified because of their grassland habitats, this block of recent wood and scrub does not really contribute to the overall value of the LoWS. The main piece of grassland that is present in this linking area is mown for amenity purposes as a lawn and is very species-poor.

#### 2.9.17 Former Nursery, Riddings Lane

This site now comprises mainly Bramble and other scrub plus piles of dumped material. Whilst technically "previously developed land" it does not show many of the characteristic traits of the more interesting "brownfield" sites. That said, the site will not be without some wildlife interest and may support nesting birds, reptiles and some invertebrate populations.

#### 2.9.18 Town Park

As with many of the sites in this section, the Town Park will not be without some wildlife interest and it is a clearly important location for local residents to interact with and appreciate that wildlife. However, the grasslands are rather species-poor and the trees are not thought to be exceptional.

## 3. DISCUSSION

#### 3.1 Local Wildlife Site Network

- 3.1.1 The number of LoWS within the district has been revised following changes in policy and the application of new site selection criteria, which are more wide ranging and all-inclusive but at the same time more rigorous in their demands for a site to be adopted as a LoWS. Government guidance issued by Defra and adopted by The Wildlife Trusts movement states that SSSIs should not be considered within LoWS systems and, whilst there are valid arguments against this, the Essex Wildlife Trust now follows this guidance. Some of the sites that were removed from the network are now considered to be of insufficient quality when measured against the new criteria, either because of a decline in the habitat present over the intervening years or because the LoWS selection criteria are now more stringent.
- 3.1.2 Excluding the Green Wedges, there are only two main areas with a rural landscape in Harlow. Firstly, the far northwest with floodplain and pastoral grasslands, exemplified by the new Eastwick and Parndon Meads LoWS; and secondly, arable and grassland habitat to the east and south of Old Harlow. Whilst development is seen as a threat to the countryside in general, loss of LoWS land between 2002 and 2010 to development has been negligible. It is accepted that increased development can lead to an increase in the recreational use of LoWS. This is evident in the deletion of Dadds Wood as a Wildlife Site. This small fragment of ancient woodland, close to the civic centre, has become little more than a group of trees, heavily trampled and isolated from the open countryside. It is important that future development recognises LoWS and ensures that there are no adverse implications, particularly former rural Sites, such as Ha32 Gravelpit Spring, New Hall, that are now located in a suburban landscape.

#### 3.2 Distribution of LoWS

3.2.1 Harlow District LoWS (Fig. 1) are distributed in three distinct bands running eastwest. To the north is a series of floodplain and other wetland sites along the Stort valley, forming the core of the Stort Valley Living Landscapes area (see Fig. 2 and Section 3.2, below); centrally, from the Pinnacles area through to New Hall is a series of old woodlands and grasslands representing old countryside habitats; and to the south are the woodlands and commons of Parndon and Latton Bush areas.









3.2.2 Many of the LoWS are found within the Green Wedges which are a major feature of Harlow. These were originally incorporated into the layout of the town to provide corridors of land kept relatively free from development. Green Wedges were intended to act as arterial links through the town, to provide recreational open spaces and areas for nature conservation. Although not strictly a wedge, a band of important wildlife habitat, interspersed with amenity grassland runs along the southern part of the district, straddling the Harlow/Epping Forest District boundary. Here there is a combination of the SSSI of Harlow Woods and the extensive grassland LoWS of Harlow and Latton Commons, this latter site linking with the Epping Forest District LoWS Ep90 Mark Bushes Complex. These sites form part of the Living Landscape area 13 (Fig 2).

#### 3.3 Living Landscapes

3.3.1 Nationally, The Wildlife Trusts (the umbrella organisation covering each of the individual county Trusts) is promoting the concept of "Living Landscapes", which are significant landscapes for wildlife that are present across the country. They include important landscape features, such as river valleys and estuaries; characteristic landscapes and land uses, such as clusters of hamlets and villages with ancient greens and drove ways and significant clusters of good wildlife habitat such as unusually well wooded areas. For Essex, these Living Landscape areas are spread right across the county, with two currently covering parts of Harlow District (see fig 2.); these are discussed below with reference to their associated LoWS.

#### 3.3.2 Stort Valley: Harlow

This is the more significant of the two Living Landscape zone in the district. It straddles the northern boundary of the district and Hertfordshire and extends into the neighbouring districts of Epping Forest and Uttlesford. It includes ten of the 42 Harlow District LoWS:- Eastwick and Parndon Meads (Ha5); Ram Gorse (Ha9); St Mary's, Little Parndon (Ha11); Parndon Moat Marsh (Ha13); Marshgate Spring (Ha21); Town Park Marsh (Ha22); Maymead Marsh (Ha23); Wyldwood Marsh (Ha32); Marsh Lane Pit Wood (Ha39) and Pincey Brook Complex (Ha40).

#### 3.3.3 Parndon Woods: Harlow

This area includes sites within Harlow and Epping Forest Districts, including Parndon Common (Ha12); Parndon Wood Link (Ha14); Parndon Wood North (Ha16); and

Latton Common (Ha27). The most significant areas within this Living Landscape area are Harlow Woods SSSI and additional woodland within Epping Forest District. This area also provides a buffer to the urban extent of Harlow town.

3.3.4 The presence of a large number of LoWS in the central band across the district could warrant the designation of the central belt as a new Living Landscape area and this possibility should be explored further. The deliberate act of leaving swathes of countryside within large scale urban development to form areas for recreation and amenity, landscaping and wildlife is one of the core features of the Living Landscapes policy: to enhance the value of key nature conservation sites by ensuring good connectivity within the wider countryside, allowing species to move freely between key sites, to colonise new areas and to build viable long-term populations. The ability for local residents to experience and help care for the wildlife sites within these areas is also a key quality.

#### 3.4 UK BAP Priority Habitats

- 3.4.1 UK BAP Priority Habitats are the basis of many of the habitat selection criteria used during this review. Many local authorities monitor these habitats within their Annual Monitoring Reports. There are, therefore, clear overlaps between the LoWS system and the Biodiversity Action Planning process for habitats. The Essex BAP habitats closely mirror definitions within the UK BAP, providing a focus for implementing national goals at a local level.
- 3.4.2 Both UK BAP and Essex BAP habitats and species have been changed in the past few years. Nationally, some habitats have been added – Ponds and Hedgerows, for example – and others have had their name and/or scope changed – "Ancient or Species-rich Hedgerows" has changed to just "Hedgerows", for example. In total, 695 species have also been added to the UK Priority List, encompassing birds, freshwater fish, reptiles, amphibians, higher and lower plants, fungi, marine species, invertebrates and mammals. The Essex BAP has also been extended by the addition of habitats and species, most of which correspond to national BAP habitats and species. The identification on the Register sheets of the relevant BAP habitats found within each LoWS should allow land managers, planners and countryside agencies to easily see how the management of any site could be contributing to these larger BAP projects.

#### 3.5 UK BAP Habitats within Harlow District

3.5.1 The following UK BAP habitats occur within the District:

- Coastal and Floodplain Grazing Marsh
- Hedgerows
- Lowland Fens
- Lowland Meadows
- Lowland Mixed Deciduous Woodland
- Open Mosaic Habitats on Previously Developed Land
- Ponds
- Reedbeds
- Wet Woodland
- 3.5.2 At first sight, other BAP habitats, such as "Arable Field Margins" might be added to the list, but the definition of this habitat type is quite precise so that not all field margins qualify. There are currently no known examples of this BAP habitat within the district, but this might change in the future. The same is true of the "Rivers" habitat, which again has a quite demanding definition.
- 3.5.3 Floodplain grazing marsh is one of the most significant UK BAP habitats present in the district and this is recognised in the much expanded site Ha5 Eastwick and Parndon Meads. It adjoins the SSSI of Hunsdon Mead which comprises another considerable extent of this fragile habitat types, although much of the SSSI lies over the border in Hertfordshire. Eastwick and Parndon Meads also link upstream with the Town Park Marsh (Ha22), Maymead Marsh (Ha23) and Marshgate Spring (Ha21) LoWS all of which have been derived from floodplain grassland even though some areas have now evolved into swamp and fen habitats. To the northeast of Harlow town, Wyldwood Marsh (Ha34) forms part of a chain of sites in the upper Stort Valley that continue up into Epping Forest and Uttlesford districts in Essex and further sites in Hertfordshire.
- 3.5.4 The scope of the UK BAP Priority Habitat covering field boundaries has been expanded to include the majority of intact, semi-natural field boundaries under the new title "Hedgerows". The definition requires a hedgerow to consist of more than 80% cover of woody species native to the county. There appears to be no requirement for species diversity or for age, but it is intended that all hedgerows with

a rich basal flora will also be included. It has been estimated that 84% of hedgerows in the UK will qualify and the same kind of percentage could be expected for Harlow District. In the past, there has been a presumption that any UK BAP Priority Habitat would qualify a site for consideration as a LoWS, and in most cases it is possible to include all examples of the habitat. With hedgerows it would serve no purpose to include every qualifying hedgerow, as this would lead to a proliferation of LoWS that would dilute their importance at a district and county level. Therefore, there is a need to focus on a representative selection of hedgerows or hedgerow systems to ensure the inclusion of the habitat within the network.

- 3.5.5 The small and highly urbanised character of Harlow means that there are no truly large scale field hedgerow networks remaining. However, the value of hedgerows in providing connectivity between other sites of nature conservation value is recognised in the inclusion of LoWS Ha14 Parndon Wood Link and the boundary hedges of Ha12 Parndon Common, both providing connectivity between the two separate sections of the Harlow Woods SSSI. Site Ha32 Gravelpit Spring, New Hall has been extended to include a narrow strip of woodland and hedgerow to connect the main body of the site to Ha37 Brenthall and Barnsley Woods.
- 3.5.6 Lowland Fen habitats are found along the Stort valley, most notably within Ha13 Parndon Moat Marsh and Ha21 Marshgate Spring. Survey work carried out by EECOS in the summer of 2010 has demonstrated that both of these sites support important assemblages of wetland invertebrates, with several species known from nowhere else in Essex. Parndon Moat Marsh has a strong population of a UK BAP species – Desmoulin's Whorl Snail *Vertigo moulinsiana*.
- 3.5.7 Lowland Meadows are defined within the UK BAP as conforming to a particular grassland type within the National Vegetation Classification. This is the "traditional old hay meadow" MG5 *Cynosurus cristatus Centaurea nigra* grassland and this sward type still occurs in some grasslands, as indicated in the individual LoWS citations. However, extensive re-seeding with commercially available seed mixes that mimic this grassland type can mask the identity of truly old examples of this grassland. This is particularly the case with Harlow, where landscaping of broad road verges has created many areas with similar characteristics. Modern grasslands, though a useful resource in terms of providing a flower-rich resource, do not have

the associated fungi, mosses, soil invertebrates and other fauna associated with old grassland.

- 3.5.8 The UK BAP Lowland Mixed Deciduous Woodland is not restricted to ancient woodland, though the best examples of this habitat type invariably are ancient. Ancient woodland is well represented within the LoWS register (for example, Ha1 Harolds Grove, Ha3 Upper Wood, Ha10 Burnett Wood, Ha19 Maunds Wood and Ha37 Brenthall and Barnsley Woods) as are woods that are doubtfully ancient but which nevertheless have a good woodland structure, flora and fauna (such as Ha26 Vicarage Wood and Ha27 Brays Grove). Mature but technically "recent" broadleaved woodland also has a role to play in adding habitat diversity to such sites as Ha21 Marshgate Spring, Ha29 Latton Common, Ha8 Canons Brook Complex and Ha25 The Moors.
- 3.5.9 Brownfield land (the UK BAP "Open Mosaic Habitats on Previously Developed Land") is strongly represented in some parts of Essex, but this is not the case with Harlow. It is often the unwitting by-product of sand and gravel extraction or large-scale demolition of old industrial units. Within the district, one area has been identified as a Potential LoWS (PHaLoWS6 East Road Brownfield), since it appears to support several of the habitat characteristics of brownfield land. Detailed survey work, including invertebrates, flora and amphibians and reptiles, would be needed to confirm this potential interest. It is recommended that prior to the determination of any future planning application for this site, the council should seek a detailed ecological report on the land, including those features listed above.
- 3.5.10 A new Priority Habitat of 'Ponds' has also been included within the recent national review, with qualifying features covering a broad spectrum of features including marginal or aquatic plant communities and the presence of rare or otherwise significant species. This will lead to a large number of ponds qualifying for consideration as LoWS with a similar problem to that described for Hedgerows above. A similar, representative selection of ponds will need to be added to the LoWS network, preferably linked to existing sites or other valuable habitats. The artificial reservoir at Ha33 Perry Spring is perhaps at first sight an unusual inclusion here, but the site supports a very varied aquatic flora and fauna and is of particular value in a suburban landscape. Two pond areas have been put on the Potential

LoWS register (Appendix 3). Both Church End Pond and Meadow (PHaLoWS3) and Challinor Ponds (PHaLoWS9) have the potential to be improved to the extent that they merit inclusion in the LoWS register, with detailed survey work a key baseline requirement.

- 3.5.11 Again, many ponds have been included within the LoWS network, such as at Upper Wood (Ha3), Burnett Wood (Ha10), Brenthall and Barnsley Woods (Ha37) and Latton Common (Ha29). Although these ponds may not merit inclusion as a LoWS on their own, they are intimately associated with their own LoWS so that they undoubtedly add to the overall habitat interest and biodiversity of the Sites.
- 3.5.12 Reedbeds are also not strongly represented in the district, but the relatively new beds within the New Hall development (Ha35 New Hall Reedbeds) are felt to be of sufficient quality to merit LoWS status. Other stands of reed occur at Ha21 Marshgate Spring. Even small stands of reed can support some of the characteristic fauna of the larger beds, including invertebrates. The success in attracting birds such as Reed and Sedge Warbler will depend more on the levels of human activity and disturbance.
- 3.5.13 Wet woodland habitat is very rare in the district, making all such examples of interest. Examples of this habitat are found at Ha13 Parndon Moat Marsh and Ha21 Marshgate Spring. An extensive area of riverside woodland has been identified as a potential LoWS (PHaLoWS5 Stort Woodland), which has the potential to be restored to wet woodland.

#### 3.6 Essex BAP Species and Habitats

3.6.1 A number of Essex BAP species have a general applicability across the county and across any given district. These include Brown Hare, bats, Skylark, Song Thrush, Water Vole and Great Crested Newts. Others are rather more site specific.

Otter – The River Stort is an important habitat for this species, with consideration of its requirements needed at a landscape scale.

Black (or Water) Poplar – is one of the scarcest of British trees. Three specimens are known to occur within Harlow: at East Farm in the extreme northwest; at Woodhill just beyond the southern end of The Ravine LoWS; and near Golding's

Farm, Tye Green. There are opportunities to plant other specimens e.g. to augment the Stort Woodland Potential LoWS and within the Eastwick and Parndon Meads floodplain and Wyldwood Marsh.

3.6.2 Some Essex BAP habitats also occur throughout the county, such as hedgerows and green lanes, ancient woodland and, at low density, species-rich grassland. The one Essex BAP habitat that stands out for Harlow is the rather "cross-curricular" Urban Areas HAP. This recognises that woodland, grassland, wetlands and other habitats have a particular value when they are in urban or suburban locations in terms of environmental education, contact with wildlife in many forms and quality of life as part of open spaces for recreation and amenity. The very fact that green wedges were designed into the development of Harlow means that there are many important wildlife sites within easy reach of a high proportion of the population (Figure 1).

#### 3.7 County Context

- 3.7.1 Essex has 14 Local Authority/Unitary areas, most of which have had a LoWS review within the last 6 years. They range from the very small, highly urbanised Harlow, Southend-on-Sea and, to a lesser extent, Castle Point up to the large, agriculture-dominated expanses of Uttlesford and Braintree districts. These differing landscapes can distort attempts to analyse which areas are particularly rich or poor in terms of their LoWS resource, but the following section is a broad summary of the picture as it stands.
- 3.7.2 The following table provides the most up to date data for each of the Local Authority areas in Essex (it should be noted that Southend and Brentwood have not been reassessed since the early 1990s and the number of LoWS shown here is perhaps fewer than might otherwise be the case. The Local Authority areas have been listed in order of increasing size and one particular aspect of the data has been plotted as Figure 3.

LA Area	No. of LoWS	Area of LoWS (ha)	Local Authority Area (ha)	% land as LoWS
Harlow	42	300.0	3053.6	9.82
Castle Point	32	671.7	6317.8	10.63
Southend	10	121.6	6785	1.79
Basildon	54	1068.7	11044.5	9.68
Brentwood	138	1027.1	15311.7	6.71
Thurrock	70	1074.2	18431.9	5.83
Rochford	39	359.6	26341.7	1.37
Epping	222	1680.8	33898.8	4.96
Chelmsford	150	1654.2	34299.8	4.82
Colchester	168	1963.2	34871.8	5.63
Tendring	125	1216.8	36506.8	3.33
Maldon	89	1066.6	42659.7	2.50
Braintree	251	1965	61170.8	3.21
Uttlesford	281	1701	64118.2	2.65



3.7.3 Figure 3, above, is a plot of the % of land identified as LoWS for each district, ranked in order of increasing land area. It is difficult to analyse these data too finely, but the overall summary is that Harlow District has a relatively high proportion of land designated as LoWS compared to other Essex authorities.

## 4. Recommendations

This section summarises the main recommendations of the review. The recommendations have both policy and management implications.

#### 4.1 Recommendation 1 – Adoption of LoWS

- 4.1.1 The sites listed in Appendix 1 are recommended for inclusion in the LoWS network and should be adopted in the future Local Development Framework.
- 4.1.2 This report has reviewed the LoWS sites identified in the Replacement Harlow Local Plan and has assessed them against the current criteria for LoWS. This has reconfirmed that most of the sites identified in Policy NE18 of the Harlow Local Plan should be retained as LoWS. However some of the Policy NE18 sites do not now meet the selection criteria for LoWS so it is recommended that these sites are not included in the emerging LDF.
- 4.1.3 In addition, a number of new sites have been identified by this review, which meet the selection criteria, and therefore are recommended for inclusion in the LoWS network. The LDF should provide an appropriate policy framework to ensure the protection and enhancement of LoWS and their setting as well as recognising their role within the wider Green Infrastructure Network.
- 4.1.4 It is also proposed that the site code numbers proposed in this Review are used when identifying LoWS.

#### 4.2 Recommendation 2 – Deletion of Sites

- 4.2.1 The sites or areas recommended for deletion in this report should not be included in the LoWS network identified in the future Local Development Framework.
- 4.2.2 This review has recommended that some of the existing Local Wildlife Sites (listed in Policy NE18) should not be included in the LoWS network to be identified in the future LDF. However, because the LDF is not expected to be adopted for some time, the Council may wish to reappraise these sites, in due course, before they are removed from the LoWS network.

#### 4.3 Recommendation 3 – Potential LoWS

4.3.1 Seek the inclusion of Potential Sites into the formal LoWS network through improvements.

- 4.3.2 The study identified a number of Potential Local Wildlife Sites that could not be designated as part of the LoWS network at this stage because either additional information is required or a change in management practices is needed. A subsequent review of the information available about these sites, or a change in management practices may lead to a site being classified as LoWS in the future.
- 4.3.3 The Council should explore measures to address these issues and seek to include the potential sites into the LoWS network in the future. This could be achieved through policy proposals in the LDF, improvements to the existing management practices or by funding through Section 106 contributions.

#### 4.4 Recommendation 4 – Landowner Liaison

- 4.4.1 Landowners should be notified of sites in their ownership.
- 4.4.2 Landowners should be made aware of any LoWS designation affecting their land. The Essex Wildlife Trust's Wildlife Sites Officer has been working alongside Local Authorities to identify owners, undertake initial meetings to discuss the LoWS project and to encourage the adoption of simple management strategies to achieve "Positive Conservation Management" for each site. Harlow Council should seek to notify landowners of the changes to the LoWS network where appropriate.
- 4.4.3 Landowners should be encouraged to work with the Council and other partners to ensure that appropriate management practices are undertaken for the Sites. Landowners could also be offered further advice and assistance to explain the LoWS project, its implications and opportunities.

#### 4.5 Recommendation 5 – Monitoring and Review

- 4.5.1 Maintain information about the condition of LoWS in the district.
- 4.5.2 The LoWS network should not be a static system. There have been considerable changes in the agricultural environment and the quantity and quality of information regarding the species and habitats present for the County since the last review. LoWS policy, particularly in respect to site selection criteria, is also likely to evolve further in response to national guidance. This process is likely to continue with further agricultural change and as the impacts of climate change become clearer. It is important that the Council maintains an up to date database of the condition of

sites in the district so it is able to understand and respond to changing pressures on the LoWS network.

- 4.5.3 The condition of sites in the district can be monitored in a number of ways. Essex has adopted 'Delivery of Biodiversity through Local Sites' as an "index" of how well biodiversity is being looked after in the county. Essentially, this means that the Local Area Agreement Biodiversity Indicators (LAABI) Steering Group, acting as the LoWS Partnership and comprising representatives from the Essex Wildlife Trust, the County Council and Local Authority, will be striving to ensure that a certain percentage of all LoWS will be under appropriate management at key milestone dates. This cannot be done without the co-operation of the relevant land owners.
- 4.5.4 Monitoring of management outcomes and Site condition is also important. Ideally, each Local Wildlife Site should be visited every year, to monitor its condition, identify threats and to increase our knowledge of the communities present. In addition, further potential Local Wildlife Sites are likely to arise, through habitat creation or because of new information or improved access and these sites will need to be assessed against the site selection criteria. As the criteria change there will also be a need to review the status of the existing sites. In reality, it may be more practicable to have a more structured programme of monitoring, with all sites reviewed on a cycle, or woodlands reviewed less often than grassland sites, as a reflection of their slower rate of change unless actively managed.

#### 4.6 Advice to Harlow Council

#### Other sites of ecological interest in Harlow

- 4.6.1 There remain many places that, although are not designated as LoWS, are of importance to wildlife at a more local level. A LoWS designation should not be considered as a convenient short-cut to deciding whether or not an area has environmental assets or whether an application is likely to have environmental impacts. It is important that the contribution that other sites have are recognised and their contribution to the wider Green Infrastructure Network understood.
- 4.6.2 There will be many other sites with implications for wildlife and the environment that will require appropriate ecological assessment when determining the impact of a

planning application. Wildlife implications on these sites may take the form of the presence of legally protected species (e.g. Badgers, bats, Water Voles, nesting birds and Great Crested Newts), or small fragments of habitats that might, if larger or less ecologically isolated, have qualified for LoWS status.
# APPENDIX 1 SUMMARY TABLE OF LOCAL WILDLIFE SITES

Site Reference No. and Name	Area (hectares)	Grid Reference
Ha1 Harolds Grove	3.2	TL 423089
Ha2 Pinnacles Woodland	2.0	TL 425094
Ha3 Upper Wood	0.3	TL 426084
Ha4 Third Avenue/Elizabeth Way Verge	0.5	TL 429092
Ha5 Eastwick and Parndon Meads	81.4	TL 429112
Ha6 St Mary the Virgin, Great Parndon	0.5	TL 432089
Ha7 Hawkenbury Meadow	1.6	TL 434088
Ha8 Canons Brook Complex	20.9	TL 435093
Ha9 Ram Gorse	1.9	TL 435108
Ha10 Burnett Wood	2.8	TL 436075
Ha11 St Marv's. Little Parndon	0.2	TL 438110
Ha12 Parndon Common	5.6	TL 442070
Ha13 Parndon Moat Marsh	3.1	TL 442111
Ha14 Parndon Wood Link	0.5	TL 443067
Ha15 Stewards Meadow	0.4	TL 444079
Ha16 Parndon Wood North	0.2	TL 445072
Ha17 The Ravine	2.5	TL 445086
Ha18 Third Avenue. Todd Brook Grasslan	ds 15.3	TL 445093
Ha19 Maunds Wood	2.5	TL 447075
Ha20 Netteswell Plantation	9.3	TL 449094
Ha21 Marshgate Spring	5.4	TL 452115
Ha22 Town Park Marsh	8.3	TL 450115
Ha23 Maymead Marsh	6.2	TL 453118
Ha24 St Ándrew's, Netteswellbury	0.3	TL 456093
Ha25 The Moors	2.1	TL 458096
Ha26 Vicarage Wood	4.4	TL 458103
Ha27 Brays Grove	1.4	TL 462092
Ha28 Gravelpit Springs, Latton Farm	2.2	TL 462096
Ha29 Latton Common	30.7	TL 466079
Ha30 Markhall Wood	12.8	TL 467102
Ha31 Kingsdon Lane Ponds	0.2	TL 473091
Ha32 Gravelpit Spring, New Hall	1.3	TL 473104
Ha33 Perry Spring	2.9	TL 474097
Ha34 Wyldwood Marsh	15.4	TL 475129
Ha35 New Hall Reedbeds	1.7	TL 476103
Ha36 Newpond Spring	2.0	TL 476104
Ha37 Brenthall/Barnsley Woods	12.9	TL 478099
Ha38 Harlow Common	24.6	TL 478086
Ha39 Marsh Lane Pit Wood	0.2	TL 481126
Ha40 Pincey Brook Complex	2.6	TL 486126
Ha41 Feltimores Meadow	7.5	TL 488109
Ha42 Chalk Lane Embankment	0.2	TL 495112

**Total Area** 

300.0 ha

# HARLOW DISTRICT COUNCIL

# LOCAL WILDLIFE SITE REVIEW 2011

# FINAL

March 2011

# **ANNEX REPORT 1**

# LOCAL WILDLIFE SITE SELECTION CRITERIA

Produced by the Essex Local Wildlife Sites Partnership

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EECOS Abbotts Hall Farm, Great Wigborough, Colchester, Essex, CO5 7RZ 01621 862986, eecos@essexwt.org.uk

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Working together for Harlow

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These selection criteria have resulted from the input of a number of people and organisations throughout Essex. The work of the original Wildlife Site review panel<sup>1</sup> was particularly important and led to the production of the County's first selection criteria by Adrian Knowles, working for the Essex Wildlife Trust's consultancy, EECOS. These were the starting point for the current document, which has been developed in light of consultation and feedback from a wide range of people. The following made particularly important contributions:

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#### Luke Bristow

Wildlife Sites Officer, Essex Wildlife Trust, April 2008 Second Edition edited by Adrian Knowles, EECOS, June 2009 Minor corrections and amendments made January 2010

<sup>1</sup> The panel met for a series of meetings between 1998 - 1999

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### **1** INTRODUCTION

- 1.1 Essex is one of the most populous counties in England, and surrounding the busy towns much of the countryside is now under arable cultivation. Despite this, it remains important for wildlife. In particular, it has one of the largest coastlines of any county stretching to over 300 miles, much of which supports internationally important numbers of over-wintering wildfowl and wading birds.
- 1.2 Our largest river, the Backwater Estuary, is recognised by WWF as one of the top five marine biodiversity hotspots in the UK. Away from the coast there are several large forests of national and international significance, most notably Epping Forest and Hatfield Forest, with numerous ancient veteran trees. Furthermore, the oxlip woods of the north-west are among the best preserved and bio-diverse in eastern England. Similarly, south Essex is home to a significant proportion of the UK's ancient Hornbeam woods. Finally, the Thames valley supports unique and rich assemblages of invertebrates.
- 1.3 A considerable proportion of this important resource is protected by statutory national and international designation. However, much has no such legal protection and their continued survival is ensured largely as a result of their recognition as 'non-statutory' wildlife sites within the local planning system.
- 1.4 The publication of 'Local Sites: Guidance on their Identification, Selection and Management' by the Government's Department for Environment, Food and Rural Affairs (Defra) in 2006 demonstrated the need to review the existing protocols and selection criteria used to identify non-statutorily protected Wildlife Sites within the county. This presented an opportunity to consult widely with the 'biodiversity' and 'planning' communities who have typically been the principal users of the criteria, and to revise them in light of the new national guidance. This exercise was coordinated by the Essex Wildlife Site Project (EWSP) and supported by its Advisory Group.
- 1.5 Defra's guidance sets out the role and value of Local Sites, namely:

- Local Site systems should select all areas of substantive nature conservation value;
- Local Sites networks should provide a comprehensive, rather than representative, suite of sites. This means that there should be a presumption that ALL sites meeting the selection criteria would be selected;
- Local Sites provide wildlife refuges for most of the UK's fauna and flora and through their connecting and buffering qualities, they complement other site networks;
- Local Sites have a significant role to play in meeting overall national biodiversity targets;
- Local Sites represent local character and distinctiveness; and
- Local Sites contribute to the quality of life and the well-being of the community, with many sites providing opportunities for research and education.
- 1.6 Defra recommends the use of a standard name: 'Local Wildlife Site' (LoWS) for all non-statutory sites of biological interest, which is adopted in these criteria. Similarly, those sites of geological interest (which might previously have been referred to as Regionally Important Geological/Geomorphological sites, RIGS) can be referred to as Local Geological Sites. The use of the word 'Local' might seem to devalue sites previously referred to as being of 'County' importance. However, this change ensures consistency with national guidance and associated policy documents such as Planning Policy Statement 9<sup>2</sup> (PPS9), but does not alter their value which remains unchanged: 'LoWS are Wildlife Sites of County Importance'.
- 1.7 Another important change from previous criteria is the omission of Sites of Special Scientific Interest (SSSI), which are now deemed to be outside the LoWS system. There are valid arguments for and against this decision, but the stance taken is in line with Defra guidance. There is a danger of assuming that LoWS are therefore

<sup>2</sup> Planning Policy Statement 9: Biodiversity and Geological Conservation, ODPM, August 2005

in some way "inferior" to SSSIs, but this attitude should be strongly resisted. It is accepted by Natural England that the SSSI network identifies only a representative selection of sites exhibiting any particular nature conservation feature, giving rise to the possibility of other SSSI-grade sites not actually being afforded SSSI designation because they merely duplicate that nature conservation interest. Such sites ought to be identified within the LoWS system and are arguably of national interest albeit lacking the formal designation as such. Other LoWS are recognised as being of lower quality than an adjacent SSSI but providing a valuable buffering or habitat extension role. Thus, the roles and importance of SSSIs and LoWS can be subject to great overlap and interdependence and LoWS should not be too lightly dismissed as "second tier" sites. Notwithstanding this, geological SSSIs will still be considered where they merit selection on nature conservation interest alone.

- 1.8 Formerly in Essex, Local Nature Reserves (LNRs) were automatically included within the LoWS network. LNRs embrace a wide range of nature conservation values and educational benefits, both of which are of importance to LoWS systems and it is expected that most LNRs will be identified as LoWS. However, this will be done with specific reference to the nature of the wildlife or education value of the site rather an automatic consequence of its designation as an LNR.
- 1.9 Despite the coverage of Local Geological Sites in the recent Defra guidance, no attempt has been made in this document to produce criteria to enable their selection. It was felt the current Essex Wildlife Sites Project did not have sufficient expertise or resources to address these sites adequately. This position will be reviewed should circumstances become more favourable in the future, with the hope that a complimentary document to this will be published to support the selection of 'Local Geological Sites.' The lead group considering sites of local geological importance in Essex is "GeoEssex" and they should be consulted in all matters relating to the conservation of geodiversity.
- 1.10 However, geologically interesting sites will be considered where they merit selection on nature conservation interest alone and there can be a degree of

overlap in this respect. Exposures of sandy deposits, be they in a quarry or a naturally eroding coastal cliff, can display features of geological interest and provide bare ground nesting and foraging habitat for a characteristic array of invertebrates. A natural river channel with meanders, riffles and pools with natural bank profiles is likely to be of some geomorphological interest in Essex and would provide a complex suite of riverine habitats that would be expected to support a good biodiversity as a result.

1.11 In addition to the Defra guidance, the importance of a robust set of criteria for identifying Local Wildlife Sites is further underlined in PPS9, with paragraph 9 stating that:

"...Criteria-based policies should be established in local development documents against which proposals for any development on, or affecting, such (Local) sites will be judged. These policies should be distinguished from those applied to nationally important sites."

In this respect, the "nationally important sites" referred to are SSSI, although as explained above some LoWS might rightly also be viewed as being of comparable national interest.

1.12 Therefore, these selection criteria provide the basis for local authorities in Essex, with responsibility for publishing Local Development Documents, to develop such policies. Furthermore, protecting Local Wildlife Sites underpins the Biodiversity Action Plan (BAP) process, and is a key way in which local authorities can deliver their duty to biodiversity outlined under the Natural Environment and Rural Communities (NERC) Act 2006.

# 2 HISTORY OF ESSEX WILDLIFE SITE SELECTION CRITERIA

- 2.1 The first comprehensive register of Local Wildlife sites (referred to at the time as SINCs - Sites of Importance for Nature Conservation) stemmed from a countywide Phase I survey completed by Essex Wildlife Trust in the early 1990s, commissioned by the then Nature Conservancy Council (Now Natural England) and the majority of the 14 Local Authorities within Essex, with support also being provided by Essex County Council. Selection was based largely on habitat quality, and relied quite heavily on the 'professional judgement' of those involved in the fieldwork. The selection of sites was made more rigorous with the development in 2004<sup>3</sup> of a new set of criteria building on work completed by the Essex Review Panel back in 1999. This was the starting point for the current document, which introduces a standardised protocol for survey and selection, together with new and revised criteria in light of changes in national planning and nature conservation policy, and our understanding of certain species and habitats. For example, the appreciation of the importance of derelict "brownfield" sites for wildlife has altered significantly in recent years.
- 2.2 The objective was to produce a more robust set of criteria that clearly illustrate the rationale behind each site's selection. To facilitate this, a program of consultation with key stakeholders<sup>4</sup> was initiated in 2006 by the Essex Wildlife Sites Project (EWSP) culminating in the production of the first edition of this document in 2008. The EWSP is coordinated by Essex Wildlife Trust with support from an Advisory Group consisting of representatives from the following organisations: Essex County Council, Environment Agency, Natural England, Biological Records Initiative in Essex, Essex Field Club, Essex Planning Officers Association Planning Policy Forum and the Essex Biodiversity Project. At the time of writing (March 2009) this group is being reorganised as the Essex Local wildlife Sites Partnership (ELWSP).

<sup>3</sup> EECOS contract for Chelmsford Borough Council review of Local wildlife Sites within the borough

<sup>4</sup> See Acknowledgements

# **3 PROTOCOL FOR SURVEY, EVALUATION AND SELECTION**

3.1 The original suite of Local Wildlife Sites in Essex, referred to as Sites of Importance for Nature Conservation (SINCs), were identified as part of a county-wide Phase I habitat survey<sup>5</sup> undertaken between 1987 and 1994 by Essex Wildlife Trust. Subsequently, LoWS have typically been selected as part of borough, district or unitary authority 'reviews' commissioned by the relevant local authority. This section aims to ensure all future reviews in Essex follow a standard '5 step' approach (see **Box 1**) which is consistent with national guidance.

## Box 1 Local Wildlife Site Review '5 step' Process

1.	Identification of potential sites for assessment:
a.	Consult EWSP 'potential' LoWS register;
b.	Complete local consultation.
2.	Arranging access for survey
a.	Where possible, identify LoWS owners (e.g. land registry search);
b.	Strive to contact LoWS owners to arrange access for survey;
3.	Site survey and assessment
a.	Field survey using standard EWSP monitoring form;
b.	Collate supporting data (e.g. biological records)
4.	Site evaluation and selection
a.	Evaluate sites against selection criteria;
b.	Review candidate sites by Local Selection Panel;
C.	Endorsement by EWSP Advisory Group.
5.	Notification
a.	Supply notification sheet to LoWS owners.

# 3.2 IDENTIFICATION OF POTENTIAL SITES FOR ASSESSMENT

3.2.1 The first step of any review should be to identify the sites to be visited during the field survey period. The Essex Wildlife Sites Project maintains a continually updated register of potential sites across the county, and this, together with the existing register of LoWS, should form the starting point of any review. It is also

<sup>5</sup> Joint Nature Conservation Committee, (1993) Handbook for Phase 1 survey – a technique for environmental audit.

recommended that consultation is sought with local authorities, local people and organisations with an interest in nature conservation, to identify additional potential sites. This is best achieved through the various local wildlife/biodiversity groups and forums that meet in many of the local authority areas.

3.2.2 In some instances, reviews of LoWS may form part of a wider more detailed habitat study such as a Phase 1 habitat survey. In these cases further 'potential' sites may be discovered during the field survey period. None-the-less, the following process should still apply.

#### 3.3 ARRANGING ACCESS FOR SURVEY

3.3.1 The Defra guidance states:

"Site owners should, whenever possible, be contacted and asked for access permission to survey and monitor sites. This initial engagement will provide an ideal opportunity to discuss the implications of the survey and potential site selection and offer an opportunity for the site owner to raise any issues."

- 3.3.2 In light of this, the Essex Wildlife Sites Project view contacting landowners to arrange survey access as vitally important. When commissioning LoWS reviews, local authorities should ensure that sufficient resources and time are allocated for this important task. The Essex Local Wildlife Sites Partnership holds LoWS ownership details for some sites, but at the time of publication it is far from comprehensive. As a result, a land registry search may prove a particularly useful approach to adopt. Whilst not all land is registered, it does provide a legitimate context in which to write to landowners. Additional information on landownership is also likely to be gathered as part of the local consultation described in Para. 3.2.1. Furthermore, there is likely to be some merit in contacting organisations representative of particular groups of landowners, e.g. the National Farmers Union (NFU).
- 3.3.3 Contacting all landowners prior to survey may not always be practical or possible, but it is important to demonstrate that a reasonable effort has been

made. Local planning authorities may be able to provide legal 'Notices of Entry' to ecological surveyors, for the purpose of surveying, consistent with their powers under s.324 and s.325 of the Town and Country Planning Act (1990).

#### 3.4 SITE SURVEY AND ASSESSMENT

- 3.4.1 Once a list of potential LoWS has been identified and reasonable effort has been made to contact the owners of each site, field survey work should be undertaken by a suitably experienced and competent ecologist. The survey period should be planned, where possible, to ensure that different habitats are surveyed during the appropriate season. For site assessments to be ecologically meaningful, they must be undertaken at the right time of year<sup>6</sup>. It is recommended that site assessments utilise the current version of the 'Local Wildlife Site Monitoring Form'<sup>7</sup>.
- 3.4.2 Collating additional data, such as biological records, is an important part of the assessment process, and will greatly improve the evaluation of each potential LoWS. Where records collected from a third party are used to support the selection of a site the source, methodology and date of survey should be clearly documented.

#### 3.5 SITE EVALUATION AND SELECTION

3.5.1 The Defra guidance states:

"Once criteria have been agreed and documented, potential sites should be evaluated against them. All sites that meet those criteria should be selected."

3.5.2 The first step in the site evaluation and selection process is to evaluate all the sites against the selection criteria, based upon the information collected as part of the survey and assessment process. The next step is to draw up a shortlist of 'candidate sites' that appear to meet one or more criteria. This should be

<sup>6</sup> For guidance see the Common Standards Monitoring section of the JNCC website viewable at: www.jncc.gov.uk

<sup>7</sup> Copies can be downloaded from: http://www.essexbiodiversity.org.uk/

undertaken by a suitably experienced and competent ecologist, preferably with a good understanding of the county's flora and fauna.

3.5.3 The shortlist of candidate sites should then be presented for ratification to a Local Selection Panel for review; the panel should comprise representatives from the following organisations: local natural history societies, Essex Wildlife Trust local groups, local authority officers, statutory nature conservation agencies, non-statutory nature conservation organisations and natural history museums. The final list should then be submitted to the Essex Local Wildlife Sites Partnership for endorsement in order to maintain a comparability of standards across the county. If the Partnership considers that the guidance provided in the current version of the selection criteria have not been applied correctly the list will be returned to the Local Selection Panel for further review.

#### 3.6 NOTIFICATION

- 3.6.1 Once the final list of LoWS has been endorsed, each site owner, where known, should be provided with a notification sheet which explains the reasons behind selection, and illustrates the boundary of the LoWS on an appropriate Ordnance Survey base map. An example of a standard notification sheet is reproduced in Appendix 7.
- 3.6.2 Where access to the site has not been formally granted, sites should still be notified where it can be clearly demonstrated the site meets one or more selection criteria based upon survey information collected either from a public footpath, observed from neighbouring land where access permission has been granted or under the powers of a Notice of Entry (see Section 3.3.3, above). The following reasons for failure to gain access apply (assuming that Notices of Entry do not exist): a landowner has refused access for survey; the landowner of a site cannot be identified, despite reasonable efforts to ascertain their details; or it is hazardous to enter a site. Where this is the case, it should be clearly indicated upon the notification sheet.

3.6.3 Upon completion of a review, a copy of each notification sheet should be supplied to the ELWSP, who will then update the county register and endeavour to circulate the updated register to all relevant statutory and non-statutory organisations.

# 4 HABITAT SELECTION CRITERIA

#### 4.1 INTRODUCTION

- 4.1.1 Drawing on the Defra (2006) guidance, there are a number of key principles which should be adopted by any Local Wildlife Sites system, providing the bedrock upon which precise selection criteria can be based. These are:
  - That biological SSSIs shall be excluded from LoWS systems. Throughout the ensuing site selection criteria, it is assumed that only land outside the biological SSSI network is being considered for LoWS selection. Should a piece of land be de-designated as an SSSI it is recommended that it be immediately assessed for inclusion within the LoWS network. Geological SSSIs can be considered as LoWS in respect of their nature conservation interest.
  - 2. That the sites should play a key role in delivering the objectives of national and local (at county or local authority level) Biodiversity Action Plans.
  - The suite of sites should represent local character and distinctiveness, embracing the range of variation of any given habitat type within the area in which the LoWS system will be operating (in this case, across Essex).
  - 4. That the resultant suite of sites, when viewed alongside SSSIs, should embrace the full range of important species and habitats for the target area covered by the LoWS Partnership at a level necessary to maintain the nature conservation interest of the area. In other words, all populations and habitat ecosystems should be sustainable within the LoWS/SSSI network.
  - 5. All sites that meet the criteria should be selected, with such sites displaying <u>substantive</u> nature conservation interest. The key to determining a successful site selection process is to define what is "substantive" across a broad range of habitats and species, encompassing many and varying degrees of interest. This needs to consider the relative conservation merits of a locally rare example of a nationally more common habitat or species assemblage against a local abundance of a nationally scarce or rare resource; the value of a small population on the edge of its range against a large population at the core of a species' distribution.
  - 6. The key qualities of habitats or species assemblages should be assessed in terms of the following factors: size or extent, diversity, naturalness, rarity or

exceptional quality, fragility, typicalness, recorded history and cultural associations, connectivity within the landscape, educational or recreational value. Clearly, no one site will embrace all these features and several (e.g. rarity and typicalness, fragility and opportunities for learning) are antagonistic. It should be stressed also that for many Sites public access would be quite inappropriate, if in private ownership, and LoWS status should not be taken to imply public access to a piece of land.

 The selection process should not completely do away with ecological experience and sound judgement, reducing the process to a mere mechanical, rule-based approach.

#### 4.2 WOODLAND, SCRUB AND RELATED HABITATS

- 4.2.1 According to the National and Regional Inventory of Woodland and Trees (Forestry Commission, 2001 and 2002) Essex supports less woodland cover<sup>8</sup> than both the national and regional average. In 2001/2 our county supported 5.3% woodland cover, compared to an average of 7.3% in the East of England (Bedfordshire 6.2%, Cambridgeshire 3.6%, Hertfordshire 9.5%, Norfolk 9.8% and Suffolk 8.3%) and 8.4% across England as a whole. However, woodland cover in Essex is now expanding, perhaps largely due to small-scale farm and roadside planting schemes, and has increased by 27% between 1980 and 2001/2.
- 4.2.2 A wide range of woodland and scrub habitats are found in the county, including ancient semi-natural woodland, plantation woodland (including those on ancient woodland sites), woody scrub, pasture woodland, parkland and orchards. Remnant woodland features may also occur outside of woodland habitats and are often of high ecological interest, for example individual veteran trees and ancient species-rich hedgerows. This rich and varied woodland resource requires a holistic approach to its conservation to ensure that the full range of woodland habitats and their associated biological diversity are retained and protected within the LoWS network. This will require criteria that select both ancient and

<sup>8</sup> Defined as land with a minimum area of 0.1ha under stands of trees with, or with the potential to achieve, tree cover of more than 20%. Areas of open space integral to the woodland are also included. Orchards and urban woodland between 0.1 and 2ha are excluded. Scrubby vegetation is not included as a separate category.

recent woodland stands, areas of scrub where little wood remains and woods that form part of a mosaic of habitats where the key quality is the complex interrelationship between two or more habitat types.

- 4.2.3 There are three key components to the selection of woodland LoWS in Essex:
  - The recognition of ancient woodlands as the closest surviving links to the truly natural vegetation of the vast majority of the county, even though such sites have invariably been modified by centuries of management and incidental influence by Man. In reality, ancient woodlands are but a sub-set of the national Priority BAP woodland habitats (below) but they are universally recognised as being of unique importance.
  - 2. The conservation of the range of national Priority BAP Habitat woodland types to be found in Essex. The woodland BAP Priority Habitats to be found in Essex are: Lowland Mixed Deciduous Woodland (which will encompass the majority of Essex's ancient woods), Lowland Beech and Yew Woodland (such Beech woods are rare in Essex and Yew woods non-existent) and Wet Woodland.
  - The role that woodlands, along with hedgerows, play in terms of providing habitat connectivity in what may otherwise be a wildlife unfriendly arable landscape.

Woodlands that are a component of a mosaic of different habitat types, with no one clearly dominant habitat are treated separately under a "mosaic" criterion.

### **Ancient Woodland**

4.2.4 Ancient woodland sites are generally accepted to have been in existence since 1600 AD, with woodland having its origins after this date being termed "recent". Some such areas of ancient woodland are "primary" in that they have been under continuous woodland cover since the end of the last ice-age. The remainder are "secondary" and may have come about by the "tumbling down" of abandoned farmland or, in a few cases, deliberate planting. Secondary woodland can thus be either ancient or recent. This long continuity of woodland cover has resulted in an irreplaceable resource, which is typically associated with diverse and characteristic assemblages of higher plants, breeding birds, invertebrates, bryophytes, lichens and fungi.

- 4.2.5 All ancient woodland sites greater than 2ha in size are listed in the national Ancient Woodland Inventory, generally produced by the Nature Conservancy Council and its subsequent organisations. However, the inventory excludes small woodland areas, so there remains potential for new candidate LoWS to be identified in the future, based on field work. It should be noted that several errors in the current Essex Ancient Woodland Inventory have been detected and others probably remain to be found, so that the use of the Inventory alone is not recommended as a means of determining the extent of ancient woodlands in the county. These errors include woods thought to be ancient and larger than two hectares but have been omitted from the Inventory and also areas of land highlighted as being ancient woodland that are clearly not, as shown by old Ordnance Survey maps. Therefore, reference should also be made to field survey results, old Ordnance Survey maps and other archive material (such as parish tithe maps) to accurately determine the extent of such woodland.
- 4.2.6 Specialist ecological survey can be used to investigate the quality of suspected ancient woodlands, in particular through an assessment of the presence and number of Ancient Woodland Indicator (AWI) plant species (see **Appendix 3** for a list of AWI in Essex), and a survey of remnant historic woodland features, such as wood banks and landmark trees.
- 4.2.7 Intact semi-natural stands of ancient woodland are usually easily recognised, even though they may embrace a wide range of canopy variation. Nearly all Essex ancient woods will fall into one of two National Vegetation Classification (NVC) categories (see Section 4.2.10, below), which comprise the Lowland Mixed Deciduous Woodland UK Priority Habitat. Some of the others will be Alder woods that can be included within the Wet Woodland UK BAP Priority Habitat. A very few might comprise scarcer woodland canopy types, such as Wych Elm,

suckering Elms and variable quantities of Sessile Oak, all of which should be recognised within the LoWS system.

However, many ancient sites have been replanted and may not, at least on preliminary inspection, appear to be of ancient origin. Although the biodiversity interest of replanted ancient woods may have deteriorated, significant ecological interest may remain. It is often possible to restore and enhance the biodiversity interest of replanted woods through the implementation of sensitive woodland restoration and management.

#### **Recent Woodland**

- 4.2.8 Although recent woodlands (including recent plantations) are often of lower ecological interest than ancient sites, they can provide important refuge habitat for a range of plant and animal species. The ecological value associated with secondary woodlands will be a result of a number of factors, including their origin (i.e. natural regeneration or plantation), age, size, species composition, management, structure, juxtaposition with other, possibly ancient, woods and general surrounding land use. For example, recent woodland developed through natural colonisation is likely to comprise locally characteristic species and be of greater value to local wildlife, while those of plantation origin may comprise nonnative species of limited value to associated wildlife. Woodlands managed solely for conservation objectives and are subject to limited human disturbance are also likely to be of greater value than urban, intensively managed woodlands used primarily for recreation. All of these variables will have a bearing on whether or not a piece of recent woodland or plantation has "substantive nature conservation interest" and thus influence whether or not the site is worthy of inclusion within the LoWS network.
- 4.2.9 Recent woodlands may also provide important landscape ecology functions. This may include, for example, acting as disturbance buffers and wildlife corridors around and between other valuable habitats, or an area that forms a component part of a more complex landscape mosaic. In light of the current increase in

woodland cover, new and recently developed woodland stands may provide important long-term opportunities for future woodland conservation in Essex.

4.2.10 In order to make sense of this almost complete continuum of woodland types and associated wildlife values, woodlands (including plantations) need a complex set of criteria and these are now based on the UK BAP Priority Habitat types. For Essex, the Lowland Mixed Deciduous Woodland Priority Habitat type is defined as comprising woodlands that fall within the National Vegetation Classification (NVC) types W8 (*Fraxinus excelsior – Acer campestre – Mercurialis perennis* woodland) and W10 (*Quercus robur – Pteridium aquilinum – Rubus fruticosus* woodland)<sup>9</sup>.

#### Habitat Criterion 1 (HC1) – Ancient Woodland Sites

"All sites considered to be ancient woodland shall be eligible for selection".

#### <u>Guidance</u>

Information on the location of such woods can be gained from the Essex Ancient Woodland Inventory, but their true extent should be determined through field evidence (the presence of Ancient Woodland Indicator plant species, and/or possessing remnant ancient woodland features, such as external ditch and bank systems) and/or documentary evidence, such as old Ordnance Survey maps or other historical documents and maps.

Replanted ancient woodland sites will only be excluded if the intensity and duration of that replanting has totally and seemingly irreversibly effaced all the ecological\interest of the site. This is likely to only apply to conifer plantations.

Habitat Criterion 2 (HC2) – Lowland Mixed Deciduous Woodland on Nonancient Sites

<sup>9</sup> British Plant Communities Volume 1. J.S. Rodwell (ed). 1991, C.U.P.

"All significant areas of non-ancient Lowland Mixed Deciduous Woodland will be eligible for selection".

### <u>Guidance</u>

In judging the significance of such areas of woodland, consideration will be given to:

- Its proximity (or otherwise) to an area of ancient wood;
- The presence of a recognisable layered structure comprising ground flora, sub-canopy (or scrub understorey) and high canopy;
- The presence of canopy and understorey dominated by native<sup>10</sup> deciduous species;
- The presence of a diverse and typical woodland ground flora and/or notable woodland fauna populations;
- The abundance or lack of woodland habitat or any type within that part of the county.

Where these qualities are in doubt, special consideration shall be given to woods that present opportunities for the development of public access, countryside education or research.

Where a wood that largely falls within the definition of this UK BAP Priority Habitat, but which includes stands of other woodland types (e.g. Elm stands or scrub), the whole wood will be eligible for inclusion within the LoWS system.

# Habitat Criterion 3 (HC3) – Other Priority Habitat Woodland Types on Nonancient Sites

"Any area of Lowland Beech and Yew woodland (e.g. NVC type W15) or Wet Woodland, as defined in the UK Biodiversity Action Plan Priority Habitat Descriptions, will be eligible for selection."

<sup>10</sup> Native to Essex, not just to the UK

#### Wood Pasture and Parkland

- 4.2.11 Wood-pasture and parkland is typically the product of historic land management systems, including deer parks and common land. Although many losses have occurred, Essex supports many fine examples, and has one of the highest concentrations of medieval parks in England. Essentially, this habitat comprises open, variably spaced trees, with a ground layer of grazed or mown grassland, or more unusually a heath or woodland ground layer. Many historic sites support important concentrations of mature standard and pollard trees, including oak, horse chestnut and hornbeam. Aside from the presence and abundance of mature trees, these sites often support unimproved ground layer vegetation.
- 4.2.12 Although the majority of the ancient wood-pasture sites in the county carry existing wildlife designation, this is less often the case for areas of parkland, especially newly emparked areas that are occasionally created as recreational green spaces in association with new residential developments. Where new parklands are subject to ecologically sensitive landscape design and management planning, there is the potential for such sites to provide important habitat in the future, including sites that may warrant consideration for LoWS selection, although they would fall outside the scope of the relevant UK BAP.

The "Wood-pasture and Parkland" UK BAP embraces the following areas:

- Such areas derived from medieval forests and emparkments, wooded commons, parks and pastures with trees in them;
- Post 18<sup>th</sup>-Century parklands where they contain much older trees derived from an earlier landscape;
- Parkland or wood-pasture that has been converted to other land uses, including arable production, where surviving veteran trees are of nature conservation interest.

It excludes 19<sup>th</sup> Century or later parklands lacking in veteran trees. Notwithstanding this, the unique ecological value of more recent parkland environments can be considered within a LoWS network.

#### Habitat Criterion 4 (HC4) – Wood-pasture and Parkland

"Any remnant area of mature parkland and/or wood-pasture, preferably with veteran trees and/or a semi-natural ground flora will be eligible for selection, together with any more recent parkland sites that support inherent ecological interest and whose ecological value is not compromised by amenity use or other primary functions".

#### <u>Guidance</u>

Veteran trees are defined in Natural England publication IN13 – "Veteran Trees: A guide to good management" by three guiding principles:

- trees of biological, aesthetic or cultural interest because of their age;
- trees in the ancient stage of their life;
- trees that are old relative to others of the same species.

Trunk girth alone is not a reliable character (although perhaps a good, initial yardstick) because of variation across species and due to soils, geology and geographical locations.

Whilst it will be desirable to maintain active grazing in areas of wood-pasture and parkland, it is not a prerequisite for inclusion as a LoWS.

#### Woody Scrub

- 4.2.13 In Essex, scrub communities come in many forms, from strips of suckering elm to dense blocks of Hawthorn and Blackthorn, willow scrub in poorly drained sites, coastal Shrubby Seablite and Broom communities, and brakes of Common Gorse within heathland settings. The south of the county has a suite of very characteristic scrub types associated with former plotland housing, in which garden trees, shrubs and herbs form an integral part of the more natural scrub growth that is now overcoming the old gardens.
- 4.2.14 In many such habitats, the scrub can play an important integral role in the ecology of the site, providing windbreaks or alternative foraging habitat for

grassland invertebrates and nesting areas for many birds and invertebrates foraging elsewhere. Such mosaics can be critical to many invertebrates that have very differing habitat requirements throughout their lifecycle of larva and adult forms.

4.2.15 It should be noted, however, that whilst important in its own right in certain situations and in limited quantity, too much scrub may pose a threat to other more important open habitats, for example mixed scrub on unimproved grassland, birch scrub in heathland and willow scrub in wetlands and marshes. Consideration for selection in these cases should acknowledge the importance of maintaining or restoring the open habitat component of the site.

#### Habitat Criterion 5 (HC5) – Woody Scrub

"Stands of woody scrub that support exceptional diversity, uncommon shrub assemblages, and/or which provide a valuable component of a site's ecological value will be eligible for selection".

#### **Veteran Trees**

4.2.16 Although veteran trees are usually associated with other semi-natural and often historic landscapes, individual trees and groups of trees may be found as remnant features in otherwise modified landscapes, even in intensive arable situations. Aside from their landscape, cultural and inherent ecological interest, these trees may also provide important habitat for a range of mosses, lichens and invertebrates. Many species are entirely dependent on the habitats provided by old trees, in particular the long continuity of dead wood and associated microhabitats. Other features such as splits and holes also provide habitat for hole nesting birds and tree roosting bats.

#### Habitat Criterion 6 (HC6) – Veteran Trees

"Veteran trees known or suspected to be of specific nature conservation interest, for example supporting significant invertebrate assemblages, and/or epiphytic bryophytes and lichens, will be eligible for selection, even in the absence of other associated semi-natural habitat. The tree or tree group should encompass a sufficient area with appropriate habitat conditions for the associated species interest to be maintained".

#### **Guidance**

Veteran trees are defined in Natural England publication IN13 – "Veteran Trees: A guide to good management" by three guiding principles:

- trees of biological, aesthetic or cultural interest because of their age;
- trees in the ancient stage of their life;
- trees that are old relative to others of the same species.

Trunk girth alone is not a reliable character (although perhaps a good, initial yardstick) because of variation across species and due to soils, geology and geographical locations.

Given the often prominent landscape significance of such trees and cultural associations in town or village locations, this ecological\interest can be taken to include a social or cultural aspect that may provide a focus for more broad-based environmental education or appreciation.

#### Orchards

4.2.17 Orchard cultivation is on the decline in Essex, so that any orchard site still bearing fruit trees is quite likely to be over 50 years old, even if the current stand of trees is not of that age. This Essex and National BAP habitat is associated with a number of notable invertebrate species and may also be important for over-wintering birds where windfall fruit is left on the ground. Orchards with a species-rich ground flora are even rarer and should be selected as a priority, as they often contain notable plant species.

#### Habitat Criterion 7 (HC7) – Old Orchards

"All traditional orchards will be eligible for selection, particularly those that have retained mature fruit trees."

#### <u>Guidance</u>

By "traditional" it is meant orchards with older, normal-sized trees (rather than the dwarf fruit tree varieties of now invariably planted when tree stocks are replenished) and/or with a more or less flower-rich grassland cover. Whilst grazing this grass sward would have formerly been quite typical it is today a very scarce practice and is not a prerequisite for inclusion as a LoWS.

Other positive attributes that will be used to guide site selection include the presence of locally characteristic or unusual traditional fruit varieties, trees with lichen cover and the presence of associated semi-natural habitats, such as species-rich grassland.

#### **Hedgerows and Green Lanes**

4.2.18 Despite widespread grubbing-out in previous decades, hedgerows should not be routinely selected since many thousands of kilometres remain, and the existing resource is protected by the Hedgerow Regulations (1997) against further indiscriminate removal. However, ancient hedges and green lanes and even well-established, species-rich hedges of more recent origin may be selected if they have a particular ecological significance. This might include a function as a wildlife corridor or providing scrub in an otherwise poor area for that habitat. Some hedgerows are remnant bank and ditch features of otherwise lost ancient woods.

Green lanes have some special value in being an often ancient blend of hedgerow or linear woodland habitats with internal strips of species-rich grassland. As such they are of conservation merit in their own right, but they again often provide opportunities for wildlife to disperse along them, providing a corridor function as well as intrinsically interesting habitats in their own right. Consideration should also be given to their use as thoroughfares, particularly close to residential areas, where they may provide one of the few opportunities for the local residents to experience nature first hand on a regular basis.

- 4.2.19 The UK BAP definition of a qualifying hedgerow is very broad, with singlespecies hedgerows included, whilst the current Essex BAP considers ancient/species-rich hedgerows i.e. are more stringent level of interest.
- 4.2.20 That said, special consideration should also be given to suckering elm hedges, these being especially characteristic of Essex farmland, especially in coastal districts. These are typically species-poor and mainly comprise Elm alone but are most likely to be very old if not ancient. Additional protection is also provided to the more significant lanes through the local authority 'Protected Lanes' policy. In this instance, reasons for protection are typically based on historical and landscape criteria, rather than wildlife interest.

#### Habitat Criterion 8 (HC8) – Hedgerows and Green Lanes

"Hedgerows and green lanes shall be eligible for selection if they are assessed as having significant ecological value in terms of:

- their intrinsic flora and fauna
- a defined ecological function in the landscape"

### Hedgerow Guidance

Special consideration should be given to:

- individual hedgerows that represent the 'ghost' outline of a former ancient wood provided they retain some of the characteristic flora and/or fauna of an ancient wood;
- other hedgerows supporting a suite of species indicative of ancient woodland conditions;
- hedgerow networks that support an unusually high density of very large or veteran standard trees;
- ancient and/or species-rich hedgerow networks forming a small field landscape that provide good quality scrub habitat, with due weighting given to the landscape and location in which the site occurs. Where the hedgerows enclose semi-natural vegetation, consideration should be

given to including these habitats within the LoWS, even though they might not warrant LoWS status in isolation.

• The role of any such hedgerow "matrix" as a wildlife corridor complex, assisting the dispersal of wildlife through the open countryside.

Where the quality of a field network system of hedges is in doubt, the quantity of alternative scrub habitat in the adjacent landscape should be taken into account and where largely lacking, this should add weight to the acceptance of the site as a LoWS. This is most likely to apply in coastal zones or open, intensively arable landscapes with little if any other woodland or scrub cover.

Where a single hedgerow forms a viable link between two or more sites of nature conservation interest and would benefit the dispersal of identified key species, then that hedgerow can be included within a LoWS using the HC30 Wildlife Corridors criterion.

#### Green Lane Guidance

Special consideration should be given to ancient lanes that support flora and fauna typical of ancient woodlands and/or ancient, unimproved grasslands.

The role of such lanes as wildlife corridors should also be considered (overlapping with criterion HC30). Where a green lane's function as a wildlife corridor is in doubt, such as due to interruption by a potential wildlife barrier, or where its connectivity with other areas of wildlife value is less well defined, its role as a regularly used thoroughfare should add some weight to its inclusion. Such lanes provide good opportunities for countryside recreation and formal and informal wildlife learning experiences. Such lanes also have a cultural significance as survivors of the general countryside transport infrastructure that has escaped widening, straightening and having a metalled surface installed.

There can be some justification in considering some wider green lanes as linear woodland or grassland habitats or a mosaic of two or more such habitats and such sites can be assessed under the corresponding habitat criteria, rather than those given above.

#### 4.3 GRASSLAND

4.3.1 Although the majority of the permanent grassland found within the county is of an agriculturally improved character, areas of botanically rich grassland do remain and warrant specific protection. Such grasslands are of importance on a number of fronts, including the conservation of scarce plant species and vegetation types in their own right but also the conservation of the implied invertebrate interest that unimproved grasslands invariably retain. The following criteria include neutral and calcareous grasslands, floodplain and inundation pastures and meadows. The selection criterion for acid grassland is included under Heathland habitat (Section 4.4), with coastal grazing marsh dealt with under the Coastal Habitats (Section 4.7). Grasslands that form part of a mosaic of habitats are dealt with via a Mosaic Habitat criterion (see Section 4.8.5).

#### **Neutral Grassland**

4.3.2 Old, unimproved and species-rich grasslands (including floodplain and inundation pasture and meadow) are such a scarce resource that there should be a presumption in favour of selecting the majority of such habitats and they are embraced by a number of UK BAP Priority Habitats.

#### **Lowland Meadows**

- 4.3.3 The importance of old, unimproved grasslands is recognised within the UK BAP, with the Lowland Meadows Priority Habitat comprising good examples of grassland that conform to the NVC mesotrophic grassland type MG5 (*Cynosurus cristatus Centaurea nigra* grassland). This vegetation is the classic "old hay meadow" of lowland England although it also survives within pastures (and mixed management swards) and this Priority BAP encompasses both mown and/or grazed swards.
- 4.3.4 It should be recognised that this grassland type covers quite a broad spectrum of species-rich grasslands on circum-neutral soils ranging from slightly acidic

through neutral to slightly base-rich (calcareous) substrates. Parts of Essex are underlain by chalky boulder clay, which can range from neutral to calcareous in nature and the more base-rich areas can support limited numbers of the chalk grassland plants listed in Appendix 5. Such grasslands, including road verges, are here treated within this broad category of lowland meadows, restricting the remit of criterion HC12 Lowland Calcareous Grasslands to those sites located on thin brown earth soils over solid chalk substrates.

- 4.3.5 The Essex Wildlife Site Review Panel documentation recommended using Natural England's Grassland Inventory<sup>11</sup> as a source for 'automatically' selecting such sites. This is resisted in these criteria, however, since the qualifying criterion for inclusion within the Inventory is that the site was deemed to be relatively species-rich in 1985/6 when the original survey was undertaken. Such sites may well have deteriorated significantly since that time and it is also unclear how any subsequent update would identify new sites. Therefore, it is held that all sites must be selected on their current merits, although the Grassland Inventory should clearly be used as a focus for survey work. Old, unimproved grasslands can be identified by the presence of 'indicator' species (see Appendix 4) or by documentary, verbal or geomorphological evidence (e.g. presence of ridge and furrow or other landform indicating the site has not been ploughed for several centuries).
- 4.3.6 The role of road verges in conserving albeit small fragments of species-rich grassland within the wider countryside should also be recognised and this is recognised in the Lowland Meadows UK BAP description. 'Special Verges' identified by the Special Verges Project<sup>12</sup> will be considered for selection where they meet an appropriate grassland criterion. However, it must be realised that the fundamental purpose of the Special Verges Project is to control adverse highways management (verge cutting responsibilities) where it affects interesting plant species or communities. It is not an absolute nature conservation designation that identifies all top roadside grassland strips. Hence, some Special

<sup>11</sup> Inventory of all UK BAP unimproved grassland types, produced in 1995 and at the time of publication being updated.

<sup>12</sup> Project coordinated by Essex County Council, Essex Wildlife Trust, Essex Field Club and Local Natural History Museums.

Verges are not identified as LoWS because their flora is not of sufficient quality and, conversely, some very rich and important strips of roadside grassland may not be afforded Special Verge status if they are not threatened by adverse highways management or if they must be cut as a matter of high priority for road health and safety (e.g. line-of-sight considerations on bends or junctions).

#### Habitat Criterion 9 (HC9) – Lowland Meadows

"All old, largely unimproved grasslands identifiable as falling within the definition of the NVC MG5 Lowland Meadow vegetation type will be eligible for selection."

#### **Guidance**

Whilst the nominate species for this community are Black Knapweed and Crested Dog's-tail, this vegetation type embraces a wide supporting flora, including such rarities as Green-winged Orchid, Pepper-saxifrage, Lady's Smock and many other grasses and herbs. It embraces grasslands on circum-neutral soils, which can exhibit species more normally associated with unimproved acid or calcareous grassland. Reference to the underlying geology should help to place the grassland community in question within the right habitat category.

This criterion should include all grasslands that are in a deteriorated condition but which can be restored to this vegetation type.

Evidence for antiquity and a likely lack of significant agricultural improvement can be taken from the presence of indicator plants, land-form or documentary records. Where appropriate, reference should also be made to the size of the site and its location within the county, with special dispensation given to smaller or poor quality sites where little such grassland remains in that part of the county.

With the modern availability of "conservation" grassland seed mixes, it is now possible to create an MG5 sward out of a packet. Such swards should not be identified here, but might be included as a LoWS if it satisfies another grassland

criterion or if the grassland is known to support wildlife that satisfies species selection criteria.

#### **Floodplain Grazing Marsh**

- 4.3.7 Special consideration should be given to large tracts of river floodplain grassland, especially those still subjected to seasonal inundation. Few areas of such habitat in Essex attain the full definition of the Coastal and Floodplain Grazing Marsh BAP Priority Habitat in that the majority of Essex ditch systems dry out during the summer rather than maintaining a high soil water table. However, there is justification in conserving all Essex examples, with the hope that active management of the water table might help to restore some areas.
- 4.3.8 Even where the sward has been significantly improved, so that the flora has no particular merit, the environmental conditions created can be of significance for terrestrial invertebrate populations and some over-wintering waders (e.g. Snipe *Gallinago gallinago*, Curlew *Numenius arquata*, Lapwing *Vanellus vanellus* and Golden Plover *Pluvialis apricaria*). Equally, where a high water table can be maintained, the aquatic flora and fauna of the associated ditches can be of greater significance than the open grassland, but such habitats are better treated here rather than alongside more mainstream aquatic habitats.
- 4.3.9 Because of their risk of flooding, many such remaining tracts of floodplain grassland can be considered to be old, even though they may have lost their characteristic flora. Such areas have often been under a grazing regime for long periods, and often support important invertebrate assemblages associated with animal dung. Continuity of grassland cover is also important for numerous other invertebrate species. Equally, where floodplain grassland has been ploughed up for cereal cultivation despite winter flooding and subsequent crop impedance, encouragement should be given to recreate floodplain grassland habitats. Given the importance of environmental conditions rather than a specific flora, such grasslands can be realistically recreated, although the diversity of ditch flora and fauna may not come to match ancient floodplain grasslands.

- 4.3.10 Such areas of floodplain grassland can act as a buffer for the associated river. For example, by reducing the impact of nutrient run-off compared to a river with arable cropping being practised right up to the top of the bank. Large tracts of semi-natural vegetation along river valleys can also function as a wildlife corridor, assisting in the dispersal of fauna through the open countryside.
- 4.3.11 There can be justification in considering some riverside willow plantations within this broad category, where the wildlife interest is associated with the tall herb vegetation rather than what might be perceived as the 'woodland' cover above. In these situations, there is likely to be some cross-over with the swamp and tallherb fen communities considered in section 4.5.

#### Habitat Criterion 10 (HC10) – River Floodplain

"Significant areas of river floodplain grassland should be considered for selection, especially those areas still subject to seasonal inundation. The role of such grasslands as wildlife corridors should also be considered".

#### <u>Guidance</u>

Where such a grassland system reaches estuarine conditions, there may be an arbitrary cut off point between considering the grasslands to be river floodplain grazing marsh and coastal grazing marsh. These two grassland forms are covered by one UK BAP Priority Habitat description but are dealt with separately within this document. Where the upper tidal limit of the river is demarked on Ordnance Survey maps, this should be used as the divider between these two grassland types.

There will be many instances where habitat structure (sward height, presence of scattered scrub) and other edaphic factors (soil type, soil moisture and tendency to winter-flood) will be more important qualities than plant species-richness, although some such site do support scarce and declining plants listed in Appendix 4).

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#### **Other Neutral Grasslands**

4.3.12 Notwithstanding the special value of MG5 grasslands identified in Section 4.3.3 above, other forms of grassland vegetation on circum-neutral soils (see Section 4.3.4), including old, unimproved swards that do not conform to the NVC MG5 vegetation type, and even quite recent grasslands, can also be selected as LoWS if they have a demonstrable nature conservation value. Some grassland found in the county is not adequately described in the NVC. Examples include Meadow Barley *Hordeum secalinum* dominated stands, species-rich coastal grasslands with abundant Common Couch *Elytrigia repens*, and stands associated with Thames Terrace gravels. In these instances, candidate LoWS should still support a diverse assemblage of flowering plants (both herbs and grasses), especially if they enhance invertebrate habitat or are the only grasslands present within a significant part of the county. Reference should be made to the "priority" NVC community type for the Natural Area in which the site is located (see Table 1).

Table 1 Essex Natural Area 'priority' grassland types (excluding MG5 Lowland Meadows)<sup>13</sup>

London Basin:

• MG4 Alopecurus pratensis – Sanguisorba officinalis grassland

East Anglian Plain:

- MG4 Alopecurus pratensis Sanguisorba officinalis grassland
- MG8 Cynosurus cristatus Caltha palustris grassland
- 4.3.13 With regard to invertebrate populations, even some quite highly agriculturally improved grasslands (e.g. with an abundance of Red or White Clover) can represent significant foraging habitat and even these areas should be considered for selection it they are deemed to be part of the essential foraging range of an invertebrate species of conservation interest. Such grasslands are likely to be identified as part of a larger mosaic of habitats and, as such, are dealt with under that heading, below.

<sup>13</sup> See Rodwell (1992) for explanations of these community types.

#### Habitat Criterion 11 (HC11) – Other Neutral Grasslands

"Unimproved or semi-improved<sup>14</sup> pastures or meadows that do not clearly fit criterion HC9 shall be eligible for selection if they support features that indicate long continuity as grassland or support notable populations of invertebrates. Special consideration should be given to sites listed in the Grassland Inventory for Essex and to sites supporting plants listed in Appendix4".

#### <u>Guidance</u>

These grasslands can, like the lowland meadows covered by HC9, occur on circum-neutral soils and may exhibit species associated with unimproved acid or calcareous grasslands. Reference to the underlying geology should help to place the grassland community in question within the right habitat category.

#### Lowland Calcareous Grassland

4.3.14 In Essex, surface exposures of chalk are restricted to the extreme north-west, around Saffron Walden, and in the south, around Grays and Purfleet. The former areas were doubtless long-ago sheep walks – open extensively grazed sheep pastures – but have for many decades now been under arable cultivation, whilst the latter has suffered from quarrying and urban expansion. As a result, areas of recognisable chalk grassland flora in Essex are virtually limited to roadside verges, the narrow fringes along the clifftops of old quarries and churchyards. The extreme rarity of chalk grassland in Essex suggests that all sites supporting assemblages of chalk grassland species (see Appendix 5) should be considered for selection.

#### Habitat Criterion 12 (HC12) – Lowland Calcareous Grassland

"All areas of grassland supporting assemblages of typical chalk grassland species included in Appendix 5 should be considered for selection."

<sup>14</sup> Semi-improved grassland is a transition category between unimproved and improved swards, they have typically been modified by one or other of the following: herbicides, fertilizers, drainage and/or intensive mowing/grazing, but still retain some features and/or species associated with unimproved grassland.

#### <u>Guidance</u>

There shall be no lower limit to the size of such sites.

Whilst "classic" chalk grasslands are often very species-rich, in which many species listed in Appendix 5 will be present, Essex grasslands of this type are likely to have far fewer, with perhaps only two such species triggering eligibility under this criterion.

Many such Sites will be roadside verges and reference should be made to the Special Road Verge project in Essex.

#### 4.4 HEATHLAND

- 4.4.1 Such is the scarcity of this habitat type in Essex, it is felt that all land supporting stands of heathland vegetation should be selected, however sparse the cover of ericaceous (heather) plants and however small the site. Furthermore, this habitat is here defined as encompasses acid grassland, even if no ericaceous shrubs are present, as well as the very limited extent of sphagnum bogs remaining in the county. Acid grassland is defined as a sward variably co-dominated by Common Bent-grass (*Agrostis capillaris*) and Sheep's Sorrel (*Rumex acetosella*), with other associates often present, including Heath Bedstraw, Mouse-ear Hawkweed and Heath Wood-rush. Reference should be made to the Lowland Heathland Inventory<sup>15</sup> although it should be emphasised that many small fragments, still worthy of inclusion, may have been overlooked in the Inventory.
- 4.4.2 Sites should still be included even if they have succumbed to scrub or secondary woodland invasion if it is considered that the heathland could be restored with appropriate management and a characteristic ground flora still persists. It should be recognised that limited amounts of scrub, especially Gorse and Broom is a valuable component of heathland communities and even scattered trees of birch and oak can be valuable e.g. as song perches or territory markers for heathland birds.

<sup>15</sup> English Nature and RSPB (1997) The Lowland Heathland Inventory.
# Habitat Criterion 13 (HC13) – Heathland and Acid Grassland

"Any site supporting characteristic heathland or acid grassland vegetation, including deteriorated sites with the potential for restoration shall be eligible for selection".

#### **Guidance**

Such sites might be identified in their own right as a component part of a mosaic, for which a separate Mosaic Habitat Criterion exists.

# 4.5 WETLAND HABITATS

4.5.1 This suite of habitats comprises a very variable continuum from damp grasslands (which at the drier end will grade into lowland meadow or other grassland types discussed above), through tall-herb fens on more or less permanently damp soils, to swamps in shallow standing water and finally open water habitats (e.g. lakes and ponds). Smaller wet ditches are considered to form part of grassland ecosystems, such as the floodplain grasslands (see Section 4.3.8), whilst brackish dykes are considered under coastal habitats, below. In ecological terms, one can define subtle differences in vegetation with terms such as "mire", "fen", "swamp" and "marsh" each having a different (although sometimes overlapping) meaning. A more simplistic approach to naming such habitats is used here, for clarity.

## Lowland Fen

4.5.2 Essex has precious few significant examples of the type of vegetation covered by the UK BAP Priority Habitat "Lowland Fen". These are defined as "peatlands which receive water and nutrients from the soil, rock and ground water as well as from rainfall". Narrow bands of sedge (*Carex* spp.) around the shallow margins of ponds and lakes or developing in wet hollows in low-lying grassland can be ascribed to forms of tall-herb fen vegetation, but these are seldom extensive. Notable exceptions include the Essex Wildlife Trust's reserve at Sawbridgeworth Marsh, which lies mainly over the border in Hertfordshire. The Stort valley in general probably holds the best remaining examples of this vegetation type in Essex.

- 4.5.3 Elsewhere in Essex, most areas of tall-herb fen occur as narrow bands along the edges of rivers, ponds, lakes and other water bodies, rather than as extensive stands in their own right. Characteristic species include Meadowsweet (*Filipendula ulmaria*), Greater and Lesser Pond-sedges (*Carex riparia* and *C. acutiformis*, respectively), Yellow Iris (*Iris pseudacorus*), Hemp Agrimony (*Eupatorium cannabinum*), Reed Canary-grass (*Phalaris arundinacea*), Reed Sweet-grass (*Glyceria maxima*), Bur-reeds (*Sparganium spp.*) and Greater Willowherb (*Epilobium hirsutum*). Rare Essex plants include Meadow-rue (*Thalictrum flavum*). Such marginal vegetation is likely to be included within any open water Local Wildlife Site. Any extensive area of swamp vegetation or tall-herb fen is likely to be a scarce habitat, dependent upon a narrow range of environmental conditions to develop, and often supporting uncommon species.
- 4.5.4 Riverside cricket-bat willow plantations can develop a form of wet grassland mosaic with tall-herb fen and sedge beds that may be considered under this category.

## Habitat Criterion 14 (HC14) – Lowland Fen Vegetation

"Significant areas of lowland fen vegetation<sup>16</sup>, or such habitat known to support notable species, will be eligible for selection. Usually such sites will include the associated water body or source of groundwater, if applicable."

#### <u>Guidance</u>

Smaller areas of this vegetation type can also be included within a larger mosaic of grassland and other wetland habitat types, covered by the Mosaic Habitat Criteria.

<sup>16</sup> Fens are peatlands which receive water and nutrients from the soil, rock and ground water as well as from rainfall.

#### **Reedbeds and Other Species-poor Swamps**

- 4.5.5 This category comprises stands of emergent vegetation usually growing in shallow water and dominated by only one or two species, most typically Common Reed (*Phragmites australis*), Sea Club-rush (*Bolboschoenus maritimus*) and/or Reedmace (*Typha* spp.). The vegetation is characteristically species-poor, but provides important habitat for many species of bird, mammal and/or invertebrate for which the key habitat qualities are size and habitat structure (vegetation density or the presence of open pools or channels) rather than floristic diversity. In some of these situations, selection may be more appropriately dealt with via the Mosaic Habitat or Species Selection Criteria. Only reedbeds are considered here as a habitat in their own right.
- 4.5.6 All significant stands of more or less pure Reed growth are included within the UK and Essex BAP Reedbed habitat. Use by reed-specialist birds (e.g. Reed Warbler (*Acrocephalus scirpaceus*) and Sedge Warbler (*A. schoenobaenus*), Cetti's Warbler (*Cettia cetti*), Bearded Tit (*Panurus biarmicus*) and Marsh Harrier (*Circus aeruginosus*) is desirable but not essential since the habitat is also important for a number of specialist invertebrates, notably some moths and solitary bees and wasps. Whilst large undisturbed beds may be more attractive as breeding habitat for specialist birds, edges and openings subject to limited disturbance are important for foraging as invertebrates and other plants tend to be found in more abundance in these situations. The importance of scattered scrub bushes or scrubby margins to such areas should not be overlooked, as necessary habitat components for several bird species.

## Habitat Criterion 15 (HC15) – Reedbeds

"All significant stands of Common Reed (Phragmites australis) will be eligible for selection."

## <u>Guidance</u>

Selection should take into account the overall size, the shape of the bed (with wider stands more desirable), and also the degree of human disturbance.

Smaller stands that form part of a larger mosaic of habitats can be included within a site identified under the Mosaic Habitat criterion.

#### 4.6 **OPEN WATER HABITATS**

4.6.1 The complexities of characterising aquatic habitats along with the less well-studies aspects of their flora and fauna make the identification of sections of river, canal, borrow dyke or individual lakes and ponds on habitat grounds less achievable than for terrestrial habitats. Guidance from the UK BAP Priority Habitats project allows for the identification of certain key habitats and specific qualities that they should exhibit to allow for the selection of a network of key sites. That said, many such sites might be better identified via relevant species selection criteria rather than as a result of their vegetation structure or composition. Thus, a lake, river or reservoir might be identified because it supports a significant number of over-wintering wildfowl or fish population.

#### Lakes and Reservoirs

- 4.6.2 The nutrient status of most lowland water bodies has been influenced by human activity, most significantly via run-off from agricultural land. As a result, some water bodies have become grossly over-loaded with nutrients (eutrophication) that fuel severe algal blooms and "boom and bust" oxygen levels in the water body and bed sediments. Such water bodies have little conservation value.
- 4.6.3 However, many water bodies in lowland England are naturally eutrophic, although nutrient levels do not reach the excesses outlined above. These waters have a high biodiversity and are a UK BAP Priority Habitat. High nutrient levels allow algae to flourish and these, in turn, support planktonic aquatic invertebrates, larger invertebrates, fish and wetland birds. It might be expected, then, that such habitats have the ability to support significant flora and fauna populations, be they a diverse selection of pond-weeds (*Potamogeton* spp.), a varied dragonfly assemblage, important fish stocks, or large numbers of overwintering wildfowl.

4.6.4 For this reason, it is recommended that eutrophic lakes and reservoirs are identified on the basis of Species Criteria, with the following Habitat Criterion or the Mosaic Habitat Criterion used to define the extent of the site.

# Habitat Criterion 16 (HC16) - Lakes and Reservoirs

"Lake and reservoir LoWS identified on the basis of Mosaic Habitat or Species Criteria should be of sufficient size and habitat quality to maintain the seasonal or resident population of that species. Where a seasonal species utilises several water bodies during the course of its stay, all such bodies should be selected".

# Ponds

4.6.5 Many ponds will, of course, lie within ancient woods, old grasslands, heathlands and so on and these will be included by default within any LoWS covering those habitats without having to demonstrate any particular conservation value. The following criterion applies only to ponds for which the principal interest of the site is the aquatic flora and/or fauna of that pond or series of ponds. Where terrestrial habitat is included it is because it is of fundamental importance to the overall lifecycle of the species concerned (most obviously for amphibians). This will, almost by default, lead to a mosaic habitat but such sites are dealt with here because the clear focus of the site's importance is the pond as the primary habitat.

Ponds, as defined within the UK BAP Priority Habitats documentation, need to fulfil one of several strict criteria in order to be considered as a Priority Habitat and these guidelines are adopted here as the starting point for selecting Essex ponds as LoWS. The UK BAP Priority Habitat covers the following ponds:

- Habitats of international importance: ponds that meet criteria under Annex I of the Habitats Directive.
- Ponds supporting Red Data Book, UK BAP or Schedule 5 and 8 (Wildlife and Countryside Act 1981, as amended) species, or species listed within Annex II of the Habitats Directive, a Nationally Scarce wetland plant species or three Nationally Scarce aquatic invertebrate species.

- Ponds supporting exceptional populations or numbers of key species, such as dragonflies, wetland plants, amphibians and aquatic macroinvertebrates (i.e. excluding planktonic forms).
- Ponds that score in excess of 75% when analysed using the Predictive System for Multimetrics (PSYM).
- Other pond types, in isolation or in groups, with a limited geographical distribution, recognised as being important because of their age, rarity of type or landscape context. Such ponds might include pingos or dune slack ponds (neither of which occur in Essex).
- 4.6.6 For Essex, this framework identifies the following pond habitats as being covered by the UK BAP Priority Habitat definition:
  - Ponds supporting Great Crested Newts;
  - Ponds supporting Water Voles;
  - Ponds with diverse amphibian, invertebrate or wetland plant populations
  - Ponds supporting Nationally Scarce or Red Data Book Species
  - Ponds that are part of the foraging range of Otters

As with lakes and reservoirs, these matters are dealt with via Species Criteria, with the following Criterion aimed at defining the extent of the Site.

# Habitat Criterion 17 (HC17) – Ponds

"Pond LoWS identified on the basis of Species Criteria should be of sufficient size and habitat quality to maintain the population of that species at a sustainable level."

# <u>Guidance</u>

Where a species has been demonstrated to utilise several water bodies as part of a meta-population, all such bodies should be selected. For species that utilise both terrestrial and aquatic habitats through their lifecycle, such as amphibians and dragonflies/damselflies, appropriate terrestrial habitat must be immediately adjacent to the pond and included within the LoWS boundary.

#### Rivers

- 4.6.7 The UK BAP Priority Habitat "Rivers" also has a number of quite strict defining criteria. Those that apply to Essex are:
  - Headwaters, defined as a watercourse within 2.5 km of its furthest source as marked with a blue line on Ordnance Survey Landranger maps (1:50 000 scale) and estimated to cover more than 70% of the UK's flowing waters.
  - Sections of SSSI designated for riverine species, which would be excluded from LoWS because of their SSSI status.
  - Rivers identified for fluvial geomorphology through the Geological Conservation Review.
  - Rivers supporting BAP Priority species or species listed in Annex II of the Habitats Directive.
  - Water bodies of high hydromorphological/ecological status, as defined by the Environment Agency (in prep.).
- 4.6.8 The BAP does not cover canals or reaches which are heavily degraded and which have little scope for improvement. Given that the suggested basic unit for such a habitat is a 10-30 km stretch of homogeneous physical characteristics, it is unlikely that many stretches of Essex river would qualify for inclusion within this UK BAP Priority Habitat definition. Most Essex headwaters are short, suffering from drought and would be disqualified by the degradation/scope for improvement rule.
- 4.6.9 Notwithstanding this, there is a need to protect stretches of significant Essex riverine habitat within the LoWS network. Sections of river supporting significant species, such as White-clawed Crayfish (*Austropotamobius pallipes*), Otters

(*Lutra lutra*) or Water Voles (*Arvicola terrestris*) are addressed under Species Criteria, as might rivers supporting locally notable species such as Allis (*Alosa alosa*) and Twaite (*A. fallax*) Shad, Bullhead (*Cottus gobio*), Barbell (*Barbus barbus*), Brook Lamprey (*Lampetra planeri*), White-legged Damselfly (*Platycnemis pennipes*) and Beautiful Demoiselle (*Calopteryx virgo*).

#### Habitat Criterion 18 (HC18) – Rivers

"Where a section of river, stream, canal or borrow dyke is designated via Species Selection Criteria, a minimum 500 metre section of that water course shall be designated (250 metres upstream and downstream of a positive sample site or 250 metres upstream and downstream of the end points of a cluster of records from the same population). The Site shall be deemed to extend at least 2 metres away from the top of the bank into the adjacent habitat."

#### Habitat Criterion 19 (HC19) – Extended Riverine Habitat

"Where two designated sections of watercourse are separated by no more than 1000 metres of undesignated water, the intervening section may be included within one large site, if it is deemed that the central section has the potential to be restored to good condition or realistically colonised by the species concerned".

4.6.10 Given the canalisation, culverting and straightening that has affected many stretches of river in Essex, more broadly "natural" sections of river with a meandering course, natural bank profiles and areas of deep-water pools interspersed with shallower "riffles" are a scarce resource and worthy of conservation under the fluvial geomorphology criterion. Clearly, some such stretches of river might be identified as Local Geological/Geomorphological Sites on account of this landform, but it is equally valid to include such rivers under wildlife Sites on account of the varied habitat structure they present.

#### Habitat Criterion 20 (HC20) – Complex Riverine Habitats

"Sections of river that support a suite of natural features, leading to a complex riverine habitat structure will be eligible for selection."

#### <u>Guidance</u>

Such features should include a good diversity of emergent vegetation, floating aquatic plants, shallow 'riffles' and deeper pools, natural, rather than hard, engineered banks and a more or less meandering, rather than canalised, course.

## 4.7 COASTAL HABITATS

4.7.1 This suite of sites comprises coastal grazing marsh, areas of saltmarsh and other intertidal habitats not covered by SSSI designation, borrow dykes, saline lagoons, beaches and dune-like vegetation and also maritime cliffs. Essex is of national importance for its grazing marsh and inter-tidal habitats and many of the best areas have national (SSSI) and European (SAC, Ramsar) designations. It is a suite of habitats that is under extreme pressure, from global warming and the consequent rise in sea level, from coastal engineering operations that can deflect coastal erosion problems from one areas to another, as well as agricultural improvement works and recreational pressures.

#### **Coastal Grazing Marsh**

- 4.7.2 Within the UK BAP, this habitat is included with freshwater marsh as "Coastal and Floodplain Grazing Marsh". Coastal grazing marsh comprises the upper reaches of the natural saltmarsh zonation that has been enwalled, drained and agriculturally improved to greater or lesser extents. In the worst cases, the land has been ploughed, fertilised and re-seeded or in the extreme case converted to arable cultivation. Some such sites are now the focus of "coastal realignment" or "managed retreat" schemes that see the deliberate breaching of the seawall and the recreation of saltmarsh or grazing marsh grassland habitat.
- 4.7.3 Areas that have remained as grazing land sometimes still show signs of the former saltmarsh drainage creeks and channels. These are the most diverse and valuable coastal grassland habitats, supporting a suite of Nationally Scarce plants and invertebrates, as well as providing high tide refuge for wildfowl and waders from the adjacent intertidal habitats. However, given that much of the interest of these grasslands lies in them being a feeding or resting habitat for

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coastal wildfowl and waders, even recently created blocks of grassland can soon attain a value for wildlife.

4.7.4 There is some justification in assuming that all sites retaining characteristic field patterns and drainage systems which still have ecological links to the adjacent estuarine habitats should be considered for selection. This may be provided, for example, through movements of wildfowl and waders or tidal flow of brackish water over part of the site. Many such sites are of importance because of their size, wetness or remoteness from disturbance and are of particular importance for over-wintering wildfowl and waders, as well as breeding species during the summer. In this instance, floristic diversity is not necessarily a key quality. Many important sites for Brent Geese (Branta bernicla) are improved grassland swards, with the key qualities being sward height, size of field, proximity of the open estuary and freedom from disturbance. That said, many such sites will support characteristic assemblages of grazing marsh plants and animals and these may be worthy of conservation in their own right, even if use by wildfowl and waders is less significant, or the site is small or suffering inappropriate management. The Essex Red Data List includes many brackish water invertebrates for which coastal grazing marshes are an important habitat.

## Habitat Criterion 21 (HC21) – Coastal Grazing Marsh

"All areas of coastal grazing marsh shall be eligible for selection".

#### <u>Guidance</u>

Particular consideration should be given to size, diversity, the presence of anthills, low-ways and periodically inundated creeks, notable species and close proximity to the associated intertidal habitats. The presence of a characteristic flora is desirable but is not essential, especially where the main focus of importance is over-wintering wildfowl and waders.

Whilst the conservation of old grazing marsh is of considerable importance, newer areas of coastal grazing marsh grassland should also be considered. Such areas might be created through agri-environment schemes or as part of coastal realignment projects and could qualify for selection as a LoWS if a particular importance for a species or group of species is demonstrated.

#### **Intertidal Habitats**

- 4.7.5 Truly marine habitats are generally held to be beyond the scope of Local Wildlife Site systems, but the intertidal zone of mudflats and saltmarsh communities is included and this will include the following UK BAP Priority Habitats: Coastal Saltmarsh, Intertidal mudflats and Seagrass Beds. The majority of this habitat in Essex is protected by both UK and EU legislation but several small fragments of these habitats (mainly saltmarsh) occur outside this legal framework, excluded from SSSI designation by relatively high degrees of disturbance, greater environmental degradation or other limiting factor. Nevertheless, these areas can act as important buffers to the legally designated sites and also provide opportunities for environmental education that will not damage the best examples of this fragile and declining habitat.
- 4.7.6 As discussed under para. 4.7.2, coastal grazing marsh was generally created by enwalling the upper end of saltmarsh zonations the fringe of land through which the natural tidal cycle ranged. As a result, the high tide limit in Essex is invariably a false boundary, a meeting of sea and an engineered wall be it built of clay, concrete or other artificial material. As such, there are very few places where there exists a natural tidal cycle and a full zonation of upper saltmarsh communities. Such areas are of value as near-natural ecosystems. These conditions are mimicked, to a greater or lesser extent, by the several managed retreat schemes around the Essex coast although in some cases the last line of defence is still an artificial wall and in nearly all cases the tidal cycle is still artificially channelled through breaches in outer seawalls, giving rise to artificially adapted drainage cycles.

## Habitat Criterion 22 (HC22) – Tidal Transition Zones

"All sites exhibiting an unrestricted upper saltmarsh to grassland transition will be eligible for selection".

## Habitat Criterion 23 (HC23) – Saltmarsh and Mudflats

"All areas of saltmarsh and other intertidal habitats outside of SSSIs will be considered for selection. Newly created habitats within managed retreat zones can be considered once they have acquired a typical flora and use by other coastal wildlife is demonstrated".

#### Saline Lagoons

- 4.7.7 This UK BAP Priority Habitat is defined as bodies of brackish, saline or hypersaline water that retain a proportion of their water at low tide. Drainage may be via a channel impeded by a natural bar or mud, sand or shingle or because it is through a restricting man-made channel.
- 4.7.8 There are precious few examples of truly natural lagoons in Essex, where drainage is impeded by a bar or intertidal substrate, but very small "lagoon pools" may form within low points in saltmarsh that may develop a flora and fauna characteristic of larger saline lagoons.
- 4.7.9 Within the broad definition of this habitat used in the Essex and UK BAP, allowing for water held back behind man-made channels or structures, one can view many of the coastal borrow dykes as providing parallel habitat conditions and some of these have been shown to support classic saline lagoon invertebrates. Many such borrow dykes are included, along with the seawall, within intertidal SSSIs, but where they are not, consideration should be given to identifying them as saline lagoon habitats. This should be driven by the presence of characteristic saline lagoon marine invertebrates, which requires specialist surveys. As such, areas of saline lagoon will be identified through Species Selection Criteria, with the following habitat criterion used to delimit the extent of such a site.

## Habitat Criterion 24 (HC24) – Saline Lagoons and Borrow Dyke Habitats

"Sections of borrow dyke and tidal or semi-tidal brackish or saline lagoons known to support a flora and fauna characteristic of saline lagoon conditions will be eligible for selection".

#### <u>Guidance</u>

The extent of habitat selected should reflect the ecological needs of the species concerned but should include the means by which sea water is supplied to the lagoon plus parts of the lagoon system deemed to be capable of supporting the species concerned and within the dispersal capabilities of that species.

The suite of "characteristic species" is too large and diverse a group to reproduce here, but reference should be made to local expertise in guiding what constitutes a significant population of such species.

#### Sand Dune and Shingle Beaches

4.7.10 These habitat types are scarce in Essex and largely protected within the SSSI system. However, they are such fragile, rare and, typically, diverse habitats that there should be a presumption in favour of selecting all remaining fragments. In places around the Essex coast a particular form of what is effectively shingle beach is formed from old cockle shells (e.g. at Bradwell-on-Sea) and this habitat is included within this LoWS category. There are no true, extensive sand dune areas left in Essex, although small fragments exist at Shoeburyness and small, narrow fringes of this vegetation survive at Mersea Island, Colne Point, Goldhanger and Hamford Water. However, sites that support characteristic sand dune and shingle beach flora (see Appendix 6) should be deemed eligible for selection. Due to the scarcity of this habitat, most of the characteristic plants are on the Essex Red Data List.

## Habitat Criterion HC25 (HC25) – Sand Dune and Shingle Beach Vegetation

"All areas of sand dune and shingle habitat exhibiting a characteristic land form and flora will be eligible for selection".

## **Maritime Cliffs and Slopes**

4.7.11 There are probably only two largely natural maritime cliff slope systems in Essex: The Naze at Walton and The Cliff at Burnham. The former is a geological SSSI and the latter is both a geological SSSI and also part of the Crouch and Roach Marshes biological SSSI. However, even landscaped and largely urbanised coastal slopes such as those at Clacton, Frinton, Benfleet, Westcliff and Leighon-sea can exhibit a flora and invertebrate fauna allied to that which can be found at the more natural sites. Smaller "mini-cliffs" can be found where large earthen seawalls are being eroded, and these too might support a characteristic invertebrate fauna but they are too small and ephemeral to be included here. Maritime cliff and slope sites are best treated by using Species Criteria to identify important assemblages of plants and animals, including Sand Martin nest sites. The following criterion establishes the extent that such a site should embrace.

#### Habitat Criterion 26 (HC26) – Maritime Cliffs and Slopes

"Maritime Cliffs and Slopes identified on account of one or more significant species or groups of species should be of sufficient extent, either in isolation or as a clearly recognisable chain of inter-related sites, should be of sufficient extent to include habitat capable of supporting sustainable populations of the species concerned."

#### **Guidance**

For invertebrates, where habitat conditions and ecological requirements are still relatively poorly understood, a "precautionary principle" approach should be taken, making the site larger rather than smaller than might first be apparent, by embracing semi-natural habitat likely to be of value to the species concerned.

#### 4.8 OTHER HABITATS

#### Post-industrial Sites with High Nature Conservation Value

4.8.1 This habitat, often referred to as 'brownfield', embraces a variety of derelict land, old mineral workings, post-industrial sites, silt lagoons, fly-ash dumps and other places largely created by human activity. They can be of significant importance for individual species of flora and fauna as well as assemblages of species. As a result, in many situations, one could argue for the selection of any given site through Species Selection Criteria, with several notable species favouring such sites. However, there is a certain suite of habitat conditions that are favourable to the support of biodiversity in general on these sites.

- 4.8.2 Post-industrial habitats of high nature conservation value may be characterised as unmanaged flower-rich grasslands with sparsely-vegetated areas developed on infertile substrates. Typically they comprise small-scale mosaics of the following habitats: areas of bare ground; early pioneer communities; longer established open grasslands; scrub; together with patches of other habitats such as heathland, swamp, ephemeral pools and inundation grassland. The vegetation can have similarities to early/pioneer communities (particularly grasslands) on more 'natural' substrates but, due to the severity of the edaphic conditions, the habitat can often persist for decades without active management (intervention).
- 4.8.3 Also included within this description are significant areas for wildlife developed from, or forming part of, the built environment. In particular those associated with derelict or ruined historic structures such as castles, walls, burial mounds and more recent military fortifications.
- 4.8.4 The main factors to consider when assessing brownfield/post-industrial sites or derelict buildings or structures for selection include:
  - rich and/or large examples of habitat(s) typical of the substrate/edaphic conditions, which demonstrate the characteristic mosaic of bare ground, pioneer communities, flower-rich grassland and other habitat patches;
  - presence of significant populations of notable species;
  - sites which have retained areas of bare ground and pioneer communities over an extended period, demonstrating arrested succession;
  - sites which are the last remaining examples in former industrial or urban areas where the habitat was formerly widespread or extensive;
  - sites with a high scientific interest because of historical records or the nature of particular substrates or properties that may be especially rare; and/or
  - the presence of an area of open water or the potential to become flooded, especially seasonally wet and saline areas.

#### Habitat Criterion 27 (HC27) – Post-industrial Sites

"Brownfield/post-industrial sites or derelict buildings/structures of high nature conservation value will be eligible for selection if they are known to support notable species or where it can be demonstrated they provide the habitat qualities necessary to support such species. The site may include sections of land that might not otherwise qualify for selection, if they provide one or more of the ecological requirements of the notable species".

#### **Mosaic and Corridor Habitats**

4.8.5 This category recognises that one occasionally comes across sites comprising two or more habitat types where there is no one clear dominant habitat in terms of conservation value. Each component might be too small, or not guite of sufficient standard to merit identification as a LoWS in isolation but, taken together, form a significant habitat mosaic. Alternatively, a site might have no especial value in itself, but attains importance because of an adjacent site of high value. An example of this would be an agriculturally improved, species-poor grassland sward that includes a high concentration of Red Clover, which provides a valuable additional foraging habitat for invertebrates identified as being significant in an adjacent meadow, post-industrial or maritime cliff site. Similarly, an area of grassland might form important terrestrial foraging habitat for amphibians breeding in an adjacent pond, even though of modest value in terms of the grassland criteria alone. The identification of such a site would ultimately be driven by Species Selection Criteria, using this criterion to determine boundaries.

#### Habitat Criterion 28 (HC28) – Small-Component Mosaics

"A site comprising two or more sub-habitats, each of which just fails to be selected as a Site within its own main habitat criterion group or on species grounds, will be eligible for selection".

#### **Guidance**

The component sub-habitats should be readily identifiable as comprising the key habitats covered by the main habitat criteria e.g. wet woodland, lowland fen and reedbed. The component habitats should have some identifiable ecological connectivity, as is the case with these three wetland habitats. Incongruous mosaics, such as reedbed adjacent to lowland mixed deciduous woodland should be excluded.

The extent of such sites should take into account the relative abundance of each of the component sub-habitats in that part of the county.

## Habitat Criterion 29 (HC29) – Habitat Extension Mosaics

"Where a site that would not on its own qualify for consideration as a LoWS provides a significant and clearly identifiable extension to the habitat of an adjacent LoWS, then the habitat extension area should be added to the LoWS".

#### <u>Guidance</u>

In order for the site extension to be included, it should support a clearly identifiable resource that would be utilised by the species of significance for which the site is identified. It is likely that the site extension will be of broadly the same habitat type as the main key site, although occasionally quite distinct habitats are required during the annual lifecycle of a species.

Any site identified on species grounds should contain habitat resources at a sufficient scale to support sustainable populations.

4.8.6 A linear series of such habitat might sometimes be considered to be a "wildlife corridor". In a human context, a corridor is a purpose-built structure for the explicit purpose of getting from one place to another but in ecological terms it should be viewed as habitat that a species' population can "live along" or along which a species is prepared to forage and explore as part of its normal behaviour. The "goal" or end point at the other end of the corridor is our

perception, not the species' desire, when actively managing the countryside for nature conservation and attempting to aid the dispersal of a species into e.g. an apparently suitable habitat which it does not currently occupy. Such a corridor might also link two small, vulnerable populations with no interchange into one larger population which interchange of individuals and hence genetic stock.

#### Habitat Criterion 30 (HC30) – Wildlife Corridors

"Where two or more LoWS are physically linked by additional habitat of a type that would allow the dispersal and interchange of species within each site, then these corridors should be included within the LoWS."

#### <u>Guidance</u>

The corridor e.g. a hedge linking two woods, need not be species-rich or of any great antiquity. The key feature is that it provides suitable conditions that would allow the critical species in question to pass along it, thereby giving access to both key sites linked by the corridor.

Depending on the species concerned, it may not be necessary for the corridor to directly connect with the donor/receptor sites: a "stepping stone" quality may be sufficient to provide the corridor function.

#### **Arable Field Margins**

- 4.8.7 These are defined as herbaceous strips or blocks around arable fields that are managed specifically to provide benefits for wildlife. These strips must be more than 2 metres from the centre of the adjacent hedge or ditch, with the grassland between 0 and 2 metres from the centre being considered as part of the boundary feature, NOT the arable field margin.
- 4.8.8 Such grassland strips are only likely to be selected if part of a whole-farm conservation network and shown to be supporting populations of associated notable species, whereupon they will be identified using species criteria.

## **Accessible Natural Greenspace**

- 4.8.9 Where a site of some substantive nature conservation value lies close to, and is readily accessible to, a centre of population, a case can be made for adopting it as a LoWS even if the habitat narrowly fail to qualify for inclusion in its own right. This justification is based on the important role that such sites can play in formal and informal environmental education and passive "wildlife experiences" for local residents. Whilst many such sites may be distinctly urban and represent the only opportunity to experience the countryside at first hand on a regular basis, other sites may be suburban or even rural and yet fulfil an important role in allowing people to have wildlife experiences.
- 4.8.10 Such pieces of habitat are likely to suffer more in terms of vandalism, trampling and invasion by alien species including predation by domestic pets. Urban sites are also more likely to be ecologically isolated from other, similar habitats. If the site is an ancient wood, veteran tree or other feature of antiquity, there is often an additional cultural association that might be exploited as part of a campaign of environmental education.

## Habitat Criterion 31 (HC31) – Accessible Natural Greenspace

"A site that comes close to qualifying under other selection criteria can be eligible for selection based upon its amenity, cultural and/or education value close to a centre of population."

#### <u>Guidance</u>

The site in question should still have substantive nature conservation interest but this criterion allows for a slight "lowering of the bar" in acknowledgement of the role these sites play in helping people to engage with the countryside and its wildlife. The benefits of this should have ramifications for how the countryside in general is viewed and treated by the public.

# 5 SPECIES SELECTION CRITERIA

#### 5.1 INTRODUCTION

- 5.1.1 The following Species Criteria (SC 1-20) have been developed to ensure that sites with specific species interest, which do not qualify under the Habitat Criteria, are evaluated as potential LoWS on their species interest alone. Occasionally, these criteria suites will operate in tandem, with a species criterion used to identify the existence of a candidate LoWS and an accompanying habitat criterion giving guidance on the extent of such a site. Alternatively, they can be used to emphasise a feature of particular significance, with sites being selected under more than one criterion. For example, a grassland would be eligible for selection if it is an example of MG5 Lowland Meadow (HC9), but it might also be given a Species Selection criterion if it includes a notable population of Greenwinged Orchid, a "significant" plant species in Essex (see below).
- 5.1.2 Providing a definitive list of notable species to guide LoWS selection is problematic for many reasons. Primarily, this problem may arise from a disproportionate attention given to high profile and flagship species, a relative lack of data for certain lesser known and taxonomically challenging groups, and the existence of some published species status assessments that do not reflect current understanding of species distribution. Furthermore, published national guidelines and "Schedules" of legally protected species or species of conservation concern are reviewed periodically and are therefore susceptible to change. However, in general terms, species with the following status should be considered as being of probable notable status:
  - Wildlife and Countryside Act 1981 (species listed in Schedules 1, 5 and 8);
  - Priority species under the UK and/or Essex BAPs;
  - Red Data Lists (RDL) and Red Data Books (RDB), including species with specific IUCN<sup>17</sup> designation, and species with a non-IUCN designation of 'rare'<sup>18</sup> or 'scarce'<sup>19</sup>;

<sup>17</sup> See Appendix 1 for a detailed discussion of IUCN designations

<sup>18</sup> Defined as those species with an IUCN designation of 'Rare' or above, 'Red' list birds, and for species with out IUCN designation considered 'Rare'.

<sup>19</sup> Defined as those species with an IUCN between 'near threatened' and 'Lower risk - conservation dependent', 'Amber' list birds, and for species with no IUCN designation considered 'Scarce'

- Species included on the Essex Red Data List (currently available as a draft via the Essex Field Club web-site).
- 5.1.3 Although these lists provide the foundation for assessing notable status, not all species on these lists will warrant specific protection within the LoWS network. Conversely, important species assemblages may occur that comprise a range of relatively common species, whose interest is linked to an unusual or uncommon assemblage, or simply exceptional diversity.
- 5.1.4 In keeping with the Defra guidelines, on 'substantive' (significant) populations of notable species or important assemblages of species will be considered for selection. However, what constitutes a significant population will vary between species, their individual rarity and population trends, both nationally and in the county. For example, a relatively small population of a species which is known to occur in only two sites in Essex is likely to be significant and worthy of selection, while a relatively large population of a species that is widespread and abundant in the county, but is perhaps notable for being uncommon nationally, may not be significant in the county context.
- 5.1.5 An assessment of which notable species warrant protection in LoWS and what constitutes a significant population, will ultimately be a subjective one, but these decisions must be based on the best available information and using expert opinion as necessary.
- 5.1.6 The evaluation process will primarily focus on an assessment of each site's wildlife interest against the specific Species Selection Criteria. However, other aspects will also require careful consideration prior to site notification. Firstly, all sites selected must encompass sufficient suitable habitat to enable the species or assemblage to be maintained as a viable population(s). Expert advice may be required to determine important habitat requirements for some species with complex life-cycles, and to assess the value, if any, of an *in-situ* approach to the conservation of highly mobile species. In principle, designated sites should contain the major habitat components necessary for key life-stages of the target

species (e.g. refuge, foraging, nesting, displaying, breeding and/or burrowing), or for species that depend on more than one site, provide an essential component for their survival.

5.1.7 Other more general considerations are also likely to have a bearing on site notification. Examples include management feasibility, the potential for habitat enhancement and expansion, and opportunities to link and/or buffer existing non-statutory and statutory wildlife sites.

## 5.2 PLANTS

## **Vascular Plants**

- 5.2.1 The selection of LoWS for their habitat importance will ensure that many important populations of notable plant species are protected. Nevertheless, some notable plants may occur outside of otherwise important semi-natural habitats and require selection under specific criteria. Examples of this include road verges, where significant populations of many plants have survived when their "parent" grassland the other side of the field boundary has long gone. Such verges are better viewed as single (or multiple) species refuges, rather than as grasslands *per se* although the UK BAP Priority Habitat Descriptions do now recognise that examples of, for example, the MG5 Lowland Meadow habitat do occur on road verges and these are included within the Priority Habitat definition.
- 5.2.2 Nationally significant plant species should be identified according to the current Vascular Plant Red Data List for Great Britain. The current document covers a total of 1,756 vascular plant taxa, of which 495 carry specific individual conservation status (the remainder are of 'Least Concern'). Many of these plant species are known to occur within Essex and where appropriate should be protected within the LoWS network.
- 5.2.3 A number of additional plant species are included on the Essex RDL. This list covers 616 vascular plants, and includes a number of species that are uncommon in Essex, but are of Least Concern nationally. No formal Rare Plant Register, following nationally accepted methods for assessing plant status, is

currently available for the county, but if available in the future such a list should be used to complement the existing Essex RDL.

- 5.2.4 Although these national and county lists currently provide the foundation for assessing species status, not all plant species listed will warrant specific protection. In order for a single species listed on the Essex RDL (but lacking any national threat/rarity status) to trigger LoWS selection it would need to be a very significant population, the assessment of which took into account the national, regional and local rarity and threat of the species concerned.
- 5.2.5 The selection of sites for the conservation of particular plant species will follow advice from relevant local and national experts, for example the Essex Field Club's County Recorder and national referees for specific plant taxa.

## Species Criterion 1 (SC1) – Vascular Plants

"Sites supporting significant populations of 'notable' vascular plants will be eligible for selection".

#### <u>Guidance</u>

Determination of the significance of a species should take into account published national and local Red Data Lists, Schedules within the Wildlife and Countryside Act 1981 (and subsequent amendments), the views of the County Recorder and the distribution of the species across the county.

#### Bryophytes

- 5.2.6 As with vascular plants, many notable bryophytes (mosses and liverworts) will be protected within LoWS designated for their habitat value. However, it is possible that some sites will merit selection on the basis of their bryophyte interest alone.
- 5.2.7 The foundation for assessing the national status of bryophytes will follow the definitions of Nationally Rare and Nationally Scarce species given by Hill *et al.* (1991, 1992 & 1994), with Red Data species following Church *et al.* (2001). The

local status will follow the Essex RDL, which currently lists four liverworts and three mosses that are considered rare in the county.

5.2.8 Expert advice will be sought to determine the need for designating sites for their specific bryophyte interest.

## Species Criterion 2 (SC2) – Bryophytes

"Sites supporting significant populations of 'notable' bryophytes will be eligible for selection".

# <u>Guidance</u>

Determination of the significance of a species should take into account published national and local Red Data Lists, Schedules within the Wildlife and Countryside Act 1981 (and subsequent amendments), the views of the County Recorder and the distribution of the species across the county.

## Lichens

- 5.2.9 Some LoWS selected on their habitat characteristics, particularly ancient woodland and veteran trees, will have associated lichen interest. However, it is likely that features such as individual trees, churchyards that do not qualify under other criteria, may have specific lichen interest and warrant consideration as a LoWS. One might also desire to identify the very walls of a church, castle or similar structure as a LoWS on the basis of the flora growing there, as is the case with the Roman wall around Colchester.
- 5.2.10 The assessment of the national status should follow the British Lichen Society's assessment of rarity and threat (Woods and Coppins, 2001). A county list of rare lichens has not been produced to date, but if such a list becomes available in the future it should be used to assess local status.
- 5.2.11 Expert advice will be sought to establish the need for designation of sites associated with specific lichen interest.

# Species Criterion 3 (SC3) – Lichens

"Sites supporting significant populations of 'notable' lichens will be eligible for selection".

# <u>Guidance</u>

Determination of the significance of a species should take into account published national and local Red Data Lists, Schedules within the Wildlife and Countryside Act 1981 (and subsequent amendments), the views of the County Recorder and the distribution of the species across the county.

# 5.3 FUNGI

5.3.1 A similar rationale to that used above can be applied to fungi.

# Species Criterion 4 (SC4) – Fungi

"Sites supporting significant populations of 'notable' fungi will be eligible for selection".

# <u>Guidance</u>

Determination of the significance of a species should take into account published national and local Red Data Lists, Schedules within the Wildlife and Countryside Act 1981 (and subsequent amendments), the views of the County Recorder and the distribution of the species across the county.

# 5.4 BIRDS

5.4.1 The basis for assessing bird species' statuses in Essex combines the UK list of Birds of Conservation Concern (BoCC), the UK and Essex BAPs and local status assessments undertaken by the Essex Birdwatching Society. The latest BoCC listing was published in *British Birds* 102, June 2009 or can be accessed via www.britishbirds.co.uk/Bocc3final.pdf

- 5.4.2 The birds list in the Essex RDL is not sufficiently up to date to be used absolutely for the identification of sites but should nevertheless be a starting point for discussion. Many bird species included on the Essex RDL are sufficiently uncommon to warrant specific protection. However, many species, such as farmland bird assemblages (which are a group that have suffered a severe decline), would require positive land management changes at the landscape scale, and would not benefit significantly from specific site protection.
- 5.4.3 Other bird species and assemblages have more specific requirements that could be accommodated at site level. This may include for example, sections of undisturbed beach holding breeding Little Terns, parkland and woodlands with breeding Hawfinch, Sand Martin colonies and water-bodies and surrounding habitat that support large and significant heronries.
- 5.4.4 It is also possible that some sites may warrant selection due to the regular presence of exceptional breeding or over-wintering populations of relatively commonplace species. Here, there are overlaps with habitat criteria, for example with the orchard habitat criterion HC7, where sites left with windfall apples left on the ground may attract significant numbers of over-wintering migratory Redwings and Fieldfares as well as resident species.
- 5.4.5 The value of site designation for important bird species and assemblages should be decided using the best available information and expert opinion. Such judgements should be typically based on five-year averages rather than *ad hoc* sightings or single year peaks that may not represent the general picture.

## Species Criterion 5 (SC5) – Notable Bird Species

"Discrete habitat areas known to support significant populations of notable bird species, whether breeding or over-wintering, will be eligible for selection."

#### <u>Guidance</u>

Such judgements should ideally be made using 5-year average data, although in exceptional circumstances, shorter time period data sets may be acceptable.

For many birds it may not be possible to identify discrete habitats. For example, Grey Partridge and other farmland birds that might range quite widely, exploiting favourable habitat conditions as appropriate.

It might be possible to identify e.g. an isolated grassland site for its breeding Skylark population if it is demonstrated that the site supports a stable population that might additionally overspill into the surrounding arable land. Other such examples undoubtedly occur, making it important to consider each species and each site on its own merits.

For others, e.g. Little Tern or Little Ringed Plover, it will be possible to identify discrete nesting sites which, if regularly used, might be eligible for selection, but foraging habitat is likely to be too diffuse for inclusion.

# Species Criterion 6 (SC6) – Exceptional Populations of Common Bird Species

"Discrete habitat areas that regularly support exceptional breeding, feeding, roosting/resting or over-wintering populations of relatively commonplace species will be considered for selection".

## 5.5 MAMMALS

5.5.1 In parallel with bird species, some mammals lend themselves to protection within the LoWS system, whilst others do not. The UK BAP Priority list of terrestrial mammals (i.e. excluding bats) includes Hedgehog, Harvest Mouse, Polecat and Brown Hare, all of which need conserving at a landscape scale in much the same way as farmland birds. With current knowledge, it would be difficult to define discrete habitat areas for these species. The following section therefore concentrates on only a limited number of species of conservation concern.

#### Dormouse

- 5.5.2 The Dormouse is a national and Essex BAP species, which is afforded high levels of protection under UK and European wildlife legislation. It is thought to have become extinct in up to seven counties in England over the past 100 years, and is a rare mammal in Essex, although new locations are still being discovered.
- 5.5.3 Until recently it was widely held that Dormice were restricted to large seminatural woodlands, particularly those with Hazel coppice. However, developments in Dormouse survey techniques, which have been particularly well demonstrated in south-west England, have shown it occupies a wider range of broadly arboreal habitats than previously thought. Suitable habitats are now known to include coniferous woodland, hedgerows, and low growing vegetation types such as scrub, and dense tall ruderal vegetation. Dormice have also been recorded in relatively small fragments of suitable habitat. Such small populations are, however, very vulnerable to adverse impacts and prone to localised extinction.

#### Species Criterion 7 (SC7) – Dormouse

"All sites confirmed as supporting populations of Dormouse will be eligible for selection. Sites should include all adjoining areas of suitable Dormouse habitat and important movement corridors (HC30)".

#### Bats

5.5.4 All bats are included in the Essex BAP and the UK BAP lists four species (Barbastelle, Noctule, Soprano Pipistrelle and Brown Long-eared). All British bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994. In summary, the Act and Regulations together make it illegal to (i) Intentionally or deliberately kill or capture (take) bats, (ii) Deliberately disturb bats (whether in a roost or not), and (iii) Damage, destroy or obstruct access to bat roosts (whether or not bats are in residence).

- 5.5.5 Annex II of the Regulations also lists four British bat species that are given elevated conservation status, namely Greater Horseshoe, Lesser Horseshoe, Barbastelle and Bechstein's bats. Only one of these species, the Barbastelle, is currently known to occur in Essex. Any breeding populations of this rare bat species, or other Annex II species should they be recorded in Essex in the future, not protected by statutory designation, together with other significant breeding and hibernation bat roosts, should be considered for selection.
- 5.5.6 There is, however, a general lack of protection given to their foraging habitat and routes used to move around the landscape. In many instances this is too diffuse to be identified, but use could be made of the mosaic criterion HC 29 and wildlife corridor criterion HC30 to identify and help protect key movement routes and foraging areas associated with significant bat colonies or over-wintering sites.

# Species Criterion 8 (SC8) – Barbastelle (and other Annex II) bats

"All sites containing a breeding colony of Barbastelle bats (or other Annex II bat species should they be recorded in Essex in the future) will be eligible for selection."

#### <u>Guidance</u>

All woodland immediately contiguous with the breeding site, together with areas proven to be key foraging grounds and associated movement corridors, should be included in the site, using HC29 and HC30.

## Species Criterion 9 (SC9) – Other Bat Breeding Colonies

"All sites, except dwelling houses, regularly supporting breeding colonies of four or more bat species, or an exceptional breeding roost or colony of one or more species, will be eligible for selection".

#### <u>Guidance</u>

The level that constitutes an "exceptional" breeding roost or colony should be determined in association with the Essex Bat Group and other expert opinion.

All appropriate foraging habitat immediately contiguous with the breeding site, together with other areas proven to be key foraging grounds and associated movement corridors, should be included in the site, using HC29 and HC30.

# Species Criterion 10 (SC10) – Bat Hibernation Sites

"All sites, except dwelling houses, supporting exceptional numbers of hibernating bats of one or more species will be eligible for selection".

## **Guidance**

The level that constitutes an "exceptional" number should be determined in association with the Essex Bat Group and other expert opinion.

All appropriate foraging habitat immediately contiguous with the hibernation site and associated bat movement corridors should be included, using HC29 and HC30.

## Otter

- 5.5.7 The Otter is afforded high levels of protection under UK and European Legislation and is a priority species under both the UK and Essex BAPs. The decline of Otters in the UK was thought to begin in the 1950's and has been linked to the presence of toxic chemicals in the environment. The prevalence of these chemicals in the UK environment has reduced since the 1980's and Otter numbers have been in a period of recovery since this time.
- 5.5.8 Otters were considered to be extinct in Essex by 1974. However, they now occur sparingly throughout the north of the county, although absent from the southern districts. It is thought to have re-colonised Essex through a combination of spread from adjacent natural or released populations in Suffolk and Hertfordshire and also through planned re-introduction schemes by Otter conservation organisations, including the creation of artificial otter holts.

5.5.9 Whilst they range over sections of river that are too long to accurately identify, confirmed, well established and frequently used Otter holts may warrant specific protection, although these are notoriously difficult to find.

## Species Criterion 11 (SC11) – Protection of Otter Holts

"A confirmed, natural or artificial, well established and regularly used otter holt, including an appropriate buffer zone of up to 250 metres up and down stream, will be eligible for selection".

# Water Vole

- 5.5.10 Following recent (2008) changes in legislation, the Water Vole now receives wide-ranging protection under UK Legislation, making it an offence to kill, injure or disturb the animals or to damage, destroy or block access to its places of shelter. Water Vole is also a priority species under both the UK and Essex BAPs.
- 5.5.11 Water Voles are found throughout Britain, particularly in lowlands areas, but have suffered a significant decline in numbers and distribution over recent decades. This decline has been linked to various factors, although direct habitat loss and predation/displacement by feral North American Mink are clearly important factors. This decline has also resulted in discontinuous populations being increasingly isolated and vulnerable to localised extinction.
- 5.5.12 In Essex, it is estimated that populations have declined by over 90%, although the coastal grazing marshes and borrow dyke systems still contain healthy colonies including some nationally important populations. However, populations within the main inland river catchments have declined dramatically, with only a few isolated populations remaining, for example in the Mar Dyke river towards the south of the county. Only 3.7% of the 2007 Water Vole survey points on the Blackwater catchment, which drains approximately 30% of the county, showed occupation, and the river Roding has experienced an almost total population crash, with only isolated water bodies off the main channel still occupied.

# Species Criterion 12 (SC12) – Breeding Water Vole Colonies

"Any watercourse or wetland system supporting a viable breeding population of Water Vole will be eligible for selection".

# 5.6 AMPHIBIANS

- 5.6.1 Five native species of amphibian occur within the county, namely Common Frog, Common Toad, Smooth Newt, Palmate Newt and Great Crested Newt. The first four species are afforded limited protection under the Wildlife and Countryside Act 1981 against sale only. The Great Crested Newt is afforded high levels of protection under UK and European Legislation and is a priority species under both the UK and Essex BAPs. Common Toad is also a newly adopted UK Priority species.
- 5.6.2 Common Frog, Common Toad and Smooth Newt are relatively common both nationally and in our county and, in isolation, do not currently warrant specific *in situ* conservation within the LoWS network. However, sites that support significant populations of a range of amphibian species ('hotspots'), including common species, will be considered for selection as a LoWS.

# Species Criterion 13 (SC13) - Hotspots for Amphibian Diversity

"Any water body, other than a garden pond, known to support significant populations of three or more species of breeding amphibian will be eligible for selection."

## <u>Guidance</u>

Sites should include sufficient surrounding terrestrial habitat, including appropriate over-wintering shelters, to ensure that viable amphibian populations can be maintained in the long-term. Consideration should also be given to the potential importance of any other water bodies within the dispersal range of the species present".

5.6.3 In contrast, populations of Palmate Newt, which is a very local species in Essex, and Great Crested Newt (a species of high conservation interest, albeit locally not uncommon) do warrant consideration for specific protection within LoWS.

# Species Criterion 14 (SC14) - Palmate Newts

"Any water body, other than a garden pond, known to support a breeding population of Palmate Newt will be eligible for selection."

# <u>Guidance</u>

Sites should include sufficient surrounding terrestrial habitat to ensure that a viable population can be maintained in the long-term. Consideration should also be given to the potential importance of any other water bodies within the dispersal range of the species".

5.6.4 Given its high level of protection, some counties have proposed that all Great Crested Newt breeding sites are considered as potential LoWS. However, because a large number of Great Crested Newt breeding ponds are thought to occur in Essex, this position is not considered appropriate in our county, and only the habitat of particularly significant populations that are not within SSSIs should be considered. Given the high level of protection afforded to this species by EU legislation (notably the Habitats Directive), this legislation alone should be sufficient to protect Great Crested Newt habitat and breeding ponds. The identification of LoWS for Great Crested Newts might best serve as a driver for auxiliary habitat creation schemes aimed at halting the loss of fragmented newt populations under threat from habitat changes that cannot be controlled through legislation. Such changes include water pollution through agricultural run-off, the natural succession of ponds and lakes, habitat fragmentation by new road schemes and other developments and changes in land-use in the surrounding countryside.

# Species Criterion 15 (SC15) - Great Crested Newts

"Any water body, other than a garden pond, known to support an exceptional breeding population of Great Crested Newts will be eligible for selection."

# <u>Guidance</u>

Eligible sites will include sufficient surrounding terrestrial habitat to ensure that a viable population can be maintained in the long-term. Consideration should also be given to the potential importance of any other water bodies within dispersal range.

# 5.7 REPTILES

- 5.7.1 Four native species of reptile occur in Essex, namely Adder, Grass Snake, Common (or Viviparous) Lizard and Slow-worm, all of which are UK BAP Priority species. These species are afforded protection under the Wildlife and Countryside Act 1981(as amended) against intentional killing, injury or taking animals from the wild.
- 5.7.2 Grass Snake and Slow-worm are relatively widespread in the county, with Common Lizard and Adder occurring more locally. Although no individual reptile species currently warrant specific *in situ* conservation within Essex, sites that support significant populations of a range of reptile species will be considered for LoWS selection.

# Species Criterion 16 (SC16) - Hotspots for Reptile Diversity

"Any site supporting significant populations of three or more reptile species will be eligible for selection".

# 5.8 INVERTEBRATES

5.8.1 A relatively small number of British invertebrates receive legal protection of any sort, and even fewer are known to occur in Essex. For most sites with invertebrate interest, the key quality is often the diversity of species within a group (e.g. a notable number of butterfly species breeding) or the presence of an assemblage of nationally significant species across many taxa. Only for the very rarest species or for species specifically targeted by an Essex or UK BAP might one consider identifying a LoWS on the basis of a single species.

## Native (White-Clawed) Crayfish

- 5.8.2 Native (White-clawed) Crayfish is listed in Appendix III of the Bern Convention and Annexes II and IV of the EC Habitats Directive. It is classed as globally threatened by IUCN/WCMC, and is a UK Priority BAP species, also included in the Essex BAP.
- 5.8.3 This rare and threatened species is highly susceptible to disease and also competition for food and shelter from non-native species. In particular, it is threatened by the spread of the North American Signal Crayfish, which has spread widely in UK rivers as a result of accidental and deliberate introductions from fish farms since the 1970s. Native and non-native species of crayfish rarely co-exist and the spread of Signal Crayfish is one of the most significant threats to the survival of native crayfish in the UK. White-clawed Crayfish are also susceptible to disease, and in particular crayfish plague, a disease carried by Signal Crayfish.
- 5.8.4 This species was feared to be extinct in Essex until a population was discovered in 2006 on the River Chelmer. White-clawed Crayfish remain very rare in our county, found in isolated pockets in the north of the county and are highly susceptible to localised extinction. For this reason any river or watercourse found to support a population of White-clawed Crayfish will be considered for selection.

## Species Criterion 17 (SC17) – White-clawed Crayfish

"All populations of White-clawed crayfish will be eligible for selection. Any designated Site should include suitable buffering both upstream and downstream".

## **Other Invertebrates**

5.8.5 Terrestrial and other freshwater aquatic invertebrates are the subject of relatively little conservation-related legislation, with only a small number of species protected by the Wildlife & Countryside Act, 1981 (as amended). This is despite the fact that many dozens of species have population numbers that are minute when compared with vertebrates such as Great Crested Newts and Water Voles,

which now receive very strict legal protection. A large number of terrestrial invertebrate species that are considered to have suffered severe national decline are listed in the UK BAP, although this list is biased towards a few, well-studied groups.

5.8.6 This list is a measure of threat not a measure of rarity and can be used to justify the selection of key sites for UK BAP Priority species. Some (though by no means all) nationally "rare" (i.e. Red Data Book) species have probably always been rare, highly restricted in terms of population sizes and known localities but essentially stable in the long term. These might be perceived to be less of a conservation concern than UK BAP Priority species, which are afforded that status because their populations are in serious decline, with the threat of localised or national extinction if trends continue. That is not to say, however, that RDB species are not worthy of conservation effort because without it many of these species too may fall into decline and merit BAP proposals.

## Species Criterion 18 (SC18) – UK BAP Priority Invertebrates

"All significant populations of terrestrial and freshwater aquatic UK BAP Priority invertebrates will be eligible for selection."

## **Guidance**

Sites should encompass sufficient habitat to maintain viable populations of the species concerned.

5.8.7 A number of Red Data Books, and subsequent reviews, covering most of the major insect groups have been published, which classify species according to a series of threat/scarcity categories. However, it is widely acknowledged that formal scarcity and threat categories assigned to some species are now inappropriate, and that other species not included in those reviews, are known to justify inclusion.
- 5.8.8 Whilst the scarcity status of some species nationally may nowadays be disputed or considered inadequately known, county-specific statuses for some groups are available and provide a more precise way of assessing species importance. In our county this includes the Essex Rarity and Threat categories and the ERDL.
- 5.8.8 Nevertheless, knowledge of invertebrates on specific sites is often poor, especially so on undesignated sites, where in many cases little survey work may have been carried out at all. The presence of particular habitats can be used to trigger an assessment of invertebrate interest, but decisions on a particular site should be based on wide ranging survey of several invertebrate groups using a variety of sampling methods.

#### Species Criteria 19 (SC19) – Important invertebrate assemblages

"Significant populations of notable invertebrate species, and/or important invertebrate assemblages (i.e. unusual or uncommon assemblages, or exceptional diversity) will be eligible for selection. In deciding the significance of a species, reference should be made to any available Essex Red Data List, national Red Data Book or "Review".

#### Species Criteria 20 (SC20) – Notable 'flagship' macro-invertebrates

"Exceptional populations or high species diversity of non-notable macroinvertebrates (e.g. dragonflies, damselflies and butterflies) will be eligible for selection".

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## APPENDIX 1 CONSERVATION DESIGNATIONS FOR HABITATS AND SPECIES

Over the past thirty years, numerous lists of conservation status have been produced -Red Lists, Biodiversity Action Plan (BAP) Priority Lists, species listed on European Directives, species listed on the Schedules of the Wildlife & Countryside Act (1981), together with lists of rare and scarce species. There is considerable overlap between these with some species appearing on several lists - for example the otter and the marsh saxifrage *Saxifraga hirculus* have as many as six 'badges'.

## **UK Red Listed and Rare Species**

These are a collection of taxonomically based published 'red lists' using the International Union for the Conservation of Nature and Natural Resources (IUCN) criteria, together with auxiliary lists of rare and scarce species. In the UK, Red and amber lists for birds do not follow the IUCN criteria. See the British Trust for Ornithology website <a href="http://www.bto.org/psob/index.htm#population">http://www.bto.org/psob/index.htm#population</a>

Designation	Description
Extinct	Taxa which are no longer known to exist in the wild after repeated searches of their localities and other known likely places. Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
Extinct in the Wild	A taxon is Extinct in the wild when it is known to survive only in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed extinct in the wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual) throughout its range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

#### Table 2 Red lists based on IUCN Criteria.

Designation	Description
Critically Endangered	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.
Endangered	Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating. Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
Vulnerable	Taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating. Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
Rare	Taxa with small populations that are not at present Endangered or Vulnerable, but are at risk. (In GB, this was interpreted as species which exist in fifteen or fewer 10km squares). Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
Lower risk - conservation dependent	Taxa which are the focus of a continuing taxon-specific or habitat- specific conservation programme targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.
Lower risk - least concern	Taxa which do not qualify for Lower Risk (conservation dependent) or Lower Risk (near threatened) or (in Britain) Nationally Scarce.

Designation	Description
Data Deficient	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat or Lower Risk. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that a threatened category is appropriate.
Near Threatened	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads <sup>20</sup> but do not qualify as Critically Endangered, Endangered or Vulnerable.

## Table 3 Red listed and rare species - not based on IUCN Criteria

Designation	Description
Nationally rare without IUCN designation	Occurring in 15 or fewer hectads (10km squares) in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
Nationally scarce species without an IUCN designation	Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.

<sup>20</sup> A hectad is an area 10 km x 10 km square.

Designation	Description
Bird Population Status: red	Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
Bird Population Status: amber	Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
Nationally rare	Occurring in 15 or fewer hectads in Great Britain
Nationally rare marine species	Species which occur in eight or fewer hectads containing sea (or water of marine saline influence) within the three mile territorial limit
Nationally scarce	Taxa which are recorded in 16-100 hectads but not included in one of the Red List Categories
Nationally scarce marine species	Species which occur in nine to 55 hectads containing sea (or water of marine saline influence) within the three mile territorial limit

## Essex Red Data List (ERDL) <u>www.essexfieldclub.org.uk</u>

This list has been produced for Natural England (Colchester Office) by P.R. Harvey on behalf of the Essex Field Club, with the input and help of the County Recorders of the Essex Field Club, as well as other naturalists in the county.

The need for such a list arose as a result of discussions between English Nature (Natural England), the Essex Field Club and the Essex Biodiversity Project. It is hoped that the list will be an important compilation of Essex information, and one which will help inform and better enable biodiversity and planning decisions within the county. It was never intended that the list should be fixed for all time, but that changes would be made as necessary to keep it up to date. Indeed further changes are likely to take place, particularly where new information on groups not yet covered becomes available.

## **Biodiversity Action Plan (BAP) Lists**

**UK -** A Priority Habitat and Species List published in the UK Biodiversity Group Tranche 2 Action Plans (1998)

See the UK BAP website for further information <a href="http://www.ukbap.org.uk">www.ukbap.org.uk</a>

**Essex** - In 1999, the Essex Biodiversity Project published action plans for 25 species and 10 habitats.

See the Essex BAP website for further information <a href="http://www.essexbiodiversity.org.uk">http://www.essexbiodiversity.org.uk</a>

## APPENDIX 2 UK AND EUROPEAN WILDLIFE LAW

International Conventions and Directives

Constituent list	Explanation
Bern Convention	The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was adopted in Bern, Switzerland in 1979, and came into force in 1982. The principal aims of the Convention are to ensure conservation and protection of all wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to afford special protection to the most vulnerable or threatened species (including migratory species) (listed in Appendix 3). To this end the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1000 wild animal species.
Bonn Convention	The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention or CMS) was adopted in Bonn, Germany in 1979 and came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix 1 of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix 2), and by undertaking co-operative research activities

Constituent list	Explanation
Birds Directive	In 1979, the European Community adopted Council Directive 79/409/EEC on the conservation of wild birds (PDF 209KB) (the 'Birds Directive'), in response to the 1979 Bern Convention on the conservation of European habitats and species (the 'Bern Convention'). The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It sets broad objectives for a wide range of activities, although the precise legal mechanisms for their achievement are at the discretion of each Member State (in the UK delivery is via several different statutes).

Constituent list	Explanation
Habitats and Species Directive	In 1992 the European Community adopted Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (EC Habitats Directive). This is the means by which the Community meets its obligations as a signatory of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The provisions of the Directive requires Member States to introduce a range of measures including the protection of species listed in the Annexes; to undertake surveillance of habitats and species and produce a report every six years on the implementation of the Directive. The 169 habitats listed in Annex I of the Directive and the 623 species listed in Annex II, are to be protected by means of a network of sites. Each Member State is required to prepare and propose a national list of sites, which will be evaluated in order to form a European network of Sites of Community Importance (SCIs). These will eventually be designated by Member States as Special Areas of Conservation (SACs), and along with Special Protection Areas (SPAs) classified under the EC Birds Directive, form a network of protected areas known as Natura 2000.
EC Cites	The 'Washington' Convention on International Trade in Endangered Species of Wild Fauna and Flora, more commonly known as CITES, aims to protect certain plants and animals by regulating and monitoring their international trade to prevent it reaching unsustainable levels. The Convention entered into force in 1975, and the UK became a Party in 1976.

## National Legislation

## Wildlife and Countryside Act 1981

Protected birds, animals and plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act.

## Schedule1:

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

## Schedule 5:

The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals.

## Schedule 8:

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

## APPENDIX 3 SPECIES INDICATIVE OF ANCIENT WOODLAND IN ESSEX

The following list of Ancient Woodland Indictor plants (AWIs) has been taken from the list (specifically the section covering the 'eastern region' of Britain) compiled by Keith Kirby of Natural England, and reproduced in Francis Rose's new Wild Flower Key<sup>21</sup>. Species not recorded in Essex have been removed from the list. To aid the interpretation and use of the list additional notes have been included.

Acer campestre	Field Maple	1
Adoxa moschatellina	Moschatel	
Allium ursinum	Ramsons	
Anemone nemorosa	Wood Anemone	
Blechnum spicant	Hard Fern	
Bromopsis ramosa	Hairy Brome	
Calamagrostis epigejos	Wood Small-Reed	2
Campanula trachelium	Nettle-Leaved Bellflower	3
Cardamine amara	Large Bitter-Cress	
Carex laevigata	Smooth-Stalked Sedge	
Carex pallescens	Pale Sedge	
Carex pendula	Pendulous Sedge	
Carex remota	Remote Sedge	
Carex strigosa	Thin-Spiked Wood Sedge	
Carex sylvatica	Wood Sedge	
Carpinus betulus	Hornbeam	1
Ceratocapnos claviculata	Climbing Fumitory	
Chrysosplenium alternifolium	Alternate-Leaved Golden-Saxifrage	
Chrysosplenium oppositifolium	Opposite-Leaved Golden-Saxifrage	
Conopodium majus	Pignut	2
Convallaria majalis	Lily Of The Valley	
Crataegus laevigata	Midland Hawthorn	
Daphne laureola	Spurge-Laurel	
Dipsacus pilosus	Small Teasel	2
Dryopteris affinis	Scaly Male Fern	
Dryopteris carthusiana	Narrow Buckler-Fern	
Elymus caninus	Bearded Couch	2
Epipactis helleborine	Broad-Leaved Helleborine	
Epipactis purpurata	Purple Helleborine	
Equisetum sylvaticum	Wood Horsetail	
Euonymus europaeus	Spindle Tree	
Euphorbia amygdaloides	Wood Spurge	
Festuca gigantea	Giant Fescue	
Frangula alnus	Alder-Buckthorn	2
Galeobdolon luteum	Yellow Archangel	
Galium odoratum	Woodruff	
Geum rivale	Water Avens	
Gnaphalium sylvaticum	Heath Cudweed	2

21 Rose, F. and O'Reilly C. (2006) The Wildflower Key, Warne, London

Helleborus viridis	Green Hellebore	3
Hordelymus europaeus	Wood Barley	
Hyacinthoides non-scripta	Bluebell	
Hypericum hirsutum	Hairy St. John's-Wort	
Hypericum pulchrum	Slender St John's-Wort	2
llex aquifolium	Holly	1
Iris foetidissima	Stinking Iris	2:3
Lathraea squamaria	Toothwort	, -
Lathvrus linifolius	Bitter Vetchling	
Lathvrus svlvestris	Narrow-Leaved Everlasting Pea	3
l uzula pilosa	Hairy Woodrush	Ũ
l uzula svlvatica	Great Woodrush	
l vsimachia nemorum	Yellow Pimpernel	
l vthrum portula	Water-Purslane	2
Malus sylvestris	Crab Apple	-
Melamovrum cristatum	Crested Cow-Wheat	4
Melampyrum pratense	Common Cow-Wheat	•
Melica uniflora	Wood Melick	
Mercurialis perennis	Dog's Mercury	
Milium effusum	Wood Millet	
Moehringia trinenvia	Three-Veined Sandwort	
Myosotis sylvatica	Wood Forget-Me-Not	З
Neottia nidus-avis	Bird's Nest Orchid	0
Applications vulgatum	Adder's-Tongue Fern	2
Orchis mascula	Farly Purple Orchid	2
Oreonteris limbosperma	Lemon-Scented Fern	
	Wood Sorrol	
Daris quadrifolia	Horb Paris	
Pimpinolla maior	Groator Burnot-Savifrago	2
Platanthara chlorantha	Greater Butterfly Orebid	2
Poo nomorolio	Wood Moodow Grass	2
Polygonum vulgara	Polypody	
Polystichum aculoatum	Hard Shield-Forn	
Polystichum sotiforum	Soft Shield Forn	
Populus tromula		1 2
Populus liemula	Aspen Barran Strowbarry	1, ∠ 2
Primula alatian		Z
Primula elduol Primula vulgaria	Drimrooo	
Prinula vulgans	Mild Charry	4
Plullus aviulli Ouereue petreee		I
	Sessile Oak	
Ranunculus auncomus	Black Current	2
Ribes nigrum	Black Current	3
	Red Cullant Butcher's Breeze	3
Ruscus aculeatus	Buicher's Broom	
Sanicula europaea		0
	Orpine	3
Sorbus aucuparia		1, 2
Surbus torminalis	vviid Service Tree	0
	Betony Orașter Obielaus și	2
Stellaria neglecta		2
i amus communis	BIACK Bryony	

Tilia cordata	Small-Leaved Lime	
Veronica montana	Wood Speedwell	
Viburnum opulus	Guelder-Rose	2
Vicia sepium	Bush Vetch	2
Viola odorata	Sweet Violet	3
Viola reichenbachiana	Early Dog Violet	

#### Notes

- 1. Only record as an AWI if it occurs frequently as coppice or other large, old tree.
- 2. Occurs in other habitats.
- Beware of garden escapes; the more likely source in Essex.
  In Essex typically occurs on the edge of ancient woods or hedges.

## APPENDIX 4 SPECIES INDICATIVE OF UNIMPROVED GRASSLAND & MARSH IN ESSEX

The following list has been produced by the Essex Wildlife Sites Project with the help of the County's Vascular Plant Recorder Dr Ken Adams.

Note: '\*' denotes plants which seldom occur outside unimproved grasslands/marshes or are particularly indicative of a long period of traditional grassland management. 'M' denotes species indicative of old, unimproved marshes 'A' denotes species indicative of unimproved acidic grassland

Achillea ptarmica	Sneezewort	*
Briza media	Quaking Grass	*
Bromus commutatus	Meadow Brome	
Bromus racemosus	Smooth Brome	
Caltha palustris	Marsh Marigold	Μ
Campanula rotundifolia	Harebell	А
Cardamine pratensis	Cuckooflower	
Carex acuta	Tufted Sedge	
Carex binervis	Ribbed Sedge	А
Carex caryophyllea	Spring Sedge	
Carex distans	Distant Sedge	
Carex disticha	Soft Brown Sedge	
Carex echinata	Star Sedge	
Carex nigra	Black Sedge	
Carex panicea	Carnation Sedge	
Carex paniculata	Greater Tussock Sedge	
Carex vesicaria	Bladder Sedge	
Carex viridula ssp. oedocarpa	Straight-Beaked Sedge	
Conopodium majus	Pignut	
Dactylorhiza incarnata	Early Marsh Orchid	
Dactylorhiza praetermissa	Southern Marsh Orchid	
Danthonia decumbens	Heath Grass	A
Equisetum fluviatile	Water Horsetail	
Galium uliginosum	Fen Bedstraw	
Galium verum	Lady's Bedstraw	
Genista tinctoria	Dyer's Greenweed	
Glyceria declinata	Glaucous Sweet-Grass	
Juncus compressus	Round-Fruited Rush	
Juncus squarrosus	Heath Rush	А
Juncus subnodulosus	Blunt-Flowered Rush	М
Lathyrus nissolia	Grass Vetchling	
Lychnis flos-cuculi	Ragged Robin	Μ
Lysimachia nummularia	Creeping Jenny	
Molinea caerulea	Purple Moor-grass	A
Oenanthe fistulosa	Tubular Water-Dropwort	М
Ophioglossum vulgatum	Adder's Tongue Fern	
Orchis morio	Green-Winged Orchid	*

Pedicularis sylvatica Potentilla anglica	Lousewort Trailing Tormentil	•
Potentilla erecta		A
Primula veris	Cowslip	т
Rhinanthus minor	Yellow Rattle	*
Sanguisorba minor ssp. minor	Salad Burnet	
Saxifraga granulata	Meadow Saxifrage	*
Scutellaria minor	Lesser Skullcap	Μ
Senecio aquaticus	Marsh Ragwort	
Silaum silaus	Pepper Saxifrage	*
Spiranthes spiralis	Autumn Lady's-Tresses	*
Stachys officinalis	Betony	
Stellaria uliginosa	Bog Stitchwort	
Thalictrum flavum	Meadow Rue	
Thymus polytrichus	Wild Thyme	
Trifolium ochroleucon	Sulphur Clover	
Trifolium subterraneum	Subterranean Clover	
Triglochin palustris	Marsh Arrowgrass	
Valeriana dioica	Marsh Valerian	
Veronica catenata	Pink Water Speedwell	

## APPENDIX 5 SPECIES INDICATIVE OF CHALK GRASSLAND IN ESSEX

The following list has been produced by the Essex Wildlife Sites Project with the help of the County's Vascular Plant Recorder Dr Ken Adams.

Note: Some of these species can also be found within unimproved chalky boulder clay, or exceptionally within neutral soil, meadows. This appendix is intended to be applied when considering sites on a solid chalk substrate.

Anacamptis pyramidalis Astragalus glycyphyllos Blackstonia perfoliata Briza media Campanula glomerata Carlina vulgaris Centaurea scabiosa Cirsium acaule Cirsium eriophorum Clinopodium acinos Cruciata laevipes Gentianella amarella Helianthemum nummularium Helictotrichon pratense Inula conyzae Nepeta cataria Oreganum vulgare Orobanche elatior Sanguisorba minor ssp. minor Scabiosa columbaria Thymus polytrichus

**Pyramidal Orchid** Wild Liquorice Yellow-Wort Quaking Grass Clustered Bellflower Carline Thistle Great Knapweed Stemless Thistle Woolly Thistle **Basil-Thyme** Crosswort Autumn Gentian Rock-Rose Meadow Oat-Grass Ploughman's Spikenard Catmint Marjoram **Knapweed Broomrape** Salad Burnet **Small Scabious** Wild Thyme

## APPENDIX 6 CHARACTERISTIC PLANTS OF SAND DUNES AND SHINGLE BEACHES

List compiled by Adrian Knowles, Senior Ecologist, EECOS, Essex Wildlife Trust

Ammophila arenaria Atriplex laciniata Cakile maritima Carex arenaria Crambe maritima Crithmum maritimum Elytrigia atherica Elytrigia juncea Eryngium maritimum Euphorbia paralias Glaucium flavum Honckenya peploides Lathyrus japonicus Leymus arenarius Phleum arenarium Polygonum oxyspermum ssp. raii Salsola kali Suaeda vera Tripleurospermum maritimum Vulpia fasciculata

Marram Grass **Frosted Orache** Sea Rocket Sand Sedge Sea Kale **Rock Samphire** Sea Couch Sand Couch Sea Holly Sea Spurge Yellow Horned-poppy Sea Sandwort Sea Pea Lyme-grass Sand Cat's-tail Ray's Knotgrass **Prickly Saltwort** Shrubby Seablite Sea Mayweed Dune Fescue

## APPENDIX 7 LOCAL WILDLIFE SITE NOTIFICATION SHEET

Code and Name: Th1. Tank Lane

**Size:** (1.1 ha)

Grid Reference: 554786

Date of Survey: 22/07/2007

Date of Notification: 28/08/2007

BAP Habitats: UK BAP lowland calcareous grassland

**Notable Species:** ERDL Viper's Bugloss *Echium vulgare;* UK BAP bumblebee *Bombus humilis* 

**Description:** This site comprises a remnant of chalk grassland, now becoming rather badly infested with scrub growth, with a small block of maturing secondary woodland at the eastern end. Nevertheless, the site still supports an interesting chalk flora, including marjoram *Origanum vulgare*, ploughman's spikenard *Inula conyzae*, viper's bugloss *Echium vulgare* and vervain *Verbena officinalis*.

In addition, the site has been shown to support a very significant assemblage of scarce invertebrates, including national BAP, Red Data Book and Essex Red Data List species. The national BAP bumblebee *Bombus humilis* has been shown to be nesting here, with important forage plants red bartsia *Odontites vernus* and bird's-foot trefoil *Lotus corniculatus* present.

Selection Criteria: HC12; SC18; SC19

**Condition and Proposed Management:** Some small-scale cyclical management of scrub invasion should be undertaken, following an initial larger-scale clearance to improve the currently rather scrubby situation. This should comprise cutting out individual trees and shrubs, rather than by wholesale cutting of large areas of grass and scrub together. One of the important features of the site is the unmanaged flower-rich tall herbage that provides good physical structure as well as a good nectar source for many species.

## HARLOW DISTRICT COUNCIL

# LOCAL WILDLIFE SITE REVIEW 2011

## FINAL

March 2011

## **ANNEX REPORT 2**

## REVIEW OF 2002 REPLACEMENT LOCAL PLAN WILDLIFE SITES

EECOS Abbotts Hall Farm, Great Wigborough, Colchester, Essex, CO5 7RZ 01621 862986, eecos@essexwt.org.uk

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Working together for Harlow



## 1. INTRODUCTION

This Annex Report documents the 42 Wildlife Sites identified and discussed within the 2002 Replacement Harlow Local Plan supporting document "Wildlife Sites".

For each Site additions and deletions are explained and cross-reference made to the new suite of Local Wildlife Sites and former SINC designations.

# Highlighted site Land added to the existing site Land deleted from the site Potential LoWS

## Key to maps



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## 1. Third Avenue, Elizabeth Way

This site has been adopted, unchanged as LoWS Ha4.



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## 2. Burnside Meadow

The 2002 Plan already recognised that this site had been ploughed up. It remains arable land and so was not considered further in the present review.



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## 3. Kingsdon Lane Pond

These two ponds have been adopted, unchanged as LoWS Ha31.



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## 4. EdinburghWay Pond

This site has been deleted from the LoWS register. The woodland is of no especial value other than in a very local sense and the pond is subject to seasonally drying out. The wood is undoubtedly of some value as a landscape feature and is not without some wildlife interest but it does not make he quality threshold for LoWS designation.



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## 5. Marsh East of Wyldwood

This site has been adopted, unchanged as Ha34.



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## 6. Harlow Common

The central copse has been removed since it is just a plantation of exotic conifers and broadleaved species. The fishing lake does not meet selection criteria as a water body. A small area of amenity land south of Red Lion Crescent has also been excluded.

Conversely, additional common land at the western and northern edges have been added to the site, since they support a similarly species-rich sward to the remainder of the common.



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## 7. Clay Pit, near The House

This site has been adopted, unchanged as LoWS Ha39.



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## 8. Hawkenbury Meadow

This site has been adopted, unchanged as Ha7.



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## 9. Church End Pond

This site has been downgraded to a Potential Local Wildlife Site. There is currently no evidence to support the adoption of the pond itself as a LoWS. Ponds such as this might qualify on the grounds of their amphibian populations or the presence of scarce or rare aquatic invertebrates, but the current data on the pond are sparse.

The grassland component of the site could provide appropriate terrestrial habitat for amphibians. It is only moderately species-rich and shaded by landscaping trees at present, which limits its value. The grassland is not without wildlife value but is felt it does not currently meet LoWS criteria.

Restorative management of the pond may improve its quality and subsequent survey work may provide sufficient data for this site to be reviewed in the future.



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## 10. Third Avenue Meadow

This series of grasslands (pale green) is retained and additional landed added to the new LoWS Ha18 adjacent to Todd Brook.



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## 11. Burnett Wood

This site is retained as LoWS Ha 10, with the addition of a small block of recent scrub woodland in the northwest corner.



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## 12. Latton Common

This site has been adopted, unchanged as Ha29.



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## **13. Stewards Meadow**

This site has been adopted, unchanged as Ha15.



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## 14. Maples/Burnett Park

This hedge was noted as deleted from the sites register in the 2002 Replacement Harlow Local Plan. Its status was reassessed during this current review and it does not meet the hedgerow criteria for selection as a LoWS. This situation is unlikely to change, even with appropriate management.


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# 15. Town Park Ditches

This site has been adopted, unchanged as Ha22. It is proposed to change the name to Town Park Marsh as a better indication of the overall ecology of the site.



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## 16. Dadds Wood

This small fragment of wood was deleted by the 2002 review for the Local Plan. Its status was reassessed during the present study and its deletion is confirmed. Although the group of trees is technically an ancient woodland site it is deemed to have lost its ecological character as ancient woodland, being highly disturbed, isolated by urban development and lacking the structure, flora and fauna that makes ancient woodland so important.



# 17. Gravel Pit spring

This site has been adopted, unchanged as Ha28.



## 18. Vicarage Wood

This site has been adopted, unchanged as Ha26. The only modification is tidying up the boundary with the removal of Howard Way.



## 19. Harolds Grove

This site has been adopted, unchanged as Ha1.



## 20. Peldon Road

This site has been retained. It is merged with site old 26, Third Avenue and has an additional piece of land added to form a new site Ha8 Canons Brook Complex.



## 21. Pincey Brook Meadows

This site is retained. Added to it is a small fragment of ancient woodland that formerly extended to the east into Epping Forest district. It is now LoWS Ha40.



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# 22. Little Pynchons

This hedge was deleted in the 2002 review and this is confirmed. Although of local wildlife and landscape interest it is unlikely that it would ever qualify for LoWS status (which would have to be based on extreme invertebrate interest).



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## 23. Second Avenue

The 2002 review recommended that this verge be transferred to a "wildlife verge" scheme and it has been confirmed that its flora does not merit LoWS status. The verge might warrant inclusion within the Essex County Council protected road Verge scheme, which aimed to address the issues associated with inappropriate mowing of grassland road verges.



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## 24. Mead to West of Allende Avenue

This site (highlighted in pale green above) has been merged with Eastwick Mead (site 34, see below) with a considerable extent of new land to form one large river floodplain site Ha5 Eastwick and Parndon Meads.



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# 25. Netteswell Rectory

This horse paddock is demoted to the rank of Potential LoWS. It is currently suffering from excessive grazing pressure, trampling and accumulation of nutrient-rich waste. The sward shows signs of its former flower-rich state and it is felt that the site is not beyond redemption if management pressures are alleviated and some restorative work carried out.



## 26. Third Avenue

This site (highlighted in pale green) has been amalgamated with site 20, Peldon Road, to form a new site called Ha8 Canons Brook Complex.



# 27. Fennels Field

This site is retained and, with additional land at the eastern and western ends is renamed Ha12 Parndon Common.



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## 28. Gilden Way Meadow

This site has been demoted to the level of Potential LoWS, amid concerns that heavy grazing may have caused deterioration in the sward and that other parts may not meet the grassland criteria in any case. A more appropriate management regime may permit a reevaluation of the site in the future.



# 29. New Pond Spring

This site is retained, with the addition of further woodland and hedgerow habitat to the south, to form a connection with Brenthall/Barnsley Woods to the south.



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# 30. Brenthall and Barnsley wood. Perry spring and Reservoir

The woods have been retained as LoWS Ha37 Brenthall/Barnsley Wood. The reedbed to the north of Brenthall Wood has been separated out into a new site, along with another section of reed, to form LoWS Ha35 New Hall Reedbeds. Perry Spring and reservoir has been separated out into its own site Ha33 Perry Spring.



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## **31. Feltimores Meadow**

A section on the western edge of the site has been removed on account of it being a garden area associated with the adjacent house. However, a far larger piece of grassland has been added to the new LoWS Ha41 on the northern side.



## 32. Markhall Wood

This site is retained as Ha30, unchanged other than by tidying up the mapping to remove the A414.



## **33. Netteswell Plantation**

This site is retained, with the addition of a small area of land in the northeast corner.



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## 34. Eastwick Mead

This site has been merged with old site 24 "Mead to West of Allende Avenue" and a considerable area of new land to form a single site Ha5 Eastwick and Parndon Meads.



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## 35. Latton Island

It should be noted that the land referred to on Ordnance Survey maps as "Latton Island" lies somewhat upstream of the site labelled as such in the 2002 Local Plan document (pale green on map above). The land, in conjunction with the site highlighted in dark green on the map, is generally known as Maymead Marsh and this is now a new LoWS Ha23.



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# 36. Gravelpit Spring, New Hall Farm

There has a been a slight, difficult to quantify impact on the eastern margin of this wood as the result of the construction of Canopy Lane, but essentially the wood is retained unchanged.



# 37. The Moors, Long Ley

Land at the eastern end of this site has been deleted since the grassland is not of sufficient quality to meet current criteria.



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## 38. Former 3M Research Ltd., Coldharbour Road

This site has been demoted to the level of Potential LoWS. The presence of Bee Orchids alone, whilst a notable local feature, is not sufficient to warrant Local Wildlife Site status. The lawn is currently mown very short, making it difficult to assess the remainder of the sward and whilst kept so short the sward is of minimal wildlife value. If a more generally flower-rich sward can be created and managed on this site then the site could be reconsidered in the future.



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## 39. Fountains Farm Pond, Tye Green

There is insufficient information available to support the retention of this pond within the current LoWS network. The 2002 Local Plan supporting document refers to a diverse invertebrate population but no data are available. If better amphibian or invertebrate data are available in the future it may be possible to re-assess this pond, but the site is particularly small and lacking in any significant semi-natural vegetation surrounding it.



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# 40. Maunds Wood, Paringdon Road

This site is retained, with the addition of a small block of woodland to the south of the bisecting Paringdon Road, which was part of Maunds Wood (formerly Peters Wood) prior to the road being built.



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## 41. Ram Gorse

This site is retained, unchanged. The woodland to the south-east, on the other side of Elizabeth Way, is also part of the historical Ram Gorse, but this section has a poor canopy and overall woodland structure and was therefore rejected as a potential extension to the site.



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# 42. Burnt Mill Lane

This site was selected on the grounds that it supported a population of a UK BAP moth called the Buttoned Snout. However, this moth has been widely recorded across Essex. It would be unfeasible to identify all known populations of this moth as LoWS so further survey work is needed so that the key populations might be considered for identification at some time in the future.



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#### Site: Ha1 Harold's Grove TL 423089 Area: 3.2 ha Location: West Harlow, Flex Meadow

#### Site Description

This small ancient woodland lies south of the Pinnacles industrial estate. It is predominantly very tall neglected coppice of Hornbeam (*Carpinus betulus*), Field Maple (*Acer campestre*) and Ash (*Fraxinus excelsior*) with standards of Pedunculate Oak (*Quercus robur*). Hazel (*Corylus avellana*) and Hawthorn *Crataegus monogyna*) form a scattered shrub canopy. Midland Hawthorn (*Crataegus laevigata*), an indicator of ancient woodland, is also present. The ground flora beneath this densely shading canopy is limited to low Bramble (*Rubus fruticosus agg.*) and areas of Dog's Mercury (*Mercurialis perennis*). There are also localised patches of Primrose (*Primula vulgaris*), Bluebell (*Hyacinthoides non-scripta*) and Wood Millet (*Milium effusum*). Previous surveys have shown the presence of several other ancient woodland plants, including Wood Anemone (*Anemone nemorosa*), Early Dog-violet (*Viola reichenbachiana*), Hairy St. John's-wort (*Hypericum hirsutum*) and Remote Sedge (*Carex remota*).

Part of the western edge of the woodland has a very different composition to the coppiced structure. Dense Blackthorn (*Prunus spinosa*) and Hawthorn grows along with young Pedunculate Oak (*Quercus robur*), Wild Cherry (*Prunus avium*) and Ash standards forming a low sub-canopy. Small open areas within have dense bramble growth.

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

### **Selection Criteria**

HC1 – Ancient Woodland Sites

### Selection Rationale

The site is recommended for adoption as a LoWS because the coppiced Hornbeam structure and ground flora in this woodland is characteristic of many ancient woods of Essex. Its association with the ancient parish boundary is another confirmatory character.

### **Review Schedule**

Site Selected: 1991 (Essex Wildlife Trust) Reviewed: 2002 (Harlow DC) 2010 (EECOS)



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#### Ha2 Pinnacles Woodland TL 425094 Area: 2.0 ha Location: West Harlow, Pinnacles Industrial Estate

### **Site Description**

This site largely comprises fragments of the ancient Pinnacles Wood, along with some more recent woodland fringes and scrub. The block south of Harolds Road formed a narrow belt of woodland on the northwest side of Pinnacles Wood, separated by a north – south track that is depicted in the county map of 1777 by Chapman and André and still evident on the ground today. In general, the canopy comprises Hornbeam (*Carpinus betulus*) coppice with Pedunculate Oak (*Quercus robur*) and Ash (*Fraxinus excelsior*) standards. Field Maple (*Acer campestre*) forms a scattered low sub-canopy layer, whilst Hawthorn (*Crataegus monogyna*), Elder (*Sambucus nigra*) and some Hazel (*Corylus avellana*) are found in amongst the shrub canopy. Midland Hawthorn (*C. laevigata*) an indicator of ancient woodland is also found. The ground flora has abundant lvy (*Hedera helix*), more typical of secondary woodland habitat, but also supports a range of species associated with more ancient woods including Bluebell (*Hyacinthoides non-scripta*), Wood-sedge (*Carex sylvatica*), Wood Millet (*Milium effusum*),Remote Sedge (*Carex remota*), Dog's Mercury (*Mercurialis perennis*), Hairy St. John's-wort (*Hypericum hirsutum*) and Spurge-laurel (*Daphne laureola*). As well as being of great historical interest, these wood fragments provide green islands within an otherwise very heavily developed part of the district.

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

### **Selection Criteria**

HC1 – Ancient Woodland Sites HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites

### Selection Rationale

The site is recommended for adoption as a LoWS because the majority of this woodland can be clearly associated with the ancient Pinnacles Wood from map-based evidence and the surviving landforms and flora. Small areas of more recent scrub and secondary woodland add to the overall habitat extent and provide greater habitat diversity

#### **Review Schedule**

Site Selected: 2010 (EECOS) Reviewed: -



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#### Ha3 Upper Wood TL 426084 Area: 0.3 ha Location: West Harlow, Katherines

#### **Site Description**

Upper Wood straddles the boundary of Harlow and Epping Forest districts. The Harlow site is dominated by Hornbeam (*Carpinus betulus*) coppice and standards with some Field Maple (*Acer campestre*) and Elm (*Ulmus* sp.). There is very little understorey with only very scattered Hawthorn (*Crataegus monogyna*) and Holly (*Ilex aquifolium*) with intertwined Honeysuckle (*Lonicera periclymenum*). The ground flora has a very good assemblage of species generally found in ancient woodland. These include abundant Bluebell (*Hyacinthoides non-scripta*) along with Wood Melick (*Melica uniflora*), Wood Millet (*Milium effusum*), Wood-sedge (*Carex sylvatica*) and Goldilocks Buttercup (*Ranunculus auricomus*). A small pond in the north of the wood has a dominant stand of Bulrush (*Typha latifolia*). This pond is surrounded by Grey Willow (*Salix cinerea*) with much Remote Sedge (*Carex remota*) and Bittersweet (*Solanum dulcamara*).

#### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

### Selection Criteria

HC1 – Ancient Woodland Sites

### **Selection Rationale**

The site is recommended for adoption as a LoWS because the structure and flora of this wood suggests that woodland is ancient.

### **Review Schedule**

Site Selected: 2010 (EECOS) Reviewed: -



#### Ha4 Third Avenue/Elizabeth Way Road verge TL 429092 Area: 0.4 ha Location: West Harlow, Pinnacles Industrial Estate, Third Avenue

#### **Site Description**

This verge comprises grassland and scrub on a sloping roadside bank. The site exhibits a range of grass species including Meadow-grasses (*Poa* spp.), Crested Dog's-tail (*Cynosurus cristatus*), and Yellow Oat-grass (*Trisetum flavescens*). The herb flora is plentiful and typical of free draining neutral and base-rich grasslands with a wide variety of species including Agrimony (*Agrimonia eupatoria*), Lady's Bedstraw (*Galium verum*), Common Restharrow (*Ononis repens*), Field Scabious (*Knautia arvensis*), Cowslip (*Primula veris*), Bee Orchid (*Ophrys apifera*), Corn parsley (*Petroselinum segetum*) and Hairy St John's-wort (*Hypericum hirsutum*).

#### **BAP Habitats**

Species-rich Grassland (Essex)

### Selection Criteria

HC11 – Other Neutral Grasslands

### **Selection Rationale**

The site is recommended for adoption as a LoWS because although it may have been influenced by seeding following road construction, the flora of this road verge includes a varied assemblage of interesting plant species and is the most floristically rich piece of grassland in the Pinnacles area.

# Review Schedule

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)


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Ha5 Eastwick and Parndon Meads TL 429112 Area: 81.2 ha Location: Northwest Harlow, Eastwick - Parndon Lock

### Site Description

This site lies between the River Stort Navigation and the London to Cambridge railway line. It forms an extensive continuation of the river flood plain grassland habitat found within Hunsdon Mead Site of Special Scientific Interest (SSSI) to the west.

The sheep grazed grasslands of Parndon Mead are historic flood plain meadows and the Ordnance Survey 1882 map annotates the meadows as "liable to floods". These meadows still retain the characteristics of damp, seasonally wet habitat by the presence of extensive tussocks of Tufted Hair-grass (*Deschampsia cespitosa*) throughout the site. Other grasses recorded include Meadow Barley (*Hordeum secalinum*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Yorkshire-fog (*Holcus lanatus*), Creeping Bent (*Agrostis stolonifera*) and Red Fescue (*Festuca rubra*).

The grasslands of Eastwick Mead are drier in nature and have been subject to some improvement. To the east of Parndon Lock the grasslands are cattle grazed and are similar to

Parndon Mead in being seasonally wet, with much Tufted Hair-grass throughout This area also has several other grasses including Meadow Barley, Rough Meadow-grass (*Poa trivialis*), Meadow Foxtail (*Alopecurus pratensis*) and Yorkshire-fog. These flood plain grasslands have a limited herb flora that includes Meadow Buttercup (*Ranunculus acris*), Cut-leaved Crane's-bill (*Geranium dissectum*) and occasional localised patches of Creeping Thistle (*Cirsium arvense*). Grazing or seasonal cutting by machinery is current management practice of much of the grassland, whilst a few areas are left unmanaged.

This Site includes numerous hedgerows, including those of Cat Lane, which add to the overall habitat diversity of the marshes.

### **BAP Habitats**

Coastal and Floodplain Grazing Marsh (UK) Species-rich Grassland (Essex)

## Selection Criteria

HC10 - River Floodplain

#### **Selection Rationale**

The site is recommended for adoption as a LoWS because these extensive floodplain grasslands are valuable corridor habitat along the River Stort Navigation, and form the single largest block of grassland habitat in the district. They are an historic flood plain landscape and still demonstrate the ecological characteristics that make all remaining examples of this habitat of conservation value.

#### **Review Schedule**

**Site Selected:** part 1991 (Essex Wildlife Trust) **Reviewed:** 2002 (Harlow DC); 2010 (EECOS) - considerably extended



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### Ha6 St Mary the Virgin, Great Parndon TL 432089 Area: 0.5 ha Location: West Harlow, Great Parndon

# Site Description

The site comprises the original yard around the church, and a later extension to the west side. The grassland in the vicinity of the church has two distinctive localised flower-rich areas, on the north and south sides. The north side is most diverse and includes Lady's Bedstraw (*Galium verum*) and Mouse-ear-hawkweed (*Pilosella officinarum*). Both areas near the church have abundant Burnet-saxifrage (*Pimpinella saxifraga*) plants. This plant has a low colonising ability and tends to occur on relatively infertile base poor soils of old grasslands. However, the grassland of the western extension to the churchyard has also been colonised in many places by this plant. There are also localised concentrations of Lady's Bedstraw in this area. Other species of interest recorded include Common Knapweed (*Centaurea nigra*), Bulbous Buttercup (*Ranunculus bulbosus*) and Sheep's Sorrel (*Rumex acetosella*) occurring in small patches where slightly more acidic conditions exist. An unusual record is the presence of Crosswort (*Cruciata laevipes*), a species of neutral and calcareous soils. This species is very rare in Essex and the only records are of introductions.

# **BAP Habitats**

Lowland Meadows (UK) Species-rich Grassland (Essex)

## **Selection Criteria**

HC11 – Other Neutral Grasslands

## Selection Rationale

The site is recommended for adoption as a LoWS because the churchyard exhibits a flora characteristic of old unimproved grassland. It not only has a rich flora in the vicinity of the church itself, but a diverse assemblage has now established the later extension of the churchyard to the west.

#### **Review Schedule**

Site Selected: 2010 (EECOS) Reviewed: -



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### Ha7 Hawkenbury Meadow TL 434088 Area: 1.6 ha Location: West Harlow, Great Parndon, Paycock Road

### **Site Description**

This secluded site has been designated as a Local Nature Reserve. Surrounded by dense hedge and tree habitat, the site comprises grassland and areas of localised willow (*Salix* spp.) scrub. The site exhibits a wide variety of herb species including Meadow Crane's-bill (*Geranium pratense*), Meadow Vetchling (*Lathyrus pratensis*), Agrimony (*Agrimonia eupatoria*), Red Bartsia (*Odontites vernus*), Cuckooflower (*Cardamine pratensis*), Common Knapweed (*Centaurea nigra*), Cowslip (*Primula veris*) and Meadow Buttercup (*Ranunculus acris*). Other species of interest that have been recorded in recent years include Yellow Rattle (*Rhinanthus minor*), Common Spotted-orchid (*Dactylorhiza fuchsii*) and Grass Vetchling (*Lathyrus nissolia*). Of interest within a good butterfly population is the Brown Argus, which is a scarce though spreading species in Essex.

### BAP Habitats

Lowland Meadows (UK) Species-rich Grassland (Essex)

# **Selection Criteria**

HC9 – Lowland Meadows

HC11 – Other Neutral Grasslands

#### Selection Rationale

The site is recommended for adoption as a LoWS because the flora indicates long continuity of grassland and is one of the most species-rich pieces of grassland in the district. It is also likely to be of great value for its invertebrates.

### **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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### Ha8 Canons Brook Complex TL 435093 Area: 21.0 ha Location: West Harlow, Hare Street/Great Parndon

### **Site Description**

This extensive site has a wide variety of habitat types including woodland, grassland, scrub, ruderals and the central stream. Woodland runs along and to the east of Canons Brook, with Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Hazel (*Corylus avellana*) as coppice and Hawthorn (*Crataegus monogyna*) and Elder (*Sambucus nigra*) in the scrub layer.

Grassland on neutral soils to the west slopes down to the brook. This grassland has a wide variety of grasses including Sweet Vernal-grass (*Anthoxanthum odoratum*), Crested Dog's-tail (*Cynosurus cristatus*), Red Fescue (*Festuca rubra*), Meadow-grasses (*Poa* spp.), Meadow Foxtail (*Alopecurus pratensis*) and Soft-brome (*Bromus hordeaceus*). The herb flora includes Common Bird's-foot-trefoil (*Lotus corniculatus*), Common Knapweed (*Centaurea nigra*), Meadow Buttercup (*Ranunculus acris*), Oxeye Daisy (*Leucanthemum vulgare*), Field Scabious (*Knautia arvensis*), Field Wood-rush (*Luzula campestris*) and Sheep's Sorrel (*Rumex acetosella*). An area of marshy grassland is found in the southeast corner adjacent to the woodland. This is dominated by Floating Sweet-grass (*Glyceria fluitans*) with a prominent stand of Great Willowherb (*Epilobium hirsutum*). Other species present characteristic of marsh include Soft-rush (*Juncus effusus*),

Hard Rush (*J. inflexus*), Brooklime (*Veronica beccabunga*), Greater Bird's-foot-trefoil (*Lotus pedunculatus*) and Skullcap (*Scutellaria galericulata*).

Land to the south of Third Avenue is also a mosaic of woodland and grassland. Several tree and shrub species are recorded including Hornbeam (*Carpinus betulus*), Hawthorn, Field Maple (*Acer campestre*), Ash, Wild Cherry (*Prunus avium*) and willows (*Salix* spp.). There are three grassland blocks that exhibit both neutral and semi-acid soil characteristics. Throughout the grassland, the diverse flora includes many species of interest. Among those recorded are grasses such as Sweet Vernal-grass and Crested Dog's-tail. The herb flora includes Common Knapweed, Meadow Buttercup, Field Wood-rush, Bulbous Buttercup (*Ranunculus bulbosus*) and Lesser Stitchwort (*Stellaria graminea*). Red Fescue dominates a fine sward on the upper slopes of the central grassland area. Localised patches of Sheep's Sorrel, typical of free draining acidic soil conditions, are found in this area.

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Species-rich Grassland (Essex)

## Selection Criteria

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites HC11 – Other Neutral Grasslands

### **Selection Rationale**

The site is recommended for adoption as a LoWS because Canons Brook complex comprises a broad mix of habitat types and structures in a landscape of varied topography. This allows for the site to support a very diverse flora, which in turn should support many invertebrates, small mammals and birds.

### **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS), small addition



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### Ha9 Ram Gorse TL 435108 Area: 1.9 ha Location: Northwest Harlow, Elizabeth Way

# Site Description

Parts of this wood are old, being recorded as plantation on the 1841 parish tithe map, but other areas are more recent, being recorded as arable land within the tithe documents. Nevertheless, the woodland to the north of Elizabeth Way now has a good structure. The section to the south has deteriorated and is in a poor condition and so is excluded from this Site.

Pedunculate Oak (*Quercus robur*), Hornbeam (*Carpinus betulus*) and Ash (*Fraxinus excelsior*) are the main component trees of the canopy. Sycamore (*Acer pseudoplatanus*) is also found and in places is reaching to sub-canopy level. The far northwest corner of the wood has a localised area of Hornbeam coppice with standards, whilst Elm (*Ulmus sp.*) and Wild Cherry (*Prunus avium*) dominate the south-east corner. Hazel (*Corylus avellana*), Elder (*Sambucus nigra*) and Hawthorn (*Crataegus monogyna*) form a very scattered shrub layer. Where there is dense canopy shading the ground flora is rather suppressed.

However, beneath the Ash in the south of the wood, greater light penetration allows a more diverse flora including Bluebell (*Hyacinthoides non-scripta*), Enchanter's-nightshade (*Circaea lutetiana*), Wood Speedwell (*Veronica montana*) and Red Currant (*Ribes rubrum*).

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

### **Selection Criteria**

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites

# Selection Rationale

The site is recommended for adoption as a LoWS because it exhibits a varied broadleaf woodland structure and is an important urban site with little other woodland present in the immediate area.

### **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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### Ha10 Burnett Wood TL 436075 Area: 2.8 ha Location: Southwest Harlow, Sumners

# **Site Description**

Burnett Wood is an ancient coppice with standards site, with overgrown Hornbeam (*Carpinus betulus*) coppice and Pedunculate Oak (*Quercus robur*) standards. The canopy also includes Ash (*Fraxinus excelsior*), Field Maple (*Acer campestre*) and Wild Cherry (*Prunus avium*). Suckering Elm (*Ulmus* sp.) is locally abundant. In the northwest corner is a small block of recent Common Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*) scrub that now forms an integral part of the site.

The rich ground flora includes abundant Creeping Soft-grass (*Holcus mollis*), frequent Bluebell (*Hyacinthoides non-scripta*) and also Wood Melick (*Melica uniflora*), Primrose (*Primula vulgaris*), Wood-sedge (*Carex sylvatica*), Wood Avens (*Geum urbanum*), Goldilocks Buttercup (*Ranunculus auricomus*), Lesser Celandine (*Ficaria verna*), Wood Speedwell (*Veronica montana*) and Common Dog-violet (*Viola riviniana*).

Also included within the Site is a pond and surrounding willows, which add to the overall diversity of the site.

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

# **Selection Criteria**

HC1 – Ancient Woodland Sites HC29 – Habitat Extension Mosaics

### **Selection Rationale**

The site is recommended for adoption as a LoWS because the structure and flora of this wood suggests that it is ancient. The recent scrub and pond, though minor features, add to the overall habitat diversity of the Site.

# **Review Schedule**

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS) – minor addition



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### Ha11 St Mary's, Little Parndon TL 438110 Area: 0.2 ha Location: North Harlow, Little Parndon, Parndon Mill Lane

### **Site Description**

The grassland of this small urban churchyard retains several species of interest including Burnetsaxifrage (*Pimpinella saxifraga*), Lady's Bedstraw (*Galium verum*), Common Knapweed (*Centaurea nigra*), Field Wood-rush (*Luzula campestris*), Mouse-ear-hawkweed (*Pilosella officinarum*) and Harebell (*Campanula rotundifolia*), the latter included within the Essex Red Data List as a scarce species in the county. This flora is indicative of a largely unimproved grassland on light, sandy soils.

## BAP Habitats

Lowland Dry Acid Grassland (UK) Species-rich grassland (Essex)

## Selection Criteria

HC13 – Heathland and Acid Grassland

## Selection Rationale

The site is recommended for adoption as a LoWS because this small churchyards survives as a fragment of unimproved acid to neutral grassland. These low nutrient grassland sites are increasingly rare in the Essex countryside and churchyards such as this have become important refuges for many of the counties declining plant species.

Review Schedule Site Selected: 2010 (EECOS) Reviewed: -



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### Ha12 Parndon Common TL 442070 Area: 5.7 ha Location: Southwest Harlow, Kingsmoor, Parndon Wood Road

# Site Description

Although locally known as Parndon Common, this site lies to the south of the footprint of the former common. Ordnance Survey maps of the 1880s show the site to be largely based on three rectangular fields that lay at the northern end of a series of such fields separating Parndon Wood from Hospital/Risden's Woods. This land may have formerly been woodland connecting the two present day woods, with the extant hedgerows comprising ancient woodland remnants. At the western end of this Site is a narrow strip of ancient woodland that was excluded from the SSSI, now carrying the cemetery access road. The canopy is mainly Hornbeam (*Carpinus betulus*) and Pedunculate Oak (*Quercus robur*).

The grassland is not of sufficient merit to select the site under grassland criteria alone, but the combination of reasonable species diversity, the scatter of mature oak trees and thick boundary hedge makes this an interesting wildlife area and an important link between the two sections of woodland SSSI. It is also an important site for local amenity and environmental education. For this reason the common is includes within the Parndon Woods and Common LNR.

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

# **Selection Criteria**

HC1 – Ancient Woodland Sites HC30 – Wildlife Corridors HC31 – Accessible Natural Greenspace

# **Selection Rationale**

The site is recommended for adoption as a LoWS because the common provides an ecological link between the two SSSI woods and also provides an important educational resource and greenspace amenity area.

# **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS) – slightly enlarged



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### Ha13 Parndon Moat Marsh TL 441111 Area: 3.1 ha Location: North Harlow, Burnt Mill, Parndon Mill Lane

### **Site Description**

Parndon Moat Marsh is located to the south of the River Stort navigation. This site together with Marshgate Spring (Ha21) and part of Town Park Marshes (Ha22) form Harlow Marshes Local Nature Reserve. The most significant feature of Parndon Moat Marsh is the presence of Desmoulin's Whorl Snail (*Vertigo moulinsiana*), a UK Biodiversity Action Plan species and known in Essex from only two other sites. It requires stands of dense, tall sedge and a stable hydrological regime and occurs in a number of sedge beds scattered across the Site.

The site is a mosaic of woodland, swamp, grassland and scrub. Pond-sedges (*Carex acutiformis* and *C. riparia*) are locally dominant, with Reed Canary-grass (*Phalaris arundinacea*) and Meadowsweet (*Filipendula ulmaria*) also prominent in this habitat. Of interest is the presence of Skullcap (*Scutellaria galericulata*) in this area. A pond towards the eastern end of the site exhibits a tall swamp flora, with stands of Bulrush (*Typha latifolia*), Reed Sweet-grass (*Glyceria maxima*), and Purple-loosestrife (*Lythrum salicaria*). Other species of interest here include Flowering-rush (*Butomus umbellatus*), Water Forget-me-not (*Myosotis scorpioides*) and Tufted Forget-me-not (*Myosotis laxa*). A steep bank by Allende Avenue has well drained species-rich grassland supporting Common Restharrow (*Ononis repens*), Bee Orchid (*Ophrys apifera*),

Common Knapweed (*Centaurea nigra*) and Lady's Bedstraw (*Galium verum*). The site is also important for reptiles with Grass Snake (*Natrix natrix*), Common Lizard (*Zootoca vivipara*) and Slow Worm (*Anguis fragilis*) all recorded.

## **BAP Habitats**

Lowland Fens, Wet Woodland (UK)

### **Selection Criteria**

HC13 – Lowland Fen SC16 – Hotspots for Reptile Diversity SC18 – UK BAP Priority Invertebrates

## **Selection Rationale**

The site is recommended for adoption as a LoWS because the site supports a regionally, if not nationally, important population of Desmoulin's Whorl Snail. The diverse reptile population is also of note. All extensive sedge bed and fen habitats in Essex are fragile, under threat and worthy of conservation.

## **Review Schedule**

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS)



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#### Ha14 Parndon Wood Link TL 443067 Area: 0.5 ha

Location: Southwest Harlow, Parndon Wood Cemetery and Crematorium

### Site Description

This Site comprises an old hedgerow feature with mature, though technically "recent" (rather than ancient) semi-natural broadleaved woodland. The Site provides some level of connectivity between the two adjacent sections of SSSI woodland, an ecological function that is not necessarily compromised by the woodlands role as a commemorative area for the adjacent cemetery. The canopy is primarily of Pedunculate Oak (*Quercus robur*).

### **BAP Habitats**

Hedgerows; Lowland Mixed Deciduous Woodland (UK) Ancient/Species-rich Hedgerows and Green Lanes (Essex)

# **Selection Criteria**

HC2 - Lowland Mixed Deciduous Woodland on Non-ancient Sites HC30 – Wildlife Corridors

## **Selection Rationale**

The site is recommended for adoption as a LoWS because the wildlife of the two separate sections of SSSI woodland will be enhanced by maintaining good connectivity between the two woodland blocks.

# **Review Schedule**

Site Selected: 2010 (EECOS) Reviewed: -



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### Ha15 Stewards Meadow TL 444079 Area: 0.4 ha Location: Southwest Harlow, Stewards, Pinceybrook Road

# **Site Description**

This small block of grassland and scrub lies within the grounds of Stewards School and is used as an educational area. The western end is mostly dominated by dense Hawthorn (*Crataegus monogyna*) scrub, but a small recently dug pond occupies the southwest corner. Other areas have locally dominant Blackthorn (*Prunus spinosa*) scrub. Much of the grassland is dominated by False Oat-grass (*Arrhenatherum elatius*) with frequent Yorkshire-fog (*Holcus lanatus*) and lesser amounts of Bent-grass (*Agrostis* sp.) and Timothy (*Phleum pratense* agg). The herb flora includes Red Bartsia (*Odontites vernus*), Cowslip (*Primula veris*), Primrose (*Primula vulgaris*), Meadow Vetchling (*Lathyrus pratensis*) and Perforate St John's-wort (*Hypericum perforatum*).

# BAP Habitats

Species-rich Grassland (Essex)

### Selection Criteria

HC31 – Accessible Natural Greenspace

## Selection Rationale

The site is recommended for adoption as a LoWS because Stewards Meadow is located in a very urban setting and survives as an oasis of scrub and grassland that is particularly valuable for invertebrates and birds. Although rather small and isolated, it provides an ideal area for students to study wildlife.

# **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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### Ha16 Parndon Wood North TL 445072 Area: 0.2 ha Location: Southwest Harlow, Kingsmoor, Parndon Wood Road/Long Wood

# **Site Description**

This small site is a narrow band of woodland surviving to the north of a track separating it from Parndon Wood (SSSI). The composition is mainly coppice and standards of Hornbeam (*Carpinus betulus*) along with some Field Maple (*Acer campestre*). Other tree species include Pedunculate Oak (*Quercus robur*) and Ash (*Fraxinus excelsior*). There is very little in the way of any shrub canopy, but Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*) are present. The ground flora is most diverse on the trackside bank where Remote sedge (*Carex remota*), Black Bryony (*Tamus communis*) and Hairy-brome (*Bromopsis ramosa*), all ancient woodland indicators, are recorded.

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

# Selection Criteria

HC1 – Ancient Woodland Sites

## Selection Rationale

The site is recommended for adoption as a LoWS because this small belt survives as a piece of probably ancient wood that formed part of a larger woodland complex with the now lost Long Wood which lay to the east. It has a good broadleaf structure to complement Parndon Wood SSSI and it is effectively a detached section of this wood, separated by a gradually widened lane.

Review Schedule Site Selected: 2010 (EECOS) Reviewed: -



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## Ha17 The Ravine TL 445086 Area: 2.5 ha Location: Central west Harlow, Passmores

### **Site Description**

This linear site follows the course of a small tributary stream that drains northwards into Todd Brook. The stream lies at the bottom of a steep sided ravine, with the banks on the east side having a particularly steep gradient. Some very old tall Hornbeam (*Carpinus betulus*) and Ash (*Fraxinus excelsior*) coppice dominates along its length along with Pedunculate Oak (*Quercus robur*), Field Maple (*Acer campestre*) and Sycamore (*Acer pseudoplatanus*). Coppiced Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Elder (*Sambucus nigra*) form a scattered shrub layer. Midland Hawthorn (*Crataegus laevigata*), a shrub strongly associated with ancient woodland and hedgerows, is also present. Cow Parsley (*Anthriscus sylvestris*) and Ivy (*Hedera helix*) are frequent in the ground flora, but ancient woodland plants include Bluebell (*Hyacinthoides non-scripta*), Dog's Mercury (*Mercurialis perennis*) and Wood Melick (*Melica uniflora*) with Cuckooflower (*Cardamine pratensis*) occurring sparingly.

## **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

## **Selection Criteria**

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites HC31 – Accessible Natural Greenspace

### **Selection Rationale**

The site is recommended for adoption as a LoWS because this wooded ravine is clearly visible on the 1882 Ordnance Survey map, and almost certainly survived then as now due to the severe topography either side of the small stream. It is arguably an ancient woodland strip although its margins would have been influenced by surrounding development. It provides a valuable greenspace experience for residents of the Passmores area of Harlow.

Review Schedule Site Selected: 2010 (EECOS) Reviewed: -



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#### Ha18 Third Avenue, Todd Brook Grasslands TL 445093 Area: 15.3 ha Location: Central Harlow, Todd Brook, Third Avenue

# **Site Description**

This extensive grassland lies either side of Todd Brook and provides a real sense of countryside right in the heart of the town. A wide variety of grasses are found throughout the Site including Sweet Vernal-grass (*Anthoxanthum odoratum*), Crested Dog's-tail (*Cynosurus cristatus*), Yellow Oat-grass (*Trisetum flavescens*), Red Fescue (*Festuca rubra*) and Meadow-grasses (*Poa* spp.). Visually, at the height of the flowering season in June, the most prominent herbs are Meadow Buttercup (*Ranunculus acris*) and Oxeye Daisy (*Leucanthemum vulgare*). However there are many other species of interest to be found including, Grass Vetchling (*Lathyrus nissolia*), Field Scabious (*Knautia arvensis*), Red Bartsia (*Odontites vernus*), Greater Knapweed (*Centaurea scabiosa*) and Wild Mignonette (*Reseda lutea*). The latter two species are generally associated with more calcareous soils.

### **BAP Habitats**

Lowland Meadows (UK) Species-rich Grassland (Essex)

# Selection Criteria

HC9 - Lowland Meadows HC11 – Other Neutral Grasslands

# Selection Rationale

The site is recommended for adoption as a LoWS because it is thought to be old farmland that survived the construction of Harlow new town and represents relict old grassland, with associated flora and, most likely, invertebrates.

## Review Schedule

Site Selected: 1991 (EWT)

Reviewed: 2002 (Harlow DC) - extended; 2010 (EECOS) - further extension



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#### Ha19 Maunds Wood TL 447075 Area: 2.5 ha Location: South west Harlow, Stewards, Paringdon Road

#### Site Description

The main body of Maunds Wood comprises overgrown Hornbeam (*Carpinus betulus*) coppice with Pedunculate Oak (*Quercus robur*) standards. The northern and eastern margins are, however, quite different, with Hazel (*Corylus avellana*) replacing hornbeam and with Holly (*Ilex aquifolium*) and Bramble (*Rubus fruticosus* agg.). The detached part of the wood to the south is also an oak-Hornbeam wood, suffering from considerable trampling. The ground flora is rather suppressed under the dense Hornbeam canopy, but elsewhere there is locally frequent Creeping Soft-grass (*Holcus mollis*) and Bluebell (*Hyacinthoides non-scripta*), with Remote Sedge (*Carex remota*), Honeysuckle (*Lonicera periclymenum*), Lesser Celandine (*Ficaria verna*) and Bramble (*Rubus fruticosus* agg.) also present.

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

### Selection Criteria

HC1 – Ancient Woodland Sites

# **Selection Rationale**

The site is recommended for adoption as a LoWS because documentary and floristic evidence suggests that this wood is ancient.

## Review Schedule Site Selected: 1991 (EWT)

**Reviewed:** 2002 (Harlow DC); 2010 (EECOS) – slight addition



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### Ha20 Netteswell Plantation TL 449094 Area: 9.3 ha Location: Central Harlow, Tye Green, Second Avenue

# Site Description

This site has a complex history. The main block of woodland to the northwest of the site, although recent in origin, is present on an Ordnance Survey map of 1882. The remaining woodland either side of Todd Brook is more recent still. Stony Wood (originally beneath the cul-de-sac end of Westfield) was a woodland plantation dating from the early 20<sup>th</sup> Century and had mostly been cleared by the 1960's. Only a very small fragment of Stony Wood now survives to the south of Todd Brook.

This site evolution has created a wood of diverse structure and an important woodland amenity within the town centre. Pedunculate Oak (*Quercus robur*) standards, Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Hornbeam (*Carpinus betulus*) coppice are the dominant trees of this site. They form a densely shading canopy. The shrub layer has some scattered Hazel (*Corylus avellana*) coppice beneath. The area close to Todd Brook has much Blackthorn (*Prunus spinosa*) and many other species including Ash, Field Maple (*Acer campestre*), Hawthorn (*Crataegus monogyna*), Elder (*Sambucus nigra*), Hazel and Pedunculate Oak.

The ground flora comprises typical woodland species, such as Enchanter's-nightshade (*Circaea lutetiana*), Male-fern (*Dryopteris filix-mas*), Bluebell (*Hyacinthoides non-scripta*), Dog's Mercury (*Mercurialis perennis*), Lesser Celandine (*Ficaria verna*) and Red Campion (*Silene dioica*).

Small areas of grassland to the northeast and southwest add to the habitat diversity of this site, in particular creating scrub edge habitat that is an important micro-habitat for invertebrates.

## BAP Habitats

Lowland Mixed Deciduous Woodland (UK)

#### **Selection Criteria**

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites HC29 – Habitat Extension Mosaics

# **Selection Rationale**

The site is recommended for adoption as a LoWS because this is an important urban wood that provides a good wildlife habitat and also opportunities as an educational/amenity resource in the heart of the town.

## Review Schedule

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC) – slight addition; 2010 (EECOS) – further addition



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# Ha21 Marshgate Spring TL 452115 Area: 5.4 ha

### Location: North Harlow, Temple Fields, Elizabeth Way

### Site Description

Marshgate Spring forms part of Harlow Marshes Local Nature Reserve (LNR) along with Parndon Moat Marsh (Ha13) and Maymead Marsh (Ha23). The site has woodland on a north facing slope with springs that feed an area of wet woodland and swamp habitat. The woodland comprises Pedunculate Oak (*Quercus robur*) standards with Ash (*Fraxinus excelsior*) and Hornbeam (*Carpinus betulus*). The shrub layer canopy has scattered Hawthorn (*Crataegus monogyna*) and Hazel (*Corylus avellana*) coppice. The lower slopes have Alder (*Alnus glutinosa*) dominating where there very poor drainage conditions exist, grading into wet willow (*Salix* spp.) scrub woodland. The ground flora of the drier upper slopes includes Bluebell (*Hyacinthoides non-scripta*), Dog's Mercury (*Mercurialis perennis*), Cowslip (*Primula veris*) and frequent Ivy (*Hedera helix*). Down slope, Ramsons (*Allium ursinum*) is found as a streamside species. The north-eastern part of the site is dominated mainly by Willows.

The centre and west of the Site is predominantly wetland supporting species such as Common Reed (*Phragmites australis*), Lesser Pond-sedge (*Carex acutiformis*), Reed canary-grass (*Phalaris arundinacea*) and Reed Sweet-grass (*Glyceria maxima*). Of particular note is the Common Meadow-rue (*Thalictrum flavum*), an Essex Red Data List species that has declined in throughout the county due to the loss of marsh and fen habitat.

Recent invertebrate work has revealed an important assemblage of wetland beetles, flies and spiders including species not previous recorded in Essex, the most notable of which are the beetle *Oxytelus fulvipes* and the flies *Dicranomyia lucida, Stevenia atramentaria* and *Ischiolepta denticulata*.

### **BAP Habitats**

Lowland Fen, Wet Woodland, Lowland Mixed Deciduous Woodland (UK)

### Selection Criteria

HC2 – Lowland Mixed Deciduous woodland on Non-ancient Sites HC3 – Other Priority Habitat Woodland Types on Non-ancient Sites HC14 – Lowland Fen Vegetation

#### **Selection Rationale**

The site is recommended for adoption as a LoWS because this extensive mosaic of wetland habitats has been shown to support rare and scarce flora and fauna in an Essex context. The drier woodland provides additional opportunities for woodland amenity and education and this grades quite naturally into scarce wet woodland habitats.

#### Review Schedule

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS)



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### Ha22 Town Park Marsh TL 450115 Area: 8.4 ha Location: North Harlow, Town Park

# **Site Description**

This Site comprises an extensive series of mainly river floodplain grasslands in conjunction with Maymead Marsh (Ha23). The Town Park Marsh site comprises both dry and wet grassland. The site has many grasses characteristic of more fertile soils including Meadow-grasses (*Poa* spp.), False Oat-grass (*Arrhenatherum elatius*), Meadow Foxtail (*Alopecurus pratensis*) and Yorkshire-fog (*Holcus lanatus*). However, the eastern end of the site has a more varied flora with herb species including Common Knapweed (*Centaurea nigra*) and Meadow Vetchling (*Lathyrus pratensis*), and has an important colony of Southern Marsh-orchids (*Dactylorhiza praetermissa*) an Essex Red Data List Species (ERDL) found in a localised damp area of the grassland. The far western end also has a seasonally wet central zone with Creeping Bent (*Agrostis stolonifera*) and a nearby stand of Reed Canary-grass (*Phalaris arundinacea*). Other species associated with this damp substrate include Hairy Sedge (*Carex hirta*) and Hard Rush (*Juncus inflexus*). The many drains support several emergent and marginal species including Marsh Woundwort (*Stachys palustris*), Bulrush (*Typha latifolia*) and Bittersweet (*Solanum dulcamara*) and Lesser Water-parsnip (*Berula erecta*), which is a scarce Essex plant that is included within the Essex Red Data List of plants.

## **BAP Habitats**

Coastal and Floodplain Grassland (UK) Species-rich Grassland (Essex)

# Selection Criteria

HC10 – River Floodplain HC11 – Other Neutral Grasslands

### **Selection Rationale**

The site is recommended for adoption as a LoWS because this series of dry, damp and seasonally wet grasslands and the associated drains form an extensive and very important riverside habitat supporting a diverse and species rich flora. This site also compliments the Local Nature reserve grassland within Maymead Marsh (Site Ha23). Floodplain habitat of this kind is increasingly rare, much having been lost due to drainage and improvement. The site also supports two ERDL species of vascular plant.

## **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)


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### Ha23 Maymead Marsh TL 453118 Area: 6.2 ha Location: North Harlow, Town Park - Templefields

### **Site Description**

This site along with Marshgate Spring (Ha21) and Parndon Moat Marsh (Ha13) are designated as Harlow Marshes Local Nature Reserve; it also forms an extensive area of old river floodplain grassland with Site Ha22 (Town Park Marshes). Maymead Marsh is a series of damp and seasonally wet grasslands separated by hedges and drains along with a pond, scrub, planted willows and tall herb communities. The western grasslands are floristically most diverse, with Lesser Pond-sedge (*Carex acutiformis*) and Brown Sedge (*Carex disticha*) (an Essex Red Data List (ERDL) species) forming localised patches within the grassland. Other species recorded include Meadowsweet (*Filipendula ulmaria*), Common Knapweed (*Centaurea nigra*), Meadow Vetchling (*Lathyrus pratensis*) and Lesser Water-parsnip (*Berula erecta*), also an ERDL species.

### **BAP Habitats**

Coastal and Floodplain Grassland, Wet Woodland (UK) Species-rich Grassland (Essex)

# Selection Criteria

HC10 – River Floodplain HC3 – Other Priority Habitat Woodland Types on Non-ancient Sites

# Selection Rationale

The site is recommended for adoption as a LoWS because this Site, along with Town Park Marsh (Ha22) forms an extensive and very important riverside habitat supporting a species-rich flora. Floodplain habitat of this kind is increasingly rare, much having been lost due to drainage and improvement. There are three ERDL species of vascular plant found in this site.

### **Review Schedule**

Site Selected: 1991 (EWT) - part of site Reviewed: 2002 (Harlow DC); 2010 (EECOS)



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### Ha24 St Andrew's Church, Netteswellbury TL 456093 Area: 0.3 ha Location: Central Harlow, Tye Green, Waterhouse Moor

# **Site Description**

The most species-rich area of this churchyard is found just to the south of the church itself. This area retains an old grassland assemblage and includes two species of interest. Harebell (*Campanula rotundifolia*), included within the Essex Red Data List (ERDL) as a scarce species, is found growing near to some old graves, whilst the small evergreen fern Black Spleenwort (*Asplenium adiantum-nigrum*) (also ERDL) utilises the gaps in the stonework of a tomb to the east side of the church. Other species recorded include Bulbous Buttercup (*Ranunculus bulbosus*) and Burnet-saxifrage (*Pimpinella saxifraga*), this latter species being slow to colonise and is particularly characteristic of old grassland habitat.

### **BAP Habitats**

Species-rich Grasslands (Essex)

# Selection Criteria

HC11 – Other Neutral Grasslands

### **Selection Rationale**

The site is recommended for adoption as a LoWS because the grassland in the churchyard exhibits a flora characteristic of old unimproved grassland. Churchyards often comprise small relicts of such grassland that have survived agricultural improvement or development.

# Review Schedule Site Selected: 2010 (EECOS)

Reviewed: -



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### Ha25 The Moors TL 458096 Area: 2.1 ha Location: Central Harlow, Netteswell, Howard Way

### Site Description

This site lies to the north side of Todd Brook and is currently (2010) horse grazed. The west part of the Site comprises streamside Ash (*Fraxinus excelsior*) and Hazel (*Corylus avellana*) coppice, Hawthorn (*Crataegus monogyna*) and Elder (*Sambucus nigra*) with some Sycamore (*Acer pseudoplatanus*) and Pedunculate Oak (*Quercus robur*) in the far west end. The shaded grassland and ruderal habitat in the western part of the site is generally less species diverse and comprises species such as Meadow Foxtail (*Alopecurus pratensis*), Common Nettle (*Urtica dioica*) and Hogweed (*Heracleum sphondylium*). The open grassland to the east slopes with a southerly aspect. The upper slope is the most species-rich with Burnet-saxifrage (*Pimpinella saxifraga*), Lady's Bedstraw (*Galium verum*), Musk Mallow (*Malva moschata*) and Lesser Stitchwort (*Stellaria graminea*).

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Species-rich Grassland (Essex)

### **Selection Criteria**

HC28 – Small Component Mosaics HC31 – Accessible Natural Greenspace

# Selection Rationale

The site is recommended for adoption as a LoWS because it appears to represent an increasingly wooded old grassland strip. Whilst the current mix of habitats provides good habitat diversity, future management may be needed to conserve the grassland component.

# Review Schedule

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS) - partial deletion



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#### Ha26 Vicarage Wood TL 458103 Area: 4.4 ha Location: Central Harlow, Netteswell – Markhall South, Howard Way

### **Site Description**

Vicarage Wood is arguably ancient woodland at least in part. The western section is dominated by Pedunculate Oak (*Quercus robur*) standards with some tall Hornbeam (*Carpinus betulus*) coppice. Coppiced Hazel (*Corylus avellana*) is present in the shrub layer. The area to the east of the bisecting road is similar in structure in having dominant Pedunculate Oak standards, but Norway Maple (*Acer platanoides*) dominates the sub-canopy level and is particularly invasive throughout this section of the wood. The ground flora is varied and includes Bluebell (*Hyacinthoides non-scripta*), Dog's Mercury (*Mercurialis perennis*), Wood sedge (*Carex sylvatica*), Remote Sedge (*Carex remota*), Hairy St John's-wort (*Hypericum hirsutum*), Wood Millet (*Milium effusum*) and Barren Strawberry (*Potentilla sterilis*).

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

# Selection Criteria

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites

### Selection Rationale

The site is recommended for adoption as a LoWS because if this wood is subsequently demonstrated to be ancient, criterion HC1 would apply. Regardless of its status, this woodland has a good broadleaf canopy and shrub layer structure. The range of ground flora herb species recorded alludes to the wood being, if not strictly ancient, then at least of some considerable age. It is an important urban wildlife resource.

# Review Schedule

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS)



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### Ha27 Brays Grove TL 462092 Area: 1.4 ha Location: Central Harlow, Brays Grove, Tumbler Road

# **Site Description**

The Bray's Grove area of Harlow takes its name from this old, possibly ancient wood. An Ordnance Survey map of 1882 shows that the wood extended further south, but was lost during the 1960's to the housing around where Great Leylands now exists. The main part of the woodland differs in character to the eastern limb, the northern half of which exhibits the characteristics of older woodland. Here, Pedunculate Oak (*Quercus robur*) and standards and Hornbeam (*Carpinus betulus*) coppice are found. The main woodland block has a mixture of older Hornbeam coppice and Pedunculate Oak standards confined to the northwest and northeast corners. Elsewhere the canopy comprises Ash (*Fraxinus excelsior*), Sweet Chestnut (*Castanea sativa*) and Sycamore (*Acer pseudoplatanus*) with Hazel (*Corylus avellana*) coppice in the shrub canopy, along with much invasive Norway Maple (*Acer platanoides*). Centrally, an area of presumed storm damage has been replanted, including exotic species such as Grey Alder (*Alnus incana*). Ground flora species found throughout the site include Bluebell (*Hyacinthoides non-scripta*), Wood sedge (Carex sylvatica), Three-nerved Sandwort (*Moehringia trinervia*) and Primrose (*Primula vulgaris*).

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

# **Selection Criteria**

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites HC31 - Accessible Natural Greenspace

#### **Selection Rationale**

The site is recommended for adoption as a LoWS because Brays Grove is surrounded by housing development, and although it is secondary woodland habitat, it still retains remnants of an older coppiced structure and some interesting ground flora species. This site now has a varied species composition, and provides an excellent opportunity for community involvement to enhance the wildlife value by sympathetic management.

Review Schedule Site Selected: 2010 (EECOS) Reviewed: -



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Ha28 Gravelpit Springs, Latton Farm TL 462096 Area: 2.2 ha Location: Central Harlow, Mark Hall South, Howard Way

# Site Description

This woodland has a varied structure: the central area has an open and mixed canopy including Field Maple (*Acer campestre*), Scots Pine (*Pinus sylvestris*), Elm (*Ulmus sp.*), Ash (*Fraxinus excelsior*) and Sycamore (*Acer pseudoplatanus*). Beneath this is a tangle of Bramble (*Rubus fruticosus* agg) scrub. However, Sycamore is also regenerating in this central area of the woodland. Bluebell (*Hyacinthoides non-scripta*) is generally restricted to wood margins and in particular the outer wood bank. The eastern edge of the wood has Hornbeam (*Carpinus betulus*) coppice with Pedunculate Oak (*Quercus robur*) and Ash in the high canopy. Hazel (*Corylus avellana*) coppice forms a shrub layer beneath. Bluebells are also found in this area. In contrast, the northwest part of the wood is characterised by tall Pedunculate Oak standards over Hazel coppice with scattered patches of bramble scrub. Other ground flora species found in Gravelpit Spring include Wood-sedge (*Carex sylvatica*) and tussocks of Soft–rush (*Juncus effusus*) in the damper zones, whilst Rosebay Willowherb (*Chamerion angustifolium*) has colonised localised open dry areas not shaded by tree and shrub species.

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

# **Selection Criteria**

HC1 – Ancient Woodland Sites

### **Selection Rationale**

The site is recommended for adoption as a LoWS because although it is not recorded as such on the county's ancient woodland inventory, the flora and structure of this wood suggests an ancient origin for this wood, although the canopy may have been modified in the past by extensive replanting. The name "spring" generally refers to coppice (another sign of ancient status) rather than groundwater features.

### Review Schedule

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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# Ha29 Latton Common TL 462096

Area: 30.7 ha

### Location: Southeast Harlow, Latton Bush, Latton Common Road

# Site Description

This site comprises the central section of the former Harlow Bush Common, which included Harlow Common (Ha38) to the east. Although Latton Common suffers from localised overgrazing and the sward is of variable quality, the whole extent of the common is selected here in recognition of its overall wildlife value. The sward is dominated by Common Bent (*Agrostis capillaris*), with some Meadow Foxtail (*Alopecurus pratensis*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Tufted Hair-grass (*Deschampsia cespitosa*), Red Fescue (*Festuca rubra*), Yorkshire-fog (*Holcus lanatus*) and Cock's-foot (*Dactylis glomerata*). Hard Rush (*Juncus inflexus*) is locally frequent. Herbage includes Common Knapweed (*Centaurea nigra*), Common Cat's-ear (*Hypochaeris radicata*), Meadow Vetchling (*Lathyrus pratensis*), Field Wood-rush (*Luzula campestris*), Meadow Buttercup (*Ranunculus acris*) and vetches (*Vicia* spp.). On the higher, southern slopes Oval Sedge (*Carex leporina*) is locally frequent and is associated with old grasslands.

The southern margins of the Common comprise scrub woodland and some mature Hornbeam (*Carpinus betulus*), with large, ancient pollards of Pedunculate Oak (*Quercus robur*). This mature woodland merges into that of Mark Bushes to the south in Epping Forest District. Two ponds within the woodland add to the habitat diversity.

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Species-rich Grassland (Essex)

# **Selection Criteria**

HC11 – Other Neutral Grasslands

### **Selection Rationale**

The site is recommended for adoption as a LoWS because this is an old grassland. Although suffering from localised over-grazing, overall the grazing has helped to retain a diverse flora that should benefit invertebrates.

# **Review Schedule**

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS)



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# Ha30 Markhall Wood TL 467102 Area: 12.8 ha

## Location: Central east Harlow, Mark hall South, Momples Road

### **Site Description**

This large ancient wood has a mixed canopy of Hornbeam (*Carpinus betulus*), Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*) and locally frequent Scots Pine (*Pinus sylvestris*), with some Field Maple (*Acer campestre*), Sycamore (*Acer pseudoplatanus*) and planted exotics. The understorey comprises Hazel (*Corylus avellana*), Common Hawthorn (*Crataegus monogyna*), Holly (*Ilex aquifolium*) and Elder (*Sambucus nigra*). The varied ground flora includes several ancient woodland indicators, including Ramsons (*Allium ursinum*), Wood-sedge (*Carex sylvatica*), Bluebell (*Hyacinthoides non-scripta*), Primrose (*Primula vulgaris*), Goldilocks Buttercup and Spindle (*Euonymus europaeus*).

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

### Selection Criteria

HC1 – Ancient Woodland Sites

# **Selection Rationale**

The site is recommended for adoption as a LoWS because the flora and structure of this wood suggests an ancient origin.

### Review Schedule Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS)



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#### Ha31 Kingsdon Lane Ponds TL 473091 Area: 0.2 ha Location: Southeast Harlow, Potter Street, Kingsdon Lane

# **Site Description**

This Site comprises two old farmland ponds. present on the Ordnance Survey maps for the 1880s. Both ponds have Willows (*Salix* spp.) trees around their margins. The larger pond has a variety of marginal plant species including Yellow Iris (*Iris pseudacorus*), Water mint (*Mentha aquatica*), Floating Sweet-grass (*Glyceria fluitans*), Great Willowherb (*Epilobium hirsutum*), Bittersweet (*Solanum dulcamara*) and Brooklime (*Veronica beccabunga*). The pond surface is almost completely covered in Greater Duckweed (*Spirodela polyrhiza*), an Essex Red Data List species. The smaller of the two ponds has a shallow western end where Floating Sweet-grass and Water-cress (*Rorippa nasturtium-aquaticum* agg.) dominate. These two ponds support four species of native amphibian (Great Crested Newt, Smooth Newt, Common Frog and Toad), making it one of the more significant amphibian sites in the district.

# **BAP Habitats**

Ponds (UK)

# Selection Criteria

SC13 – Hotspots for Amphibian Diversity

## Selection Rationale

The site is recommended for adoption as a LoWS because supporting three species of amphibian qualifies it for inclusion under criterion SC13, so a site supporting four is especially valuable. Whilst the amount of surrounding semi-natural vegetation is limited, there is no reason why adjacent gardens cannot also provide places of shelter for these species. It is also important as an urban wildlife site and criterion HC31 would be equally applicable for such a site.

Review Schedule Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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Ha32 Gravelpit Spring, New Hall Hall TL 473104 Area: 1.3 ha Location: Central east Harlow, Mark Hall, Canopy Lane

### **Site Description**

This woodland survives with largely the same outline as existed in the late 19<sup>th</sup> century. The undulating topography within is the result of former small scale gravel workings. The site has a varied structure with Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), Sycamore (*Acer campestre*), Sweet Chestnut (*Castanea sativa*), and Elm (*Ulmus* sp.) in the canopy. Elder (*Sambucus nigra*) and Hawthorn (*Crataegus monogyna*) form a scattered shrub layer. Bramble (*Rubus fruticosus* agg) dominates many areas of the ground flora and other herbs found include Enchanter's-nightshade (*Circaea lutetiana*), Hairy St John's-wort (*Hypericum hirsutum*) and Dog's Mercury (*Mercurialis perennis*).

### **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

# Selection Criteria

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites

### Selection Rationale

The site is recommended for adoption as a LoWS because with the ongoing housing development around New Hall, this wood will have an increasing importance as an area of greenspace, and criterion HC31 (Accessible Natural Greenspace) will become equally applicable. The wood displays a good structure and flora.

Review Schedule Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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#### Ha33 Perry Spring TL 474097 Area: 2.9 ha Location: East Harlow, Church Langley, Minton Lane

### Site Description

Perry Spring is comprises woodland present in the 19<sup>th</sup> century and a reservoir now used as a fishing lake constructed in the latter half of the 20<sup>th</sup> century. The main composition of the wood is Pedunculate Oak (*Quercus robur*) standards with coppiced Sycamore (*Acer pseudoplatanus*) and Ash (*Fraxinus excelsior*) over Hawthorn (*Crataegus monogyna*) and coppiced Hazel (*Corylus avellana*). Herb species of the ground flora includes frequent Common Ivy (*Hedera helix*) but also present are Primrose (*Primula vulgaris*), Dog's Mercury (*Mercurialis perennis*) and Threenerved Sandwort (*Moehringia trinervia*), There is a very steep bank on the east side of the wood where the fishing lake adjoins.

The fishing lake has a well established aquatic, emergent and marginal flora. Among the aquatics are Rigid Hornwort (*Ceratophyllum demersum*), Spiked Water-milfoil (*Myriophyllum spicatum*), Curled Pondweed (*Potamogeton crispus*) and Water-lily (*Nymphaea* sp.). Lesser Bulrush (*Typha angustifolia*) and Lesser Pond-sedge (*Carex acutiformis*) form prominent stands around the lake. There is a varied assemblage of other species including Common Spike-rush (*Eleocharis palustris*), Reed Sweet-grass (*Glyceria maxima*) and Yellow Iris (*Iris pseudacorus*). Of particular interest is the presence of an aquatic colonial ciliate protozoan *Ophrydium versatile* at possibly only its second site in Essex.

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK)

# **Selection Criteria**

HC27 – Small Component Mosaics

### **Selection Rationale**

The site is recommended for adoption as a LoWS because despite its seemingly recent origins this site has a varied and interesting flora and fauna, particularly valuable in an increasingly urbanised landscape. Although used for fishing, the lake retains a good aquatic flora, likely to support an equally diverse fauna.

# **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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### Ha34 Wyldwood Marsh TL 475129 Area: 15.4 ha Location: Northeast Harlow, Old Harlow

### **Site Description**

This site is an extensive area of floodplain habitat located on the south side of the River Stort navigation to the east side of Harlow town and is part of a chain of such sites along the Stort valley in both Essex and Hertfordshire. It is a seasonally wet habitat characterised by the presence of Tufted Hair-grass (*Deschampsia cespitosa*) as the dominant grass species throughout, forming an uncommon sward type. Other species of the damper zones include Common Spike-rush (*Eleocharis palustris*), Pond-sedges (*Carex* spp.) and Reed Canary-grass (*Phalaris arundinacea*). The wetter habitat grades into drier grassland habitat where the dominant grasses are False Oat-grass (*Arrhenatherum elatius*) and Common Couch (*Elytrigia repens*). Other herbs of this habitat include Purple-loosestrife (*Lythrum salicaria*), Water Mint (*Mentha aquatica*) and Marsh Woundwort (*Stachys palustris*). Creeping Thistle (*Cirsium arvense*) is well established in drier parts of the site and may need controlling.

### **BAP Habitats**

Coastal and Floodplain Grazing Marsh (UK)

# **Selection Criteria**

HC10 – River Floodplain HC11 – Other Neutral Grasslands

### **Selection Rationale**

The site is recommended for adoption as a LoWS because all remaining areas of wet river floodplain grassland are of value. This value often lies in habitat conditions for breeding and over-wintering birds and for invertebrates rather than in flora, but this site retains interesting plant life.

# Review Schedule

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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#### Ha35 New Hall Reedbeds TL 476103 Area: 2.0 ha Location: East Harlow, New Hall, The Chase

### **Site Description**

Each of the two sections of this Site comprises three pools dominated by Common Reed (*Phragmites australis*). Despite their recent origins, these beds have quickly developed into significant stands of reed, forming the largest extent of this UK Biodiversity Action Plan (BAP) habitat in the district. Scattered willow (*Salix* spp.) scrub adds to the habitat structural diversity but should not be allowed to dominate the pools at the expense of reed growth.

# BAP Habitats

Reedbeds (UK) Reedbeds (Essex)

### **Selection Criteria**

HC14 - Reedbeds

HC31 – Accessible Natural Greenspace

### Selection Rationale

The site is recommended for adoption as a LoWS because reed bed stands are generally rare habitat and therefore important BAP habitat. Both sections of reed lie next to other LoWS, therefore extending and diversifying the areas for wildlife. In an increasingly urbanised part of the district, this site allows unusually good access for contact with reedbed/wetland birds and invertebrates, such as dragonflies.

### **Review Schedule**

**Site Selected:** part 2002 (Harlow DC), within the Brenthall/Barnsley Woods site **Reviewed:** 2010 (EECOS)



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### Ha36 Newpond Spring TL 477105 Area: 1.8 ha Location: East Harlow, Old Harlow, New Hall, The Chase

# Site Description

This streamside woodland is split into two parts by The Chase. The main section to the north is dominated by mature Sycamore (*Acer pseudoplatanus*) coppice with standards and Hornbeam (*Carpinus betulus*) found adjacent to the stream, with Ash (*Fraxinus excelsior*) locally dominates a localised area of the woodland. The shrub layer has very scattered patches of Hawthorn (*Crataegus monogyna*), Elder (*Sambucus nigra*) with some Hazel (*Corylus avellana*) along the west side of the wood. There is much Sycamore regeneration within this wood. The Ash coppice affords greater light penetration and beneath this is found Bluebell (*Hyacinthoides non-scripta*) and Red Campion (*Silene dioica*). Other species found in the wood includes the ancient woodland indicator Goldilocks Buttercup (*Ranunculus auricomus*) along with Dog's Mercury (*Mercurialis perennis*), Wood-sedge (*Carex sylvatica*) and Lesser Celandine (*Ficaria verna*).

The southern section is a much narrower strip of streamside woodland and includes the hedgerow which connects the site to Brenthall/Barnsley woods to the south. Pedunculate Oak (*Quercus robur*) and Ash coppice are found along its length with Hawthorn and Elder in the shrub layer. Goldilocks Buttercup and Dog's Mercury are also found in the ground flora of this block of wood.

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

# **Selection Criteria**

HC1 – Ancient Woodland Sites HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites

# Selection Rationale

This site is recommended for adoption as a LoWS because it is largely arguably ancient streamside woodland, augmented by more recent secondary growth. With increased urban development adjacent to the wood it is likely to place an increasingly important role in local amenity and wildlife experiences.

# **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS)



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#### Ha37 Brenthall/Barnsley Wood TL 478099 Area: 12.9 ha Location: East Harlow, Church Langley

### Site Description

This large woodland site is listed on the Ancient Woodland Inventory for Essex. The canopy has a varied structure with tall coppiced Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Hornbeam (*Carpinus betulus*) along with Pedunculate Oak (*Quercus robur*) standards. Hazel (*Corylus avellana*) coppice is frequent throughout the shrub layer, whilst other shrub layer species recorded include Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Honeysuckle (*Lonicera periclymenum*) and Spindle (*Euonymus europaeus*). Bramble (*Rubus fruticosus* agg) patches are frequent within the woodland, whilst the ground flora has much Dog's Mercury (*Mercurialis perennis*). Where there is greater light penetration to the ground, Primrose (*Primula vulgaris*) and Wood Speedwell (*Veronica montana*) are found. Other species recorded from the wood include Three-nerved Sandwort (*Moehringia trinervia*), Wood-sedge (*Carex sylvatica*), Barren Strawberry (*Potentilla sterilis*) and Bluebell (*Hyacinthoides non-scripta*). The pond in the south-western corner supports Great Crested Newts, Smooth Newts and Common Frog, making this an important feature of the pond.

# **BAP Habitats**

Lowland Mixed Deciduous Woodland (UK) Ancient Woodland (Essex)

# **Selection Criteria**

HC1 – Ancient Woodland Sites

# Selection Rationale

The site is recommended for adoption as a LoWS because the flora and structure of this wood indicate that it is ancient and, other than the Harlow Woods SSSI, the largest block of ancient woodland in the district.

#### **Review Schedule**

Site Selected: 1991 (EWT)

Reviewed: 2002 (Harlow DC); 2010 (EECOS) – reedbeds separated into new Site.



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### Ha38 Harlow Common TL 478086 Area: 24.6 ha Location: Southeast Harlow, Potter Street

### **Site Description**

This site is the eastern end of a formerly huge tract of common land that stretched westwards through the present day Latton Common to close to Maunds Wood (Ha19) near the Harlow Woods SSSI. Largely *ad hoc* grazing by horses has helped to maintain a relatively species-rich sward, although there is localised overgrazing to the detriment of the site, allowing establishment of Common Ragwort (*Senecio jacobaea*).

The grass sward comprises much Common Bent (*Agrostis capillaris*), Meadow Foxtail (*Alopecurus pratensis*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Red Fescue (*Festuca rubra*) and Yorkshire-fog (*Holcus lanatus*) along with more localised Velvet Bent (*Agrostis canina* – an Essex Red Data List species), Tufted Hair-grass (*Deschampsia cespitosa*), Perennial Ryegrass (*Lolium perenne*), Rough Meadow-grass (*Poa trivialis*) and Smooth Meadow-grass (*Poa pratensis*). Wet ditches support Floating Sweet-grass (*Glyceria fluitans*), Creeping Bent (*Agrostis stolonifera*) and rushes (*Juncus* spp.).

Overall, the sward retains a good mix of herbs, including Cuckooflower (*Cardamine pratensis*), Common Knapweed (*Centaurea nigra*), Meadow Vetchling (*Lathyrus pratensis*), Common Bird's-

foot-trefoil (*Lotus corniculatus*), Meadow Buttercup (*Ranunculus acris*), Agrimony (*Agrimonia eupatoria*) and Common Sorrel (*Rumex acetosa*). The moss *Rhytidiadelphus squarrosus* is present, it being a moss generally associated with old grasslands.

### **BAP Habitats**

Species-rich Grassland (Essex)

### Selection Criteria

HC11 – Other Neutral Grasslands

### **Selection Rationale**

The site is recommended for adoption as a LoWS because it is one of the largest continuous tracts of grassland in the district. It retains a good, varied flora and should support an equally diverse invertebrate assemblage, as befits ancient grassland with a long history of grazing.

#### **Review Schedule**

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS) – boundary amended, with additions and deletions.



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#### Ha39 Marsh Lane Pit Wood TL 481126 Area: 0.2 ha Location: Northeast Harlow, Old Harlow

### Site Description

This small copse comprises a steep sided woodland with pond and despite its small size has a varied structure. A few Ash (*Fraxinus excelsior*) and Silver Birch (*Betula pendula*) standards are found on the upper slopes, but the majority of the canopy is made up of Field Maple (*Acer campestre*) with some Hazel (*Corylus avellana*) and Elder (*Sambucus nigra*) in the shrub layer. Much of the ground is covered by a leaf litter layer except for near the pond where Dog's Mercury (*Mercurialis perennis*) forms extensive patches in the shaded areas. A dense tangle of Bramble (*Rubus fruticosus* agg), Common Nettle (*Urtica dioica*) and other shrubs line the western side of the pond. The shallow pond has a few marginal species including Pendulous Sedge (*Carex pendula*), Gipsywort (*Lycopus europaeus*), Brooklime (*Veronica beccabunga*) and Pink Waterspeedwell (*Veronica catenata*), a species uncommon in the district and, indeed, in Essex.

# BAP Habitats

Lowland Mixed Deciduous Woodland (UK)

### **Selection Criteria**

HC2 – Lowland Mixed Deciduous Woodland on Non-ancient Sites

# **Selection Rationale**

The site is recommended for adoption as a LoWS because this small woodland provides a diverse structure with secluded habitat for wildlife in an otherwise poorly wooded part of the district.

# Review Schedule

Site Selected: 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS)



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Ha40 Pincey Brook Complex TL 486126 Area: 2.6 ha Location: Northeast Harlow, Old Harlow

### Site Description

This site comprises small-scale floodplain grassland, woodland and scrub in the Pincey Brook valley and forms a natural extension to a similar LoWS to the east in Epping Forest District (Ep109). The main grassland surrounded by dense hedges supports a range of grasses and herbs including Red Fescue (*Festuca rubra*), Yorkshire-fog (*Holcus lanatus*), Meadow-grasses (*Poa* spp.), Meadow Buttercup (*Ranunculus acris*) and Meadow Vetchling (*Lathyrus pratensis*). In contrast, the smaller block of habitat at the western end of the site has damp grassland characterised by herbs including Great Willowherb (*Epilobium hirsutum*), Meadowsweet (*Filipendula ulmaria*), Water Forget-me-not (*Myosotis scorpioides*), Water Chickweed (*Myosoton aquaticum*) and Purple-loosestrife (*Lythrum salicaria*). A small stand of Lesser Pond-sedge (*Carex acutiformis*) is also found here. White Willow (*Salix alba*) and Aspen (*Populus tremula*) trees are found near to the brook. There is also a narrow strip of ancient woodland forming the southern limb to the site, which is dominated by Hornbeam (*Carpinus betulus*).

### **BAP Habitats**

Coastal and Floodplain Grazing Marsh; Lowland Mixed Deciduous Woodland (UK) Ancient Woodland; Species-rich Grassland (Essex)

# **Selection Criteria**

HC1 –Ancient Woodland Sites HC10 – River Floodplain

# Selection Rationale

The site is recommended for adoption as a LoWS because although Pincey Brook is a relatively minor watercourse, the series of damp grasslands found here within Harlow and Epping Forest districts comprises an important example of this declining grassland habitat. Areas of woodland and scrub add to the overall habitat diversity.

# **Review Schedule**

Site Selected: part 1991 (EWT) Reviewed: 2002 (Harlow DC); 2010 (EECOS)


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#### Ha41 Feltimores Meadows TL 488109 Area: 7.5 ha Location: East Harlow, Old Harlow, Hobbs Cross Road

#### **Site Description**

Feltimores Meadows are an area of unimproved grassland located predominantly in an arable landscape to the east of the district. It is a relatively large tract of old grassland exhibiting a wide variety of grasses. Sweet Vernal-grass (*Anthoxanthum odoratum*), Common Bent (*Agrostis capillaris*), Crested Dog's-tail (*Cynosurus cristatus*), Red Fescue (*Festuca rubra*), Meadow Barley (*Hordeum secalinum*) and Yellow Oat-grass (*Trisetum flavescens*) are amongst the many species recorded here. Herb species found throughout this meadow site include Agrimony (*Agrimonia eupatoria*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Oxeye daisy (*Leucanthemum vulgare*), Meadow Buttercup (*Ranunculus acris*) and Burnet-saxifrage (*Pimpinella saxifraga*).

#### **BAP Habitats**

Species-rich Grassland (Essex)

#### Selection Criteria

HC11 – Other Neutral Grasslands

#### Selection Rationale

The site is recommended for adoption as a LoWS because this extensive area of grassland survives in a landscape mostly given over to arable farming. Large blocks of good grassland habitat are scarce in the district and indeed the county. Feltimores provides valuable pasture that retains the characteristics of old grassland habitat.

### **Review Schedule**

Site Selected: 2002 (Harlow DC) Reviewed: 2010 (EECOS) – addition and deletion.



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Ha42 Chalk Lane Embankment TL 495112 Area: 0.2 ha Location: East Harlow, Old Harlow, Chalk Lane

#### Site Description

This small section of embankment has been planted with many young Ash (*Fraxinus excelsior*) trees as part of the motorway landscaping, but its importance lies in the grassland below. The base rich soil conditions support an interesting flora including Agrimony (*Agrimonia eupatoria*), Common Knapweed (*Centaurea nigra*), Wild Basil (*Clinopodium vulgare*), Wild Carrot (*Daucus carota*), Hairy St John's-wort (*Hypericum hirsutum*), and in excess of two hundred Pyramidal Orchids (*Anacamptis pyramidalis*), this being an Essex Red Data List species.

### BAP Habitats

Species-rich Grassland (Essex)

# Selection Criteria

SC1 – Vascular Plants

#### **Selection Rationale**

The site is recommended for adoption as a LoWS on the basis of its large population of Pyramidal Orchids.

Review Schedule Site Selected: 2010 (EECOS) Reviewed: -

### APPENDIX 3 REGISTER OF POTENTIAL LOCAL WILDLIFE SITES

### KEY TO MAPS





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# PHaLoWS1 Timberland Fishery (3.0 ha) TL 420094)

It appears that Water Voles have colonised this site in the recent past. Good quality Water Vole habitat can be considered for selection as a Local Wildlife site, but it is felt to be too early to tell if this site merits this status. The Water Vole population may be transient or exploratory rather than established. If the population establishes itself more or less permanently, the site could be considered for selection.



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### PHaLoWS2 Lawn at Former 3M Buildings (0.1 ha) TL 429093

This site was previously identified as a Wildlife Site on account of the population of Bee Orchids present. However, using the current criteria, this species alone is unlikely to qualify the site for identification as a full LoWS. For a site to be selected as a LoWS for a single plant species, it would normally be a plant included within the Essex Red Data List of threatened species, and Bee Orchid is not on this list.

It would therefore need to be an exceptional population of any other plant to merit LoWS registration. The white form of the orchid *Ophrys apifera var. chlorantha* is only a colour variety, not a sub-species, which can, according to county Botany Recorder Dr Ken Adams, come and go in populations by chance mutation. There is therefore no case to be made for the conservation of a scarce sub-species of a plant.

The site would be of greater nature conservation value if it were a more species-rich and tall sward, such as the nearby Third Avenue verge (which also contains Bee Orchids). However, at present the lawn appears to be mown regularly and very short, thereby severely limiting the value of the site.



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# PHaLoWS3 Church End Pond and Meadow (1.1 ha) TL 433088

The citation for this old LoWS makes reference to "local rarities" within the flora, but no such species could be found during the present survey. Currently it does not appear to merit the former description as "one of the more important sites in Harlow". The grassland is not without some merit in a strictly local context and could be improved by removing the associated exotic trees and managing it as a form of hay meadow.

The pond would only qualify as a LoWS on the grounds of amphibian and/or aquatic invertebrate survey data, which is currently lacking.



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# PHaLoWS4 Netteswell Rectory (0.6 ha) TL 454096

This undoubtedly represents an old grassland site, but it is suffering under a regime of excessive grazing, dumping of manure and other disturbance, so that large parts of the sward now comprise bare ground or ruderal (weed) communities rather than grassland. The site is not yet beyond redemption but would need restorative management before it could be re-considered for selection.



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# PHaLoWS5 Stort Woodland (8.0 ha) TL 462124

In a recent review carried out by the Herts and Middlesex Wildlife Trust, this site was identified as being wet woodland – a national Biodiversity Action Plan (BAP) habitat. However, in reality only small patches of this woodland type occur here, with the remainder comprising drier woodland with exotic conifers and broadleaved trees frequent throughout the canopy.

However, with significant management input, it could be restored to a much more attractive riverside woodland corridor, in which willows and Alder predominate.



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# PHaLoWS6 East Road Brownfield (2.2 ha) TL 467116

This is an area of disturbed, weedy waste ground with a small pond and fringe of wetland habitat. Brownfield habitats such as this have been demonstrated in recent years to have the capacity to support regionally or nationally important populations of invertebrates, which are attracted by the complex micro-topography (and hence habitat diversity), flower-rich vegetation and often warm, sunny substrates. The pond on this site also has potential for amphibian populations.

It is considered that this site is the true location for "Pond 46" identified in a Great Crested Newt survey report prepared for Harlow Council by Jones and Sons Environmental Sciences Ltd. The report maps the pond as being some 200 metres to the northeast in an adjacent plot of land, but the accompanying photos indicate the pond lies within this plot.



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# PHaLoWS7 Roman Temple (3.9 ha) TL 467122

This is, by definition, an ancient site at least in part, but it does not support a flora indicative of old, unimproved grassland. The site may well prove to be of significance for its invertebrate populations, but this would take a whole seasons' work to establish the true value of the invertebrate populations present.



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# PHaLoWS8 Gilden Way Meadow (3.3 ha) TL 478111

None of the habitats present is currently known to support flora and fauna of sufficient importance to merit LoWS designation. If the pond is demonstrated to hold a significant population of Great Crested Newts or, alternatively, three amphibian species then it and the adjacent semi-natural vegetation could be considered for inclusion. The grasslands are not especially species-rich and are currently suffering from over-management.



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# PHaLoWS9 Challinor Ponds (2.0 ha) 483099

Brief survey work by other consultants in 2006 has demonstrated that Great Crested Newts do breed in this pond. However, the survey was not sufficiently thorough to be able to properly assess the size of the population present. The ponds might qualify under LoWS species criterion 15, which states,

"Any water body, other than a garden pond, known to support an exceptional breeding population of Great Crested Newts will be eligible for selection."

However, one visit in mid March is not a sufficient survey to tell whether or not the population is strong enough to be regarded as "exceptional". Alternatively, it might qualify under species criterion 13:

"Any water body, other than a garden pond, known to support significant populations of three or more species of breeding amphibian will be eligible for selection."

The previous survey identified only two species of amphibian but other species may be present but not recorded during this early spring, one visit survey.

### APPENDIX 4 REGISTER OF SITE OF SPECIAL SCIENTIFIC IINTEREST

N.B. The maps in this appendix are for illustrative purposes only and should not be construed as the legal boundary of the SSSIS. Natural England should be consulted for the definitely boundaries and citations for these sites.

### KEY





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### Harlow Woods SSSI

The SSSI comprises two separate blocks of ancient woodland (shaded orange).

The two Local Wildlife Sites (shaded pale yellow) lying between these two woods help to provide some ecological connectivity between the two sections. The potential exists to improve these links by further appropriate hedgerow planting within the cemetery.



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### **Hunsdon Mead**

The map illustrates that part of the SSSI lying within Essex (shaded orange) adjacent to the newly enlarged Eastwick and Parndon Meads Local Wildlife Site (pale yellow). Most of the Essex section of the SSSI lies within Epping Forest district.