

**Uttlesford District Council
Local Wildlife Site Review 2007**

ESSEX ECOLOGY SERVICES LTD.

UTTLESFORD DISTRICT COUNCIL

SELECTED LOCAL WILDLIFE SITE REVIEW 2007

**Version 2
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UTTLESFORD DISTRICT COUNCIL
SELECTED LOCAL WILDLIFE SITE REVIEW 2007

1. INTRODUCTION

1.1 General Introduction

This report has been prepared by Essex Ecology Services Ltd. (EECOS), the wildlife consultancy of the Essex Wildlife Trust, on behalf of Uttlesford District Council. It comprises the details of a re-assessment of selected Local Wildlife Sites notified to the Council (as SINCs – Sites of Importance for Nature Conservation) following a district-wide assessment in 1993-4. This report should be used in conjunction with the appropriate electronic GIS data layer provided on CD.

1.2 Background

In Essex, non-statutory “second tier” areas of significant wildlife interest (i.e. nominally below SSSI) were originally called Sites of Importance for Nature Conservation (SINC) and were identified during a series of studies between 1987 and 1994, carried out by the Essex Wildlife Trust. Uttlesford survey work was undertaken during the period 1993-4. With the forthcoming change over to the use of Local Development Frameworks, a re-evaluation of the current suite of important wildlife sites across the whole county is now timely. Recent policy has seen the adoption of the name “Local Wildlife Site” in place of the old SINC nomenclature.

The 1994 assessment was based on a limited set of site selection criteria. Since then, the site selection process has been completely overhauled by EECOS, to bring the system up to date with Biodiversity Action Planning and recent government guidance on the administration of Wildlife Site systems as well as benefiting from a better knowledge of the county’s invertebrate, mammalian and avian faunae. The selection criteria have been further refined by the Essex Wildlife Trust’s Wildlife Sites Officer, Luke Bristow. These criteria have been used to undertake similar reviews in Basildon, Chelmsford, Braintree, Thurrock, Castle Point, Maldon and Rochford. They are thus becoming the recognised standard in Essex for the identification of those parts of the countryside that merit protection within the planning system and which also merit preferential grant-aid to assist with their sympathetic management.

1.3 Remit and Methodology of the 2007 Survey

The current survey comprised two main initiatives:

1. to re-assess a specific list of Local Wildlife Sites against the current selection criteria;
2. to search for other potential sites within the landscape corridors connecting these existing sites, to determine whether or not any additional sites might be adopted.

The suite of sites to be re-assessed lay in two broad corridors and was specifically identified by officers of Uttlesford District Council. The two corridors were:

1. the West Anglian railway route between Bishop's Stortford and Great Chesterford;
2. the A120 corridor between Bishop's Stortford and the district boundary near Rayne, Braintree.

The assessment was commissioned in the spring of 2007. Aerial photographs of the district, taken circa 1999, were used to identify areas of habitat that showed potential as candidate Local Wildlife Sites in the vicinity of existing sites and close to the major urban areas that form the core of the two general corridors of interest. The potential sites were then visited between April and September 2007 and assessed against the selection criteria. In addition to the use of aerial photographs, the list of current sites was circulated to local naturalists with a knowledge of the area and also discussed at meetings of the Uttlesford Nature Conservation Working Group. Members of this group are drawn from the Essex Biodiversity Partnership, Essex County Council, Essex Amphibian and Reptile Group, local naturalists and officers from Uttlesford District Council. Details of potential new sites were requested for inclusion within the field survey work.

In addition, EECOS wrote to Peter Harvey and Colin Plant of the Essex Field Club and local members of the Essex Birdwatching society, requesting details of important species and habitats they were aware of within the study area. EECOS would particularly like to thank Peter Harvey of the Essex Field Club for providing a good deal of invertebrate records for the district.

Also in spring 2007 a process was commenced to identify the relevant landowners of the sites to be surveyed, to gain their permission to enter onto their land and to engage their involvement in the Local Wildlife Site system. Uttlesford District Council undertook a series of data request searches with the Land Registry to identify registered landowners. EECOS

then wrote to those owners requesting permission to access the relevant site(s). This yielded a rather poor response, with the result that Uttlesford District Council then issued “Warrants for Entry” to EECOS surveyors, under sections 196A, 214B and 324 of the Town and Country Planning Act 1990. These warrants permitted entry to view the sites for which direct permission to enter had not been forthcoming.

For each existing Local Wildlife Site, attempts were made to record their feature(s) of interest that resulted in their original designation, in the hope of confirming the retention of wildlife interest. In some cases, notably for invertebrate populations, the survey work needed to seek out and determine whether or not the species is still present is laborious and time-consuming. In these few instances, continued presence of the appropriate habitat features has been used to re-assess the value of the site for the invertebrate species concerned. If the feature(s) of interest were not apparent, the site was assessed using the full suite of selection criteria to determine whether or not the site should be retained on other grounds. Other sites, not currently identified as Wildlife Sites, were evaluated in a similar manner.

Reference has also been made to the first edition 6” to the mile Ordnance Survey maps of circa 1870-80 available via the web-site old-maps.co.uk. This has allowed for a number of inconsistencies within the ancient woodland inventory for Essex to be identified, which has resulted in changes to some site boundaries and the deletion of one complete site.

This report presents the revised suite of Local Wildlife Sites for Uttlesford District. It also identifies a number of potential Local Wildlife Sites, for which either further information or improved management is needed before the sites might be considered for inclusion within the Local Wildlife Site register. Some consideration is also given to the wider countryside in which these Local Wildlife Sites are located, discussing actual or potential wildlife corridors within the landscape that do or might contribute to a greater interplay between the fauna and flora of individual sites. This idea of connectivity is particularly important for invertebrate populations, the movement and colonisation of new areas by amphibians and mammals and foraging behaviour of bats and birds.

1.4 Integration into the Full Local Wildlife Site Register

This current study has re-assessed approximately one quarter of the original SINC's identified in 1994. In order to rationalise the whole system, some consideration has to be given to the remaining sites although it should be stressed that the remaining three quarters of the old

SINCs have NOT been re-evaluated using the new site selection criteria. This leaves a Local Wildlife Sites register for Uttlesford with which there are known to be inconsistencies and errors, with known changes to the Protected Roadside Verge scheme to name but one issue. All the Uttlesford SINCs are re-listed here (see Section 3.1) with their new numbers, so that numbers might be systematically ascribed to those sites that have been reassessed. This does not mean to say that the Essex Wildlife Trust necessarily endorses the remaining sites as valid Local Wildlife Sites.

Revisions to Local Wildlife Site registers within Essex require a change to the style of re-numbering sites. Originally, sites were grouped into broad habitat categories, with woodland sites being numbered, W1, W2, etc, grassland sites listed with a G-code, Mosaics with an M and freshwater sites as FW. This resulted in Essex having fourteen W1 SINCs – the first woodland site in each of the fourteen local authorities, and so on. To remove this potential confusion, especially near to district boundaries, Local Wildlife Sites are now prefixed with a district code and are numbered sequentially, without regard for the habitat type. Sites are numbered from south to north scanning west to east across the district: effectively they run in “numerical” order based on their 6-figure Ordnance Survey grid reference.

2. SITE ASSESSMENT

2.1 Selection Criteria

The Local Wildlife Site (LoWS) selection criteria have recently been produced as a “stand-alone” document, which is reproduced here as Annex 1. It has been ratified via consultation with Essex County Council, Natural England, the Environment Agency, the Essex Field Club and other local natural history societies as well as participating local authorities. The end result is believed to be a robust set of criteria that give a unified approach throughout Essex, but which do not do away entirely with expert local judgement, which can recognise the variation of habitat types and qualities in different parts of the county.

2.2 Local Wildlife Sites Register

Annex 2 provides the register of revised Local Wildlife Sites within the two search corridors identified above. Each site is presented on a single sheet, with a few exceptions, which gives the following information:

- detailed boundary/location map;
- name of site;
- area in hectares;
- Ordnance Survey grid reference of site centre;
- summary description of site, identifying the characteristic vegetation and features of specific interest;
- coded selection criteria (explanations for which are given in Annex 1 – the selection criteria document);
- a condition statement and a few brief notes on management issues affecting the site;
- the dates of first identification as a SINC/LoWS and the date of this current revision, if appropriate.

A digitised map layer of these site boundaries accompanies this report on CD (“L1 – Local Wildlife Sites”). This layer includes all Sites within the district, including those that have not been formally re-assessed here, with their new code number.

2.3 Identification of Potential Local Wildlife Sites

Annex 3 provides similar information for a small number of sites that might, in the future, qualify for inclusion within the full Local Wildlife Sites register. Realising their potential

may merely require the gathering of additional information in order to confirm a suspected interest, or may require remedial management work to bring the site up to standard. This is the case with two sites that have been demoted from the Local Wildlife Sites register. A few, newly created sites may just need time to mature before they might be considered. For each Site, desired actions are listed in Annex 3 in order to guide future initiatives aimed at realising the potential of these sites. A digitised map layer of these Potential Local Wildlife Site boundaries accompanies this report on CD (“L2 – Potential Local Wildlife Sites”).

2.4 Sites of Special Scientific Interest (SSSI)

One of the more fundamental changes to how the Local Wildlife Site register is operated in Essex has been the removal of SSSIs from the system. Whilst it can be argued that SSSIs and Local Wildlife Sites are ecologically inter-linked, with one providing “added value” to the other, national guidelines call for a clearer distinction to be made between SSSIs and Local Wildlife Sites. For Clarity, the SSSIs within Uttlesford are identified in Annex 4, as follows:

Ashdon Meadows

Debden Water

Elsenham Woods

Garnett's Wood/Barnston Lays

Hales and Shadwell Woods

Hatfield Forest

High Wood, Great Dunmow

Little Hallingbury Marsh

Nunn Wood

Quendon Wood

Sawbridgeworth Marsh

The Grove (part of Langley Wood SSSI in Cambridgeshire)

West Wood

It should be stressed that the SSSI boundaries illustrated here are indicative only and do not have any legal standing. For exact boundaries and further information regarding SSSIs in Essex, Natural England officers should be contacted via their Colchester Office.

3. DISCUSSION

3.1 Changes to the Local Wildlife Site Register

The following is a summary of the changes to the register, since the original 1994 assessment. This is a full listing, including old SINCs with their new numbers. N.B. where the “Changes” column is left blank the site has not been re-assessed during this study. Sites that have been re-assessed and are accepted with no changes to their boundaries are labelled “Unchanged”. Sites that have been re-assessed are also marked * after their name. The sites are listed in order of their original habitat coding, to allow for ease of translocation from this old code to the new one.

| CODE | | SITE NAME | CHANGES |
|------|-------|------------------------------|---------|
| Old | New | | |
| W1. | Ufd2 | Bottom Roughway Wood | |
| W2. | Ufd3 | Roughway Wood/Oldfield Grove | |
| W3. | Ufd5 | Oxbury Wood | |
| W4. | Ufd7 | High Wood | |
| W5. | Ufd9 | Mead Bushes Wood | |
| W6. | Ufd10 | Park Wood, Chrishall | |
| W7. | Ufd11 | Cane's Walk | |
| W8. | Ufd14 | Arnold's Spring | |
| W9. | Ufd16 | Scotch Wood | |
| W10. | Ufd19 | Morley Wood | |
| W11. | Ufd20 | Bloodhounds Wood | |
| W12. | Ufd24 | Ley Wood | |
| W13. | Ufd25 | Daw's Grove | |
| W14. | Ufd27 | Rockell's Wood | |
| W15. | Ufd28 | Bailey Hills | |
| W16. | Ufd32 | Free Wood | |
| W17. | Ufd33 | Battle's Wood | |
| W18. | Ufd34 | Lee Wood | |
| W19. | Ufd35 | Lee Wood | |
| W20. | Ufd37 | Strethall Wood | |
| W21. | Ufd39 | Ash Grove | |
| W22. | Ufd40 | Felsted Croft Grove | |

| CODE | | SITE NAME | CHANGES |
|------|--------|---------------------------|---|
| Old | New | | |
| W23. | Ufd42 | Wilford's Wood | |
| W24. | Ufd43 | Bixett Wood | |
| W25. | Ufd44 | Beaver's Wood | |
| W26. | Ufd45 | Ann's Wood | |
| W27. | Ufd46 | Green Wood/Teapond Grove | |
| W28. | Ufd51 | Cups/Bush Pasture Groves | |
| W29. | Ufd55 | Hazelend Wood | |
| W30. | Ufd57 | Howe Wood, Catmere End | |
| W31. | Ufd59 | Northey Wood * | Unchanged |
| W32. | Ufd66 | Birchanger Wood * | Very small addition |
| W33. | Ufd67 | Catherine Grove * | Additions along southern boundary |
| W34. | Ufd70 | Houghtey Wood * | Unchanged |
| W35. | Ufd72 | Broom/Burney Woods * | Very small addition |
| W36. | Ufd73 | Coney Acre * | Significant deletion |
| W37. | Ufd75 | Digby Wood * | Unchanged |
| W38. | Ufd76 | Parsonage Spring * | Unchanged |
| W39. | Ufd77 | Bushy Lays/Spring Close * | Addition on northern boundary |
| W40. | Ufd77 | Spring Close | Amalgamated with W39. |
| W41. | | Quendon Wood SSSI | SSSI removed from LoWS system |
| W42. | | Ugley Green Wood | SITE DELETED |
| W43. | Ufd83 | Downhall Wood | |
| W44. | Ufd87 | Paynsden Wood * | Unchanged |
| W45. | Ufd93 | Spring Wood * | Minor deletion (fragment transferred to new site) |
| W46. | Ufd94 | Round Coppice * | Unchanged |
| W47. | Ufd95 | Alsa Wood * | Very small addition |
| W48. | Ufd97 | Stocking Wood * | Unchanged |
| W49. | Ufd98 | Durrel's Wood * | Significant additions |
| W50. | Ufd99 | London Jock Wood * | Very small addition |
| W51. | Ufd101 | Emanuel Wood * | Unchanged |
| W52. | Ufd102 | Wilkin's Plantation * | Unchanged |
| W53. | Ufd103 | Burton Wood | |
| W54. | Ufd105 | Priory Wood * | Unchanged |
| W55. | Ufd107 | Brakey Lee Wood | |
| W56. | Ufd108 | Long Border * | Unchanged |

| CODE | | SITE NAME | CHANGES |
|------|--------|--|-------------------------------|
| Old | New | | |
| W57. | Ufd109 | Westley Wood | |
| W58. | Ufd110 | Paddock Wood | |
| W59. | Ufd111 | High/Priors Wood * | Unchanged |
| W60. | Ufd114 | Park Wood, Widdington | |
| W61. | Ufd115 | Horseley Wood/Cabbage Wood/Pig's Parlour | |
| W62. | Ufd116 | Man Wood | |
| W63. | Ufd118 | High/Prior's Wood Lane * | Minor addition |
| W64. | Ufd119 | Grimsditch Wood | |
| W65. | Ufd120 | Howe Wood, Debden | |
| W66. | Ufd122 | Little Grimsditch Wood | |
| W67. | Ufd123 | Colville Hall Wood | |
| W68. | Ufd126 | Peverel's Wood | |
| W69. | Ufd127 | Row Wood | |
| W70. | Ufd129 | Fulfen Slade Lane | |
| W71. | Ufd130 | Pigeon Wood/Greenstreet Spring | |
| W72. | Ufd131 | Lady Wood/Regent's Spring * | Regent's Spring added |
| W73. | Ufd133 | Pritchett's Spring * | Unchanged |
| W74. | Ufd136 | Pounce Wood * | Unchanged |
| W75. | Ufd137 | Hadstock Wood | |
| W76. | Ufd139 | Whitehill Wood * | Unchanged |
| W77. | Ufd140 | Cammashall Wood | |
| W78. | Ufd141 | Brick Kiln Spring | |
| W79. | Ufd142 | Madge Hobbs Wood | |
| W80. | Ufd145 | Littley Wood West | |
| W81. | Ufd146 | Prior's Wood * | Unchanged |
| W82. | | Elsenham Woods SSSI | SSSI removed from LoWS system |
| W83. | Ufd147 | Mollpond Wood * | Unchanged |
| W84. | | Nunn Wood SSSI | SSSI removed from LoWS system |
| W85. | Ufd150 | Willis's Spring | |
| W86. | Ufd152 | Canfield Hart | |
| W87. | Ufd153 | Hawland Wood | |
| W88. | Ufd154 | Chickney Lane | |
| W89. | Ufd155 | Martin's Wood * | Unchanged |
| W90. | Ufd156 | Robin's Grove/Hills Wood * | Unchanged |

| CODE | | SITE NAME | CHANGES |
|-------------|------------|------------------------------------|-------------------------------|
| Old | New | | |
| W91. | Ufd157 | Bright's Wood | |
| W92. | Ufd158 | Littley Wood East | |
| W93. | Ufd159 | Broomshawbury Wood | |
| W94. | Ufd160 | Grove Spring | |
| W95. | Ufd161 | Crowney Wood | |
| W96. | Ufd163 | Hales Wood South | |
| W97. | Ufd164 | Rowney Woods | |
| W98. | | Hales and Shadwell Woods SSSI | SSSI removed from LoWS system |
| W99. | Ufd166 | Shadwell Wood West | |
| W100. | Ufd167 | Harrison's Wood | |
| W101. | Ufd168 | Poplars Wood | |
| W102. | Ufd170 | Hamperden End Wood | |
| W103. | Ufd171 | Beck's Wood | |
| W104. | Ufd172 | Runnel's Hey | |
| W105. | Ufd175 | Little Hales Wood | |
| W106. | Ufd176 | Scabbard's Wood | |
| W107. | Ufd177 | Wimbish Lanes | |
| W108. | Ufd179 | Philipland/Middlefield Wood | |
| W109. | | Little Easton Airfield Woods | SITE DELETED |
| W110. | Ufd184 | Hart's Grove | |
| W111. | Ufd185 | Oak Wood | |
| W112. | Ufd187 | Bury Spring | |
| W113. | Ufd189 | Homestead Grove | |
| W114. | Ufd190 | Leaden Roding Marsh/Longstead Lane | |
| W115. | Ufd191 | Reedings Grove | |
| W116. | Ufd192 | Home Wood, Thaxted | |
| W117. | Ufd195 | Brown's Wood | |
| W118. | Ufd197 | Bush Croft | |
| W119. | Ufd201 | Wilderness Grove | |
| W120. | Ufd202 | Home Wood, Ashdon | |
| W121. | Ufd204 | High Rodingbury Wood | |
| W122. | Ufd205 | Home Wood, Tilty | |
| W123. | Ufd206 | Leaden Roding Woods | |
| W124. | Ufd208 | Roundlay Grove | |

| CODE | | SITE NAME | CHANGES |
|-------|--------|---|--------------------------------------|
| Old | New | | |
| W125. | Ufd209 | Eseley Wood | |
| W126. | Ufd210 | Burntfield Grove | |
| W127. | Ufd211 | Tilekiln Grove | |
| W128. | Ufd212 | Lord's Wood | |
| W129. | Ufd216 | Canfield Thrift | |
| W130. | | High Wood, Great Dunmow SSSI | SSSI removed from LoWS system |
| W131. | Ufd217 | Margaret Roding Wood | |
| W132. | | The Grove (part of SSSI) | SSSI removed from LoWS system |
| W133. | Ufd219 | Grigg's Grove | |
| W134. | Ufd221 | Bow Croft Wood | |
| W135. | Ufd223 | Beech Wood | |
| W136. | Ufd224 | Hoglands Wood/Broomhills/Frederick's Spring * | Minor deletion and addition |
| W137. | Ufd226 | Little Bendysh Wood | |
| W138. | Ufd227 | Bush Wood | |
| W139. | Ufd231 | Dobb's Wood | |
| W140. | Ufd232 | Great Bendysh Wood | |
| W141. | Ufd233 | Clay Wood | |
| W142. | | West Wood SSSI | SSSI removed from LoWS system |
| W143. | Ufd234 | Ash Grove/Oak Spring * | Oak Spring added |
| W144. | Ufd235 | Roffey Wood | |
| W145. | Ufd236 | Olives Wood * | Unchanged |
| W146. | Ufd237 | Bigod's Wood | |
| W147. | Ufd238 | Avesey Wood | |
| W148. | Ufd240 | Alrey Wood 1 | |
| W149. | Ufd241 | Dow Wood/Four Corner Spinney | |
| W150. | Ufd243 | Alrey Wood 2 | |
| W151. | Ufd244 | Gallows Wood | |
| W152. | Ufd247 | Holbrook Wood | |
| W153. | | Garnett's Wood/Barnston Lays SSSI | SSSI removed from LoWS system |
| W154. | Ufd250 | | Amalgamated into new Merks Hall Site |
| W155. | Ufd250 | | Amalgamated into new Merks Hall Site |
| W156. | Ufd251 | Ridley Wood | |
| W157. | Ufd252 | Crow's Wood | |
| W158. | Ufd250 | | Amalgamated into new Merks Hall Site |

| CODE | | SITE NAME | CHANGES |
|-------|--------|--|-----------------------|
| Old | New | | |
| W159. | Ufd255 | Marks Wood | |
| W160. | Ufd256 | Clobbs Wood * | Minor addition |
| W161. | Ufd257 | Homelye Wood * | Unchanged |
| W162. | Ufd264 | Bran End Wood | |
| W163. | Ufd266 | Hempstead Wood | |
| W164. | Ufd269 | Bran End * | Amalgamated with G111 |
| W165. | Ufd271 | Sampford Hall Wood | |
| W166. | Ufd272 | Scales Grove | |
| W167. | Ufd273 | Great Howe Wood | |
| W168. | Ufd274 | Mount Hall Wood | |
| W169. | Ufd275 | Lakehouse Grove | |
| W170. | Ufd277 | Lubberhedges Wood | |
| W171. | Ufd278 | Whitehouse Spring * | Unchanged |
| W172. | Ufd279 | Mouslin Wood * | Unchanged |
| W173. | Ufd281 | Boxted Wood * | Unchanged |
| G1. | Ufd1 | Langley Lower Green Protected Roadside Verge | |
| G2. | Ufd4 | Building End Meadows | |
| G3. | Ufd6 | Langley Upper Green Protected Roadside Verge | |
| G4. | Ufd8 | Chrishall Parish Church | |
| G5. | Ufd12 | Cane's Walk Strip | |
| G6. | Ufd13 | Pelham Centre Meadow | |
| G7. | Ufd15 | Deer's Green Protected Roadside Verge | |
| G8. | Ufd17 | Park Green | |
| G9. | Ufd18 | Cooper's End Protected Roadside Verge | |
| G10. | Ufd21 | Cooper's End Meadow | |
| G11. | Ufd22 | Clavering Mill Protected Roadside Verge | |
| G12. | Ufd23 | Farnham Green | |
| G13. | Ufd26 | Daw's Grove Protected Roadside Verge | |
| G14. | Ufd29 | Stickling Green | |
| G15. | Ufd30 | Becketts Paddock | |
| G16. | Ufd31 | Scotts Pasture | |
| G17. | Ufd36 | Farnham Churchyard | |
| G18. | Ufd38 | Green Man Meadows | |
| G19. | Ufd41 | Catmere End | |

| CODE | | SITE NAME | CHANGES |
|------|--------|--|--|
| Old | New | | |
| G20. | | Little Hallingbury Marsh SSSI | SSSI removed from LoWS system |
| G21. | Ufd48 | Manuden Church | |
| G22. | Ufd49 | Rickling Protected Roadside Verge | |
| G23. | Ufd50 | Arkesden Chalk Pit | |
| G24. | Ufd52 | Howe Wood, Strethall Protected Roadside Verge | |
| G25. | Ufd53 | Strethall Field Protected Roadside Verge | |
| G26. | Ufd54 | Hallingbury Mill Pastures | |
| G27. | Ufd56 | Manuden Strip Lynchets | |
| G28. | Ufd60 | Wicken Bonhunt Churchyard | |
| G29. | Ufd61 | Catmere End | |
| G30. | Ufd62 | Wendens Ambo Lane | |
| G31. | Ufd63 | Stansted Marsh * | Partial deletion plus addition |
| G32. | Ufd64 | Wicken Bonhunt Protected Roadside Verge | |
| G33. | Ufd65 | Little Hallingbury Churchyard | |
| G34. | Ufd68 | Strethall Road Protected Roadside Verge | |
| G36. | Ufd69 | The Mount, Stansted * | Significant deletion plus minor addition |
| G37. | Ufd71 | A11, Chesterford Protected Roadside Verge | |
| G38. | Ufd74 | Great Chesterford Road Verge * | Split from former larger site |
| G38. | Ufd82 | Little Chesterford Verges * | Split from former larger site, with amendments |
| G39. | | Gall End Meadow | Downgraded to Potential LoWS |
| G40. | Ufd80 | Quendon Park * | Significant deletions of surrounding grassland |
| G41. | Ufd81 | Wendens Ambo Station Road Protected Roadside Verge * | Unchanged |
| G42. | Ufd84 | Hatfield Heath | |
| G43. | | Newport Churchyard | Downgraded to Potential LoWS |
| G44. | Ufd86 | Woodside Green | |
| G45. | Ufd90 | Kiora Pastures * | Significant additions |
| G46. | Ufd91 | Saffron Walden - Audley End Park Wall Protected Roadside Verge * | Unchanged |
| G47. | Ufd96 | Audley Park Pastures * | Minor deletion and correction of boundary |
| G48. | Ufd104 | Crave Hall Meadow | |
| G49. | Ufd106 | Widdington - Waldegraves Protected Roadside Verges * | Unchanged |
| G50. | | Little Walden Road quarry | Downgraded to Potential LoWS |
| G51. | Ufd113 | Little Barrington Hall Protected Roadside Verge | |
| G52. | | Elsenham Hall Fields | Downgraded to Potential LoWS |
| G53. | | Pennington Hall Meadow | Downgraded to Potential LoWS |

| CODE | | SITE NAME | CHANGES |
|------|--------|--|-------------------------------|
| Old | New | | |
| G54. | Ufd117 | Saffron Walden – Roos Hill Protected Roadside Verges * | Minor amendment |
| G55. | | Byrd's Farm Lane Special Roadside Verge | Downgraded to potential LoWS |
| G56. | Ufd124 | Ashdon Road Verges * | Additions |
| G57. | Ufd125 | Matching Airfield Grasslands, North | |
| G58. | | Radwinter Road Bank | SITE DELETED |
| G59. | Ufd128 | Stansted Airport Sewage Works Fen * | Significant deletion |
| G60. | Ufd135 | Saffron Walden - Ashdon Road Protected Roadside Verges * | Unchanged |
| G61. | Ufd132 | Harrison Sayer Reserve | |
| G62. | Ufd138 | Elder Street Protected Roadside Verge | |
| G63. | Ufd143 | Molehill Green Meadow * | Unchanged |
| G64. | Ufd144 | Pledgdon Green | |
| G65. | Ufd148 | Molehill Green * | Significant deletion |
| G66. | Ufd149 | Palegate Meadow | |
| G67. | Ufd151 | Smith's Green Protected Roadside Verge | |
| G68. | Ufd169 | Broxted Protected Roadside Verge | |
| G69. | Ufd174 | Debden Green Protected Roadside Verge | |
| G70. | Ufd178 | Fitzjohns Marsh | |
| G71. | Ufd180 | Canfield End Pastures | |
| G72. | Ufd181 | Aythorpe Roding Churchyard | |
| G73. | Ufd182 | Burnt House Meadow | |
| G74. | Ufd183 | Aythorpe Roding Verges | |
| G75. | Ufd186 | Canfield End Churchyard | |
| G76. | Ufd188 | Cutler's Green Protected Roadside Verge | |
| G77. | Ufd193 | Ashdon Road Protected Roadside Verge | |
| G78. | Ufd194 | Little Easton Airfield * | Minor deletion |
| G79. | | Ashdon Meadows SSSI | SSSI removed from LoWS system |
| G80. | Ufd198 | Cutlers Green | |
| G81. | Ufd199 | Howlett End Protected Roadside Verge | |
| G82. | Ufd200 | Radwinter Manor Place | |
| G83. | Ufd203 | Chalks Green | |
| G84. | Ufd207 | Tilty Mill Meadow | |
| G85. | Ufd213 | Folly Mill Protected Roadside Verge | |
| G86. | Ufd214 | Ellis Green | |
| G87. | Ufd215 | Aythorpe Roding Protected Roadside Verge | |

| CODE | | SITE NAME | CHANGES |
|-------|--------|---|-------------------------------|
| Old | New | | |
| G88. | Ufd218 | Collins Farm Lane | |
| G89. | Ufd220 | Thaxted Churchyard | |
| G90. | Ufd222 | Plough Meadow | |
| G91. | Ufd225 | Cowless Hall Meadows | |
| G92. | Ufd228 | Friars Farm Meadow | |
| G93. | Ufd229 | Haylock's Fen | |
| G94. | Ufd230 | Elms Spinney | |
| G95. | | Parsonage Downs | Downgraded to Potential LoWS |
| G96. | Ufd239 | Gallow Wood Marsh | |
| G97. | Ufd242 | Sweetings Meadow | |
| G98. | Ufd245 | Wincelow Pasture | |
| G99. | Ufd246 | Hempstead Church Meadow | |
| G100. | Ufd248 | Great Sampford Road Bank | |
| G101. | Ufd249 | Stagdon Cross Protected Roadside Verge | |
| G102. | Ufd253 | Great Sampford Sand Pit | |
| G103. | Ufd254 | Daisyley Road Verges | |
| G104. | Ufd258 | Hounslow Green Protected Roadside Verge | |
| G105. | Ufd259 | Bustard Green | |
| G106. | Ufd262 | Poplar Farm, Duck End Protected Roadside Verge | |
| G107. | Ufd263 | Onslow Green | |
| G108. | Ufd265 | Bran End Meadows | |
| G109. | Ufd268 | Little Sampford Protected Roadside Verge | |
| G110. | Ufd270 | Stebbing - The Downs Protected Roadside Verge * | Unchanged |
| G111. | Ufd269 | Brick Kiln Farm Pastures | Amalgamated with W164 |
| G112. | Ufd276 | Felsted Fen | |
| G113. | Ufd280 | Stebbing Green * | Minor additions |
| M1. | | Sawbridgeworth Marsh SSSI | SSSI removed from LoWS system |
| M2. | Ufd47 | Wallbury Plantation and Marsh | |
| M3. | Ufd58 | Rushy Mead | |
| M4. | Ufd85 | Aubrey Buxton Reserve * | Unchanged |
| M5. | Ufd88 | River Cam Wet Woods * | Significant additions |
| M6. | Ufd100 | Turner's Spring/The Bourne * | Minor addition |
| M7. | | Debden Water SSSI | SSSI removed from LoWS system |
| M8. | | Hatfield Forest SSSI | SSSI removed from LoWS system |

| CODE | | SITE NAME | CHANGES |
|------|--------|---|--------------------------------------|
| Old | New | | |
| M9. | Ufd121 | Barrington Hall Lake | |
| M10. | Ufd173 | Chickney Hall | |
| M11. | Ufd196 | Fritch Way * | Minor additions |
| M12. | Ufd250 | | Amalgamated into new Merks Hall Site |
| M13. | Ufd260 | Nick's Hole | |
| M14. | Ufd261 | Hick's Plantation * | Unchanged |
| | Ufd78 | Alsa Lodge Pit * | NEW SITE |
| | Ufd79 | Wicken Water Marsh * | NEW SITE |
| | Ufd89 | Newport - Debden Road Protected RoadsideVerge * | NEW SITE |
| | Ufd92 | Saffron Walden Golf Course * | NEW SITE |
| | Ufd112 | Bulmer Road Verges * | NEW SITE |
| | Ufd134 | Eastend Lane * | NEW SITE |
| | Ufd162 | Redgates * | NEW SITE |
| | Ufd165 | Redgates Lane * | NEW SITE |
| | Ufd267 | Stebbing – Bran End Protected Roadside Verge * | NEW SITE |

Where a site is showing “Site Deleted” the area is not even considered as a potential for future re-instatement, at least in the short-term. This is either because it is felt that there has been an irreversible decline in the quality of the site, or the site, whilst not declined in condition, no longer meets the more stringent selection criteria.

Several sites have been removed from the register of Local Wildlife sites but are placed on the list of potential sites, pending the acquisition of further information about the wildlife present or improved management resulting in a better site condition.

3.2 **Discussion of Changes**

Within the two survey zones the most significant change, other than the removal of SSSIs from the system, has been the loss of several grassland sites, with several others approaching a borderline condition. In each case, the cause of decline is perhaps a little surprising: it is under-management. In times when horse grazing paddocks and other grazing land is often at a premium, it is curious that many of the grasslands surveyed are in desperate need of regular grazing and removal of encroaching scrub. This has affected Pennington Hall Meadow, Gall End Meadow and Elsenham Hall Fields to the extent that they are now downgraded to potential sites. Molehill Green Meadow is declining, also, but retains its Local Wildlife Site status for the time being. Sites such as The Mount, Stansted are being grazed but nevertheless, the inexorable spread of scrub from hedgerows is reducing the amount of grazing land available. Livestock grazing is unlikely to limit the lateral spread of scrub from a site's margins, so that periodic cutting back by hand will be necessary.

Conversely, a number of sites are downgraded to potential sites on account of being damaged or irreversibly degraded by over-zealous management, but in the form of mowing. These sites include the large "village green" at Parsonage Downs, Great Dunmow, where even the original SINC description warned of the adverse effects of being mown as amenity lawn. Similarly downgraded is Newport Churchyard, where regular mechanised mowing is destroying the species-rich sward. These trends are perhaps not irreversible, if the mowing regimes were to be moderated to allow selected areas to grow tall during the summer months.

The Woodland Trust's property "Ugley Green Wood" has been removed from the register, but this should not be interpreted as a decline in quality. Indeed, as this recent plantation matures it should continue to gain in quality. In 1994, all land belonging to nature conservation organisations was automatically included within SINC registers, regardless of quality. This no longer applies, leaving this unremarkable, but maturing piece of planted woodland falling short of current woodland selection criteria. Its potential is long-term, measured in decades, and so it is not included within the list of potential LoWS.

Even one Essex Wildlife Trust nature reserve also falls foul of these more exacting standards. Little Walden Road Quarry was identified as a site of importance for its chalk grassland plants before the completion of adjacent house-building and the site was originally much larger in extent than the current nature reserve. The house-building process destroyed much of the floor of the quarry where the critical plant species occurred. The site may re-qualify for

selection on account of its invertebrate populations, but further survey work is needed to clarify this point.

Former site W109, Little Easton Airfield Woods, is permanently deleted. It is shown on the Ancient Woodland Inventory for Essex as ancient woodland, but reference to Ordnance Survey maps of the late 1880s show the land to be open fields at that time. Nothing about the structure or flora of the woods suggests an ancient status, except perhaps the immediate stream-side fringe, and so the site is removed from the register. The main block is poor quality wood dominated by Sycamore.

Former site G55, Byrd's Farm Lane Special Roadside Verge, is deleted on the grounds that it is no longer a Protected Road Verge and seemingly no longer supports the population of Crested Cow-wheat, which was the reason for its selection as such in the first place

Radwinter Road Bank (G58) is deleted on the grounds that its flora has been lost to scrub encroachment, over-vigorous mowing and general habitat deterioration. It was not one of the Essex County Council Protected Roadside Verges.

Other than these major changes to the register, the majority of sites have undergone minor "fine-tuning" of their boundaries to reflect changes over the last 13 years and allowing the inclusion of areas of supporting habitat that were overlooked or thought to be of insufficient quality during the original survey.

In addition to this, several new sites have been identified as a result of the desk study and data trawl undertaken as part of the project. The new sites are:

Alsa Lodge Pit – an important invertebrate site, although currently suffering loss of habitat by partial development of the pit as a whole.

Wicken Water Marsh – a wetland area to the west of Newport

Newport - Debden Road Protected Roadside Verge – a site with a surviving fragment of chalk grassland vegetation.

Saffron Walden Golf Course – a large area of rough scattered across the course, with chalk grassland plants of some interest.

Bulmer Road Verges – another chalk grassland flora on chalky boulder clay.

Eastend Lane – an attractive flower-rich bridleway with scarce Essex plants.

Redgates - a surviving piece of old chalk flora grassland, although with a serious scrub problem.

Saffron Walden - Redgates Lane Protected Roadside Verge – contains the nationally scarce Crested Cow-wheat plant.

Stebbing – Bran End Protected Roadside Verge – a significant population of the nationally scarce Lesser Calamint.

3.3 Potential Sites

As previously indicated, adverse management is the reason behind why several sites are listed here, rather than as full LoWS. However, for several sites more detailed ecological survey work will be required to determine the full extent of the wildlife interest of the site. This is especially true for sites suspected of having invertebrate interest.

The list of Potential LoWS contains a number of sites that might appear surprising at first, namely landfill sites and active sand pits. However, it is just this sort of “brownfield” land that has been shown, in the south of the county, to support a wealth of locally or nationally scarce and rare invertebrates. There is no reason to suspect that such sites will be very much less interesting in the north-west of the county. Many invertebrates are able to exploit, or actually depend upon, areas of sparsely vegetated ground with large bare areas warmed by the sun on south-facing slopes and these conditions are invariably found scattered across landfill and active mineral extraction sites. The key to conserving such invertebrate interest beyond the active life of the site clearly depends upon the restoration plans, which have sometimes been drawn up many years previously when the value of brownfield land was not fully appreciated.

3.4 The Future

The Essex Wildlife Trust has now appointed a Local Wildlife Sites Officer, Luke Bristow, to work alongside local authorities and landowners to provide guidance on getting the most out of the Local Wildlife Sites for Essex. The LoWS Officer can provide a point of liaison between the local authority and landowners as well as give advice on management, assisting with advice on grant aid and other matters regarding the system.

4. HABITAT APPRAISAL

4.1 Overview

The key factor that gives many Uttlesford Local Wildlife Sites their peculiar interest stems from the underlying geology. Much of the soil covering this part of Essex has a base-rich (alkaline) nature, either as a result of developing from the limited hard rock outcrops of chalk around Saffron Walden or via the chalky boulder clay spread widely over north-west Essex by glacial activity. The resultant more or less alkaline soils give rise to conditions that many plants cannot tolerate: the relatively insoluble state of some essential plant minerals in alkaline soils limits the distribution of some species and conversely favours others. Thus, chalky woods, grasslands or marshes have characteristic plants and associated animal life.

This, coupled perhaps with climatic constraints, has resulted in a number of nationally scarce species being quite widespread in north Essex, south Suffolk and south Cambridgeshire, giving those relevant local authorities the especial responsibility of guardianship of the majority of the national stock of such species.

4.2 Woodland

One of the most iconic plants for the chalky boulder clay woods is Oxlip (*Primula elatior*), and many of the ancient woods reviewed here support populations of this Nationally Scarce plant. All Oxlip woods should be considered to be of regional if not national importance. A less conspicuous companion in chalky boulder clay woodlands is Herb Paris (*Paris quadrifolia*). The typical canopy of many of the ancient woods on the boulder clay comprises Ash, Field Maple, Hazel and Pedunculate Oak, providing for a rather lighter and open canopy structure compared with the Hornbeam-dominated woods of south Essex. However, Hornbeam does also occur within this area, especially in the more southern woods around Takeley and Bishop's Stortford, although it is widely present in smaller quantities across the survey area.

The dense shading of some woodland canopies is being exacerbated by the lack of recent management. This abandonment of traditional coppices has resulted into each coppice stool growing up into sometimes four to six individual tree-sized trunks and produces a very densely shading canopy. This then limits the ground flora. Very few woods within the survey zones showed signs of active recent coppice, with London Jock Wood near Widdington being the main exception.

Several of the larger ancient woods surveyed have undergone large-scale clearance and re-planting with exotics, often conifers, thereby having an even greater impact upon the overall structural diversity and wildlife value of the wood. This has affected the cluster of large ancient woods to the east of Saffron Walden, Emanuel Wood at Chesterford Park and Broom/Burney Woods at Quendon. However, it is believed that these woods are not beyond redemption and they are retained within the Local Wildlife Site system. Nevertheless, it would be a great asset to the district if these sites could be reverted back to their native canopy composition.

A more curious woodland plant is Crested Cow-wheat, another Nationally Scarce plant and one with an even more restricted national distribution than Oxlip. Its ecological preference seems to be to grow on the edges of ancient woods or along the margins of rides or closely adjacent hedgerows rather than under the canopy of the wood itself. Its scarcity merits the consideration of all known sites as Local Wildlife Sites. It is known from a number of sites to the east of Saffron Walden, but appears to have disappeared from one former Essex County Council Protected Roadside Verge on Byrds Farm Lane.

4.3 Grassland

True chalk grassland i.e. that formed on thin brown earth soils over bedrock chalk is extremely rare in Essex, with suitable outcrops only occurring around Saffron Walden and the Grays/Purfleet area in Thurrock. Even here, there are very few examples of extensive open swards. The closest grassland type to this occurs mainly on a number of road verges, with plants such as Greater Knapweed (*Centaurea scabiosa*), Crosswort (*Cruciata laevipes*), Fairy Flax (*Linum catharticum*), Salad Burnet (*Sanguisorba minor*), Stemless Thistle (*Cirsium acaule*), Wild Liquorice (*Astragalus glycyphyllos*) and Thymes (*Thymus* spp.) being characteristic species. In a national context, these areas of “chalk grassland” would not perhaps rate particularly highly alongside the extensive downlands of Kent, Sussex and the Chilterns, but the road verges around Saffron Walden and Chrishall represent the most significant stock of such plants left in Essex and are therefore of great local importance.

Many of the chalk grassland species referred to above also occur in chalky boulder clay grasslands, where they are joined by a specialist of these more heavy soils: Sulphur Clover (*Trifolium ochroleucon*). With the intensive management of pastures and meadows, this is another species that has found road verges to be a vital refuge, although one that it prone to

adverse management and catastrophic disturbance as a result of highways maintenance and vehicular activity.

Churchyards can also provide a similar refuge for such plants, with the original yards often encapsulating a piece of ancient grassland when the church was constructed. However, the flora of many churchyards is under threat from over-zealous mowing, especially in areas of the yard where graves are no longer active and could be left in a more semi-natural grassland surrounding. The sometimes conflicting interests of grassland wildlife and visual or physical amenity are also apparent when considering village greens. Uttlesford has many such greens, although most fall outside the remit of this current study. Molehill Green near Stansted Airport is threatened by future expansion of the airport, whilst Stebbing Green remains relatively unscathed although there are issues with the unofficial “adoption” of sections in front of properties as continuations of the resident’s front lawn.

4.4 Wetlands

Wetlands, too, have a distinctive wildlife value when located on base-rich substrates, but this is more noticeable within the invertebrate life rather than through plant life. That said, Greater Tussock-sedge is strongly associated with base-rich fens and marshes and occurs within the present study area within the Debden Water SSSI.

Within the invertebrate fauna, the molluscs are those creatures most prominent, with the calcareous soils providing the calcium carbonate necessary for constructing their shells. An aspect of invertebrate ecology that is receiving more attention in recent years is the plight of the native White-clawed Crayfish. This is a species of clean, calcareous streams and rivers, making the River Cam catchment of potential value for this species, although records are currently lacking. At the very least, parts of this catchment might make valuable re-introduction sites although their vulnerability to “crayfish plague” carried by a number of alien, introduced crayfish in Essex rivers may limit the success of any such re-introduction programme.

4.5 Wildlife Corridors

For most species of flora and fauna, the term “corridor” is a misleading one. In human terms, a corridor is merely a conduit by which one gets from A to B, with the conscious decision to get to B having left A. The journey may take only a few seconds, minutes or at the most hours if one considers roads as human corridors. Furthermore, it does not necessarily matter if

the human corridor passes through “inhospitable” or “useful” territory: it is, as said, a means of “getting from A to B”. For wildlife, only a very small handful of large-scale migratory species can be said to follow similar patterns and even then there are fundamental differences in how that corridor works. Wildebeest follow ancient, traditional routes across southern Africa, but the “corridor” still needs to support their basic needs every day along the way. The closest example of a small-scale corridor that works in a similar way to that used by humans might be a pipe underpass that allows Badgers to carry on using a traditional foraging path once a road has been built across it. In this instance, Badgers will often instantly take advantage of the underpass, provided it is very close to their known route. Badgers tend to adapt to this arrangement because they generally follow well-worn paths when out foraging for food and patrolling their home range in any case.

Within the realm of countryside planning and management it is invariably the case that it is us humans that have decided that the species concerned living at point A would be better off if it were also living at point B: wildlife merely takes advantage of living wherever it can. Thus, for B to be colonised by the species, it may well have to “live down” the corridor to reach our desired end-point. In other words, the corridor must be of sufficient habitat quality to support the species, albeit temporarily, whilst it spreads through the habitat hopefully ending up at point B, where there is sufficient habitat for permanent populations to become established. For the successful movement of Brown Hares, this corridor will need to be at a landscape scale, whilst for reptiles it may only be a few tens of metres wide.

There is still a major variation in the time-scales in which such corridors may operate. If one is exceptionally lucky, Dormice might spread from one wood to another using an artificial rope-bridge slung over a road in a few weeks or months, but such dispersal, if it happens at all, is much more likely to take years to work. Dormice are not capable of thinking “we can use this bridge to get to the other side now” – it will just happen as part of random exploration of their surroundings. A newly planted hedge to encourage the dispersal of bats may take many years before it is big enough to attract bats to use it for foraging behaviour. It is therefore of fundamental importance that for the dispersal of wildlife through the countryside, not only should potential habitat point B be capable of supporting the species, but the land designated to allow it to spread to that point must also be suitable habitat. It would be for the good of the species in terms of mixing gene pools for the return journey from B to A to be possible at any time, along with mixing with individuals at points C, D etc. so the concept of a matrix rather than a corridor is a better one.

For all this, there is one fundamental problem in designing and implementing wildlife corridor schemes: there are virtually no scientific papers that empirically show that such corridors work at the landscape scale. It can be demonstrated that Badgers and migrating frogs and toads use underpasses under roads, and some studies have looked at insect dispersal along road verges, but such insights into how and why animals move through the countryside are very few and far between and usually focus on small-scale site mitigation rather than landscape planning. As such, all that can be done is to strive towards a far-reaching matrix of what we perceive to be good quality habitat for the species or groups of species concerned and hope that their population and distribution are improved as a result.

4.6 Corridor Requirements

The requirements of a few selected groups of animals can be used to illustrate some of the key features that need to be considered when attempting to plan the spread of species around the countryside. This will reinforce the fact that it is impossible to have a “one size fits all” wildlife corridor. Rather, one is likely to be dealing with “a bat corridor” or “a Water Vole” corridor, with little prospect of dual use, although some shared usage may be possible e.g., bats with Dormouse, reptiles and amphibians with ground-dwelling invertebrates.

4.6.1 Bats

Bats are obviously very mobile species, but they have some requirements to use an area regularly. Habitually, they tend to spread from their roost sites along hedgerows, tree belts or similar features, feeding as they go, before arriving at a main feeding area. As such, these hedgerows come some way towards the human concept of a route to get somewhere, but nevertheless the hedge must be able to provide foraging habitat itself or it is less likely to be used much, if at all. Most bat species will not cross large open areas whilst on nightly foraging activity. That said, bats are clearly capable of moving large distances on a seasonal basis when they travel to and from winter hibernation sites and the overall presence or absence of bats in an area is probably more down to the presence or absence of suitable summer roost sites and good quality habitat capable of supporting the colonies when there. In summary, if the habitat is good enough, bats will probably find it (sooner or later). The speed at which it is found may depend on the quality of the matrix of hedgerows, woods and similar features which favour foraging activity.

4.6.2 Amphibians and Reptiles

Newts, toads and frogs have a tendency to return to the pond of their origin, dispersing into the surrounding countryside away from the breeding season. However, if new ponds are encountered during that dispersal, colonisation can occur. The likelihood of that colonisation taking place depends on how tempted the species is to disperse in that direction e.g. down strips of habitat that satisfy their needs at that time of year.

Consider two ponds, one in a field hedgerow and the other in the middle of an arable field nearby (see Figure 1, below).

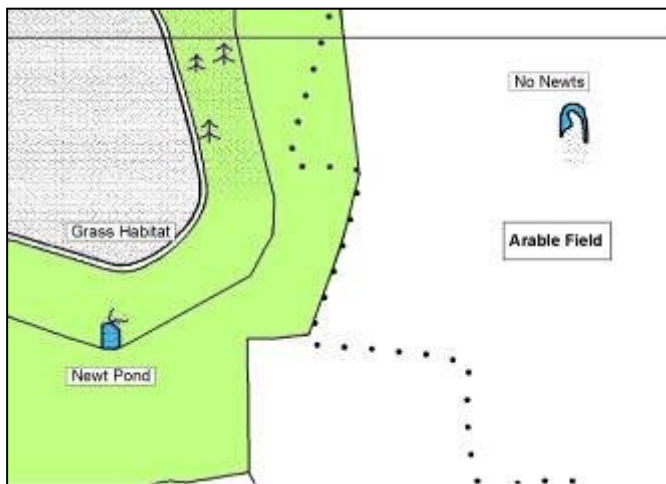


Figure 1. Landscape with isolated pond

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The isolated pond within the arable field may provide suitable habitat for breeding newts, but they are unlikely to disperse in that direction, unless a short corridor of suitable terrestrial habitat is created (Fig. 2.)

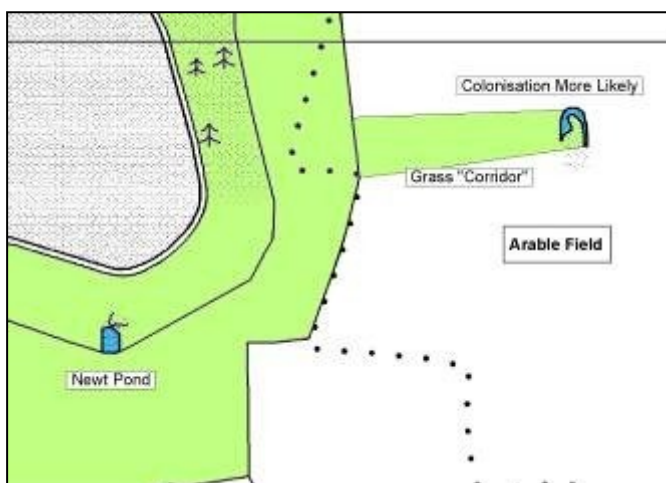


Figure 2. Corridor in place

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In a landscape with a high density of ponds, a better concept is again one of a matrix rather than single corridors, since this will allow good mixing of the gene pool. This type of corridor would also assist the dispersal of reptile species.

4.6.3 Water Voles

In Britain, Water Voles are strictly tied to living close to water bodies, usually rivers and streams but sometimes ponds and lakes. It is interesting to note that this does not apply in continental Europe where, as the scientific name *Arvicola terrestris* implies, it is a terrestrial species found well away from water. Water Voles are capable of dispersing some distance down rivers and their immediate banks and could colonise suitable sections of river bank where stands of emergent vegetation provide cover and food supply and steep banks permit burrowing. However, the biggest block to such corridor use is the presence of Mink in the river catchment. Feral Mink are very significant predators of Water Voles and are thought to be largely responsible for the drastic decline in Water Vole numbers across Britain. Thus, there is an instance here of “empty corridors” – many suitable river sections are likely to remain devoid of Water Voles if Mink are present, with the complication that the Mink will be largely using the same corridor for dispersal, although they are less strictly tied to such routes.

4.6.4 Flying Insects

This category clearly encompasses a huge variety of organisms, each of which has strengths and weaknesses in terms of dispersal. Many such insects are highly mobile and are capable of chancing upon suitable nesting habitat and “living space” whilst out foraging for food. These colonisation events can be leaps across relatively unattractive habitat in the case of some bees and wasps, so the concept of “stepping stones” rather than corridors is a more appropriate analogy. That said, the speed and likelihood of colonisation will probably depend on how far apart the “stones” are placed. Many such insects survive as meta-populations, that is, clusters of semi-independent colonies within which some exchange of individuals takes place. In this way, re-colonisation can take place following a localised extinction and new habitats can be exploited as existing sites become less suitable e.g. by succession to scrub from an open grassland.

A more significant factor affecting the dispersal of such species over larger distances is the existence of barriers. A clear example of this is a multi-lane dual carriageway, which represents a formidable barrier to many low-flying insects. Many species will be prone to being killed by speeding traffic or will not cross such a bleak tract of land due to behavioural

constraints. It should be borne in mind that, to a limited extent, such barriers may be partial corridors in themselves, in that the verges may act as grassland or hedgerow corridors along the route of the road. This theme is returned to later.

Other species, however, are very poor colonisers of new habitat, despite being winged. Many butterflies are quite poor fliers and do not have the inclination to fly long distances. These tend to be habitat specialists that are, by and large, the rarer species in today's countryside. For these species the concept of permanent linked habitat along which they can slowly spread, living many years along the corridor, is still a valid one.

4.6.5 Ground-dwelling Invertebrates

The problems faced by these animals are largely parallel to those faced by reptiles and amphibians, although their willingness or otherwise to cross even minor paved roads makes the problem of road corridors as barriers rather than as means of dispersal is even more extreme.

4.6.6 Plants

Plants similarly display a range of abilities, from weed species that have seeds which can travel in the wind many miles or even tens or hundreds of miles, through to species that only spread a few inches a year in patch-like growth. This latter group includes several so called "ancient woodland indicators", with the premise being that if they are found in a wood, it is likely to be ancient and possibly a modified relic of the original wildwood that once covered the land. This is because these plants are such poor dispersers that they are incapable of colonising new areas of woodland. In reality, even the poorest of such dispersers is theoretically capable of spreading into newer mature woodland if it is immediately adjacent to the ancient wood, but even then the rate of spread will be very slow. For these species the corridor needs to be effectively permanent and the rate of spread will be measured in decades or centuries for any significant movement.

4.7 Wildlife Corridors in Uttlesford

Opportunities for dispersal through the countryside can be considered as two distinct forms: via relatively or absolutely inflexible infrastructure features and also through general land use patterns and alignments. The first factor can be split into artificial and natural features.

4.7.1 Artificial Infrastructure Corridors/Barriers

These are essentially major road verges and railway lines. Map 1 illustrates the most significant of such features: the M11, A120 and the West Anglia railway line. Many other lesser barriers also exist, such as the old A120. As indicated above, our scientific knowledge of what makes a proven successful wildlife corridor at the landscape scale is almost nonexistent. However, our appreciation of what makes an identifiable barrier to movement is slightly better developed and it is suggested that any corridor system would bear more fruit in terms of wildlife dispersal by addressing these issues rather than by attempting large-scale land use manipulation, at least in the first instance.

Some of the cuttings and embankments of the M11 represent significant areas of grassland that have obviously been colonised by a range of insects, birds and mammals. The frequent site of Kestrels hovering over such roads bears testament to the small mammal populations that have colonised and doubtless spread along these areas of rough grassland. However, the mortality of mammals, birds and insects caught trying to cross such features is not so often seen, unless it is the size of a Badger or deer.

Map 1 shows that these two main road routes effectively divide the district into three sections, with the inference that movement between these sections may be limited for some species. That said, given the size of Uttlesford District, landscape fragmentation at this most severe scale is perhaps rather more limited than for some of the smaller local authorities in the more urbanised south of the county.

Map 1 also identifies what are likely to be rather more “permeable” artificial corridors, mainly railway lines, although even then these features may inhibit dispersal. For Uttlesford the effect here is, again, likely to be limited, with only one railway line and that running largely parallel to the more problematic barrier to dispersal presented by the M11.

Natural Infrastructure Corridors/Barriers

This term is taken to mean more or less natural physical features over which we have little overall control on their whereabouts. This comprises major watercourses: the upper reaches of the Rivers Stort, Cam, Pant and Chelmer. These rivers and their often tree-lined courses provide an obvious corridor feature, but it is effectively immovable. They clearly have the ability to allow aquatic species to migrate along their lengths, but could also act as grassland corridors, subject to the state of bank-side vegetation. However, it must be accepted that the

rivers are, to some species, just as much of a barrier to lateral movement as are the major trunk roads. This will have its greatest effect on ground-dwelling invertebrates, reptiles (that can swim under duress but may not habitually do so, other than Grass Snake) and small mammals.

4.7.2 Natural Habitat Chains

Map 1 also identifies a number of more obvious chains of semi-natural habitat, including several Local Wildlife sites, where the dispersal of species is likely to occur more freely than in other parts of the district. These have largely been identified by the Large Area Working Group of the Essex Wildlife Trust, with one further area identified as a proposed zone by EECOS. The purpose of this Working Group was to identify zones of habitat where characteristic habitats were in need of action to improve their connectivity with each other, to enhance the intrinsic value of each site and to generally treat nature conservation in a more “holistic” manner. These chains are:

1. Strehall to Chrishall – chalky grassland habitats but also with a cluster of large ancient woods, much of which lies in the ownership of a few, large estates.
2. Langley to Manuden – small commons, village greens and road verges as an important but fragmented grassland resource.
3. Shadwell to Hales Wood – Oxlip woods.
4. Bendysh to Hempstead Wood – Oxlip woods.
5. Rowney to West Wood – Oxlip woods.

Map 1 shows a number of hypothetical corridor “bridges” between these woodland clusters to illustrate the desire to enlarge the scale of connectivity. In reality, a north-east to south-west corridor between area 4 and the western end of area 5 would encapsulate a number of small woodland and hedgerow Local Wildlife Sites.

6. Stansted Oxlip woods. Again, a corridor of Local Wildlife Site woodlands can be identified to link this to area 5, to the north.
7. Hatfield Forest – as a core zone, but this surrounding countryside benefitting from this unique “store” of biodiversity.
8. Upper Chelmer riverine habitats. Recent survey work has shown that this catchment area still supports native White-clawed Crayfish.
9. Pincey Brook riverine habitats.
10. Stort Valley riverine habitats
11. This last site is not a formal product of the Wildlife Trust’s Working Group, but is here recommended for inclusion, comprising the River Cam/Granta riverine habitats.

Within any one of these areas for “biodiversity opportunity”, some fairly predictable prescriptions can be generated to enhance their biodiversity value. These include linking woodlands with belts of new planting or the strengthening of existing hedgerows, the creation

of permanent grassland headlands adjacent to important road verge grassland strips and focussing effort on getting appropriate management regimes for the Local wildlife Sites within the area.

Clearly, such initiatives can be applied at smaller scales in other chains of Local Wildlife Sites, with the arc of important sites either side of Bran End, Stebbing being a notable feature.

4.8 Planning for the Future

From the above discussion it should be apparent that planning for wildlife dispersal through corridors is at an embryonic stage in ecological knowledge. It could be argued that corridors should be unnecessary: the whole of the countryside should be open for movement in any direction a species cares to disperse. This is, albeit an admirable vision, a long-term project to say the least. For now, corridors or clusters of sites may be desirable to help conserve species that have either died out of a formerly populated area, or would have a far more stable population status if it were more widespread.

As previously mentioned, one cannot reasonably design a corridor that will suit all species. Rather, specific prescriptions can be designed for species projects. For example, one might have a project to encourage the spread of Water Voles along the length of a river catchment. The specific features that a suitable river and its bank should possess can then be identified and, where practicable, put in place. A similar project might look to increase the number of Great Crested Newt ponds, the number of meadowland butterflies in an area and so on.

That said, a number of broad principles can be identified to assist in the general maintenance of biodiversity in Uttlesford.

Encourage field grass margins and the re-establishment of hedgerows

Parts of the district, notably the far north where huge arable fields predominate, are impoverished in terms of even “commonplace” wildlife species, so even modest habitat creation schemes have the potential to reap great rewards. The concept of grass margins around every arable field epitomises the idea of a matrix-based, rather than corridor-based, approach to nature conservation.

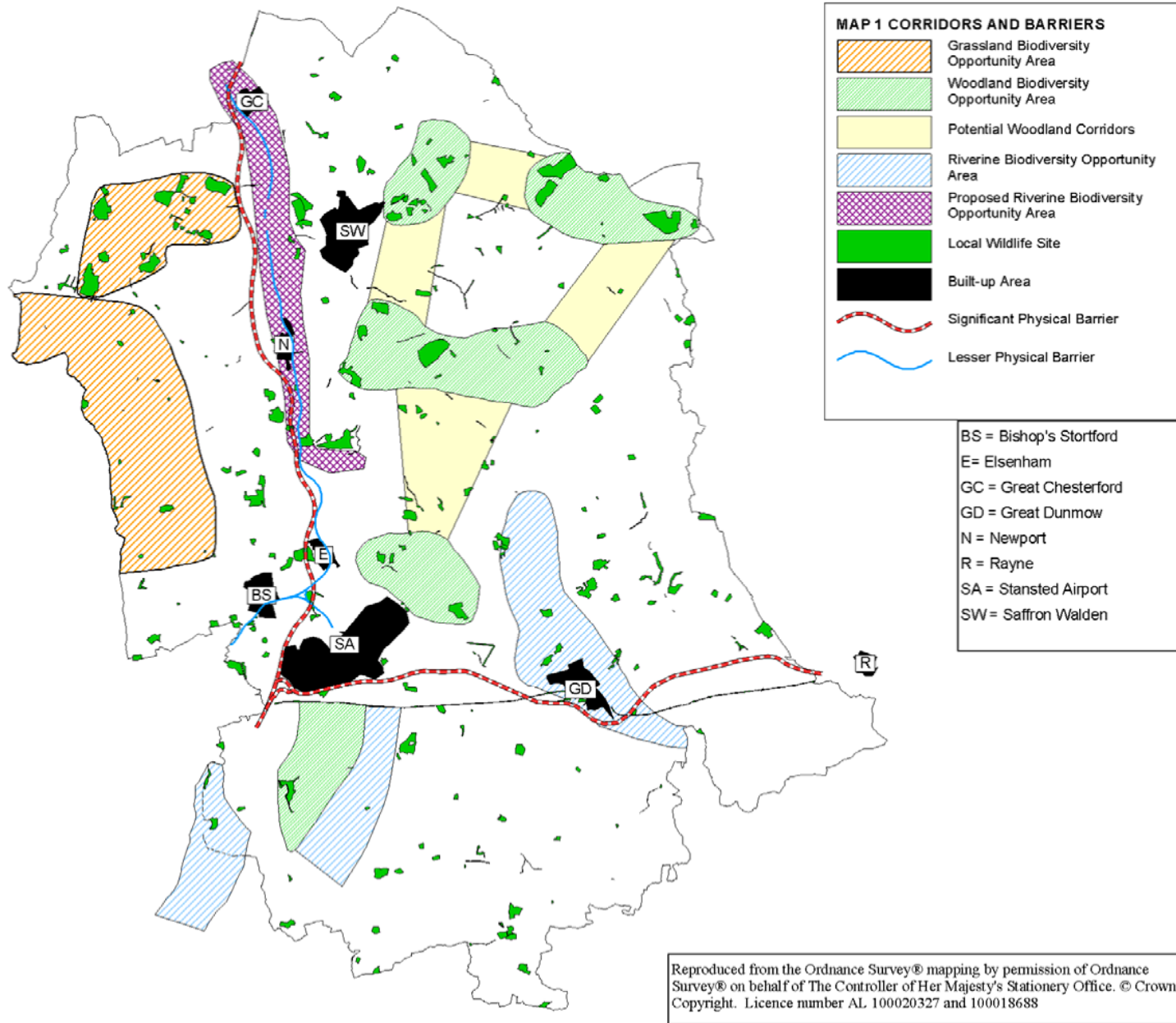
Where possible, design “green bridges” over major trunk roads and other barriers likely to be impermeable to the lateral movement of wildlife.

As previously discussed, it is easier to identify where and how the passage of wildlife through the countryside is being blocked than it is to design and implement routes for large-scale dispersal. Impediments to the dispersal of wildlife come in three main forms: urban growth, with no places of shelter designed into or left within them; featureless arable landscapes; and roads. The idea of green bridges is an appealing one from the perspective of the nature conservationist, but extremely expensive to implement. They have been used with great success in countries with less pressure on the land and more wildlife to contend with, such as Canada, where the pressures to keep Black Bears and Moose out of the way of speeding traffic on new cross-country routes is rather different to the pressures faced in this country. Green “butterfly” bridges were lobbied for in the UK when the M3 was driven through a huge cutting through Twyford Down in south Hampshire, but this was declined on grounds of cost.

Notwithstanding this, the need to reduce the number of obstacles in the countryside is an important consideration. There are many small-scale solutions known to work, including underpasses for Badgers, Otters and amphibians under roads, rope bridges connecting two woods either side of a road for Dormice and planting tree belts for bats.

Encourage the traditional management of coppice-with-standards ancient woods.

Several of the larger ancient woods surveyed during this present study have been replanted with exotic conifers and broad-leaved species and it would be highly desirable to see these reverted to a semi-natural broad-leaved canopy. For the remainder of woods the economics of woodland management may not be particularly favourable, but efforts to encourage the resumption of coppicing in those woods where it was a traditional practice would generally be desirable.



Annex 1

LOCAL WILDLIFE SITE SELECTION CRITERIA

**Produced by the Essex Wildlife Sites Project
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ACKNOWLEDGEMENTS

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 panel¹ was particularly important and led to the production of the County's first selection criteria, produced by Adrian Knowles. Adrian's criteria form the basis of the current document, which has been revised in light of consultation and feedback from a wide range of people. The following made particularly important contributions:

- Adrian Knowles, Senior Ecologist, Essex Ecology Services Ltd
- Andrew May, Conservation Manager, Essex Wildlife Trust
- Charlie Williams, Conservation Officer, Natural England
- Darren Tansley, Water for Wildlife Officer, Essex Wildlife Trust
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- Peter Harvey, Consultant Entomologist, and County Recorder for a number of invertebrate groups within the Essex Field Club
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Luke Bristow

Wildlife Sites Officer, Essex Wildlife Trust

¹The panel met for a series of meetings between 1998 - 1999

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1

INTRODUCTION

1.1 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 selection criteria, currently used to identify Local Wildlife Sites (LoWS) 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.

1.2 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 provide a comprehensive, rather than representative, suite of sites;*
- *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.*

1.3 The use of the word 'Local' might seem to devalue sites previously referred to as being of 'County' importance. However, this change brings the system in Essex in line with national guidance, and does not alter its value which remains unchanged: '**LoWS are Wildlife Sites of County Importance**'. None-the-less it is important to note that in pursuing its key objective, the conservation of the natural range and ecology of habitats throughout the county, the system has always included a degree of local flexibility. Thus, whilst the grasslands of a district or unitary authority might be generally poorer than the county 'average', on account of geology, previous land use, climate or edaphic factors, they might still be selected if they are representative of semi-natural grasslands within that part of the county.

1.4 The importance of a robust set of criteria for identifying Local Wildlife Sites is indicated in Planning Policy Statement 9 (PPS9): paragraph 9 states 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."

1.5 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.

1.6 The Wildlife Sites Handbook² states that:

²Wildlife Trusts, (1997) *The Wildlife Sites Handbook, Version 2.*

“Local Wildlife Sites, together with statutory sites, should be treated as the minimum wildlife resource of an area.”

The assumption being below this minimum threshold wildlife cannot recover to a sustainable level. This statement defines the key objectives of a Local Wildlife Sites system: to ensure that populations of declining species of flora and fauna are held at levels where their populations are capable of returning to long-term stability. This is achieved typically through ensuring that important habitats and their associated species are managed in an appropriate way ensuring they become, or are maintained, as part of viable ecological units.

- 1.7 However, our current knowledge of ecosystems may not always be sufficient to determine accurately what the threshold level is for a particular species or habitat. Thus, we are sometimes unable to judge if a species or habitat has already dropped below the minimum threshold. In order to avoid this problem it is imperative that we take a precautionary approach, to ensure no species or habitat declines irreversibly leading to its ultimate extinction. This ‘precautionary principle’ was embodied by the Bergen Declaration on Sustainable Development in the Economic Commission for Europe (ECE) Region³, which states:
“Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.”
- 1.8 This would lead one to conclude that all semi-natural habitat should be protected, since it is not known whether or not the smallest, most species-poor piece of land is important for the survival of a particular species, were we to have a better understanding of its ecology. In practical terms, however, such a stance is unworkable, so that one needs to derive a method for safeguarding a ‘reasonable’ network of valuable wildlife sites, which might act as the basis for nature conservation efforts in any given area.
- 1.9 This document sets out a process to determine what is valuable enough to be recorded as a Local Wildlife Site in Essex.

³Bergen Ministerial Declaration on Sustainable Development in the ECE Region. UN Doc. A/CONF.151/PC/10 (1990)

2 REVIEW OF CRITERIA USED IN OTHER COUNTIES

- 2.1 Some Wildlife Site selection criteria, used in other counties, include quite specific threshold values for site selection, for example:
- *“All ancient woods that support at least 10 ancient woodland indicator vascular plants”*
 - *“All species-rich grasslands over 1 hectare in extent”*
 - *“All species-rich grasslands that support at least 40 grasses and herbs AND are over 1 hectare in extent”.*
- 2.2 Criteria of this type are very easily understood by the layman and in theory easy to defend if placed under scrutiny at a public inquiry, but these are resisted in the Essex selection criteria for the following reasons.
- 2.3 In the case of ancient woods, the underlying assumption is that the wood will be particularly rich in woodland beetles, fungi, spiders and all other forms of life, compared to an equal area of more recent woodland. It is this special biodiversity of ancient woodlands that conservationists seek to protect, not just an interesting assemblage of flowering plants. An ancient wood with only 8 such plants is still likely to be very rich in other forms of life but would not be selected, just because of a quirk of the ground flora. Such a site could also come under critical attack if an alternative survey only found 8 rather than 10 indicator species; suddenly the site would be faced with de-selection, despite being in reality as important as it had been in the past. Ancient woodland indicator species of vascular plants can be used to determine which woods are ancient and which are probably not, but cannot be used to determine which woods are of greater or lesser biological importance. This is particularly true for ancient woods on very dry, acid sandy soils, which tend to be floristically less species-rich than those on other soils.
- 2.4 Similar arguments can be applied to resisting the use of ‘ancient meadow’ indicators to select grassland sites. Using a certain number of grasses and herbs to select grassland allows the selection to be undermined as a result of counter-claims that a different number of species is present and arguments about what constitutes ‘a grassland herb’ rather than an incidental ruderal or woodland escapee.
- 2.5 Using strict size criteria can also prove difficult to defend. For example a would-be developer might argue that a site was only 0.9 rather than 1.0 hectare, or may allow piecemeal erosion of a site until it falls below the required size and thus argues for its de-selection. Many habitats in Essex are so rare, fragmented and small in size that even very small sites could be identified as Local Wildlife Sites to conserve what little is left, and to act as a focus for habitat creation schemes on adjacent land in order to create more viable ecological units. This position highlights the occasional importance of ‘potential value’ when assessing a site for selection (see para 4.8.3).
- 2.6 The Wildlife Sites Handbook states that:
- “Due to the nature of the process, assessing a site against criteria will nearly always involve elements of professional judgement”.*
- 2.7 The selection process in Essex originally relied quite heavily on this element of ‘professional judgement’, with the widespread proviso that most of the very learned naturalists in a county are in fact ‘amateurs’, although highly skilled in their field of knowledge. The original selection criteria developed in the early 1990s were based on habitat quality and a number of key ecological features to ‘test’ the value of a site to

determine whether or not it should be included in the network. This approach was followed in the subsequent version for Essex (2004), and is built upon here (2007) to produce a more robust set of criteria which clearly illustrate the rationale behind a site's selection.

3 DEVELOPMENT OF REVISED SELECTION CRITERIA

- 3.1 The previous selection criteria produced in 2004 built upon work completed by the Essex Review Panel in 1999. The panel recommended that the Essex system for selecting and adopting Wildlife Sites should ensure that the site network achieves a number of key targets. These targets were the starting point for the development of a number of Wildlife Site Statements (WSS), which underpin the subsequent site selection criteria.
- 3.2 The criteria have been further refined through a program of consultation with key stakeholders⁴ initiated in 2006 by the Essex Wildlife Sites Project (EWSP), which culminated in the production of the current document in 2007. The EWSP is coordinated by Essex Wildlife Trust with support from Essex County Council, Environment Agency, Natural England and the Essex Biodiversity Project.
- 3.3 Finally, 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 does not have sufficient geological expertise or resources to address these sites adequately. This position will be reviewed should circumstances become more favourable in the future. Furthermore, geological sites with sufficient 'nature conservation' interest will be treated the same as any other candidate Local Wildlife Site.

⁴ See Acknowledgements

4 WILDLIFE STATEMENTS

4.1 PREAMBLE

The following Wildlife Site Statements provide the framework for the production of a protocol for Local Wildlife Site review, evaluation and selection, and more specifically a basis to generate both Habitat Selection Criteria (HCr) and Species Selection Criteria (SCr). The Wildlife Site Statements themselves are in bold, with explanatory or supporting information in normal font.

4.1 WILDLIFE SITE STATEMENT 1

4.1.1 The Local Wildlife Site network of Essex will not include land identified as a Site of Special Scientific Interest (SSSI) on biological grounds at the time of the relevant Local Wildlife Site review. Geological SSSIs will be included within the network where they are found to possess suitable wildlife features. It must be realised, however, that the Local Wildlife Site network is critical to the support of such SSSIs (and vice versa) and that the identification of a site as a Local Wildlife Site rather than as an SSSI does not mean that the site is necessarily of inferior quality to a similar site that has been given SSSI status.

4.2 WILDLIFE SITE STATEMENT 2

4.2.1 If part or all of an SSSI is de-notified, then it should be immediately assessed as a candidate Local Wildlife Site and, if appropriate, added to the relevant register of sites.

4.3 WILDLIFE SITE STATEMENT 3

4.3.1 Local Nature Reserves will be subjected to the standard species/habitat selection criteria rather than receive automatic selection.

4.3.2 Under the original selection criteria developed in the early 1990s, the network of sites included all Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR). Consistent with recent national guidance, this position in relation to SSSIs is no longer adopted in the 2007 criteria. However, LNRs and geological SSSIs will be considered where they merit selection on nature conservation interest.

4.4 WILDLIFE SITE STATEMENT 4

4.4.1 All sites that meet the standards set by a Habitat Selection Criterion will be identified as Local Wildlife Sites.

4.4.2 This statement is consistent with Defra's Guidance on Local Sites, which states that:

"Local Site systems should select all areas of substantive nature conservation value..."

Therefore, the system in Essex will seek to select all sites with significant (as defined by the criteria) semi-natural habitats.

4.5 WILDLIFE SITE STATEMENT 5

- 4.5.1 Local Wildlife Site reviews shall attempt to identify all significant populations of notable species that do not have significant populations protected by SSSIs. Notable is defined for the purposes of this document to encompass ALL species:**
- listed in the Essex or UK Biodiversity Action Plan;
 - with an appropriate IUCN⁵ designation;
 - a non-IUCN designation of 'rare' or 'scarce';
 - any bird identified on the UK 'red' or 'amber' list; or
 - identified within the Essex Red Data List (ERDL).
- 4.5.2 Priority should be given to those species thought to be especially threatened or in decline, in Essex or nationally. Habitats which support significant populations of these species should be considered for selection as Local Wildlife Sites. Furthermore, the presence of notable species within a site selected through other criteria shall be used to support the designation of that site.**
- 4.5.3 The system should support populations of every notable species, although this does not mean that every population of a notable species is required to be adopted as a Local Wildlife Site.
- 4.5.4 This is a key distinction from the policy of identifying **all** habitats of 'substantive nature conservation value', although there is some justification in so doing. The population dynamics of some fauna, especially invertebrates, are markedly different to that of plants and vegetation types, with ephemeral populations arising from attempted range expansion and subsequent contraction blurring the picture of a species' core range. There is felt to be some justification in restricting the site selection process to sites where populations are believed to be stable, rather than every site where a notable species has been recorded. The antiquity of some survey data further strengthens this point, in that only recent, reliable survey information should be used to identify sites on species grounds alone.
- 4.5.5 The Essex Red Data List (ERDL) has been coordinated by Peter Harvey of the Essex Field Club for Natural England (viewable at www.essexfieldclub.org.uk). It comprises a listing of those especially rare, threatened or drastically declining species known to have been found in the county. Included within this list are all nationally rare species, nationally scarce species and, where sufficient data is available, other species of lesser national significance that are rare or threatened in Essex (see **Appendix 1** for a more detailed account of the various national and county conservation designations).
- 4.5.6 In spite of the information provided in national and local BAPs or Red databook/lists, determining and prioritising which notable species are thought to be especially threatened or in decline, and currently not adequately protected in Essex, may, for some species, represent a complex task. In these circumstances, a suitably qualified authority should be consulted.
- 4.5.7 The criteria which stem from this statement have been developed to encompass the following situations:
- the presence of populations of one or more nationally rare⁶ species;

⁵ See **Appendix 1** for a detailed discussion of IUCN designations

- the presence of populations of one or more UK BAP species;
- the presence of populations of one or more nationally scarce⁷ species;
- the presence of an Essex rarity (listed in either the ERDL or Essex BAP); and
- the presence of an unusually diverse assemblage of species, from within one species group, be they rare, scarce or relatively commonplace species.

Furthermore the criteria need to:

- conserve populations of rare and scarce species both at the core of their known distribution and also in smaller or more vulnerable satellite populations on the periphery of their known range.

4.6 WILDLIFE SITE STATEMENT 6

A Local Wildlife Site identified on species grounds should contain the habitat requirements at the correct scale for the species concerned, with the limited exception of those species that range widely over the general countryside or coast as part of their normal foraging behaviour.

4.6.1 The Site should contain the habitat requirements at the correct scale in relation to the species on which the site is being selected. This is a key point in protecting many species' populations. There is often little merit in identifying a site where a rare invertebrate has been recorded if that site does not extend to include, where they are known, significant proportions of all the ecological requirements of that species. For example, many invertebrates need a sufficiently large and continuous pollen or nectar supply to complete their life cycle. This may lead to the designation of an area of peripheral vegetation that might not otherwise qualify for Local Wildlife Site selection in its own right, if it can be demonstrated that it supplies additional habitat benefits for the species concerned.

4.6.2 Such a Statement is harder to apply to other groups, such as mammals and some birds. It may be desirable to protect the nesting location of a particularly scarce bird (e.g. little tern *Sterna albifrons*, marsh warbler *Acrocephalus palustris*, or goshawk *Accipiter gentilis*) but it may be impractical to identify and protect all the land (or sea) on which those birds forage for food. Similar problems might be encountered with otters *Lutra lutra*, although not necessarily so with water voles *Arvicola terrestris*, dormice *Muscardinus avellanarius*, harvest mice *Micromys minutus* or water shrews *Neomys fodiens*.

4.6.3 In addition to those that stem from the Essex Review Panel targets, the following Wildlife Site Statements (7-9) have been developed to inform the selection of Local Wildlife Sites.

4.7 WILDLIFE SITE STATEMENT 7

4.7.1 Habitats can be identified as Local Wildlife Sites if their identification as such contributes to the fulfilment of national, regional or county Biodiversity Action Plan targets. This does not mean to say that all such habitats must be identified

⁶ Defined as those species with an IUCN designation of 'Rare' or above, 'Red' list birds, and for species with out IUCN designation considered 'Rare'.

⁷ 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'

e.g. the identification of ALL ancient or species-rich hedgerows is not deemed appropriate.

4.8 WILDLIFE SITE STATEMENT 8

4.8.1 Other sites, not covered by criteria stemming from the previous Statements, can be identified as Local Wildlife Sites on the basis of their unique ecological characteristics. These habitat selection criteria shall give due consideration to the values and principles embodied in the 'Ratcliffe Criteria', especially rarity, naturalness, typicalness, fragility, size, diversity and position in an ecological unit⁸.

4.8.2 The last point is particularly important. For example, sites of low intrinsic nature conservation value, but which perform an important function in terms of their position within the wider ecological landscape will be considered for selection.

4.8.3 Potential value might also be considered, especially for degraded UK or Essex BAP habitats.

4.9 WILDLIFE SITE STATEMENT 9

4.9.1 Domestic gardens⁹ will not ordinarily be considered for selection. The only exception to this might be where the garden provides the very best or only site of a notable species.

4.9.2 To these nine fundamental points, three final Statements (10-12) can be added which are designed to strengthen and 'legitimise' the system for identifying Local Wildlife Sites consistent with national guidance.

4.10 WILDLIFE SITE STATEMENT 10

4.10.1 The following 'non-biological' criteria, mentioned in the Defra guidance, will also be considered where a site just fails to meet selection criteria which relate to Wildlife Site Statements 1-8:

- **historical and cultural associations;**
- **value for appreciation of nature; and/or**
- **value for learning.**

4.10.2 The inclusion of 'non-biological' criteria marks a departure from the previous documents used to identify Local Wildlife Sites in Essex, which focussed exclusively upon a site's ecological interest. It was felt that this was a significant omission, and the addition of WSS 10 brings the selection criteria in line with the Defra guidance of 2006.

4.11 WILDLIFE SITE STATEMENT 11

4.11.1 Before notification, each candidate Local Wildlife Site must be ratified by a Local Wildlife Sites Selection Panel.

4.11.1 This should be locally based at the borough, district or unitary level, and include representatives of the following organisations: local natural history societies, Essex

⁸ Ratcliffe, D.A. (ed), 1977, *A Nature Conservation Review*, NERC/NCC

⁹ Defined as land, used primarily for amenity, which forms part of a private residence less than 1 hectare in size.

Wildlife Trust local groups, local authority officers, statutory nature conservation agencies, non-statutory nature conservation organisations and natural history museums.

4.11.2 Local ratification is crucial, and this process will be strengthened, upon completion of a LoWS review, by seeking final endorsement of the ratified sites from the Essex Wildlife Sites Project Advisory Group in order to maintain a comparability of standards across the county. In situations where the local selection panel is unable to reach a decision consistent with the selection criteria or it proves difficult to convene a Local Selection Panel, the final arbiter shall be the EWSP Advisory Group, which comprises representatives from: Essex Wildlife Trust, Natural England, Environment Agency, Essex County Council, Essex Biodiversity Project, Essex Field Club and the Essex Planning Officers' Association.

4.12 WILDLIFE SITE STATEMENT 11

4.12.1 Local Authorities should include a policy within their Local Development Framework (LDF), or other relevant policy document, to allow, where necessary, for the addition or deletion of Local Wildlife Sites from their register within the lifetime of the LDF or policy document.

4.12.2 Local Authorities should endeavour to review the LoWS in their area on a regular basis. Consistent with Defra guidance, the Local Wildlife Sites Project recommend that the period between reviews should be no greater than 5 years.

5

PROTOCOL FOR SURVEY, EVALUATION AND SELECTION

- 5.1 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 survey¹⁰ undertaken between 1987 and 1994 by Essex Wildlife Trust. Subsequently, LoWS have typically been selected as part of borough, district or unitary authority wide '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. Identify LoWS owners (e.g. land registry search);
 - b. 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.

¹⁰ Joint Nature Conservation Committee, (1993) *Handbook for Phase 1 survey – a technique for environmental audit*.

5.2 IDENTIFICATION OF POTENTIAL SITES FOR ASSESSMENT

- 5.2.1 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 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.
- 5.2.2 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.

5.3 ARRANGING ACCESS FOR SURVEY

- 5.3.1 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."
- 5.3.2 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 Wildlife Sites Project 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. 5.2.1. Furthermore, there is likely to be some merit in contacting organisations representative of particular groups of landowners, e.g. the National Farmers Union (NFU).
- 5.3.3 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).

5.4 SITE SURVEY AND ASSESSMENT

- 5.4.1 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 year¹¹. It is recommended that site assessments utilise the current version of the 'Local Wildlife Site Monitoring Form'¹².

- 5.4.2 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.

5.5 SITE EVALUATION AND SELECTION

- 5.5.1 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.”

- 5.5.2 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 short-list of 'candidate sites' that appear to meet one or more criterion. This should be undertaken by a suitably experienced and competent ecologist, preferably with a good understanding of the county's flora and fauna.

- 5.5.3 The short-list 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 Wildlife Sites Advisory Group for endorsement in order to maintain a comparability of standards across the county. If the EWSP Advisory Group 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.

5.6 NOTIFICATION

- 5.6.1 Once the final list of LoWS has been endorsed by the EWSP Advisory Group, 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**.
- 5.6.2 Where access to the site has not been possible, sites should still be notified where it can be clearly demonstrated the site meets one or more selection criterion based upon survey information collected either from a public footpath or observed from neighbouring land where access permission has been granted. The following reasons for failure to gain access apply: a landowner has refused access for survey; the landowner of a site can not 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.

¹¹ For guidance see the Common Standards Monitoring section of the JNCC website viewable at: www.jncc.gov.uk

¹² Copies can be downloaded from: <http://www.essexbiodiversity.org.uk/>

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

6 HABITAT SELECTION CRITERIA

6.1 PREAMBLE

The criteria in this section, and section 7, are phrased such that sites which satisfy a Wildlife Site Statement shall be 'considered' for selection, subject to ratification by a Local Wildlife Sites selection panel, and/or, where appropriate, the Essex Wildlife Sites Project Advisory Group. The selection criteria themselves are in bold, with explanatory or supporting information in normal font. Where a criterion relates directly to one or more Wildlife Site Statements, that Statement shall be identified in parentheses at the end of the criterion (e.g. WSS6 = Wildlife Site Statement 6).

6.2 WOODLAND

- 6.2.1 There is a general acceptance that ancient woodlands are of significant importance within the Essex countryside, in most cases being semi-natural vegetation derived from the natural climax vegetation that would have covered most of the land prior to human intervention. Ancient woodland sites would be withheld from selection only if they have deteriorated to such an extent by extreme coniferisation, human disturbance, or are of such a small size that they are thought unlikely to support viable populations of the woodland flora and fauna that make ancient woods important. If de-selection is petitioned, the onus of responsibility will lie with the plaintiff to demonstrate through professional ecological survey that no such flora or fauna occurs at the site nor has occurred in the recent past.
- 6.2.2 **HCr1**
All sites identified in the Essex Ancient Woodland Inventory compiled by Natural England (HCr1a), plus any other site considered to be ancient by reason of its indicative ground flora, documentary evidence or physical and/or geomorphological qualities (HCr1b) shall be considered for selection (WSS 7).
- 6.2.3 Plant species deemed to be indicative of ancient woodland sites in Essex are listed in **Appendix 3**. For non-ancient woodland, including parkland, recent secondary woods, scrub and also hedgerows and green lanes, separate criteria apply.
- 6.2.4 **HCr2**
An area of non-ancient woodland (other than wet woodland) shall be considered for selection if it fulfils at least one of the following statements:
- a) **it lies immediately adjacent to ancient woodland and has a diversity of age and/or species structure consistent with naturally occurring woodland or provides an important buffering or connective function. (WSS 7, 8: size, diversity, position in ecological unit);**
 - b) **the wood has a diverse age and species structure (including a limited extent of coniferous plantation) and preferably includes the presence of grassy rides, ponds or other open areas. The minimum size threshold should consider the relative abundance of woodland in the surrounding countryside (WSS 8);**
 - c) **the wood forms part of a mosaic of good quality wildlife habitat in association with at least two other habitats from the following list: scrub, open water, heath, acid grassland, neutral grassland, calcareous grassland, marsh and swamp. The minimum size threshold will consider**

- the relative abundance of semi-natural habitat in the surrounding countryside (WSS 8); and/or
- d) the wood is identifiable as a ‘priority’ or ‘characteristic’ National Vegetation Classification (NVC) community type for the Natural Area¹³ in which the site is located. Greater emphasis shall be given to ‘priority’ woodland types (WSS 7, 8).

Table 1 Essex Natural Area woodland types¹⁴ (priority types are in bold type)

| |
|---|
| <p>London Basin:</p> <ul style="list-style-type: none"> • W5 <i>Alnus glutinosa</i> – <i>Carex paniculata</i> woodland • W7 <i>Alnus glutinosa</i> – <i>Fraxinus excelsior</i> – <i>Lysimachia nemorum</i> woodland • W8 <i>Fraxinus excelsior</i> – <i>Acer campestre</i> – <i>Mercurialis perennis</i> woodland • W10 <i>Quercus robur</i> – <i>Pteridium aquilinum</i> – <i>Rubus fruticosus</i> woodland • W14 <i>Fagus sylvatica</i> – <i>Rubus fruticosus</i> woodland • W15 <i>Fagus sylvatica</i> – <i>Deschampsia flexuosa</i> woodland • W16 <i>Quercus</i> spp. - <i>Betula</i> spp. - <i>Deschampsia flexuosa</i> woodland <p>East Anglian Plain:</p> <ul style="list-style-type: none"> • W2 <i>Salix cinerea</i> – <i>Betula pubescens</i> – <i>Phragmites australis</i> woodland • W6 <i>Alnus glutinosa</i> – <i>Urtica dioica</i> woodland • W8 <i>Fraxinus excelsior</i> – <i>Acer campestre</i> – <i>Mercurialis perennis</i> woodland • W10 <i>Quercus robur</i> – <i>Pteridium aquilinum</i> – <i>Rubus fruticosus</i> woodland <p>East Anglian Chalk:</p> <ul style="list-style-type: none"> • W8 <i>Fraxinus excelsior</i> – <i>Acer campestre</i> – <i>Mercurialis perennis</i> woodland <p>Suffolk Coast and Heaths:</p> <ul style="list-style-type: none"> • W10 <i>Quercus robur</i> – <i>Pteridium aquilinum</i> – <i>Rubus fruticosus</i> woodland |
|---|

6.3 PARKLAND AND VETERAN TREES

6.3.1 Parkland is a particular type of woodland mosaic in which semi-natural grassland would often have been an important component, sometimes more so than the ‘woodland’ component. Characteristic features of parkland include encircling ditches/banks, large veteran trees that have grown in an open, rather than restricted, woodland setting and species-rich grassland. Veteran trees can be exceptionally important for invertebrates and, in some cases, may provide sufficient reason to select the site, even with the lack of any other parkland component. Such trees might even be growing within an arable field.

6.3.2 HCr3

Areas of ancient parkland, preferably with veteran trees, and a semi-natural grassland ground flora should be considered for selection (WSS 8).

6.3.3 HCr4

Veteran parkland trees “known or likely to support significant dead wood or other invertebrate assemblages, or epiphytic bryophytes or lichens” may be selected even in the absence of other parkland features, such as semi-natural grassland. The stand should include a sufficient number and variety of trees to provide appropriate habitat conditions for the associated species of interest (WSS 5, 6, 8).

¹³ Natural Areas are sub-divisions of England, each with a characteristic association of wildlife and natural features.

¹⁴ See Rodwell (1991) for explanations of these community types.

6.3.4 Wet woodland is a national BAP habitat, often found in a mosaic of other habitats from open water to dry woodland, especially as willow scrub. Streamside or plateau alder *Alnus glutinosa* woodland may form more discrete units. As a scarce woodland type, all stands of wet alder wood should be considered for selection, subject to considerations of size and shape (e.g. a broad, rectangular wood is likely to be more significant than a very narrow stream-side belt). The supporting ground flora should be included. This woodland type is covered by selection criterion HCr2(d).

6.3.5 Stands of willow *Salix* spp. wood should be identified where they are known to support breeding habitat or significant foraging habitat, specialist woodland bird or invertebrate species, or where they form significant components of a mosaic site. Such sites should aim to include and protect the source of the water that maintains the habitat in its condition. Particularly large stands of wet woodland could be identified, without the supporting evidence of specialist woodland birds or invertebrates, consistent with criterion HCr2(d).

6.3.6 HCr5

All significant stands of Willow scrub woodland should be considered for selection. Selection should take into consideration the distribution of this woodland type in the county, size, associated fauna and the characteristic nature of the ground flora. Its place within a mosaic of vegetation types is also an important consideration (WSS 7).

6.4 SCRUB COMMUNITIES

6.4.1 In Essex, scrub communities come in many forms, from strips of suckering elm to dense blocks of hawthorn and blackthorn, coastal shrubby seablite and broom communities, and brakes of 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.

6.4.2 HCr6

Large areas of scrub shall be considered for selection if they fulfil at least one of the following statements:

- a) large areas of scrub known to support significant breeding populations of scrub-dependent birds or provide significant shelter or foraging habitat for migrant passerines (WSS 6, 8: size, naturalness, typicalness);
 - scrub-dependent birds include the following species: nightingale *Luscinia megarhynchos*, whitethroat *Sylvia communis*, lesser whitethroat *Sylvia curruca*, grasshopper warbler *Locustella naevia*, dunnock *Prunella modularis*, bullfinch *Pyrrhula pyrrhula*, blackcap *Sylvia atricapilla*, and willow warbler *Phylloscopus trochilus*;
- b) scrub that forms part of a mosaic of good quality wildlife habitat in association with at least two other habitats from the following list: woodland, open water, heath, acid grassland, neutral grassland, calcareous grassland, marsh and swamp. The minimum size threshold should consider the relative abundance of semi-natural habitat in the surrounding countryside, and also the species diversity within the scrub block, with smaller blocks being permitted if they are particularly species-rich (WSS 8);
- c) plotland and similar post-industrial/brownfield scrub habitat in which the alien flora contributes positively to the wildlife value of the scrub. Such scrub should typically include grassy rides and glades or form part of a mosaic with at least two other habitats from the following list: woodland, open water, heath, acid grassland, neutral grassland, calcareous grassland, marsh and swamp. (WSS 8: typicalness, diversity); and /or
- d) the scrub is identifiable as a 'priority' community type for the Natural Area in which the site is located (WSS 8). These scrub types are:
 - London Basin: elm scrub
 - Greater Thames Estuary: Mediterranean-type shrubby seablite/broom scrub.

6.5 ORCHARDS

6.5.1 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 is also important for over-wintering birds where wind-fall 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.

6.5.2 HCr7

Orchards will be considered for selection if they contain large, old trees with good lichen cover and/or include unusual local/traditional varieties of tree and/or support populations of notable species; and/or have a ground flora that would satisfy selection as a grassland site (WSS 7, 5 and 8).

6.5.3 HCr8

Large orchards shall be considered for selection if they regularly support significant breeding populations of any ERDL bird species, or significant over-wintering populations of fieldfares *Turdus pilaris*, redwings *Turdus iliacus*, mistle thrushes *Turdus viscivorus*, or other migratory birds listed in the ERDL (WSS 5, 8: rarity, size).

6.6 ANCIENT AND SPECIES-RICH HEDGEROWS AND GREEN LANES

6.6.1 Despite widespread grubbing-out in previous decades, such features 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 may be selected if they form important woodland/scrub corridors connecting or closely juxtaposed to other, protected¹⁵ wildlife sites. This provides a means of highlighting the importance of such wildlife corridors. Special consideration shall be given to suckering elm hedges, these being especially characteristic of Essex farmland and allied to elm scrub communities capable of selection via HCr6(d). 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.

6.6.2 HCr9

A hedgerow or green lane shall be considered for selection if it fulfils one of the following statements:

- **it provides appropriate habitat connectivity or functions as a corridor between two or more Wildlife Sites (WSS 7, 8: position in an ecological unit);**
- **it provides a significant extent of scrub or mosaic habitat in a part of the county otherwise deficient in such habitat (WSS 8: rarity); and/or**
- **it constitutes part of the 'ghost' outline of a former ancient wood and retains some of the characteristic flora and/or fauna of an ancient wood (WSS 7, 8).**

6.7 GRASSLANDS

6.7.1 Old, unimproved¹⁶ and species-rich grasslands (including fen-meadows and rush-pastures) are such a scarce resource that there should be a presumption in favour of selecting the majority of such habitats. The Essex Wildlife Site Review Panel documentation recommended using Natural England's Grassland Inventory¹⁷ as a source for 'automatically' selecting 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, and it is unclear how the update will 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.

¹⁵ Includes all sites with an international, national or local statutory or non-statutory designation.

¹⁶ Unimproved grassland is permanent semi-natural grassland which has not been cultivated for some years and/or been subjected to excessive intensive mowing/grazing, drainage, herbicide or fertilizer/slurry/manure applications, and supports a characteristic suite of species (see appendix 4).

¹⁷ Inventory of all UK BAP unimproved grassland types, produced in 1995 and at the time of publication being updated.

- 6.7.2 The role of road verges in conserving albeit small fragments of species-rich grassland within the wider countryside should also be recognised. ‘Special Verges’ identified by the Special Verges Project¹⁸ will be considered for selection where they meet an appropriate grassland criterion.
- 6.7.3 Old, unimproved grasslands might 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 a landform indicating the site has not been ploughed). However, even quite recent grasslands can be selected if they support a diverse assemblage of flowering plants (both herbs and grasses), especially if they enhance invertebrate habitat (WSS 6), form part of a mosaic or are the only grasslands present within a significant part of the county.

6.7.4 HCr10

All old, largely unimproved grassland shall be considered for selection. Evidence for antiquity shall be taken from the presence of indicator plants, land-form or documentary records. Where appropriate, reference should also be made to the ‘priority’ National Vegetation classification (NVC) community type for the Natural Area in which the site is located, as well as size, location within the county, species diversity and fragility (WSS 7, 8).

Table 2 Essex Natural Area ‘priority’ grassland types¹⁹

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| <p>London Basin:</p> <ul style="list-style-type: none"> • MG4 <i>Alopecurus pratensis</i> – <i>Sanguisorba officinalis</i> grassland • MG5a <i>Cynosurus cristatus</i> – <i>Centaurea nigra</i> grassland <i>Lathyrus pratensis</i> sub-community • MG5c <i>Cynosurus cristatus</i> – <i>Centaurea nigra</i> grassland <i>Danthonia decumbens</i> sub-community <p>East Anglian Plain:</p> <ul style="list-style-type: none"> • MG4 <i>Alopecurus pratensis</i> – <i>Sanguisorba officinalis</i> grassland • MG5a <i>Cynosurus cristatus</i> – <i>Centaurea nigra</i> grassland <i>Lathyrus pratensis</i> sub-community • MG5b <i>Cynosurus cristatus</i> – <i>Centaurea nigra</i> grassland <i>Galium verum</i> sub-community • MG5c <i>Cynosurus cristatus</i> – <i>Centaurea nigra</i> grassland <i>Danthonia decumbens</i> sub-community • MG8 <i>Cynosurus cristatus</i> – <i>Caltha palustris</i> grassland <p>Some grassland found in the county is not adequately described in the NVC. Examples of those not adequately described include meadow barley <i>Hordeum secalinum</i> dominated stands, species-rich coastal grasslands with abundant common couch <i>Elytrigia repens</i>, and stands associated with Thames Terrace gravels.</p> |
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¹⁸ Project coordinated by Essex County Council, Essex Wildlife Trust, Essex Field Club and Local Natural History Museums.

¹⁹ *See Rodwell (1992) for explanations of these community types.

- 6.7.5 HCr11**
Old, unimproved or semi-improved²⁰ pastures or meadows that do not clearly fit criterion HCr10 shall be considered for selection if they support a rich flora or a significant population of a notable species (WSS 5, 7, 8: rarity, fragility).
- 6.7.6 HCr12**
Semi-improved or improved²¹ grasslands shall be considered for selection if they significantly increase the key habitat for a site selected on species grounds, such that the grassland is deemed to be part of the essential foraging habitat of that species (WSS 6).
- 6.7.7 HCr13**
Floristically less interesting pieces of grassland shall be considered for selection if they form an integral part of a semi-natural habitat mosaic; specifically the grassland occurs in association with at least two of the following habitats: woodland, scrub, open water, heath, other grassland types, reedbed, tall herb fen, swamp and/or vegetation described in section 6.10 'post industrial sites with high nature conservation value'. The minimum size threshold for the mosaic should reflect the relative abundance of semi-natural habitat in the surrounding countryside (WSS 7, 8).
- 6.7.8 Special consideration should be given to large tracts of river flood-plain grassland, especially those still subjected to seasonal inundation. 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 invertebrate populations and some over-wintering waders (e.g. snipe *Gallinago gallinago*, curlew *Numenius arquata*, and plovers *Pluvialis* spp.). Because of their risk of flooding, many such remaining tracts of flood-plain 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.
- 6.7.9 Such areas of flood-plain grassland can act as a buffer for the associated river. For example, 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.
- 6.7.10 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 the 'woodland' cover. In these situations, there is likely to be some cross-over with the swamp and tall-herb fen communities considered in section 6.12.
- 6.7.11 HCr14**

²⁰ 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.

²¹ Improved grasslands are those meadows or pastures which have been so affected by intensive mowing/grazing, drainage or the application of herbicides or fertilizers/manure/slurry that they have lost most of the species associated with unimproved grassland.

Significant areas of river flood-plain 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 (WSS6, 7, 8).

6.7.12 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.

6.7.13 HCr15
All areas of grassland supporting assemblages of species included in Appendix 5 should be considered for selection (WSS 7, 8: rarity, fragility).

6.7.14 Acid grasslands are treated within section 6.9 'heathland'.

6.8 COASTAL GRAZING MARSH

6.8.1 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. As such, 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 due to disturbance, small size of site or inappropriate management. The Essex Red Data List includes many brackish water invertebrates for which coastal grazing marshes are an important habitat.

6.8.2 HCr16
All fragments of former coastal grazing marsh shall be considered for selection. Consideration should be given to size, diversity, the presence of anthills, low-ways and periodically inundated creeks, notable species and the degree of isolation from the associated estuary. 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 (WSS 7, 8).

6.8.3 HCr17
All sites exhibiting an unrestricted upper saltmarsh to grassland transition should be considered for selection (WSS 7, 8: naturalness, rarity).

6.9 HEATHLAND

- 6.9.1 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 plants and however small the site. Furthermore, this habitat encompasses acid grassland, even if no ericaceous shrubs are present, as well as the very limited extent of sphagnum bogs remaining in the county. The basis for identifying blocks of heathland should be the Lowland Heathland Inventory²² although it should be emphasised that small fragments, still worthy of inclusion, may have been overlooked in the Inventory.
- 6.9.2 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 (WSS 8: potential value).
- 6.9.3 HCr18
All heathland sites listed on the Natural England Lowland Heathland Inventory for Essex should be considered for selection (WSS 7).**
- 6.9.4 HCr19
Any other site supporting characteristic heathland or acid grassland species and with the potential for restoration shall be considered for selection (WSS 7, 8).**

6.10 POST INDUSTRIAL SITES WITH HIGH NATURE CONSERVATION VALUE

- 6.10.1 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.

²² English Nature and RSPB (1997) *The Lowland Heathland Inventory*.

- 6.10.2 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 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).
- 6.10.3 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.
- 6.10.4 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.
- 6.10.5 HCr20**
Brownfield/post-industrial sites or derelict buildings/structures of high nature conservation value will be considered 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 (WSS 6, 7, 8).

6.11 REEDBEDS

6.11.1 All significant stands of more or less pure reed growth are included within this UK and Essex BAP habitat. Use by reed-specialist birds (e.g. reed *Acrocephalus scirpaceus* and sedge warbler *A. schoenobaenus*, Cetti's warbler *Cettia cetti* and bearded tit *Panurus biarmicus*) is desirable but not essential since the habitat is also important for a number of specialist invertebrates, notably some moths and solitary bees. Other swamp communities are discussed separately.

6.11.2 HCr21

All significant stands of reed *Phragmites australis* will be considered for selection (WSS 7), either in their own right or as part of a larger mosaic of habitats. Selection should take into account overall size, the shape of the bed (with wider stands more desirable), and also the degree of human disturbance.

6.11.3 HCr22

Smaller or narrower stands of reedbed shall be considered if they form part of a mosaic of other habitats, including open water, wet woodland, marsh and other swamp communities (WSS 8).

6.12 SWAMP AND TALL-HERB FEN

6.12.1 In Essex, most areas of tall-herb fen and swamp communities occur along the edges of rivers, ponds, lakes and other water bodies, rather than as extensive stands in their own right. Such marginal vegetation is likely to be included within any open water or mosaic 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. For some swamp types e.g. sea club-rush *Bolboschoenus maritimus*, reedmace *Typha latifolia*, the vegetation is characteristically species-poor, but provide important habitat for many species of bird, mammal and/or invertebrate. In some of these situations, selection may be more appropriately dealt with via the 'Species Selection Criteria'.

6.12.2 Riverside willow plantations can develop a form of wet grassland mosaic with tall-herb fen and sedge beds that may be considered under this category.

6.12.3 HCr23

Significant areas of species-rich swamp²³ or tall-herb fen²⁴, or such habitat known to support notable species should be considered for selection. Usually such sites will include the associated water body or source of groundwater, if applicable.

6.13 FRESHWATER HABITATS

6.13.1 The complexities of characterising aquatic vegetation make the identification of sections of river, canal, borrow dyke or individual lakes and ponds on habitat grounds less precise than for terrestrial habitats. This section establishes a framework for site selection, but it is recommended that bodies of water, including

²³ Swamp is defined as non-woody vegetation transitional between open water and terrestrial vegetation.

²⁴ Fens are peatlands which receive water and nutrients from the soil, rock and ground water as well as from rainfall.

obviously man-made structures such as farm reservoirs and flood storage areas, should mainly be designated via Species Selection Criteria aimed particularly at protecting the following important aquatic features:

- fish stocks, e.g. Allis *Alosa alosa* and Twaite *A. fallax* shad, bullhead *Cottus gobio*, barbell *Barbus barbus*, brook lamprey *Lampetra planeri*;
- invertebrates, e.g. white-clawed crayfish *Austropotamobius pallipes*, white-legged damselfly *Platycnemis pennipes*, and beautiful demoiselle *Calopteryx virgo*;
- flora, e.g. diverse assemblages of pond-weeds *Potamogeton* spp. or crowfoots *Ranunculus* spp.; and/or
- other notable species.

6.13.2 HCr24

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 (WSS6). The Wildlife Site shall be deemed to extend at least 2 metres away from the top of the bank into the adjacent habitat.

6.13.3 HCr25

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 (WSS 6, 8: potential value).

6.13.4 HCr26

Where sections of lakes or ponds hold species or vegetation stands of interest, the whole water body shall be designated (WSS 6, 8).

6.13.5 HCr27

Sections of river that support a suite of natural features, leading to a complex riverine habitat structure should be considered for selection. 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 (WSS 8: naturalness, rarity, size, diversity, fragility).

6.14 SALINE LAGOONS

6.14.1 Within the broader definition of this habitat used in the Essex and UK BAP, all tidal or semi-tidal brackish or saline lagoons and inundated borrow dykes will be considered for selection. Close proximity to other coastal habitats of nature conservation value is also desirable.

6.14.2 HCr28

Sections of borrow dyke and tidal or semi-tidal brackish or saline lagoons should be considered for selection. Such sites should have some ecological link with adjacent coastal habitats (WSS 7, 8).

6.15 SAND DUNE AND SHINGLE

6.15.1 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. Due to the scarcity of this habitat, most of the characteristic plants are on the Essex Red Data List.

6.15.2 HCr29

All areas of sand dune and shingle habitat exhibiting a characteristic land form and flora should be considered for selection (WSS 8).

6.16 OTHER HABITAT CRITERIA

6.16.1 The following Essex BAP habitats are not included within specific criteria, although in many cases the system allows for their characteristic species to support site selection through 'Species Selection criteria'.

6.16.2 **Cereal Field Margins** are only likely to be selected if part of a whole-farm conservation network and shown to be supporting populations of associated notable species.

6.16.3 **Coastal saltmarsh and eelgrass beds:** Wildlife Site status is usually restricted in Essex to terrestrial and freshwater habitats rather than inter-tidal habitats. Most, if not all, eelgrass *Zostera* spp. beds off the Essex coast are already covered by SSSI protection as well as international designations.

6.16.4 **Urban Habitats:** the BAP for this category is very broad, encompassing old countryside features encapsulated in towns by urban sprawl, newly 'designed' green areas within urban development, and also brownfield and post-industrial sites. The most important urban habitat types are dealt with in section 6.10.

6.16.5 Two final habitat criterion, which should be considered with caution, address separate issues relating to site selection, which may arise from time to time and cannot be adequately resolved via the 'conventional' habitat or species criteria. The first deals with a site which suffers several 'near misses' against a number of other habitat or species criteria. For example, it might have an interesting suite of invertebrates but without any notable species being present, plus a good but not exceptional flora, or it appears to function as a wildlife corridor between two important sites. In these situations, there is some justification in including special cases within the selection process, although over-reliance on this criterion is not recommended.

6.16.6 HCr30

A site that comes close to qualifying on a number of other selection criteria can be considered for selection based upon its overall nature conservation interest. The case for selection must be supported by suitably qualified experts in those species and/or habitats involved (WSS 8).

6.16.7 The second although not strictly a habitat criterion, plays a similar 'supportive' role by providing a means to select a site which just fails to meet other habitat or species criteria, but which provides important opportunities for amenity or education consistent with the 2006 Defra guidance.

6.16.8 HCr31

A site that comes close to qualifying on a number of other selection criteria can be considered for selection based upon its amenity and/or education value. The case for selection must be supported by suitably qualified experts in the appropriate field of interest (WSS 10).

7 SPECIES SELECTION CRITERIA

7.1 PREAMBLE

- 7.1.1 Wildlife Site Statement 5 sets the scene for this section, in presuming that at least one viable population of all notable species known from Essex will be included within the Local Wildlife Site network, especially if not already protected within the SSSI series. The following criteria are included as a more detailed means of delivering that Statement. Under this category one can consider two sub-groups: Local Wildlife Sites identified for a single species and others identified to protect an assemblage of species. It is assumed that ‘assemblages of important plant species’ will have been covered by a Habitat Selection Criterion, so that one is left with individual plant species and both individual and assemblages of fauna of nature conservation interest.
- 7.1.2 In all cases selection should be subject to the condition that the site boundary encompasses a significant area of known habitat requirements. For example, nesting sites and food/prey foraging conditions are present in viable quantities. Thus, for a species such as the national BAP bumblebee *Bombus sylvarum* it would not be sufficient just to find a specimen on a site. There would need to be viable flower-rich areas comprising species such as bird’s-foot trefoil *Lotus corniculatus*, red bartsia *Odontites verna* and clovers *Trifolium* spp. plus likely nesting habitat (e.g. relatively unmanaged tall open warm grasslands) and over-wintering habitat (e.g. rough grassland). Furthermore, not all sites with singing nightingales should be selected, but sites where breeding of several pairs is proven to be taking place might be selected.
- 7.1.3 Previous deliberations of the Essex Wildlife Sites Review Panel suggested that a scoring system should be developed to help select which species assemblages should be proposed as Local Wildlife Sites. This scoring system does not yet exist and so a more subjective and yet still defensible selection process is used here in the interim. Wildlife Site Statement 5 states that only significant populations of notable species should be considered for protection. There is therefore a need to have a selection process to determine what constitutes a ‘significant population’ for a given species or assemblage of species.
- 7.1.4 The following selection criteria are designed to identify sites where selection may be considered but eventual notification as a Local Wildlife Site will depend on further considerations. These include the viability of the habitat available to support the species or the potential to bring surrounding land into a favourable condition (in which case that land should be included within the Local Wildlife Site). It will also be necessary to consider whether or not a potentially stable breeding colony may exist (rather than just the transient occurrence of the species on a site), as well as the context of the population within its known range, both nationally and in the county.

7.2 AMPHIBIANS AND REPTILES

7.2.1 There are five native amphibians in Essex: common frog *Rana temporaria*, common toad *Bufo bufo*, palmate newt *Triturus helveticus*, smooth newt *T. vulgaris* and great crested newt *T. cristatus*. The latter is a UK and Essex BAP species and fully protected under UK and European law (see **Appendix 2** for more details about wildlife law). Some county selection criteria propose the selection of all breeding sites for great crested newt, but this is felt to be an unworkable criterion in Essex on account of the number of great crested newt ponds likely to occur in the county. The criterion adopted here is broader in scope, but it is recommended that local authorities support the maintenance of a separate 'alert map' of all great crested newt ponds, so as to draw attention to the legal safeguards afforded to this species when planning or land use changes threaten ponds or associated habitats.

7.2.2 SCr1

Significant breeding populations of great crested newts shall be considered for selection. Such sites should have a suitable flora for egg-laying and nursery areas, and should include a core area of terrestrial habitat used outside the breeding season. Consideration shall be given to the proximity or otherwise of adjacent populations (WSS 6, 7).

7.2.3 Palmate newts would appear to be the scarcest herptile²⁵ in Essex and are therefore worthy of more specific protection.

7.2.4 SCr2

Any site (other than a garden pond²⁶) known to support a breeding population of palmate newts shall be considered for selection. Such sites should have a suitable flora for egg-laying and nursery areas and should include a core area of terrestrial habitat used outside the breeding season (WSS 5, 6, 12).

7.2.5 There is also a value in protecting general amphibian diversity.

7.2.6 SCr3

Any site (other than a garden pond) with three or more species of breeding amphibian shall be considered for selection. Such sites should have a suitable flora for egg-laying and nursery areas, and should include a core area of terrestrial habitat used outside the breeding season (WSS 5, 6, 12).

7.2.7 There are four species of reptile in Essex: adder *Vipera berus*, grass snake *Natrix natrix*, common (or viviparous) lizard *Lacerta vivipera* and slow-worm *Anguis fragilis*.

7.2.8 SCr4

Any site supporting significant populations of three or more reptile species shall be considered for selection. Such sites should include sufficient terrestrial (and in the case of grass snake also aquatic) habitat to maintain viable populations of the species (WSS 5, 6).

²⁵ Used to collectively describe an amphibian or reptile

²⁶ Pond situated in the grounds of an occupied private residence less than 1 hectare in size (residence not pond).

7.2.9 There is also a need to consider a more general contribution to overall herptile biodiversity.

7.2.10 SCr5

The presence of two species of reptile and/or amphibian species can be used to further the case for selection in the instance of marginal sites that might not otherwise have been selected, under other criteria. Such sites should include sufficient terrestrial (and in the case of grass snake also aquatic) habitat to maintain viable populations of the species (WSS 5, 6).

7.3 MAMMALS – BATS

7.3.1 Bats are protected under UK and European Wildlife law, which makes it an offence to disturb roost sites. However, there is additional value in having a criterion to identify and protect hibernation sites.

7.3.2 SCr6

All colonial hibernation sites for any bats species in Essex (other than an occupied residential property) shall be considered for selection as a Local Wildlife Site (WSS 5, 7).

7.4 DORMOUSE

7.4.1 This is a national and Essex BAP species and one that is very scarce in Essex.

7.4.2 SCr7

All sites known to support breeding populations of dormouse should be considered for selection. All woodland immediately contiguous with the known site should also be included if it supports habitat conditions thought to be suitable for dormice (WSS 5, 6, 7).

7.4.3 SCr8

All woodland with suitable habitat conditions connected by suitable area of habitat (e.g. one or more hedgerows) to a known dormouse population should be considered for selection, as should the connecting corridors (WSS 5, 6, 7).

7.5 OTTER

7.5.1 Otters are fully protected under UK and European wildlife law. In recent years they have spread across much of Essex as a result of naturally extending populations and from released captive-bred stock. A number of artificial otter holts have been constructed in order to encourage them to settle. Whilst they range over sections of river that are too long to accurately identify, their holts are worthy of protection.

7.5.2 SCr9

Any otter holt, natural or artificial, known to have been occupied within the last 5 years, plus the sections of river 200 metres either side of that holt, and all semi-natural vegetation 20 metres behind that length of river bank shall be considered for selection (WSS 5, 7).

7.6 WATER VOLE

7.6.1 This is a national and Essex BAP species and appears to be scarce in Essex. The most robust populations are now confined to the coastal grazing marshes with the species declining or lost in most Essex river systems primarily due to predation by north American mink *Mustela vison*. In some urban watercourses, rats can be a significant threat to water vole colonies. Habitat loss through drought, pollution, and damage to burrow systems during water course management or development are also possible causes of local extinctions.

7.6.2 SCr10

Any watercourse or wetland system containing breeding populations of water vole should be considered for selection. Watercourses or wetland systems with sub-optimal habitat, that link otherwise fragmented populations, should also be considered if suitable habitat enhancement could be expected to result in the integration of those populations.

7.7 BIRDS

7.7.1 The basis for the conservation of bird species in Essex is taken to be the Essex Red Data List, which is largely based on the UK Red and Amber alert lists (produced by the British Trust for Ornithology)²⁷, plus more detailed local knowledge from the Essex Birdwatching Society. Many species included in the ERDL are in need of conservation management and protection based upon changing agricultural and land management practices across the wider countryside, rather than the protection of small, specific sites. Thus, whilst the yellowhammer *Emberiza citronella* is a farmland bird in decline, it would be unfeasible to identify all hedgerows and scrub blocks where it breeds. However, little tern colonies, hawfinch *Coccothraustus coccothraustus* woodlands and heronries are more discrete units and should be considered for selection.

7.7.2 In addition to notable species, there are likely to be some sites that warrant selection as a result of the regular presence of significant breeding or over-wintering populations of relatively commonplace species, such as jackdaw *Corvus monedula* or curlew. In these situations, selection should be informed by advice from the Essex Birdwatching Society.

7.7.3 SCr11

Where significant breeding or over-wintering habitat of notable bird species can be reasonably identified as discrete areas, then they shall be considered for selection.

²⁷ <http://www.bto.org/psob/index.htm>

- 7.7.4 SCr12**
Other sites shall be considered for selection where it can be demonstrated that they regularly support significant breeding or over-wintering populations of non-notable bird species.
- 7.8 INVERTEBRATES**
- 7.8.1 The Invertebrate Site Register (ISR) for Essex²⁸ is largely out of date and not exhaustive in its identification of important invertebrate habitat. As a result, it should be used only as a focus for further research into invertebrate populations. The first step in most cases will be to determine whether or not the species listed within the Register are still present.
- 7.8.2 A more suitable basis for selection of sites with significant invertebrate interest is the various scoring systems for invertebrate populations that have been developed (see **Appendix 6**). In particular, the Species Quality Index (SQI) is recognised nationally as a rational methodology for identifying important assemblages of invertebrates.
- 7.8.3 SCr13**
A site known or suspected to support a breeding assemblage of invertebrates with a Species Quality Index of at least 5 will be considered for selection (minimum sample of 60 species, 8 hours of field work) (WSS 8: Diversity, Rarity).
- 7.8.4 Notwithstanding this, some species will be of such national rarity or local significance that they alone might qualify the site for selection:
- 7.8.5 SCr14**
Significant populations of notable invertebrates or noteworthy assemblages of distinct taxa (e.g. dragonflies, butterflies) should be considered for selection. The interpretation of significance should take into account both the core populations at the centre of the species range and also stable populations on the periphery, especially where colony expansion or colonisation of nearby habitat is likely (WSS 5).
- 7.9 PLANTS**
- 7.9.1 For the sake of simplicity, this category includes flowering plants, bryophytes, lichens and fungi.
- 7.9.2 SCr15**
Significant populations of notable vascular plants, bryophytes, lichens and/or fungi should be considered for selection. Where there is ambiguity, guidance will be sought from the relevant county expert to help determine what represents a significant population for a particular species (WSS 5).

²⁸ The ISR was a national initiative established in the 1980's to identify, document and evaluate sites of importance for the conservation of terrestrial and freshwater invertebrates in Great Britain. The dataset has increasingly become out-dated since the 1990's.

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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

<http://www.bto.org/psob/index.htm#population>

Table 3 Red lists based on IUCN Criteria.

| 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. |
| 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. |

| Designation | Description |
|-------------------------------------|---|
| 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. |
| 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 ²⁹ but do not qualify as Critically Endangered, Endangered or Vulnerable. |

Table 4 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. |
| 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 |

²⁹ A hectad is an area 10 km x 10 km square.

Essex Red Data List (ERDL) www.essexfieldclub.org.uk

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 www.ukbap.org.uk

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

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

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 |
| 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.

Schedule 1:

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 Indicator 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 Key³⁰. 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.

| | | |
|--------------------------------------|-----------------------------------|---|
| <i>Acer campestre</i> | field maple | 1 |
| <i>Adoxa moschatellina</i> | moschatel | |
| <i>Allium ursinum</i> | ramsons | |
| <i>Anemone nemorosa</i> | wood anemone | |
| <i>Blechnum spicant</i> | hard fern | |
| <i>Bromopsis ramosa</i> | hairy brome | |
| <i>Calamagrostis epigejos</i> | wood small-reed | 2 |
| <i>Campanula trachelium</i> | nettle-leaved bellflower | 3 |
| <i>Cardamine amara</i> | large bitter-cress | |
| <i>Carex laevigata</i> | smooth-stalked sedge | |
| <i>Carex pallescens</i> | pale sedge | |
| <i>Carex pendula</i> | pendulous sedge | |
| <i>Carex remota</i> | remote sedge | |
| <i>Carex strigosa</i> | thin-spiked wood sedge | |
| <i>Carex sylvatica</i> | wood sedge | |
| <i>Carpinus betulus</i> | hornbeam | 1 |
| <i>Ceratocapnos claviculata</i> | climbing fumitory | |
| <i>Chrysosplenium alternifolium</i> | alternate-leaved golden-saxifrage | |
| <i>Chrysosplenium oppositifolium</i> | opposite-leaved golden-saxifrage | |
| <i>Conopodium majus</i> | pignut | 2 |
| <i>Convallaria majalis</i> | lily of the valley | |
| <i>Crataegus laevigata</i> | midland hawthorn | |
| <i>Daphne laureola</i> | spurge-laurel | |
| <i>Dipsacus pilosus</i> | small teasel | 2 |
| <i>Dryopteris affinis</i> | scaly male fern | |
| <i>Dryopteris carthusiana</i> | narrow buckler-fern | |
| <i>Elymus caninus</i> | bearded couch | 2 |
| <i>Epipactis helleborine</i> | broad-leaved helleborine | |
| <i>Epipactis purpurata</i> | purple helleborine | |
| <i>Equisetum sylvaticum</i> | wood horsetail | |
| <i>Euonymus europaeus</i> | spindle tree | |
| <i>Euphorbia amygdaloides</i> | wood spurge | |
| <i>Festuca gigantea</i> | giant fescue | |
| <i>Frangula alnus</i> | alder-buckthorn | 2 |
| <i>Galeobdolon luteum</i> | yellow archangel | |
| <i>Galium odoratum</i> | woodruff | |
| <i>Geum rivale</i> | water avens | |
| <i>Gnaphalium sylvaticum</i> | heath cudweed | 2 |
| <i>Helleborus viridis</i> | green hellebore | 3 |
| <i>Hordelymus europaeus</i> | wood barley | |

³⁰Rose, F. and O'Reilly C. (2006) The Wildflower Key, Warne, London

| | | |
|----------------------------------|-------------------------------|------|
| <i>Hyacinthoides non-scripta</i> | bluebell | |
| <i>Hypericum hirsutum</i> | hairy st. john's-wort | |
| <i>Hypericum pulchrum</i> | slender st john's-wort | 2 |
| <i>Ilex aquifolium</i> | holly | 1 |
| <i>Iris foetidissima</i> | stinking iris | 2;3 |
| <i>Lathraea squamaria</i> | toothwort | |
| <i>Lathyrus linifolius</i> | bitter vetchling | |
| <i>Lathyrus sylvestris</i> | narrow-leaved everlasting pea | 3 |
| <i>Luzula pilosa</i> | hairy woodrush | |
| <i>Luzula sylvatica</i> | great woodrush | |
| <i>Lysimachia nemorum</i> | yellow pimpernel | |
| <i>Lythrum portula</i> | water-purslane | 2 |
| <i>Malus sylvestris</i> | crab apple | |
| <i>Melampyrum cristatum</i> | crested cow-wheat | 4 |
| <i>Melampyrum pratense</i> | common cow-wheat | |
| <i>Melica uniflora</i> | wood melick | |
| <i>Mercurialis perennis</i> | dog's mercury | |
| <i>Milium effusum</i> | wood millet | |
| <i>Moehringia trinervia</i> | three-veined sandwort | |
| <i>Myosotis sylvatica</i> | wood forget-me-not | 3 |
| <i>Neottia nidus-avis</i> | bird's nest orchid | |
| <i>Ophioglossum vulgatum</i> | adder's-tongue fern | 2 |
| <i>Orchis mascula</i> | early purple orchid | |
| <i>Oreopteris limbosperma</i> | lemon-scented fern | |
| <i>Oxalis acetosella</i> | wood sorrel | |
| <i>Paris quadrifolia</i> | herb paris | |
| <i>Pimpinella major</i> | greater burnet-saxifrage | 2 |
| <i>Platanthera chlorantha</i> | greater butterfly orchid | 2 |
| <i>Poa nemoralis</i> | wood meadow-grass | |
| <i>Polygonum vulgare</i> | polypody | |
| <i>Polystichum aculeatum</i> | hard shield-fern | |
| <i>Polystichum setiferum</i> | soft shield-fern | |
| <i>Populus tremula</i> | aspen | 1, 2 |
| <i>Potentilla sterilis</i> | barren strawberry | 2 |
| <i>Primula elatior</i> | oxlip | |
| <i>Primula vulgaris</i> | primrose | |
| <i>Prunus avium</i> | wild cherry | 1 |
| <i>Quercus petraea</i> | sessile oak | |
| <i>Ranunculus auricomus</i> | goldilocks buttercup | |
| <i>Ribes nigrum</i> | black currant | 3 |
| <i>Ribes rubrum</i> | red currant | 3 |
| <i>Ruscus aculeatus</i> | butcher's broom | |
| <i>Sanicula europaea</i> | sanicle | |
| <i>Sedum telephium</i> | orpine | 3 |
| <i>Sorbus aucuparia</i> | rowan | 1, 2 |
| <i>Sorbus torminalis</i> | wild service tree | |
| <i>Stachys officinalis</i> | betony | 2 |
| <i>Stellaria neglecta</i> | greater chickweed | 2 |
| <i>Tamus communis</i> | black bryony | |
| <i>Tilia cordata</i> | small-leaved lime | |
| <i>Veronica montana</i> | wood speedwell | |
| <i>Viburnum opulus</i> | guelder-rose | 2 |

| | | |
|------------------------------|------------------|---|
| <i>Vicia sepium</i> | bush vetch | 2 |
| <i>Viola odorata</i> | sweet violet | 3 |
| <i>Viola reichenbachiana</i> | 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.
3. Beware of garden escapes; the more likely source in Essex.
4. In Essex typically occurs on the edge of ancient woods or hedges.

APPENDIX 4 SPECIES INDICATIVE OF UNIMPROVED GRASSLAND & MARSH IN ESSEX

'*' 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

| | | |
|--|------------------------|---|
| <i>Achillea ptarmica</i> | sneezewort | * |
| <i>Briza media</i> | quaking grass | * |
| <i>Bromus commutatus</i> | meadow brome | |
| <i>Bromus racemosus</i> | smooth brome | |
| <i>Caltha palustris</i> | marsh marigold | M |
| <i>Campanula rotundifolia</i> | harebell | A |
| <i>Cardamine pratensis</i> | lady's smock | |
| <i>Carex acuta</i> | tufted sedge | |
| <i>Carex binervis</i> | ribbed sedge | A |
| <i>Carex caryophyllea</i> | spring sedge | |
| <i>Carex distans</i> | distant sedge | |
| <i>Carex disticha</i> | soft brown sedge | |
| <i>Carex echinata</i> | star sedge | |
| <i>Carex nigra</i> | black sedge | |
| <i>Carex panicea</i> | carnation sedge | |
| <i>Carex paniculata</i> | greater tussock sedge | |
| <i>Carex vesicaria</i> | bladder sedge | |
| <i>Carex viridula</i> ssp. <i>oedocarpa</i> | straight-beaked sedge | |
| <i>Conopodium majus</i> | pignut | |
| <i>Dactylorhiza incarnata</i> | early marsh orchid | |
| <i>Dactylorhiza praetermissa</i> | southern marsh orchid | |
| <i>Danthonia decumbens</i> | heath grass | A |
| <i>Equisetum fluviatile</i> | water horsetail | |
| <i>Galium uliginosum</i> | fen bedstraw | |
| <i>Galium verum</i> | lady's bedstraw | |
| <i>Genista tinctoria</i> | dyer's greenweed | |
| <i>Glyceria declinata</i> | glaucous sweet-grass | |
| <i>Juncus compressus</i> | round-fruited rush | |
| <i>Juncus squarrosus</i> | heath rush | A |
| <i>Juncus subnodulosus</i> | blunt-flowered rush | M |
| <i>Lathyrus nissolia</i> | grass vetchling | |
| <i>Lychnis flos-cuculi</i> | ragged robin | M |
| <i>Lysimachia nummularia</i> | creeping jenny | |
| <i>Molinia caerulea</i> | purple moor-grass | A |
| <i>Oenanthe fistulosa</i> | tubular water-dropwort | M |
| <i>Ophioglossum vulgatum</i> | adder's tongue fern | |
| <i>Orchis morio</i> | green-winged orchid | * |
| <i>Pedicularis sylvatica</i> | lousewort | |
| <i>Potentilla anglica</i> | trailing tormentil | |
| <i>Potentilla erecta</i> | tormentil | A |

| | | |
|---|-----------------------|---|
| <i>Primula veris</i> | cowslip | |
| <i>Rhinanthus minor</i> | yellow rattle | * |
| <i>Sanguisorba minor</i> ssp. <i>minor</i> | salad burnet | |
| <i>Saxifraga granulata</i> | meadow saxifrage | * |
| <i>Scutellaria minor</i> | lesser skullcap | M |
| <i>Senecio aquaticus</i> | marsh ragwort | |
| <i>Silaum silaus</i> | pepper saxifrage | * |
| <i>Spiranthes spiralis</i> | autumn lady's-tresses | * |
| <i>Stachys officinalis</i> | betony | |
| <i>Stellaria alsine</i> | bog stitchwort | |
| <i>Thalictrum flavum</i> | meadow rue | |
| <i>Thymus polytrichus</i> | wild thyme | |
| <i>Trifolium ochroleucon</i> | sulphur clover | |
| <i>Trifolium subterraneum</i> | subterranean clover | |
| <i>Triglochin palustris</i> | marsh arrowgrass | |
| <i>Valeriana dioica</i> | marsh valerian | |
| <i>Veronica catenata</i> | pink water speedwell | |

APPENDIX 5 SPECIES INDICATIVE OF CHALK GRASSLAND IN ESSEX

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.

| | |
|-------------------------------------|-----------------------|
| <i>Anacamptis pyramidalis</i> | pyramidal orchid |
| <i>Astragalus glycyphyllos</i> | wild liquorice |
| <i>Blackstonia perfoliata</i> | yellow-wort |
| <i>Briza media</i> | quaking grass |
| <i>Campanula glomerata</i> | clustered bellflower |
| <i>Carlina vulgaris</i> | carline thistle |
| <i>Centaurea scabiosa</i> | great knapweed |
| <i>Cirsium acaule</i> | stemless thistle |
| <i>Cirsium eriophorum</i> | woolly thistle |
| <i>Clinopodium acinos</i> | basil-thyme |
| <i>Cruciata laevipes</i> | crosswort |
| <i>Gentianella amarella</i> | autumn gentian |
| <i>Helianthemum nummularium</i> | rock-rose |
| <i>Helictotrichon pratense</i> | meadow oat-grass |
| <i>Inula conyzae</i> | ploughman's spikenard |
| <i>Nepeta cataria</i> | catmint |
| <i>Oregano vulgare</i> | majoram |
| <i>Orobanche elatior</i> | knapweed broomrape |
| <i>Sanguisorba minor ssp. minor</i> | salad burnet |
| <i>Scabiosa columbaria</i> | small scabious |
| <i>Thymus polytrichus</i> | wild thyme |

APPENDIX 6 INVERTEBRATE SPECIES QUALITY INDEX (SQI)

The **Species Quality Index (SQI)** is a widely used method of comparing one site with another; the following section explains the rationale behind its use.

Invertebrate species rarity and the degree to which they are endangered have typically been assessed by analysing the number of national 10km grid squares in which they occur. This is slightly altered for the case of the most endangered species, which are recorded in national Red Data Books (e.g. Shirt, 1987). Here, the listing as RDB1 (Endangered), RDB2 (Vulnerable) and RDB3 (Rare) is more strictly an assessment of how threatened or endangered the species is in Britain, rather than how scarce it is in terms of counting spots on maps. Nevertheless, all Red Data Book species are found in very few locations. The definitions of the three categories are as follows (adapted from Shirt, 1987):

RDB 1 Species in danger of extinction and whose survival is unlikely if the causal factors continue operating. These include:

- Species known from only a single locality since 1970;
- Species restricted to habitats that are especially vulnerable;
- Species that have shown a rapid and continuous decline in the last twenty years and are now estimated to exist in five or fewer localities;
- Species believed extinct but which would need protection if re-discovered.

RDB 2 Species believed likely to move into the RDB1 category in the near future if the causal factors continue operating. These include:

- Species declining throughout their range;
- Species in vulnerable habitats;
- Species whose populations are low.

RDB 3 Species with small populations that are not at present endangered (RDB1) or vulnerable (RDB2) but which are at risk. These include:

- Species that are estimated to occur in fifteen or fewer localities.

In addition to these categories, there is a fourth, more general category:

RDB K Species suspected to fall within the RDB categories but which are at present insufficiently known to enable placement.

Species that are now known to occur more widely or that are now not so threatened have been termed 'RDB4' 'out of danger', although these would not then be considered to be Red Data Book species.

Below these particularly threatened and 'rare' species, two other scarcity categories are generally recognised: 'Nationally Scarce' and 'Local'. The concept of 'Nationally Scarce' (originally called Nationally Notable) species was introduced in Ball (1986). This status, based on the number of 10 kilometre squares of the Great Britain grid system in which a species occurs, is sometimes divided into two bands for some species. Band 'Na' comprises species occurring in 16 to 30 10-kilometre squares of the National Grid System whilst band 'Nb' comprises species found in 31 to 100 10-kilometre squares.

The concept of 'Local' is less well defined, but comprises species of distinctly limited or restricted distribution, with such limitations being brought about by climate controls, dependency on a scarce habitat type, host (in the case of parasitic species) or similar ecological factor.

Thus, one might now assess the quality of a site by adding up the number of Red Data Book (RDB), Nationally Scarce and Local species, although one again runs into difficulties. Is a site with one RDB species more or less important than a site with 10 Nationally Scarce species? In order to try and get round this problem, Ball (1986) proposed an 'Invertebrate Index', with points for a species assemblage awarded on the following basis:

| | |
|--|------------------------|
| RDB species (regardless of whether grade 1,2,3 or K) | 100 points per species |
| Nationally Scarce (Na) | 50 points per species |
| Nationally Scarce (Nb) | 40 points per species |
| Local | 20 points per species |
| Common species | 0 points |

The sum of these points for any one site thus generates an Invertebrate Index.

A further refinement has been to take account of the amount of recording effort for a site, using the assumption that more recording effort will, up to a point, yield more species, both common and rare. A site that is being extensively surveyed will tend to accumulate a higher and higher Index, as occasional discoveries of Local, Nationally Scarce and even RDB species pushes the score up. However, this would make it appear to be more valuable than a less well-visited site, with fewer 'scoring' species amongst a smaller overall tally. A fairer system, then, is to consider what is effectively the 'average Invertebrate Index score' per species i.e. divide the Invertebrate Index by the total number of species recorded. This is the **Species Quality Index (SQI)** and is widely used to generate a means of comparing one site with another. Any site with an SQI value of 10 or over is

likely to be of national significance, with regionally important sites perhaps scoring between 5 and 7.

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: HCr15; SCr11; SCr12


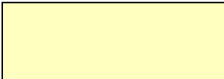


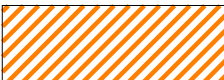
Condition and Proposed Management: Some small-scale cyclical management of scrub invasion should be undertaken, following an initial larger-scale clearance to improve the currently rather scrubby situation. This should comprise cutting out individual trees and shrubs, rather than by wholesale cutting 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.

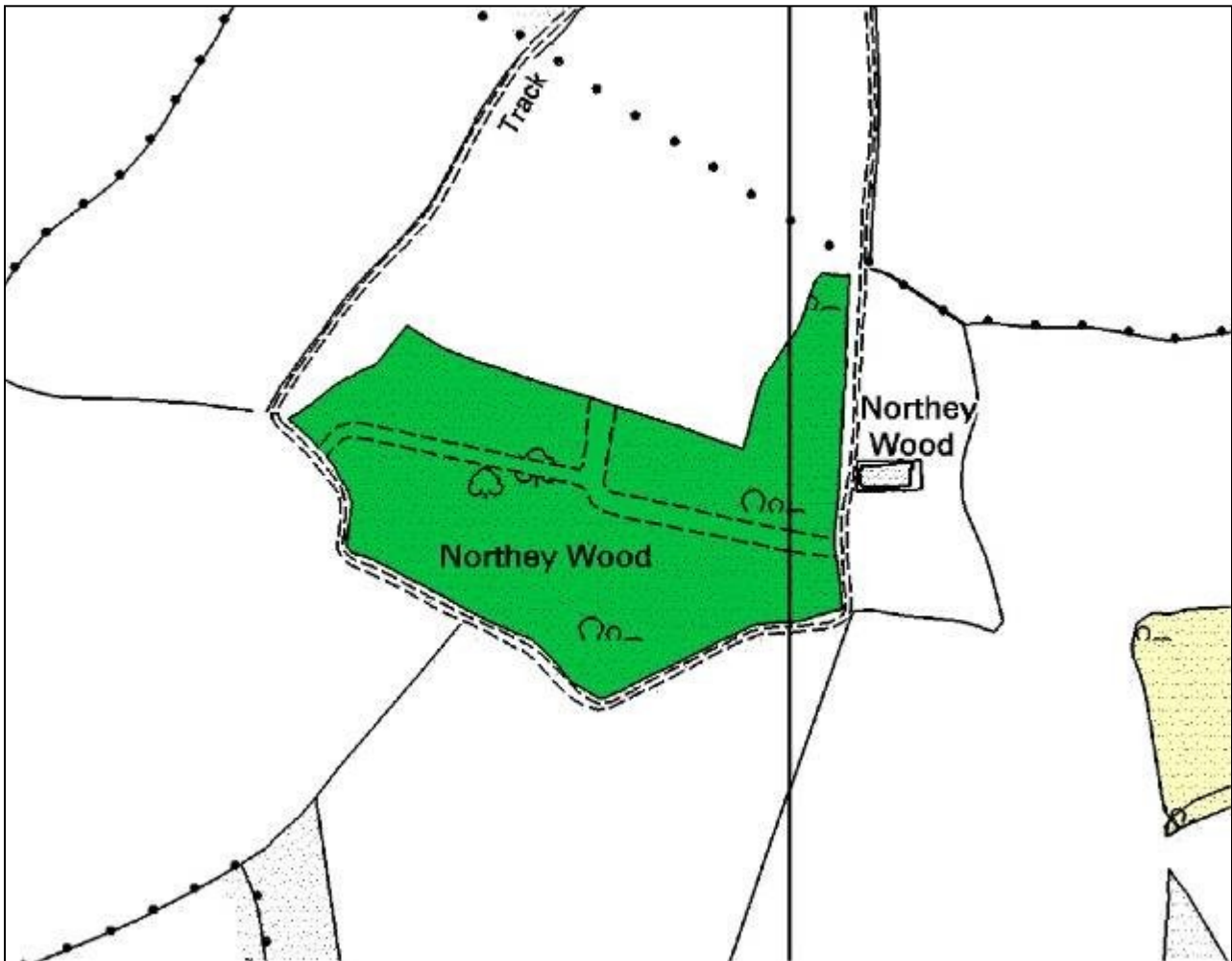
ANNEX 2

LOCAL WILDLIFE SITE REGISTER FOR WEST ANGLIA RAILWAY AND A120 CORRIDORS 2007

Note: where a plant's scientific name is followed by an asterisk (e.g. *Campanula rotundifolia**), the plant is listed on the Essex Red Data List. Further information about this Red Data List project is available via the Essex Field Club.

KEY TO MAPS

| | |
|---|------------------|
|  | Highlighted LoWS |
|  | Other LoWS |
|  | Potential LoWS |
|  | Highlighted SSSI |
|  | Other SSSI |



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Ufd59. Northey Wood (5.3 ha) TL 499296

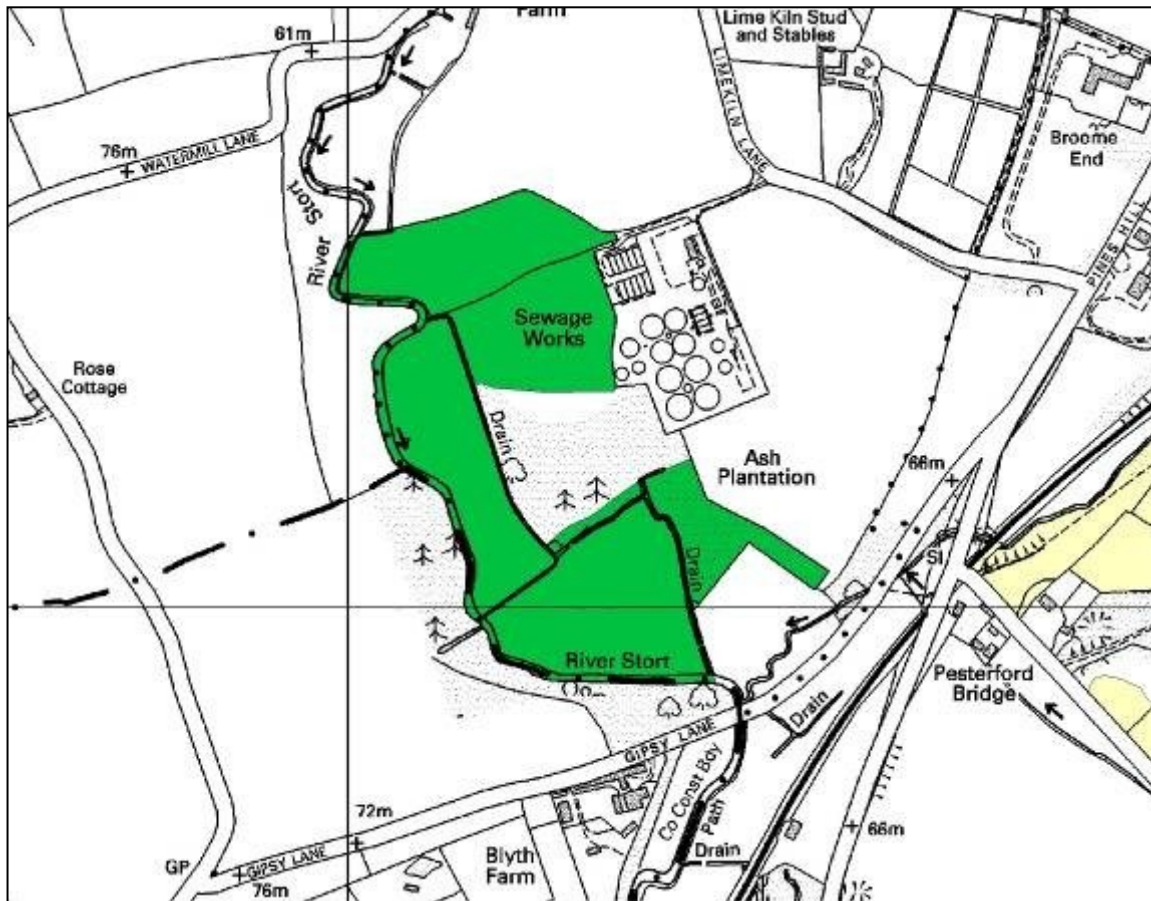
The canopy of this ancient wood is dominated by Pedunculate Oak (*Quercus robur*) and Ash (*Fraxinus excelsior*) with a stand of Hornbeam (*Carpinus betulus*) in the north-east corner. Hazel (*Corylus avellana*) is the predominant understorey species, with some Elder (*Sambucus nigra*). The typical woodland ground flora is characterised by Dog's Mercury (*Mercurialis perennis*), Bluebell (*Hyacinthoides non-scripta*) and Bramble (*Rubus fruticosus*).

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: It is assumed that this wood would traditionally have been coppiced. A resumption would benefit habitat diversity.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd63. Stansted Marsh (9.1 ha) TL 502242

This site has changed considerably since its original designation, but still supports important habitats. Many of the notable plants were not recorded during this present survey but they may survive, hidden in the tall, thick sedgebeds that have developed. The key species include: Blunt-flowered Rush (*Juncus subnodulosus**), Marsh Marigold (*Caltha palustris*), Soft Brown Sedge (*Carex disticha**), Common Sedge (*Carex nigra**), Greater Tussock-sedge (*Carex paniculata**), Water Horsetail (*Equisetum fluviatile**) (still present in good quantity), Early Marsh Orchid (*Dactylorhiza incarnata*) and Fen Bedstraw (*Galium uliginosum**).

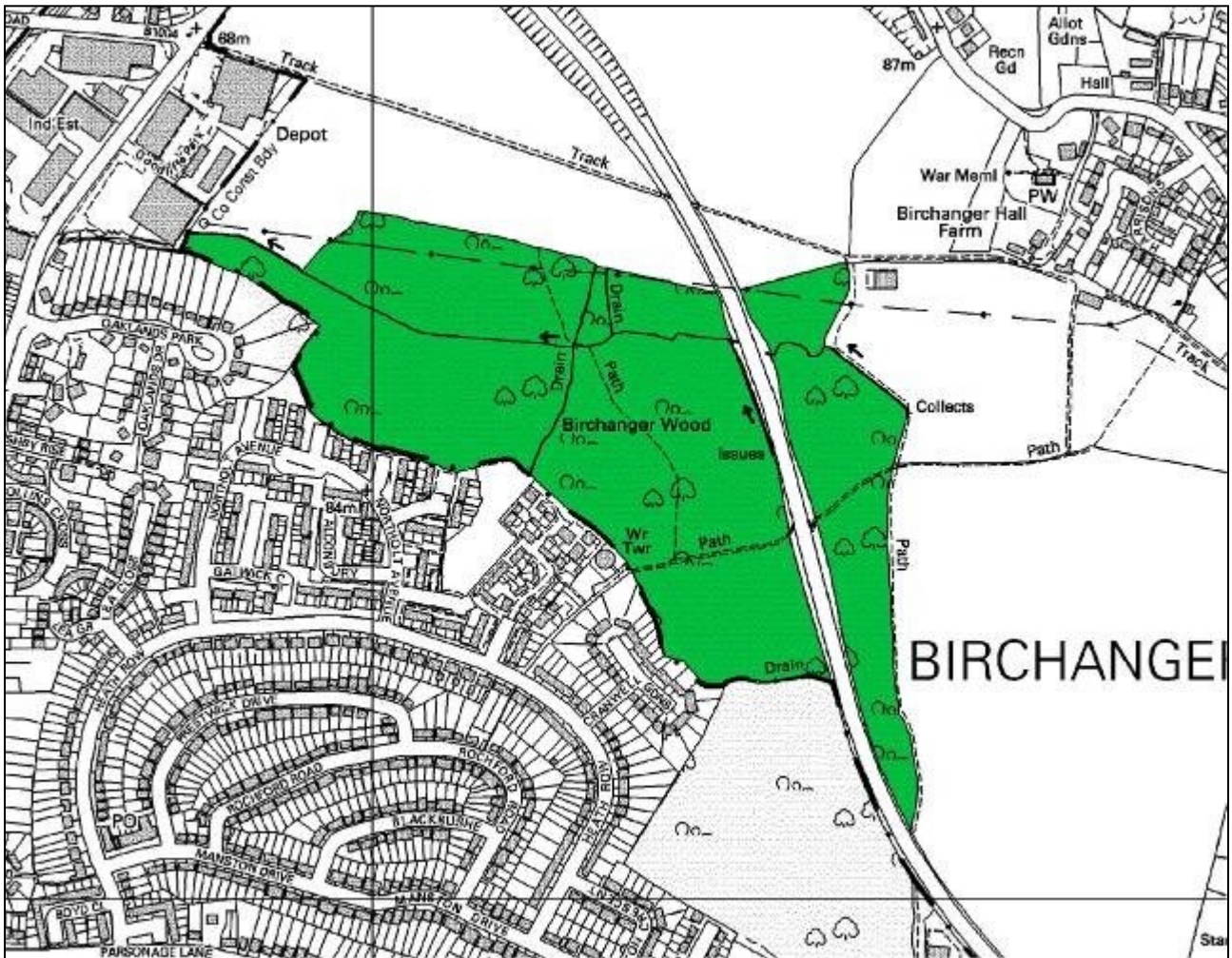
The main body of the site now comprises extensive sedgebeds, with both Lesser and Greater Pond-sedges present (*Carex acutiformis* and *C. riparia*, respectively). There are also small stands of Common Reed (*Phragmites australis*), and the tall marsh flora includes Marsh Thistle (*Cirsium palustre*), Angelica (*Angelica sylvestris*), Meadowsweet (*Filipendula ulmaria*) and Reed Canary-grass (*Phalaris arundinacea*). The northern end of the site is horse-grazed (perhaps too heavily so), but still supports a damp grassland flora that includes Amphibious Bistort (*Polygonum amphibium*) and Sharp-flowered Rush (*Juncus acutiflorus*). The site is now extended further eastwards to include an interesting area of very wet willow wood under which is further sedge, along with Yellow Flag-iris (*Iris pseudacorus*) and Red Currant (*Ribes rubrum*).

LoWS Selection Criteria: HCr5, HCr14, HCr22, HCr23, SCr15

Condition and Management Issues: Northern pasture is very heavily grazed. Maintenance of ground water regime will be important. Prevent excessive scrub growth over swamp communities.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd66. Birchanger Wood (20.3 ha) TL 503226

The majority of Birchanger Wood's canopy comprises Pedunculate Oak (*Quercus robur*) and Ash (*Fraxinus excelsior*) standards with overgrown Hornbeam (*Carpinus betulus*) coppice. To the north of the stream, Birch (*Betula* sp.) and Sycamore (*Acer pseudoplatanus*) predominate. Hazel (*Corylus avellana*) is more frequent in the extreme south-east, which may be recent secondary woodland. The ground flora is varied, though somewhat sparse in cover due to dense shading. Ancient woodland plants include Wood Anemone (*Anemone nemorosa*), Pendulous Sedge (*Carex pendula*), Remote Sedge (*Carex remota*), Pignut (*Conopodium majus*), Bluebell (*Hyacinthoides non-scripta*), Primrose (*Primula vulgaris*) and Sanicle (*Sanicula europaea**). The marshy ground bordering the stream supports Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium**), Marsh Bedstraw (*Galium palustre*) and Bog Stitchwort (*Stellaria uliginosa*).

LoWS Selection Criteria: HCr1(a), HCr2(a)

Condition and Management Issues: Control of Sycamore spread should be a high priority

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd67. Catherine Grove (4.3 ha) TL 504295

This site comprises mainly ancient woodland, with a narrow strip of recent secondary woodland along the southern margin. The main body of the wood has a high canopy of Ash (*Fraxinus excelsior*) and Pedunculate Oak (*Quercus robur*) over old coppice stools of Field Maple (*Acer campestre*) and Hazel (*Corylus avellana*). The ground flora is typified by Dog's Mercury (*Mercurialis perennis*), Bluebell (*Hyacinthoides non-scripta*) and Bramble (*Rubus fruticosus*).

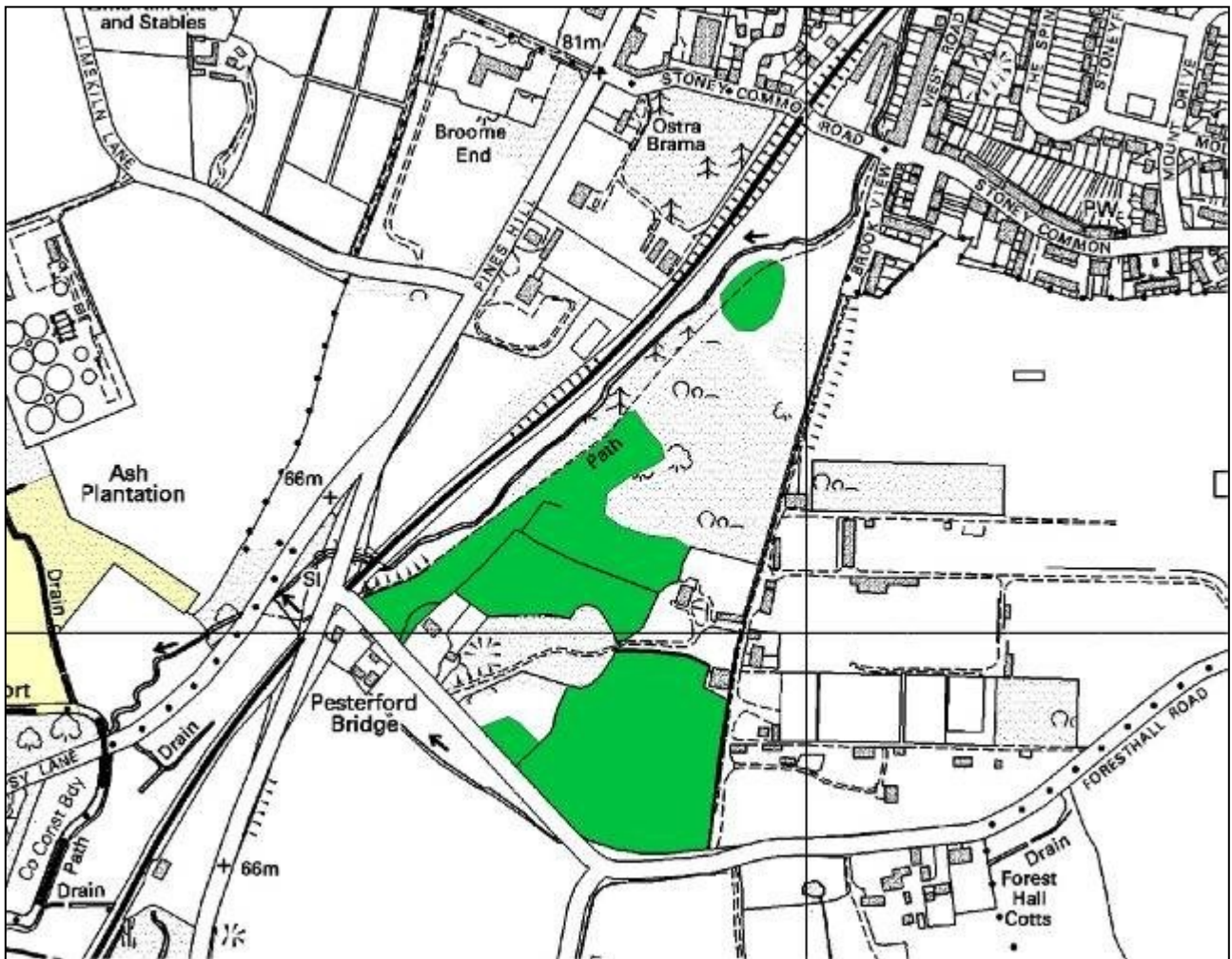
The sections of recent woodland to the south have a similar canopy composition, along with some Hornbeam (*Carpinus betulus*). The ground flora has a typical array of woodland species.

LoWS Selection Criteria: HCr1(a), HCr2(a)

Condition and Management Issues: Rather low habitat diversity and modest ground flora. Resumption of coppicing is desirable.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd69. The Mount, Stansted (5.3 ha) TL 508240

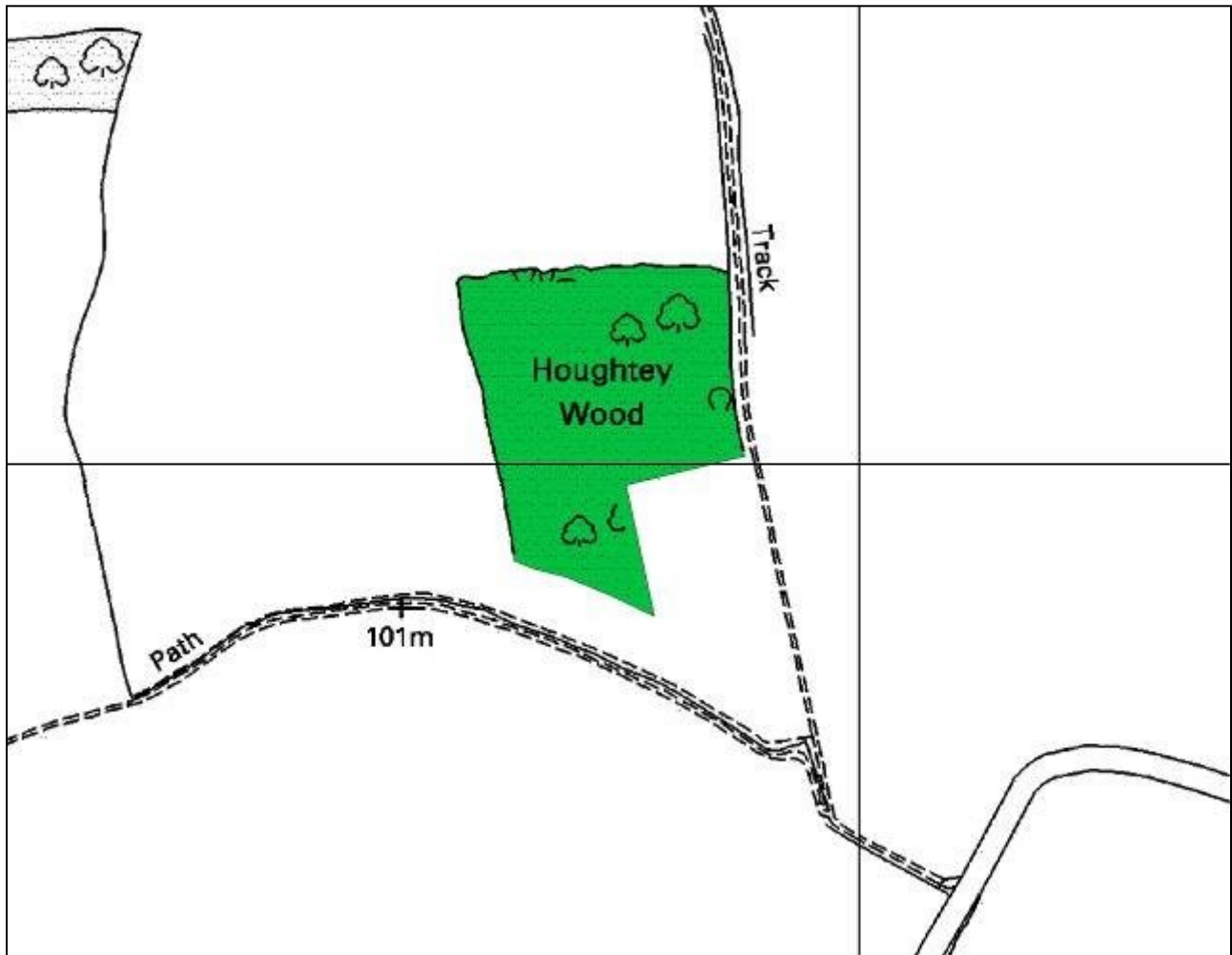
This site comprises a series of horse-grazed old grasslands adjacent to The Mount on Foresthall Road, Stansted Mountfitchet. The southern pasture has an abundance of Ox-eye Daisy (*Leucanthemum vulgare*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Crested Dog's-tail (*Cynosurus cristatus*), Yorkshire Fog (*Holcus lanatus*) and Meadow Buttercup (*Ranunculus acris*). Species of note include Restharrow (*Ononis repens*), Salad Burnet (*Sanguisorba minor**), Cowslip (*Primula veris*) and Lady's Bedstraw (*Galium verum*). The westernmost area of grassland is in danger of being engulfed by scrub and is not currently grazed. It has a dry, almost acid grassland sward in which Mouse-ear Hawkweed (*Pilosella officinarum*) and Musk Mallow (*Malva moschata*) are prominent. The separate northern grassland comprises a low sward amongst which Salad Burnet (*Sanguisorba minor**), Meadow Saxifrage (*Saxifraga granulata**), Cowslip (*Primula veris*), Pepper Saxifrage (*Silaum silaus**) and Restharrow have been recorded, although none of these species was evident during 2007. Nevertheless, this fragment of old grassland should be conserved and enhanced by pushing back the boundaries of the advancing Bramble scrub.

LoWS Selection Criteria: HCr10

Condition and Management Issues: Scrub encroachment, particularly along the north-west and northern sections is a serious issue that will need addressing with some urgency. Light grazing by horses should help maintain a diverse sward, although over-grazing would be detrimental.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd70. Houghtey Wood (2.7 ha) TL 508270

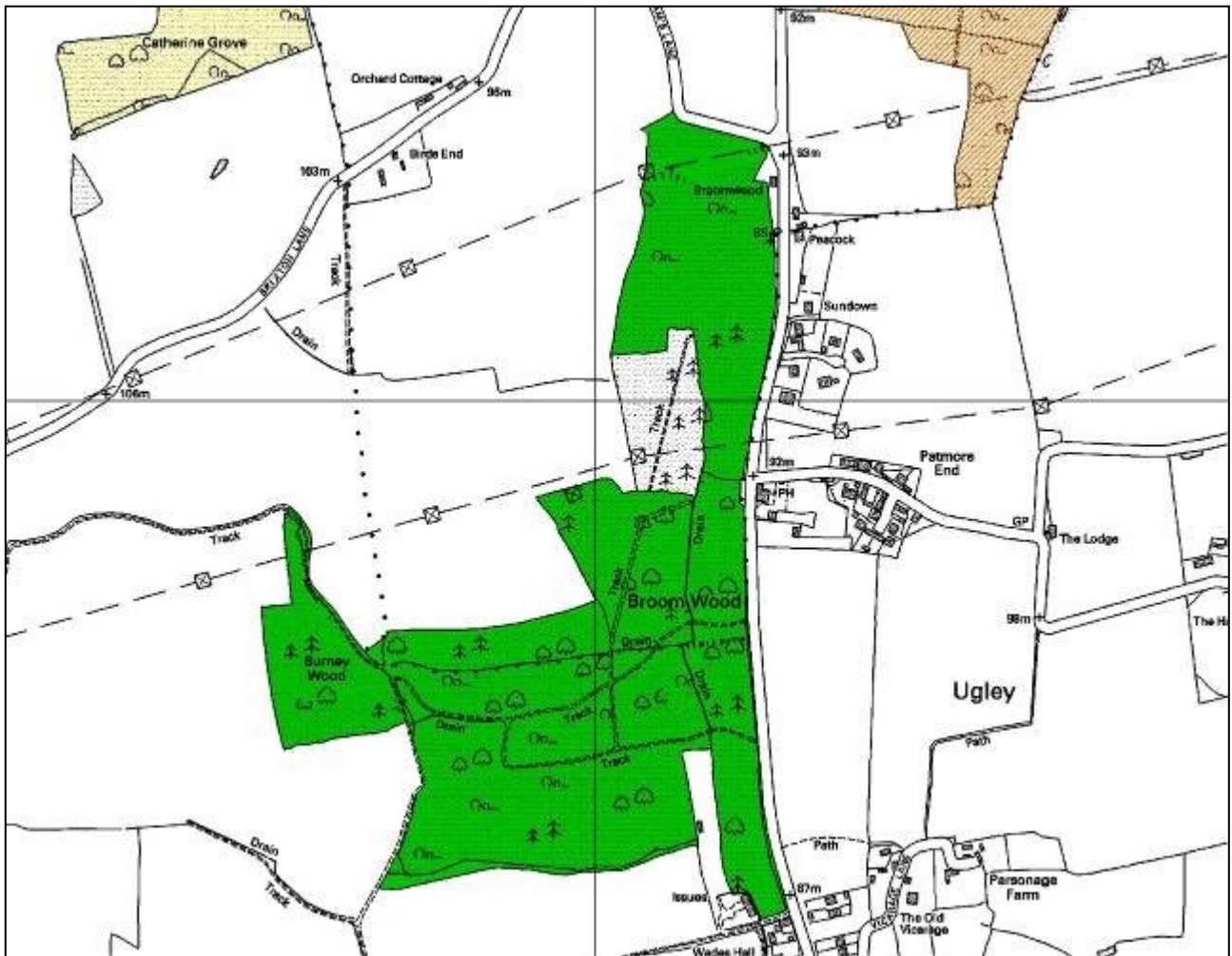
The structure of this ancient wood is overgrown coppice-with-standards, with Ash (*Fraxinus excelsior*) forming much of the canopy as multi-stemmed trees. Other trees present in lesser quantities include Field Maple (*Acer campestre*), Hornbeam (*Carpinus betulus*), Pedunculate Oak (*Quercus robur*) and Elm (*Ulmus sp.*). There is some Hazel coppice in the south-western corner. The ground flora is locally dominated by Bramble (*Rubus fruticosus*) with frequent Enchanter's Nightshade (*Circaea lutetiana*), Bluebell (*Hyacinthoides non-scripta*), Ground-ivy (*Glechoma hederacea*) and Wood Sedge (*Carex sylvatica*). Oxlip (*Primula elatior**) is also present.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: Resumption of coppicing is desirable.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd72. Broom/Burney Woods (34.6 ha) TL 510284

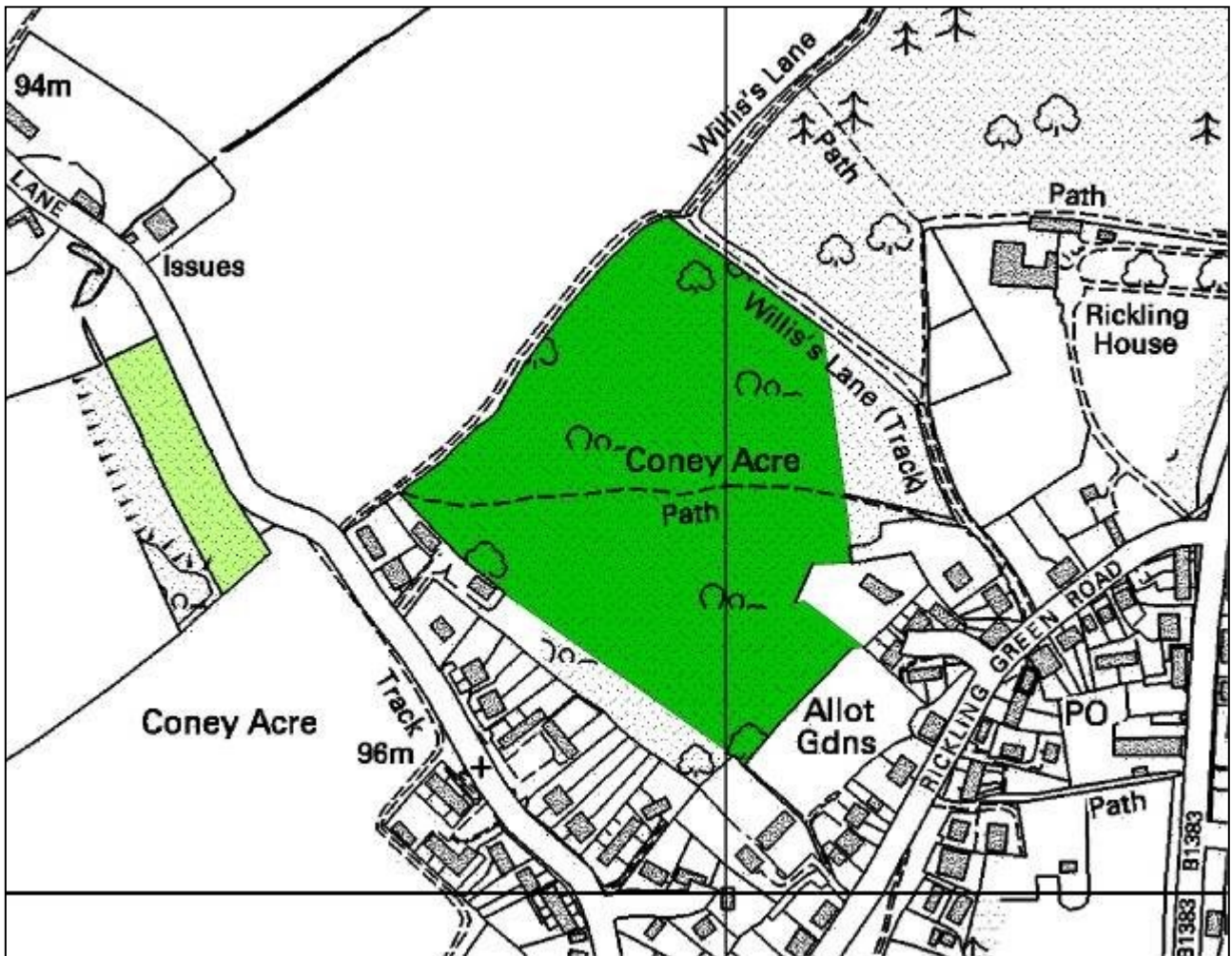
This large complex of ancient woodland has been extensively replanted with conifers and Beech (*Fagus sylvatica*) with scattered standards of Pedunculate Oak (*Quercus robur*). On the south and west boundaries, relic stands of overgrown Ash (*Fraxinus excelsior*) and Hornbeam (*Carpinus betulus*) coppice still survive. The ground flora includes good quantities of Creeping Soft-grass (*Holcus mollis*), Bluebell (*Hyacinthoides non-scripta*), Hairy St. John's-wort (*Hypericum hirsutum*), Dog's Mercury (*Mercurialis perennis*), Bramble (*Rubus fruticosus*) and Remote Sedge (*Carex remota*). The ground flora would be improved by replacing the planted trees with a native semi-natural cover, which would greatly increase the wildlife value of this large woodland complex.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: Rather poor condition on account of coniferisation. Reversion to a semi-natural broadleaved canopy should be a high priority.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd73. Coney Acre (5.6 ha) TL 510302

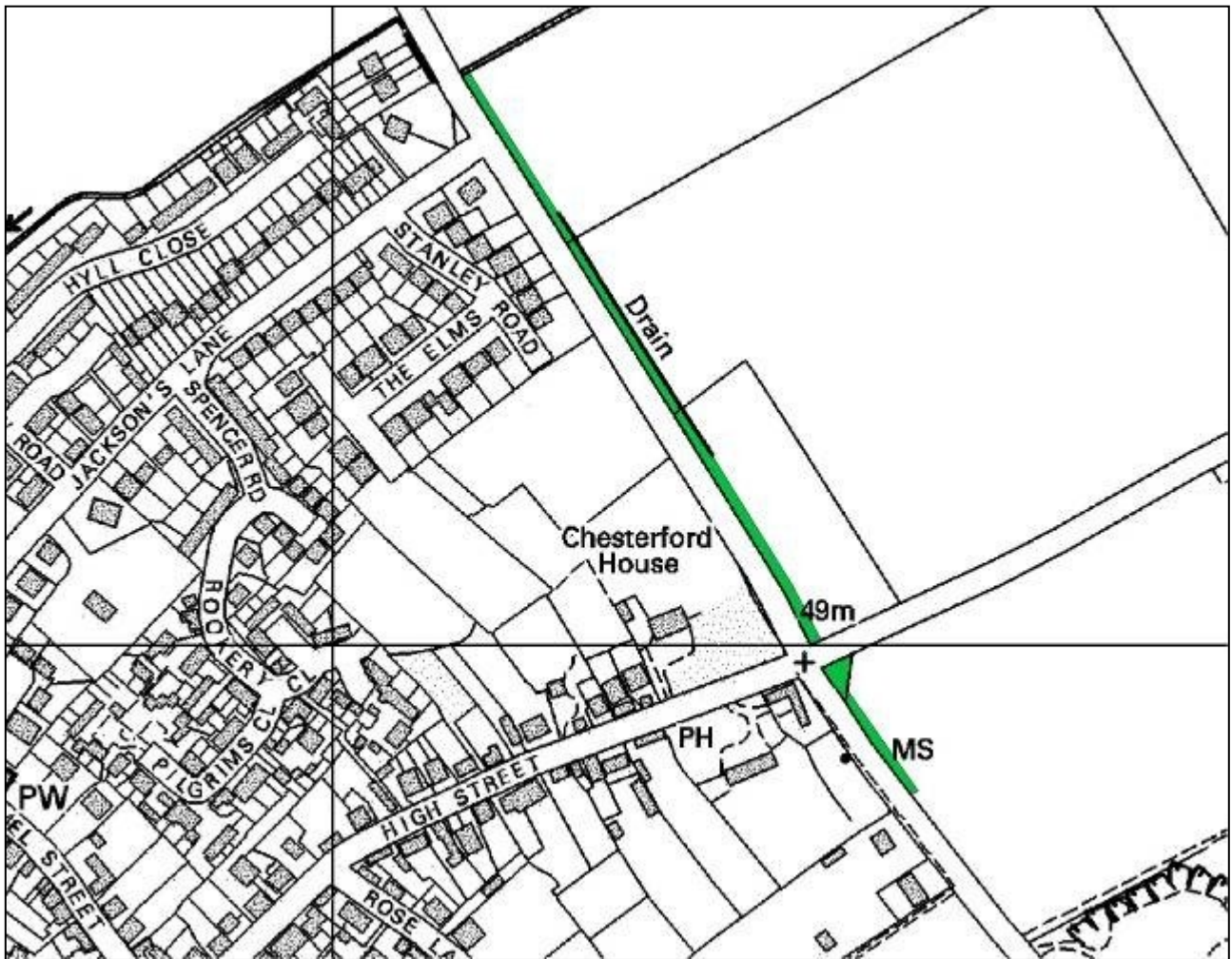
The extent of ancient woodland here has been significantly over-estimated on the Ancient Woodland Inventory, and the boundary of this site has now been revised accordingly. A narrow strip of ancient wood has been cleared along the southern boundary and this has been removed from the Site. Hornbeam (*Carpinus betulus*) coppice dominates most of Coney Acre, with tall Pedunculate Oak (*Quercus robur*) overshadowing in places as a high canopy, whilst Sycamore (*Acer pseudoplatanus*) and Field Maple (*Acer campestre*) form a sub-canopy. Hazel (*Corylus avellana*) is found throughout as a well developed shrub layer. The ground flora comprises areas of extensive Bramble (*Rubus fruticosus*) and Bluebell (*Hyacinthoides non-scripta*).

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: Sycamore invasion is a problem and needs tackling.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd74. Great Chesterford Road Verge (0.15 ha) TL 51084335 to TL 51344293

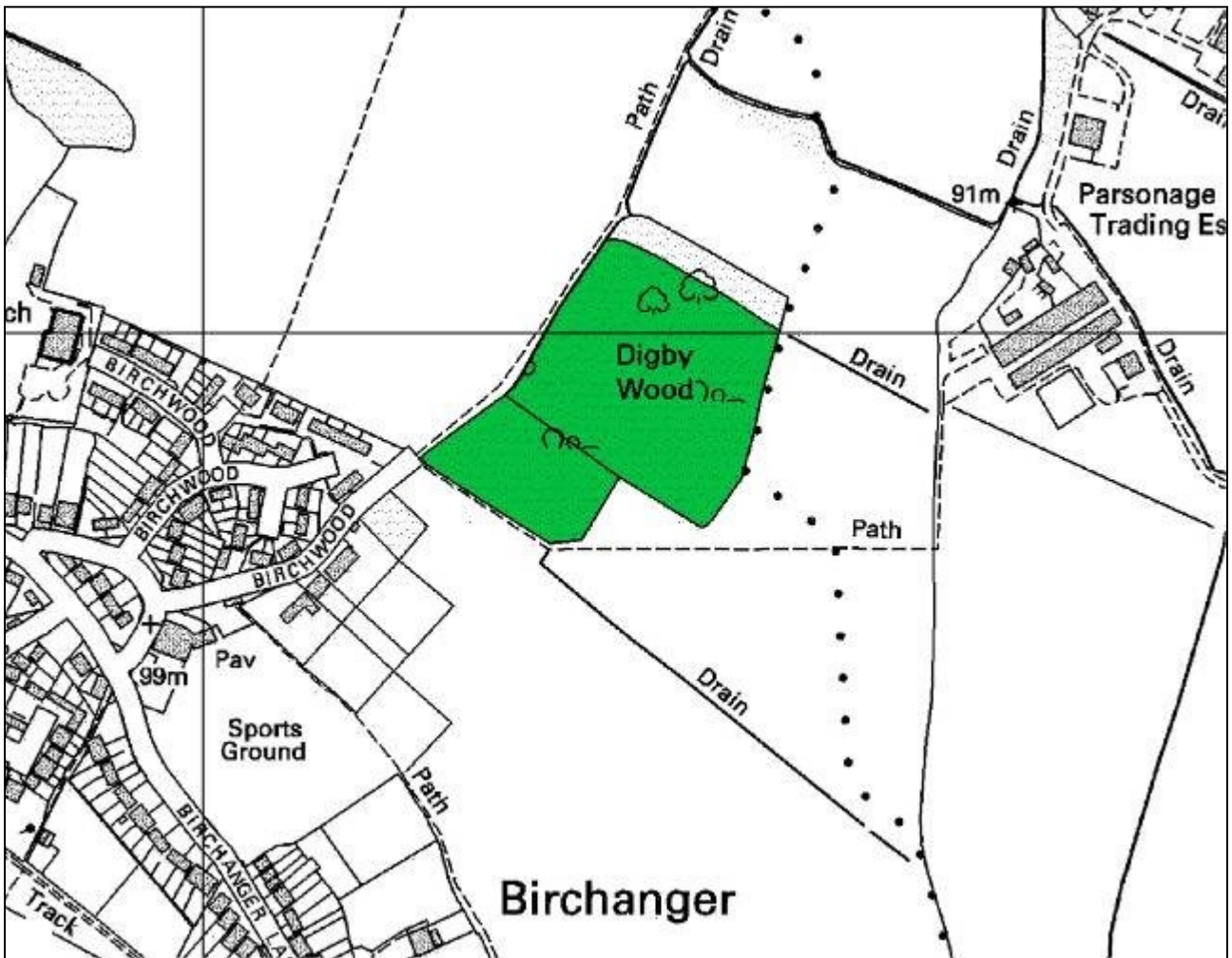
This site comprises the northernmost section of Essex County Council Protected Road Verge UTT24a. It retains a chalk grassland flora that includes Greater Knapweed (*Centaurea scabiosa**), wild Basil (*Clinopodium vulgare*), Field Scabious (*Knautia arvensis*), Burnet-saxifrage (*Pimpinella saxifraga*), Bladder Champion (*Silene vulgaris*) and Hoary Plantain (*Plantago media*). The flora also includes Common Star-of-Bethlehem (*Ornithogalum angustifolium**).

LoWS Selection Criteria: SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd75. Digby Wood (3.1 ha) TL 512229

This ancient wood is dominated by overgrown Hornbeam (*Carpinus betulus*) coppice with young standards of Birch (*Betula sp.*) and old Pedunculate Oak (*Quercus robur*) on the boundary. Dense shading suppresses the ground flora, which is typified by Bluebell (*Hyacinthoides non-scripta*) and Bramble (*Rubus fruticosus*) but also includes Pignut (*Conopodium majus*), Goldilocks buttercup (*Ranunculus auricomus*) and Lesser Celandine (*Ranunculus ficaria*).

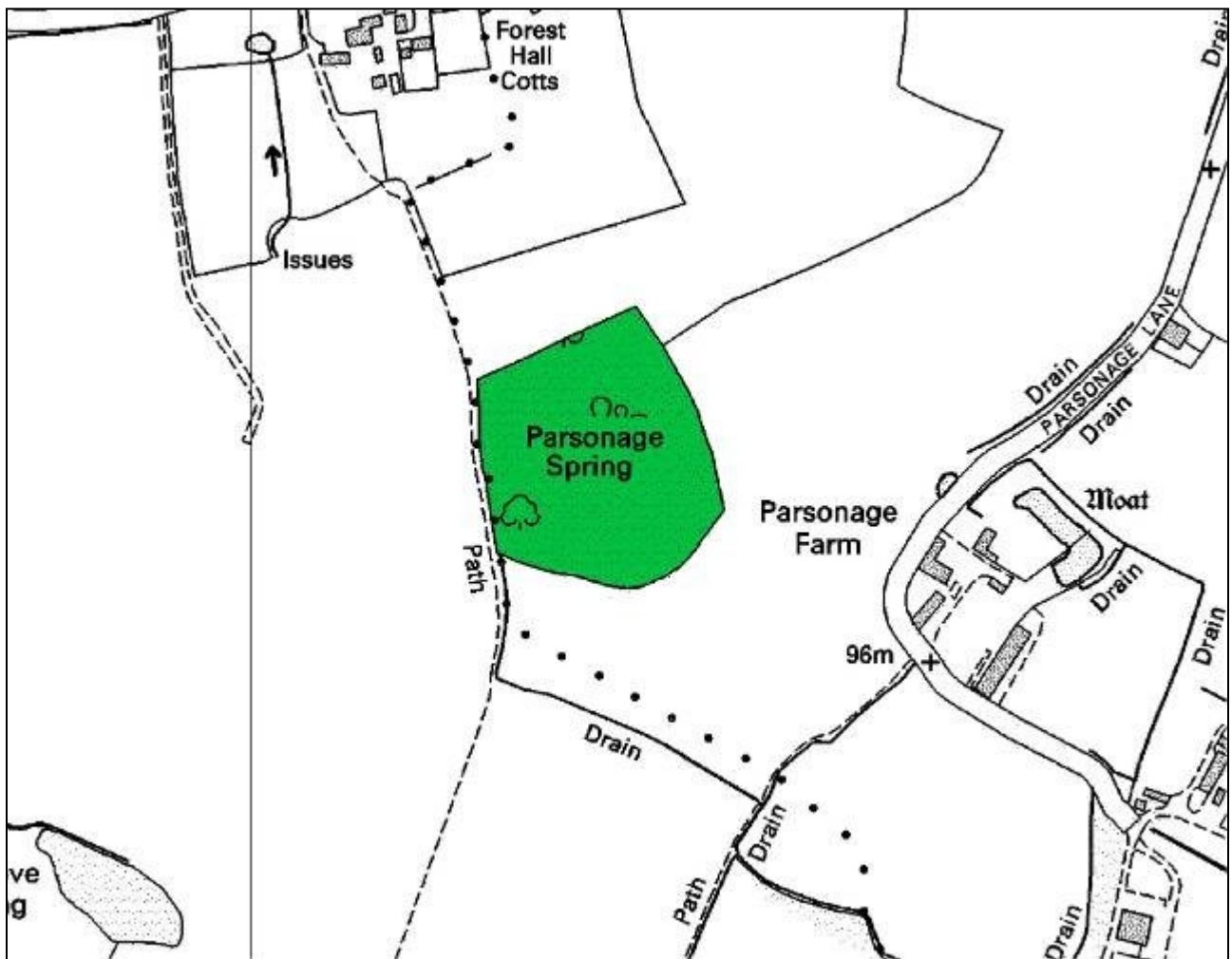
The narrow strip of wood along the northern border (currently excluded from the Wildlife Site) has abundant Sycamore but this does not yet seem to be invading the ancient wood. Management of this strip to replace the Sycamore with a semi-natural native canopy could allow this strip to be added to the Wildlife Site in the future.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The ground flora is rather limited by dense shade of overgrown Hornbeam. A resumption of coppicing would be desirable.

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Ufd76. Parsonage Spring (2.6 ha) TL 512235

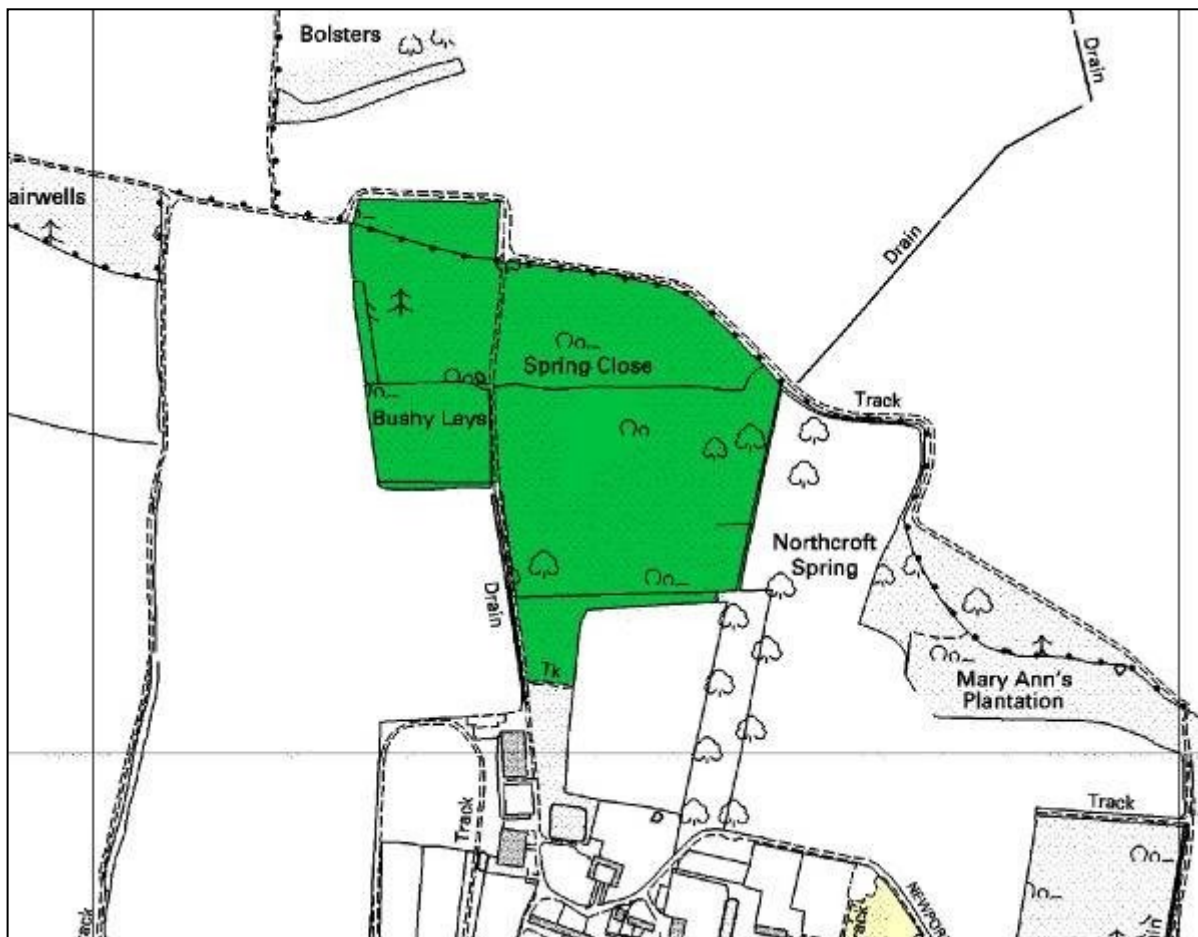
The majority of this ancient wood was felled in the early 1990s and is now regenerating as a scrubby Hornbeam (*Carpinus betulus*) coppice amongst abundant Bramble (*Rubus fruticosus* agg.). The original canopy comprised Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*) and Hornbeam. The ground flora has frequent Bluebell (*Hyacinthoides non-scripta*) amongst Bramble (*Rubus fruticosus*).

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: Needs time to mature from previous felling and replanting.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd77. Bushy Lays/Spring Close (10.6 ha) TL 514323

Although not recorded as being ancient, Bushy Lays provides a valuable extension to its larger, ancient neighbour Spring Close, having a mature structure and varied flora. The canopy comprises neglected Ash (*Fraxinus excelsior*) coppice with occasional standards of Ash and Pedunculate Oak (*Quercus robur*). Within the understorey is a lesser quantity of Hornbeam (*Carpinus betulus*), Field Maple (*Acer campestre*) and Hazel (*Corylus avellana*) coppice. The ground flora includes Bluebell (*Hyacinthoides non-scripta*), Sanicle (*Sanicula europaea**) and Herb Paris (*Paris quadrifolia**)

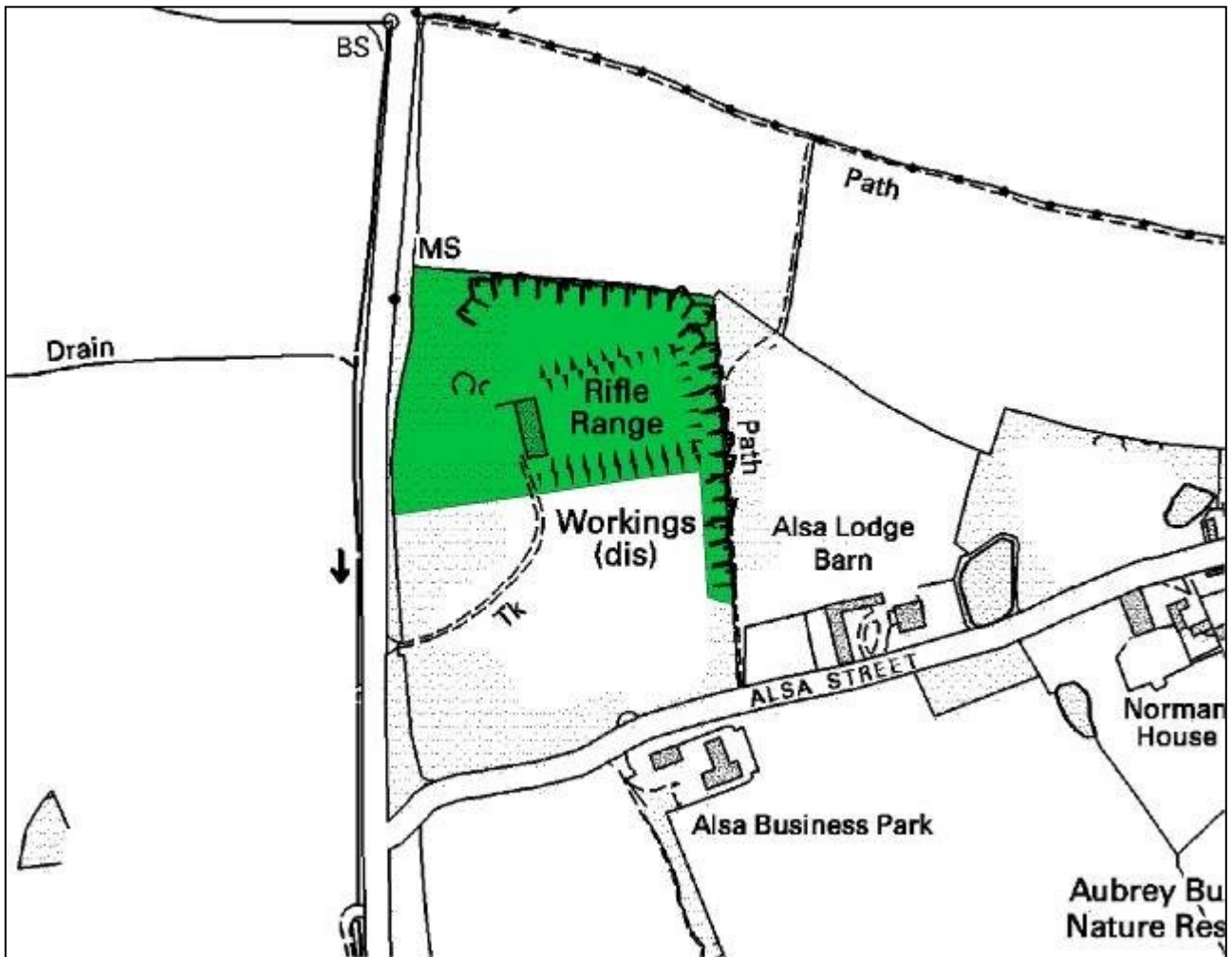
The canopy of Spring Close includes areas of Ash (*Fraxinus excelsior*) coppice, Pedunculate Oak (*Quercus robur*) standards and to a lesser extent Sycamore (*Acer pseudoplatanus*), Beech (*Fagus sylvatica*) and some conifers. Elder (*Sambucus nigra*), Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*) form the shrub layer. A relatively sparse ground flora includes Oxlip (*Primula elatior**), Common Twayblade (*Listera ovata**), Wood False Brome (*Brachypodium sylvaticum*), Bluebell (*Hyacinthoides non-scripta*) and Dog's Mercury (*Mercurialis perennis*).

LoWS Selection Criteria: HCr1(a), HCr2(a)

Condition and Management Issues: It would be desirable to revert the southern area of plantation to semi-natural broadleaved cover and to control the invasion of Sycamore.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd78. Als Lodge Pit (2.8 ha) TL 515264

This disused sand pit has an important invertebrate fauna, which includes the only British record for the Tachinid fly *Clytiomya continua*. Eleven other Essex Red Data List species have been recorded, including 6 species under threat in Essex and four regionally important species. As with many former sand pits, the assemblage of solitary bees and wasps is a significant part of the invertebrate fauna, with key species including the mining bees *Lasioglossum xanthopus*, *Andrena tibialis*, *Sphecodes ferruginatus* and *Sphecodes crassus*, all Nationally Scarce species. The steep cliffs and banks around the rifle range remain the most important habitat for these species.

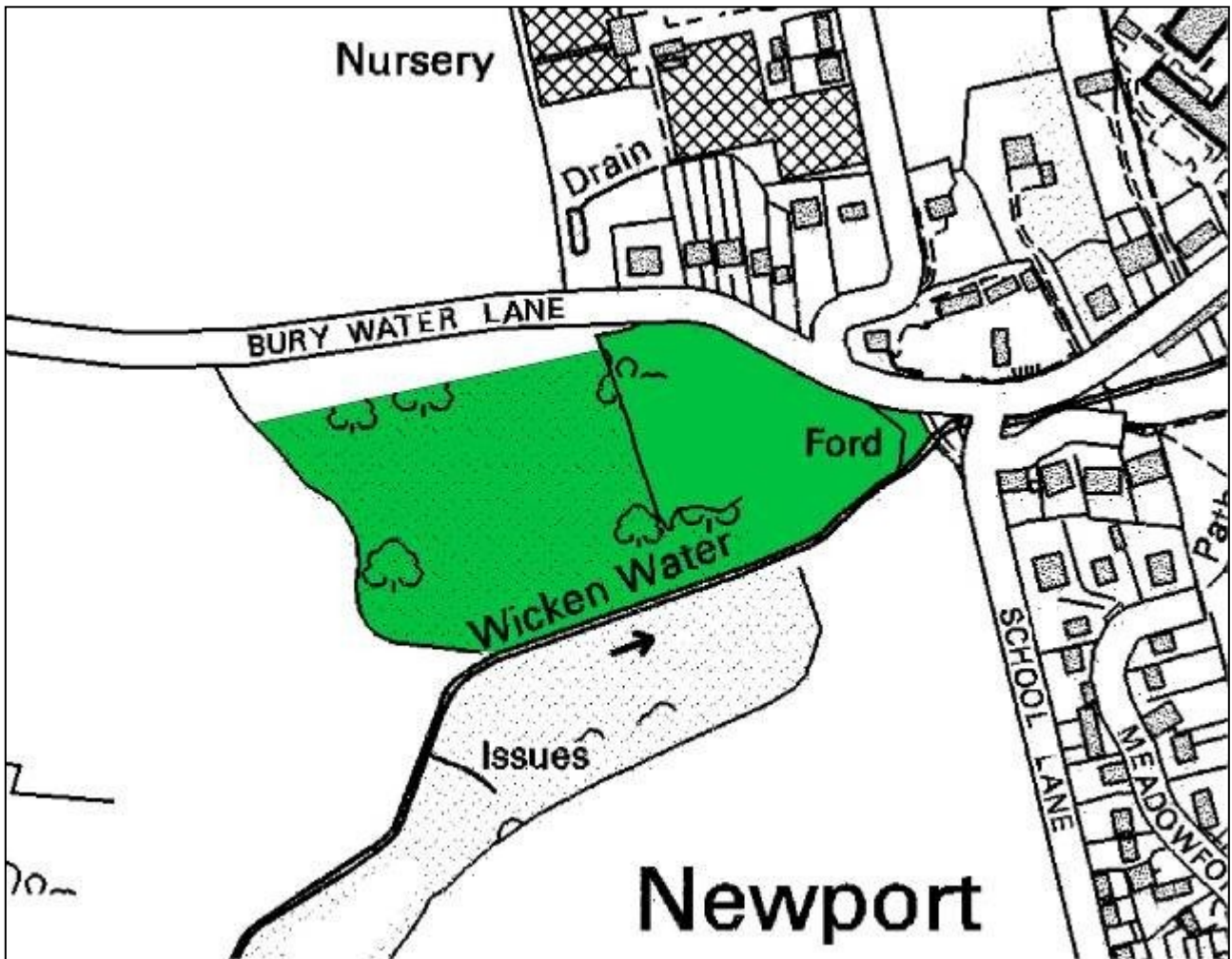
The southern section of the pit is undergoing development in 2007, but it is hoped that the landscaping around the central building will be sympathetic to the invertebrate interest of the site, which might allow for the Local Wildlife Site boundary to be extended in the future.

LoWS Selection Criteria: HCr20, SCr14

Condition and Management Issues: The southern part of this pit has been lost to commercial development. The northern area must be seen as under threat, similarly. Scrub encroachment should be controlled. Limited, light disturbance may be beneficial in maintaining areas of sparsely vegetated ground, for invertebrates.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd79. Wicken Water Marsh (2.8 ha) TL 516342

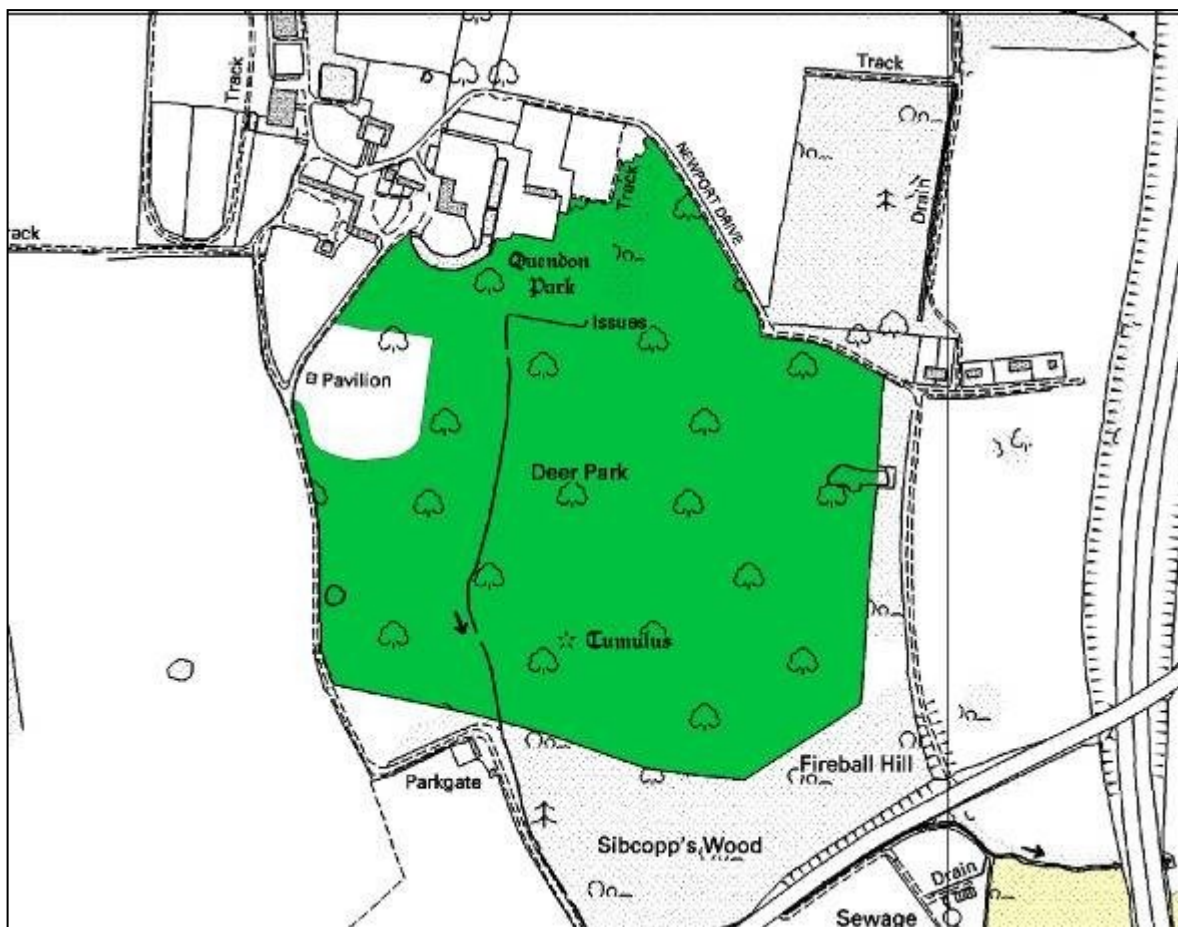
The eastern section of this site comprises a dense Reed (*Phragmites australis*)-bed, surrounded by largely willow scrub. The western section comprises an overgrown Osier (*Salix viminalis*) bed, with overgrown scrub of Crack willow (*Salix fragilis*), Grey Willow (*Salix cinerea*) and Goat Willow (*Salix caprea*). Reedbed and wet woodland are both Biodiversity Action Plan habitats.

LoWS Selection Criteria: HCr5, HCr22

Condition and Management Issues: Whilst willow scrub is one of the important habitats here, it should not be allowed to spread at the expense of the open reedbed. Coppicing the willow scrub would add to the habitat diversity.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd80. Quendon Park (21.3 ha) TL 517314

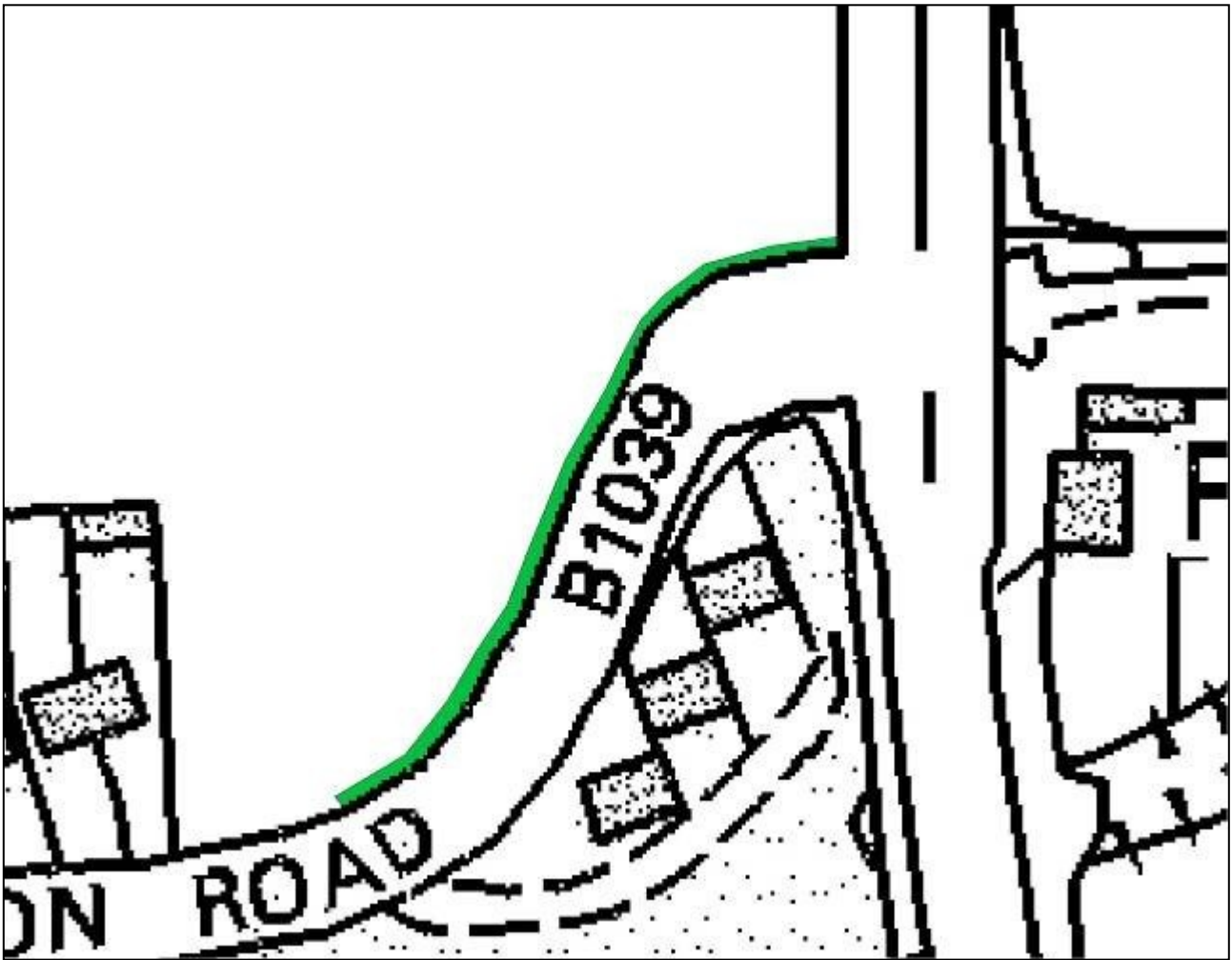
The grasslands of Quendon Deer Park have a floristically rich sward, forming one of the largest sites of this type within the district. The diverse grass mix includes Bent-grasses (*Agrostis* sp.), Meadow Foxtail (*Alopecurus pratensis*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Red Fescue (*Festuca rubra*), Crested Dog's-tail (*Cynosurus cristatus*), Meadow Barley (*Hordeum secalinum*), Yellow Oat-grass (*Trisetum flavescens*) and Yorkshire Fog (*Holcus lanatus*). The presence of scattered Quaking Grass (*Briza media**) is notable. A great variety of herbs is also to be found, including Harebell (*Campanula rotundifolia**), Lady's Bedstraw (*Galium verum*), Pignut (*Conopodium majus*), Large Thyme (*Thymus pulegioides**), Stemless Thistle (*Cirsium acaule**), Autumn Hawkbit (*Leontodon autumnalis*) and Mouse-ear Hawkweed (*Pilosella officinarum*).

LoWS Selection Criteria: HCr3, HCr10, SCr15

Condition and Management Issues: Maintenance of an appropriate grazing regime is of importance for this old grassland.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd81. Wendens Ambo Station Road Protected Roadside Verge UTT38 (0.02 ha) TL 518365 to TL 519365

The flora of this section of road verge includes Lesser Calamint (*Clinopodium calamintha**) and Harebell (*Campanula rotundifolia**), a scarce plant in Essex, with both species being listed in the Essex Red Data plant list. Other species of interest include Wild Basil (*Clinopodium vulgare*), and Marjoram (*Origanum vulgare**).

LoWS Selection Criteria: SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend. This verge is becoming taken over by tall, rank grasses, indicating that a more intense management regime may be needed. Areas with Lesser Calamint need to be cut with scissor-action machinery, rather than rotary mowers which tend to pull out the shallow-rooted plants.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd82. Little Chesterford Verges (0.33 ha) TL 519418 to TL 520406

These three sections of road verge comprise part of an Essex County Council protected Roadside Verge UTT24b. They support an important chalk grassland flora, which includes Wild Liquorice (*Astragalus glycyphyllos**), Small Scabious (*Scabiosa columbaria*), Greater Knapweed (*Centaurea scabiosa**), Wild Basil (*Clinopodium vulgare*), Lady's Bedstraw (*Galium verum*), Restharrow (*Ononis repens*), Common Broomrape (*Orobanche minor**) and Hoary Plantain (*Plantago media*).

The northernmost section includes grassland recreated on the route of the former road, which was diverted when the Chesterford Park access road roundabout was constructed. The soil came from the section of verge disrupted by this road realignment. The northernmost section of the current road verge, reprofiled during the recent junction improvement works, supports a large population of the Essex Red Data Listed Hawkweed Ox-tongue (*Picris hieracioides**), along with a few plants of Wild Liquorice, and frequent Red Bartsia (*Odontites vernus*).

LoWS Selection Criteria: HCr15, SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

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Date of last revision: 30/09/2007



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Ufd85. Aubrey Buxton Reserve (9.1 ha) TL 521262

This reserve is a complex of copses, grassland and numerous ponds that attracts a wide variety of wildlife. The population of butterflies and moths is very diverse. The flora includes woodland plants such as Remote Sedge (*Carex remota*), Pendulous Sedge (*Carex pendula*), Bluebell (*Hyacinthoides non-scripta*) and Wood speedwell (*Veronica montana*). The grassland flora includes Marsh Marigold (*Caltha palustris*), Adder's-tongue Fern (*Ophioglossum vulgatum**), Pignut (*Conopodium majus*), Common Spotted Orchid (*Dactylorhiza fuchsii*), Hoary Plantain (*Plantago media*) and Cowslip (*Primula veris*). Great Crested Newts and Grass Snake have been recorded.

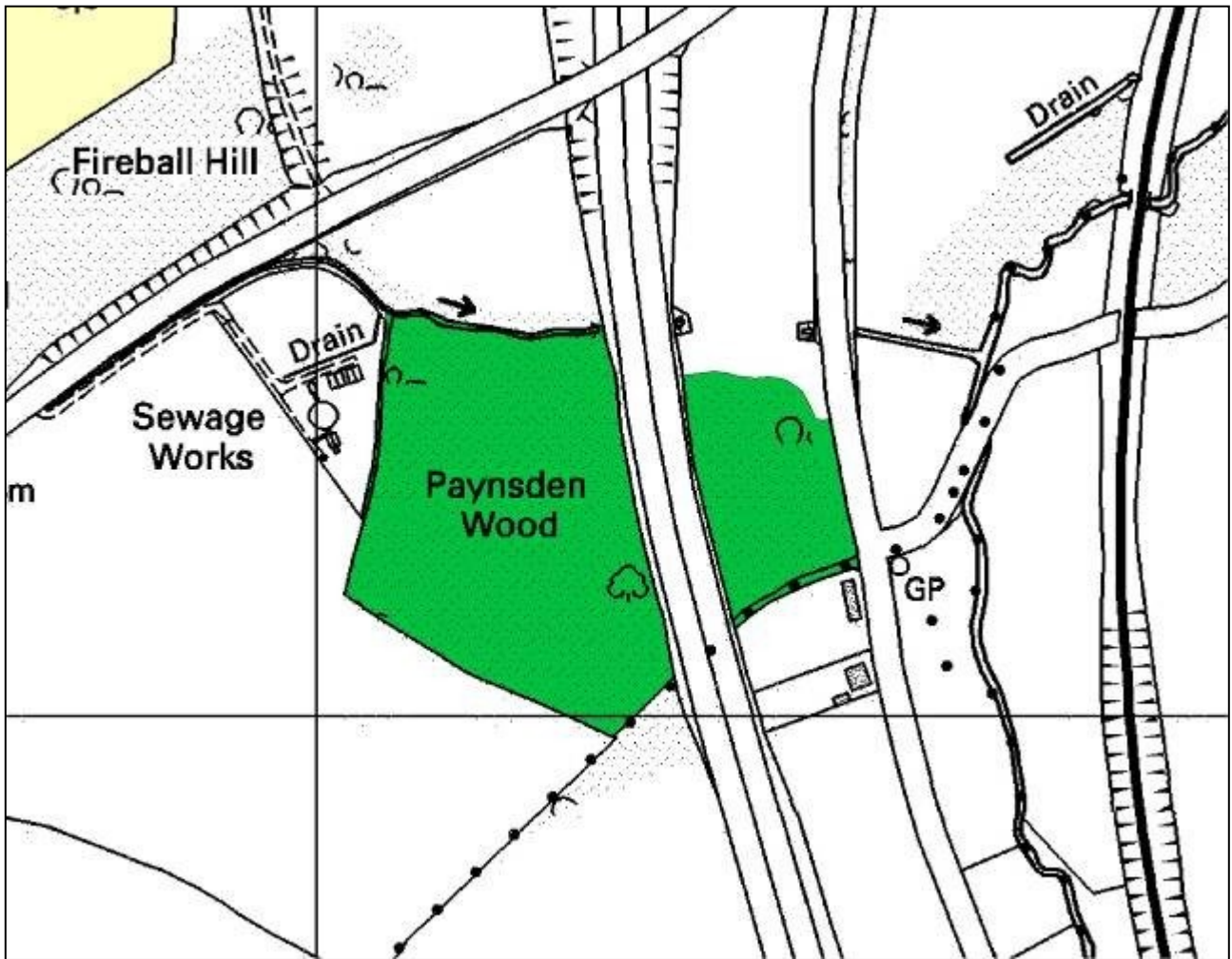
There is diverse interest in the invertebrate assemblage, including Svensson's Copper Underwing at one of its few Essex locations, the Nationally Scarce hoverfly *Eumerus ornatus* (status: threatened in Essex) and several Nationally scarce and Essex Red Data list spiders.

LoWS Selection Criteria: HCr2(c), HCr11, SCr14

Condition and Management Issues: Maintenance of a habitat mosaic is desirable.

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Ufd87. Paynsden Wood (4.0 ha) TL 522311

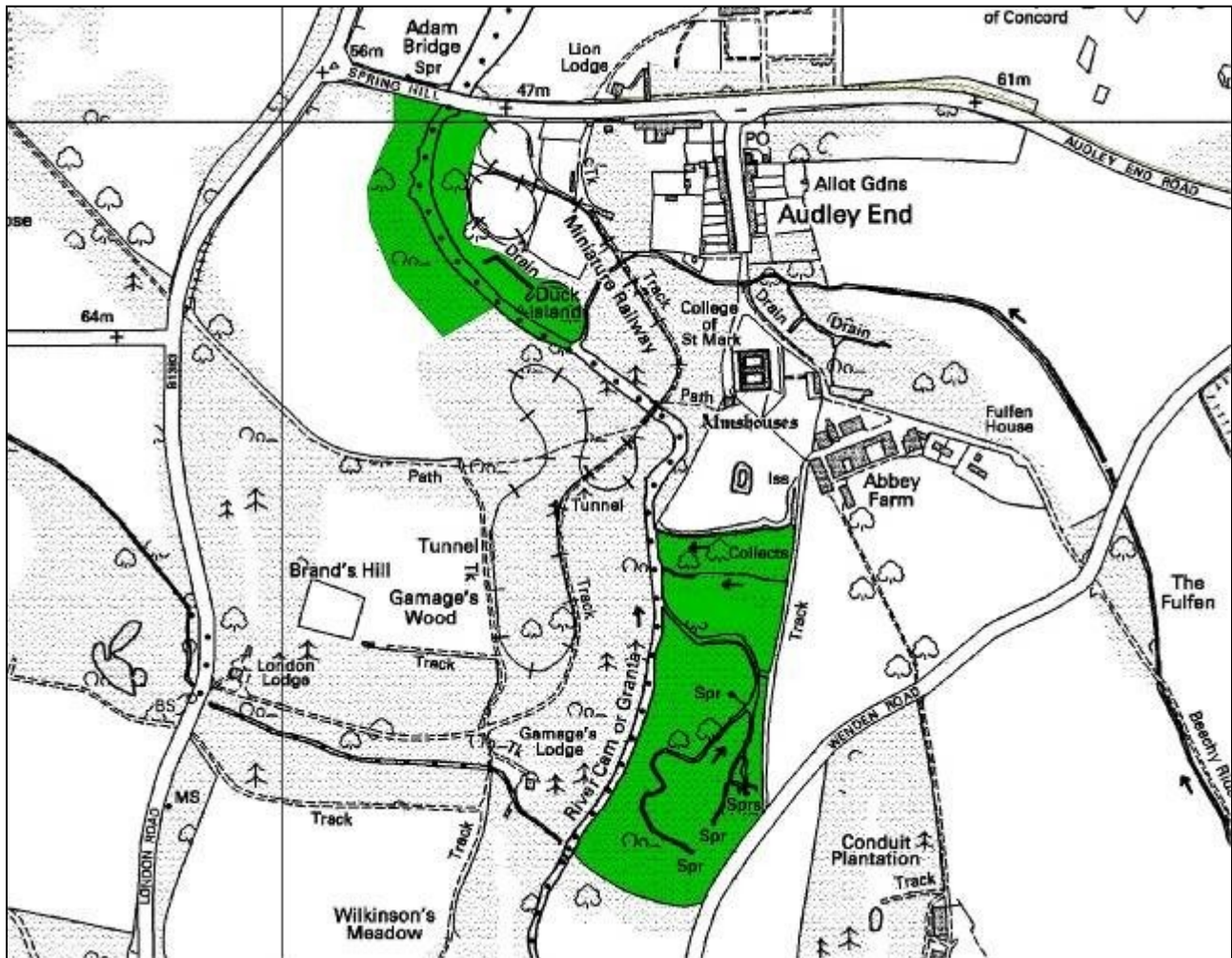
This wood is bisected by the M11 motorway. The canopy is composed of overgrown Ash (*Fraxinus excelsior*) coppice with only scattered Pedunculate Oak (*Quercus robur*) standards. Other canopy/sub-canopy trees include Birch (*Betula sp.*), Hornbeam (*Carpinus betulus*), Poplar (*Populus sp.*) and some invading Sycamore (*Acer pseudoplatanus*). The shrub layer includes Hazel (*Corylus avellana*), Dogwood (*Cornus sanguinea*), Spindle Tree (*Euonymus europaeus*) and Blackthorn (*Prunus spinosa*). The ground flora is characterised by patches of Dog's Mercury (*Mercurialis perennis*), Bluebell (*Hyacinthoides non-scripta*) and Bramble (*Rubus fruticosus*), along with lesser quantities of Wood Anemone (*Anemone nemorosa*) and Oxlip (*Primula elatior**) amongst a typical woodland flora.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The overgrown coppice would benefit from being re-cut. Sycamore should be controlled before it becomes too well established.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd88. River Cam Wet Woods (8.1 ha) TL 522379

This site consists of two main blocks of tall swamp, sedgebed and willow plantation either side of the River Cam adjacent to Audley Park, forming a rare and declining Essex habitat. These habitat conditions also surround this Site in more diffuse form, with these two identified blocks forming the core of good quality habitat.

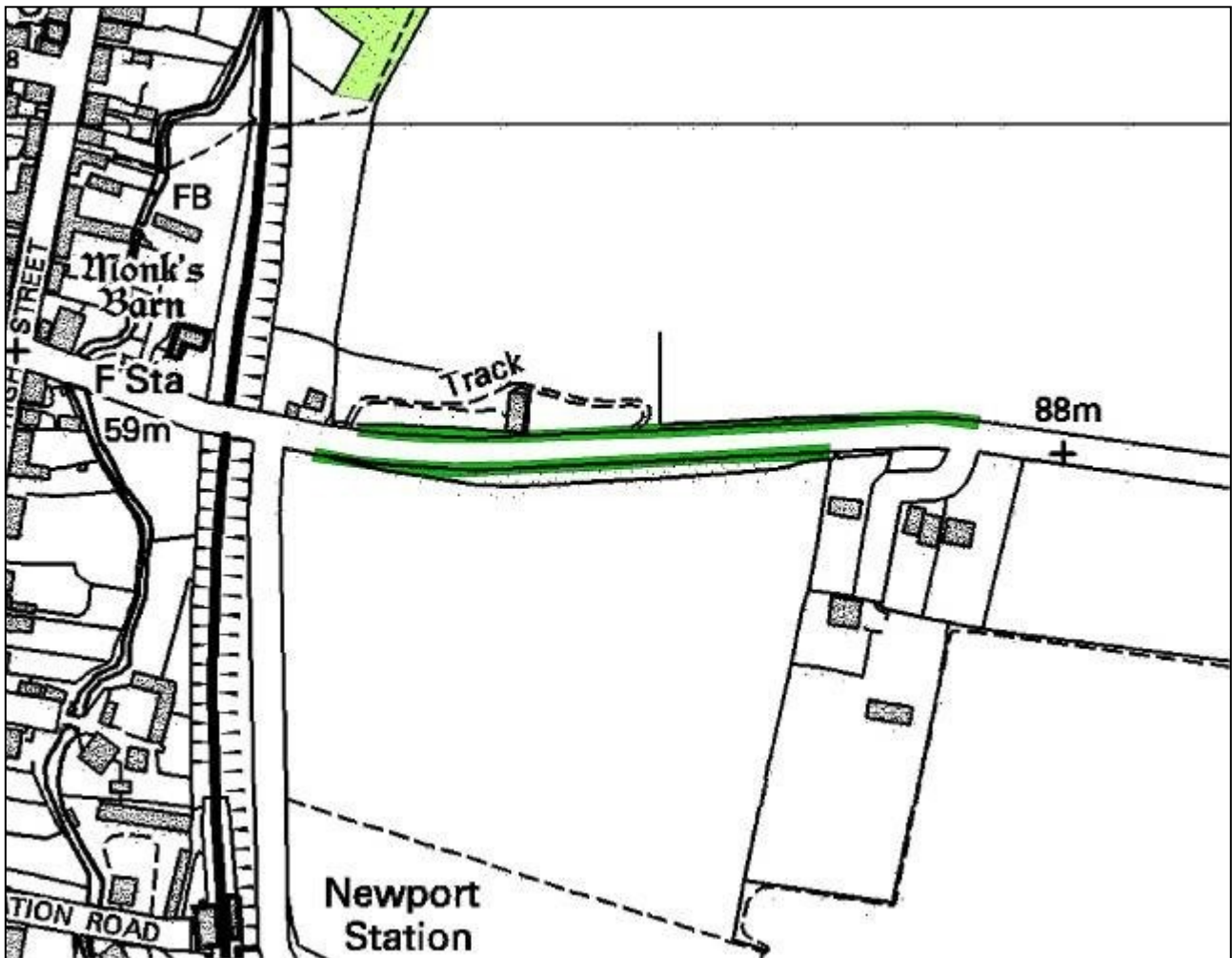
The principal fen species are Pond-sedge (*Carex* spp.), Reed Sweet-grass (*Glyceria maxima*), Branched Bur-reed (*Sparganium erectum*), Reedmace (*Typha latifolia*), Reed Canary-grass (*Phalaris arundinacea*) and Great Willowherb (*Epilobium hirsutum*). The over-topping canopy is largely one of planted Willows (*Salix* spp.) but native willows also occur here.

LoWS Selection Criteria: HCr5, HCr23

Condition and Management Issues: Cropping planted willows will not be to the detriment of the marsh ground flora unless stocking density is too high. Maintenance of a high groundwater table is also important.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd89. Newport - Debden Road Protected Roadside Verge UTT52 (0.4 ha) TL 523338 to TL 526338

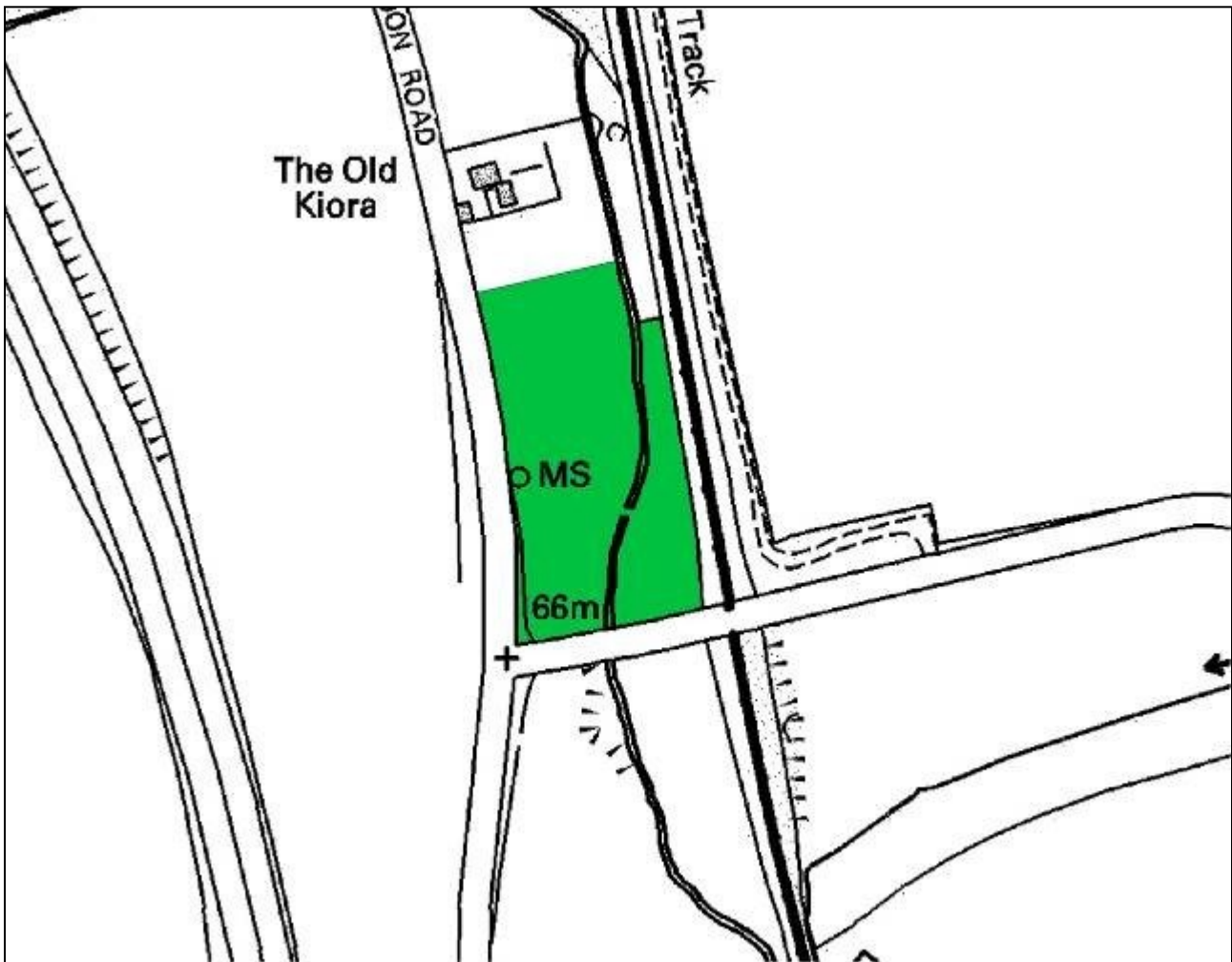
The main importance of these verges is the population of Wild Liquorice (*Astragalus glycyphyllos**), which is included in the Essex Red Data plant list. The flora in general is species-rich and indicates a chalky influence to the soil, with Wild Basil (*Clinopodium vulgare*), Fairy Flax (*Linum catharticum**), Field Scabious (*Knautia arvensis*) and Blue Fleabane (*Erigeron acer**) also present.

LoWS Selection Criteria: SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd90. Kiora Pastures (1.6 ha) TL 524326

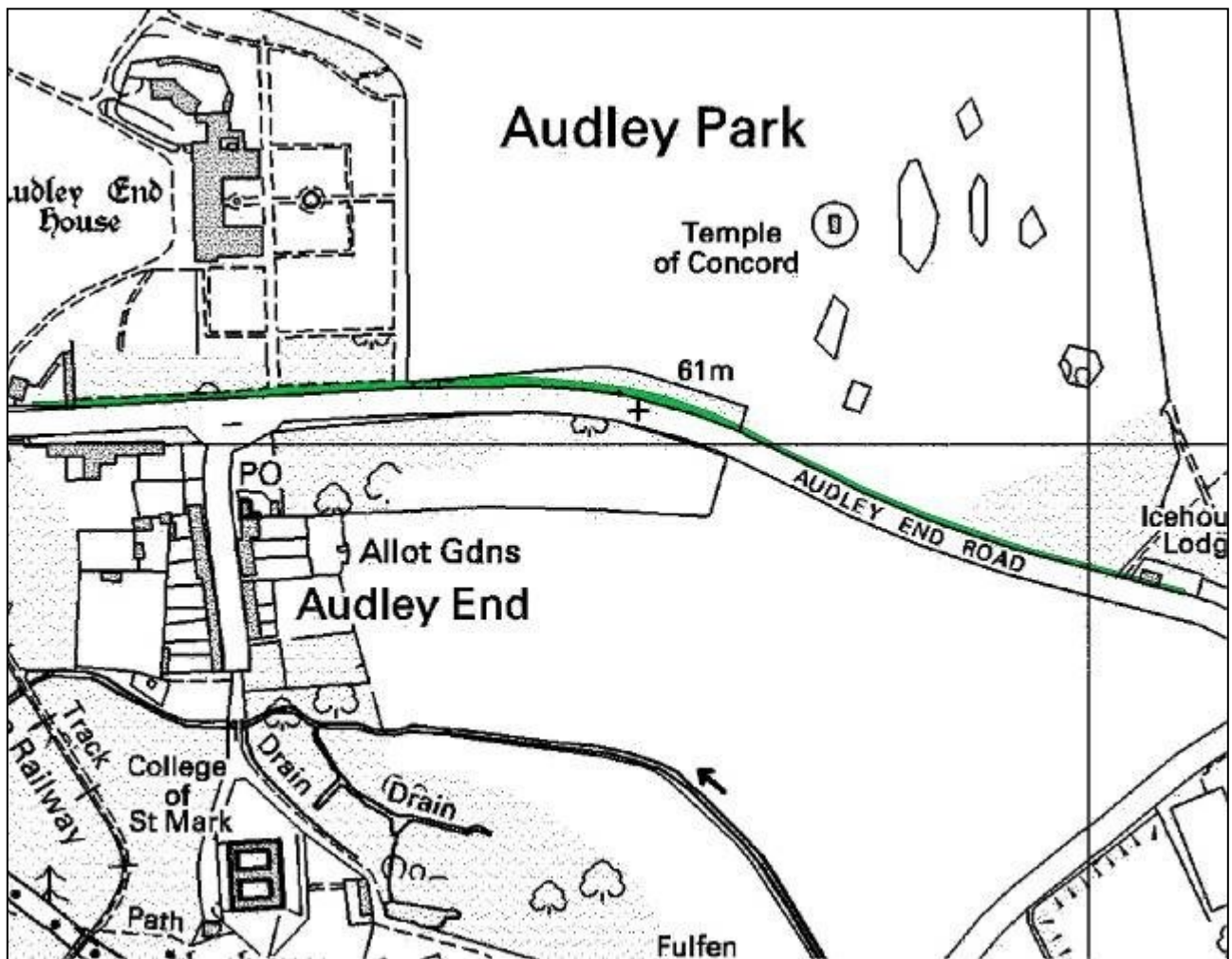
These two old grasslands are becoming rather rank and tall, but they still retain an important flora, with the western field notable for its population of Meadow Saxifrage (*Saxifraga granulata**), a rare and decreasing plant in Essex. The eastern field has a large population of Cowslips (*Primula veris*). Other species of interest include Lady's Bedstraw (*Galium verum*), Field Wood-rush (*Luzula campestris*) and Field Scabious (*Knautia arvensis*). Increased management pressure by way of late summer grazing may assist in reducing the abundance of Cow Parsley and tall, rough grasses, in favour of the more interesting low-growing herbs and grasses. The invertebrate populations of these old grasslands would repay closer examination.

LoWS Selection Criteria: HCr10, SCr15

Condition and Management Issues: Both fields are in need of management to reverse the gradual invasion by coarse, tall grasses and herbs. Autumn grazing may be beneficial in this respect.

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**Ufd91. Saffron Walden - Audley End Park Wall Protected Roadside Verge UTT46 (0.36 ha)
TL 524380 to TL 532378**

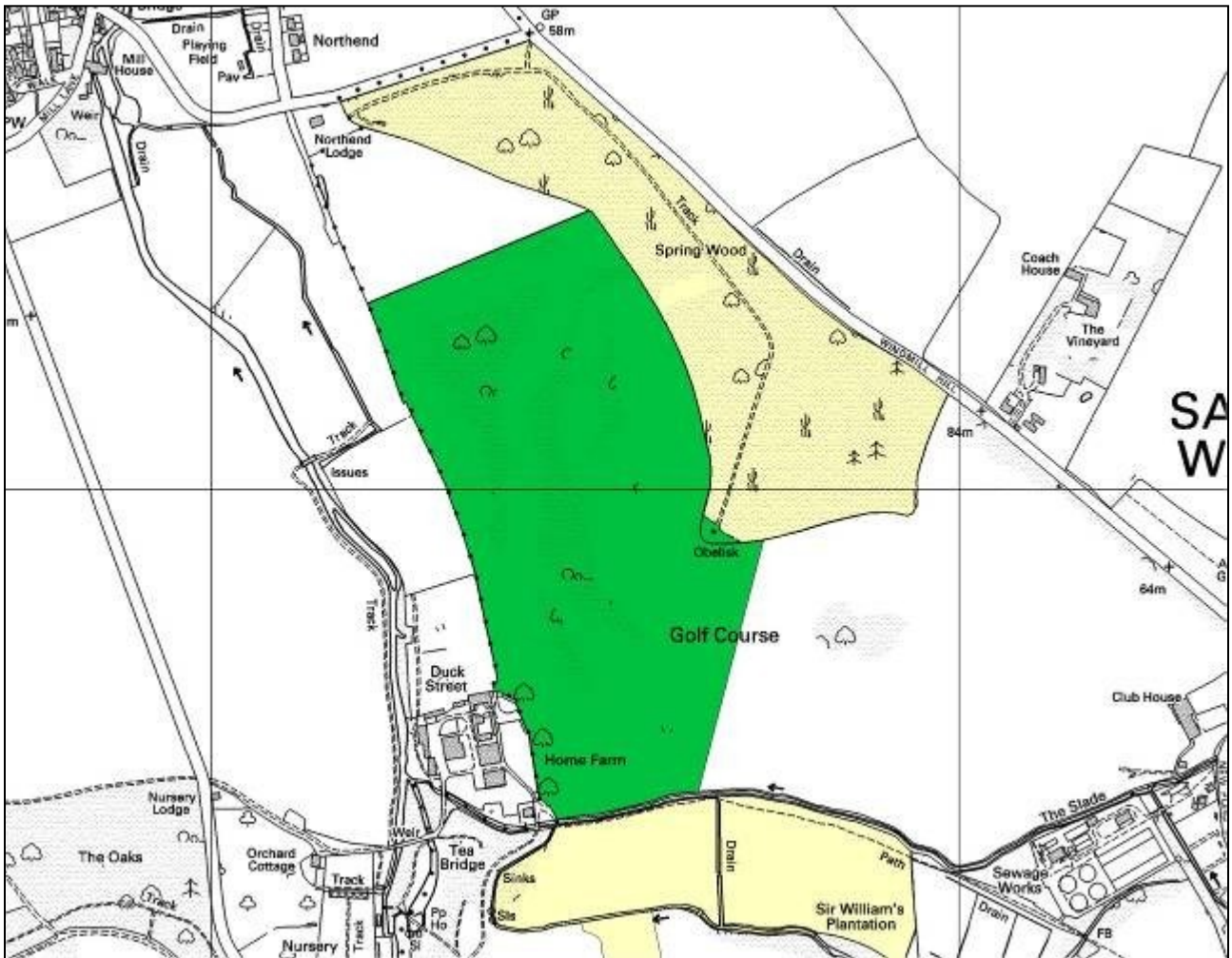
This section of road verge includes a large population of Lesser Calamint (*Clinopodium calamintha**), Wild Clary (*Salvia verbenaca**), both Essex Red Data List species, as well as Star-of-Bethlehem (*Ornithogalum angustifolium**). Several other species of interest occur within the flower-rich sward, including Marjoram (*Origanum vulgare**), Wild Basil (*Clinopodium vulgare*) and Lady's Bedstraw (*Galium verum*).

LoWS Selection Criteria: SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend. This verge is becoming taken over by tall, rank grasses, indicating that a more intense management regime may be needed. The location of a footpath alongside the verge is an additional complication, with the need to control Nettle growth.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd92. Saffron Walden Golf Course (25.0 ha) TL 525390

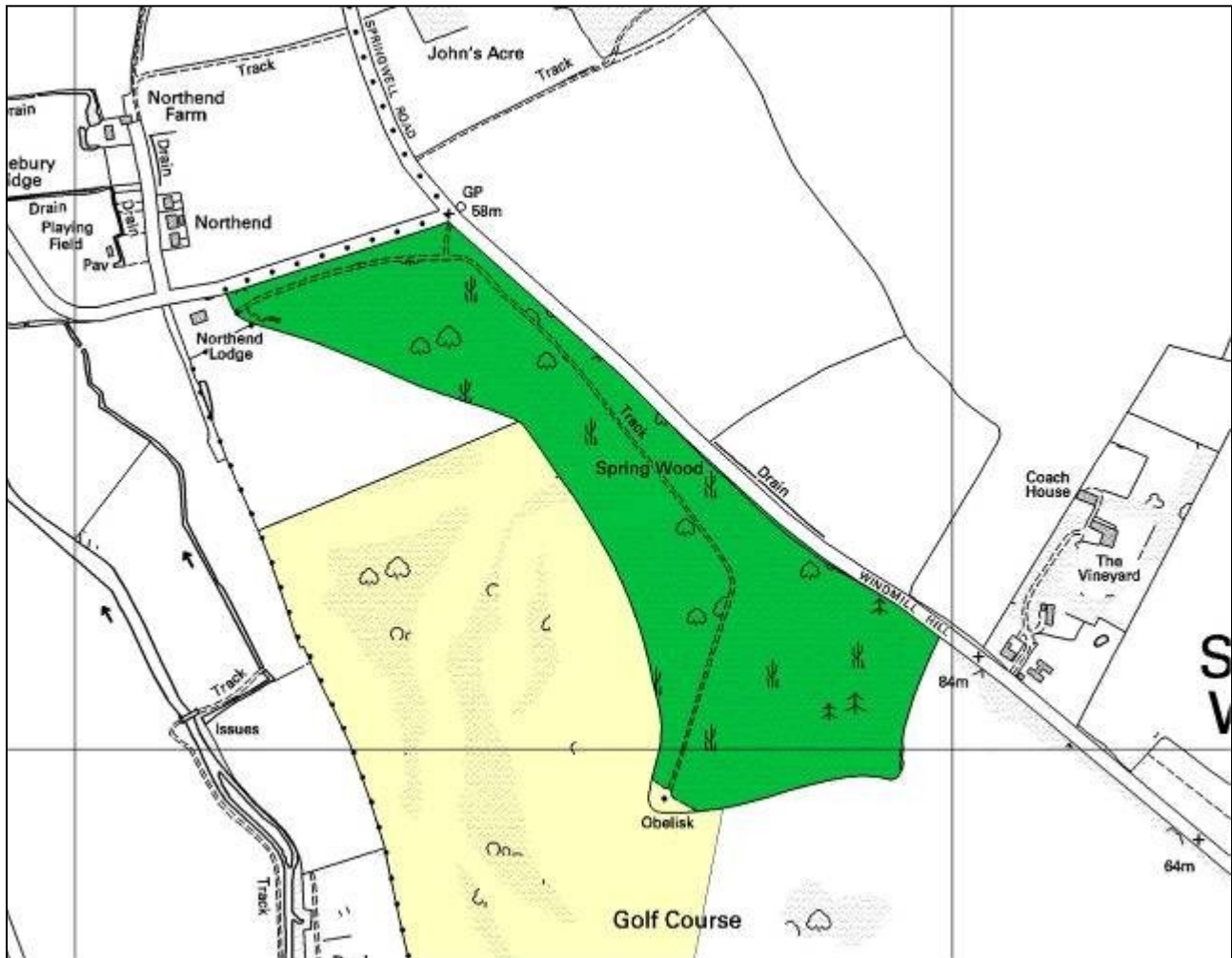
It should be stressed that whilst the whole area of the western half of the course has been highlighted here, the LoWS designation extends only to the rough grassland and areas of scrub and not the managed playing surfaces. This slightly newer section of the course supports an important chalk grassland flora spread across the site. The most significant species, all present in quite small quantity, include Dark Mullein (*Verbascum nigrum**), Upright Brome (*Bromopsis erecta*), Clustered Bellflower (*Campanula glomerata**), Pyramidal Orchid (*Anacamptis pyramidalis**), Bee Orchid (*Ophrys apifera**) and Harebell (*Campanula rotundifolia**). A small piece of grassland surrounding the obelisk at the edge of Spring Wood supports Large Thyme (*Thymus pulegioides**), Salad Burnet (*Sanguisorba minor**), Common Rockrose (*Helianthemum nummularium**) and Harebell.

LoWS Selection Criteria: HCr15, SCr15

Condition and Management Issues: The flora has flourished under a less intensive mowing regime for the rough areas of the course, but management impact needs also to sufficiently strong to prevent the invasion of tall, coarse grasses and scrub.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd93. Spring Wood (16.4 ha) TL 526393

This large ancient wood has been greatly modified by estate management. The generally open canopy is dominated by mixed age Sycamore (*Acer pseudoplatanus*) with some Pedunculate Oak (*Quercus robur*) and Ash (*Fraxinus excelsior*). Old Yew (*Taxus baccata*) trees are frequent along the northern boundaries. Elder (*Sambucus nigra*) is the most widespread scrub species present. The ground flora is poor, being dominated by Dog's Mercury (*Mercurialis perennis*) and Nettle (*Urtica dioica*), but grassier in mown clearings.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: This wood has been badly affected by storm damage and invasion by Sycamore.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd94. Round Coppice (1.1 ha) TL 527222

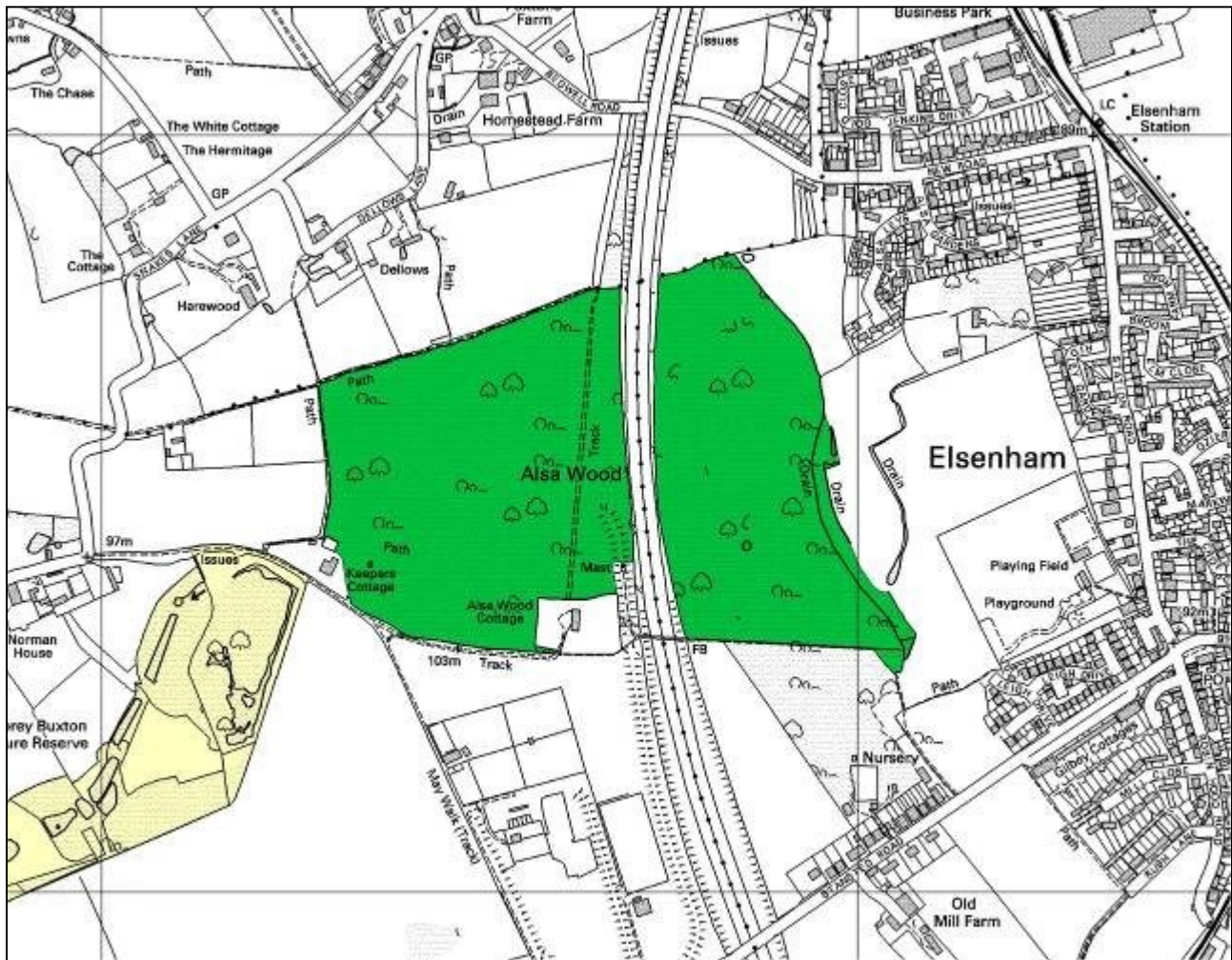
This ancient woodland fragment is dominated by Hornbeam (*Carpinus betulus*) with only scattered Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*) and Field Maple (*Acer campestre*). The typical woodland flora includes Bluebell (*Hyacinthoides non-scripta*), Hairy St. John's-wort (*Hypericum hirsutum*), Dog's Mercury (*Mercurialis perennis*), Three-veined Sandwort (*Moehringia trinervia*), Oxlip (*Primula elatior**) and Goldilocks Buttercup (*Ranunculus auricomus*). The ecology of this wood is greatly impacted upon by its close proximity to busy roads and Stansted Airport.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: This wood has become ecologically isolated from the open countryside with the expansion of Stansted Airport and peripheral developments.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd95. Alsa Wood (26.4 ha) TL 527266

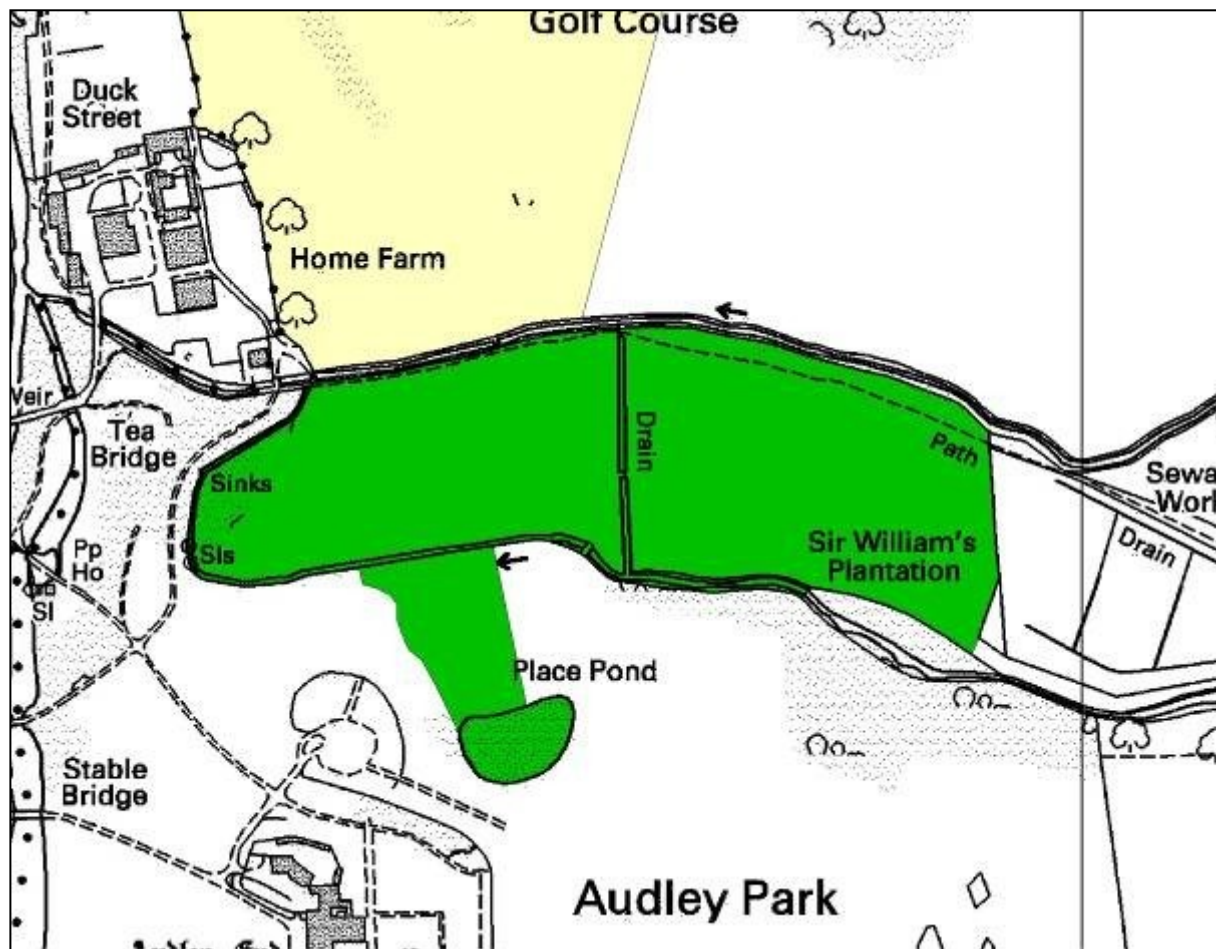
This large ancient wood, a former SSSI, was bisected by the M11. The western portion is dominated by old Hornbeam (*Carpinus betulus*) coppice with scattered standards of Ash (*Fraxinus excelsior*) and Pedunculate Oak (*Quercus robur*). The typical wood flora includes an abundance of Bluebell (*Hyacinthoides non-scripta*) along with lesser quantities of Hairy St. John's-wort (*Hypericum hirsutum*), Oxlip (*Primula elatior**) and Violets (*Viola sp.*). The eastern section has a more mixed canopy of Ash, Hornbeam and Pedunculate Oak over Hazel (*Corylus avellana*) and Elder (*Sambucus nigra*). The ground flora is more diverse and includes Wood Anemone (*Anemone nemorosa*), Remote Sedge (*Carex remota*), Pendulous Sedge (*Carex pendula*), Ragged Robin (*Lychnis flos-cuculi*) and Sanicle (*Sanicula europaea**). A number of small ponds and a recent woodland strip along the eastern boundary are included within the site.

LoWS Selection Criteria: HCr1(a), HCr2(a)

Condition and Management Issues: Dense canopy shading is restricting habitat diversity and ground flora. A resumption of coppicing would be desirable.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd96. Audley Park Pastures (9.5 ha) TL 527385

This site ranges from dry grassland through to wet pasture, sedge beds and swamp adjacent to The Slade stream. The drier land supports abundant Meadow Barley (*Hordeum secalinum*), Yorkshire Fog (*Holcus lanatus*), Red Fescue (*Festuca rubra*), Timothy-grass (*Phleum* sp.) and Oval Sedge (*Carex ovalis**). In damper areas Jointed Rush (*Juncus articulatus*), Marsh Thistle (*Cirsium palustre*), Angelica (*Angelica sylvestris*), Lesser Pond-sedge (*Carex acutiformis*), Tufted Hair-grass (*Deschampsia cespitosa*), Meadowsweet (*Filipendula ulmaria*), Lady's Smock (*Cardamine pratensis*), Common Spike-rush (*Eleocharis palustris**) and Marsh Horsetail (*Equisetum palustre**) occur. In the wettest area, Reed Sweet-grass (*Glyceria maxima*) dominates. Southern Marsh Orchid (*Dactylorhiza praetermissa*) has been recorded from land immediately to the west of Place Pond, although it is not known if it persists here. This area now comprises a rather tall but interesting swamp vegetation characterised by Reed Canary-grass (*Phalaris arundinacea*), Pond-sedges and Common Fleabane (*Pulicaria dysenterica*). The northern boundary of the site supports many ancient oak trees, which may be of interest for their invertebrate populations and would repay closer investigation.

LoWS Selection Criteria: HCr11, HCr14

Condition and Management Issues: Maintenance of a high water table is important in maintaining the marshland flora.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd97. Stocking Wood (2.1 ha) TL 528224

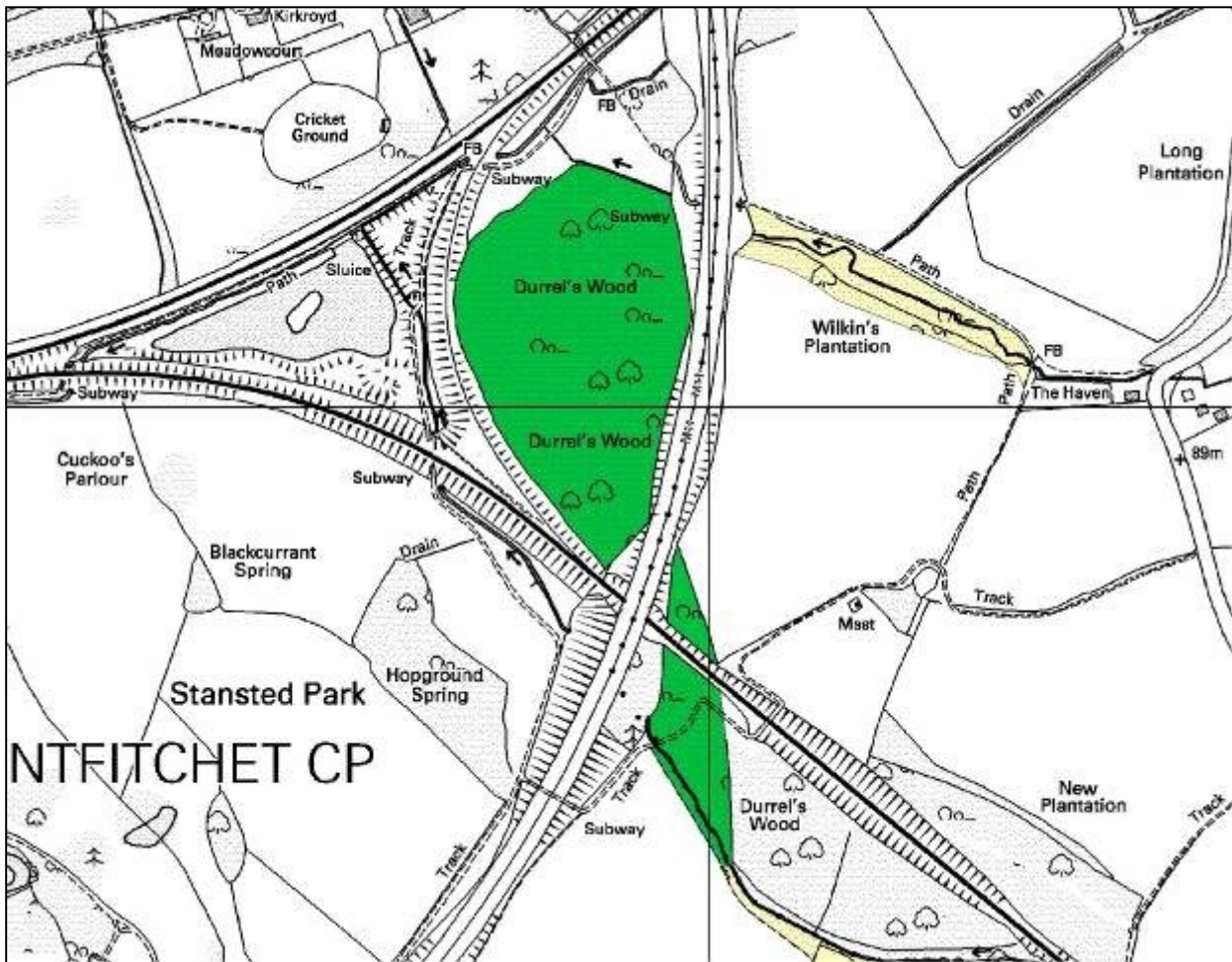
This site, which is largely ancient woodland, is dominated by neglected Hornbeam (*Carpinus betulus*) coppice, with scattered Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*), Field Maple (*Acer campestre*) and Hazel (*Corylus avellana*). Elder (*Sambucus nigra*) and Bramble (*Rubus fruticosus*) are both widespread, with Dog's Mercury (*Mercurialis perennis*) and Bluebell (*Hyacinthoides non-scripta*) abundant in the ground layer. The ecology of this wood is greatly impacted upon by its close proximity to busy roads and Stansted Airport.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The wood is suffering from isolation, fragmentation and disturbance resultant from the development of Stansted Airport.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd98. Durrel's Wood (9.1 ha) TL 528251

This Site is extended to include two fragments to the south over-looked during the original SINC identification process. Durrel's is an old wood has several attributes of ancient woodland. The canopy comprises Pedunculate Oak (*Quercus robur*), abundant Hornbeam (*Carpinus betulus*), Ash (*Fraxinus excelsior*) and Field Maple (*Acer campestre*), with some Sycamore (*Acer pseudoplatanus*) invasion. The understorey/shrub layer includes Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Elder (*Sambucus nigra*). The southernmost section includes the highly invasive exotic Snowberry (*Symphoricarpos rivularis*), which should be removed if possible, before it spreads to other parts of the woods.

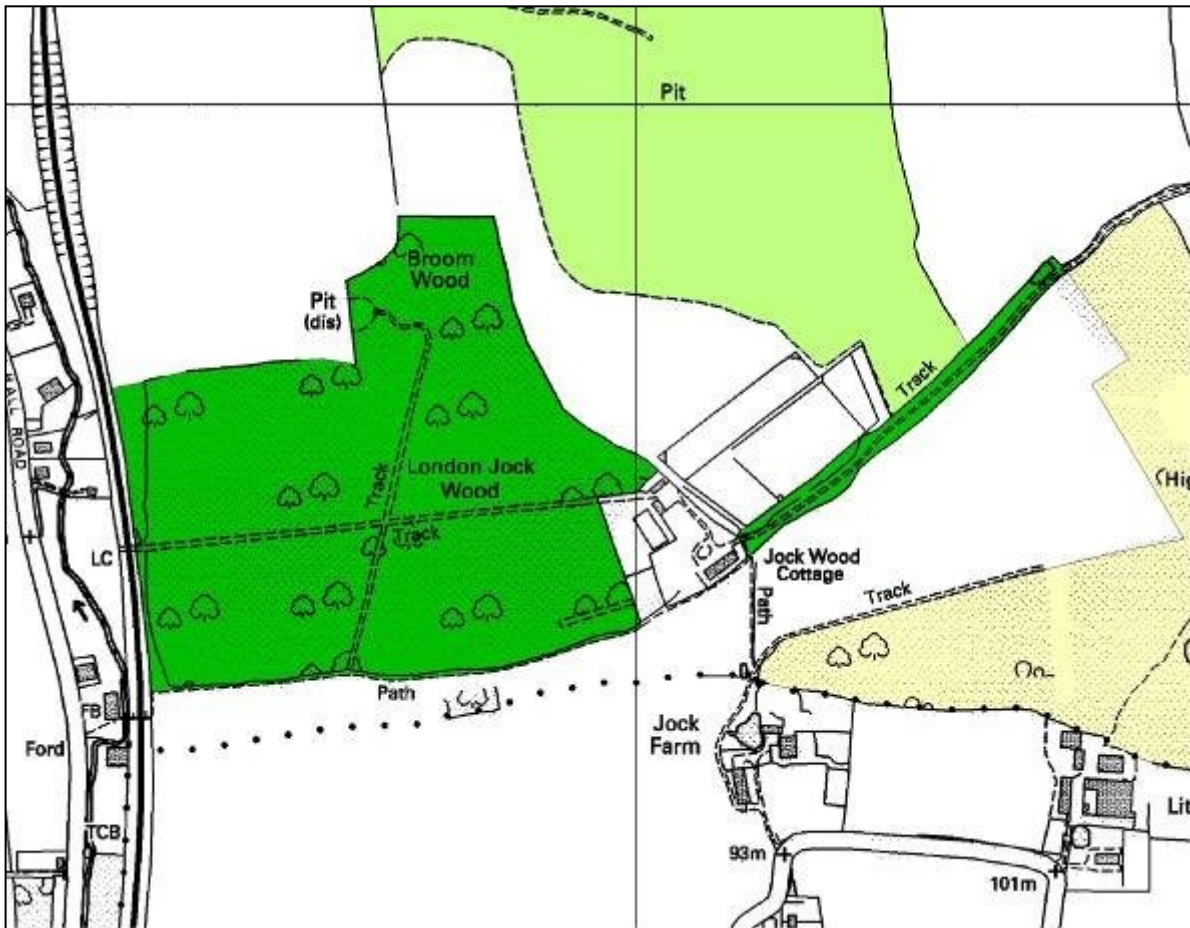
The ground flora is diverse and is typified by Pendulous Sedge (*Carex pendula*), Remote Sedge (*Carex remota*), Enchanter's Nightshade (*Circaea lutetiana*), Creeping Soft-grass (*Holcus mollis*), abundant Bluebell (*Hyacinthoides non-scripta*), Dog's Mercury (*Mercurialis perennis*), Three-veined Sandwort (*Moehringia trinervia*) and Red Campion (*Silene dioica*).

LoWS Selection Criteria: HCr2(b)

Condition and Management Issues: Eradication of Snowberry would be desirable.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd99. London Jock Wood (15.4 ha) TL 528307

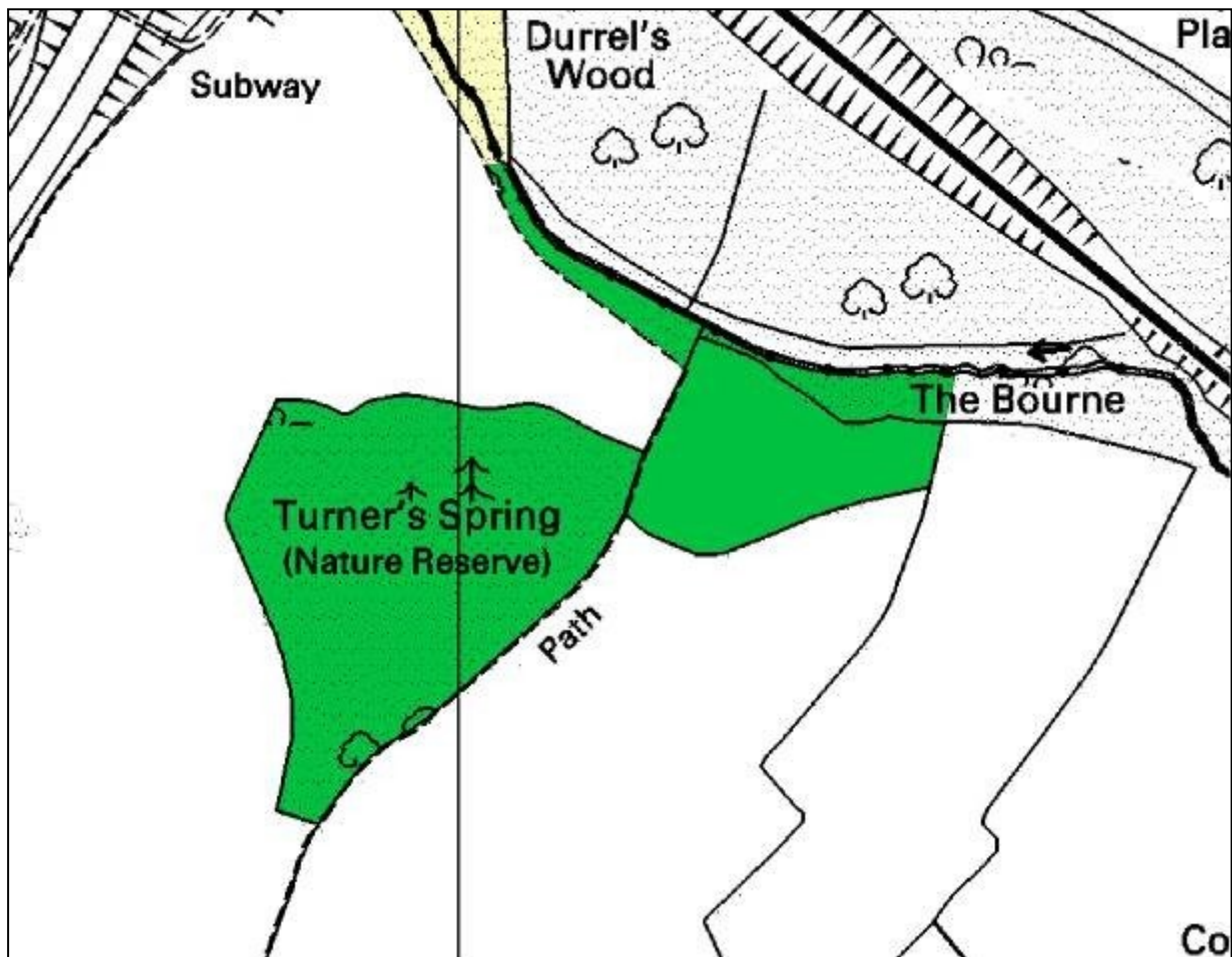
This Site comprises the ancient London Jock Wood, a thin strip of recent secondary wood between this and the railway line to the west and also a section of wooded lane leading to the wood from the east. The ancient wood varies from extensive Sycamore (*Acer pseudoplatanus*) stands to areas of old Hornbeam (*Carpinus betulus*), Sweet Chestnut (*Castanea sativa*) and Hazel (*Corylus avellana*) coppice. Much of the coppice has been cut in recent years. Bracken (*Pteridium aquilinum*) has colonised much of the open unshaded ground, whilst the high degree of shading afforded by the main canopy precludes a very diverse ground flora from developing, although Bluebell (*Hyacinthoides non-scripta*) and Dog's Mercury (*Mercurialis perennis*) are found in abundance. The lane leading east from the wood, which is also clearly ancient in nature, supports Early Purple Orchid (*Orchis mascula**) and forms a natural wildlife corridor to High/Prior's Woods to the east. The site is extended southwards to include a narrow grassy fringe along the southern boundary of London Jock Wood in which Harebell (*Campanula rotundifolia**) (an Essex Red Data List plant) and Lady's Bedstraw (*Galium verum*) can be found in an acid grassland sward.

LoWS Selection Criteria: HCr1(a), HCr2(a), HCr9, SCr15

Condition and Management Issues: Managed better than some ancient woods, but Sycamore is spreading rapidly. Expansion of relatively recent coppicing is desirable.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd100. Turner's Spring/The Bourne (4.0 ha) TL 530243

This Site largely comprises the Essex Wildlife Trust's Turner's Spring nature reserve but it also includes a narrow strip of streamside woodland that connects this area to the southern tip of Durrel's Wood. Turner's spring has standards of Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Beech (*Fagus sylvatica*), with Hazel (*Corylus avellana*) and Hornbeam (*Carpinus betulus*) coppice. The ground flora, though dominated by Bramble (*Rubus fruticosus*), Nettle (*Urtica dioica*) and Dog's Mercury (*Mercurialis perennis*), also includes Oxlip (*Primula elatior**), Herb Paris (*Paris quadrifolia**) and Violets (*Viola sp.*). The adjacent meadow comprises wet grassland and a sedge bed, with a flora that includes Cowslip (*Primula veris*), Meadowsweet (*Filipendula ulmaria*) and Salad Burnet (*Sanguisorba minor**). This drains into a strip of woodland by The Bourne, which is largely Hornbeam coppice. The ground flora here includes Hart's-tongue Fern (*Phyllitis scolopendrium**), Hairy wood-rush (*Luzula pilosa**) and Wood Sedge (*Carex sylvatica*).

LoWS Selection Criteria: HCr2(c), HCr23, SCr15

Condition and Management Issues: Removal of Sycamore is desirable. The wet grassland is probably drying out in the long-term on account of change in rainfall patterns and a significant lowering of the local water table.

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Ufd101. Emanuel Wood (9.1 ha) TL 531419

The native canopy composition of this wood is Pedunculate Oak (*Quercus robur*) standards with Ash (*Fraxinus excelsior*), Field Maple (*Acer campestre*) and some Hazel (*Corylus avellana*) coppice. Part of the eastern portion has been replanted with Beech (*Fagus sylvatica*) and conifers, whilst a section of the western arm has been recently replanted with native trees. The ground flora is varied, with an ancient woodland flora that includes Bluebell (*Hyacinthoides non-scripta*), Early Purple Orchid (*Orchis mascula**), Yellow Archangel (*Lamium galeobdolon*), Primrose (*Primula vulgaris*) and Black Bryony (*Tamus communis*).

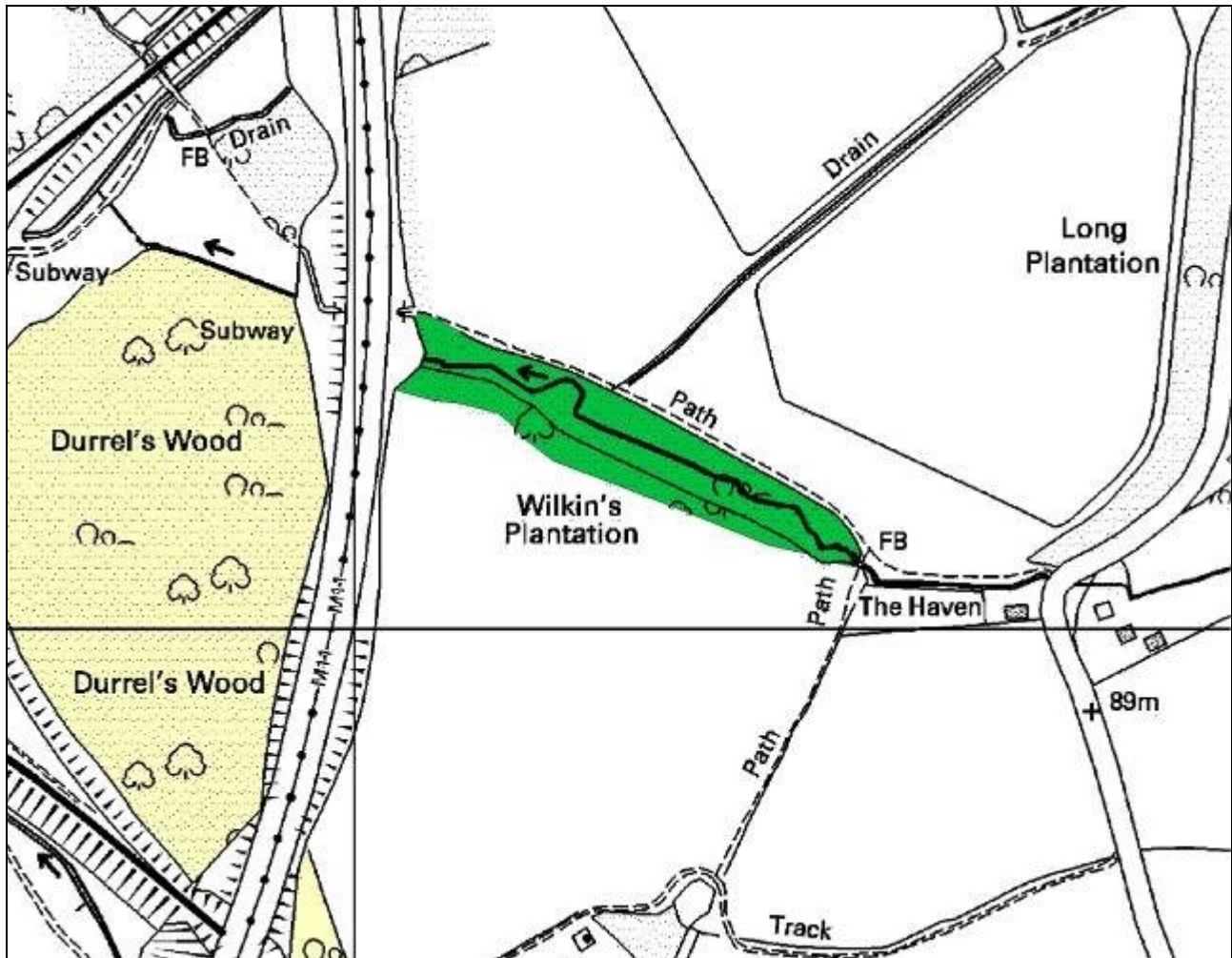
One of the most notable features of the wood is a small grassy glade within the eastern block. Here, a chalk grassland flora is flourishing, including many species now scarce in Essex. These include Quaking Grass (*Briza media**), Fairy Flax (*Linum catharticum**), Wild Thyme (*Thymus polytrichus**), Woolly Thistle (*Cirsium eriophorum**), Eyebright (*Euphrasia* agg.), Milkwort (*Polygala vulgaris**), Stemless Thistle (*Cirsium acaule**), Common Gromwell (*Lithospermum officinale**), Salad Burnet (*Sanguisorba minor**) and Yellow-wort (*Blackstonia perfoliata**).

LoWS Selection Criteria: HCr1(a), HCr15, SCr15

Condition and Management Issues: Removal of planted trees in favour of native species is desirable. The chalk grassland area is in need of significant scrub control measures.

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Ufd102. Wilkin's Plantation (1.7 ha) TL 532252

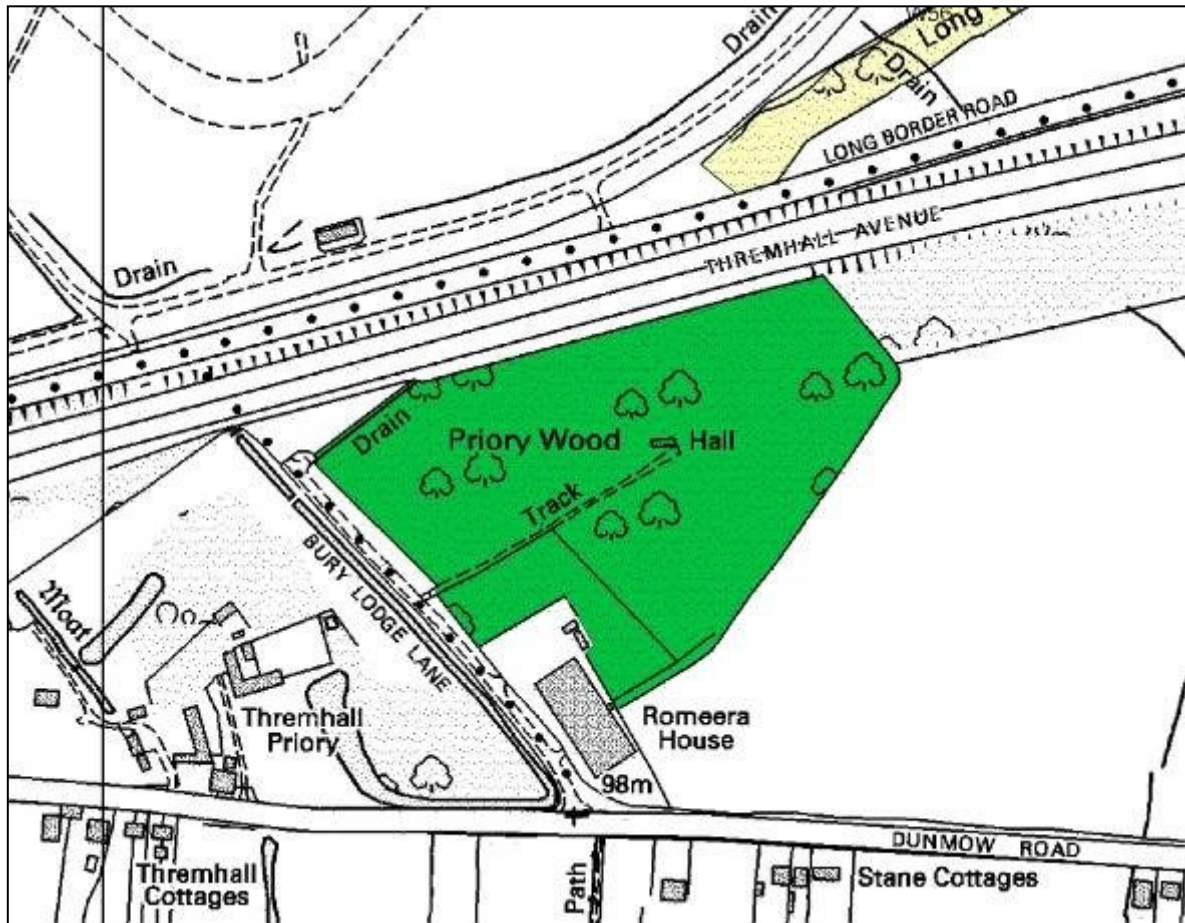
This small streamside wood, not obviously planted, has a rich flora for its size. It lies in a surprisingly steep-sided “ravine” that is likely to have been wooded rather than cultivated and can therefore probably be regarded as ancient, despite its name. The canopy has abundant Hornbeam (*Carpinus betulus*) and Sycamore (*Acer pseudoplatanus*) with occasional Ash (*Fraxinus excelsior*) and Pedunculate Oak (*Quercus robur*). Hawthorn (*Crataegus monogyna*) and Elder (*Sambucus nigra*) form a dense scrub layer in parts but the ground cover remains good, with Bluebell (*Hyacinthoides non-scripta*), Red Champion (*Silene dioica*), Primrose (*Primula vulgaris*) and Wood Anemone (*Anemone nemorosa*) and lesser quantities of Pignut (*Conopodium majus*), Oxlip (*Primula elatior**) and Violet (*Viola sp.*).

LoWS Selection Criteria: HCr1(b)

Condition and Management Issues: Removal of Sycamore is desirable.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd105. Priory Wood (6.3 ha) TL 533215

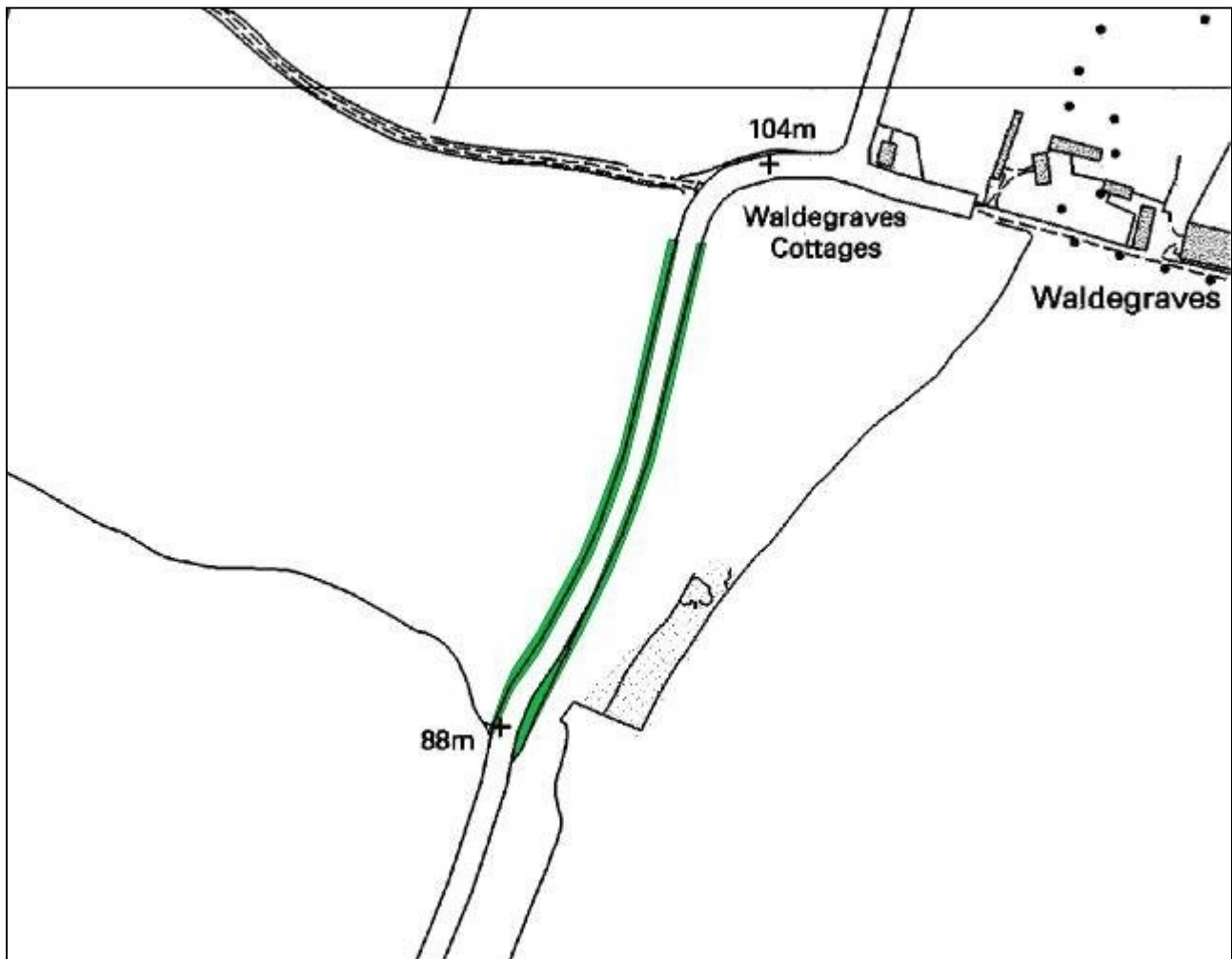
The canopy cover is largely Hornbeam (*Carpinus betulus*) and Ash (*Fraxinus excelsior*), although many other woody species are present in the canopy and understorey. These include Field Maple (*Acer campestre*), Dogwood (*Cornus sanguinea*), Hazel (*Corylus avellana*), Midland Hawthorn (*Crataegus laevigata*), Blackthorn (*Prunus spinosa*), Wild Cherry (*Prunus avium*) and Pedunculate Oak (*Quercus robur*). Invasion by Sycamore (*Acer pseudoplatanus*) is becoming a significant problem. The ground flora includes Wood Anemone (*Anemone nemorosa*), Bluebell (*Hyacinthoides non-scripta*), Hairy St. John's-wort (*Hypericum hirsutum*), Twayblade Orchid (*Listera ovata**) and Sanicle (*Sanicula europaea**). The southern section of the wood has a sparse ground flora, in which Dog's Mercury (*Mercurialis perennis*) predominates. Part of the ancient wood was lost to new road development associated with Stansted Airport and much of the remainder is now leased to the Boy Scouts, the activities of whom are having a localised impact upon the flora.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: There is an urgent need to control Sycamore invasion.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd106. Widdington - Waldegraves Protected Roadside Verges UTT22 (0.2 ha) TL 535326 to TL 536329

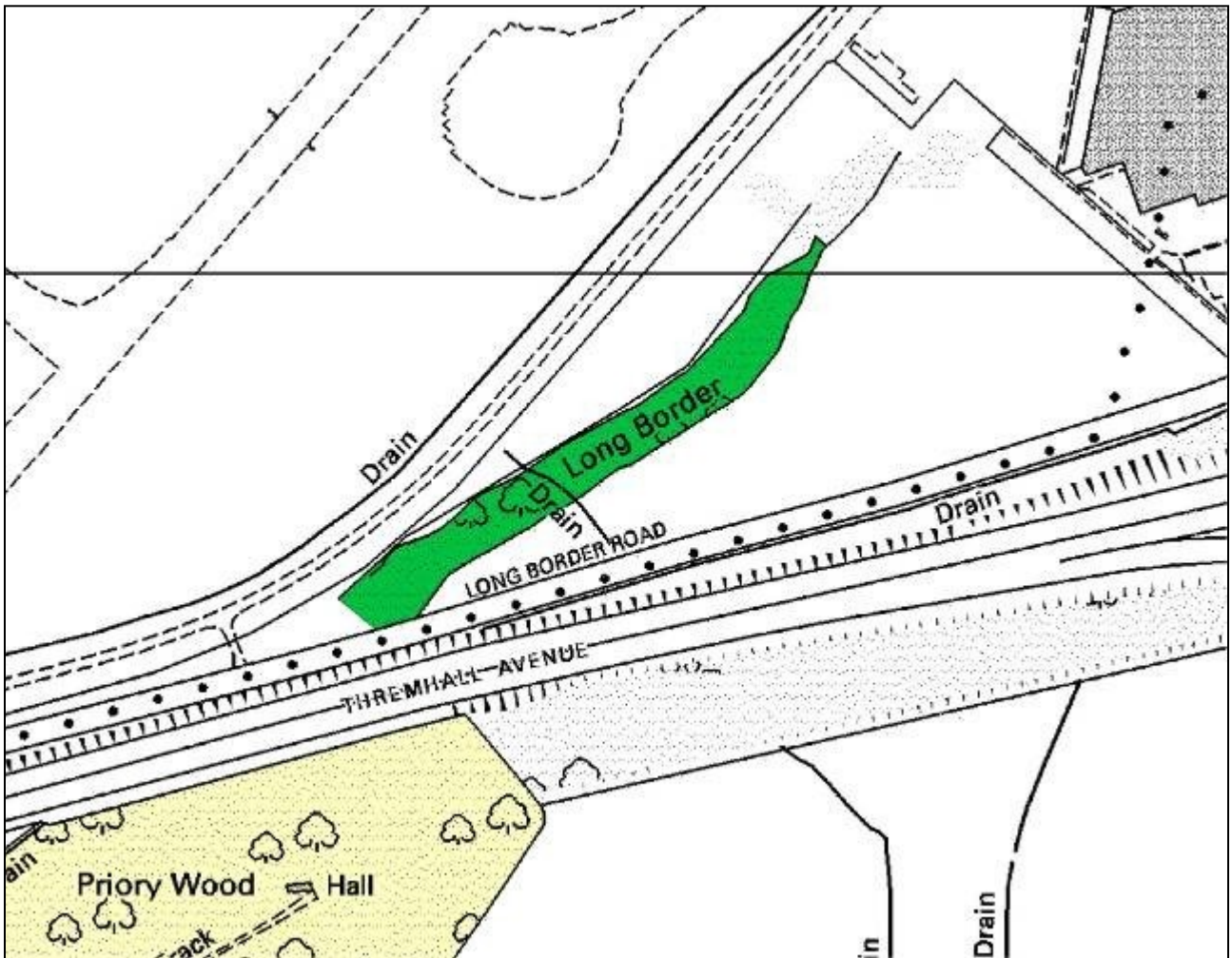
This roadside verge has a flora that includes Cowslip (*Primula veris*), Field Scabious (*Knautia arvensis*), Bee Orchid (*Ophrys apifera**), Glaucous Sedge (*Carex flacca*), Fairy Flax (*Linum catharticum**), Greater Knapweed (*Centaurea scabiosa**), Marjoram (*Origanum vulgare**) and Wild Basil (*Clinopodium vulgare*).

LoWS Selection Criteria: HCr15, SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend. This verge is, in places, becoming taken over by tall, rank grasses, indicating that a more intense management regime may be needed. The dumping of horse manure from adjacent pastures and camping by travellers are additional problems for this site.

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Date of last revision: 30/09/2007



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Ufd108. Long Border (1.2 ha) TL 536219

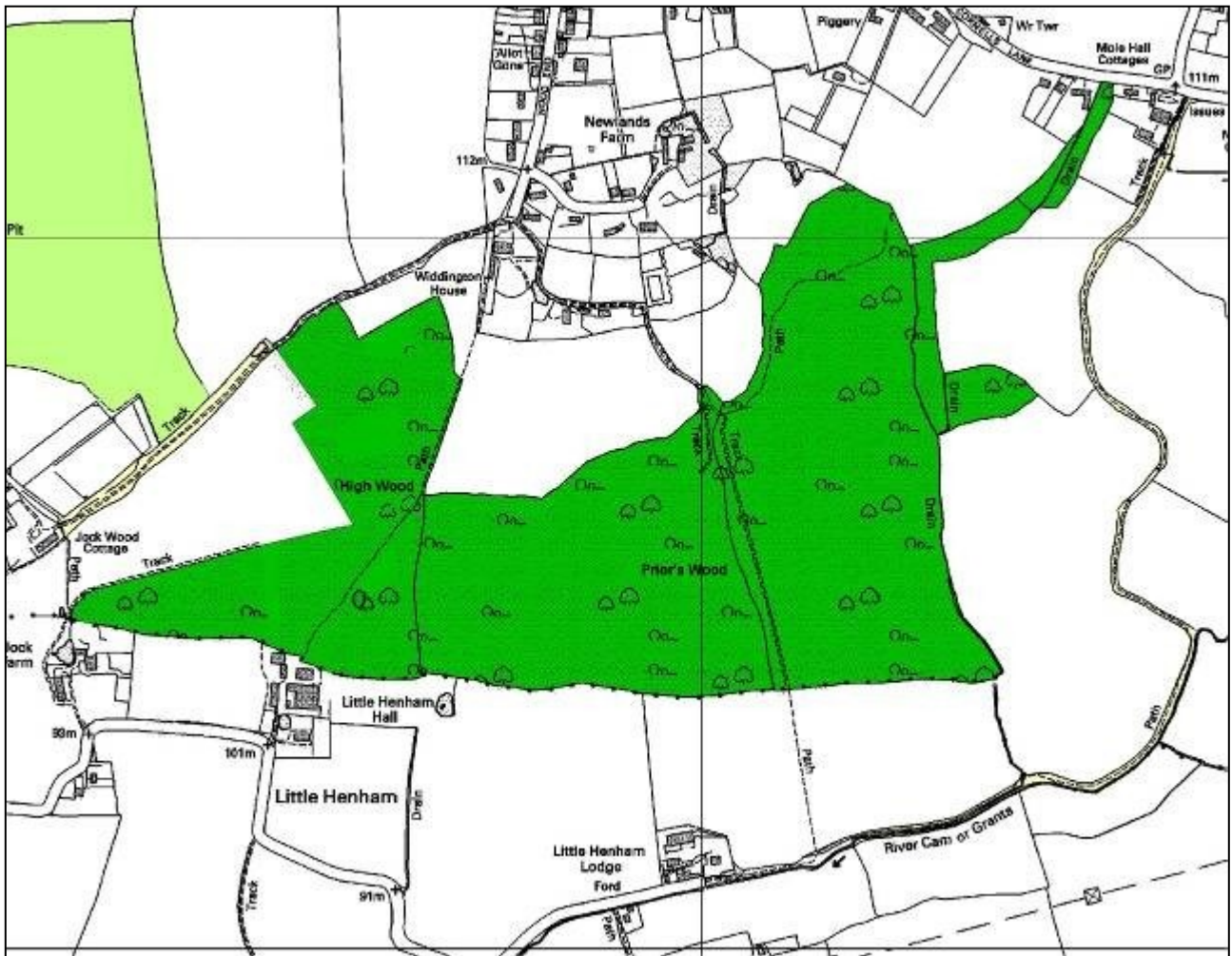
This ancient woodland strip is composed of mainly Hornbeam (*Carpinus betulus*) with some Field Maple (*Acer campestre*) and with an understorey of Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Dogwood (*Cornus sanguinea*). The ground flora is dominated by Dog's Mercury (*Mercurialis perennis*) with a scattered though varied assemblage of typical ancient woodland plants. It formerly connected to Priory Wood to the south but is now rather ecologically isolated from other nearby areas of woodland.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: This strip of wood is ecologically rather isolated.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd111. High/Priors Wood (47.0 ha) TL 538305

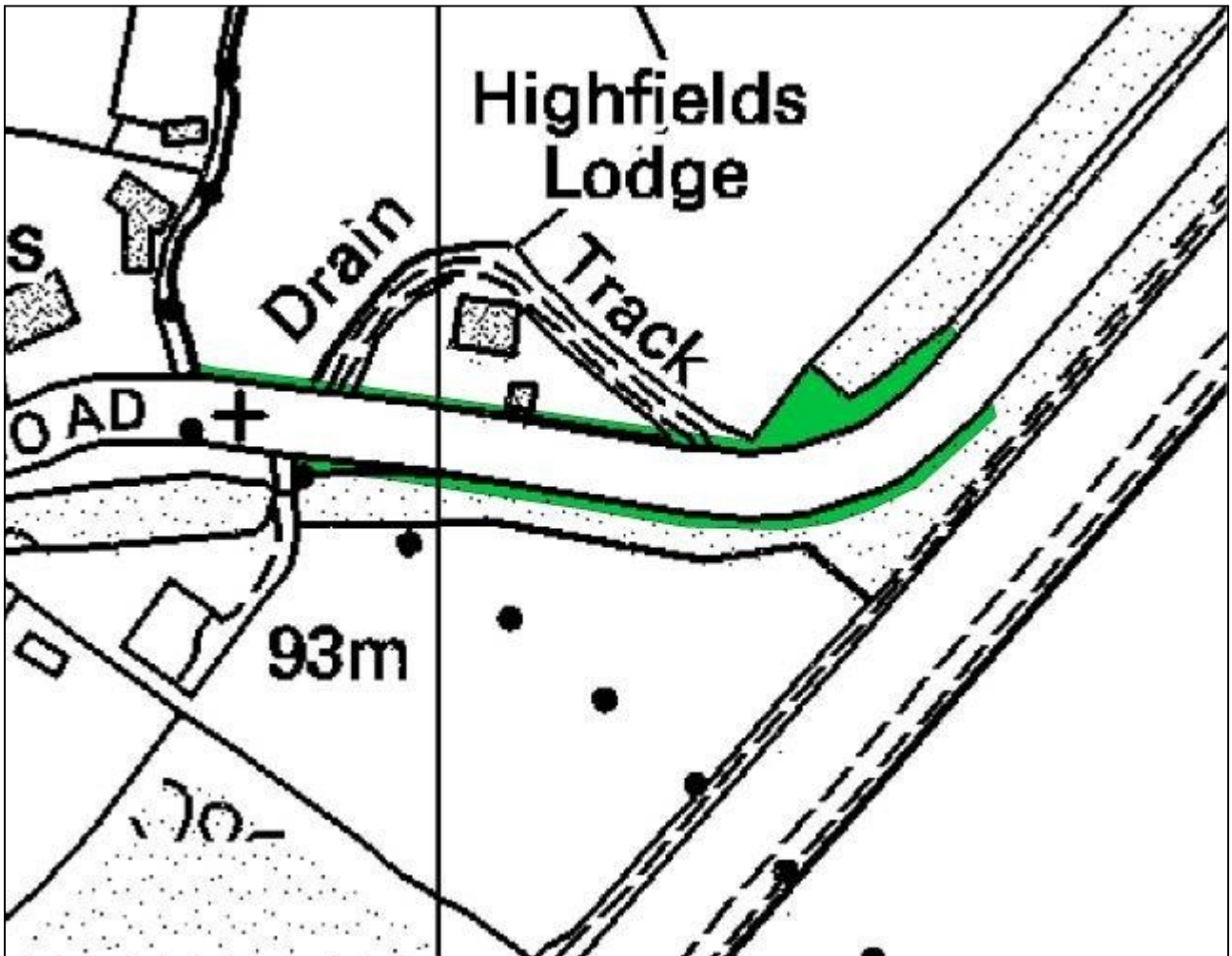
This is one of the largest ancient woods in the district. It is mostly dominated by Hornbeam (*Carpinus betulus*) coppice, some Ash (*Fraxinus excelsior*) and Field Maple (*Acer campestre*) coppice and with Pedunculate Oak (*Quercus robur*) standards throughout. Hazel (*Corylus avellana*), Elder (*Sambucus nigra*), Hawthorn (*Crataegus monogyna*), Midland Hawthorn (*C. laevigata*) and Blackthorn (*Prunus spinosa*) are found in the shrub layer. Amongst a varied ground flora are numerous ancient woodland specialists, such as Oxlip (*Primula elatior**), Herb Paris (*Paris quadrifolia**), Early Purple Orchid (*Orchis mascula**), Early Dog-violet (*Viola reichenbachiana*), Bluebell (*Hyacinthoides non-scripta*), Common Twayblade (*Listera ovata**), Hairy St John's-wort (*Hypericum hirsutum*) and Ramsons (*Allium ursinum*).

LoWS Selection Criteria: HC1(a)

Condition and Management Issues: Maintenance of an active coppice cycle would be of great benefit to habitat diversity and flora richness.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd112. Bulmer Road Verges (0.14 ha) TL 53942378 to TL 5412 2380

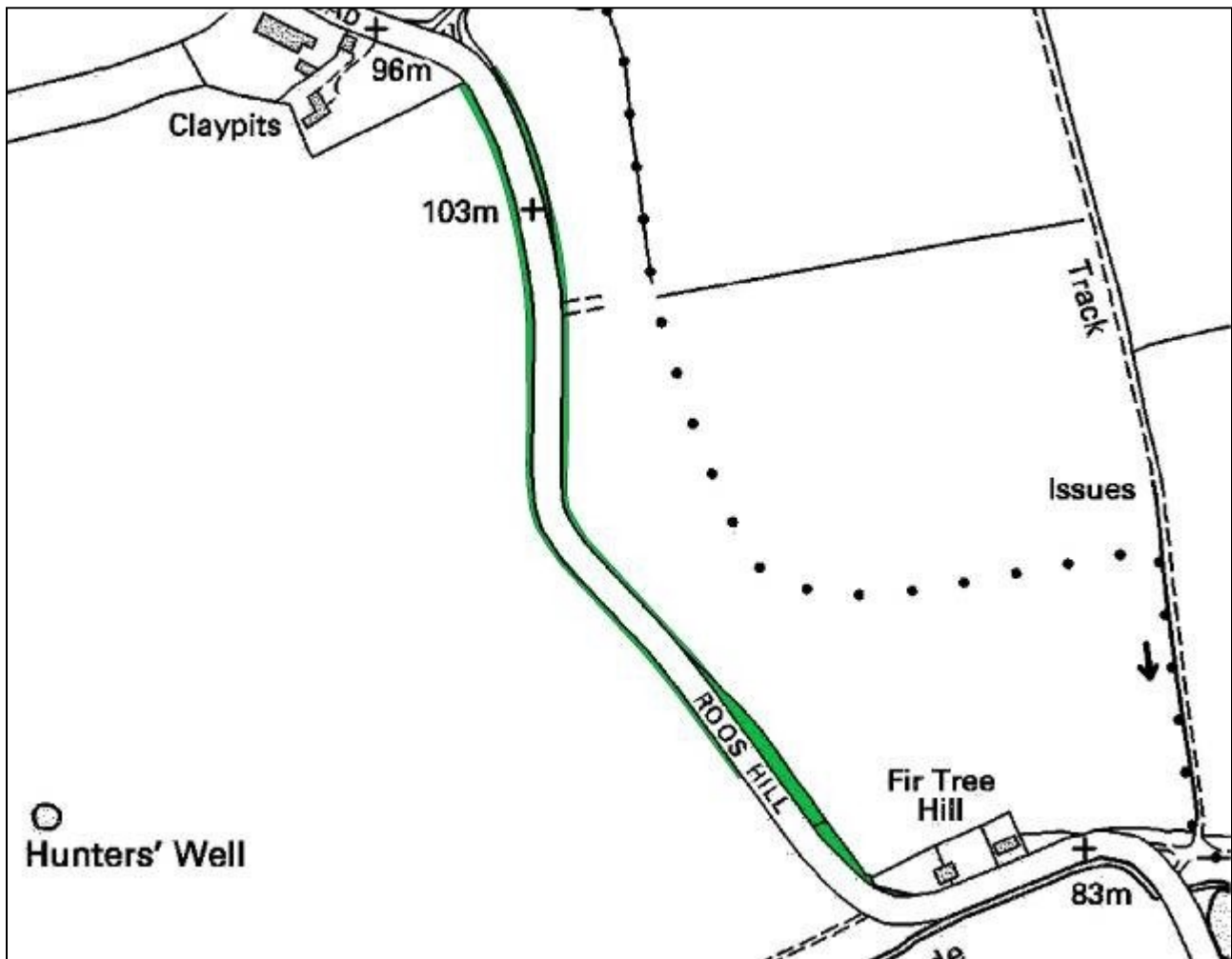
These verges comprise the eastern end of the Stansted Mountfitchet – Burton End Protected Roadside Verges UTT13. The remainder of this protected verge was not deemed of sufficient quality to be included within this LoWS. It supports a chalky grassland flora, which includes Restharrow (*Ononis repens*), Rough Hawkbit (*Leontodon hispidus**), Lady's Bedstraw (*Galium verum*), Field Scabious (*Knautia arvensis*) and Hoary Plantain (*Plantago lanceolata*).

LoWS Selection Criteria: HCr11, SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd117. Saffron Walden – Roos Hill Protected Roadside Verges UTT18 (0.3 ha) TL 545362 to TL 543366

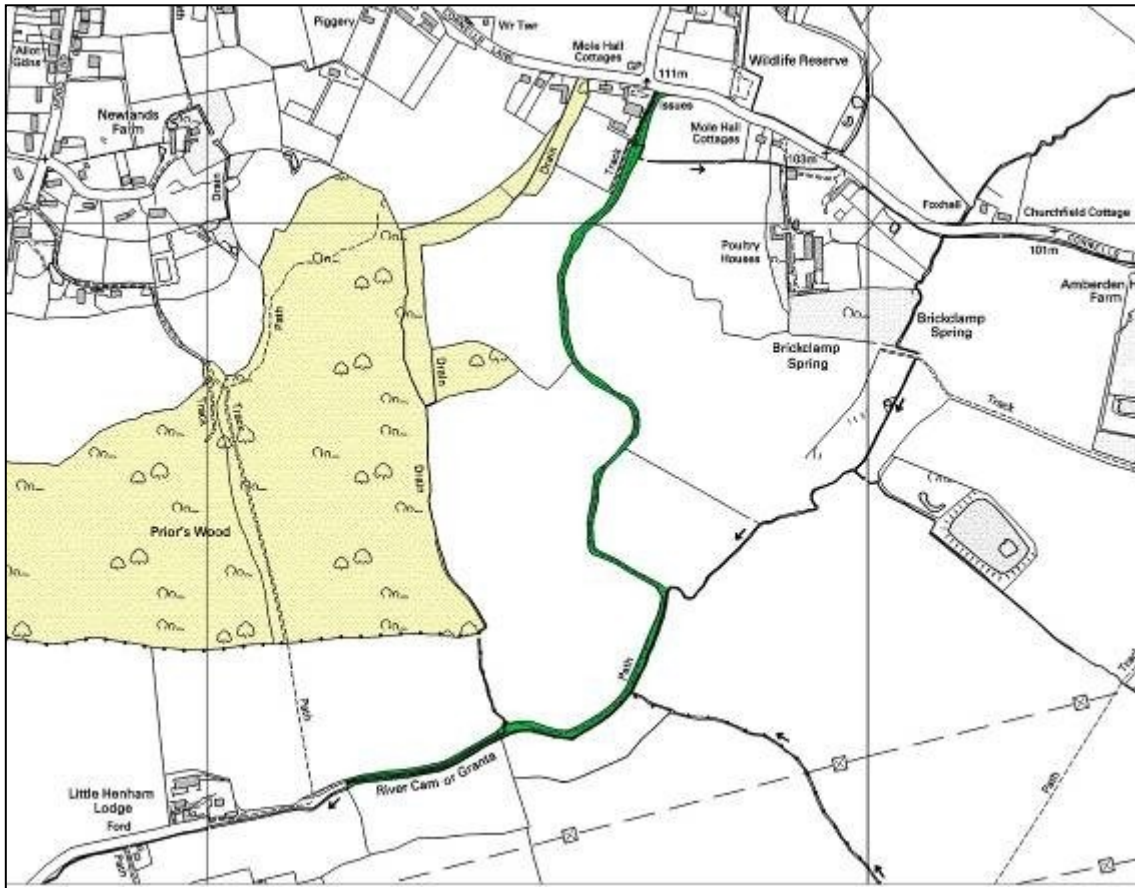
These sections of road verge have been designated in recognition of their chalk grassland flora, which includes Common Rock-rose (*Helianthemum nummularium**), Greater Knapweed (*Centaurea scabiosa**), Wild Basil (*Clinopodium vulgare*), Field Scabious (*Knautia arvensis*), Marjoram (*Origanum vulgare**), Salad Burnet (*Sanguisorba minor**), Sulphur Clover (*Trifolium ochroleucon**) and Bee Orchid (*Ophrys apifera**).

LoWS Selection Criteria: HCr15, SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

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Ufd118. "High/Prior's Wood Lane" (1.6 ha) TL 546305

This lengthy ancient lane is of sufficient size to be considered as a linear “ancient wood” in its own right, but its close proximity to the large High/Priors wood complex is also an important factor. The Site includes the channel of the fledgling River Cam (Granta) and is of some geomorphological interest as the stream has cut a steep and deep channel into the chalk. The invertebrate fauna of this stony chalk stream may well repay closer investigation.

The lane has an extremely rich and varied flora. The hedgerows contain much Blackthorn (*Prunus spinosa*) and Hawthorn (*Crataegus monogyna*) with coppiced Ash (*Fraxinus excelsior*), Field Maple (*Acer campestre*) and Hornbeam (*Carpinus betulus*) and with standards of Pedunculate Oak (*Quercus robur*). Also present are Spindle Tree (*Euonymus europaeus*), Dogwood (*Cornus sanguinea*), Hazel (*Corylus avellana*), Guelder Rose (*Viburnum opulus*) and Wayfaring Tree (*Viburnum lantana**). The ground flora has Pendulous Sedge (*Carex pendula*), Enchanter's Nightshade (*Circaea lutetiana*), Wood Anemone (*Anemone nemorosa*), Early Dog-violet (*Viola reichenbachiana*), Bluebell (*Hyacinthoides non-scripta*), Greater Burnet Saxifrage (*Pimpinella major**) and Oxlip (*Primula elatior**).

LoWS Selection Criteria: HCr9

Condition and Management Issues: As a bridleway, trampling of the ground flora will always be an issue, with localised heavy disturbance.

Date of first designation: 1994

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Ufd124. Ashdon Road Verges (0.09 ha) TL 55223887 to TL 55463890

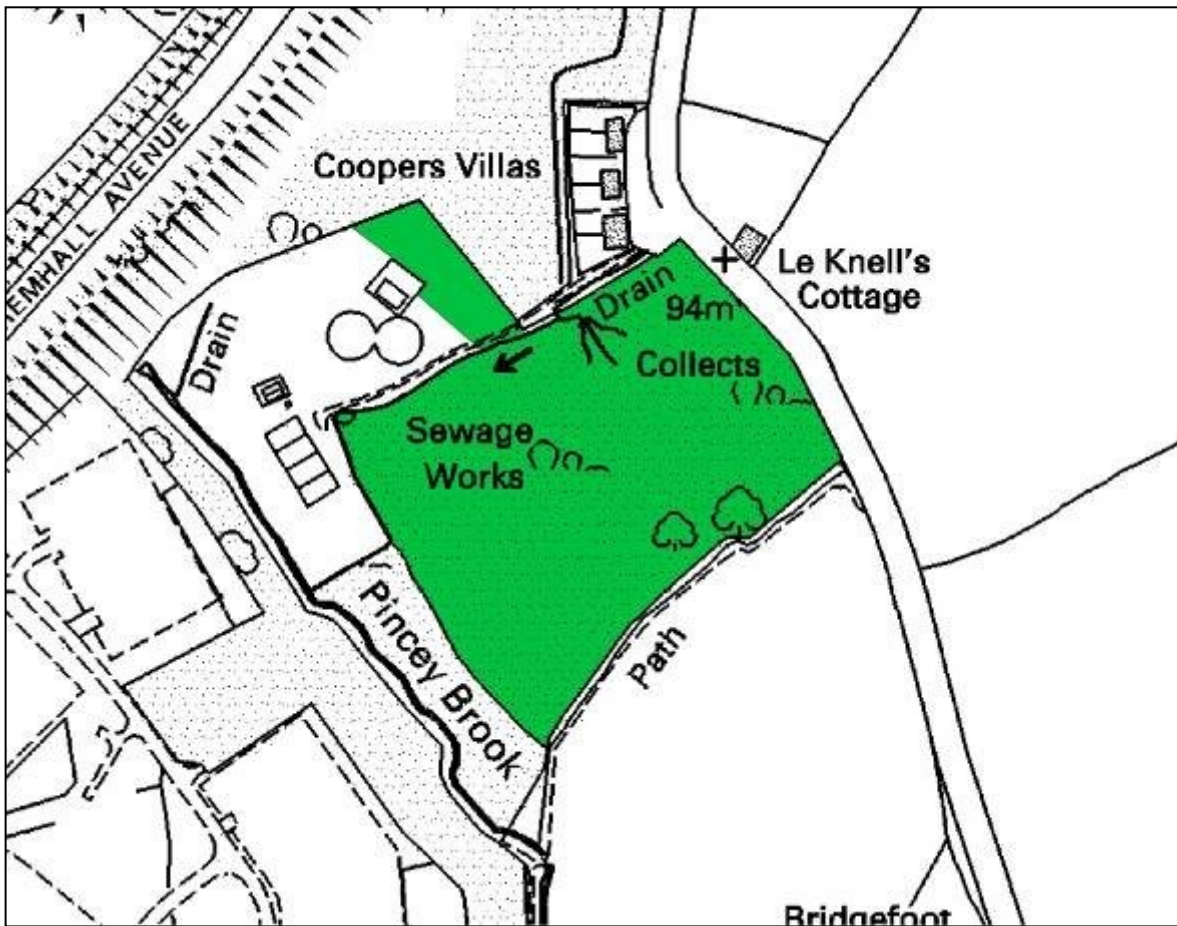
This group of verges includes the Saffron Walden – Ashdon Road Protected Roadside Verge (West Section) UTT45 and have been designated in recognition of their chalk grassland flora. The most interesting section is at the eastern end and is not currently included within the protected verge. The flora here includes Marjoram (*Origanum vulgare**), Greater Knapweed (*Centaurea scabiosa**), Burnet Saxifrage (*Pimpinella saxifraga*), Restharrow (*Ononis repens*), Hoary Plantain (*Plantago media*), Field Scabious (*Knautia arvensis*), Blue Fleabane (*Erigeron acer**) and Fairy Flax (*Linum catharticum**).

LoWS Selection Criteria: HCr15, SCr15

Condition and Management Issues: Parts of the site may be impacted upon by any future widening of the access road to the Commercial Centre. Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd128. Stansted Airport Sewage Works Fen (3.6 ha) TL 555227

This site has been greatly reduced in extent since its original designation on account of disturbance to the northern sewage works grassland. The abandoned works are being used to store organic detritus, with the loss of much of the central part of the site. The surviving flora in the remaining area of species-rich grassland includes Glaucous Sedge (*Carex flacca*), Cowslip (*Primula veris*), Lady's Bedstraw (*Galium verum*), Black Knapweed (*Centaurea nigra*), Field Scabious (*Knautia arvensis*), Lesser Hawkbit (*Leontodon saxatilis*), Red Bartsia (*Odontites vernus*) and Burnet Saxifrage (*Pimpinella saxifraga*). Salad Burnet (*Sanguisorba minor**) and Stemless Thistle (*Cirsium acaule**) have also been recorded, but it is not known if they still survive on the site.

The southern area consists of wet grassland, fen and an increasing amount of scrub. Curiously, a Reed (*Phragmites australis*) bed is developing on the upper slopes of this domed site, whilst on the lower ground Angelica (*Angelica sylvestris*), Marsh Marigold (*Caltha palustris*), Lady's Smock (*Cardamine pratensis*), Greater Burnet Saxifrage (*Pimpinella major**), Hemp Agrimony (*Eupatoria cannabinum*) and Meadowsweet (*Filipendula ulmaria*) can be found. The presence of Fen Bedstraw (*Galium uliginosum**) is of particular note.

LoWS Selection Criteria: HCr11, HCr23, SCr15

Condition and Management Issues: The northern grassland may be under threat from further detrimental activities within the sewage works. Scrub invasion of the fen and wet grassland needs to be controlled.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd131. Lady Wood/Regent's Spring (11.9 ha) TL 556264

The eastern section of Lady Wood, abutting the SSSI Pledgdon Wood, has a coppice-with-standards structure of Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*), Hazel (*Corylus avellana*) and Field Maple (*Acer campestre*). The diverse ground flora includes Pendulous Sedge (*Carex pendula*), Early Purple Orchid (*Orchis mascula**), Common Spotted Orchid (*Dactylorhiza fuchsii*), Herb Paris (*Paris quadrifolia**) and Oxlip (*Primula elatior**).

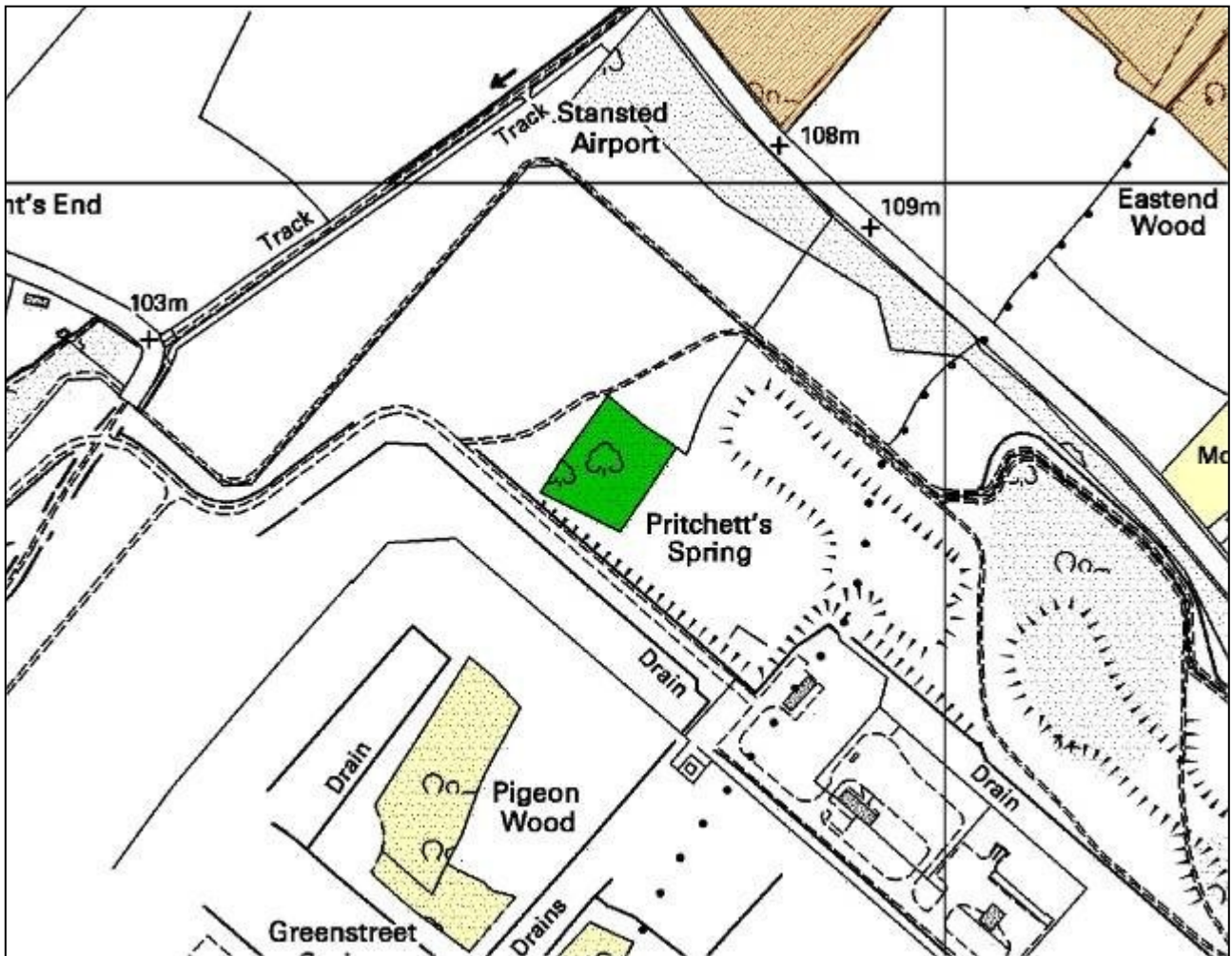
The western section has a similar canopy structure with the addition of a small quantity of Hornbeam (*Carpinus betulus*) and a strip of planted conifers down the eastern margin. The ground flora is dominated by Dog's Mercury (*Mercurialis perennis*), Enchanter's Nightshade (*Circaea lutetiana*) and Bramble (*Rubus fruticosus*), but also includes Oxlip, various sedges (*Carex* spp.) and Pignut (*Conopodium majus*). The adjoining Regent's spring is old if not ancient woodland and is also an Oak/Ash/Hazel/Maple wood with a reasonably diverse ground flora. The standard oaks are rather even-aged, which suggests old planting or regeneration from a more or less similar point in time.

LoWS Selection Criteria: HCr1(a), HCr2(a)

Condition and Management Issues: Thinning of standards may allow for greater understorey and ground flora growth, which would increase habitat diversity.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd133. Pritchett's Spring (0.5 ha) TL 558248

It has not been possible to re-survey this small wood on account of its location within the security perimeter of Stansted Airport. The following description is taken from historical data.

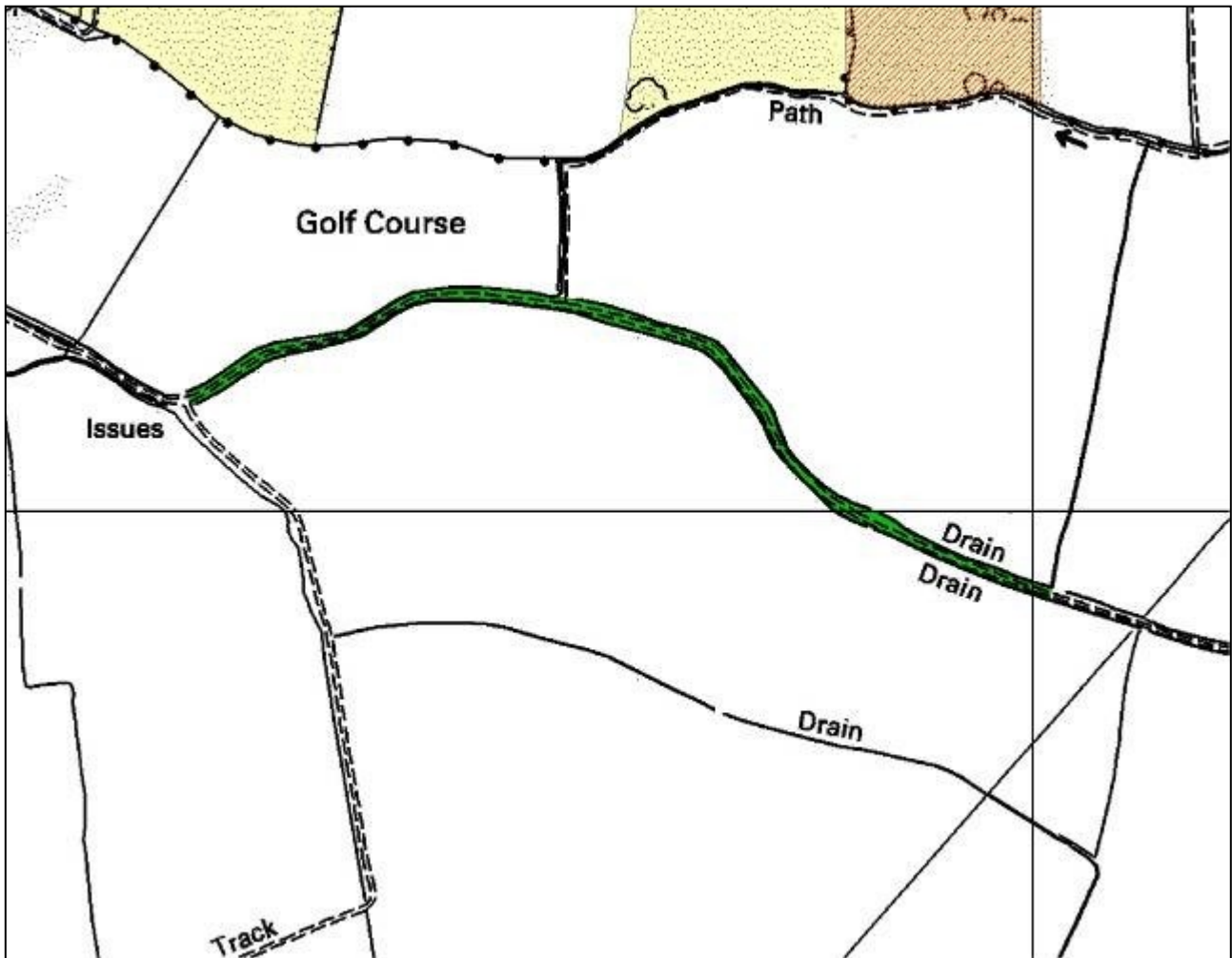
This small, probably ancient copse has abundant Hornbeam (*Carpinus betulus*) with occasional Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*) and Hazel (*Corylus avellana*). Hawthorn (*Crataegus monogyna*), Midland Hawthorn (*Crataegus laevigata*) and Elder (*Sambucus nigra*) form a dense shrub layer. The ground flora is typified by Wood False Brome (*Brachypodium sylvaticum*), Bramble (*Rubus fruticosus*) and False Oat-grass (*Arrhenatherum elatius*) but also includes Three-veined Sandwort (*Moehringia trinervia*), Early Purple Orchid (*Orchis mascula**), Pignut (*Conopodium majus*) and Cowslip (*Primula veris*).

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: This wood is ecologically isolated, following its incorporation into the Stansted airport development.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd134. Eastend Lane (0.5 ha) TL 558261

This section of lane has been designated on account of its grassland flora, although the well-maintained species-rich hedges also add to the wildlife value of the site. The key species are Rockrose (*Helianthemum nummularium**), Restharrow (*Ononis repens*) and Greater Burnet-saxifrage (*Pimpinella major**), but the flora also includes frequent Black Knapweed (*Centaurea nigra*), Agrimony (*Agrimonia eupatoria*), Field Scabious (*Knautia arvensis*), Autumn Hawkbit (*Leontodon autumnalis*) and Red Bartsia (*Odontites vernus*).

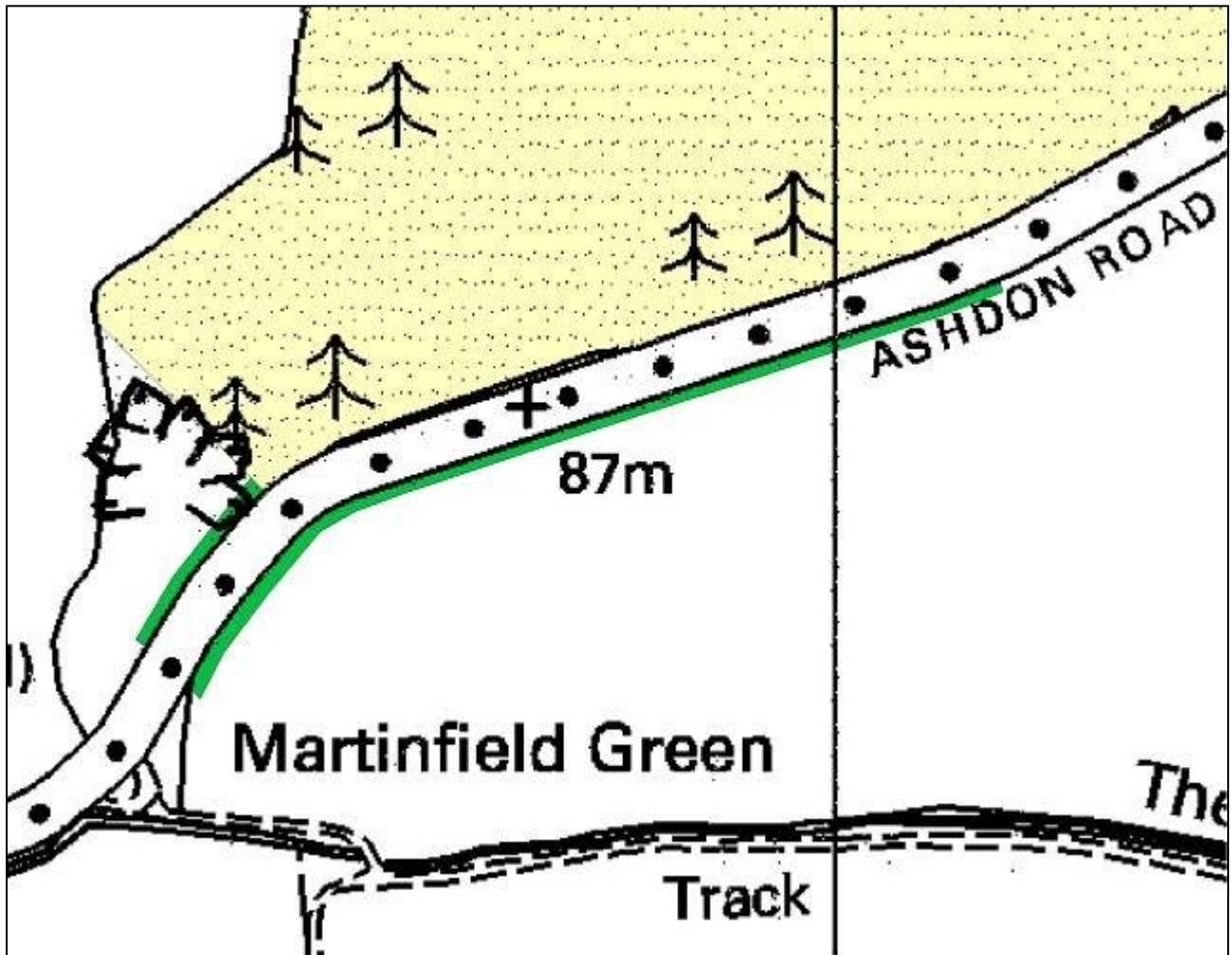
The hedges comprise mainly Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*), but also include Field Maple (*Acer campestre*), Dogwood (*Cornus sanguinea*), Pedunculate Oak (*Quercus robur*), Elder (*Sambucus nigra*), Guelder Rose (*Viburnum opulus*) and Wayfaring Tree (*Viburnum lantana**).

LoWS Selection Criteria: HCr11, SCr15

Condition and Management Issues: Despite being a bridleway, trampling of the track surface is currently very slight. Re-surfacing of the track with artificial substrate would be highly detrimental.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd135. Saffron Walden - Ashdon Road Protected Roadside Verges UTT23 (0.1 ha) TL 55803913 to TL 56053925

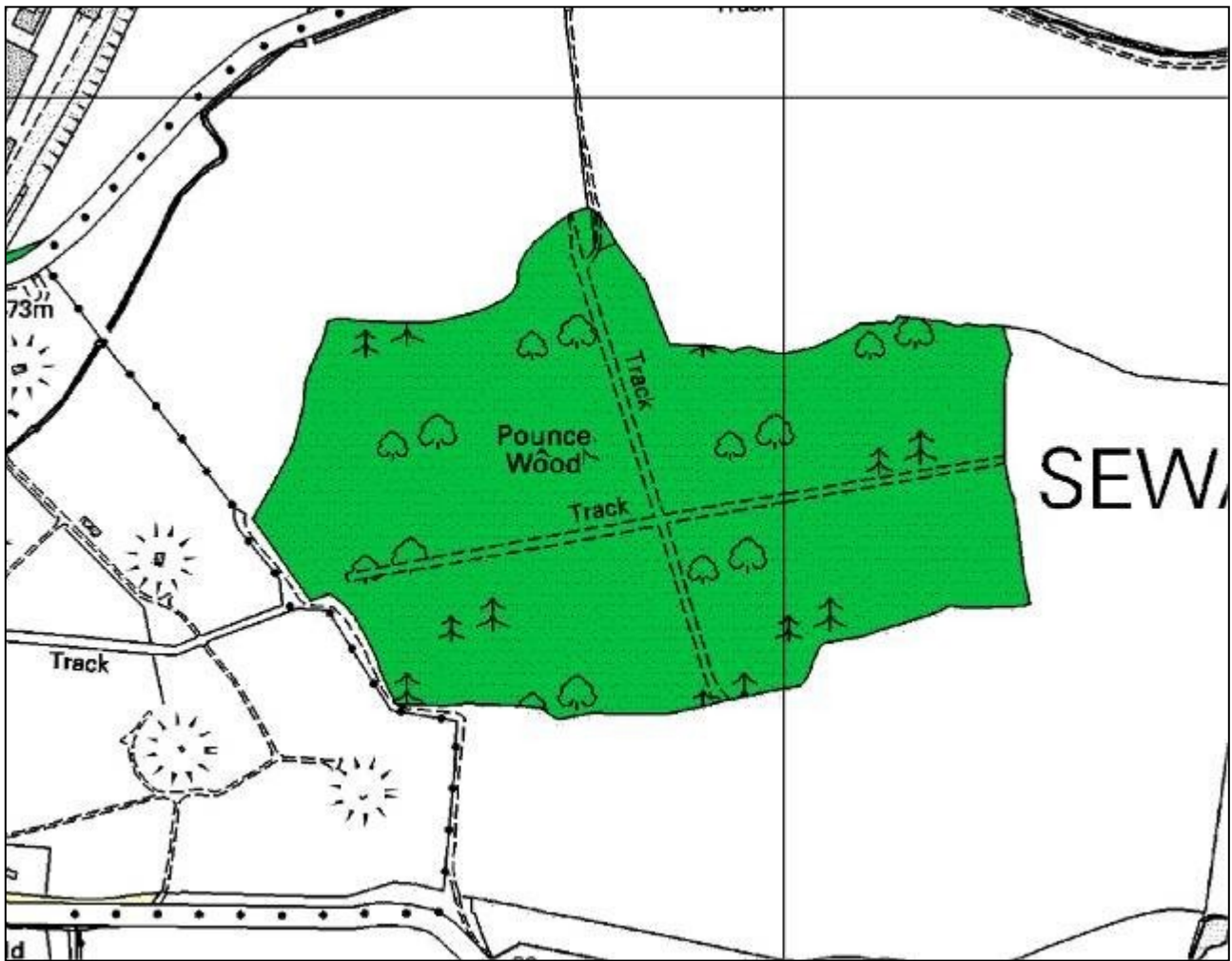
The chalk flora of these two road verges includes Crested Cow-wheat (*Melampyrum cristatum**), Rockrose (*Helianthemum nummularium**), Kidney Vetch (*Anthyllis vulneraria**) and Narrow-leaved Everlasting-pea (*Lathyrus sylvestris*). It should be noted that much of the protected verge along the north side of the road is included within the adjacent woodland LoWS.

LoWS Selection Criteria: SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend. This verge has suffered from extremely close mowing in recent years.

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Date of last revision: 30/09/2007



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Ufd136. Pounce Wood (13.6 ha) TL 559387

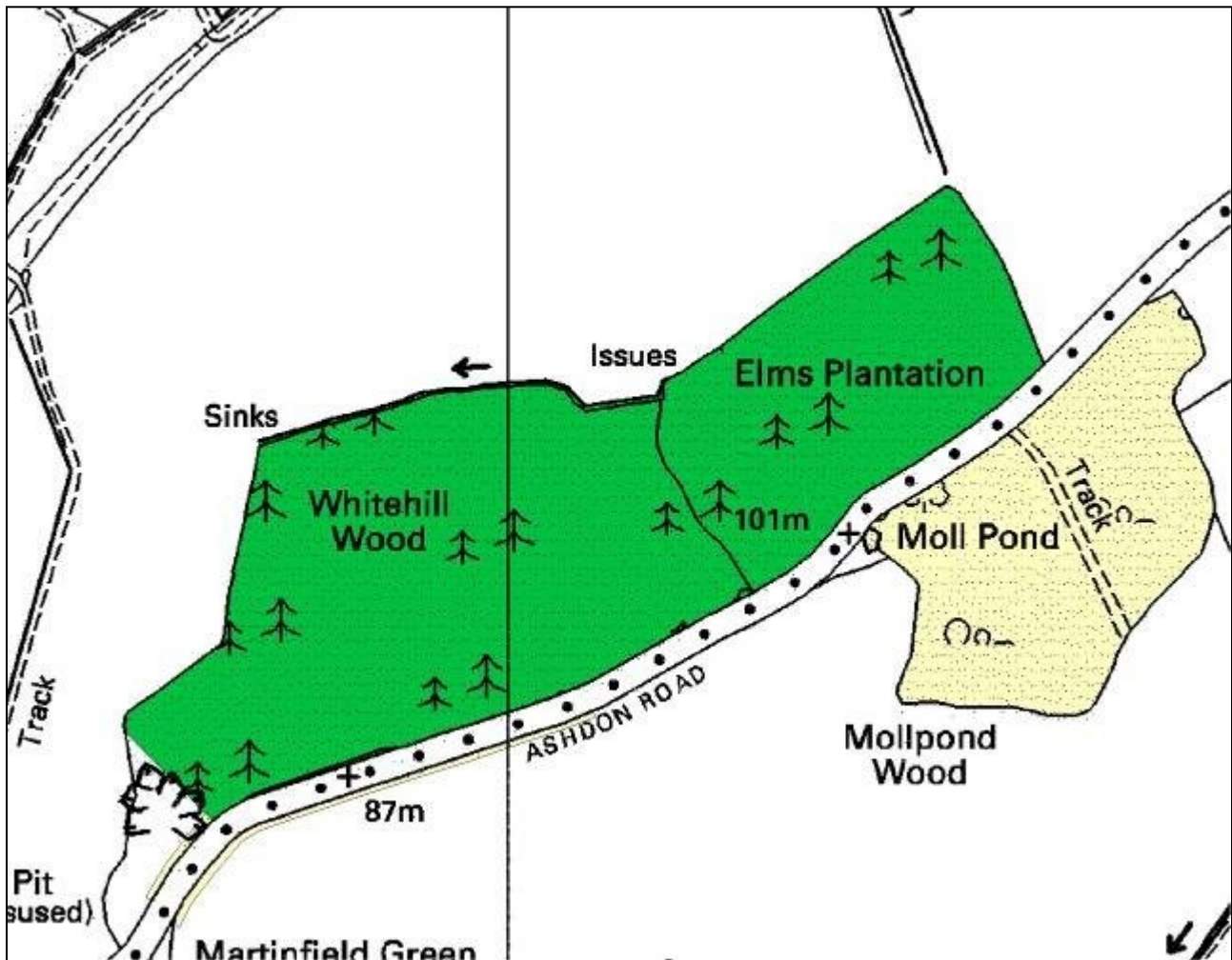
This large ancient wood has been almost entirely replanted with Beech (*Fagus sylvatica*), Spruce (*Picea* sp.) and other conifers. The native broadleaved canopy of Ash (*Fraxinus excelsior*), Field Maple (*Acer campestre*), Pedunculate Oak (*Quercus robur*) and Hazel (*Corylus avellana*) is restricted to a narrow boundary strip. The ground flora is very restricted under the dense canopy, with only scattered Bluebell (*Hyacinthoides non-scripta*) and Dog's Mercury (*Mercurialis perennis*) under the Beech. The main rides support a reasonable marshy grassland flora, with frequent Wood Sedge (*Carex sylvatica*) and Remote Sedge (*Carex remota*). A primary management aim should be the replacement of the exotic species with native trees.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The ground flora is limited by the generally dense shade cast by the planted canopy. Replacement with a semi-natural broadleaved canopy and understorey would be highly desirable.

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Date of last revision: 30/09/2007



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Ufd139. Whitehill Wood (8.1 ha) TL 560393

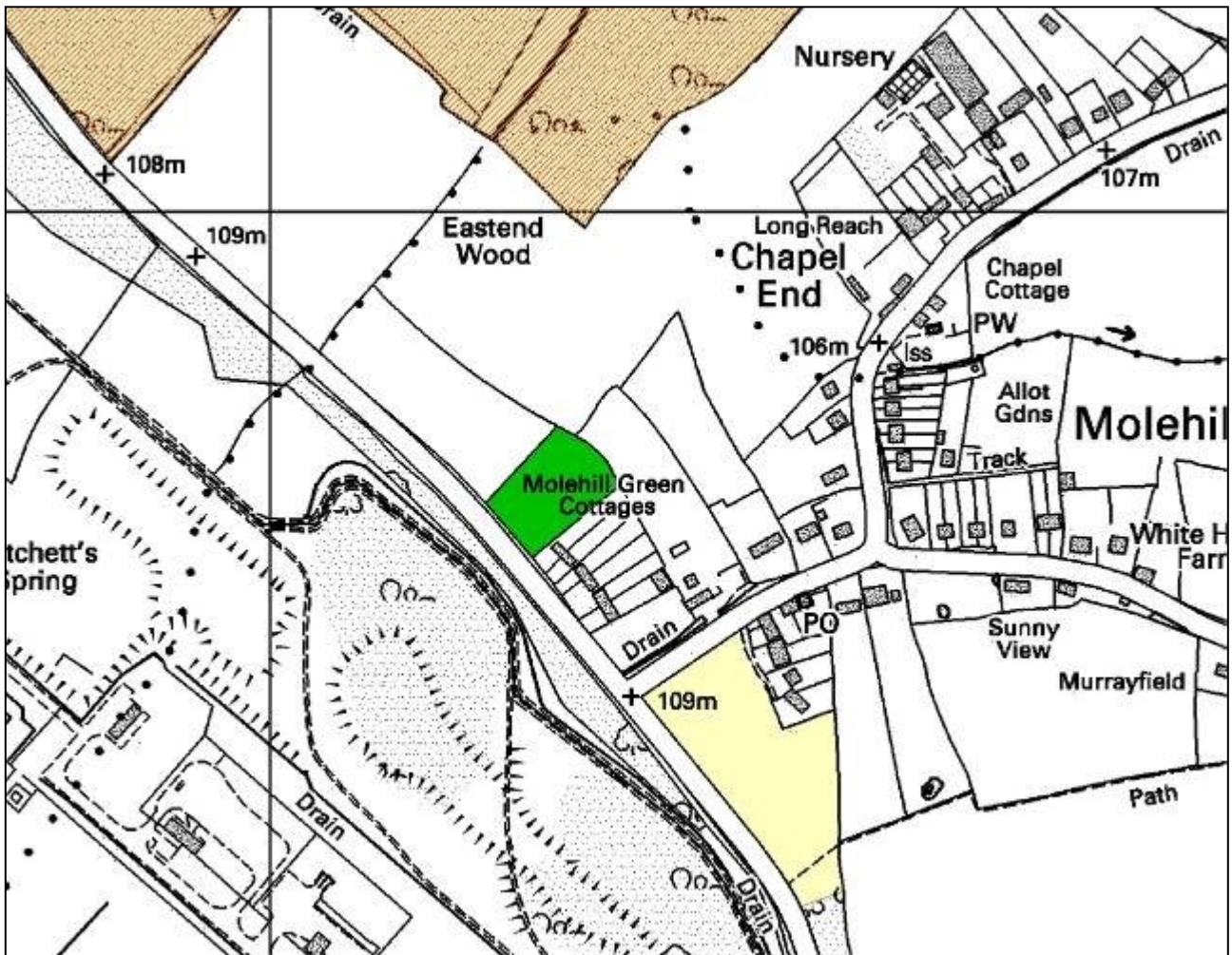
The canopy of this ancient wood has been almost entirely replaced by conifers, with native broadleaved species restricted to narrow strips along the rides and boundary. The latter species include Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*), Field Maple (*Acer campestre*) and Hazel (*Corylus avellana*). The sparse ground flora includes Hairy St. John's-wort (*Hypericum hirsutum*), Dog's Mercury (*Mercurialis perennis*) and Three-veined Sandwort (*Moehringia trinervia*). The nationally scarce Wood Barley (*Hordelymus europaeus**) has been recorded in this wood, though has not been recently seen, possibly due to the adverse light conditions under the very dense conifer canopy. The site is also notable for the presence of Crested Cow-wheat (*Melampyrum cristatum**) along the southern boundary, which forms part of a protected road verge.

LoWS Selection Criteria: HCr1(a), SCr15

Condition and Management Issues: The ground flora is limited by the generally dense shade cast by the planted canopy. Replacement with a semi-natural broadleaved canopy and understorey would be highly desirable.

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Ufd143. Molehill Green Meadow (0.5 ha) TL 562248

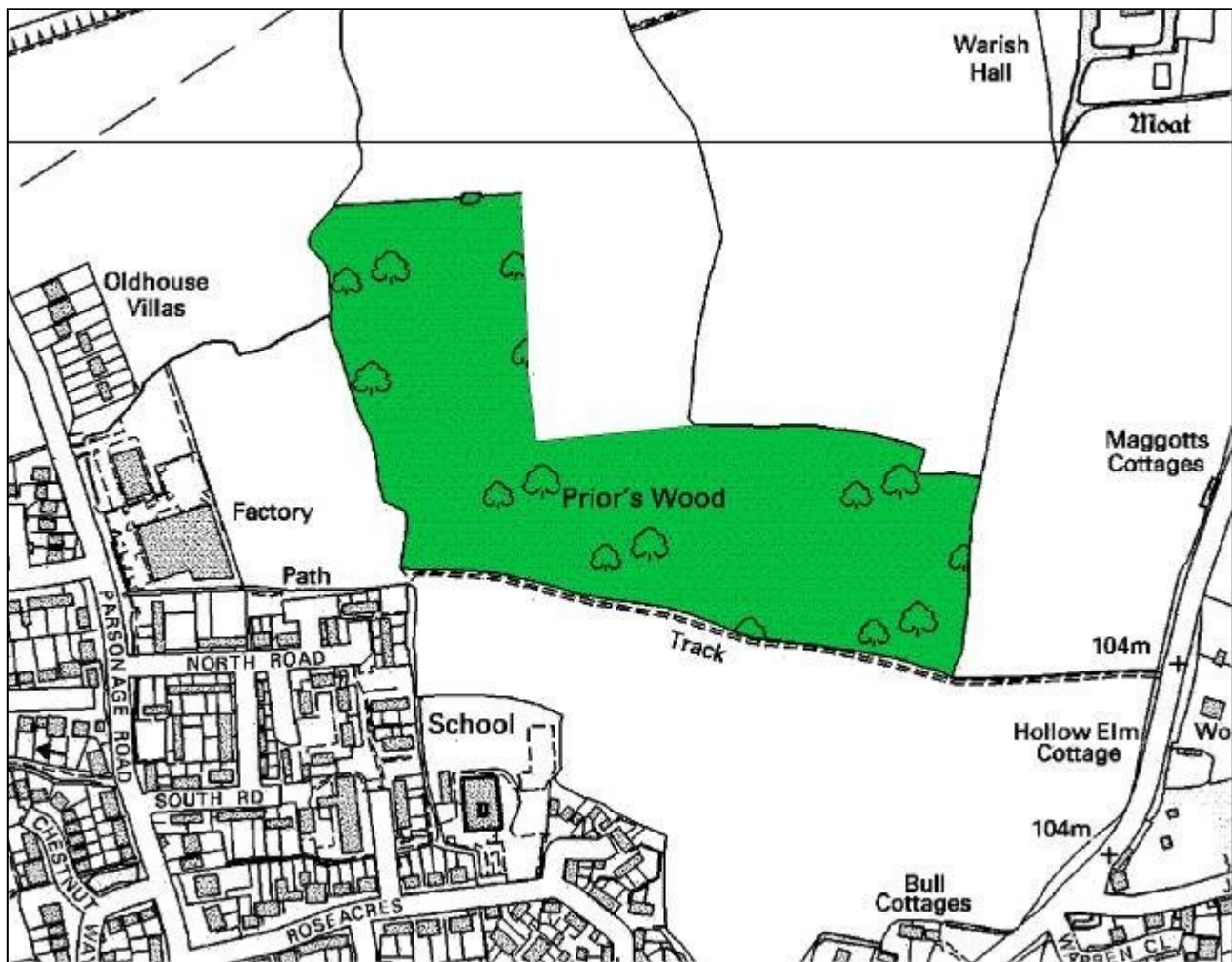
This species-rich meadow is notable for its population of Cowslip (*Primula veris*), although appears to be in decline in the face of scrub growth and an increasingly rough grass sward. The grass sward includes Meadow Foxtail (*Alopecurus pratensis*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Crested Dog's-tail (*Cynosurus cristatus*), Tufted Hair-grass (*Deschampsia cespitosa*), Red Fescue (*Festuca rubra*) and Meadow-grasses (*Poa* spp.). Characteristic herbs include Black Knapweed (*Centaurea nigra*), Red Bartsia (*Odontites vernus*) and Agrimony (*Agrimonia eupatoria*). Common Sedge (*Carex nigra**), a scarce Essex plant has also been recorded, although not during this present survey, along with Glaucous Sedge (*Carex flacca*) and Common Spotted Orchid (*Dactylorhiza fuchsii*).

LoWS Selection Criteria: HCr10

Condition and Management Issues: This meadow is suffering from neglect, with the spread of scrub and invasion by taller, coarse grasses and herbs. Scrub clearance and light grazing would be beneficial.

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Ufd146. Prior's Wood (8.0 ha) TL 563218

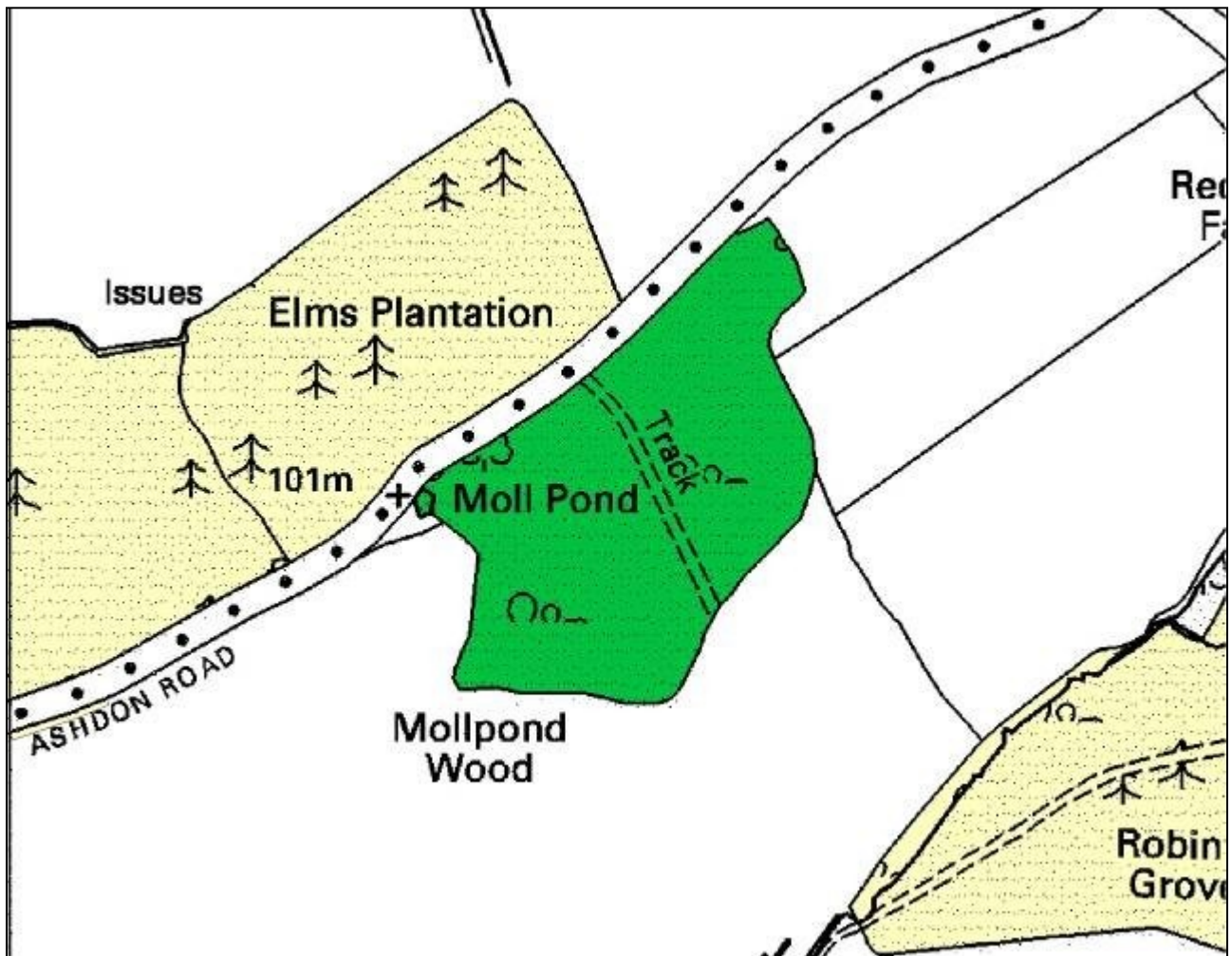
The canopy of this ancient wood comprises tree-sized coppiced Hornbeam (*Carpinus betulus*) and Pedunculate Oak (*Quercus robur*) standards. Previously recorded conifers appear to have been removed or are now very few in number. The understorey includes locally frequent holly (*Ilex aquifolium*) and some Midland Hawthorn (*Crataegus laevigata*), Field Maple (*Acer campestre*) and Crab Apple (*Malus sylvestris*). The ground flora has an unusual abundance of sedges, with both Pendulous Sedge (*Carex pendula*) and Wood Sedge (*Carex sylvatica*) being frequent. Dog's Mercury (*Mercurialis perennis*) and Bramble (*Rubus fruticosus*). Twayblade Orchid (*Listera ovata**), Hairy Wood-rush (*Luzula pilosa**), Early Purple Orchid (*Orchis mascula**), Wood Sorrel (*Oxalis acetosella*) and Herb Paris (*Paris quadrifolia**) have been recorded within the flora, although the quality of the ground vegetation is being impaired by the dense shade cast by over-grown coppice. There are numerous well-used paths around the site.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The ground flora is suffering from the deep shade cast by the overgrown coppice canopy. A resumption of coppicing would be desirable. Trampling from public access is increasing and may be an issue in the future.

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Date of last revision: 30/09/2007



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Ufd147. Mollpond Wood (2.8 ha) TL 563393

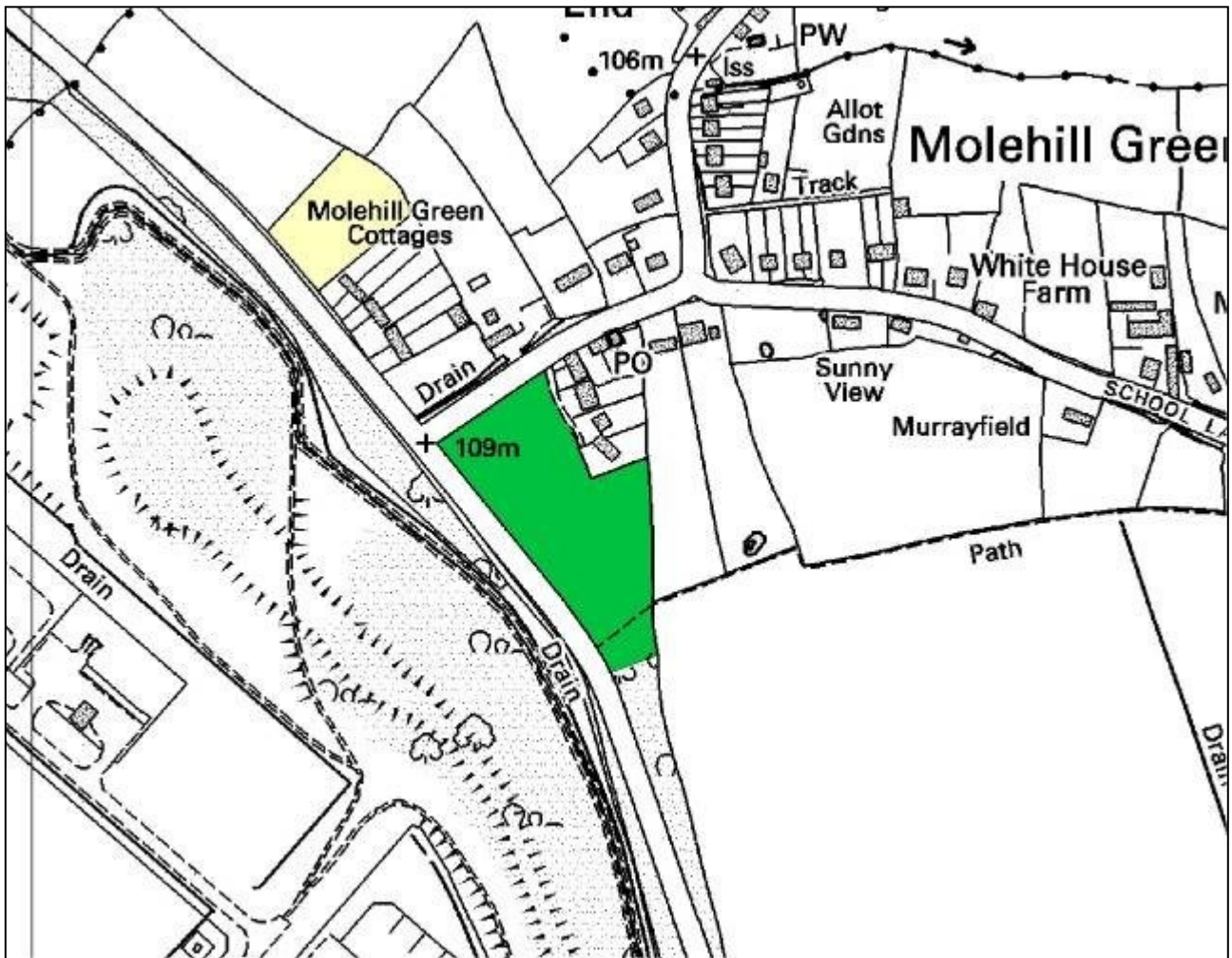
This ancient wood has been extensively replanted with Pedunculate Oak (*Quercus robur*) and Pine (*Pinus* sp.), with only scattered remnants of the native broadleaved canopy remaining. This comprises Hazel (*Corylus avellana*), Ash (*Fraxinus excelsior*) and Field Maple (*Acer campestre*) with a thin scrub layer of Hawthorn (*Crataegus monogyna*), Midland Hawthorn (*Crataegus laevigata*) and Dogwood (*Cornus sanguinea*). The maturing plantation has an increasingly dense canopy that allows a restricted ground flora to flourish, with typical species being Wood False Brome (*Brachypodium sylvaticum*), Dog's Mercury (*Mercurialis perennis*), Hairy St. John's-wort (*Hypericum hirsutum*) and Bramble (*Rubus fruticosus*).

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The ground flora is limited by the generally dense shade cast by the planted canopy. Replacement with a semi-natural broadleaved canopy and understorey would be highly desirable.

Date of first designation: 1994

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Ufd148. Molehill Green (1.4 ha) TL 564246

This Site formerly extended to include the scrub hedgerows leading south-east from the open grassland (comprising the full extent of this piece of common land) but the site is now reduced to encompass its main focus of interest: unimproved damp grassland.

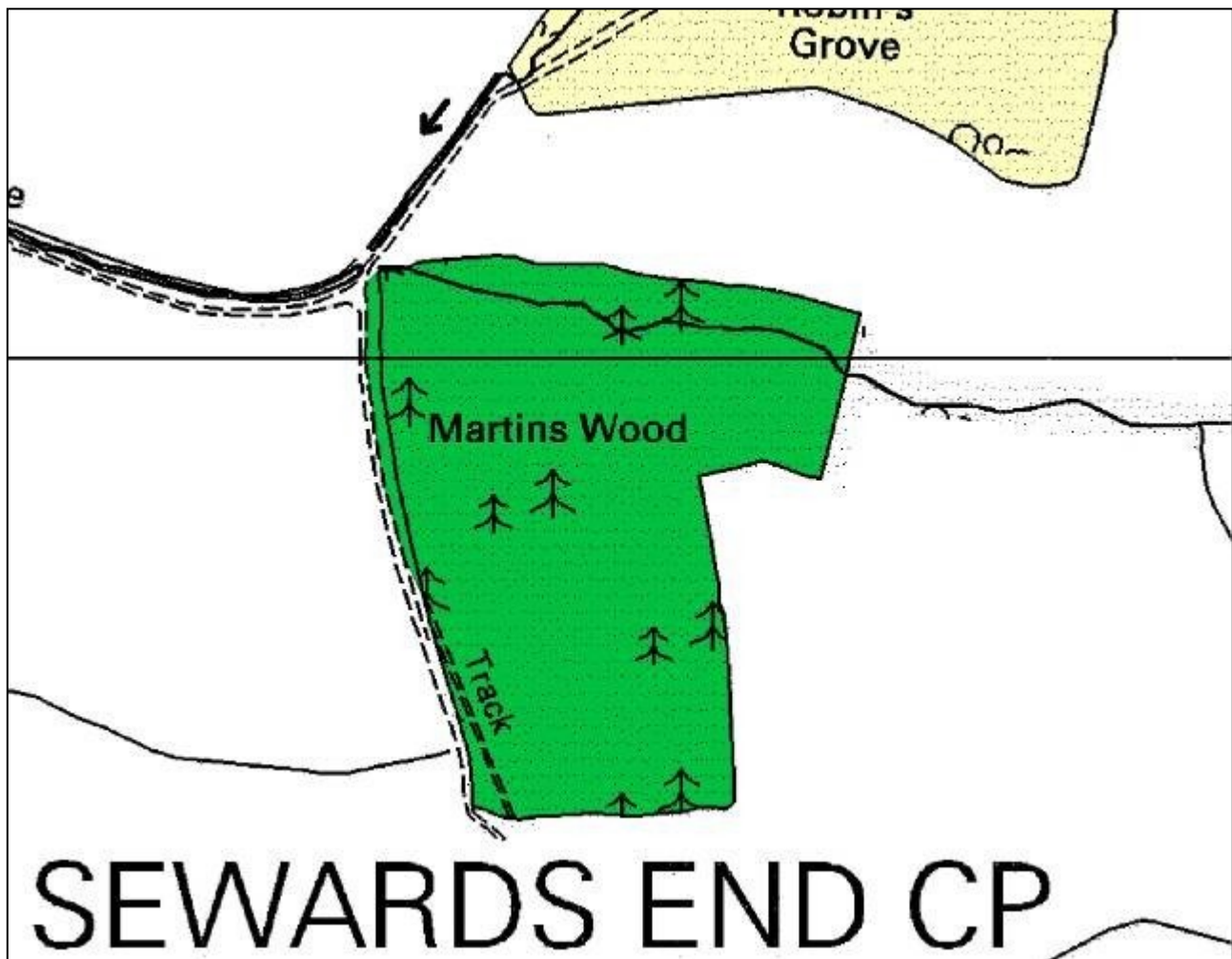
This is a rare Essex habitat type supporting Lady's Smock (*Cardamine pratensis*), Lady's Bedstraw (*Galium verum*), Pepper Saxifrage (*Silaum silaus**), and Devil's-bit Scabious (*Succisa pratensis**) amongst a sward of Bent-grasses (*Agrostis* spp.), Sweet Vernal Grass (*Anthoxanthum odoratum*), Tufted Hair-grass (*Deschampsia cespitosa*), Fescues (*Festuca* spp.), Yorkshire Fog (*Holcus lanatus*), Glaucous Sedge (*Carex flacca*) and Meadow-grasses (*Poa* spp.).

LoWS Selection Criteria: HCr10, SCr15

Condition and Management Issues: An annual hay crop is probably the most pragmatic way of maintaining this piece of open grassland, although some grazing with tethered animals may be beneficial.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd155. Martin's Wood (4.9 ha) TL 565389

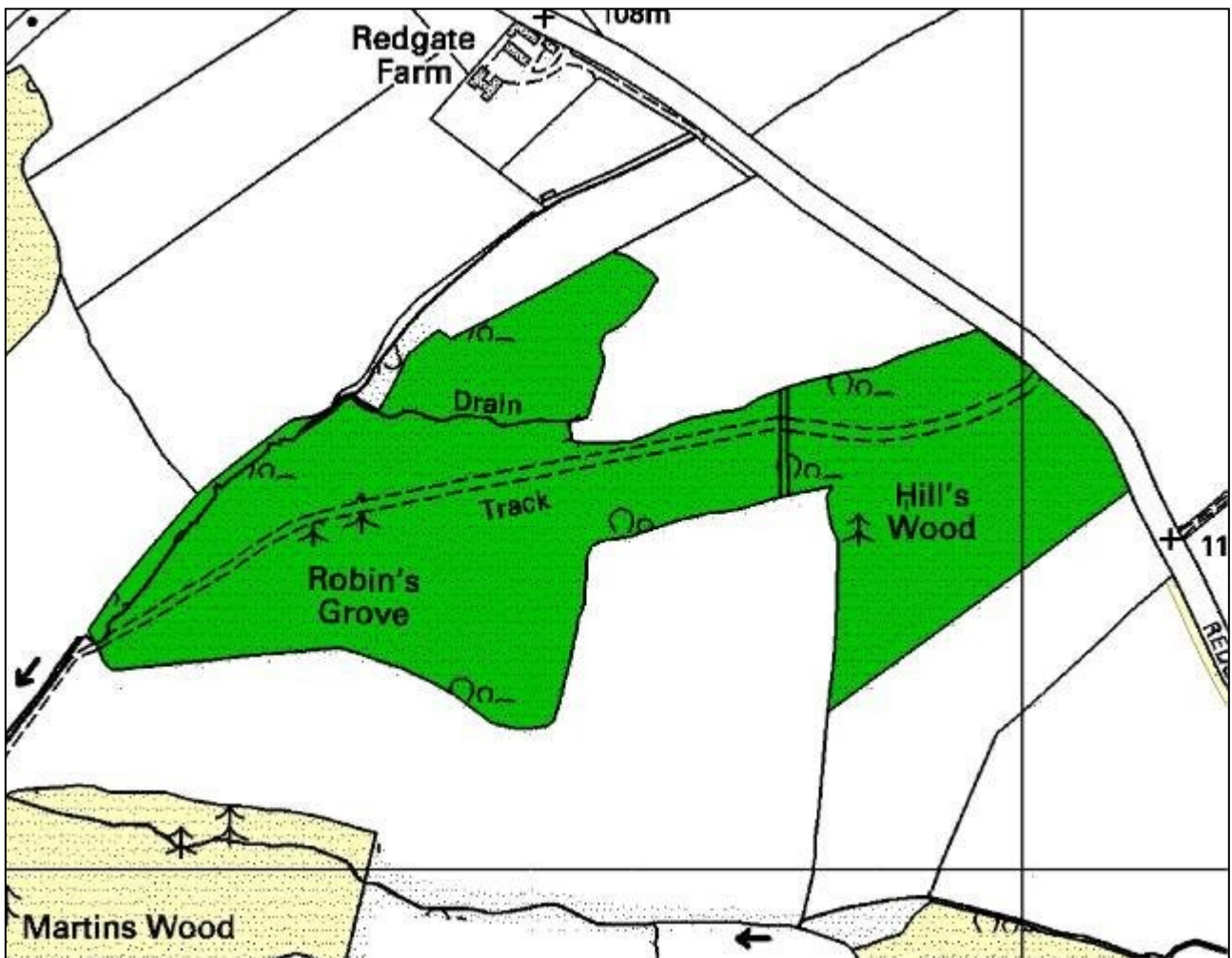
This ancient wood has an impoverished ground flora due to dense coniferisation of the canopy. Native broadleaved species such as Field Maple (*Acer campestre*), Hazel (*Corylus avellana*) and Goat Willow (*Salix caprea*) are largely restricted to the boundary banks, where Midland Hawthorn (*Crataegus laevigata*), Blackthorn (*Prunus spinosa*) and Hawthorn (*Crataegus monogyna*) may also be found. A narrow strip of wood to the north of the stream supports a native canopy of Ash (*Fraxinus excelsior*). The ground flora is absent over much of the floor, but where slightly better light levels prevail some typical ancient woodland plants such as Dog's Mercury (*Mercurialis perennis*), Yellow Archangel (*Lamium galeobdolon*), Pendulous Sedge (*Carex pendula*) and Bush Vetch (*Vicia sepium*) survive. Conversion to a native broadleaved canopy should be an urgent management aim.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The ground flora is limited by the generally dense shade cast by the planted canopy. Replacement with a semi-natural broadleaved canopy and understorey would be highly desirable.

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Date of last revision: 30/09/2007



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Ufd156. Robin's Grove/Hills Wood (8.5 ha) TL 566392

These two contiguous ancient woods have been largely restocked with conifers, although less emphatically so than the adjacent Martin's Wood, so that the semi-natural broadleaved regrowth in between the conifers gives more of a mixed woodland feel over much of the site. The native tree and shrub assemblage is varied, though sparse, and includes Field Maple (*Acer campestre*), Hazel (*Corylus avellana*), Midland Hawthorn (*Crataegus laevigata*), Spindle Tree (*Euonymus europaeus*), Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*) and Wayfaring Tree (*Viburnum lantana**). Species of note amongst the ground flora include Wood Millet (*Milium effusum*), Three-veined Sandwort (*Moehringia trinervia*), Giant Fescue (*Festuca gigantea*), Oxlip (*Primula elatior**), Greater Burnet Saxifrage (*Pimpinella major**), Wood Anemone (*Anemone nemorosa*) and Hairy St. John's-wort (*Hypericum hirsutum*). The main ride supports an interesting marshy grassland habitat typified by Angelica (*Angelica sylvestris*), Marsh Thistle (*Cirsium palustre*), Meadowsweet (*Filipendula ulmaria*), Jointed Rush (*Juncus articulatus*), Creeping Jenny (*Lysimachia nummularia*) and Tufted Hair-grass (*Deschampsia cespitosa*).

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The ground flora is limited by the generally dense shade cast by the planted canopy, although this wood is in better overall condition than those to the west. Replacement with a semi-natural broadleaved canopy and understorey would still be desirable.

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd162. Redgates (1.6 ha) TL 570389

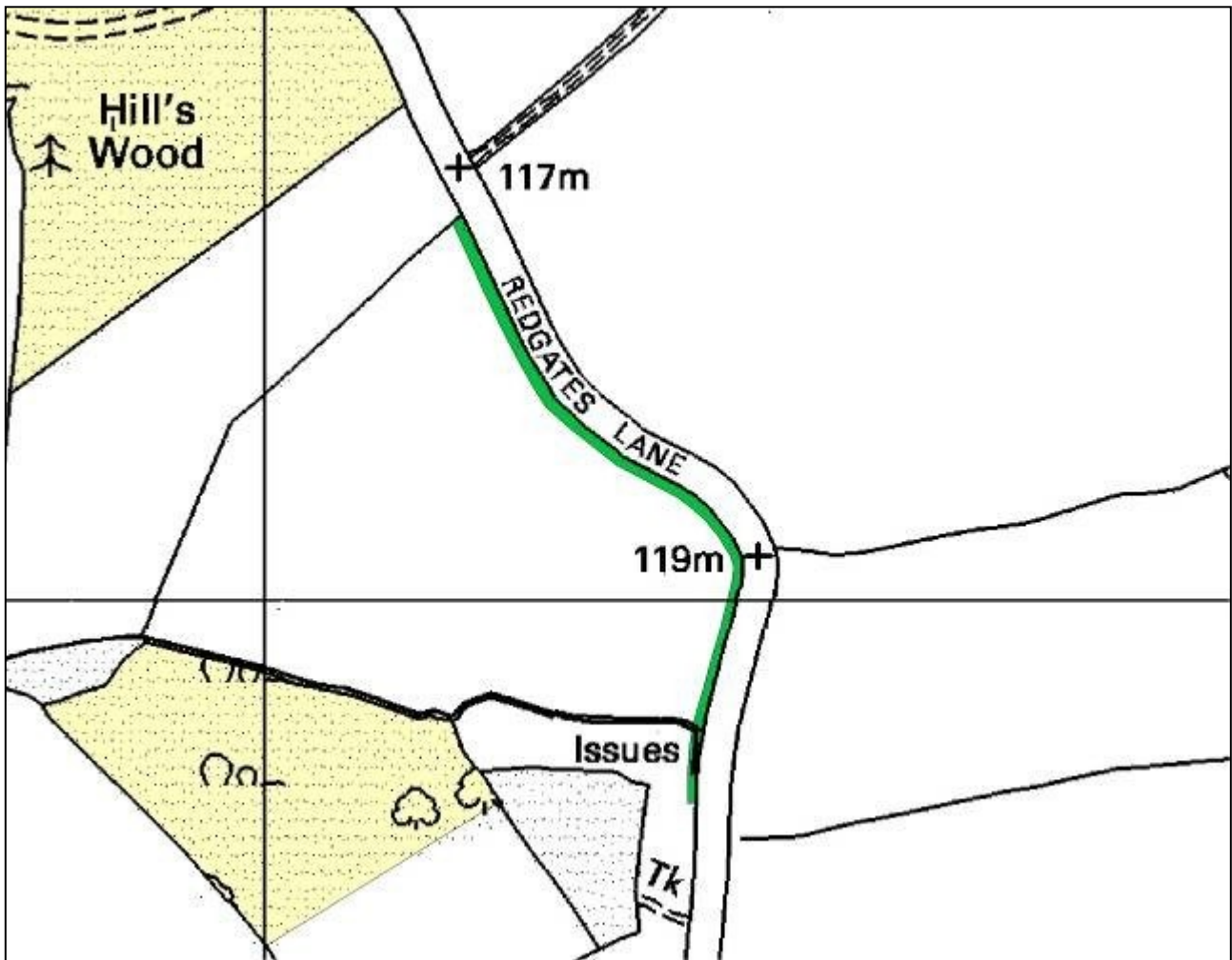
This site comprises flower-rich chalky grassland with scrub. The main species of interest is the large population of Wild Liquorice (*Astragalus glycyphyllos**), but the species-rich sward also includes Agrimony (*Agrimonia eupatoria*), Yellow-wort (*Blackstonia perfoliata**), Black Knapweed (*Centaurea nigra*), Wild Basil (*Clinopodium vulgare*), Common Spotted Orchid (*Dactylorhiza fuchsii*), Fairy Flax (*Linum catharticum**) and Bird's-foot Trefoil (*Lotus corniculatus*).

LoWS Selection Criteria: HCr15, SCr15

Condition and Management Issues: A reduction in the extent of scrub would be desirable, although some scattered scrub would be beneficial to invertebrates and birds.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd165. Redgates Lane (0.1 ha) TL 572389

This site comprises the road verge, hedge and immediate inner field margin. It has been identified on account of its scattered population of the nationally scarce plant Crested Cow-wheat (*Melampyrum cristatum**). The southern section of the verge comprises Essex County Council Protected Roadside Verge UTT53. A small number of plants of the Essex Red Data Listed Wild Liquorice (*Astragalus glycyphyllos**) also occur here, along the inner field margin. Whilst the distribution of important plants is rather patchy along this hedgerow, it is hoped that appropriate management of the verge, hedgerow and field margin might allow the Crested Cow-wheat to spread and strengthen this localised population.

LoWS Selection Criteria: SCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. Nutrient enrichment is likely to be a long-term trend. The Protected Road Verge is suffering from dense shading from the adjacent hedge. It is not known what impact the sheep grazing of the adjacent field is having on the Cow-wheat in the long-term.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd194. Little Easton Airfield (7.6 ha) TL 592230

This unusual site comprises broad strips of grassland adjacent to old airfield runways and one isolated patch of grassland. Of particular note amongst the flora is a very large population of Yellow Rattle (*Rhinanthus minor**), a rare Essex plant. Also present are Bee Orchid (*Ophrys apifera**), Yellow-wort (*Blackstonia perfoliata**), Fairy Flax (*Linum catharticum**), Common Spotted Orchid (*Dactylorhiza fuchsii*), Common Centaury (*Centaureum erythraea*), Lady's Bedstraw (*Galium verum*), Cowslip (*Primula veris*) and Bush-grass (*Calamagrostis epigejos**), another scarce plant in the county. One strip supports a large stand of Tufted Hair-grass (*Deschampsia cespitosa*) grassland, a scarce Essex habitat type.

LoWS Selection Criteria: HCr11, SCr15

Condition and Management Issues: The northern strip is becoming badly scrubbed-up in places.

Date of first designation: 1994

Date of last revision: 30/09/2007

Ufd196. Flich Way (33.6 ha) TL 595212

This disused railway line has been taken over by the County Council as a bridle/pathway which in addition acts as a valuable wildlife corridor throughout the south of the district, as well providing a good series of habitats in its own right. At nearly 34 hectares it is effectively one of the largest woodland/scrub/grassland habitats of high nature conservation value in the district. N.B. This LoWS includes a small number of woodland fragments adjacent to the Flich Way that are in private ownership.

Woodland and hedgerow species include: Wild Clematis (*Clematis vitalba*), Dog's Mercury (*Mercurialis perennis*), Yellow Archangel (*Lamiastrum galeobdolon*), Primrose (*Primula vulgaris*), Bluebell (*Hyacinthoides non-scripta*), Sweet Violet (*Viola odorata*), Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium**), Remote Sedge (*Carex remota*), Wood Millet (*Milium effusum*), Early dog-violet (*Viola reichenbachiana*) and Ramsons (*Allium ursinum*).

The varied ground conditions that result from the various embankments and cuttings as well as the importation of artificial substrates gives rise to a high diversity of grassland types. Typical species include: Black Knapweed (*Centaurea nigra*), Greater Knapweed (*Centaurea scabiosa**), Cowslip (*Primula veris*), Salad Burnet (*Sanguisorba minor**), Burnet Saxifrage (*Pimpinella saxifraga*), Marsh Thistle (*Cirsium palustre*), Meadowsweet (*Filipendula ulmaria*), Bog Stitchwort (*Stellaria uliginosa*) and Sheep's Sorrel (*Rumex acetosella*).

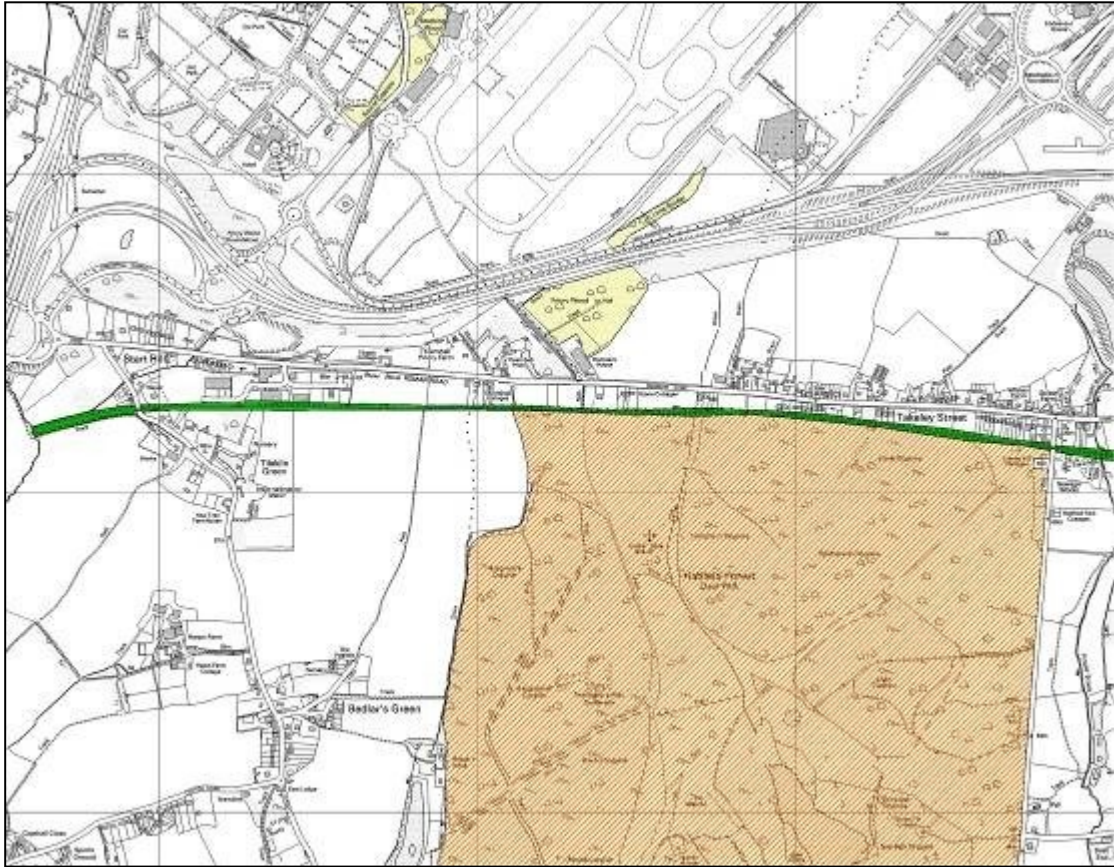
The invertebrate populations include some interesting records, including many Nationally Scarce species, such as the Hornet Moth (*Sesia apiformis*), the Pimpinel Pug moth (*Eupithecia pimpinellata*) and the digger wasp *Crossocerus distinguendus*.

LoWS Selection Criteria: HCr9, HCr11, SCr14, SCr15

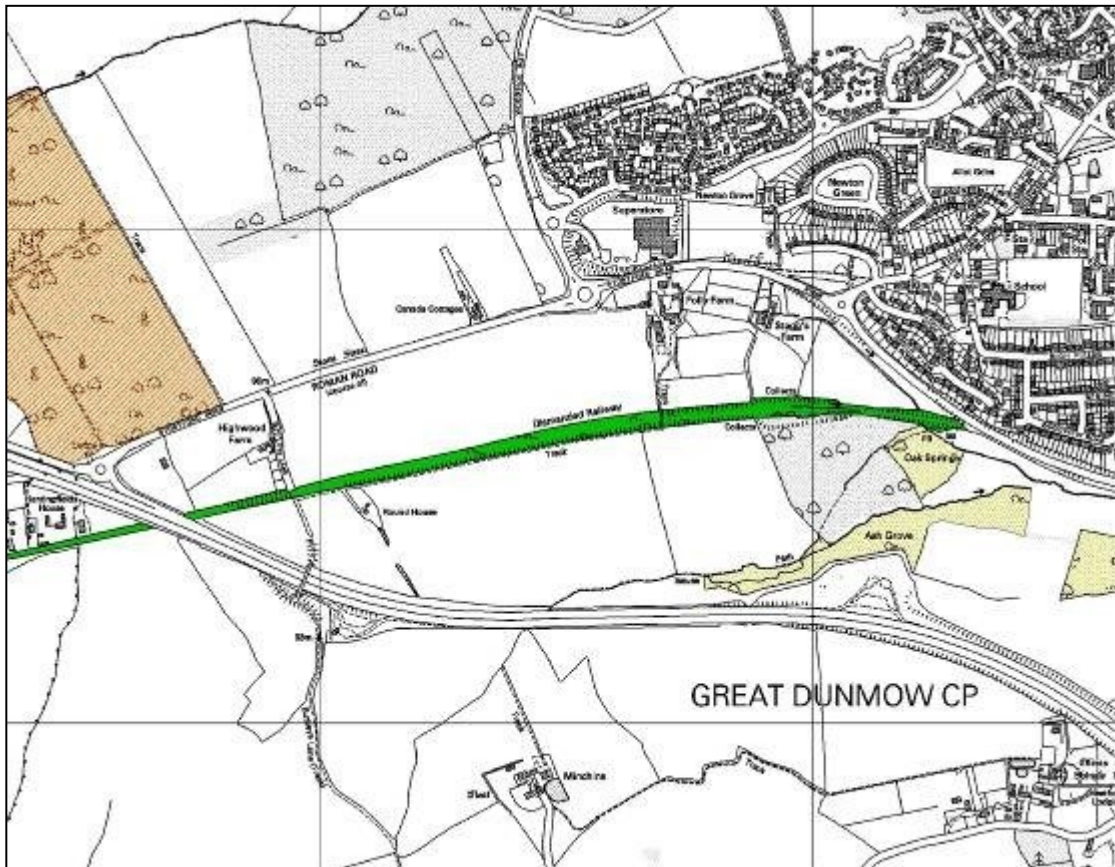
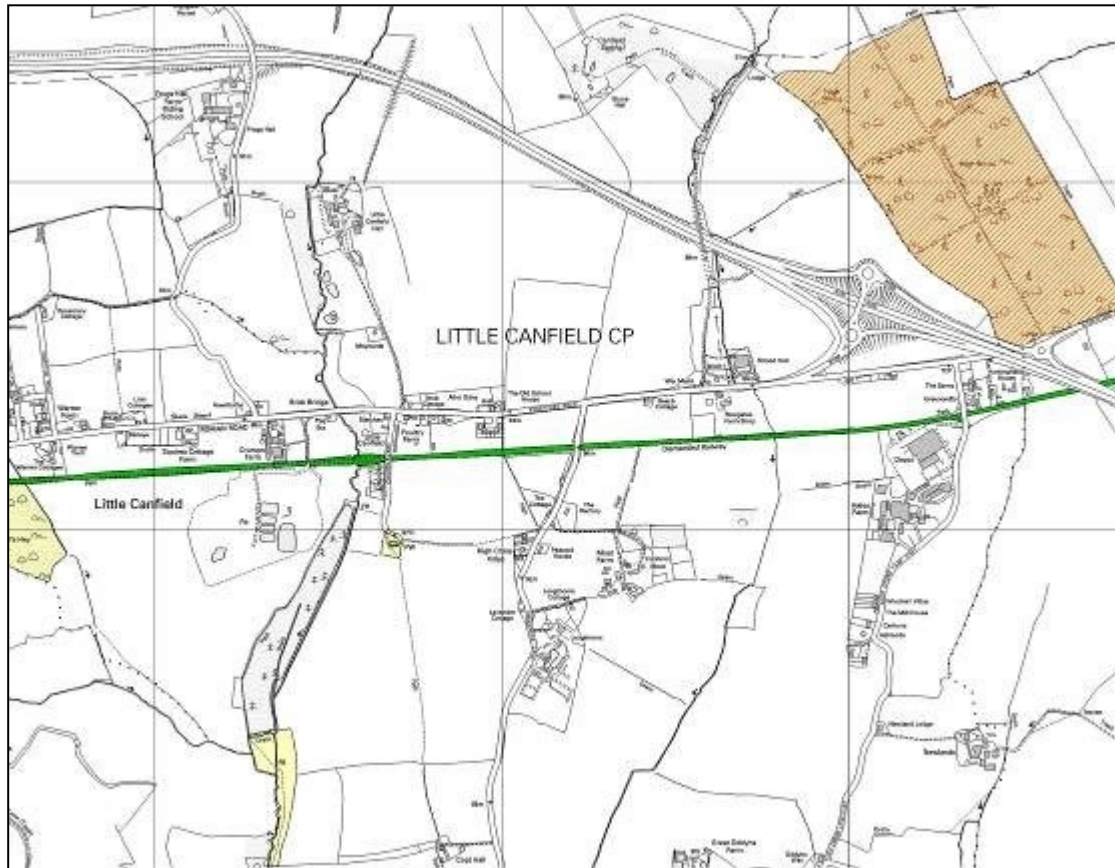
Condition and Management Issues: Trampling of the track surface and its replacement with artificial substrates has a negative impact. There is a need to strike a balance between the extent of grassland and scrub.

Date of first designation: 1994

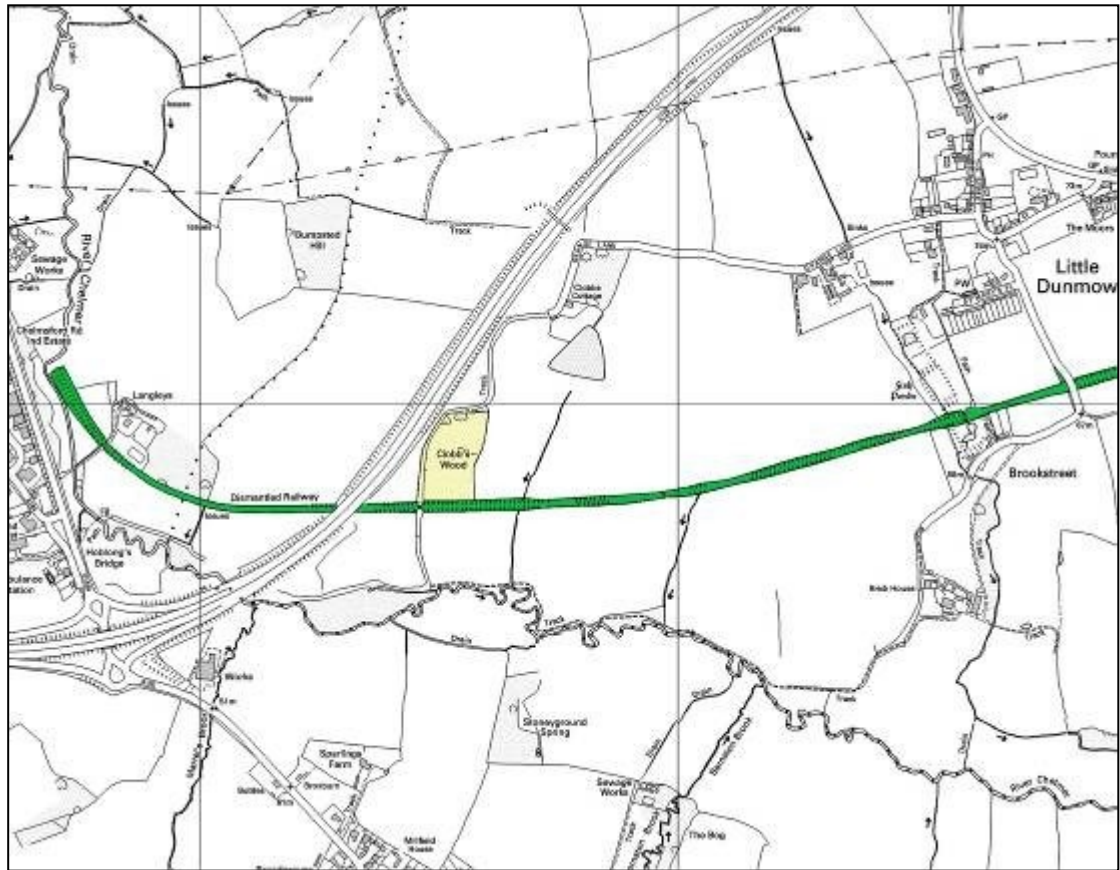
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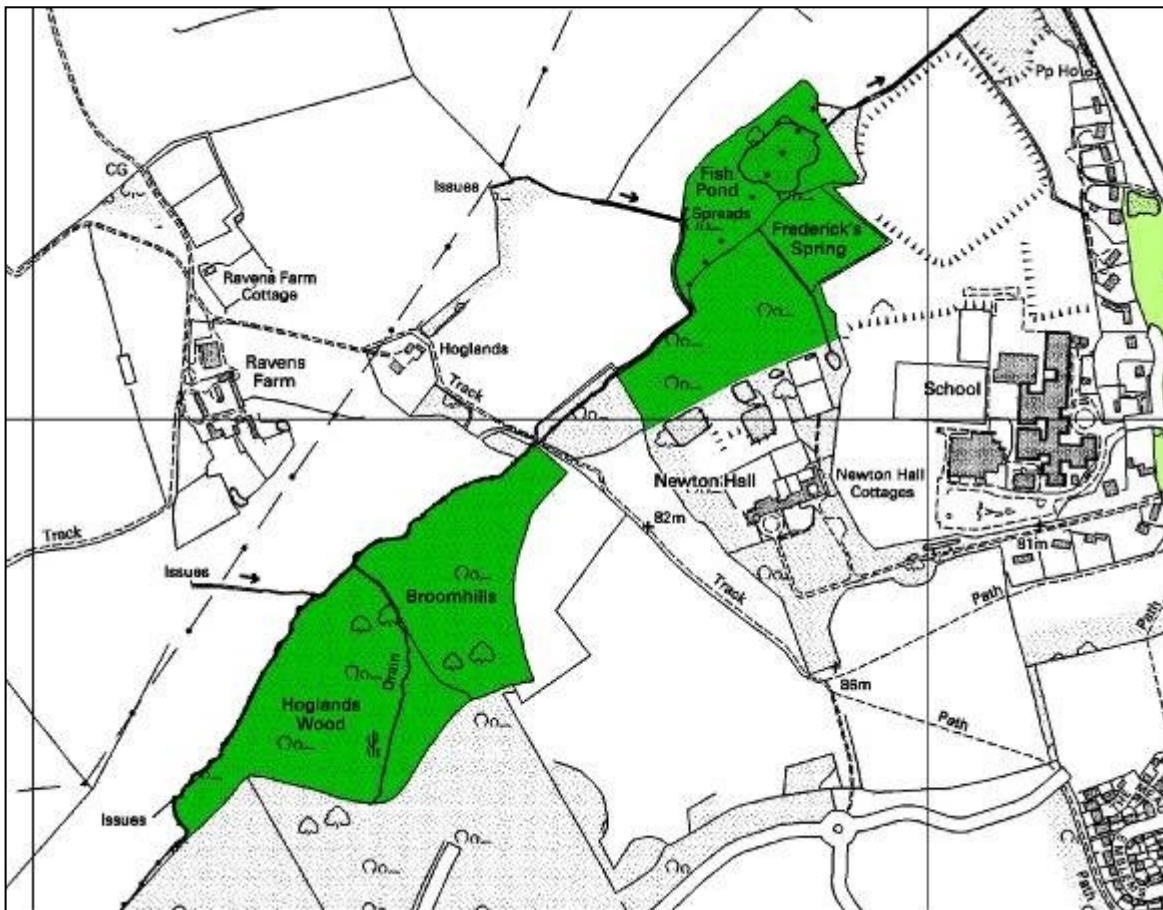


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Ufd224. Hoglands Wood/Broomhills/Frederick's Spring (13.5 ha) TL 613228

This mainly ancient woodland site has recently been bisected by the northern section of Great Dunmow bypass. The canopy is composed largely of Sycamore (*Acer pseudoplatanus*) and Birch (*Betula* sp.), with some Ash (*Fraxinus excelsior*) and Pedunculate Oak (*Quercus robur*), particularly to the west. Willow (*Salix* sp.) scrub and Alder (*Alnus glutinosa*) wood borders the northerly stream, whilst there is also a stand of hornbeam (*Carpinus betulus*) in Frederick's spring. The ground flora typically comprises Creeping Soft-grass (*Holcus mollis*), Bluebell (*Hyacinthoides non-scripta*) and Bracken (*Pteridium aquilinum*) but also includes Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium**).

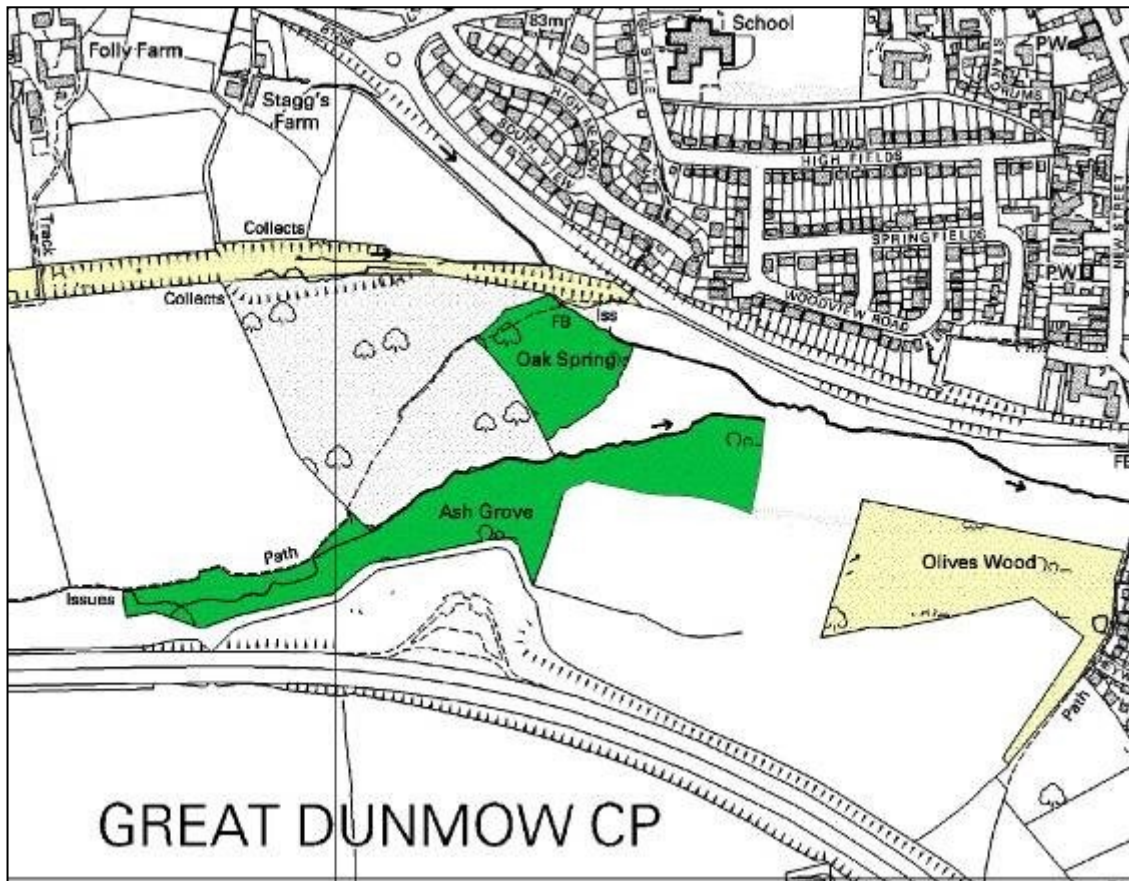
The fish pond to the north of Frederick's Spring is an addition to this site. It comprises a large expanse of wet willow and Alder wood with a silting-up pond centrally, which currently supports a large stand of Greater Reedmace (*Typha latifolia*). The owner's current plans to de-silt and enlarge the lake should benefit habitat diversity in the longer term if done in the right proportion, which should include leaving stands of Alder and also a fringe of wet willow woodland.

LoWS Selection Criteria: HCr1(a), HCr2(d), HCr5

Condition and Management Issues: Parts of the wood are badly infested with Sycamore. The recent road development, which effectively cuts the site in two, is likely to inhibit the passage of species between the two fragments.

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Ufd234. Ash Grove/Oak Spring (5.2 ha) TL 622214

These two possibly ancient woods have a varied canopy/understorey composition. Ash Grove comprises Pedunculate Oak (*Quercus robur*) standards with overgrown coppice and standards of Hornbeam (*Carpinus betulus*), with some Ash (*Fraxinus excelsior*) near the stream. Field Maple (*Acer campestre*), Hawthorn (*Crataegus monogyna*), Midland Hawthorn (*Crataegus laevigata*), Elder (*Sambucus nigra*) and Hazel (*Corylus avellana*) form the main understorey layers. Large Alders occur at the eastern end of the site. The ground flora includes Bluebell (*Hyacinthoides non-scripta*), Wood Anemone (*Anemone nemorosa*), Primrose (*Primula vulgaris*), Pendulous Sedge (*Carex pendula*) and Wood Sorrel (*Oxalis acetosella*) amongst an abundance of Ramsons (*Allium ursinum*). Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium**) can be found close to the stream.

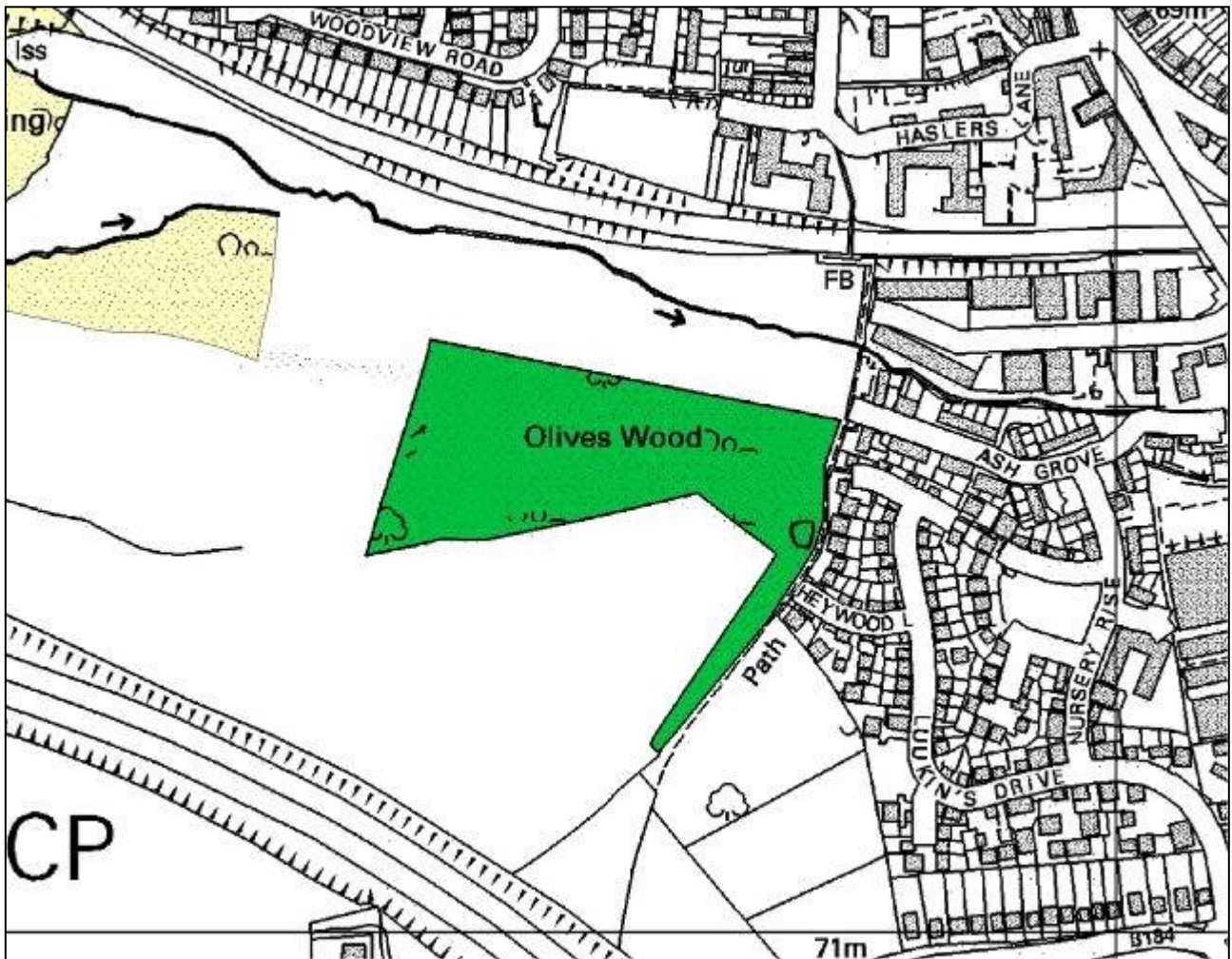
Oak Spring is a new edition to the Wildlife Site. It comprises an Oak/Ash/Hazel/ Hawthorn coppice with standards wood, with a ground flora that includes Ramsons, Wood Anemone, Bluebell, Hart's-tongue Fern (*Phyllitis scolopendrium**) and Goldilocks Buttercup (*Ranunculus auricomus*). As well as being a possible ancient wood, this site forms an ecological link between Olives Wood/Ash Grove to the scrub woodland of the Flich Way.

LoWS Selection Criteria: HCr1(b), SCr15

Condition and Management Issues:

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd236. Olives Wood (3.1 ha) TL 627213

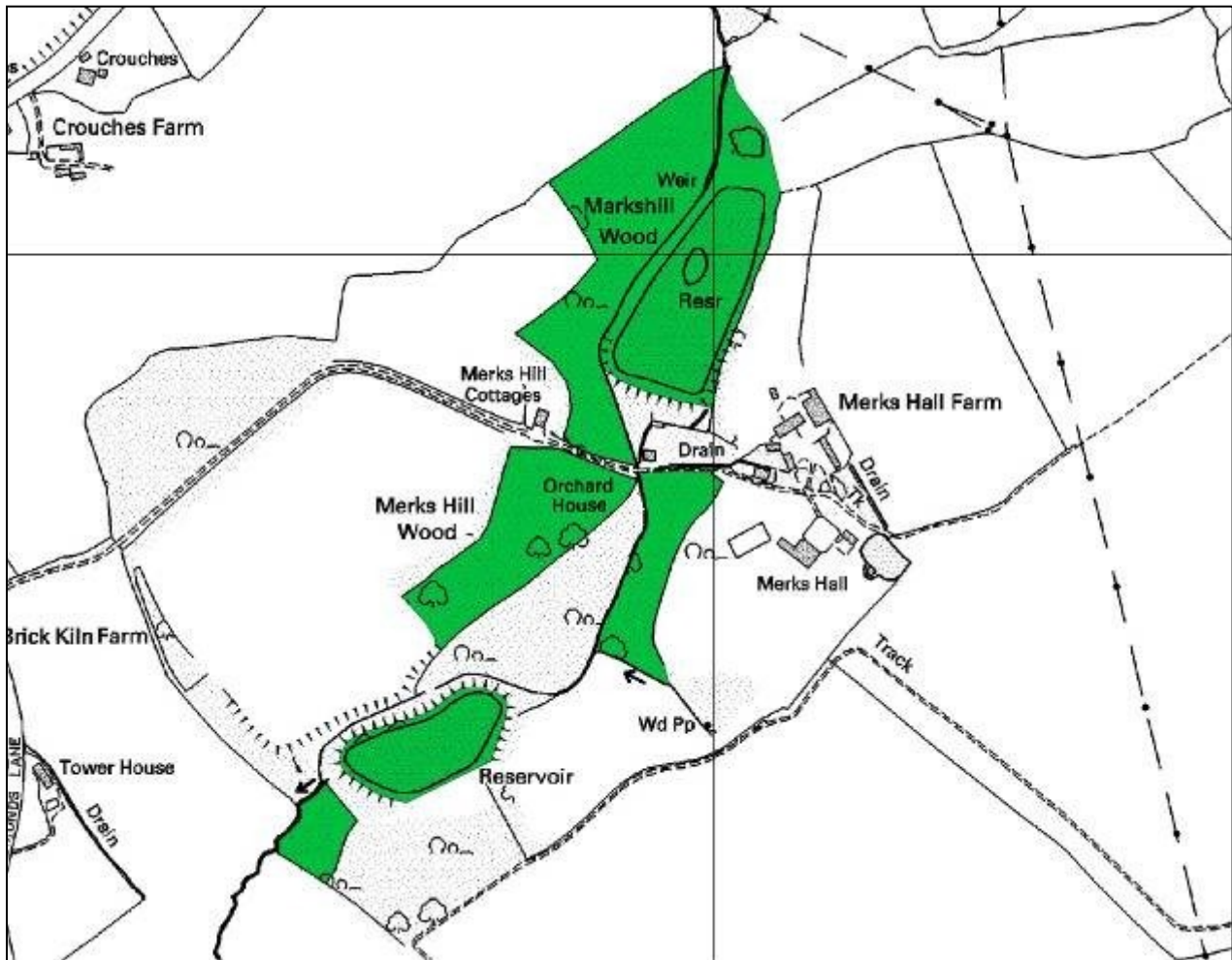
This probably ancient wood is composed of old coppiced Hornbeam (*Carpinus betulus*) and Ash (*Fraxinus excelsior*) with Ash and Pedunculate Oak (*Quercus robur*) standards over Midland Hawthorn (*Crataegus laevigata*) and Hawthorn (*Crataegus monogyna*). The rich ground flora includes Bluebell (*Hyacinthoides non-scripta*), Wood Anemone (*Anemone nemorosa*), Ramsons (*Allium ursinum*), Creeping Jenny (*Lysimachia nummularia*), Pendulous Sedge (*Carex pendula*), Lesser Celandine (*Ranunculus ficaria*) and Enchanter's Nightshade (*Circaea lutetiana*).

LoWS Selection Criteria: HCr1(b)

Condition and Management Issues:

Date of first designation: 1994

Date of last revision: 30/09/2007



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Ufd250. Merks Hall (8.9 ha) TL 639228

This site comprises ancient and recent woodland, lakes and associated marshy fringes. Markshill Wood has a canopy of mainly Ash (*Fraxinus excelsior*), with Pedunculate Oak (*Quercus robur*) and some Hornbeam (*Carpinus betulus*). An area of dead but regenerating Elm (*Ulmus* sp.) has created a more open canopy within which there has been some under-planting with native broadleaved species. Hazel (*Corylus avellana*) coppice and Elder (*Sambucus nigra*) are the predominant shrub species. Characteristic ground flora plants include Pendulous Sedge (*Carex pendula*), Yorkshire Fog (*Holcus lanatus*), Bluebell (*Hyacinthoides non-scripta*), Rough Meadow-grass (*Poa trivialis*) and Bramble (*Rubus fruticosus*), whilst Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium**) occurs in damp areas.

Merks Hill Wood has a canopy dominated by Pedunculate Oak with scattered Ash and Downy Birch (*Betula pubescens*). A few Hornbeams occur along the northern boundary. The shrub layer comprises Hazel and Elder. The ground flora is dominated by Bramble, though Bluebell is also frequent. To the south is a small, detached fragment of this wood. It has a canopy of Ash and a few Pedunculate Oak standards, over a scattered shrub layer of Elder. A small coppice compartment has been cut for firewood. The moderate ground flora does include several ancient woodland plants, such as Bluebell, Hairy Wood-rush (*Luzula pilosa**), Wood Millet and Three-veined Sandwort. To the east of Merks Hill Wood is a strip of streamside Alder (*Alnus glutinosa*) wood, with some Ash, willow (*Salix* sp.), Hawthorn (*Crataegus monogyna*) and Hazel.

The northern lake is fringed by emergent vegetation and tall trees. The two ponds to the north have a varied flora of scarce Essex plants, including Ragged Robin (*Lychnis flos-cuculi*), Common Spike-rush (*Eleocharis*

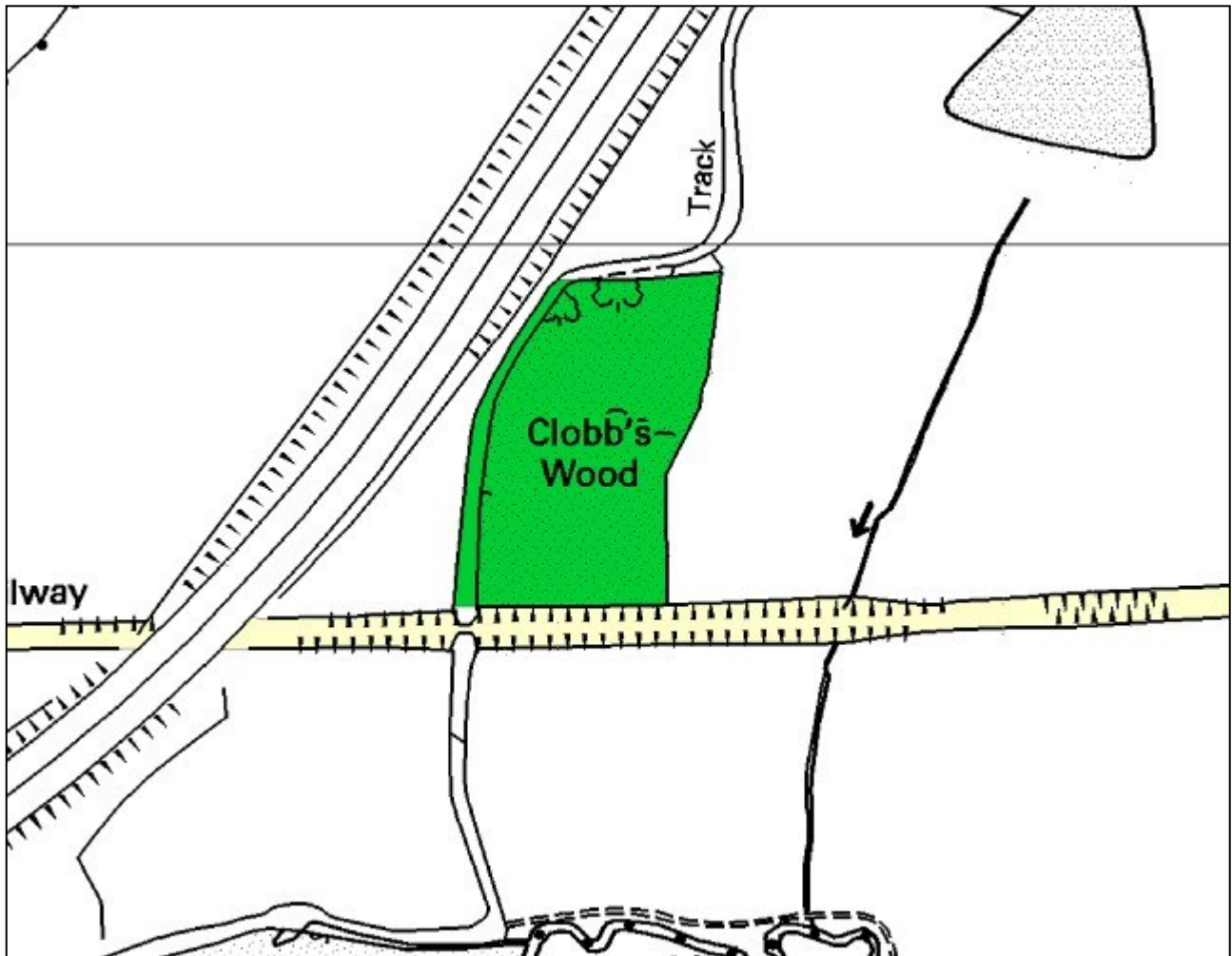
*palustris**) and Bog Stitchwort (*Stellaria uliginosa*). To the north of this is an Osier bed with some Lesser Pond-sedge (*Carex acutiformis*) and Giant Horsetail (*Equisetum telmateia*). The southern lake is fringed by Alder trees and tall emergent vegetation that includes Lesser Pond-sedge, Meadowsweet (*Filipendula ulmaria*), Water Mint (*Mentha aquatica*) and Wood Club-rush (*Scirpus sylvaticus*).

LoWS Selection Criteria: HCr1(a), HCr2(a), HCr5, HCr26, SCr15

Condition and Management Issues: Whilst willow scrub is a valuable habitat, it should not be allowed to totally engulf the areas of open marsh/tall herb fen.

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Date of last revision: 30/09/2007



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Ufd256. Clobbs Wood (2.1 ha) TL 645209

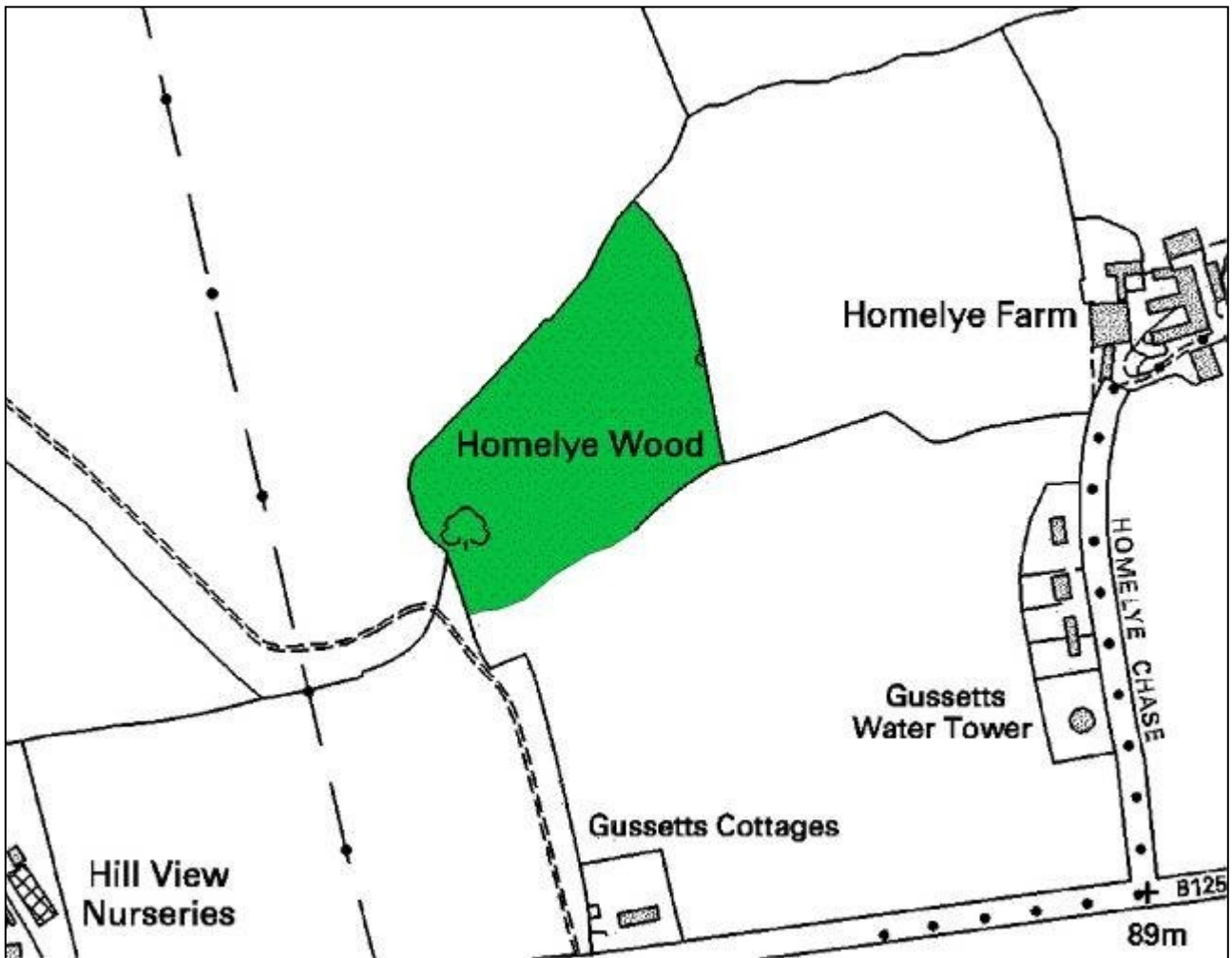
This old wood has a canopy of Pedunculate Oak (*Quercus robur*) with some old Hornbeam (*Carpinus betulus*) and Hazel (*Corylus avellana*) stools. Ash (*Fraxinus excelsior*) is a lesser component of the canopy. The ground cover is largely Bracken (*Pteridium aquilinum*), an abundance of Bluebell (*Hyacinthoides non-scripta*) with Bramble (*Rubus fruticosus*) and Honeysuckle (*Lonicera periclymenum*), but also includes Primrose (*Primula vulgaris*) and Heath Speedwell (*Veronica officinalis*). The ground flora is suffering from localised disturbance as the result of children having constructed a cycling track in the wood.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The use of bikes/motorcycles in the wood is having a localised negative impact on the ground flora.

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Ufd257. Homelye Wood (2.3 ha) TL 645225

The canopy of this ancient wood is mainly Ash (*Fraxinus excelsior*) with some Pedunculate Oak (*Quercus robur*), whilst the sub-canopy is a mix of Field Maple (*Acer campestre*), Hornbeam (*Carpinus betulus*), Hazel (*Corylus avellana*) and Elm (*Ulmus* spp.). There is some coppiced Wych Elm (*Ulmus glabra*) along the northern boundary. Nettle (*Urtica dioica*), Enchanter's Nightshade (*Circaea lutetiana*) and Dog's Mercury (*Mercurialis perennis*) dominate the ground layer, although Wood Anemone (*Anemone nemorosa*), Spurge-laurel (*Daphne laureola*), Bluebell (*Hyacinthoides non-scripta*), Wood Millet (*Milium effusum*), Primrose (*Primula vulgaris*) and Goldilocks Buttercup (*Ranunculus auricomus*) also occur more sparingly.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: Work to improve the structural diversity of this wood would increase its wildlife value.

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Ufd261. Hick's Plantation (3.0 ha) TL 651248

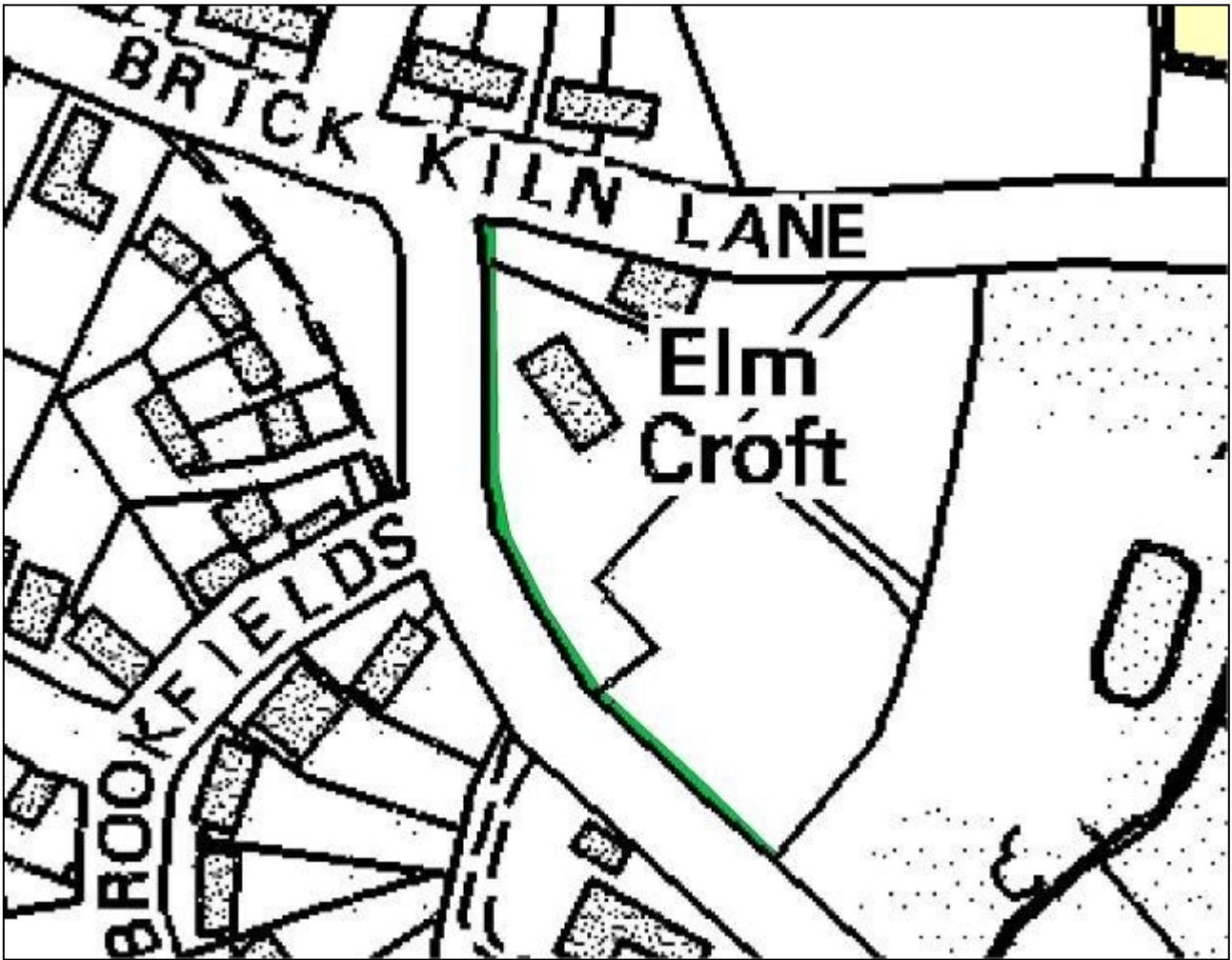
This wet woodland comprises streamside Alder (*Alnus glutinosa*), a Willow (*Salix* sp.) plantation and wet, marshy grassland. The ground vegetation represents a scarce Essex habitat, being unimproved and poorly drained. Under the willow wood Great Willowherb (*Epilobium hirsutum*), Lesser Pond-sedge (*Carex acutiformis*), Pendulous Sedge (*Carex pendula*) and Marsh Marigold (*Caltha palustris*) occur, although increasingly sparingly as a dense, scrubby understorey exerts an increasing influence over the ground layer. To the south is marshy grassland which includes small stands of Reed (*Phragmites australis*) adjacent to the stream. The tussocky sward is typified by Cock's-foot (*Dactylis glomerata*), False Oat-grass (*Arrhenatherum elatius*) and Yorkshire Fog (*Holcus lanatus*) also includes much Angelica (*Angelica sylvestris*), Pendulous Sedge, Soft Rush (*Juncus effusus*), Water Mint (*Mentha aquatica*) and Lesser Pond-sedge.

LoWS Selection Criteria: HCr2(c), HCr6(b), HCr22

Condition and Management Issues: Scrub encroachment over the grassland and marshland components of this site is in need of limited control. The local groundwater regime will also exert an influence over the ecology of this site.

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Ufd267. Stebbing – Bran End Verge (0.01 ha) TL 656250

This section of road verge supports a large stand of the Nationally Scarce (and Essex Red Data Listed) Lesser Calamint (*Clinopodium calamintha**). The majority of the verge lies within Essex County Council Protected roadside Verge UTT51.

LoWS Selection Criteria: HCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

Date of first designation: 30/09/2007

Date of last revision:



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Ufd269. Bran End (14.8 ha) TL 658254

This site comprises a mosaic of wet woodland, swamp and damp grassland through to dry, acid grassland. The northern woodland arm comprises streamside Alder (*Alnus glutinosa*) in a shallow valley, a small Willow (*Salix* sp.) plantation and scrubby woodland surrounding a stand of Reed (*Phragmites australis*). The fen-like vegetation under the Alder consists of Lesser Pond-sedge (*Carex acutiformis*), Angelica (*Angelica sylvestris*), Meadowsweet (*Filipendula ulmaria*) and Nettle (*Urtica dioica*). This is flanked on the drier ground to either side by Bracken (*Pteridium aquilinum*) and Elder (*Sambucus nigra*). A small stand of woodland along the eastern stream comprises Small-leaved Lime (*Tilia cordata*), Crab Apple (*Malus sylvestris*), Willows and Elder.

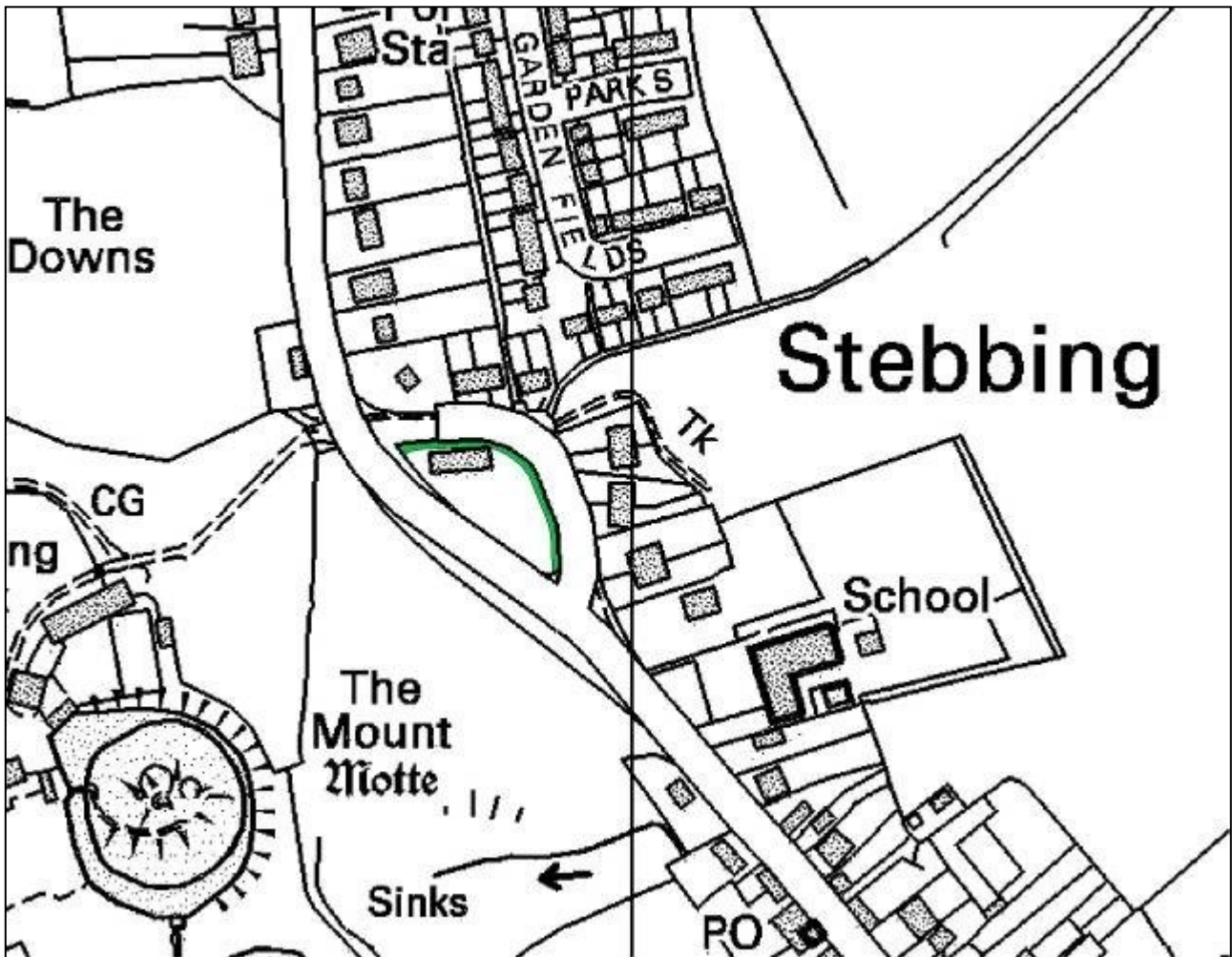
The grasslands range from dry sandy ground sloping down to marsh/fen communities adjacent to a small stream. The varied ground conditions give rise to a varied flora, from Sweet Vernal Grass (*Anthoxanthum odoratum*), Lady's Bedstraw (*Galium verum*), Creeping Bent-grass (*Agrostis stolonifera*), Red Fescue (*Festuca rubra*) and Mouse-ear Hawkweed (*Hieracium pilosella*) on drier ground, to Lady's Smock (*Cardamine pratensis*), Pond-sedges (*Carex* spp.), Marsh Thistle (*Cirsium palustre*), Meadowsweet (*Filipendula ulmaria*), Angelica (*Angelica sylvestris*), Reed Canary-grass (*Phalaris arundinacea*) and Devil's-bit Scabious (*Succisa pratensis**) in damper areas.

LoWS Selection Criteria: HCr2(c,d), HCr6(b), HCr10, HCr13, HCr22

Condition and Management Issues: Maintenance of this varied mosaic of habitats is the key to maintaining the wildlife value of this unique area.

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Ufd270. Stebbing - The Downs Protected Roadside Verge UTT29 (103.0 metres) TL 659245 to TL 660244

The flora of this section of road verge includes Lesser Calamint (*Clinopodium calamintha**), a plant listed within the Essex Red Data List and a Nationally Scarce plant with important populations in north Essex.

LoWS Selection Criteria: HCr15

Condition and Management Issues: Appropriate mowing regimes for roadside verges are a perennial problem. This, and all other protected or interesting verges need managing as grassland, not just trimmed as a highway fringe. Nutrient enrichment is likely to be a long-term trend.

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Ufd278. Whitehouse Spring (3.9 ha) TL 673252

The canopy of this ancient wood is dominated by standards of Pedunculate Oak (*Quercus robur*) and overgrown Hornbeam (*Carpinus betulus*) coppice, with scattered Hazel (*Corylus avellana*) also present as coppice. At the southern end of the wood is some tall Ash (*Fraxinus excelsior*) over Hawthorn (*Crataegus* spp.).

The dense shade of the canopy allows little ground flora to flourish, with the most prominent species being Enchanter's Nightshade (*Circaea lutetiana*), Bramble (*Rubus fruticosus* agg.) and Stinging Nettle (*Urtica dioica*). A resumption of coppicing and thinning of the oak standards would greatly benefit the habitat diversity of this site, and should also provide better cover for the Pheasants currently being reared within a pen located in the centre of the wood.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: Dense shade from the overgrown coppice is limiting the ground flora. A resumption of coppicing would be desirable.

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Ufd279. Mouslin Wood (3.3 ha) TL 679250

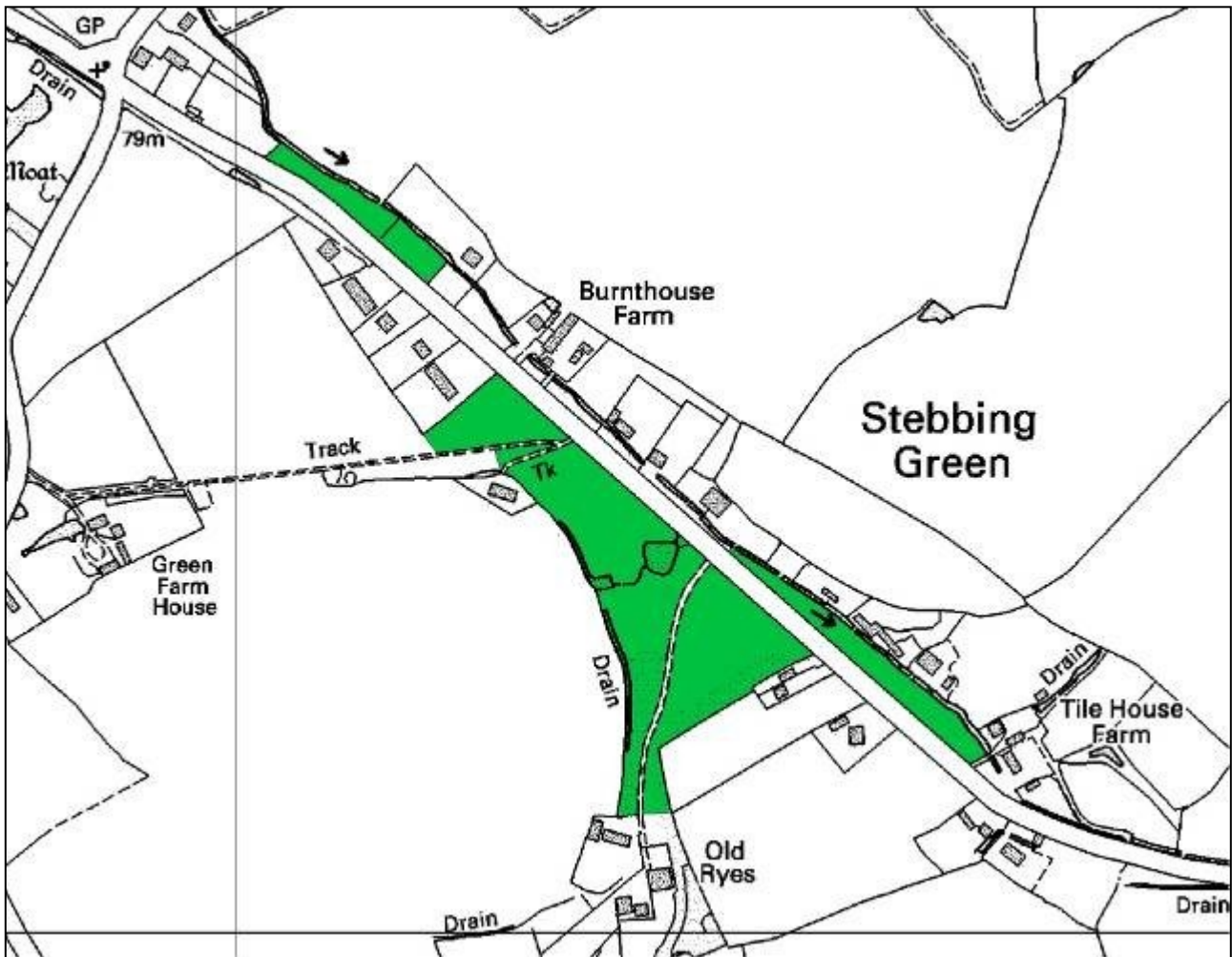
Much of this ancient wood has been clear-felled and replanted with Ash (*Fraxinus excelsior*) and Pedunculate Oak (*Quercus robur*), now forming a sub-canopy amongst the semi-natural Hazel (*Corylus avellana*) understorey. The original canopy of Oak, Ash and Hazel remains around the wood's perimeter, over a shrub layer of Elder (*Sambucus nigra*), Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*). The ground layer includes Dog's Mercury (*Mercurialis perennis*), Pendulous Sedge (*Carex pendula*), Wood Sedge (*Carex pendula*) and Bramble (*Rubus fruticosus*), with other typical woodland herbs occurring more sparingly.

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: Needs time to mature following replanting.

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Ufd280. Stebbing Green (3.6 ha) TL 683233

Large, flower-rich village greens are an increasingly rare feature in the Essex countryside, with pressures to create regularly-mown amenity grassland often leading to the creation of grass “lawns”, which may be visually neat but lack wildlife interest. This site comprises the Green and sections of roadside grassland that were formerly parts of the grassy drives leading into the green. The species-rich sward is typified by Red Fescue (*Festuca rubra*), Common Bent-grass (*Agrostis capillaris*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Cock's-foot (*Dactylis glomerata*), Yorkshire Fog (*Holcus lanatus*) and Smooth Meadow-grass (*Poa pratensis*).

Damp areas support Lady's Smock (*Cardamine pratensis*), whilst other species of note include Pignut (*Conopodium majus*), Lady's Bedstraw (*Galium verum*), Burnet Saxifrage (*Pimpinella saxifraga*), Cowslip (*Primula veris*), Pepper Saxifrage (*Silaum silaus**) and Field Wood-rush (*Luzula campestris*).

LoWS Selection Criteria: HCr10

Condition and Management Issues: Traditionally this green is likely to have been grazed, but this is not likely to be feasible. A current mowing regime is keeping the sward in reasonable condition.

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Ufd281. Boxted Wood (19.4 ha) TL 692238

This large ancient woodland has had a chequered history in recent decades. During the Second World War it was used as a bomb storage area for the adjacent airfield, with a series of concrete tracks and storage bays still evident within the site. Parts of the site have been re-planted with rather weak conifers and a stronger crop of Beech (*Fagus sylvatica*) and Poplars (*Populus* sp.). The current owner has undertaken some planting of native oak standards.

The semi-natural canopy is now of overgrown small-leaved Lime (*Tilia cordata*) coppice, with Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*) with a little Hornbeam (*Carpinus betulus*) and some Hazel (*Corylus avellana*) and Field Maple (*Acer campestre*) in the understorey. The ground flora is curiously lacking in Bluebells, but there is a reasonable array of typical ancient woodland plants, such as Wood anemone (*Anemone nemorosa*), Hairy St John's-wort (*Hypericum hirsutum*), Yellow Archangel (*Lamium galeobdolon*) and Dog's Mercury (*Mercurialis perennis*).

LoWS Selection Criteria: HCr1(a)

Condition and Management Issues: The wood is in reasonable condition, but Beech and Poplars could be replaced with native species when the timber trees are harvested.

Date of first designation: 1994






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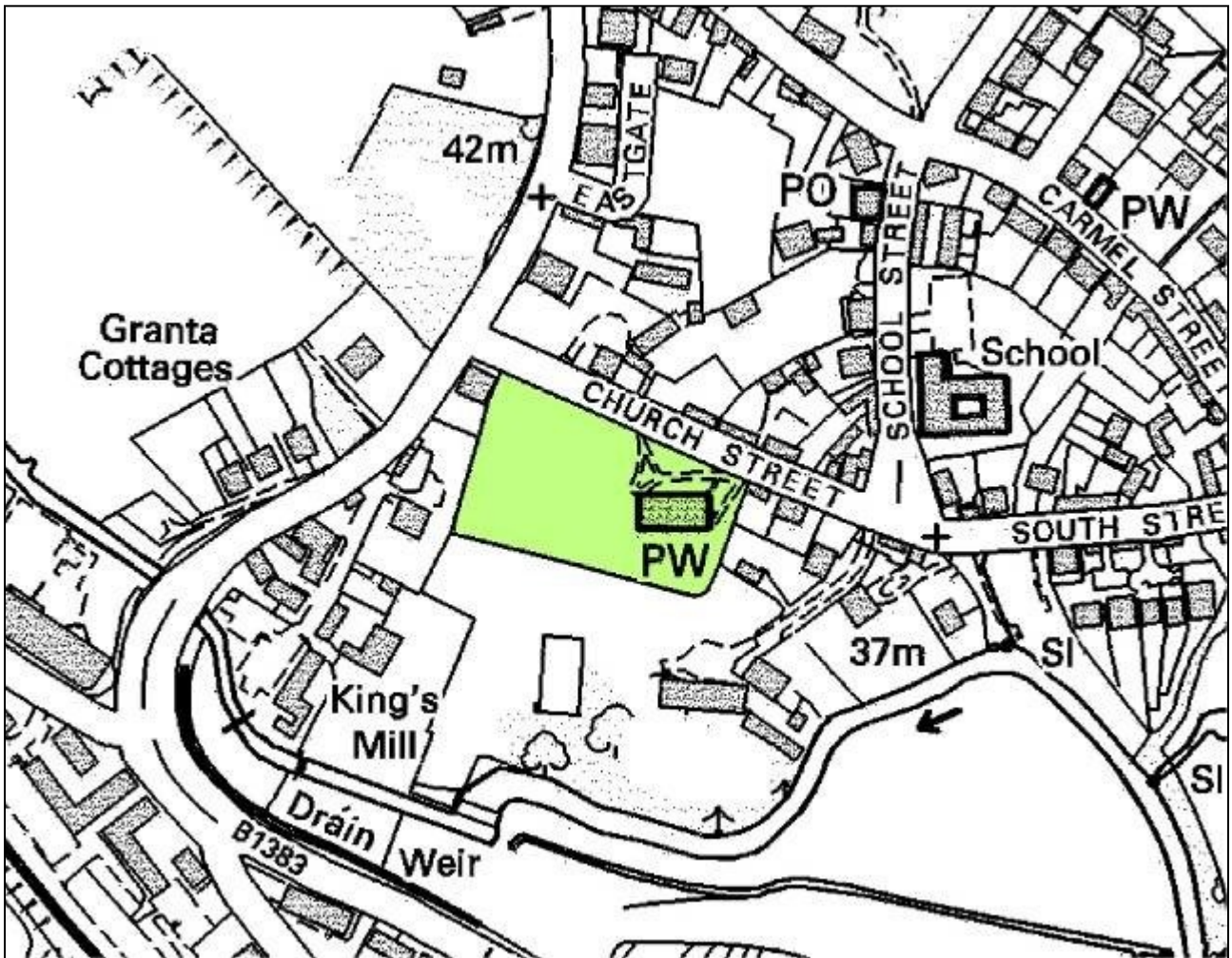
ANNEX 3

POTENTIAL WILDLIFE SITES

Note: where a plant's scientific name is followed by an asterisk (e.g. *Campanula rotundifolia**), the plant is listed on the Essex Red Data List. Further information about this Red Data List project is available via the Essex Field Club.

KEY TO MAPS

| | |
|---|------------------|
|  | Highlighted LoWS |
|  | Other LoWS |
|  | Potential LoWS |
|  | Highlighted SSSI |
|  | Other SSSI |

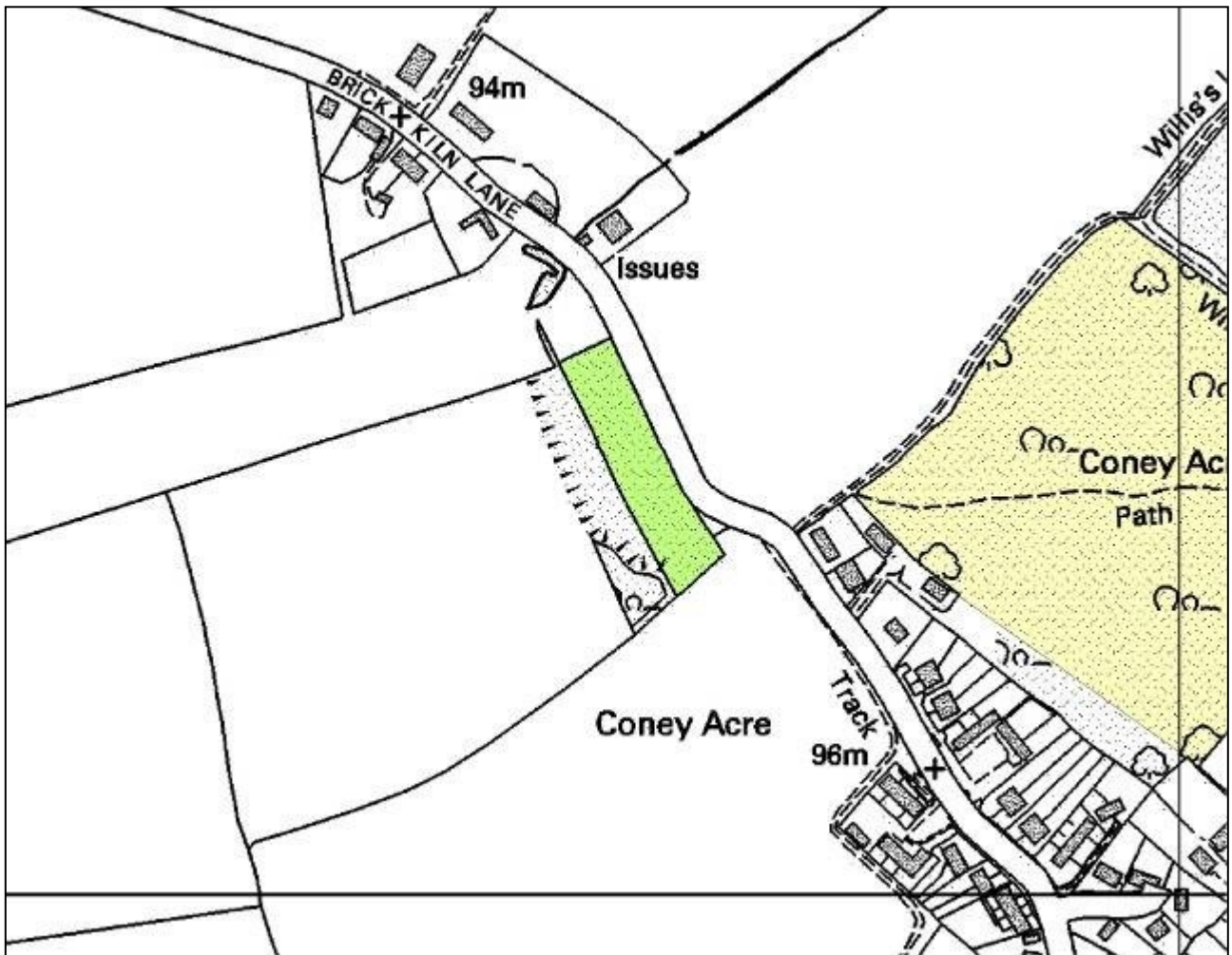


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PLoWS 1 Great Chesterford Churchyard (0.8 ha) TL 505427

The flora of this yard includes one or two species associated with unimproved, base-rich soils, but it is very intensively mown at present.

Action: Seek to reduce the extent, frequency and severity of mowing across the yard and re-assess the flora thereafter.

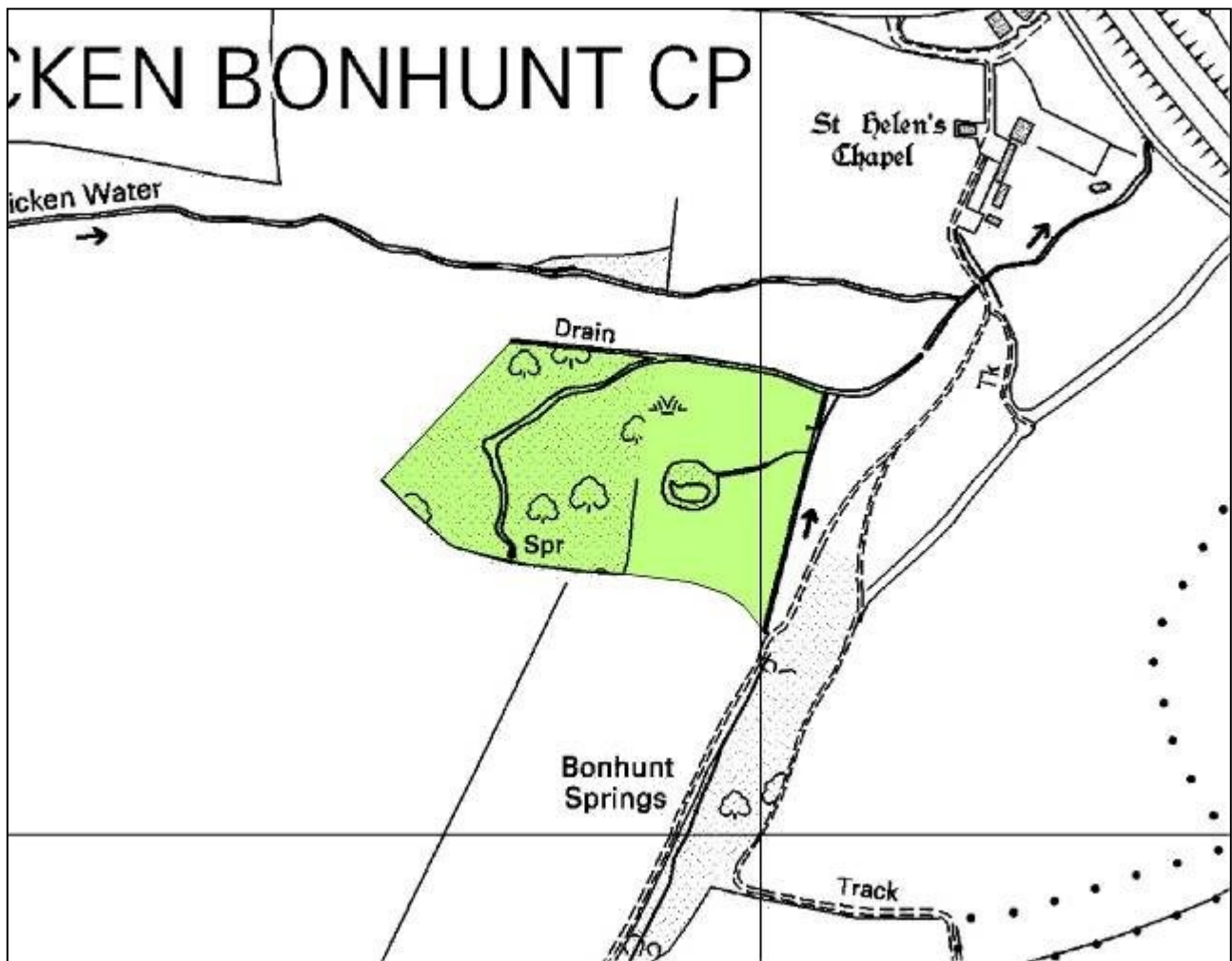


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PLoWS 2 Coney Acre West (0.5 ha) TL 506302

This section of wood is apparently labelled as Coney Acre, along with the main body of wood to the east, which is an ancient woodland Local Wildlife Site. This strip has a good population of Bluebells (*Hyacinthoides non-scripta*) and has a massive roadside bank and may well be a smaller fragment of ancient wood.

Action: further research is needed to establish the true status of this fragment of woodland.



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PLoWS 3 Bonhunt Springs (4.0 ha) TL 508332

This site comprises a rather fragmented tall herb fen, with a small area of Common Reed (*Phragmites australis*), a sedge-bed and a good deal of Great Willowherb (*Epilobium hirsutum*). There is a large quantity of Nettle (*Urtica dioica*) under the mature plantation of Poplars. It may well have an important invertebrate assemblage that could well tip the site in favour of being adopted as a full Local Wildlife Site, although its tall herb fen habitat is a little patchy in quality.

Action: Invertebrate survey desirable.

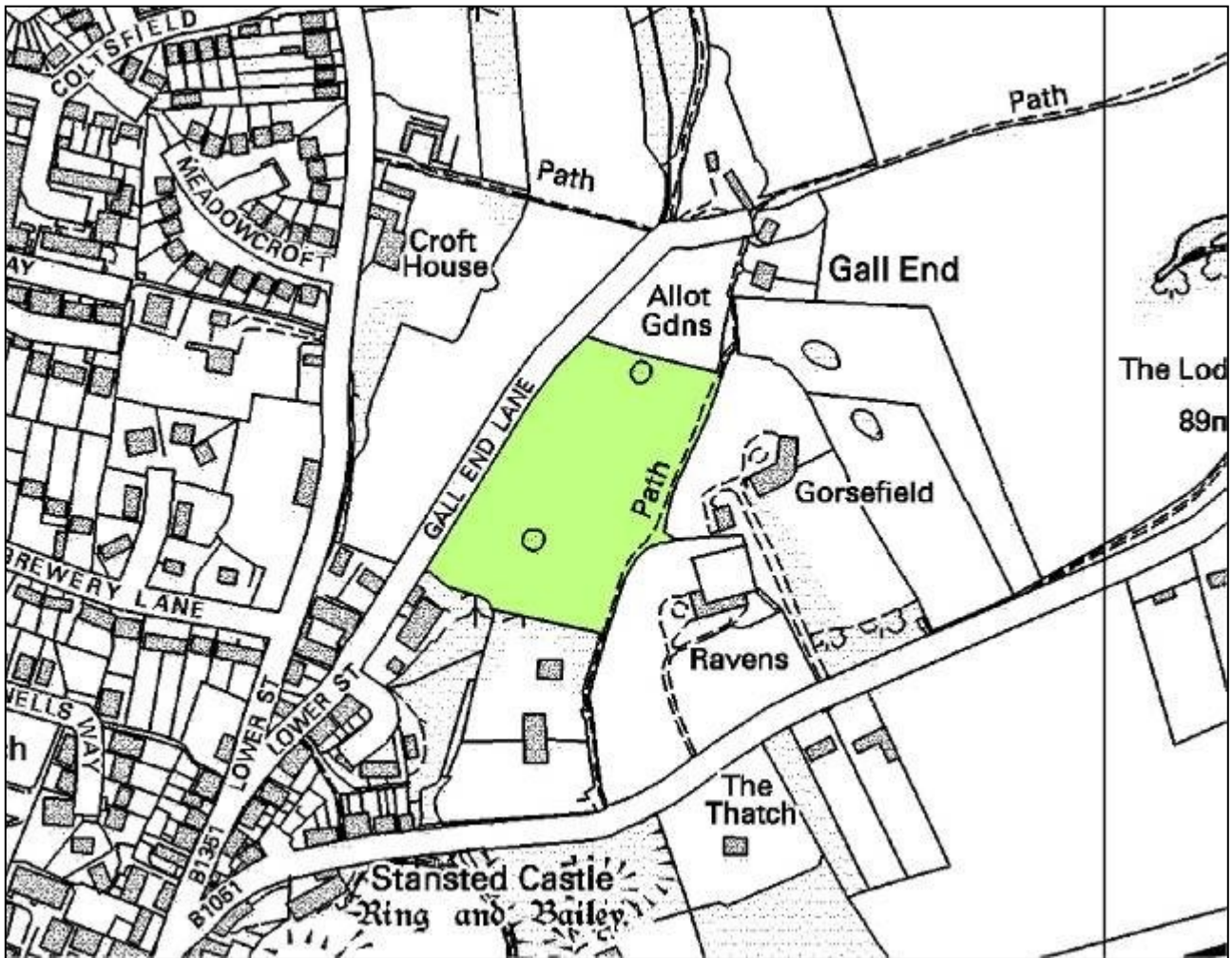


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PLoWS 4 Bordeaux Pit (4.5 ha) TL 513413

This old mineral working site is actively managed by Saffron Walden Angling club. The presence of fish stock may preclude the presence of Great Crested Newts, but it does favour Kingfisher, which have apparently been seen on a regular basis by fishermen. Perhaps the area of greatest interest is a small strip of sparsely vegetated ground along the north-eastern boundary, where an abundance of Blue Fleabane is notable. This area may have a significant invertebrate fauna.

Action: Invertebrate fauna of open grassland recommended.



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PLoWS 5 Gall End Meadow (1.7 ha) TL 517253

This site had a medium to tall sward of False Oat-grass (*Arrhenatherum elatius*), Crested Dog's-tail (*Cynosurus cristatus*), Cock's-foot (*Dactylis glomerata*), Red Fescue (*Festuca rubra*), Yorkshire Fog (*Holcus lanatus*) and Yellow Oat-grass (*Trisetum flavescens*). Amongst the herbs, Salad Burnet (*Sanguisorba minor**) is frequent. Upright Brome (*Bromus erectus*) and Cowslip (*Primula veris*) have also been recorded. The site is in need of scrub control and grazing or annual mowing in order to retain and enhance its wildlife value. This site is removed to the "Potential Site" category, pending appropriate remedial management. Scrub encroachment is advanced and few of the key species of flora appear to remain. It remains an old grassland site, with potential for invertebrate interest, but the site needs improved management and further survey work.

Action: Significant scrub clearance, particularly along the western half of the site, would be desirable to enlarge the area of grassland extant. Thereafter light grazing is likely to be beneficial. Surveys of invertebrates and flora would be desirable.

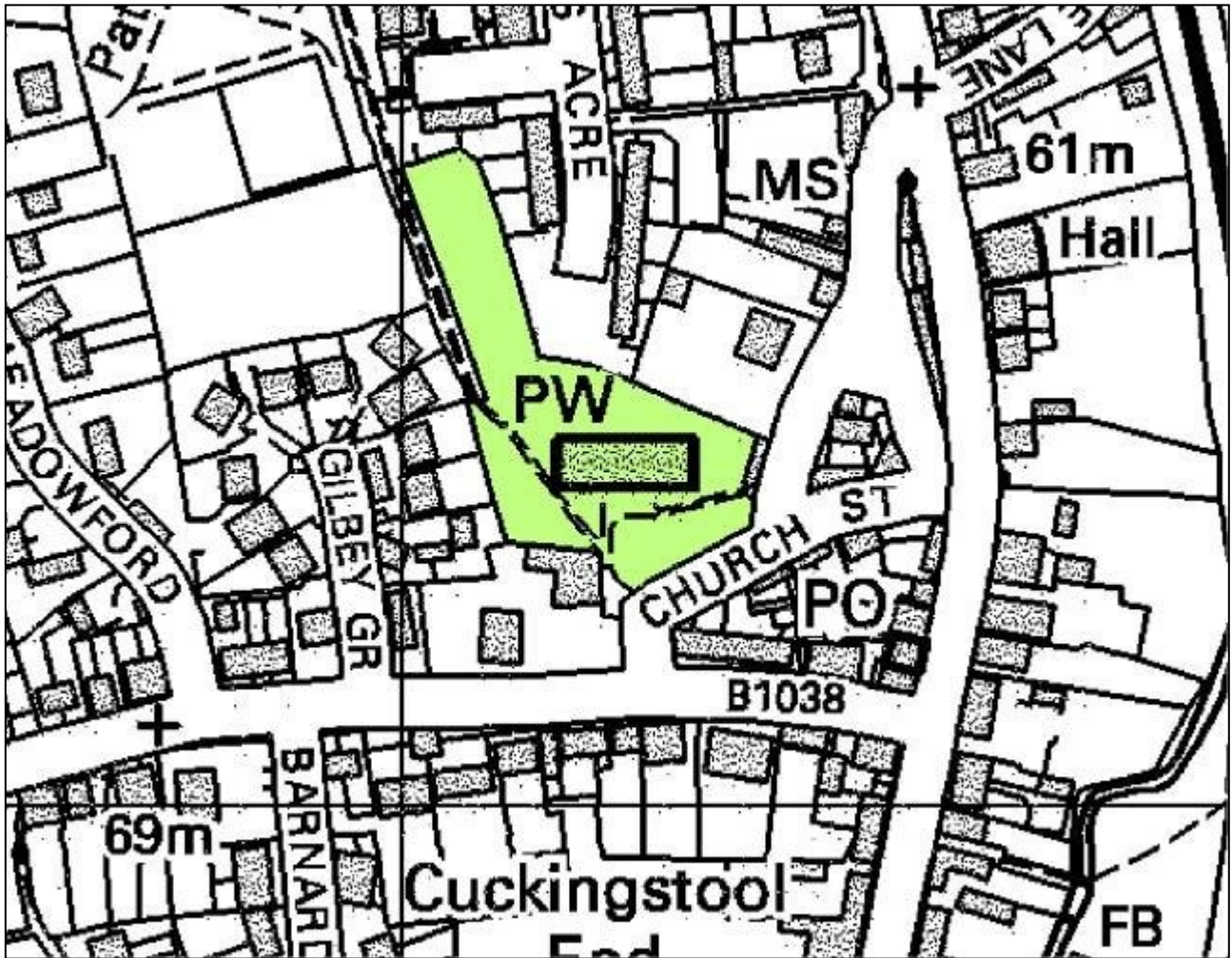


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PLoWS 6 Halls Quarry (23.3 ha) TL 518276

This is still an active site, with the level of wildlife interest in a state of flux and variable across the site. The north-eastern corner is perhaps the most mature habitat present here. However, much survey work in other parts of Essex has shown such “brownfield” sites to be of great importance for their invertebrate populations, and this may well be the same here. N.B. the north of the site incorporates the Halls quarry Geological SSSI.

Action: Extensive surveys of flora, invertebrates and reptiles are strongly recommended.

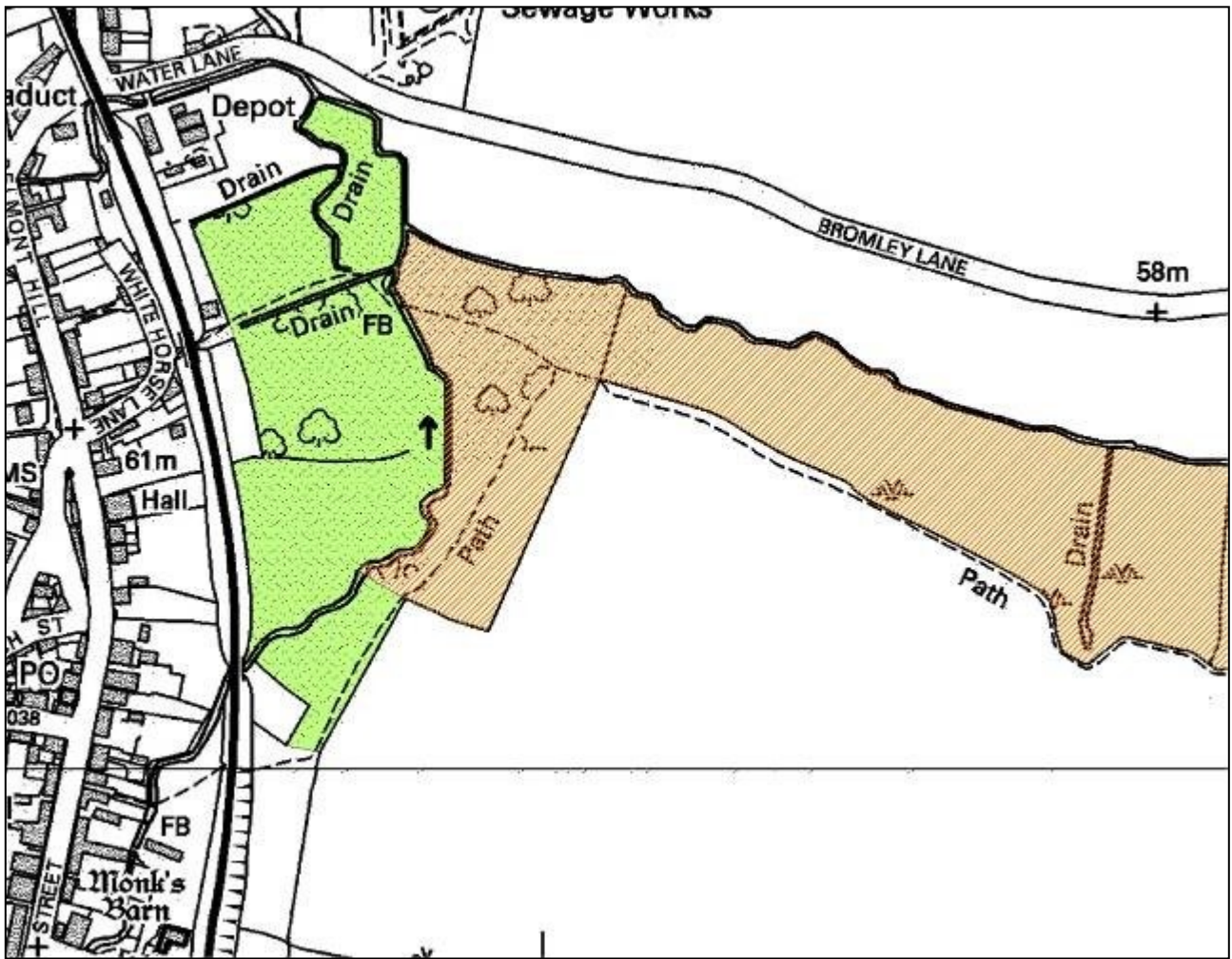


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PLoWS 7 Newport Churchyard (0.6 ha) TL 521341

This yard has helped to preserve another fragment of ancient grassland that has now all but disappeared from the surrounding countryside. Notable amongst the flora was the abundance of Fiddle Dock (*Rumex pulcher**), along with Hoary Plantain (*Plantago media*), Lady's Smock (*Cardamine pratensis*), Burnet Saxifrage (*Pimpinella saxifraga*) and many other herbs. These plants are now all but gone, thanks to an intensive mowing regime that creates a short amenity sward across the whole yard.

Action: Seek to reduce the extent, frequency and severity of mowing across the yard and re-survey the flora 1-2 years after so doing.

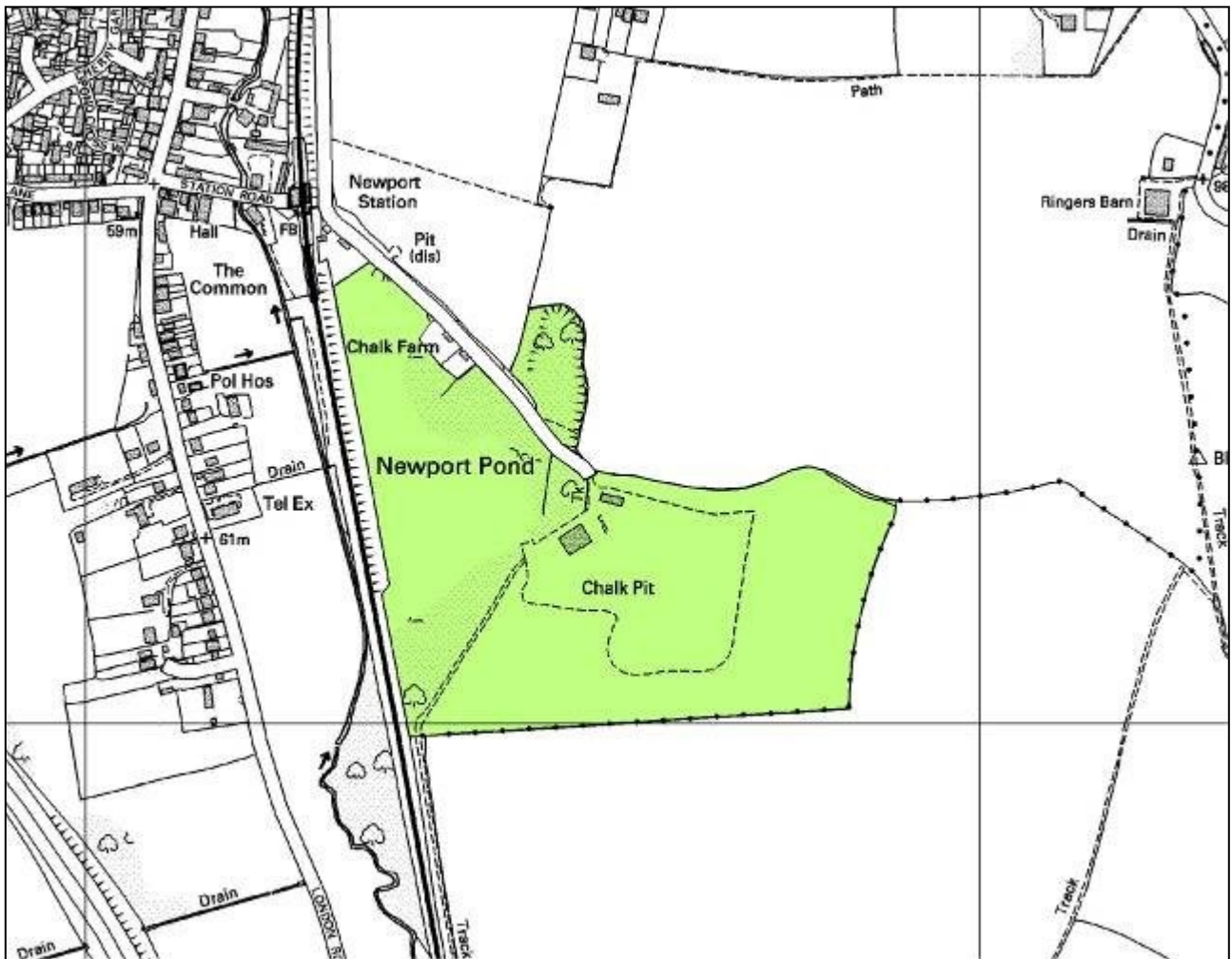


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PLoWS 8 Water Lane Plantation (4.1 ha) TL 523342

This Cricket-bat Willow plantation lies at the western end of Debden Water SSSI. It has been disturbed by recent harvesting, making a true appraisal of its flora and habitat quality difficult on account of the heavy ground disturbance. It looks to have good potential however as a valuable extension to the wetland habitats to the east within the SSSI. The small stream running along its eastern border looks to be a good quality chalk stream and a survey of its invertebrates, including a search for native White-clawed Crayfish, may yield significant results. A notice board alludes to the presence of Adders.

Action: Re-survey flora in 2-3 years time. An invertebrate survey is also highly desirable.

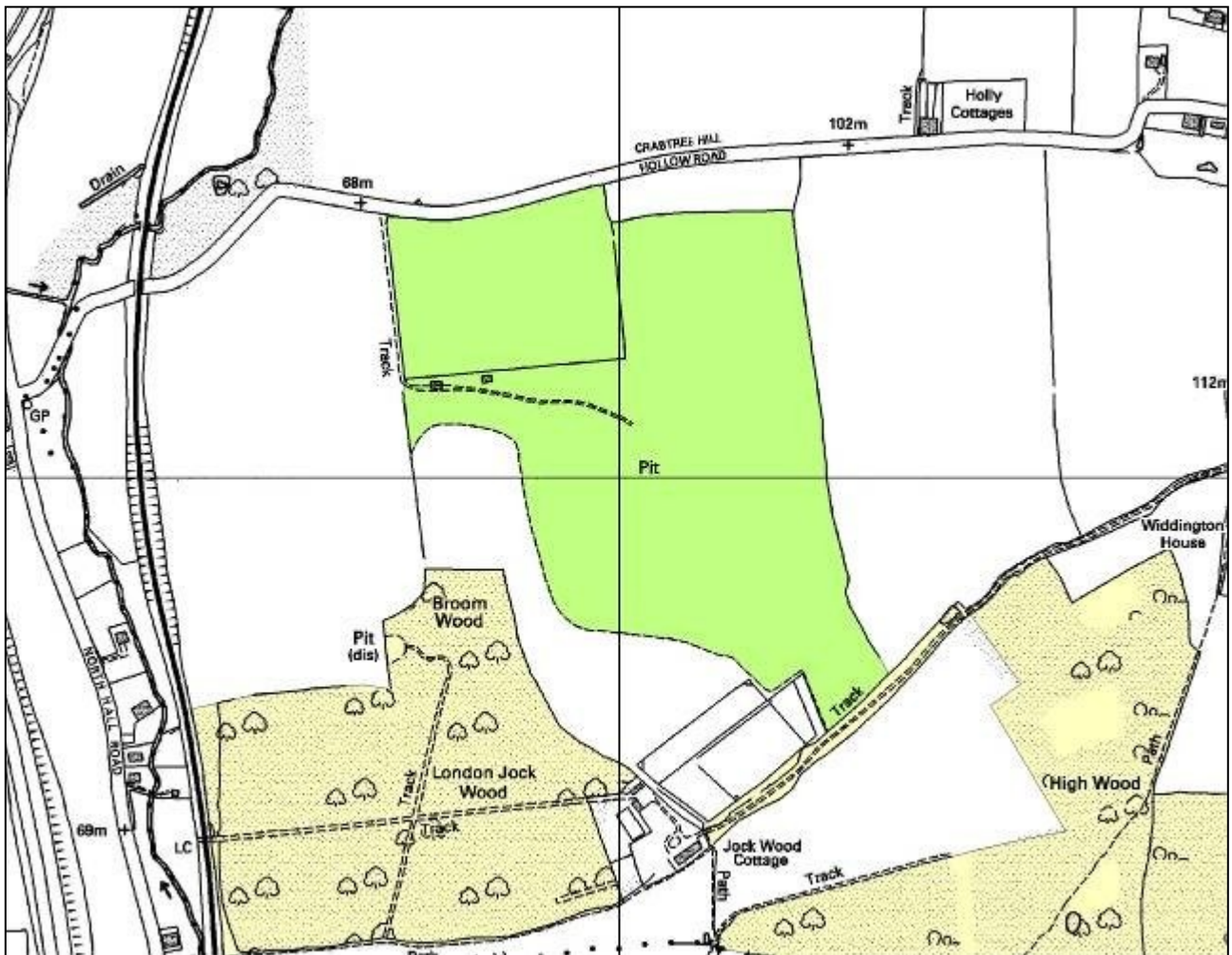


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PLoWS 9 Newport Pond Chalk Pit (18.8 ha) TL 525331

This is still an active site, with the level of wildlife interest in a state of flux and variable across the site. However, much survey work in other parts of Essex has shown such “brownfield” sites to be of great importance for their invertebrate populations, and this may well be the same here. It is especially appealing as a brownfield site, being a chalk quarry, giving rise to scarce base-rich habitats.

Action: Extensive surveys of flora, invertebrates and reptiles are strongly recommended.



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PLoWS 10 Widdington Landfill (21.0 ha) TL 530310

This is still an active site, with the level of wildlife interest in a state of flux and variable across the site. However, much survey work in other parts of Essex has shown such “brownfield” sites to be of great importance for their invertebrate populations, and this may well be the same here. Reptiles may also be present in peripheral habitats.

Action: Extensive surveys of flora, invertebrates and reptiles are strongly recommended.

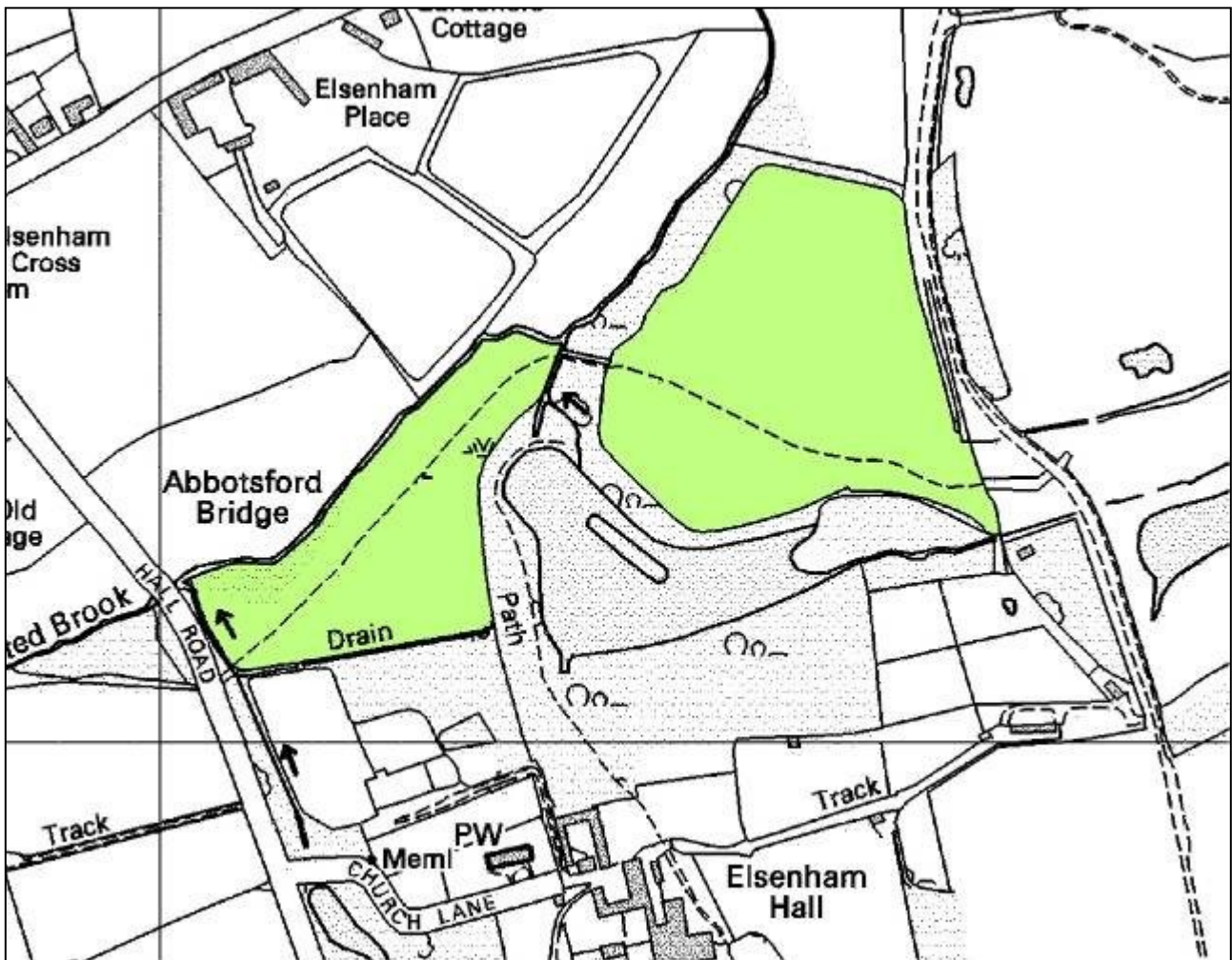


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PLoWS 11 Limefield Pit (0.4 ha) TL 541395

This SINC was called Little Walden Road quarry, but the remaining land, now an Essex Wildlife Trust reserve, is now called Limefield Pit. This old quarry supported a very varied flora and fauna, with a relict chalk grassland vegetation which included Bee Orchid (*Ophrys apifera**) and Pyramidal Orchid (*Anacamptis pyramidalis**). The exposed cliff face is of geological interest. This site was formerly larger and designated prior to the construction of the adjacent houses. The remaining fragment does not support any of the key chalk grassland species formerly present. It may have invertebrate interest, but this requires further survey work.

Action: Invertebrate surveys should be a high priority. More dynamic measures would include removing much of the dumped soil material from the floor of the quarry, to try and regain its original landform.

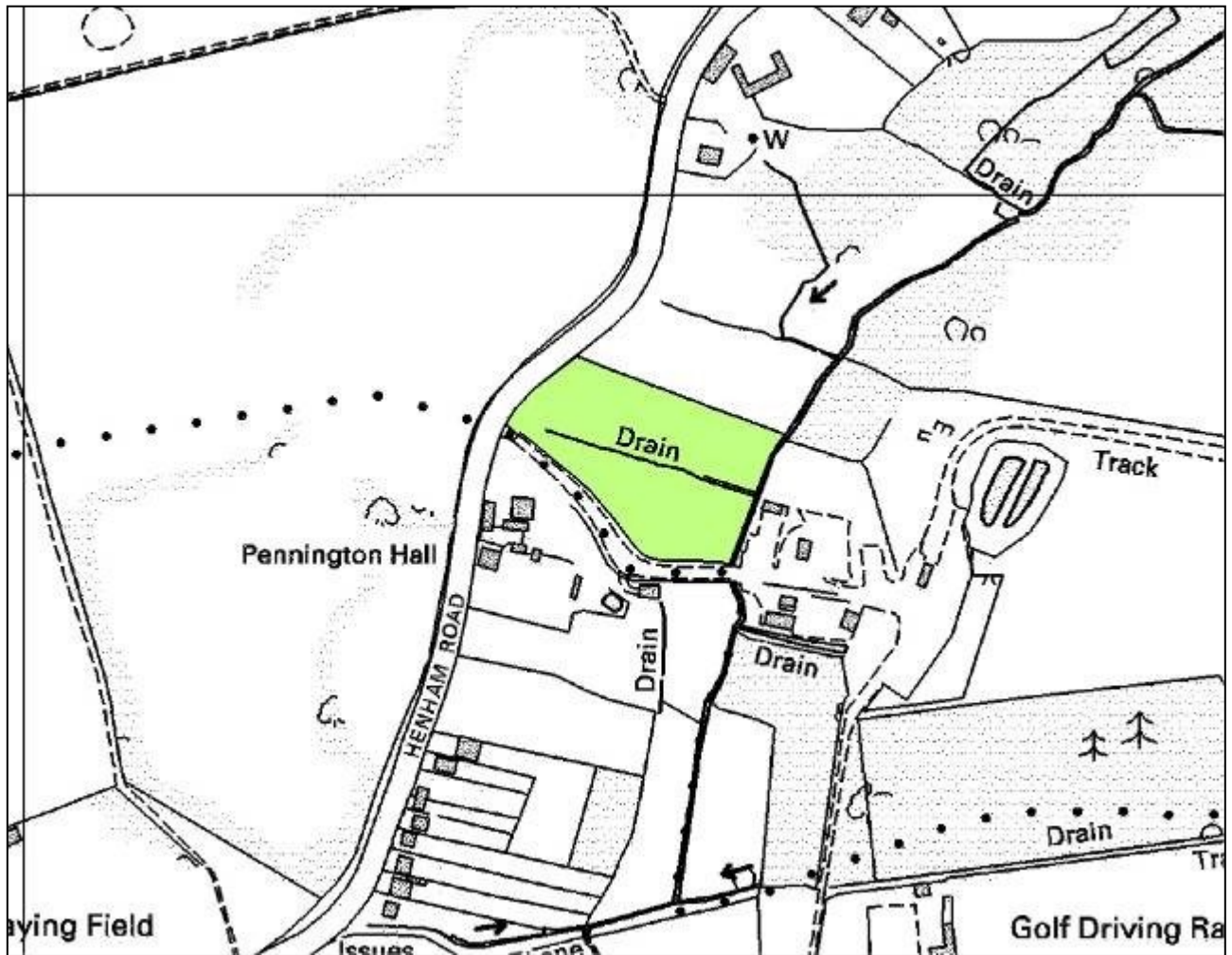


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PLoWS 12 Elsenham Hall Fields (6.3 ha) TL 543262

These two grasslands represented a rare and declining habitat in Essex, being poorly drained and relatively unimproved. This was reflected in the diverse flora that included Meadow Foxtail (*Alopecurus pratensis*), Tufted Hair-grass (*Deschampsia cespitosa*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Marsh Thistle (*Cirsium palustre*), Ragged Robin (*Lychnis flos-cuculi*), Pignut (*Conopodium majus*), the very scarce Lady's Mantle (*Alchemilla filicaulis* ssp. *vestita**), Lady's Smock (*Cardamine pratensis*) and Cowslip (*Primula veris*). These two fields have dried out and become tall, rank swards. Key floral species may no longer be present. They are placed in the "potential" list, pending restorative management and further survey work.

Action: An increased management pressure, ideally by late summer grazing may improve the flora of these fields. There are also issues with the groundwater regime that may be harder to resolve. Additional survey work to assess the flora and invertebrates is desirable.

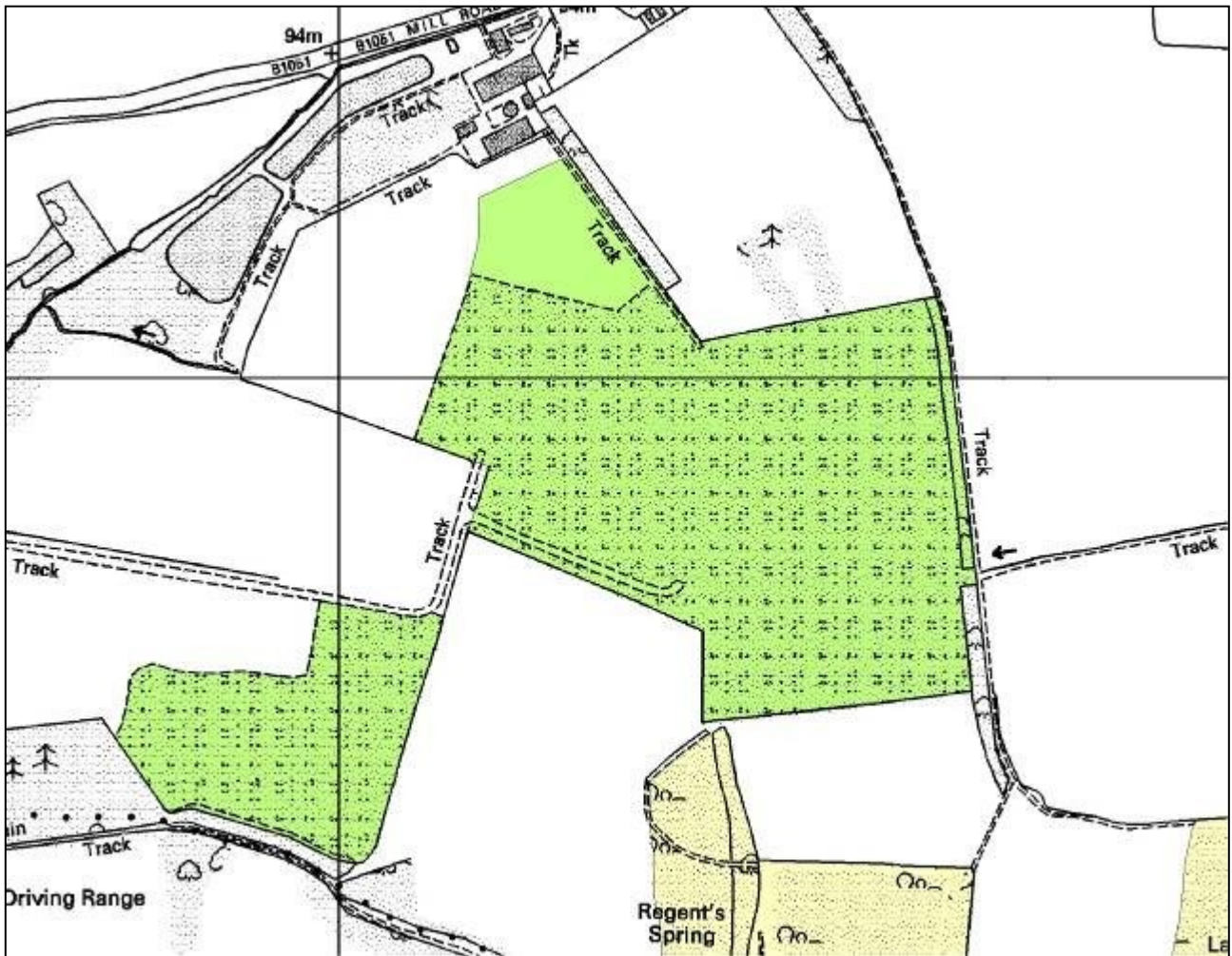


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PLoWS 13 Pennington Hall Meadow (1.4 ha) TL 544268

The vegetation type present in this meadow was a very rare one in Essex, being poorly drained and supporting an assemblage of marshland plants such as Marsh Thistle (*Cirsium palustre*), Marsh Marigold (*Caltha palustris*), Meadowsweet (*Filipendula ulmaria*), Sharp-flowered Rush (*Juncus acutiflorus*) and Ragged Robin (*Lychnis flos-cuculi*). The site formerly included the grassland section immediately to the north, but this has been completely removed from the reckoning on account of being species-poor and significantly improved. The remaining area is in need of restorative management, such as an initial flailing, followed by some form of grazing.

Action: Restoration required, followed by grazing. Invertebrate and flora surveys would be desirable.

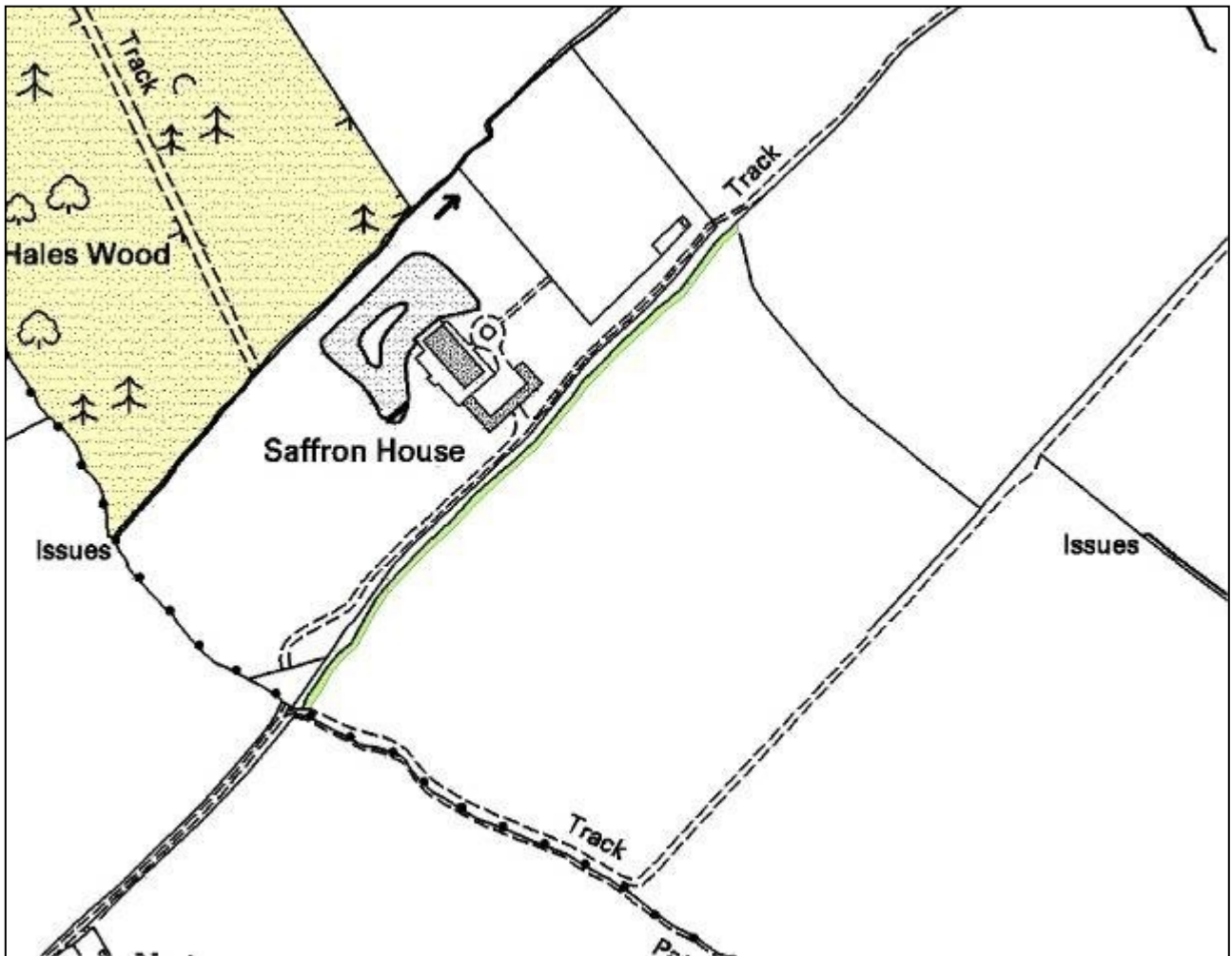


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PLoWS 14 Elsenham Landfill (20.3 ha) TL 551268

This is still an active site, with the level of wildlife interest in a state of flux and variable across the site. However, much survey work in other parts of Essex has shown such “brownfield” sites to be of great importance for their invertebrate populations, and this may well be the same here. The smaller section of land is known to support Essex Red Data List plants (Yellow-wort and blue Fleabane) and other chalk grassland specialists may also be found here. The reptile population may also be significant.

Action: Extensive surveys of flora, invertebrates and reptiles are strongly recommended.

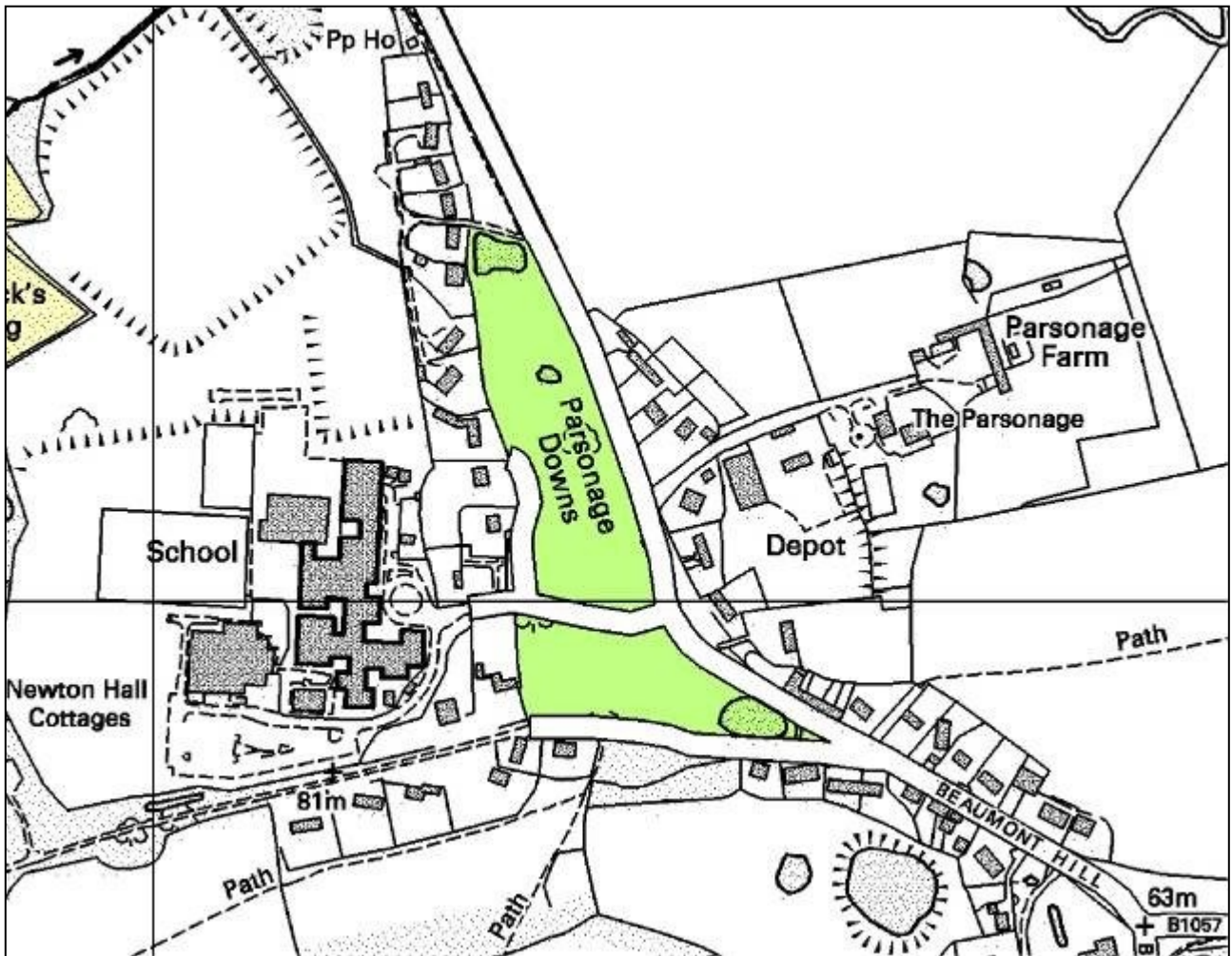


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PLoWS 15 Saffron House (0.2 ha) TL 575396

It is claimed that this hedge margin supports a good population of Crested Cow-wheat, but this was not visible in 2007, possibly because it had been recently mown prior to the survey visit.

Action: Re-survey in July 2008.

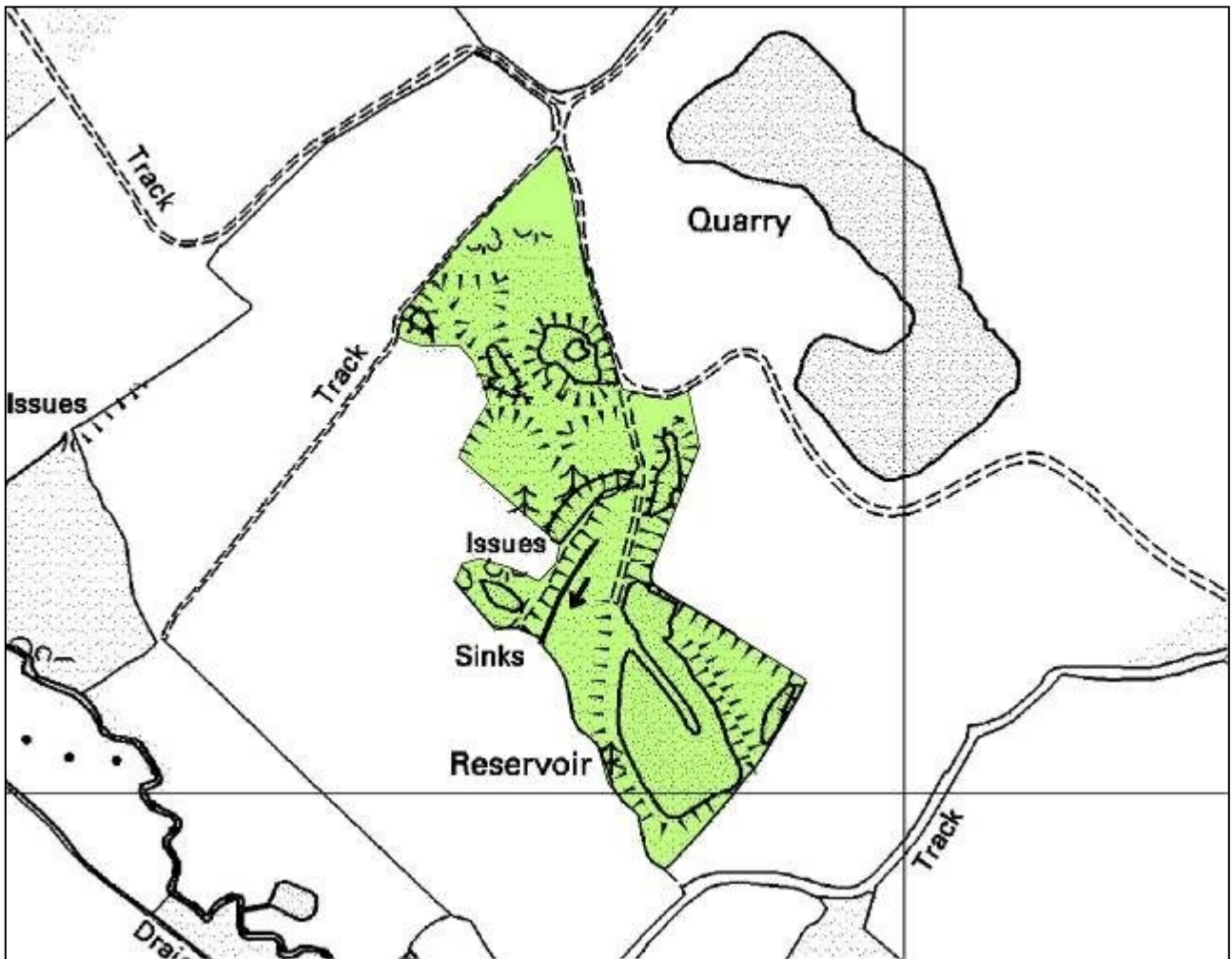


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PLoWS 16 Parsonage Downs (2.7 ha) TL 62232

This large area of amenity land to the north of Great Dunmow comprised species-rich neutral to acidic grassland and a number of ponds. The sward mainly consists of Meadow Foxtail (*Alopecurus pratensis*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Cock's-foot (*Dactylis glomerata*), Tufted Hair-grass (*Deschampsia cespitosa*), Red Fescue (*Festuca rubra*) and Yorkshire Fog (*Holcus lanatus*). Damp areas around the ponds supported species such as Lady's Smock (*Cardamine pratensis*), Ragged Robin (*Lychnis flos-cuculi*) and Sneezewort (*Achillea ptarmica**). The wildlife value of this site is being virtually eliminated by the severity of the current mowing regime. Its value would be enhanced by adopting a less rigorous mowing regime, allowing some areas of tall grassland to develop and cut annually on a hay meadow regime.

Action: Seek to reduce the extent, frequency and severity of mowing regime. Subsequent surveys of flora and invertebrates would then be desirable.



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PLoWS 17 Stebbingford Pits (4.3ha) TL 668231

This is perhaps a most unlikely looking Local Wildlife Site, comprising dense conifers and other trees surrounding a number of small flooded pits. However, such habitat would be an ideal location for Great Crested Newts and their potential presence should be considered when assessing any nearby development in the future.

Action: A survey for Great Crested Newts would be desirable to clarify the value of this site.

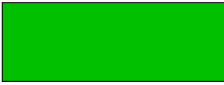
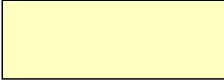



ANNEX 4

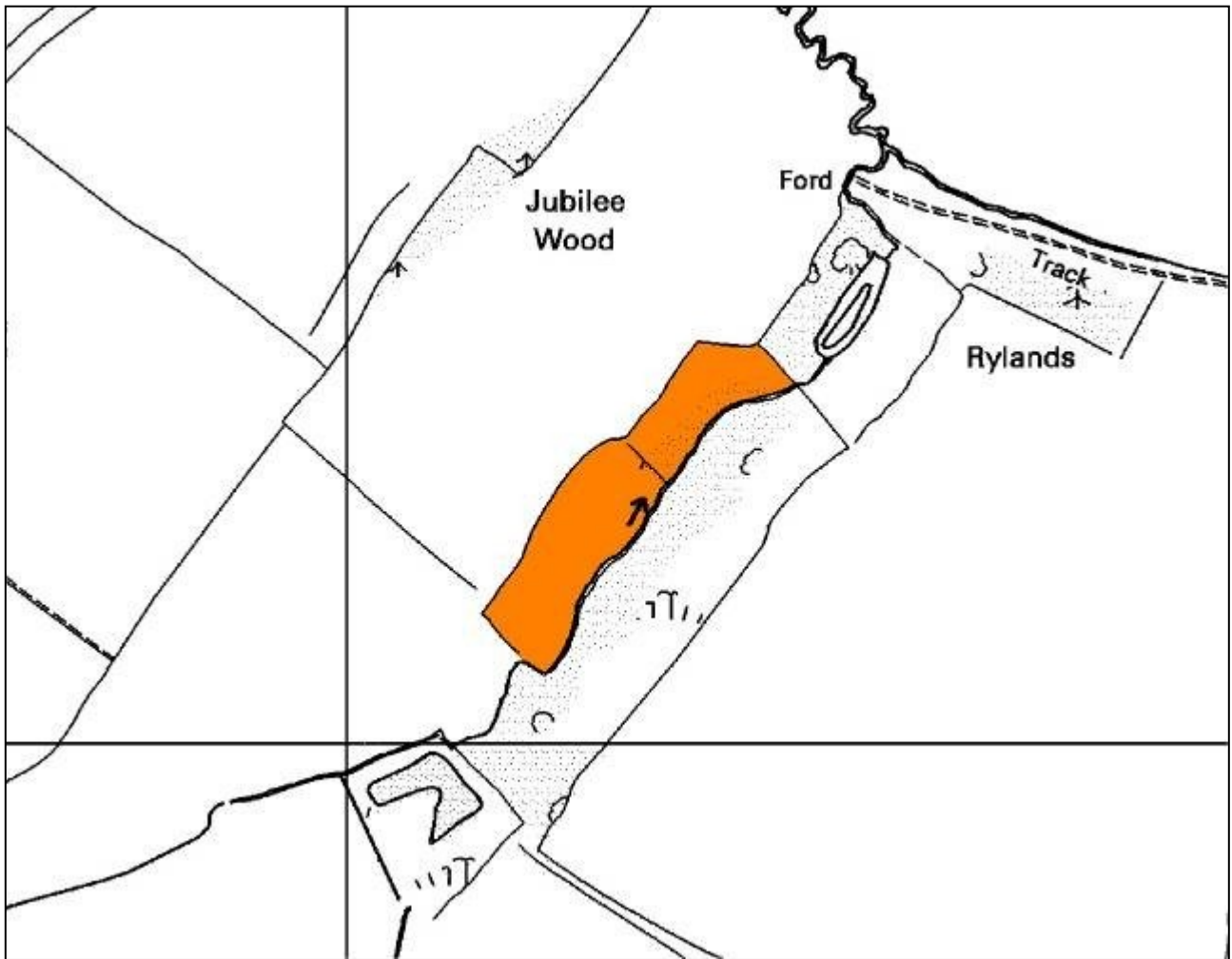
SITES of SPECIAL SCIENTIFIC INTEREST

The following maps are illustrative only. For definitive boundaries and citations, the local office of Natural England should be consulted.

Note: where a plant's scientific name is followed by an asterisk (e.g. *Campanula rotundifolia**), the plant is listed on the Essex Red Data List. Further information about this Red Data List project is available via the Essex Field Club.

KEY TO MAPS

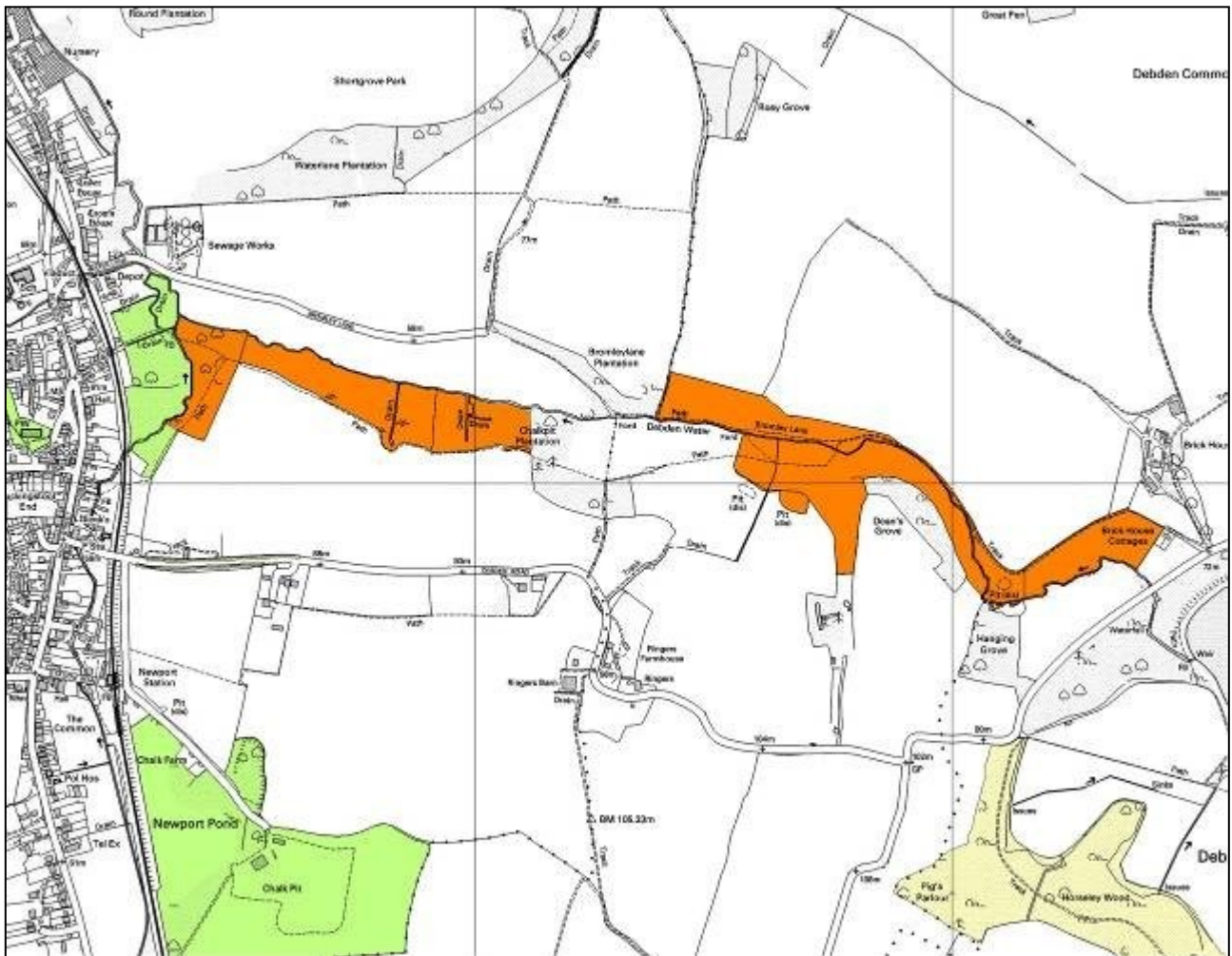
| | |
|---|------------------|
|  | Highlighted LoWS |
|  | Other LoWS |
|  | Potential LoWS |
|  | Highlighted SSSI |
|  | Other SSSI |



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Ashdon Meadows SSSI (1.3 ha) TL 592402

These small meadows show a range of vegetation types from neutral to calcareous grassland, marshy grassland, fen and willow scrub. Species of note include Salad Burnet (*Sanguisorba minor**), Downy Oat-grass (*Helictotrichon pubescens**), Blunt-flowered Rush (*Juncus subnodulosus**), Fen Bedstraw (*Galium uliginosum**), Ragged Robin (*Lychnis flos-cuculi*) and Purple Willow (*Salix purpurea**).

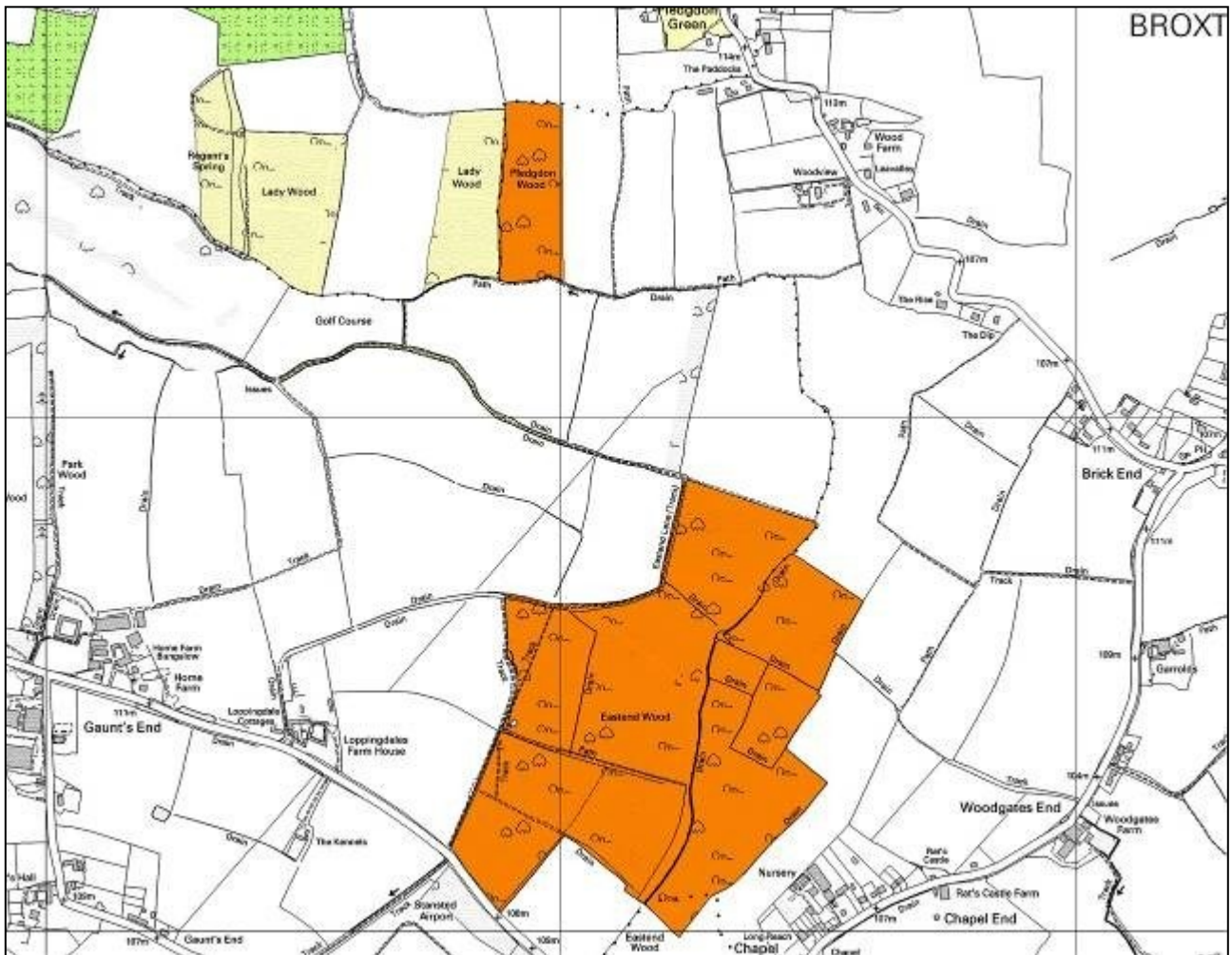


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Debden Water SSSI (20.8 ha) TL 535342

This site supports a wide variety of habitats ranging from calcareous grassland through to sandy gravel pits, fen vegetation and woodland. Typical species from the chalky grassland include Crested Dog's-tail (*Cynosurus cristatus*), Quaking Grass (*Briza media**), Salad Burnet (*Sanguisorba minor**), Cowslip (*Primula veris*), Downy Oat-grass (*Helictotrichon pubescens**) and Woolly Thistle (*Cirsium eriophorum**), a county rarity.

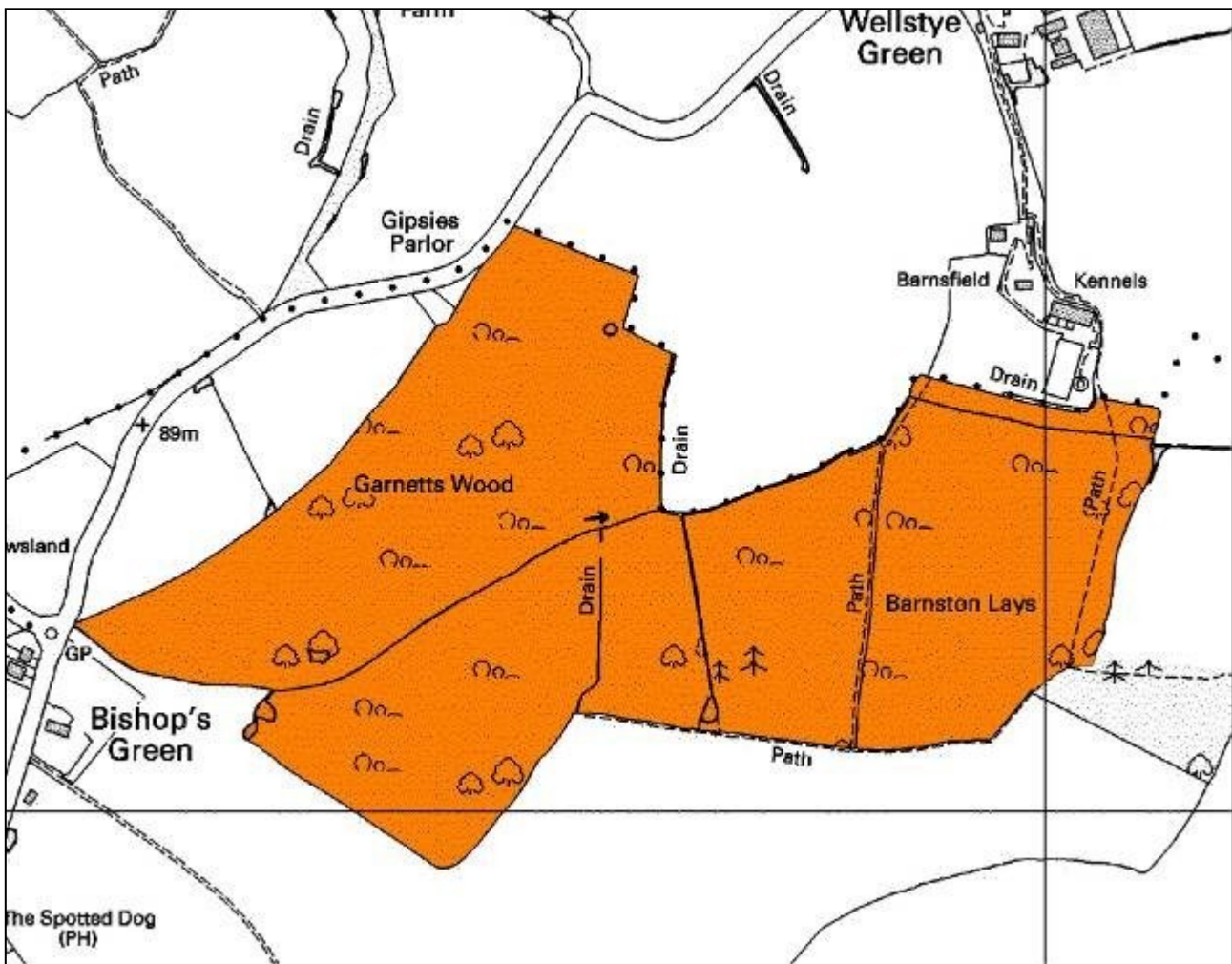
The fen areas are characterised by Common Reed (*Phragmites australis*), with good quantities of Greater Tussock-sedge (*Carex paniculata**), Lesser Pond-sedge (*Carex acutiformis*), Reed Canary-grass (*Phalaris arundinacea*) and Meadowsweet (*Filipendula ulmaria*). Southern Marsh Orchid (*Dactylorhiza praetermissa**) has also been recorded.



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Elsenham Woods SSSI (40.2 ha) TL 563255

This site comprises Eastend Wood and Pledgdon Wood to the north. Eastend Wood has a canopy of old coppiced Ash (*Fraxinus excelsior*) and Hazel (*Corylus avellana*) and some Field Maple (*Acer campestre*) with standards of Ash, Pedunculate Oak (*Quercus robur*) and Hornbeam (*Carpinus betulus*). Aspen (*Populus tremula*) and Birch (*Betula* spp.) are found throughout. Pledgdon Wood contains one of only two known locations for Wych Elm (*Ulmus glabra*) coppice in Essex. The ground flora of both woods is a mix of Bramble (*Rubus* sp.), Tufted Hair-grass (*Deschampsia cespitosa*), Dog's Mercury (*Mercurialis perennis*), Pendulous Sedge (*Carex pendula*) and Sanicle (*Sanicula europaea**). Species of interest include Oxlip (*Primula elatior**), Herb Paris (*Paris quadrifolia**) and Ragged Robin (*Lychnis flos-cuculi*).

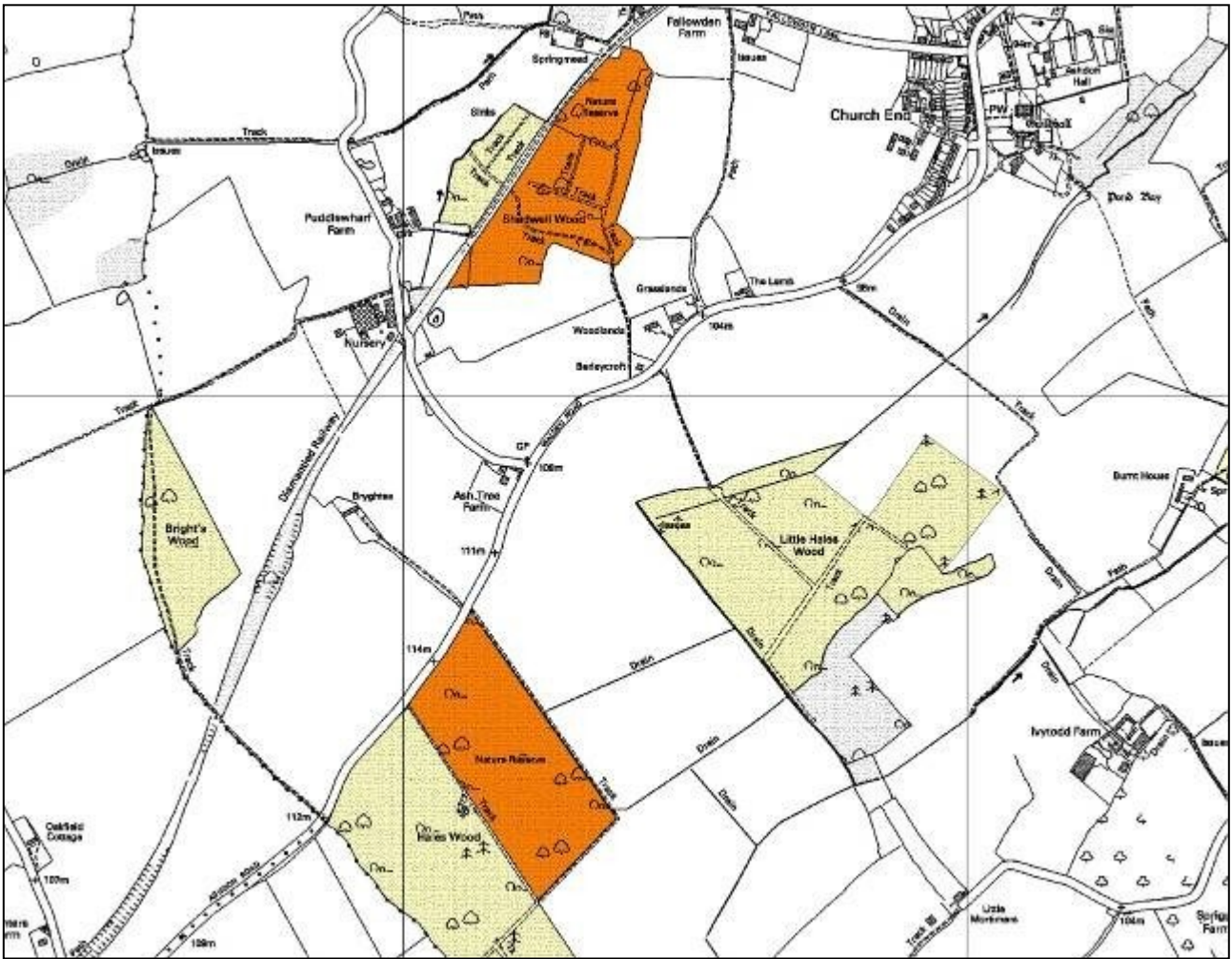


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Garnett's Wood/Barnston Lays SSSI (24.9 ha) TL 635183

Garnett's Wood is notable for its extensive stand of Small-leaved Lime (*Tilia cordata*) mixed with Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), Hornbeam (*Carpinus betulus*) and Field Maple (*Acer campestre*) with much Hazel (*Corylus avellana*). Wild Service Tree (*Sorbus torminalis*) also occurs here. To the east of Garnett's Wood is a block of mainly standard Oak, Ash, Hornbeam and Sweet Chestnut (*Castanea sativa*) with a few scattered conifers. Barnston Lays consists of Ash, Oak, Hornbeam and Field Maple with a Hazel (*Corylus avellana*) understorey.

The ground flora is varied, being characterised by Creeping Bent-grass (*Agrostis stolonifera*), Tufted Hair-grass (*Deschampsia cespitosa*), Yorkshire Fog (*Holcus lanatus*), Bluebell (*Hyacinthoides non-scripta*) and Bramble (*Rubus fruticosus*). Also present are Wood Anemone (*Anemone nemorosa*), Wood Sorrel (*Oxalis acetosella*), Pignut (*Conopodium majus*), Early Purple Orchid (*Orchis mascula**) and Wood Small-reed (*Calamagrostis epigejos**).



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Hales and Shadwell Woods SSSI (15.4 ha) TL 572403

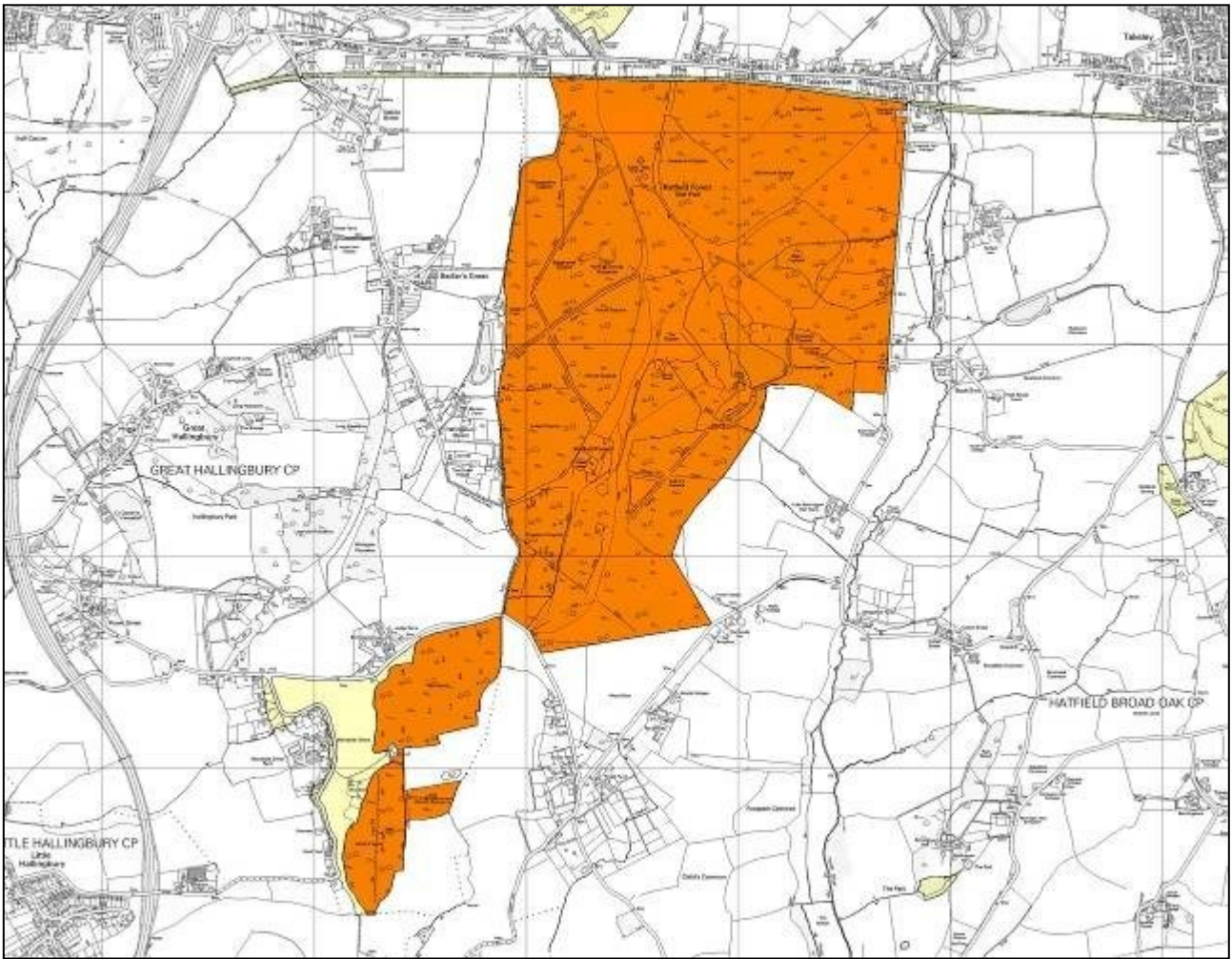
The Hales and Shadwell Woods SSSI comprises two disjunct ancient woods. Both are actively managed coppice with standards woods, with Ash (*Fraxinus excelsior*), Hazel (*Corylus avellana*) and Field Maple (*Acer campestre*) coppice and Ash and Pedunculate Oak (*Quercus robur*) standards. Spurge-laurel (*Daphne laureola*) and Wayfaring Tree (*Viburnum lantana**) are found among a varied shrub layer. Seven species of orchid have been recorded including Greater Butterfly-orchid (*Platanthera chlorantha**) and Bird's-nest Orchid (*Neottia nidus-avis**). Other species include Sanicle (*Sanicula europaea**), Wood Anemone (*Anemone nemorosa*), Bluebell (*Hyacinthoides non-scripta*), Oxlip (*Primula elatior**) and Herb Paris (*Paris quadrifolia**).



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Halls Quarry (0.7 ha) TL 519279

N.B. This is a geological SSSI and has never been listed within the SINC register for Uttlesford District. A larger part of the quarry is now listed here as a Potential Wildlife Site (see Annex 3).



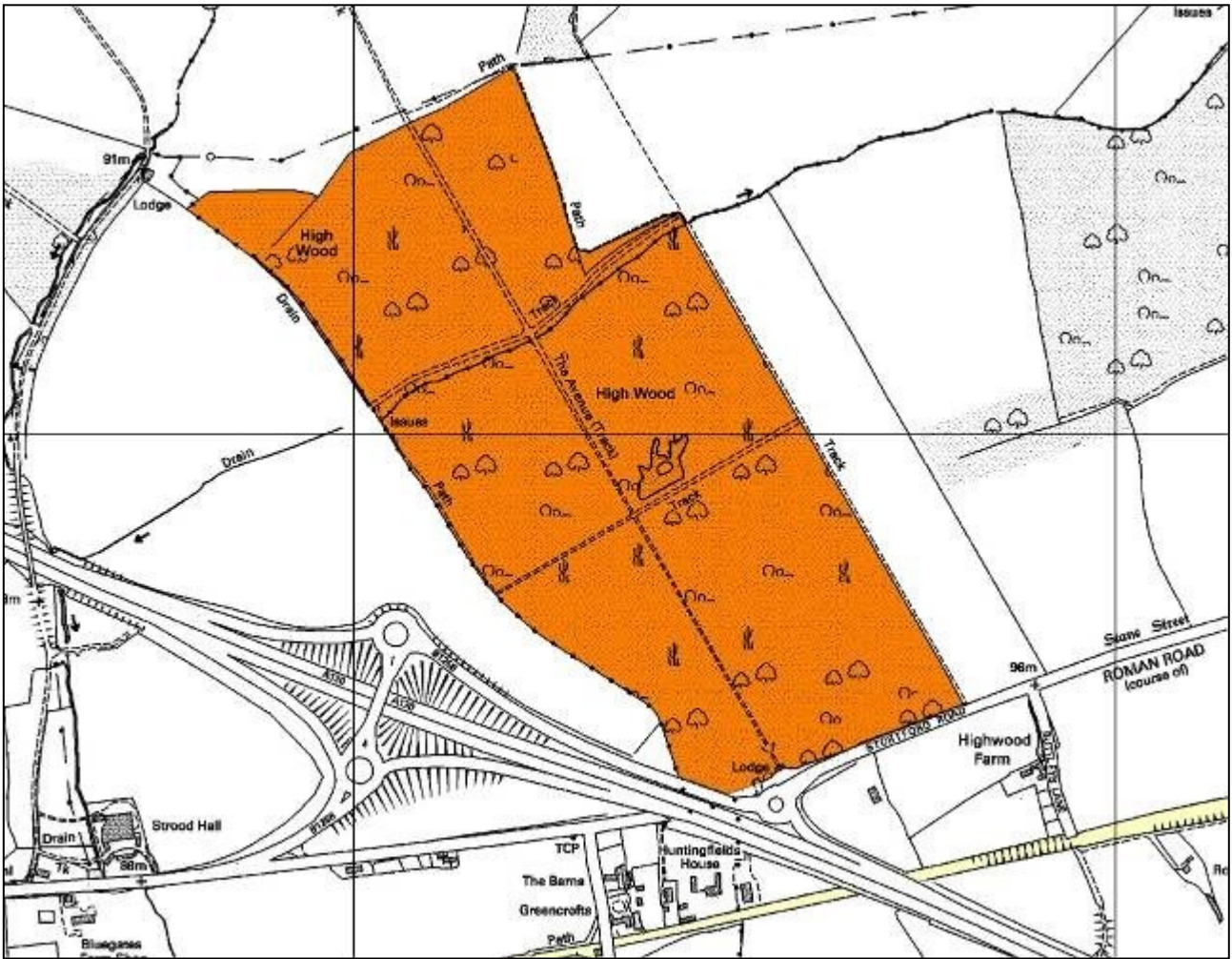
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Hatfield Forest SSSI (411.6 ha) TL 538202

Hatfield Forest is nationally renowned as a virtually intact medieval Royal Forest. The site comprises ancient coppice woodlands, unimproved grassland with scattered pollards, marshland and a lake. All these habitats support very rich assemblages of plants and associated fauna, making this unique site of national importance.

The woodlands typically comprise Ash (*Fraxinus excelsior*), Field Maple (*Acer campestre*), Hornbeam (*Carpinus betulus*) and Pedunculate Oak (*Quercus robur*), with stands of plateau Alderwood and Oak coppice also present, though rare in Essex. The ground flora is notable for a very southerly population of Oxlip (*Primula elatior**) and the nationally scarce Stinking Hellebore (*Helleborus foetidus**). Also present are Early Purple Orchid (*Orchis mascula**), Greater Butterfly Orchid (*Platanthera chlorantha**), Bird's-nest Orchid (*Neottia nidus-avis**) and Wild Daffodil (*Narcissus pseudonarcissus*).

The grasslands range from chalky soils with Pyramidal Orchid (*Anacamptis pyramidalis**), Wild Thyme (*Thymus polytrichus**) and Stemless Thistle (*Cirsium acaule**) through to markedly acidic conditions where Sheep's Fescue (*Festuca ovina*), Heath Grass (*Danthonia decumbens**), Upright Chickweed (*Moenchia erecta**) and Harebell (*Campanula rotundifolia**) can be found.

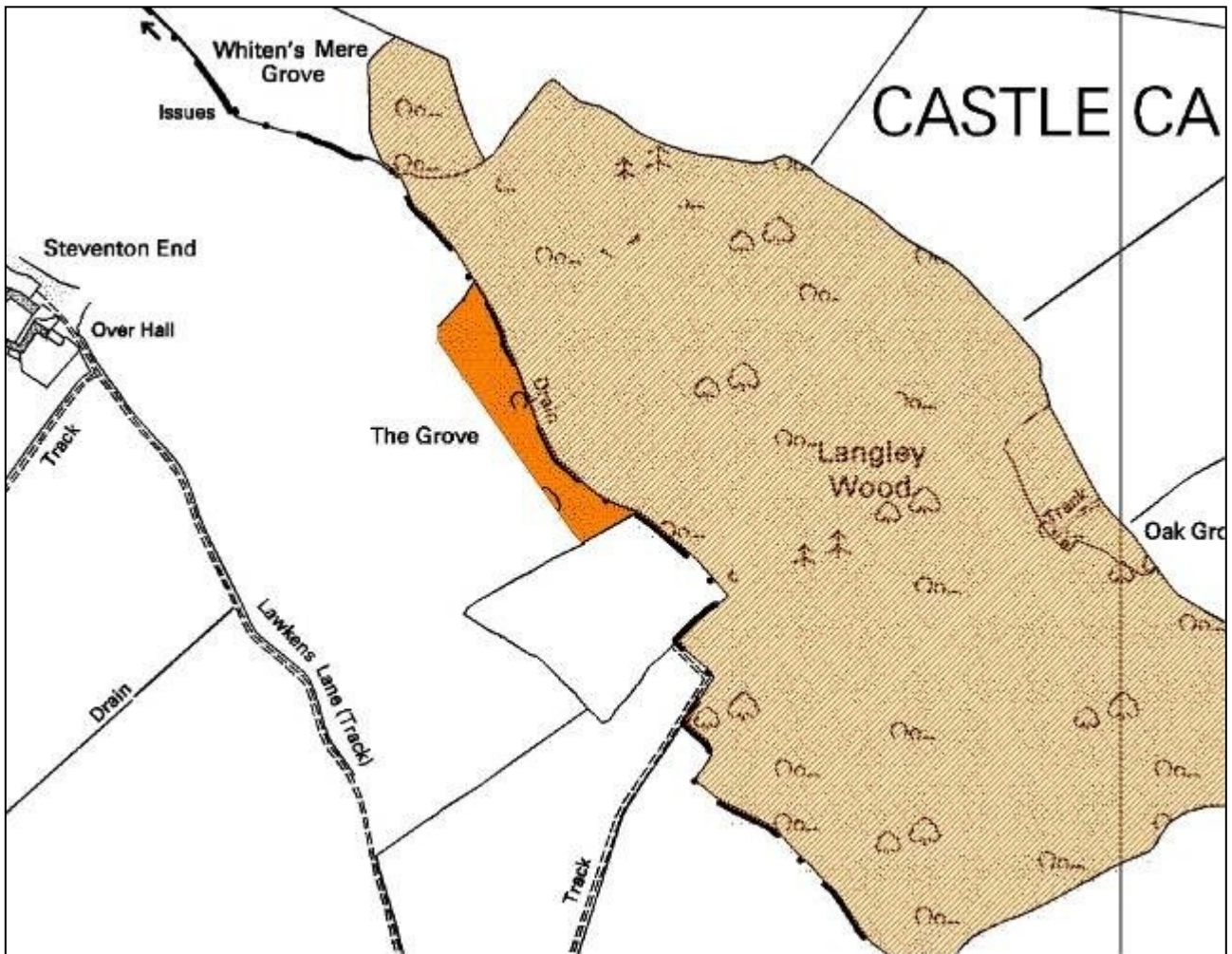


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High Wood, Great Dunmow SSSI (41.5 ha) TL 604220

The canopy of this wood comprises Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*) and Hornbeam (*Carpinus betulus*) with scattered overgrown coppice of Ash, Hornbeam, Hazel (*Corylus avellana*), Field Maple (*Acer campestre*) and Sweet Chestnut (*Castanea sativa*). Willows (*Salix* spp.) are also frequent, whilst stands of plateau Alder (*Alnus glutinosa*) wood are of note.

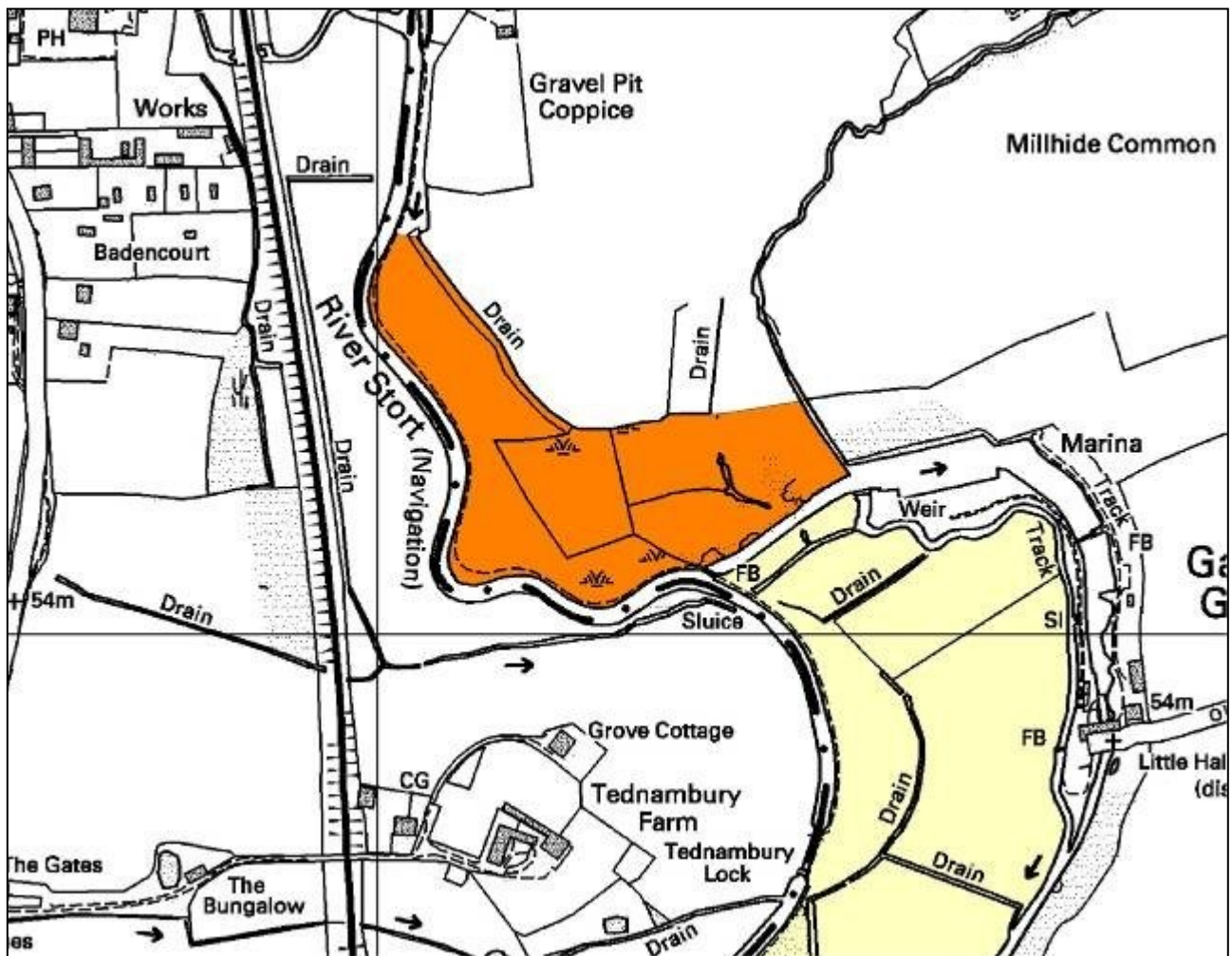
The ground flora is characterised by Dog's Mercury (*Mercurialis perennis*), Bramble (*Rubus fruticosus*), Pendulous Sedge (*Carex pendula*) and Tufted Hair-grass (*Deschampsia cespitosa*), whilst the presence of Pale Sedge (*Carex pallescens**) and Yellow-wort (*Blackstonia perfoliata**) is of interest.



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Langley Wood, The Grove (part of SSSI) (1.0 ha) TL 605425

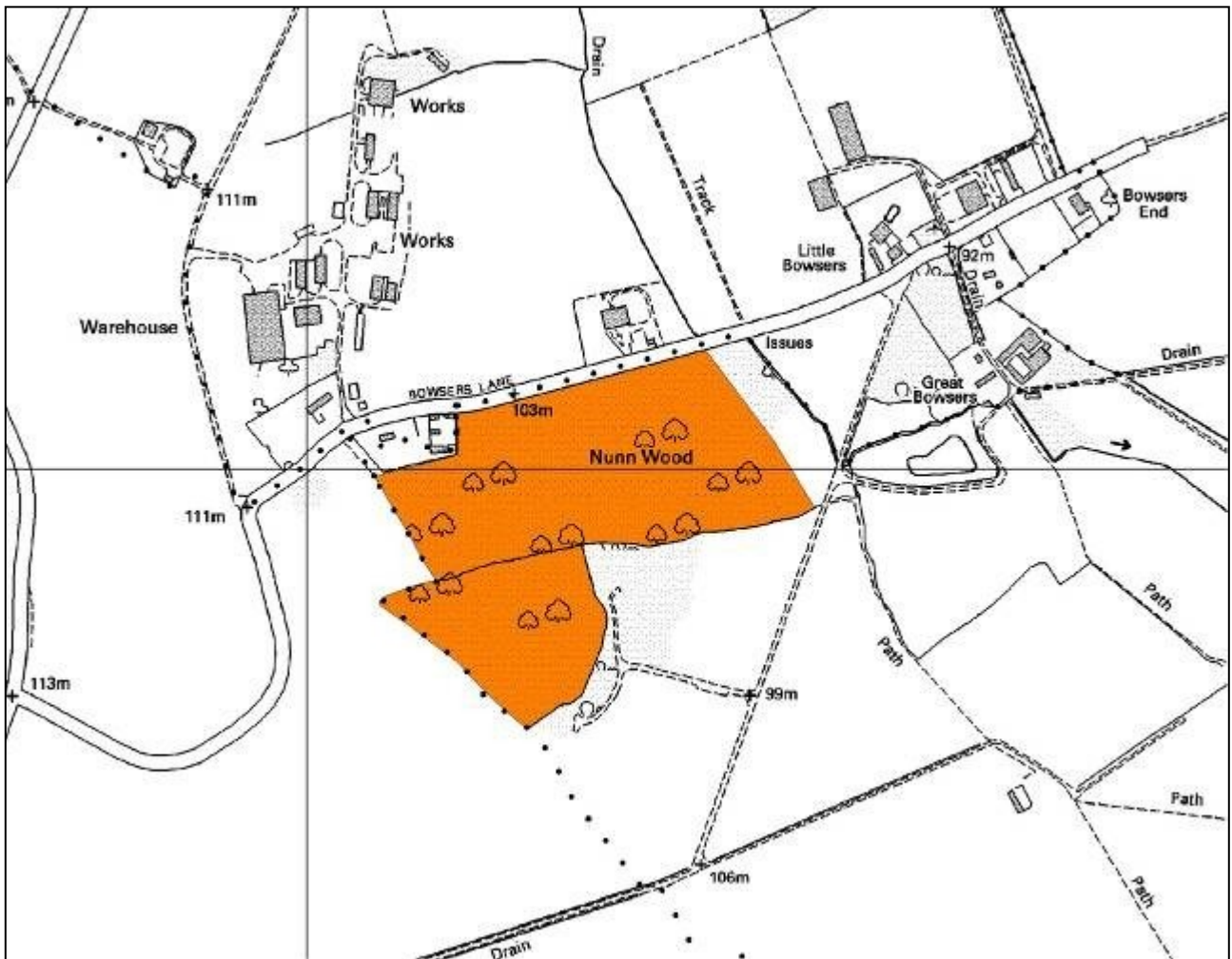
The vast majority of this ancient woodland site lies within Cambridgeshire as Langley Wood SSSI.



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Little Hallingbury Marsh SSSI (4.6 ha) TL 491171

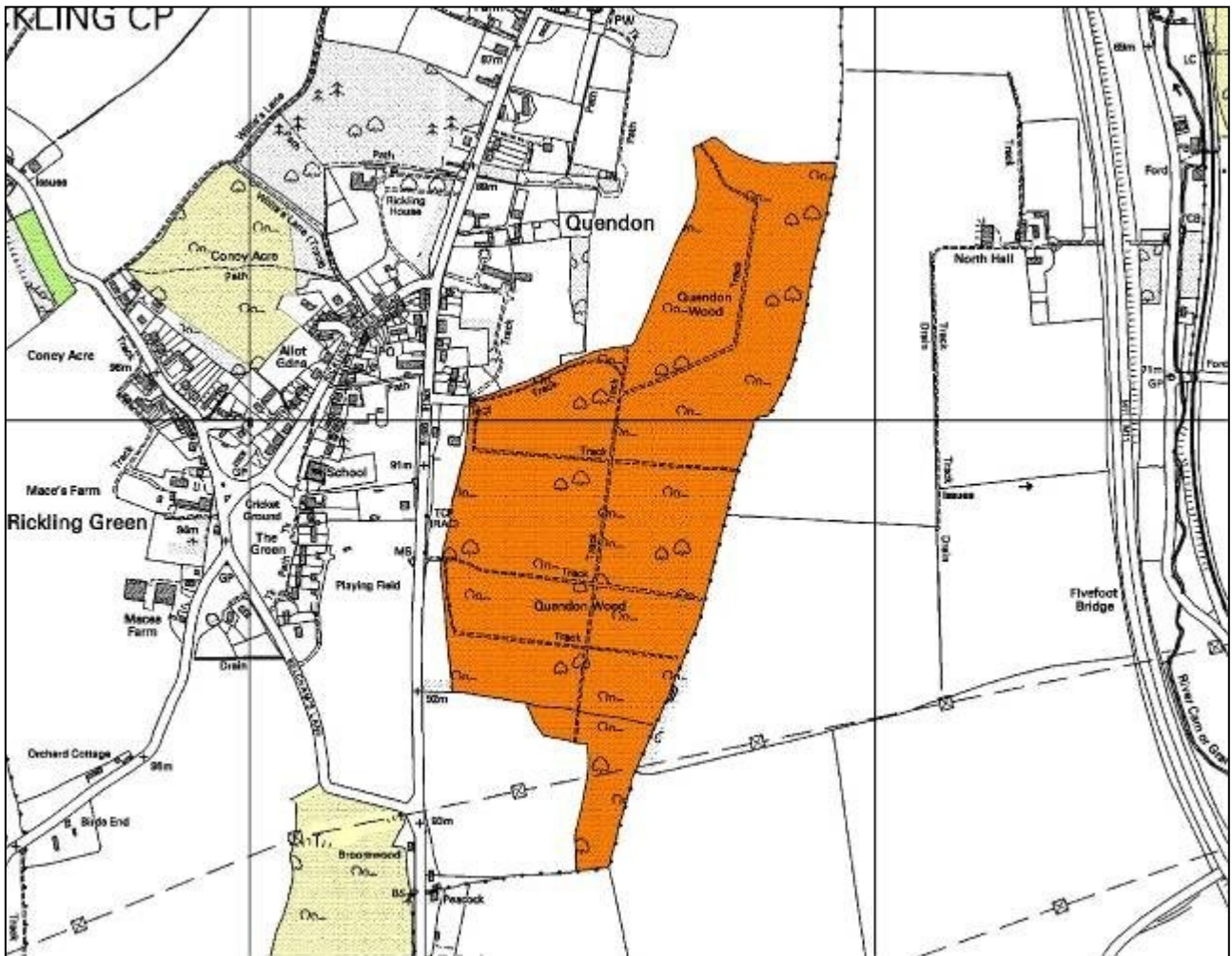
This site is an area of wet grassland and fen which supports an extremely rich flora of scarce and declining Essex plants. These include Common Sedge (*Carex nigra**), Water Horsetail (*Equisetum fluviatile**), Marsh Horsetail (*E. palustre**), Blunt-flowered Rush (*Juncus subnodulosus**), Marsh Valerian (*Valeriana dioica**) and Marsh Ragwort (*Senecio aquaticus**). The site is important for overwintering Snipe and Water Rail and also for breeding dragonflies.



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Nunn Wood SSSI (9.5 ha) TL 563430

This ancient wood is dominated by Hornbeam (*Carpinus betulus*) coppice with a small stand of Ash (*Fraxinus excelsior*) and Field Maple (*Acer campestre*). Scattered standards are mainly Ash with some Pedunculate Oak (*Quercus robur*). The ground flora is typified by Bramble (*Rubus fruticosus*), Bluebell (*Hyacinthoides non-scripta*), Dog's Mercury (*Mercurialis perennis*) and Rough Meadow-grass (*Poa trivialis*). Species of note include Ramsons (*Allium ursinum*), Early Purple Orchid (*Orchis mascula**) and Oxlip (*Primula elatior**).



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Quendon Wood SSSI (33.5 ha) TL 516298

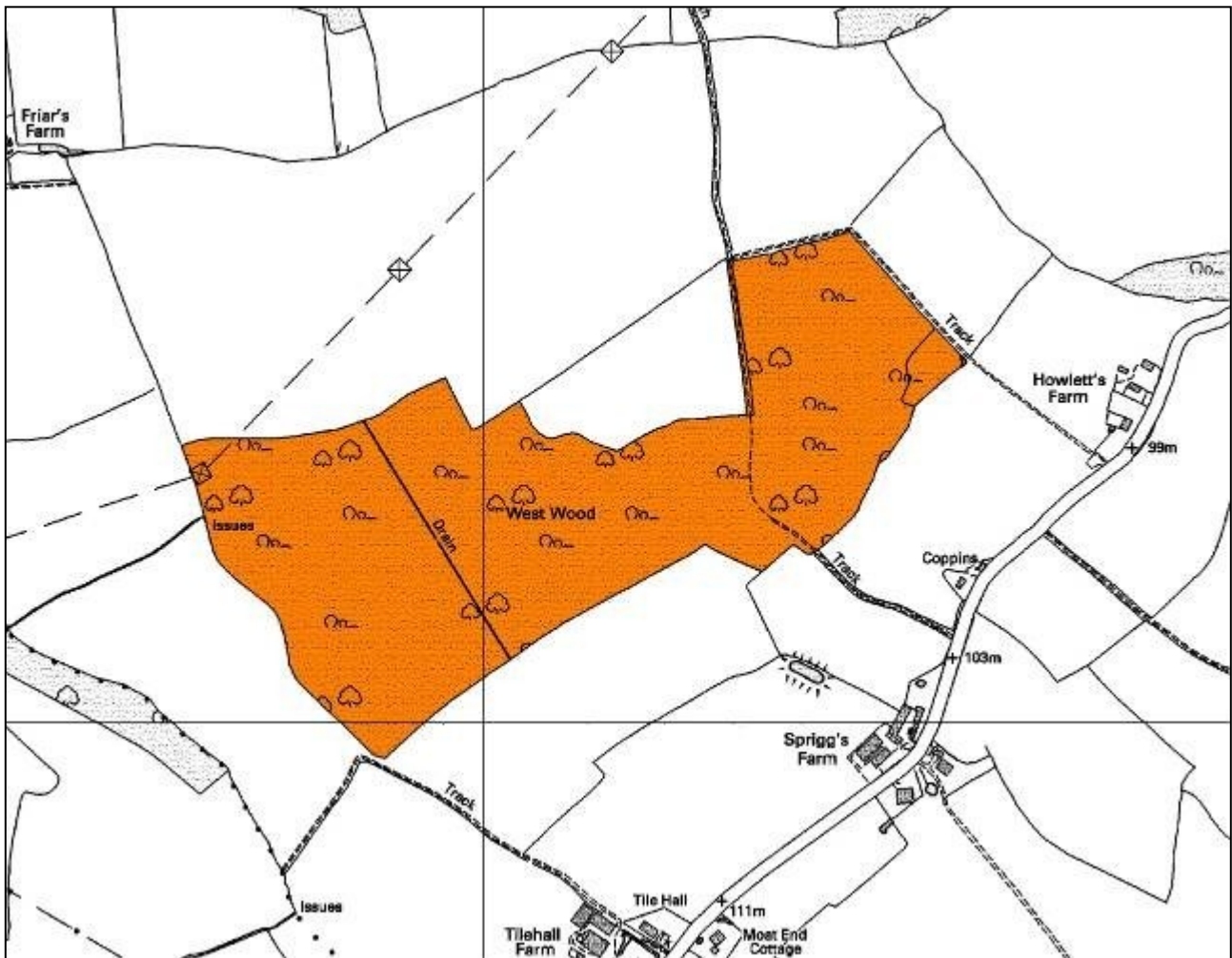
Quendon Wood is an ancient coppice-with-standards site with a varied flora associated with a range of soil types. These include Pedunculate Oak (*Quercus robur*), Hornbeam (*Carpinus betulus*), Ash (*Fraxinus excelsior*) and Field Maple (*Acer campestre*). Hazel (*Corylus avellana*) is abundant in the sub-canopy. The ground flora has several species of interest including Oxlip (*Primula elatior**), Primrose (*Primula vulgaris*) and their hybrids, Bluebell (*Hyacinthoides non-scripta*), Herb Paris (*Paris quadrifolia**), Lesser Lady's-mantle (*Alchemilla filicaulis* ssp. *vestita**), Wild Daffodil (*Narcissus pseudonarcissus*), Green Hellebore (*Helleborus viridis**) and Violet Helleborine (*Epipactis purpurata**). The woodland rides support flora generally found on well-drained acidic soils such as Trailing Tormentil (*Potentilla anglica**), Water Purslane (*Lythrum portula**) and Heath Wood-rush (*Luzula multiflora*).



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Sawbridgeworth Marsh SSSI (0.4 ha in Essex) TL 492160

Most of this reserve lies in Hertfordshire. The Essex section comprises wood and grassland, whilst elsewhere marsh and sedge beds support a rare flora and associated fauna, including Desmoulin's Whorl-snail.



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West Wood SSSI (23.8 ha) TL 621333

This wood comprises Ash (*Fraxinus excelsior*) with Field Maple (*Acer campestre*) and Hornbeam (*Carpinus betulus*). Pedunculate Oak (*Quercus robur*) standards are found in the eastern end of the wood. Hazel (*Corylus avellana*) forms the main component of the shrub layer with little Elder (*Sambucus nigra*), Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*). Bramble (*Rubus fruticosus*) and Dog's Mercury (*Mercurialis perennis*) dominate the ground flora. Species of interest include Oxlip (*Primula elatior**), Herb Paris (*Paris quadrifolia**), Greater Butterfly Orchid (*Platanthera chlorantha**), Broadleaved Helleborine (*Epipactis helleborine**), Bushgrass (*Calamagrostis epigejos**) and the rare Wood Barley (*Hordelymus europaeus**).