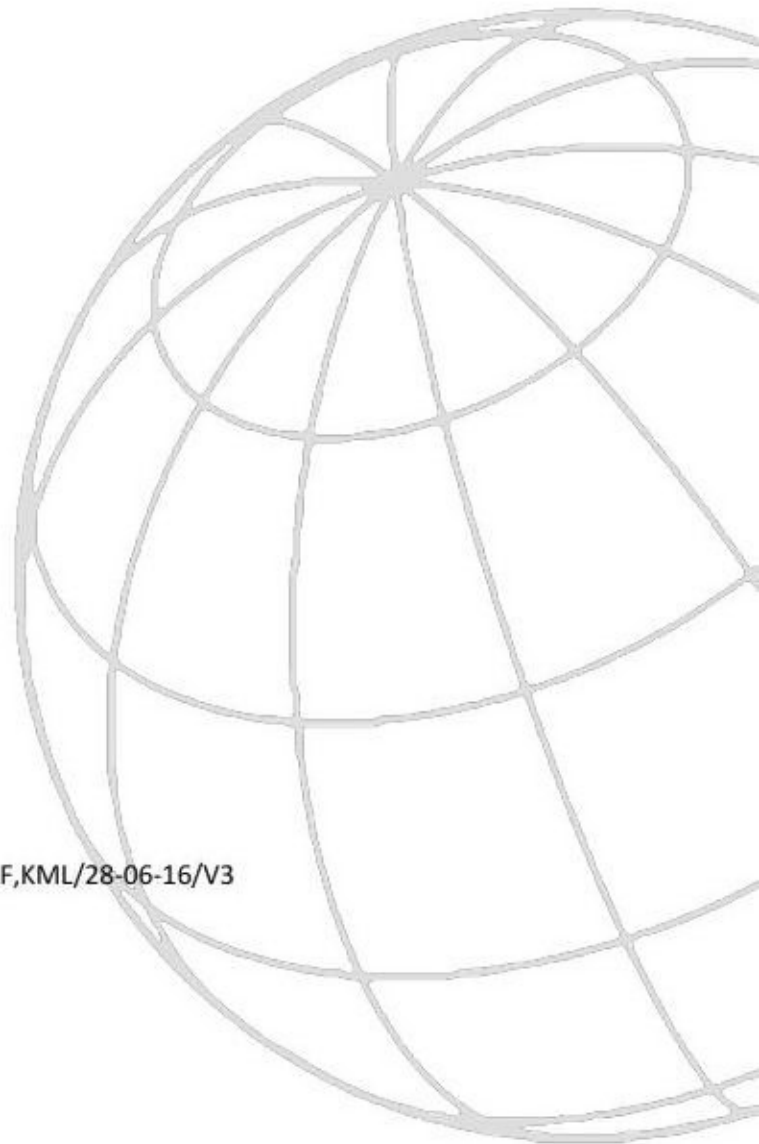


**PRELIMINARY ECOLOGICAL APPRAISAL
FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT
LANDERMERE ROAD, THORPE-LE-SOKEN, CO16 0LW**

Prepared For

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Report Reference Number: 1696,EC,AR,DS,SK/PEA/RF,KML/28-06-16/V3
Project Number: 1696,EC,AR,DS,SK
Issue Reference: 3
Issue Date: 28 June 2016



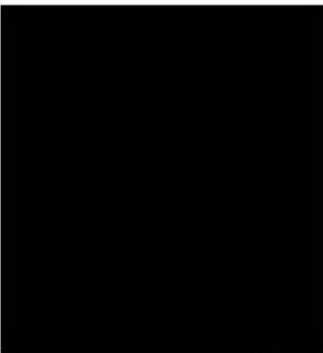
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DOCUMENT ISSUED RECORD

Report Number:	1696,EC,AR,DS,SK/PEA/RF,KML/28-06-16/3
Client:	M Scott Properties Ltd, Suite 5, Oyster House, Severalls Lane, Colchester, Essex, CO4 9PD
Project:	Landermere Road, Thorpe-le-Soken, CO16 0LW
Project Number:	1696,EC,AR,DS,SK
Report Type:	Preliminary Ecological Appraisal
Date of Report:	28 June 2016

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REVISION RECORD

Revision	Date	Document	Prepared By:	Admin
V2	21.04.16	1696,EC,AR,DS,SK-PEA-RF,KML, 31-03-16,V1	KL	CLJ

AMENDMENT RECORD

Revision	Date	Amendments
V2	21.04.16	Version 2 and an amendment to the Phase 1 Habitat Plan Drawing ref. 1696,EC,AR,DS,SK/001/Rev 0
V3	28.06.16	Amendments to client name

EXECUTIVE SUMMARY

Ecological Survey Data Review	
Report Description	<p>Geosphere Environmental Limited was commissioned by M Scott Properties Ltd, to undertake a Preliminary Ecological Appraisal of the land at Landermere Road, Thorpe-Le-Soken, CO16 0LW.</p> <p>The site is located at National Grid Reference, (NGR), 618610 222570. The report relates to the proposed redevelopment of the site for residential use.</p> <p>The proposed development covers an area of approximately 7.52 hectares (ha). This and the immediate surrounding area were surveyed.</p>
Summary of Main Findings	<p>The site predominantly comprises of Arable and Semi-Improved Grassland fields separated by species-poor hedgerows. Scattered and dense scrub, and scattered trees are present along the field margins. A pond is located on site, and a dry ditch follows one of the hedgerows.</p> <p>Habitats for protected species including birds, Badgers, bats, reptiles, Great Crested Newts and Hedgehogs have been noted on site.</p> <p>No suitable habitat was noted onsite for Otters, Water voles or Dormouse.</p> <p>Habitats for protected species are present on the site. The Arable field, scrub, hedges, trees, open water, and grassland all provide habitats which may be of importance to protected species. In most cases further species surveys will be required to determine the level of importance of the habitats, however these habitats are likely to be of site to local significance.</p> <p>The proposed development will not adversely affect any statutory designated site within or in excess of 2km from site.</p> <p>The proposed development has potential to affect Abbey Street: "Potential Local Wildlife Site", immediately south of the site. Development along the boundary of the Potential Wildlife Site would lead to an increase in disturbance of the species along the boundary.</p>
Ecological Constraints	<p>Immediately south of the site is a large area of scrub identified by Essex Wildlife trust as a potential Local Wildlife Site. This area provides potential habitat for reptiles, Great Crested Newts, birds, badgers, and bats.</p> <p>The pond on site provides potential breeding habitat for Great Crested Newts.</p> <p>The hedgerows and field margins provide potential habitat for reptiles and Great Crested Newt. The grass fields potentially provides additional temporary habitat if the grass is not maintained consistently to a short sward height.</p> <p>The hedgerows, trees and scrub on site provide foraging and commuting habitat for bats. Some of the mature trees around the pond could also provide potential roosting habitat for bats.</p> <p>The hedgerows, trees and scrub on site provide potential foraging and breeding habitat for common passerine birds. Raptor species may also be found to be using the site particularly in the southern field, due to the additional scrub off site to the south.</p>
Recommendations	<ul style="list-style-type: none">○ Birds: A breeding bird survey should be undertaken on the site to ascertain the species present and level of use across the habitats present on site. Two visits

should be undertaken, the first between April to mid-May, and the second at least four weeks later, (mid-May to the end of June).

- **Bats:** A foraging survey should be undertaken comprising at least two activity surveys. Activity surveys can only be carried out between May and September. Some bat roost features were noted within mature trees located around the pond on site. It is recommended that a bat scoping survey is undertaken to ascertain the bat roost potential of these trees.
- **Reptiles:** A survey is required to determine presence. Surveys for reptiles can only be undertaken between April and October under suitable weather conditions.
- **Great Crested Newts:** a presence/absence survey should be conducted on the adjacent pond. A minimum of four survey visits are required to prove absence from a pond. Surveys are conducted between March and June, (weather dependent), with a minimum of 50% of the surveys taking place between mid-April to mid-May.
- **Badgers:** the scrub off site to the south is considered suitable for Badgers. Badgers are known to dig new setts therefore although no evidence of setts were noted on site during the walkover, should construction works commence in excess of one year of the date of this report, a check should be made by an ecologist prior to the commencement of ground works within 30m of the southern boundary. Precautionary working methods should also be employed to minimise risk during the construction phase. For example excavations must not be left open overnight and night working avoided.

Biodiversity
Retention and
Enhancement
Opportunities

Habitats to Retain and Mitigation for Habitat Loss

- Mature trees should be retained. Any semi-mature or young trees that are removed during development should be replaced within the landscaping of the final development;
- The pond on site and its surrounding trees and scrub provide diversity to the site and additional habitats for invertebrates, amphibians, birds, and bats. The pond should be retained on site to ensure these habitats are retained;
- If any hedgerows are to be removed to gain access to the site, there is potential to provide mitigation for the loss by repairing hedgerows retained on site and replanting new hedgerows along the boundary.

Enhancements

- Any plants considered within the final development should ideally be native and considered beneficial to wildlife. Fruit/berry producing trees could be considered in order to provide a local food source for birds;
- Nectar producing plants should be incorporated within the proposed residential gardens. A plant list is attached as Appendix 7, to assist when selecting plant species within the final development;
- Bat boxes could also be placed on the mature trees to be retained within the development. Alternatively bat bricks could be included within the development. Examples are attached as Appendix 8;
- Log piles for invertebrates;
- Hibernation sites and holes at the base of garden fences large enough to allow a hedgehog to pass between gardens;

	<ul style="list-style-type: none">○ Further enhancements regarding reptiles and Great Crested Newt may be required as part of a mitigation strategy to be completed following activity surveys on the site.
Conclusions	<p>The recommendations within section 6 of this report should be adhered to reduce the impact on protected species.</p> <p>The areas of suitable habitats for protected species are predominantly located around the margins of the site, particularly the areas of dense scrub to the south of the site. A wildlife buffer strip and/or design of public open space along the southern boundary would reduce the impact on this area from the development.</p>

CONTENTS

Page No.

DOCUMENT ISSUED RECORD	1
EXECUTIVE SUMMARY	2
1. INTRODUCTION	8
1.1 General	8
1.2 Aims	8
1.3 Current UK Legislation	8
2. TECHNICAL APPROACH	10
2.1 Ecological Desk Study	10
2.2 Preliminary Ecological Appraisal	10
2.3 Habitat Suitability Index	11
2.4 Ecological Impact Assessment	11
3. DESK STUDY RESULTS	12
3.1 Statutory Designated Sites	12
3.2 Non-Statutory Designated Sites	12
3.3 Protected Species Records	14
4. HABITAT SURVEY RESULTS	17
4.1 Phase 1 Habitat Survey	17
4.1.1 Arable	17
4.1.2 Dense Scrub	17
4.1.3 Dry Ditch	17
4.1.4 Species-poor Hedge and Trees	18
4.1.5 Intact Species-poor Intact Hedge	18
4.1.6 Open Water	18
4.1.7 Scattered Scrub	18
4.1.8 Scattered Trees	18
4.1.9 Poor Semi Improved Grassland	18
4.2 Outside the Development Zone	18
4.3 Fauna on Site	19
5. ECOLOGICAL EVALUATION, IMPACT ASSESSMENT	20
5.1 Nature Conservation Sites	20
5.2 Legally Protected Species	20
5.2.1 Birds	20
5.2.2 Badger	20

CONTENTS

Page No.

5.2.3	Bats	21
5.2.4	Reptiles	21
5.2.5	Great Crested Newt	21
5.2.6	Water Vole	23
5.2.7	Otter	23
5.2.8	Dormouse	23
5.2.9	Invertebrates	23
5.2.10	Hedgehog	23
5.2.11	Plants	23
5.3	Habitats on Site	23
6.	ECOLOGICAL CONSTRAINTS AND RECOMMENDATIONS FOR MITIGATION AND ENHANCEMENT OPPORTUNITIES	24
6.1	Ecological Constraints	24
6.2	Recommendations	24
6.2.1	Habitats	24
6.2.2	Nature Conservation Sites	24
6.2.3	Bats: Roosting	24
6.2.4	Bats: Foraging	25
6.2.5	Bats: Lighting During Construction and within the Final Development	25
6.2.6	Reptiles	25
6.2.7	Breeding Birds	26
6.2.8	Great Crested Newts	26
6.2.9	Badgers	26
6.2.10	Other Species	27
6.2.11	Biodiversity Enhancement Opportunities	27
7.	CONCLUSIONS	28

CONTENTS

Page No.

APPENDICES

APPENDIX 1 – REPORT LIMITATIONS AND CONDITIONS	
APPENDIX 2 – REFERENCES	
APPENDIX 3 – DRAWINGS	
APPENDIX 4 – DESK STUDY DATA	
APPENDIX 5 – HABITAT SUITABILITY INDEX RESULTS	
APPENDIX 6 - TARGET NOTES	
APPENDIX 7 – SELECTED PLANTS	
APPENDIX 8 – BAT BOXES AND BRICKS	

TABLES

Table 1 – Statutory Designated Sites	12
Table 2 – Protected Species Records Identified Within 1km of the Site	14
Table 3 - Birds Identified During the Survey	19
Table 4 - HSI Scores for the ponds within 500m of site	22

1. INTRODUCTION

1.1 General

Geosphere Environmental Limited was commissioned by M Scott Properties Ltd, to undertake a Preliminary Ecology Appraisal of the site at Landermere Road, Thorpe-le-Soken, CO16 0LW. Any limitations and conditions pertaining to the report are stated within Appendix 1, with a full list of technical references provided within Appendix 2.

The report relates to the proposed development of the 7.52 hectares, (ha), site for residential use. The site is located at National Grid reference, (NGR), 618610 222570.

The development boundary is shown on Figure 1 below:



Figure 1 – The proposed development boundary is outlined in red.

1.2 Aims

This report has been prepared to support a planning application, and provides baseline data for the assessment of the ecological features of the site and identifies any potential constraints with regards to protected species. It also outlines recommendations for further surveys if necessary.

1.3 Current UK Legislation

The main legislation that applies to ecological issues within England and Wales is as follows:

- The Conservation of Habitats and Species Regulations 2010, consolidating all amendments to the Conservation, (Natural Habitats etc.) Regulations 1994. This legislation implements the EU Habitats Directive and also contains new provisions designed to implement aspects of the Marine and Coastal Access Act 2009 for England and Wales. These regulations place a duty on the UK to designate sites of European Community importance as special areas of conservation, (SACs), and to protect European species of conservation concern;
- Wildlife and Countryside Act 1981, (WCA), which was amended by the Wildlife and Countryside, (Amendment), Act 1985 and the Countryside and Rights of Way Act 2000, (CRoW). It is a criminal offense to “recklessly disturb” Schedule 1 nesting birds, and all species in Schedule 5 are protected under

Section 9, (animals which are protected). This does not apply to species protected under Section 9(5) only;

- The Natural Environment and Rural Communities, (NERC), Act 2006 imposes an obligation on all public bodies, including local authorities, to consider whether their activities can contribute to the protection of wildlife;
- Badgers (*Meles meles*) are protected under the Protection of Badgers Act 1992, (PBA), making it a criminal offense to wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or to attempt to do so or to intentionally or recklessly interfere with a sett.

2. TECHNICAL APPROACH

The extended Phase 1 habitat survey has been undertaken following guidelines provided by CIEEM's Guidelines for Preliminary Ecological Appraisal, (ref. **R.1**), and BS 42020: 2013 Biodiversity standards, (ref. **R.2**).

A desk study and ecological site walkover has been undertaken in accordance the key principles of the National Planning Policy Framework, (ref. **R.3**) and Government Circular 05/06: Biodiversity and Geological Conservation – statutory obligations and their impact within the planning system, (ref. **R.4**), to provide an indication of the ecological value of the site and the potential for the site to be used by protected species.

The habitat survey was undertaken in general accordance with JNCC methodology, (ref. **R.5**). Scientific names and common names of plant species identified are as they appear in Stace, (ref. **R.6**).

The conclusions and recommendations for further works are in accordance with current legislation and guidance.

2.1 Ecological Desk Study

A data search was conducted of freely available biological records. The sources of information included:

- Natural England Magic website for geographic information on key nature conservation designations of protected sites within 2km of the site, (ref. **R.7**);
- Essex Field Club was contacted to provide details of legally protected species and protected sites within 2km of the site. Essex Wildlife Trust was contacted to provide details of Local Wildlife sites within 2km of the site.

All relevant desk study data obtained is attached in Appendix 4.

2.2 Preliminary Ecological Appraisal

The surveys used to inform the preliminary ecological appraisal comprise a Phase 1 habitat and protected species scoping survey, more often referred to as an extended Phase 1 habitat survey.

The Phase 1 habitat survey involved a walkover of the site in which the habitats are categorised according to JNCC phase 1 habitat survey guidelines, (ref. **R.5**). The frequency and cover of each species identified as they are distributed in each habitat is estimated using the DAFOR scale, (ref. **R.8**), as follows:

- Dominant - >75% cover;
- Abundant – 51-75% cover;
- Frequent – 26-50% cover;
- Occasional – 11-25% cover;
- Rare – 1-10% cover;
- Locally frequent is also used where the frequency and distribution is patchy.

The site was assessed for its suitability to support protected species and other species of conservation importance which could pose a planning constraint. All signs and areas of habitat considered suitable for

protected species or those of conservation interest were recorded and photographed. These include burrows, droppings, footprints / paths, hairs, refuges and particular habitat types, such as ponds, known to be used by certain class of fauna. Any mammal paths found were noted down and followed where possible. Sites are taken in the context of their surroundings and so include the immediate environs outside of site boundaries where appropriate.

2.3 Habitat Suitability Index

The Habitat Suitability Index, (HSI), (ref. **R.9**), can be used to assess the suitability of a pond for GCN, based upon a number of factors including the size, water quality, permanence, shading, presence of fish, the number of nearby ponds and macrophyte cover. A score between 0 and 1 is given; where 0 represents poor suitability and 1 represent excellent suitability.

The results from the HSI have been included within Appendix 5.

2.4 Ecological Impact Assessment

The ecological evaluation and impact assessment detailed below is based on CIEEM Guidelines for Ecological Impact Assessment in the United Kingdom, (ref. **R.10**).

CIEEM Guidelines state that the value or potential value of an ecological resource or feature should be determined within a defined geographical context from an international to site scale as follows:

- On an International scale, e.g. Ramsar, SAC or SPA site;
- On a UK scale, for example a SSSI or a National Nature Reserve, (NNR);
- On a National scale, e.g. a reserve of importance to England/Northern Ireland/Scotland/Wales;
- On a Regional scale, e.g. a local site with important regional habitats or UKBAP species;
- On a County scale, e.g. a local site with a habitat that is characteristic of the County or rare on a County scale, or with LBAP species;
- On a District scale e.g. a site with wildlife corridors likely to improve the biodiversity of the area;
- Local or Parish, e.g. areas of green space in a predominantly urban environment;
- On a Site scale, e.g. habitats with value within the zone of influence only.

The potential for protected species to use the habitats on site contributes significantly towards the potential value of the habitats on site.

3. DESK STUDY RESULTS

All relevant desk study data obtained is attached in Appendix 4, except for detailed lists of species given the sensitive nature of the information.

3.1 Statutory Designated Sites

Hamford Water, located 1.4km to the north west of the site is a Statutory Protected Site, with numerous designations. The site is designated as a National Nature Reserve, a Ramsar site, a Site of Special Scientific Interest, (SSSI), a Special Area of Conservation and a Special Protected Area. Hamford Water has been protected due the presence of rare estuarine habitats which support internationally important breeding sites for birds and communities of rare coastal plants.

The development site is separated from Hamford Water by arable fields.

3.2 Non-Statutory Designated Sites

There are seven non-statutory designated sites identified within 2 km of the site. These sites are discussed in more detail in Table 1 below:

Table 1 – Statutory Designated Sites				
Name	Area (Ha)	Distance From Site	Site Details	Habitat Connection with Development Site
Thorpe Green (LWS)	1.0	1.4 km, West of site	Thorpe Green contains a good mix of grass and herb species, including Sweet Vernal-grass (<i>Anthoxanthum odoratum</i>), Red Fescue (<i>Festuca rubra</i>), Field Wood-rush (<i>Luzula campestris</i>), and Common Sorrel (<i>Rumex acetosa</i>). Cuckooflower (<i>Cardamine pratensis</i>) is abundant in the spring. <i>Soft-rush (Juncus effusus)</i> and Water Plantain (<i>Alisma plantago-aquatica</i>) are growing in a ditch. The western edge is bordered by Pedunculate Oak (<i>Quercus robur</i>) and Hawthorn (<i>Crataegus monogyna</i>). The site contains the BAP Priority Habitats; Lowland Meadows (UK) and Lowland Grassland (Essex).	No- the habitat is separated by urban development
Upper Holland Brook (LWS)	42.8	1.4 km, South of site	This Site comprises grassland, scattered trees, secondary woodland, scrub and reservoir along the upper reaches of the Holland Brook, beyond the SSSI downstream. Near Hunters Bridge (at the downstream end) the	No- the river habitats do not extend near to the site and is separated from

Table 1 – Statutory Designated Sites				
Name	Area (Ha)	Distance From Site	Site Details	Habitat Connection with Development Site
			first part of this site is flood plain grazing marsh, currently grazed by cattle. The site contains the BAP Priority Habitats; Coastal and Floodplain Grazing Marsh (UK).	site by urban development
St. Michael's Churchyard (LWS)	1.6	0.6km, West of site	This extensive, well-managed churchyard contains both areas of mown and long sward grassland. The latter is represented by Cock's-foot (<i>Dactylis glomerata</i>), False Oat-grass (<i>Arrhenatherum elatius</i>), Common Knapweed (<i>Centaurea nigra</i>), Yarrow (<i>Achillea millefolium</i>), among others. Rue-leaved Saxifrage (<i>Saxifraga tridactylites</i>) has been recorded on part of the roof, this being a very rare plant in Essex and is accordingly included on the Essex Red Data List. Other species of interest include Common spotted Orchid (<i>Dactylorhiza fuchsii</i>), Marjoram (<i>Origanum vulgare</i>) and Waxcap fungi. The various conifers within the yard attract year-round Goldcrest and Coal Tit. Slow-worm and Common Lizard have both been recorded in recent years.	No- the habitat is separated by urban development
Beaumont Bridge Verge (LWS)	0.05	0.9 km, North of site	This verge is of particular interest due to its population of Sea Hog's-fennel (<i>Peucedanum officinale</i>), which is nationally a very rare species, restricted to sites around Hamford Water in Essex and in north Kent. In addition, the Essex populations support the Nationally Rare (RDB2) UK BAP Fisher's Estuarine Moth.	Yes- the road verge continues adjacent to site, however the quality of the connecting road verge is much lower than the LWS. Also access points intercept the road verge at various stages.
Thorpe Hall (PWS)	16.9	0.33 km, South of site	Hall Row to the south may include remnant ancient wood. The parkland surrounding the hall itself may be of value of invertebrate habitat associated with old parkland trees,	No- Thorpe hall is separated from site by the B 1033 road.

Table 1 – Statutory Designated Sites				
Name	Area (Ha)	Distance From Site	Site Details	Habitat Connection with Development Site
			whilst the two areas of grassland to the north have general wildlife appeal. Common Lizard, Grass Snake and Adder have been reported, but their precise habitats and current status need confirmation.	
Land off Abbey Street (PWS)	7.8	0m – immediately adjacent to site to the South	This area of scrubby grassland has the potential to support reptiles, nesting birds and interesting invertebrate populations.	Yes- the Land off Abbey Street lies adjacent to site
Thorpe Pits (PWS)	12.5	0.87 km, South East of site	This is an area of “brownfield” ex-sand pit habitat that has undergone partial restoration. The open ground and ponds could support important invertebrate populations. Several nationally scarce bees and wasps have been recorded recently, although their current status is uncertain. The small woodland called Alder Car is a wet woodland habitat.	No- the Thorpe Pits habitats are separated by a the busy Frinton Rd and arable fields.
Note: LWS- Local Wildlife Sites, PWS- Potential Wildlife Sites				

3.3 Protected Species Records

There are 527 records of protected species listed within a 2km search radius of the site. Absence of records should not be taken as confirmation that a species is absent from the search area.

Table 2 provides a summary below:

Table 2 – Protected Species Records Identified Within 2km of the Site					
Common Name	Scientific Name	No. of Records	Closest Recorded Distance From The Site (Approximate)	Date of Most Recent Record	Protective Status *
Amphibian					
Common Frog	<i>Rana temporaria</i>	1	0.5km	2005	WCA sch 5 (Common. Documented)

Table 2 – Protected Species Records Identified Within 2km of the Site					
Common Name	Scientific Name	No. of Records	Closest Recorded Distance From The Site (Approximate)	Date of Most Recent Record	Protective Status *
					decline up to 1970s, since then appears to have stabilized.)
Great Crested Newt	<i>Triturus cristatus</i>	2	300m	1999	UKBAP, WCA sch 5 + 6, HabsDir
Reptile					
Common Lizard	<i>Zootoca vivipara</i>	9	1km	2014	UKBAP, WCA sch 5, NERC
Adder	<i>Vipera berus</i>	1	1.4km	1994	UKBAP, WCA sch 5, NERC
Mammal					
Badger	<i>Meles meles</i>	47	1.1km	2013	PBA
Otter	<i>Lutra lutra</i>	4	0.8km	1998	UKBAP, WCA sch 5 + 6, HabsDir
Water Vole	<i>Arvicola amphibius</i>	15	1.3km	2004	UKBAP, WCA sch 5, HabsDir
Hedgehog	<i>Erinaceus europaeus</i>	11	0.2km	2014	NERC, UKBAP, WCA sch 6
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	31	0.5km	2009	HabsDir, WCA sch 5 + 6, NERC, UKBAP
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	13	0.4km	2011	HabsDir, WCA sch 5 + 6
Brown Long-eared Bat	<i>Plecotus auritus</i>	20	0.3km	2009	HabsDir, WCA sch 5 + 6, NERC, UKBAP
Daubentons bat	<i>Myotis daubentonii</i>	4	0.8km	1998	HabsDir, WCA sch 5 + 6, NERC
Brown Hare	<i>Lepus europaeus</i>	18	1.5km	2003	UKBAP
Hazel Dormouse	<i>Muscardinus avellanarius</i>	8	0.7km	1998	HabsDir, NERC, UKBAP, WCA sch 5 + 6
Plants					
247 records of protected plants have been noted within 2km of the site including Butchers-broom (<i>Ruscus aculeatus</i>), Hog's Fennel (<i>Peucedanum officinale</i>) and Dittander (<i>Lepidium latifolium</i>).					
Invertebrate					
158 records of protected invertebrate species have been noted within 2km of the site including the Cobweb Beetle (<i>Ctesias serra</i>), Beaded Chestnut (<i>Agrochola lychnidis</i>) and Fisher's Estuarine Moth (<i>Gortyna borelii</i>).					
Birds					
In total 84 records of bird were provided.					

Table 2 – Protected Species Records Identified Within 2km of the Site

Common Name	Scientific Name	No. of Records	Closest Recorded Distance From The Site (Approximate)	Date of Most Recent Record	Protective Status *
<p>The following six BoCC Red status bird species have been noted within 2km of the site: Sky Lark (<i>Alauda arvensis</i>), Northern Harrier (<i>Circus cyaneus</i>), Corn Bunting (<i>Emberiza calandra</i>), Yellow Wagtail (<i>Motacilla flava</i>), Common Cuckoo (<i>Cuculus canorus</i>) and Yellowhammer (<i>Emberiza citrinella</i>).</p> <p>The following seven Amber BoCC amber status bird species were noted: Dunnock (<i>Prunella modularis</i>), Common Kestrel (<i>Falco tinnunculus</i>), Common House Martin (<i>Delichon urbicum</i>), Eurasian Teal (<i>Anas crecca</i>), Pied Avocet (<i>Recurvirostra avosetta</i>), Common Redshank (<i>Tringa tetanus</i>), and Western Marsh Harrier (<i>Circus aeruginosus</i>).</p> <p>The closest record of a bird species to site is for Bohemian Waxwing (<i>Bombycilla garrulous</i>) 0.7km South east of the site associated with Thorpe-le-socket.</p>					
<p>Notes:</p> <p>*WCA Sch 1 - Wildlife and Countryside Act (1981) Schedule 1. WCA Sch 5 - Wildlife and Countryside Act (1981) Schedule 5 (Killing, injuring and sale of certain species), WCA Sch 6 - Wildlife and Countryside Act (1981) Schedule 6 (Animals which may not be killed or taken by certain methods), WCA Sch 8 - Wildlife and Countryside Act (1981) Schedule 8 (Plants which are protected), UKBAP –UK Biodiversity Action Plan Species, NERC- Natural Environment and Rural Communities Act (2006) Section 41. Species of principal importance. PBA - Protection of Badgers Act (1992). HabsDir- Conservation of Habitats and Species Directive (2010) Annex II, Annex IV. BoCC Red / Amber - Birds of Conservation Concern - Red or Amber listed.</p>					

4. HABITAT SURVEY RESULTS

An experienced surveyor from Geosphere Environmental Ltd, carried out an initial appraisal of the site for protected species on the 15 March 2016. The weather conditions at the time of the survey were an overcast sky with a light air, and an approximate temperature of 10°C.

The results of the Phase 1 habitat survey and protected species scoping survey are detailed below, and annotated on the Phase 1 Habitat Plan Drawing ref. 1696,EC,AR,DS,SK/001/Rev 2 attached in Appendix 3. Descriptions of the target notes (TN) are included in Appendix 6.

4.1 Phase 1 Habitat Survey

The following habitat types were recorded within the survey area:

- Arable;
- Dense Scrub;
- Dry Ditch;
- Species-poor Hedge and Trees;
- Intact Species-poor Hedge,
- Standing Water;
- Scattered Scrub;
- Scattered Trees;
- Poor Semi Improved Grassland.

These habitats are discussed in more detail below.

4.1.1 Arable

The areas of arable land are sowed with grass and are likely to be used as a hay crop, (TN 1). The species composition is dominated by Grass (Poaceae). The grass was short at the time of the survey, however it is anticipated that this grass is allowed to grow to a long sward height before being cut for hay. Given its uniform colour, it is anticipated this crop has a low species diversity. The field margins are narrow and dominated by grass species, with rare occurrences of Oil-seed Rape (*Brassica napus* ssp. *oleifera*), Dandelion (*Taraxacum officinale* agg.), Cleavers (*Galium aparine*) and Dock (*rumex* sp.).

4.1.2 Dense Scrub

Dense scrub grows along the southern boundary of the site and continues south off site, (TN 2). The scrub is dominated by Bramble (*Rubus fruticosus* agg.), with abundant Blackthorn (*Prunus spinosa*), frequent Field Maple (*Acer campestre*), occasional Elder (*Sambucus nigra*), and rare occurrences of Hazel (*Corylus avellana*) and Common Snowberry (*Symphoricarpos albus*).

4.1.3 Dry Ditch

A dry ditch with some standing water follows a hedgerow in the east of the site. The ditch is heavily shaded with no macrophytes noted. The vegetation in the ditch is dominated by Grass.

4.1.4 Species-poor Hedge and Trees

Some of the field margins are bound by a species-poor hedge with trees, (TN3). The hedge comprises of dominant Blackthorn, with frequent Pedunculate Oak (*Quercus robur*) and occasional Field Maple.

4.1.5 Intact Species-poor Intact Hedge

An intact species-poor hedge cuts across the site, (north west to south east), along one of the field boundaries, and is formed entirely of Leyland Cypress (x *Cupressocyparis leylandii*) (TN 4).

4.1.6 Open Water

The pond on site, (pond 1), shows signs of being eutrophic, it is surrounded by dense scrub and trees and has sloped banks (TN5).

4.1.7 Scattered Scrub

Patches of scattered scrub are growing in areas around the margin of the field. The species comprised of dominant Bramble, abundant Grass species and rare occurrences of Pedunculate Oak and Dog Rose (*Rosa canina*), (TN6).

4.1.8 Scattered Trees

Scattered trees are growing in areas around the pond and through the dense scrub. The species comprise of dominant Pedunculate Oak. Some of the trees are mature and contain deadwood habitats.

4.1.9 Poor Semi Improved Grassland

The southern field comprised of semi-Improved Grassland. The grass was cut short at the time of the survey. The lack of tussocks in the field indicate that the grass has been maintained by regular cutting each year, (TN7).

4.2 Outside the Development Zone

There is a large area of scrub s adjacent to the southern boundary, (TN8). There is a woodland within 250m to the east of site, with some connectivity through hedgerows to the site. There are residential properties and gardens to the south and west of the site, and arable fields to the north and east. There are three additional ponds within 500m of the site.

4.3 Fauna on Site

The following species of birds were noted during the survey:

Table 3 - Birds Identified During the Survey		
Common Name	Scientific Name	Location Notes
Blue Tit	<i>Parus caeruleus</i>	Within hedgerows and scrub on site
Chaffinch	<i>Fringilla coelebs</i>	
Great Tit	<i>Parus major</i>	
House Sparrow	<i>Passer domesticus</i>	
Rook	<i>Corvus frugilegus</i>	

5. ECOLOGICAL EVALUATION, IMPACT ASSESSMENT

5.1 Nature Conservation Sites

There is one nature conservation sites with statutory protection and seven non-statutory sites designated as 'local wildlife sites' or 'potential wildlife sites' within 2km radius of the site.

The development site does not does not contain any habitats which support any of the important species associated with the statutory site Hamford Water, therefore the development site does not provide any suitability for the protected species associated with this statutory site. It is considered likely that residential development at Landermere Road will not be of sufficient size to have any indirect impacts on the statutory site.

It is considered unlikely, given the distance from the survey area and nature of the habitats to be affected within the development site, that the majority of sites which are statutory or non-statutory designated within or in excess of 2km will be directly affected by construction activity within the surveyed area.

Abbey Street "Potential Wildlife Site" is located immediately adjacent to the site. There is potential for the development to have an impact on the Potential Wildlife Site. Measures should be put in place to reduce the impact on this site. Should development take place without appropriate mitigation measures, there would likely be a negative impact of site to local scale, depending on the scale of the impact on the Potential Local Wildlife Site.

5.2 Legally Protected Species

5.2.1 Birds

The hedgerows, scrub and trees on site offers value to breeding birds, providing suitable nesting and foraging grounds for common passerine birds. The scrub areas are also considered important foraging areas for raptor bird species. The adjacent scrub mosaic habitat south of the site provides connective habitat for these bird species. The habitats on site are considered important on a site scale.

It is anticipated that the development will require the removal of sections of the hedgerows and areas of scrub present on site. The development may also have an indirect impact on the habitats on and near the site, for example by increasing noise and lighting levels. Therefore, should development without appropriate mitigation for nesting birds take place, this may result in a negative impact of site to local significance.

5.2.2 Badger

The desk study identified forty seven records of Badger within 2km, the closest record being within 1.3km of site. The poor semi-improved grassland provides suitable foraging habitat for badgers on site. The site has good connectivity with the adjacent scrub habitats within the Abbey Street Potential Wildlife Site.

No evidence or field signs of Badgers were found on site, or within the accessible areas of scrub surrounding the site.

There is potential for a sett to be located off site within the dense scrub, and Badgers are known to dig new setts within their local area. Therefore although no evidence of setts were noted on site during the walkover, should construction works commence in excess of one year of the date of this report, there is potential for Badgers to have moved on to site.

Therefore, should development without appropriate mitigation for badgers take place, this may result in a negative impact of site significance.

5.2.3 Bats

The desk study identified records of within 0.3km of site. The hedgerows, trees and scrub provides commuting and foraging corridors for bat species. There are also potential roosting habitats within some of the mature trees on site particularly around the pond. These habitats are considered important on a site to district scale, depending on the level of use and species using the site.

It is anticipated that the development will require the removal of sections of the hedgerows and areas of scrub present on site. The development may also have an indirect impact on the habitats on and near the site, for example by increasing lighting levels. Therefore, should development without appropriate mitigation for bats take place, this would likely result in a negative impact of site to district significance, depending on the results of further surveys.

5.2.4 Reptiles

The desk study identified records of reptile species within 1km of the site. The scrub area off site to the south of the site provides habitat which can support a permanent population of reptiles. There is connective habitat through the scrub and hedgerows around the field margins, which allow access for reptiles to the entire site. The poor semi-improved grass field and arable hay crop may provide suitable habitat in between cuts on a temporary basis.

It is anticipated that the development will require the removal of the grassland and arable grass fields, sections of the hedgerows, and areas of scrub present on site. Should development take place without appropriate mitigation in place, this could result in a negative impact of site to local scale depending on population present.

5.2.5 Great Crested Newt

The Desk study identified two records of Great Crested Newts within 300m of site in 1999, and six ponds within 500m of site referenced ponds 1 to 6 on Drawing ref. 1696,EC,AR,DS,SK 004/ Rev 1 within appendix 3. Most of the ponds were not accessible at the time of the survey, due to their location on private land.

5.2.5.1 Habitat Suitability Index

A Habitat Suitability Index, (HSI), was undertaken to assess their suitability to support Great Crested Newts, (GCN). A score between 0 and 1 is given; where 0 represents poor suitability, and 1 represents excellent suitability. The results are provided in Appendix 5, and summarised in Table 4 below.

Table 4 below, shows the Habitat Suitability Index, (HSI), for the six ponds found within 500m:

Table 4 - HSI Scores for the ponds within 500m of site				
Pond	Distance From Site	Connected or Separated from Site	HSI Score	Pond Suitability for Great Crested Newts
1	On site	On site - The pond has good connectivity to terrestrial habitats in the hedges and scrub around the margins of the site.	0.60	Average
2	5m North	Connected to site by Arable grass fields only.	0.38	HSI states Poor suitability however the construction of the pond and fish noted within the pond makes this pond highly unlikely to support GCN.
3	419m South-west	The Pond is located in a back garden and is separated from site by residential gardens.	Unknown – on private land	Unknown
4	239m South-west	The pond is separated from site by a caravan park.	Unknown – on private land	Unknown
5	412m South	No longer present.		
6	337m South	Separated from site by the B1033.	0.42	Poor - Local knowledge of the area confirms that this pond is not suitable for GCN.

The pond located on site, (pond 1, target note 5), provides average aquatic habitat for Great Crested Newts. There is a small area of fairly good quality terrestrial habitat surrounding the pond, which is connected to a large area of good habitat off site by the scrub located around the field margins. The scrub off-site to the south, provides permanent terrestrial habitat for Great Crested Newts. There is connective habitat though the scrub and hedgerows around the field margins, which allow access for Great Crested Newts to the entire site. The poor semi-improved grass field and arable hay crop may provide suitable habitat in between cuts, on a temporary basis. These habitats are considered important on a site to district scale, depending on the level of population using the site.

Pond 2, (target note 9), was located adjacent to site. The HSI calculated the pond provides poor habitat for Great Crested Newts. The pond is an artificial pond with a plastic lining. There are large goldfish in the pond and very few macrophytes. The banks of the pond are very steep and there is no access and exit points for Great Crested Newts. Therefore it is considered that this pond is not suitable for Great Crested Newts.

Pond 5 is no longer present.

Pond 6 is a large pond with an extensive selection of water fowl including a Black Swan, Goose, Mandarin Duck and Mallard. Local knowledge of the area has confirmed that GCN are not present within pond 6.

Although unable to access at the time of the survey, ponds 3 and 4 have no connectivity to site, and are therefore not a consideration for the development.

Should development without appropriate mitigation for GCN take place, this would likely result in a negative impact of local to district significance, depending on the level of population present on site.

5.2.6 Water Vole

The desk study did not identify any records of Water Voles (*Arvicola amphibius*), and suitable habitat for this species was not observed during the Phase I habitat survey. Therefore this species is not a material consideration for this development.

5.2.7 Otter

The desk study did not identify any records of Otters (*Lutra lutra*), and suitable habitat for this species was not observed during the Phase I habitat survey. Therefore this species is not a material consideration for this development.

5.2.8 Dormouse

Although the desk study identified records of Dormouse within 2km of the site, suitable habitat for this species was not observed during the habitat survey. Therefore this species is not a material consideration for this development.

5.2.9 Invertebrates

The desk study identified 158 records of protected invertebrates within 2km, mostly associated with Hamford Water. The habitats on site are considered suitable for normal assemblages of common invertebrate species only, and are considered important on a site scale. It is considered likely that providing the pond and mature trees remain within the proposed development, plant species planted within proposed residential gardens will result in no net loss of foraging for common species of invertebrate.

5.2.10 Hedgehog

The desk study identified eleven records of Hedgehog within 2km, with the closest record located within 0.2km. The poor semi-improved Grassland, hedges and scrub provides foraging habitat for hedgehog. These habitats are important on a site scale. Therefore, should development without appropriate mitigation for hedgehogs take place, this would likely result in a negative impact of site significance.

5.2.11 Plants

The desk study identified 247 species of protected plants within 2km of site. The development site provides habitat for only common species of plants suited to growing on arable land, therefore protected species of plants are not a material consideration for this development.

5.3 Habitats on Site

Habitats suitable for protected species are present on site. The arable land, scrub, hedges, trees, open water, and grassland all provide habitats which may be of importance to protected species. In most cases further species surveys will be required to determine the level of importance of the habitats, however these habitats are likely to be of site to local significance.

6. ECOLOGICAL CONSTRAINTS AND RECOMMENDATIONS FOR MITIGATION AND ENHANCEMENT OPPORTUNITIES

6.1 Ecological Constraints

The constraints to development will be the potential removal of hedgerow, trees, grassland and field margins, which have been confirmed suitable for nesting birds, reptiles, Great Crested Newt, Hedgerow, badgers and bats.

In general, if a habitat survey indicates potential habitat for legally protected species on the site which will be affected by the development, further species-specific surveys should be undertaken to determine if these species are present. If they are not carried out, the developer and/or subcontractors could be found liable for intentional, deliberate or reckless offenses with respect to wildlife.

6.2 Recommendations

6.2.1 Habitats

Any hedgerows or trees to be retained should be protected during the works. These protection measures should be implemented according to BS 5837: 2012 'trees in relation to design, demolition and construction', (ref. **R.11**).

The poor semi-improved grassland on site should continue to be regularly cut, to ensure the grass is maintained at a low height. It is anticipated that the grass seeded arable field will be allowed to grow to form a hay crop. If the grass in either of these fields is allowed to grow, the fields could provide temporary habitat for reptiles and great crested newts between cuts.

6.2.2 Nature Conservation Sites

Abbey Street "Potential Wildlife Site" is located immediately south of the site. Development along the boundary of the Potential Wildlife Site would lead to an increase in disturbance of the species along the boundary.

A wildlife buffer strip and/or design of public open space along the southern boundary would reduce the impact on this area from the development.

6.2.3 Bats: Roosting

Some bat roost features were noted within mature trees located around the pond on site, (pond 1). It is recommended that a bat scoping survey is undertaken to ascertain the bat roost potential of these trees.

Based upon the results of the bat scoping survey, activity surveys may be required should the trees require removal or limb cutting, or works likely to cause excessive vibration/disturbance are required within close proximity.

6.2.4 Bats: Foraging

The hedgerows and trees on site were identified to provide bat foraging and commuting habitats.

We would recommend that no work is conducted until a bat detector survey can be carried out, to confirm the level of bat use on the site. A minimum of two activity surveys should be undertaken between May and September.

6.2.5 Bats: Lighting During Construction and within the Final Development

The proposed development should design any new lighting which may be installed in the future, to avoid excessive light pollution which may disturb bats, nesting birds and other species. Specifically, it is recommended that hedgerows, trees, scrub and grassland remain unlit at night, and that no light pollution from the proposed development overflows onto this habitat.

Excess lighting can act as a barrier to Bats, potentially restricting their access to foraging areas. Any public lighting to be included within the proposed development, should ideally comprise of low pressure sodium lights, or alternatively high pressure sodium lights with UV filters and louvers.

Below are broad examples of what could be considered regarding lighting for the scheme to reduce impact:

- Power: It is rarely necessary to use a lamp of greater than 2000 lumens, (150 W), in security lights. The use of a higher power is not as effective for the intended function and will be more disturbing for bats;
- Lighting column for pedestrianised areas: The height of lighting columns in general should be as short as is possible as light at a low level reduces the ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reduce horizontal spill. For pedestrian lighting this can take the form of low level lighting that is as directional as possible and below 3 lux at ground level;
- Movement sensors for external lights on properties: Many residential security lights fitted within rear gardens are fitted with movement sensors which, if well installed and aimed, will reduce the amount of time a light is on each night. This is more easily achieved in a system where the light unit and the movement sensor are able to be separately aimed;
- Timers: If the light is fitted with a timer this should be adjusted to the minimum to reduce the amount of 'lit time'. This could be considered on street lights;
- Aim of light: The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. A shield or hood can be used to control or restrict the area to be lit. Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats.

6.2.6 Reptiles

The scrub, hedgerows and field margins provide habitat which can support a permanent population of reptiles. The poor semi-improved grassland and arable grassland on site could provide foraging habitats and cover for reptiles, if the grass is not maintained to a low sward height.

A survey is required to determine presence. It is strongly recommended that surveys and the specification of any mitigation measures if necessary, are carried out by a suitably qualified ecologist. Surveys for reptiles can only be undertaken between April and October under suitable weather conditions.

6.2.7 Breeding Birds

The hedgerows, scrub and trees on site offers value to breeding birds, providing suitable nesting and foraging grounds for common passerine birds. The scrub areas are also considered important foraging areas for raptor bird species. The adjacent scrub mosaic habitat south of the site provides connective habitat for these bird species. As such a breeding bird survey should be undertaken to fully assess the use of the site by breeding birds so that appropriate mitigation can be proposed.

Two survey visits should be undertaken, the first should be undertaken during the early part of the breeding season, (April to mid-May), and the second visit at least four weeks later, (mid-May to the end of June), in order to determine breeding status of species and distribution of key species of interest, (e.g. schedule 1 species, species of conservation concern etc).

A wildlife buffer strip and/or design of public open space along the southern boundary would also reduce the long term impact on habitats south of the site that are also considered suitable for birds.

6.2.7.1 Future Timing of Works

To ensure that no offences occur under the WCA it is recommended that any vegetation clearance work is undertaken outside of the bird nesting season. The bird-nesting season is generally regarded to extend between March and August inclusive, (weather dependent).

If it is not possible to undertake clearance works outside of the breeding bird season, a suitably qualified ecologist should be employed to determine if nesting birds are using the site prior to the works commencing, in order to avoid a negative impact on the protected species. Any active nests that are found would need to be provided with a 10 metre buffer, which would have to be left until the young had fledged, (typically four weeks from the eggs being laid, for the garden and woodland species which are likely to be present). Clearance works within the area can recommence only when the nest is no longer in use.

6.2.8 Great Crested Newts

The pond on site, (Pond 1), has an average HSI score and requires a survey to determine whether Great Crested Newts are present.

Dependent upon the findings of the survey visits, the number of total survey visits required varies. A minimum of four survey visits are required to prove absence from a pond. Surveys are conducted between March and June, (weather dependent), with a minimum of 50% of the surveys taking place between mid-April to mid-May.

It is considered likely that even if a population of Great Crested Newts were present, avoidance measures could easily be implemented within the development scheme to avoid long term negative impact.

6.2.9 Badgers

No evidence of badgers were found on site. Since no evidence of badgers was found on-site, no further surveys are required at this stage.

Badgers are known to dig new setts therefore although no evidence of setts were noted on site during the walkover, should construction works commence in excess of one year of the date of this report, a check should be made by an ecologist prior to the commencement of ground works within 30m of the southern

boundary. Precautionary working methods should also be employed to minimise risk during the construction phase. For example excavations must not be left open overnight and night working avoided.

6.2.10 Other Species

Habitats for Hedgehogs and common species of invertebrates have been noted on site. Enhancement features could be put in place to ensure that suitable habitat is provided within residential gardens and public open space for these species.

6.2.11 Biodiversity Enhancement Opportunities

The following has been recommended within the final development scheme:

- Mature trees should be retained where possible, as it is not possible to replace the habitats provided by mature trees. Any trees that are removed during development should be replaced within the landscaping of the final development;
- The Pond on site and its surrounding trees and scrub provide diversity to the site, and additional habitats for invertebrates, amphibians, birds, and bats. The pond could be retained on site to ensure these habitats are retained;
- Any plants considered within the final development should ideally be native and considered beneficial to wildlife. Fruit/berry producing trees could be considered in order to provide a local food source for birds;
- Nectar producing plants should be incorporated within the proposed residential gardens. A plant list is attached as Appendix 7, to assist when selecting plant species within the final development;
- Bat boxes could also be placed on the mature trees to be retained within the development. Alternatively bat bricks could be included. Examples are attached as Appendix 8;
- Log piles for invertebrates;
- Hibernation sites and holes at the base of garden fences large enough to allow a hedgehog to pass between gardens;
- Further enhancements regarding reptiles and Great Crested Newt may be required as part of a mitigation strategy to be completed following activity surveys on the site.

7. CONCLUSIONS

The proposed development will not adversely affect any statutory designated site within or in excess of 2km from site.

The proposed development has potential to affect Abbey Street "Potential Local Wildlife Site" immediately south of the site. Development along the boundary of the Potential Wildlife Site would lead to an increase in disturbance of the species along the boundary.

No habitats that occur within the survey area were considered to have high ecological importance on an international, national, regional or county scale. The habitats on site have potential to be of site to district significance, subject to the results of further Phase 2 surveys.

The site is not considered suitable for Water Voles, Otters, or Dormouse.

There are suitable features, within the area to be affected by the proposed development, which may provide habitat for birds, bats, reptiles, and Great Crested Newts. In particular:

- **Birds:** The areas of scrub, hedgerows and trees, provide suitable nesting habitat for breeding birds during the breeding season. These areas also provide potential foraging habitat for raptor species.
- **Bats:** The areas of scrub, hedgerows and trees, provide potential foraging habitat for bat species. There are potential bat roost features within the mature trees surrounding the on- site pond.
- **Reptiles:** The areas of scrub, field margins and hedgerows on site, and the areas of scrub immediately south of the site appear highly suitable for reptiles.
- **Great Crested Newts:** There is a pond located on site which provides potential breeding habitat for Great Crested Newts.
- **Badgers:** No evidence of badgers were found on site, however there is an extensive area of scrub adjacent to the site which provides potential habitat for badgers.

The recommendations within section 6 of this report should be adhered to reduce the impact on protected species.

The areas of suitable habitats for protected species are predominantly located around the margins of the site, particularly the areas of dense scrub to the south of the site. A wildlife buffer strip and/or design of public open space along the southern boundary would reduce the impact on this area from the development.

APPENDICES

APPENDIX 1 – REPORT LIMITATIONS AND CONDITIONS

This report was prepared only for our client and is not intended to be relied on by any other party.

Any limitations associated with the report will be stated. The consequences of any limitations, findings and/or recommendations in the report are made clear in line with CIEEM professional conduct guidelines and British industry standards, (refs. **R.1** and **R.2**).

The Executive Summary, Conclusions and Recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon until considered in the context of the whole report.

Interpretations and recommendations contained in the report represent our professional opinions, which were arrived at in accordance with currently accepted industry practices at the time of reporting and based on current legislation in force at that time.

This report is prepared and written in the context of the proposals stated in the introduction to this report and should not be used in a differing context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore, with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to us for re-assessment and, if necessary, re-appraisal.

Scientific survey data will be shared with local biological records centre in accordance with the CIEEM professional code of conduct.

The scoping survey does not assess the presence or absence of a species, but is used to assess the potential for habitat to support them.

This survey does not constitute an invasive species survey and should not be treated as such.

Geosphere Environmental Ltd may not be aware of information that could be held by other organisations or individuals, and it is always possible for features of nature conservation interest to be unrecorded during surveys.

Due to the time of year, some plant species are not identifiable. However, this does not affect categorisation of habitats present.

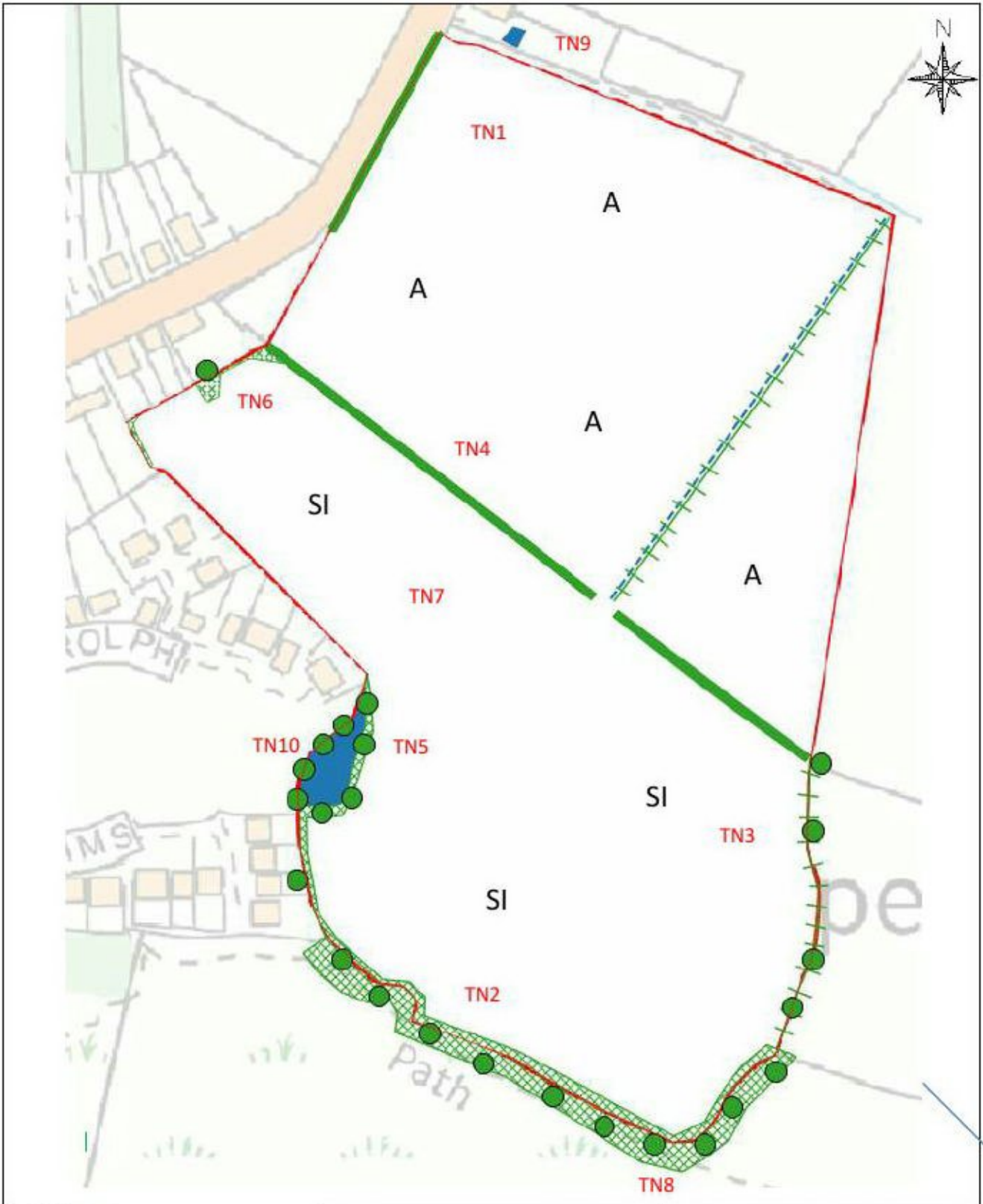
APPENDIX 2 – REFERENCES

- R.1. CIEEM (2013) Guidelines for Preliminary Ecological Appraisal (GPEA).
- R.2. BSI (2013) BS 42020:2013 Biodiversity – Code of practice for planning and development. BSI Standards Limited 2013.
- R.3. DCLG (2012) National Planning Policy Framework.
- R.4. ODPM (2005) Government Circular: Biodiversity and Geological Conservation – statutory obligations and their impact within the planning system.
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- R.6. Stace, C. A. (2010). New Flora of the British Isles (third edition), Cambridge University Press.
- R.7. Magic (accessed 17/03/16). Site Check Report. www.magic.gov.uk.
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- R.9. Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155
- R.10. CIEEM, (2016). Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland (Second edition dated January 2016).
- R.11. BS 5837: (2012), 'Trees in Relation to Design, Demolition and Construction'.

APPENDIX 3 – DRAWINGS

Phase 1 Habitat Survey Plan – Drawing ref. 1696,EC,AR,DS,SK/001/Rev 2

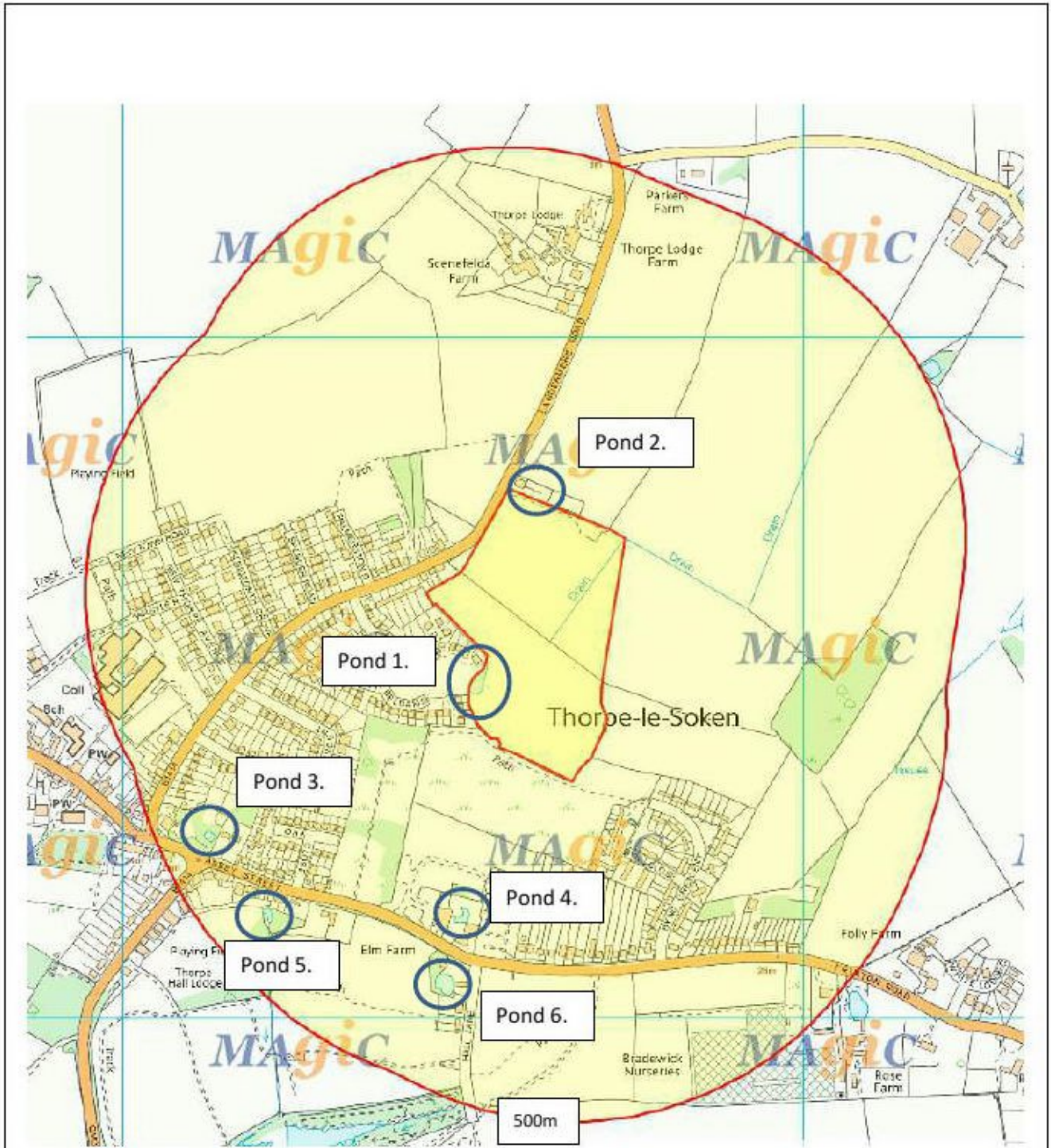
Pond Location Plan – Drawing ref. 1696,EC,AR,DS,SK/004/Rev 1



- | | |
|------------------------------|--|
| A Arable | Scattered Scrub |
| Dense Scrub | Scattered Trees |
| Dry Ditch | SI Poor Semi-Improved Grassland |
| Species-poor Hedge and Trees | Site Boundary |
| Intact Species-poor Hedge | TN Target Note |
| Standing Water | |

Brightwell Barn, Ipswich Road,
Brightwell, Suffolk, IP10 0BJ

SITE Landermere Road, Thorpe-le-Soken, CO16 0LW	TITLE Phase 1 Habitat Plan CLIENT M Scott Properties Ltd	REPORT NO. 1696,EC,AR,DS,SK DRAWN BY RF	DRAWING NO. 001 Rev 2 CHECKED KML	DATE March 2016 SCALE Not to scale
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geosphere environmental ltd

Brightwell Barn, Ipswich Road
Brightwell, Suffolk, IP10 0BJ

SITE Landermere Road, Thorpe-le-Soken, CO16 0LW	TITLE Pond Location Plan CLIENT M Scott Properties Ltd	PROJECT NO. 1696,EC,AR,DS,SK DRAWN BY RF	DRAWING NO. 004 Rev 1 CHECKED KML	DATE March 2016 SCALE Not to scale
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APPENDIX 4 – DESK STUDY DATA

Essex Recorders partnership Datasearch Report

Essex Field Club

Registered Charity Number 1113963

In partnership with

Basildon Council

Buglife

Butterfly Conservation

Essex Amphibian & Reptile Group

Essex Bat Group

Essex Birdwatching Society



Bio and Geodiversity data regarding
Land East of Landermere Road
Radius 2km from TM1858922564
Customer Reference: purchase order 0848

On behalf of

Mr Richard Fenna
Geosphere Environmental Ltd,

EFC2190, 04 Mar 2016

When information from this report is provided to a planning authority or as part of a desk study to support an Environmental Statement or planning application, then the report must be provided in full and not changed or redacted.

The Essex Field Club, Registered Charity Number 1113963.

Registered Office: Green Centre, Wat Tyler Country Park, Pitsea Hall Lane, Pitsea, Basildon, Essex SS16 4UH

Basildon Council
BASILDON • BILLERICAY • WICKFORD



earg
Essex Amphibian & Reptile Group



Essex Recorders partnership

Essex Field Club

Registered Charity Number 1113963

In partnership with

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Essex Amphibian & Reptile Group

Essex Bat Group

Essex Birdwatching Society



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Where maps are included that use OS OpenData these contain
Ordnance Survey data © Crown copyright database right 2016

Basildon Council
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Essex Amphibian & Reptile Group



Essex Recorders partnership Datasearch Report

Project: Land East of Landermere Road

Search Area: Radius 2km from TM1858922564

Our Reference: EFC2190

Customer Reference: purchase order 0848

Dated: 04 Mar 2016

On behalf of:

Mr Richard Fenna

Geosphere Environmental Ltd,

This report was compiled using records held by the County Recorders of the Essex Field Club, Basildon Council, Buglife, Butterfly Conservation, Essex Amphibian & Reptile Group, Essex Bat Group, Essex Birdwatching Society and available at the time of creation.

Enclosed within this report is the following information specific to the enquiry site area:

All of a Buzz in Thames Gateway Sites	<input checked="" type="checkbox"/>
Nature Improvement Areas	<input checked="" type="checkbox"/>
Special Areas of Conservation	<input checked="" type="checkbox"/>
Special Protection Areas	<input checked="" type="checkbox"/>
Ramsar Sites	<input checked="" type="checkbox"/>
Marine Conservation Zones	<input checked="" type="checkbox"/>
Sites of Special Scientific Interest details	<input checked="" type="checkbox"/>
Local Nature Reserves	<input checked="" type="checkbox"/>
Country Parks	<input checked="" type="checkbox"/>
Common Land	<input checked="" type="checkbox"/>
Ancient Woodland Inventory	<input checked="" type="checkbox"/>
Traditional Orchard Inventory	<input checked="" type="checkbox"/>
Invertebrate Assemblage Information	<input checked="" type="checkbox"/>
Protected Species	<input checked="" type="checkbox"/>
Priority Section 41 Species	<input checked="" type="checkbox"/>
National Red List and Scarce Species	<input checked="" type="checkbox"/>
Essex Red Data List Species	<input checked="" type="checkbox"/>
All Species Records	<input type="checkbox"/>
Invasive Species	<input checked="" type="checkbox"/>
Geological Sites	<input checked="" type="checkbox"/>

1. Introduction

Biological species recording is largely undertaken by committed naturalists on a voluntary basis and on land with public access. Recording is much more rarely undertaken for planning and development purposes, or such data subsequently provided to centralised biological recording specialists, the County Recorders. Desk studies can therefore only ever provide guidance on what is already known about the species recorded in an area, and absence of species records for a search area does not mean they may not occur. For any site with potential nature conservation significance a full ecological site appraisal should be undertaken and species surveys carried out to complement the information contained in this report.

Copyrights

Ownership of the data used in this report remains with the original recorder, Essex Field Club and the Essex Recorders partnership. Copyright of this report remains the property of the Essex Recorders partnership and reproduction is strictly prohibited, except as part of a desk study to support a planning application, when the data use restrictions must be included.

All site boundaries have been mapped using Ordnance Survey OS OpenData subject to the OS OpenData Licence. Persons viewing this material should contact Ordnance Survey for advice if they wish to licence Ordnance Survey data for their own use.

Data accuracy

The Essex Recorders partnership does not guarantee the accuracy of any information supplied and shall have no liability for any loss, damage or expense incurred as the result of reliance on any information supplied.

The Essex Recorders partnership can only provide information based on the data held by us. In particular, the absence of records for a species does not necessarily indicate that the species itself is absent, merely that it not been recorded, that we have not received records for it or the data are unavailable in suitable format at this time.

Access and use of data

The data provided in this report must not be added to a permanent database without the prior permission of the Essex Recorders partnership or copyright holder. Resale or transfer to third parties is strictly prohibited.

When information in this report is put into the public domain as part of a desk study or Environmental Statement to support a planning application, then the report must be provided in full and not changed or redacted. Data must not be used without inclusion of the data use restrictions.

When publishing information derived from these data, the Essex Field Club, Essex Recorders partnership and any other copyright holders and the date of receipt must be acknowledged.

The data held by the Essex Recorders partnership is updated regularly and will become out-of-date. If you intend to use this data after a period of six months please contact us to confirm that we have no new records.

Designations

Except for Essex designations included in the Essex Biodiversity Action Plan or Essex Red Data List, or where otherwise indicated, designations used in this report are derived from the Joint Nature Conservation Committee (JNCC) Master list regardless of the status of the species in the county.

2. Data available through the Essex Recorders partnership

This report provides access to the following species datasets:

Data Provider	Species Group	County Coverage
EFC/Essex Amphibian & Reptile Group	amphibians and reptiles	County data
Essex Field Club	honey bee and bumblebees	Available county data
Essex Field Club	bees and wasps	County data
Essex Field Club	ants	County data
Essex Field Club	beetles	Available county data
Essex Field Club	centipedes and millipedes	County data
Essex Field Club	hoverflies	Available county data
Essex Field Club	soldier flies and allies	County data
Essex Field Club	flies (other)	County data
Essex Field Club	grasshoppers, crickets and allies	County data
Essex Field Club/Butterfly Conservation	butterflies	County data
Essex Field Club/Essex Moth Group	larger moths	County data
Essex Field Club/Essex Moth Group	micro-moths	County data
Essex Field Club	leafhoppers and allies	Available county data
Essex Field Club	true bugs	Available county data
Essex Field Club	spiders	County data
Essex Field Club	harvestmen	County data
Essex Field Club	pseudoscorpions	County data
Essex Field Club	flowering plant	Available county data
Essex Field Club	woodlice	County data
Essex Field Club	dragonflies & damselflies	County data 2000-2006 + other data sample
Essex Field Club	non-vascular plants	Available county data
Essex Field Club	other Hymenoptera	County data
Essex Field Club	molluscs	Sample of data
Essex Field Club	lichens	Sample of data
Essex Field Club	fungi	Available county data
Essex Field Club	other mammals	County data
Essex Field Club	bats	County data
Essex Field Club	Invasive species	Available data
Essex Field Club	birds	Small number of records
Essex Field Club	slime moulds	Small number of records
EFC Schemes	EFC Schemes records	EFC Schemes records
Essex Bat Group	bats	Dataset
Essex Birdwatching Society	birds, with incorporated Birdtrack data	County data for 2013

Sections on site designations

The following sections provide data on site designations in relation to the datasearch request search area. For statutory designated conservation sites, these are provided on maps expanded to cover a 5km radius.

We cannot currently provide information on Local Wildlife Sites. For these contact the local authority or see www.localwildlifesites.org.uk/ and www.essexwt.org.uk/protecting-wildlife/local-wildlife-sites

3. All of a Buzz in the Thames Gateway

No All of a Buzz in the Thames Gateway sites are identified in relation to the search area

4. Nature Improvement Areas (NIAs)

See www.naturalengland.org.uk/ourwork/conservation/biodiversity/funding/nia/default.aspx

Nature Improvement Areas (NIAs) were introduced by the Government's Natural Environment White Paper to 'enhance and reconnect nature on a significant scale' in England.

Nature Improvement Areas encompass areas of land that include natural features and wildlife habitats but also include roads, housing developments and other man-made elements. They are areas that have been identified for their opportunities to restore nature at a landscape-scale alongside other land-uses.

These areas will become much better places for wildlife – creating more and better-connected habitats at a landscape scale, providing space for wildlife to thrive and adapt to climate change.

They will help people as well as wildlife – through enhancing a wide range of benefits that nature provides, such as recreation opportunities, flood protection, cleaner water and carbon storage.

NIAs should enhance existing ecological networks by:

- Increasing the number of wildlife sites
- Increasing the size of existing wildlife sites
- Improving connectivity between sites
- Creating wildlife corridors
- Improving the management of existing wildlife sites

The twelve initial NIAs extend from Morecambe Bay in the North West to the Wild Purbeck in the South West. One affecting Essex is the Greater Thames Marshes NIA in the south of the county.

No Nature Improvements Areas are identified near the search area

5. Special Areas of Conservation

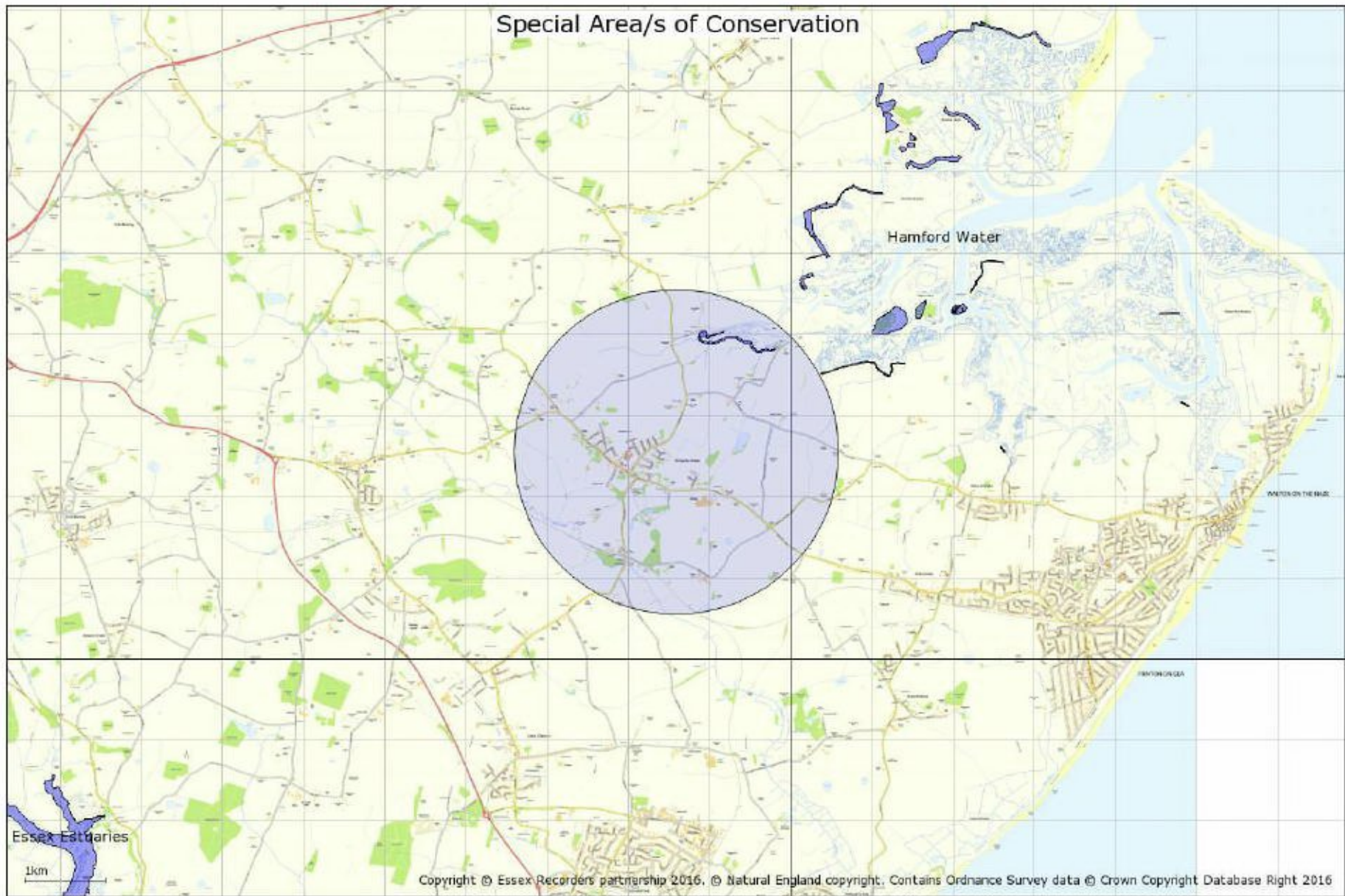
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A Special Area of Conservation (SAC) is an area which has been given special protection under the European Union's Habitats Directive. SACs provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

See www.naturalengland.org.uk/ourwork/conservation/designations/sac/

There are 2 Special Area/s of Conservation identified in relation to the search area.

Essex Estuaries
Hamford Water



6. Special Protection Areas

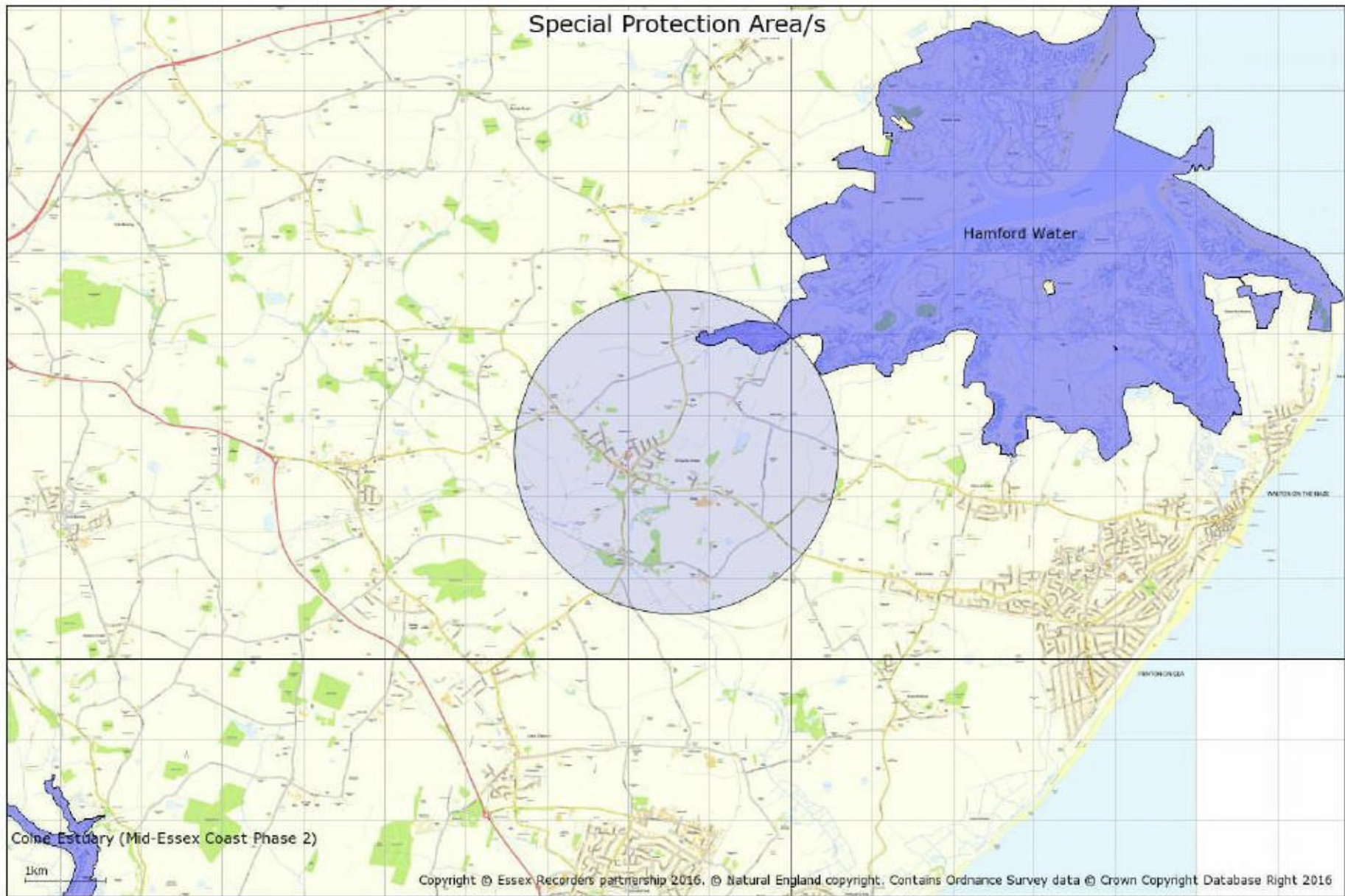
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A Special Protection Area (SPA) is an area of land, water or sea which has been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within the European Union. SPAs are European designated sites, classified under the European Wild Birds Directive which affords them enhanced protection.

See www.naturalengland.org.uk/ourwork/conservation/designations/spa/

There are 2 Special Protection Area/s identified in relation to the search area.

Colne Estuary (Mid-Essex Coast Phase 2)
Hamford Water



7. Ramsar sites

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Ramsar sites are wetlands of international importance, designated under the Ramsar Convention.

Wetlands are defined as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

Ramsar sites may also incorporate riparian (banks of a stream, river, pond or watercourse) and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands.

What is the Ramsar Convention?

The Ramsar Convention is an international agreement signed in Ramsar, Iran, in 1971, which provides for the conservation and good use of wetlands. The UK Government ratified the Convention and designated the first Ramsar sites in 1976.

See www.naturalengland.org.uk/ourwork/conservation/designations/ramsars/

There are 2 Ramsar Site/s identified in relation to the search area.

Colne Estuary (Mid-Essex Coast Phase 2)
Hamford Water

8. Marine Conservation Zone/s

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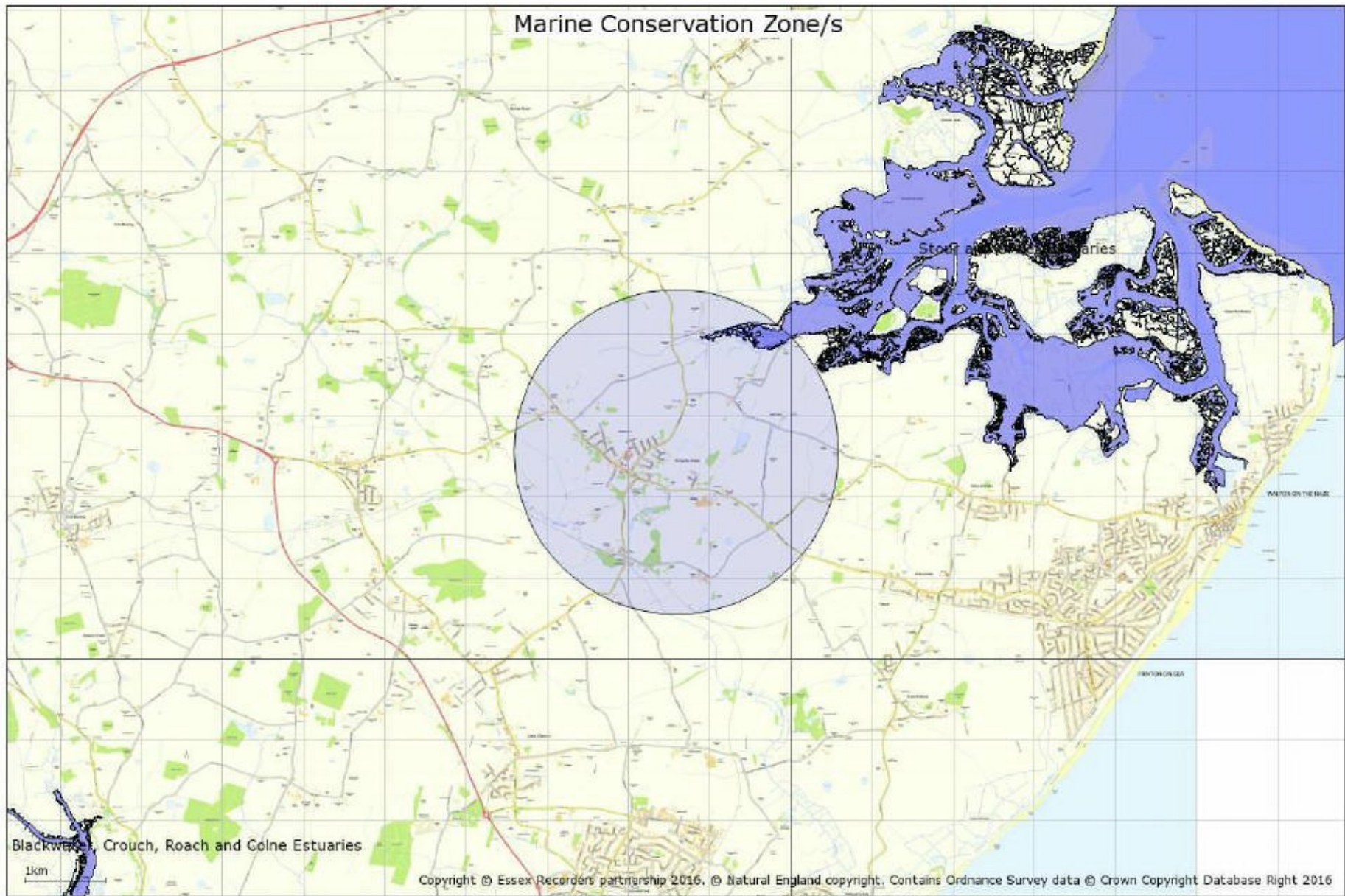
Marine Conservation Zones (MCZs) are a type of Marine Protected Area. They protect areas that are important to conserving the diversity of nationally rare or threatened habitats and/or species and those places containing habitats and/or species that are representative of the biodiversity in our seas.

The Marine and Coastal Access Act 2009 (Part 5) enables Defra Ministers to designate and protect Marine Conservation Zones (MCZs). These are a type of marine protected area, which will exist alongside European marine sites [Special Areas of Conservation (SACs) and Special Protected Areas (SPAs)], SSSIs and Ramsar sites to form an ecologically coherent network of marine protected areas.

See <http://www.naturalengland.gov.uk/ourwork/marine/mpa/mcz/default.aspx>

There are 2 Marine Conservation Zone/s identified in relation to the search area.

Blackwater, Crouch, Roach and Colne Estuaries
Stour and Orwell Estuaries



9. National Nature Reserves

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England's National Nature Reserves (NNRs) represent many of the finest wildlife and geological sites in the country. Our first NNRs emerged in the postwar years alongside the early National Parks, and have continued to grow since then.

Natural England is the body empowered to declare NNRs in England, the Reserves being a selection of the very best parts of England's Sites of Special Scientific Interest. It is this underlying designation which gives NNRs their strong legal protection. The majority also have European nature conservation designations.

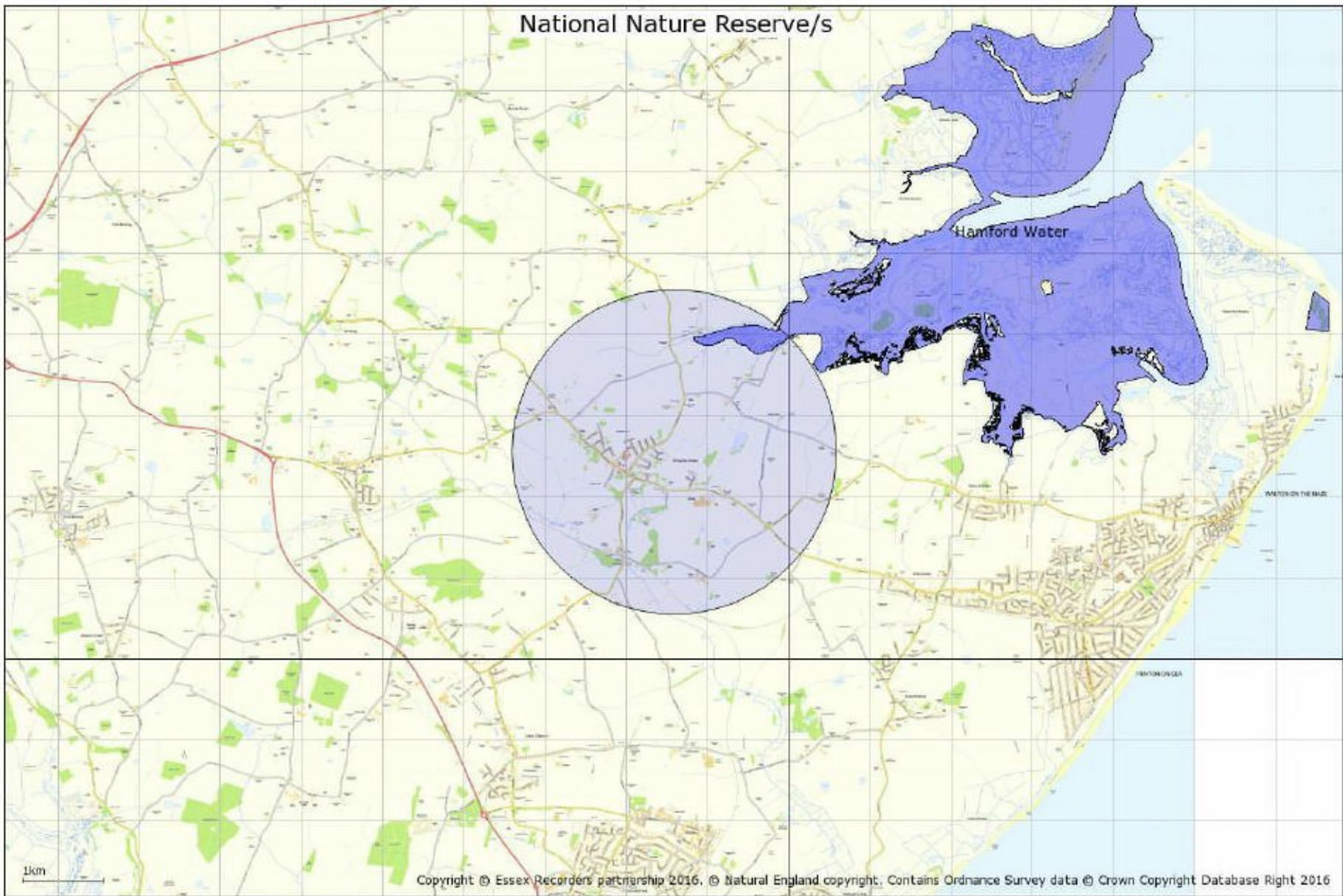
Nearly every type of vegetation is found in England's NNRs, from coastal salt-marshes, dunes and cliffs to downlands, meadows and the subtle variations of our native woodlands. Scarce and threatened habitats such as chalk downs, lowland heaths and bogs and estuaries are conserved in NNRs.

Many NNRs contain nationally important populations of rare flowers, ferns and mosses, butterflies and other insects, and of course nesting and wintering birds. Examples include unique alpine plants at Upper Teesdale and the beautiful field of fritillary lilies at North Meadow, Cricklade, Wiltshire.

See www.naturalengland.org.uk/ourwork/conservation/designations/nnr/default.aspx

There is 1 National Nature Reserve/s identified in relation to the search area.

Hamford Water



10. Sites of Special Scientific Interest

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There are over 4,100 Sites of Special Scientific Interest (SSSIs) in England, covering around 7% of the country's land area. Over half of these sites, by area, are internationally important for their wildlife, and designated as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites. Many SSSIs are also National Nature Reserves (NNRs) or Local Nature Reserves (LNRs).

SSSIs are the country's very best wildlife and geological sites. They include some of our most spectacular and beautiful habitats - large wetlands teeming with waders and waterfowl, winding chalk rivers, gorse and heather-clad heathlands, flower-rich meadows, windswept shingle beaches and remote uplands moorland and peat bog.

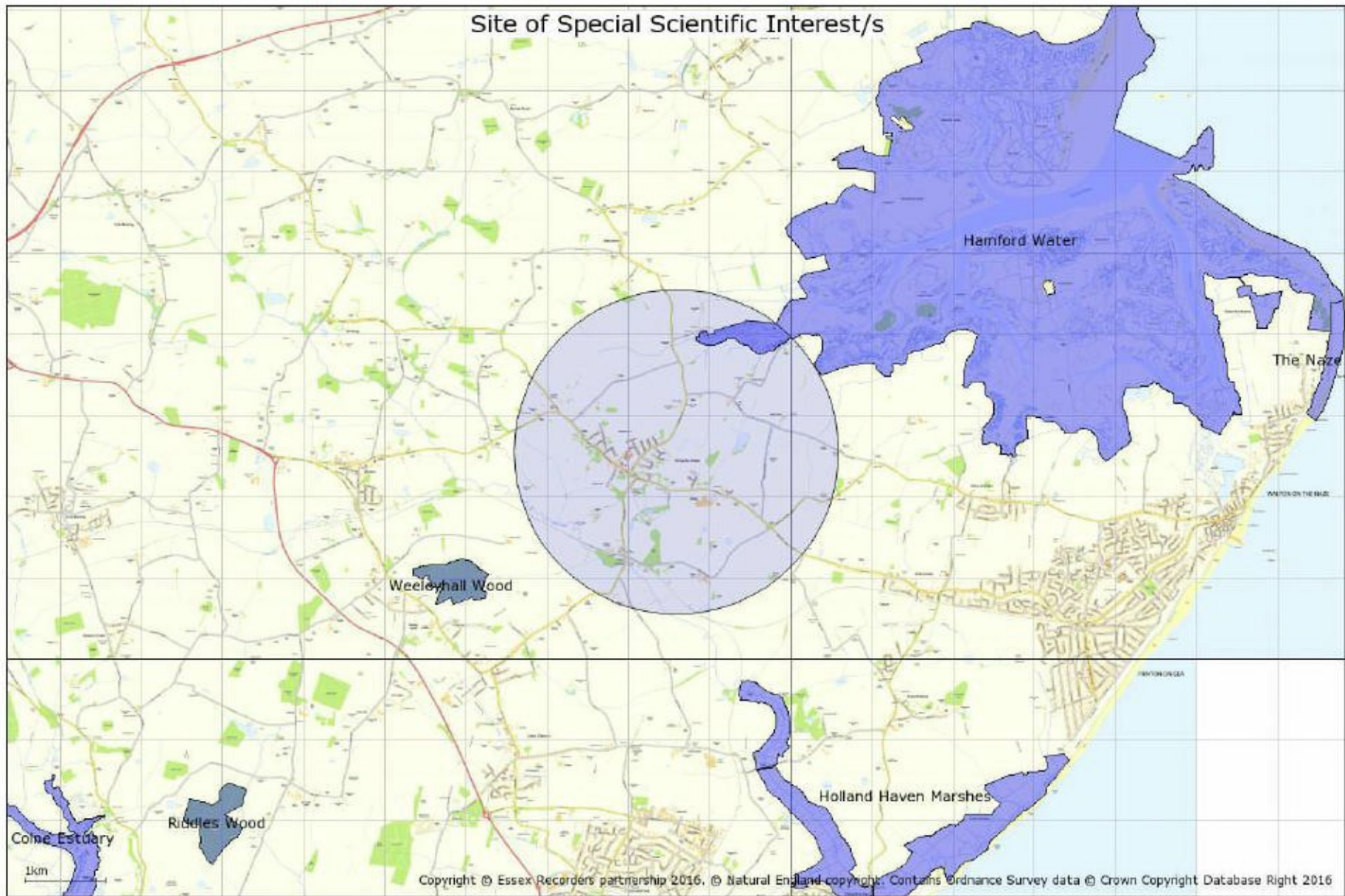
It is essential to preserve our remaining natural heritage for future generations. Wildlife and geological features are under pressure from development, pollution, climate change and unsustainable land management. SSSIs are important as they support plants and animals that find it more difficult to survive in the wider countryside. Protecting and managing SSSIs is a shared responsibility, and an investment for the benefit of future generations.

See www.sssi.naturalengland.org.uk/Special/sssi/index.cfm

For information on SSSI Impact Risk Zones (IRZs) see
http://www.magic.gov.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20v1.9%20MAGIC%2003November2014.pdf

There are 6 Site of Special Scientific Interest's identified in relation to the search area.

Colne Estuary
Hamford Water
Holland Haven Marshes
Riddles Wood
The Naze
Weeleyhall Wood



11. Local Nature Reserves

© Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right [2016]. NB This national dataset is "indicative" not "definitive". Definitive information can only be provided by individual local authorities and you should refer directly to their information for all purposes that require the most up to date and complete dataset.

Local Nature Reserve (or LNR) is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949, and amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006, by principal local authorities.

Local Nature Reserves (LNRs) are for both people and wildlife. They are places with wildlife or geological features that are of special interest locally. They offer people special opportunities to study or learn about nature or simply to enjoy it.

By declaring Local Nature Reserves (LNRs), local authorities can provide many benefits for both people and wildlife.

To:

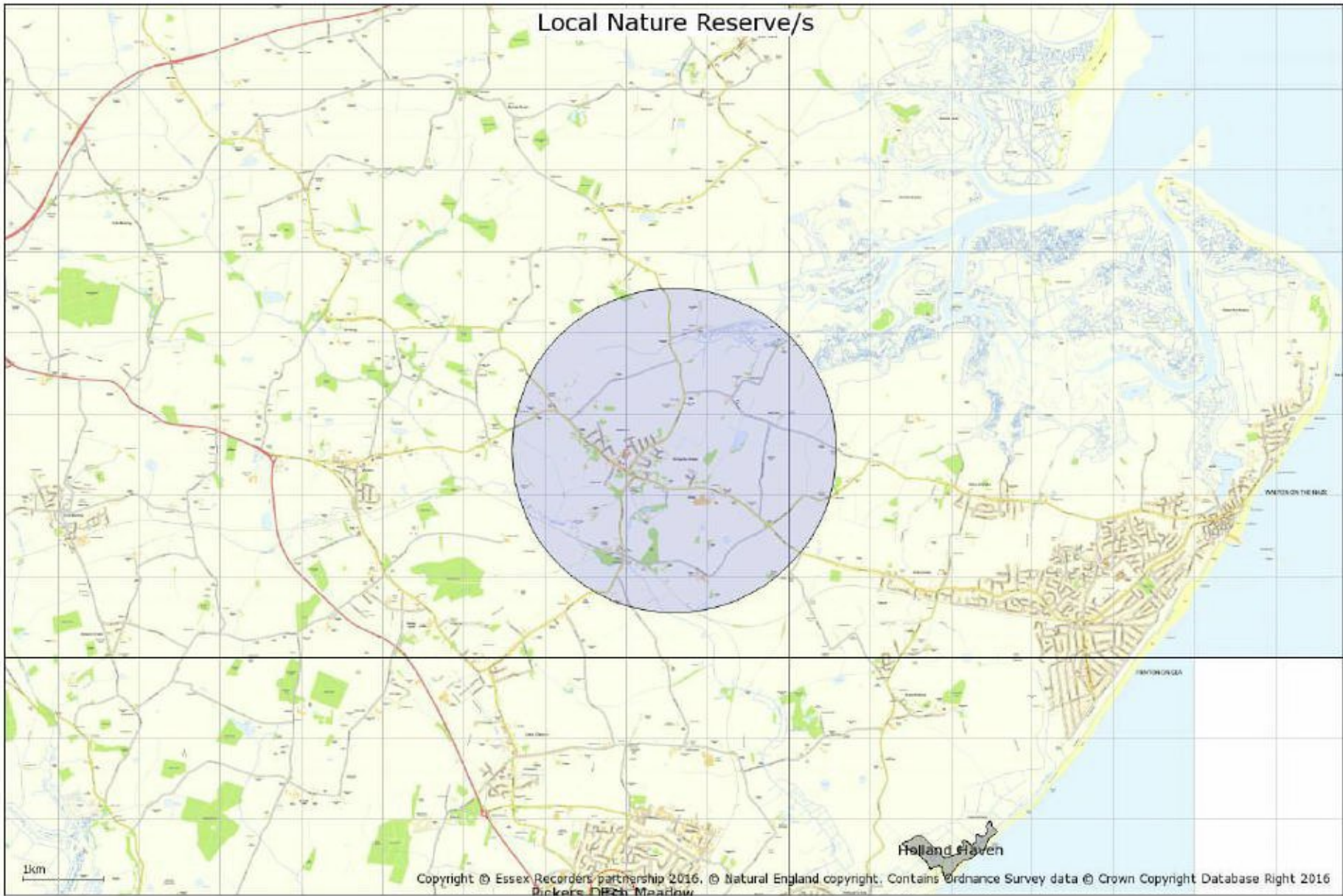
- increase people's awareness and enjoyment of their natural environment
- provide an ideal environment for everyone to learn about and study nature
- help to build relationships with national and local nature conservation organisations and local people protect wildlife habitats and natural features provide a great opportunity for people to become involved in managing their local environment offer a positive use for land which they would prefer was left undeveloped make it possible to apply bye-laws which can help in managing and protecting the site.

See www.naturalengland.org.uk/ourwork/conservation/designations/lnr/

There are 2 Local Nature Reserve/s identified in relation to the search area.

Holland Haven
Pickers Ditch Meadow

Local Nature Reserve/s



12. Country Park/s

Natural England recognises country parks as significant places that contribute to England's accessible natural greenspace.

Many are located near or within towns and cities and therefore close to where people live. All provide a wide range of opportunities for recreation, health and education and improve the quality of life for their local communities.

Country Parks were established as a result of the 1968 Countryside Act and there are currently more than 400 sites that call themselves Country Parks in England. They are visited by over 70 million visitors a year.

They are public green spaces often at the edge of urban areas which provide places to enjoy the outdoors and experience nature in an informal semi-rural park setting. Country Parks normally have some facilities such as a car park, toilets, perhaps a cafe or kiosk, paths and trails, and visitor information. There is not necessarily public right of access, although most are publicly accessible; some charge entry others do not.

See www.naturalengland.gov.uk/ourwork/enjoying/places/countryparks/default.aspx

No Country Park/s are identified in relation to the search area

13. Open Country and Common Land

Conclusive Map Data of Open Country:

Created under the Countryside and Rights of Way (CROW) Act 2000, the Open Country (OC) data was digitised from OS MasterMap by the contractors Black and Veatch Consulting Limited on behalf of the Countryside Agency. It consists of all land that appears to the Countryside Agency to consist wholly or predominantly of mountain, moor, heath and down and is not registered common land. It includes any modifications determined by the Planning Inspectorate as a result of appeals. It includes areas of land that are excepted from the rights of access as specified in Part 1 of Schedule 1 of the CROW Act. It may be amended for certain errors under current error regulations. The map must be reviewed not more than 10 years after its issue in conclusive form.

Conclusive Map Data of Registered Common Land:

Created under the CROW Act 2000, the Registered Common Land (RCL) data was digitised from DNF Landline by the contractors Geodata on behalf of the Countryside Agency. It is a digitised copy of land registered as common land under the Commons Registration Act 1965. It includes any modifications determined by the Planning Inspectorate as a result of appeals. It includes areas of land that are excepted from the rights of access as specified in Part 1 of Schedule 1 of the CROW Act. It may be amended for certain errors under current error regulations. The map must be reviewed not more than 10 years after its issue in conclusive form.

Important Notes:

There is no right of access to land shown as OC or RCL until the relevant Commencement Order for the area becomes effective.

There is no right of access to land shown as OC or RCL where such land meets any of the descriptions of excepted land as specified in Part 1 of Schedule 1 of the CROW Act. This includes areas of land such as racecourses, aerodromes and military byelaw land.

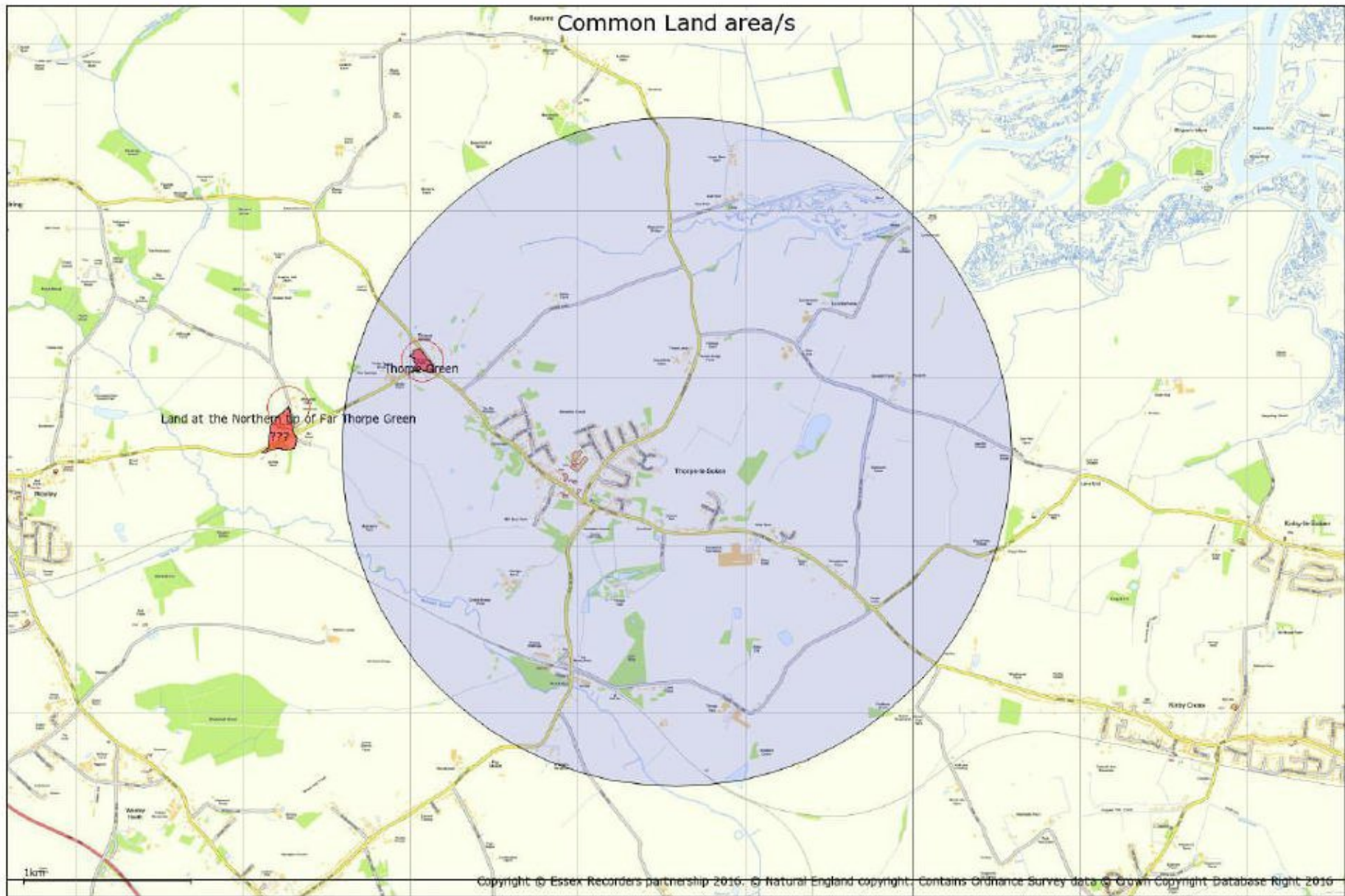
There may be restrictions on the right of access in some areas of land. Under the CROW Act, landowners or tenants of access land have a 28-day allowance of restrictions each calendar year and can also apply for longer term restrictions. Digital data of restrictions to the rights of access will not be made available to third parties. All restrictions can be viewed on the website <http://www.countrysideaccess.gov.uk>. More information about restrictions can be found here: <http://www.openaccess.gov.uk>

No Open Country area/s are identified in relation to the search area

There are 3 Common Land area/s identified in relation to the search area. (Red polygon/s)

???

Land at the Northern tip of Far Thorpe Green
Thorpe Green



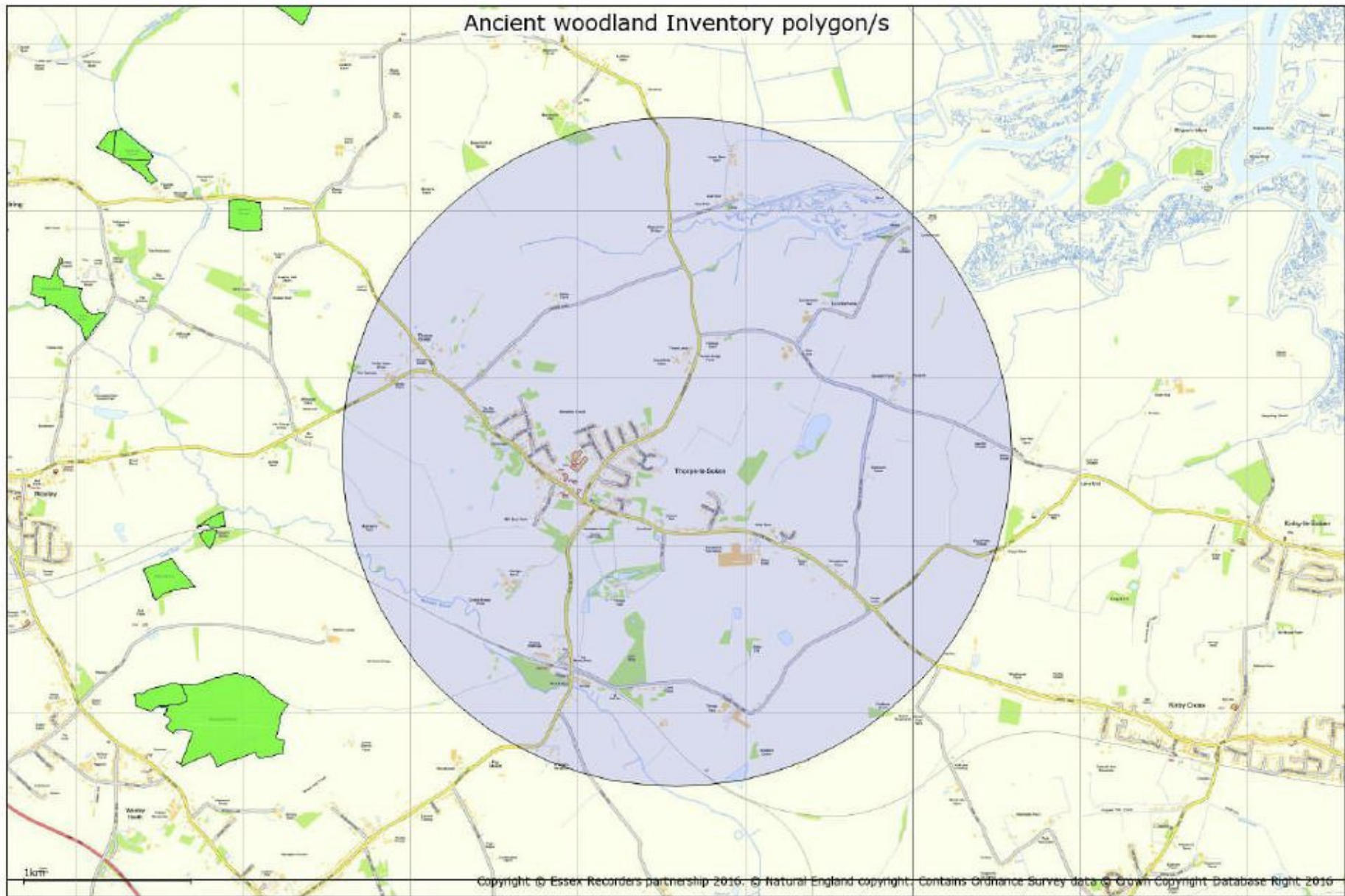
14. Ancient woodland Inventory

Ancient Woodlands (England). © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right [2016]

Ancient woodland is land that has had a continuous woodland cover since at least 1600 AD and may be ancient semi-natural woodland (ASNW), which retains a native tree and shrub cover that has not been planted, although it may have been managed by coppicing or felling and allowed to regenerate naturally, or plantation on ancient woodland sites (PAWS) where the original tree cover has been felled and replaced by planting, often with conifers, and usually over the last century.

See www.naturalengland.org.uk/about_us/whatwedo/partnership/casestudies/ancientwoodland.aspx

Ancient woodland Inventory polygon/s identified in relation to the search area are shown on the map.



15. Traditional Orchard Inventory

Natural England Traditional Orchard Inventory (Provisional) for England© Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right [2016]

Definitions

Traditional Orchard

For the purpose of the inventory, Traditional Orchards are defined as sites where at least five fruit trees must be present with no more than 20m between their crown edges. Traditional Orchards are managed in a low intensity way with the orchard floor grazed or mown for hay and with little or no chemical input.

The Traditional Orchard Inventory for England

The inventory identifies Traditional Orchard sites in England. Traditional Orchards are located using aerial photography, Ordnance Survey MasterMap, external datasets compiled from historic surveys, and ground survey ("ground-truthing"). The information recorded about each orchard and stored on the Inventory Database includes its grid reference, its area in hectares, management features of the site and its condition (based on condition assessment criteria).

Limitations of the Traditional Orchard Inventory:

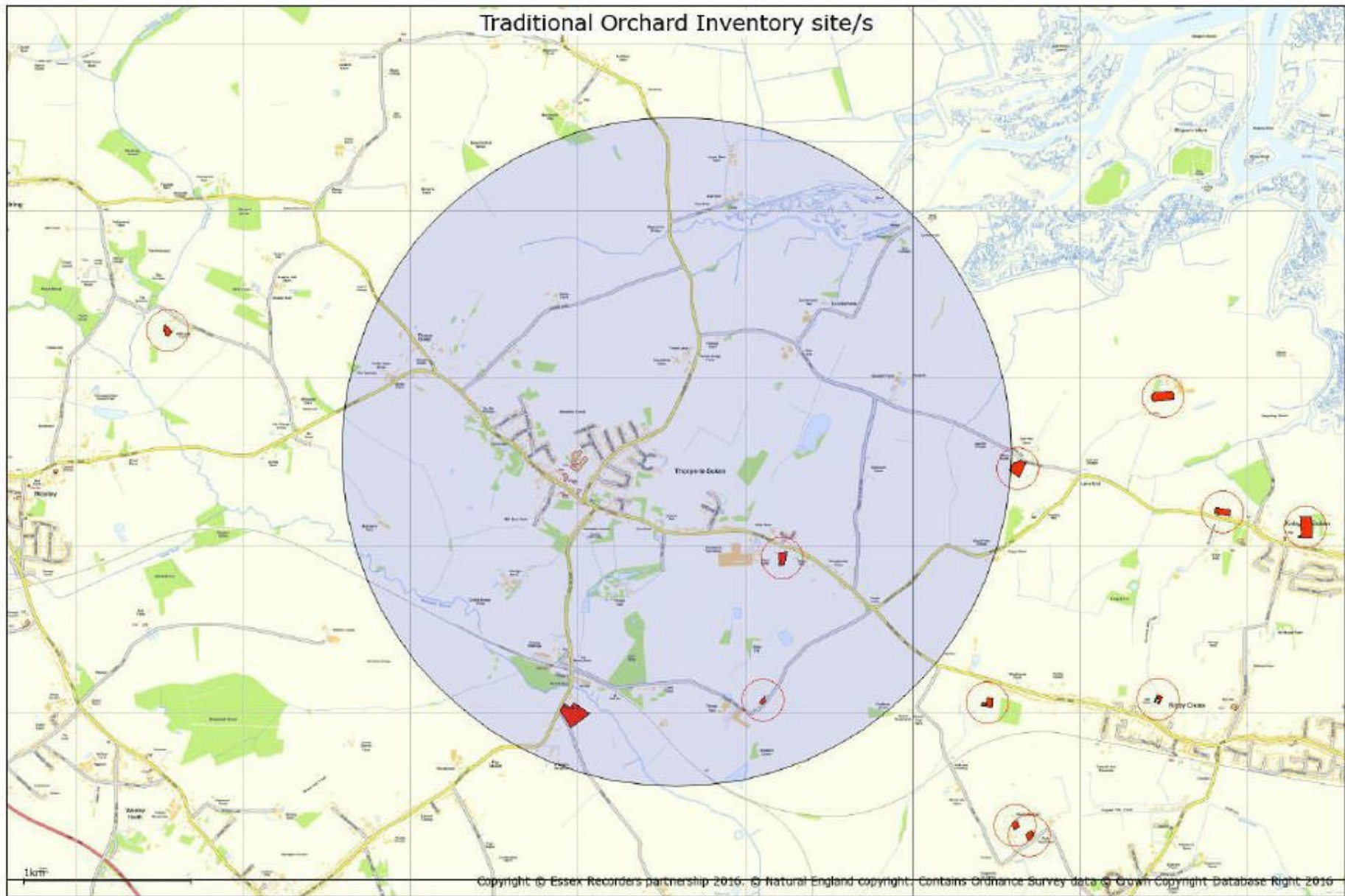
The inventory is classed as 'provisional' because it is under a constant system of review and is updated as new information is received or actual changes are recorded. If you have information that would help Natural England to update the inventory please let them know.

Traditional Orchards HAP Definition

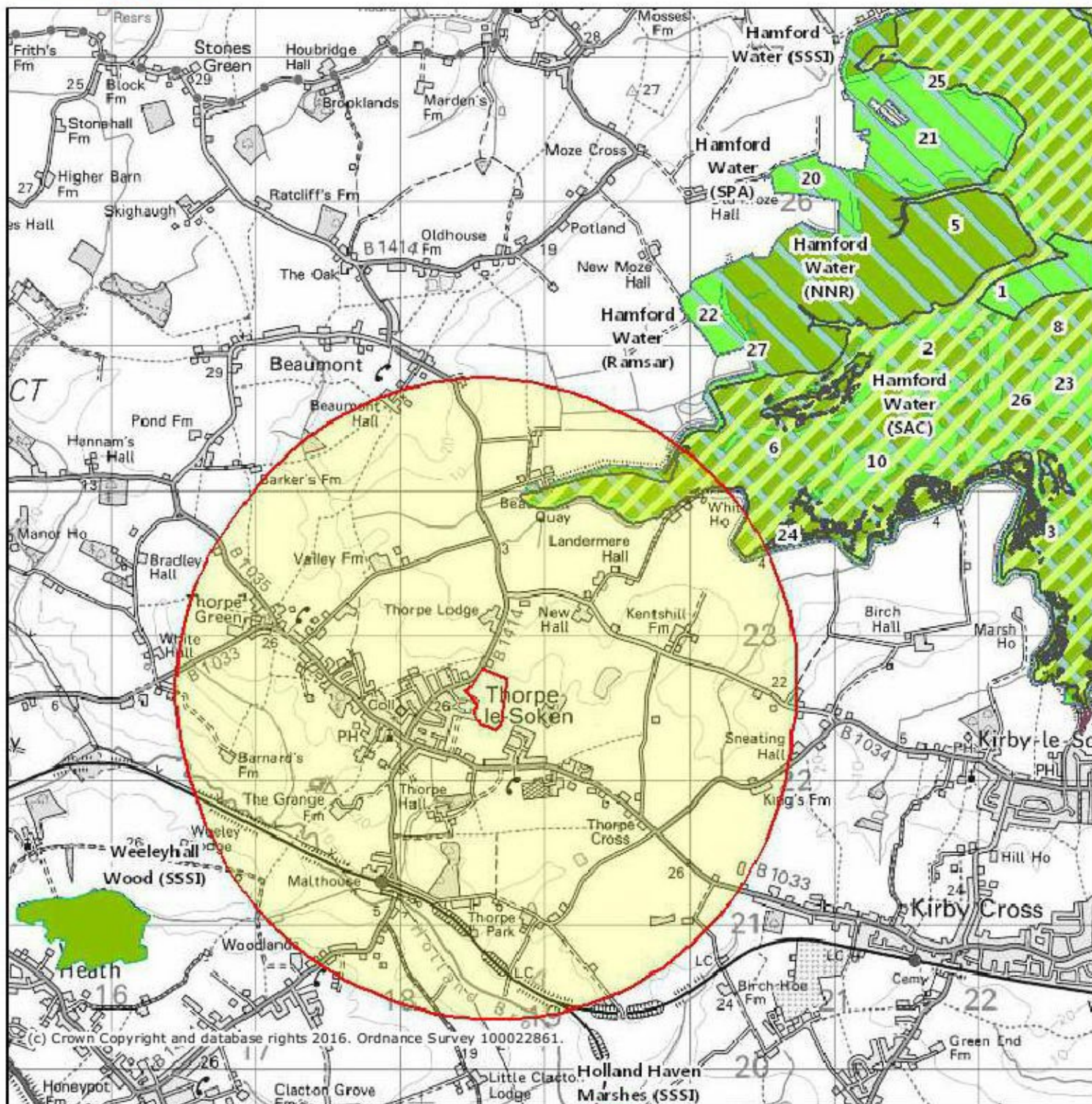
Traditional orchards are defined, for priority habitat purposes, as groups of fruit and nut trees planted on vigorous rootstocks at low densities in permanent grassland; and managed in a low intensity way. Cobnut plats are also included.

The minimum size of a traditional orchard is defined as five trees with crown edges less than 20m apart. However, the potential biological and genetic interest of sites with fewer trees, such as relict orchards and individual trees within gardens is noted. Where appropriate these should be considered as potential restoration sites. It is recognised that other sites which fall outside the definition, such as organic bush orchards and fruit collections in walled gardens may also have biodiversity value, as well as historic, cultural and genetic importance.


There are 12 Traditional Orchard Inventory site/s identified in relation to the search area.



MAGiC Land East of Landermere Road



Legend

-  Local Nature Reserves (England)
-  National Nature Reserves (England)

Projection = OSGB36

xmin = 609400

ymin = 218600

xmax = 628700

ymax = 228500

Map produced by MAGiC on 17 March, 2016.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

Site Check Report Report generated on Thu Mar 17 2016
You selected the location: Centroid Grid Ref: TM185225
The following features have been found in your search area:

National Nature Reserves (England)

Name	HAMFORD WATER
Reference	1006070
Hectares	1427.21
Hyperlink	

Ramsar Sites (England)

Name	HAMFORD WATER
Reference	UK11028
Hectares	2188.58

Sites of Special Scientific Interest (England)

Name	HAMFORD WATER
Reference	1001696
Natural England Contact	ZOE RINGWOOD
Natural England Phone Number	
Hectares	
Citation	
Hyperlink	

Special Areas of Conservation (England)

Name	HAMFORD WATER
Reference	UK0030377
Hectares	50.34
Hyperlink	

Special Protection Areas (England)

Name	HAMFORD WATER
Reference	UK9009131
Hectares	2188.53

Local Nature Reserves (England) - points

No Features found

Local Nature Reserves (England)

No Features found

National Nature Reserves (England) - points

No Features found

National Parks (England)

No Features found

Ramsar Sites (England) - points

No Features found

Sites of Special Scientific Interest (England) - points

No Features found

Special Areas of Conservation (England) - points

No Features found

Special Protection Areas (England) - points

No Features found

Biosphere Reserves (England) - points

No Features found

Biosphere Reserves (England)

No Features found

Biosphere Reserves (Wales) - points

No Features found

Biosphere Reserves (Wales)

No Features found

Less Favoured Areas (England)

No Features found

County: Essex **Site name:** Hamford Water

District: Tendring

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of The Wildlife and Countryside Act 1981.

Part of the site is a National Nature Reserve (under Section 19 of The National Parks and Access to the Countryside Act 1949).

Local Planning Authority: Tendring District Council

National Grid Reference: TM 235255 **Area:** 2185.76 (ha.)

Ordnance Survey Sheet 1:50,000: 169 1:10,000: TM 12 SE, TM 22 NW, TM 22 SE, TM 22 SW

Date Notified (under 1949 Act): 1956 **Date of last revision:** 1974

Date Notified (under 1981 Act): 1986 **Date of last revision:**

Other Information:

Hamford Water is a key site in "A Nature Conservation Review", edited by D.A. Ratcliffe, Cambridge University Press 1977. Most of the foreshore is leased by the NCC from The Crown Estate Commission and was declared a National Nature Reserve in 1983. It is proposed as a wetland of international importance under the Ramsar Convention and a Special Protection Area under the EEC Directive on the Conservation of Wild Birds. Skipper's Island, one of the four main islands in Hamford Water, and the John Weston Reserve on the eastern boundary, are Essex Naturalists' Trust Reserves. The boundary of the site has been modified at re-notification by partial deletions and an extension.

Reasons for Notification:

Hamford Water is a tidal inlet whose mouth is about three miles south of Harwich. It is a large and shallow estuarine basin comprising tidal creeks, intertidal mud and sand flats, saltmarshes, islands, beaches and marsh grasslands. The site is of international importance for breeding Little Terns and wintering Dark-bellied Brent Geese, wildfowl and waders, and of national importance for many other bird species. It also supports communities of coastal plants which are rare or extremely local in Britain, including Hog's Fennel *Peucedanum officinale* which is found elsewhere only in Kent.

The site includes a number of islands and parts of islands, and extensive saltmarsh covers one third of the area. Thrift *Armeria maritima*, and Common Sea-lavender *Limonium vulgare*, together with the rarer Rock Sea lavender *L. binervosum* and Lax-flowered Sea-lavender *L. humile*. Sea Purslane *Halimione portulacoides* and Saltmarsh-grass *Puccinellia sp.* occur on the higher area; Sea Aster *Aster tripolium*, Glasswort *Salicornia sp* and Annual Sea-blite *Suaeda maritima*, on the lower areas and creek edges. On the upper marsh and at the foot of the seawall Shrubby Sea-blite *S. vera*, Golden-samphire *Inula crithmoides*, Sea Wormwood

Artemisia maritima thrive alongside the Hog's Fennel. The uncommon Slender Hare's-ear *Bupleurum tenuissimum* is also found on the seawall.

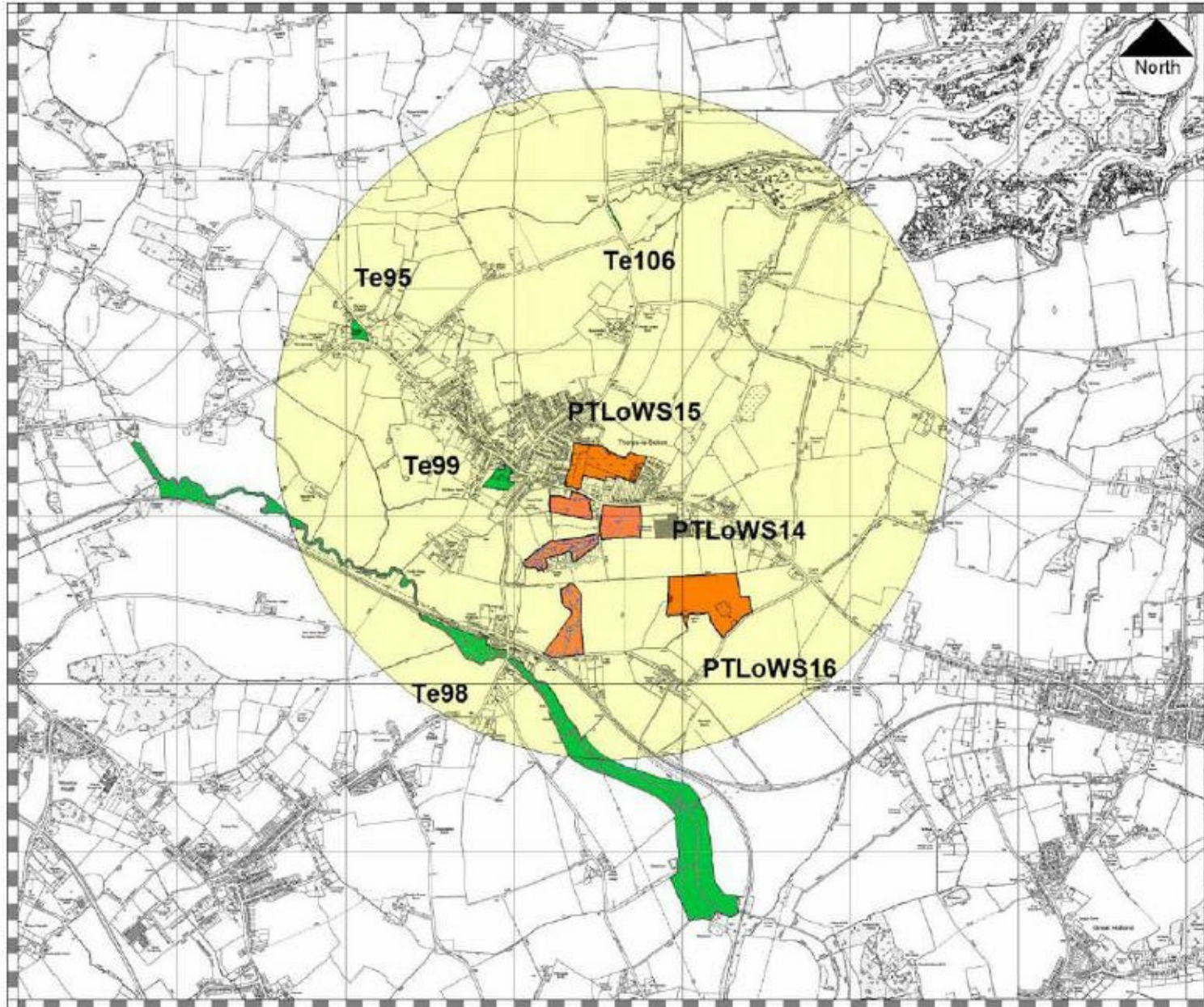
The intertidal areas support abundant invertebrates, mainly worms and thin shelled molluscs. The commonest species are the ragworm *Nereis diversicolor*, the bivalve molluscs *Macoma balthica*, *Scrobicularia plana* and the gastropod mollusc *Hydrobia ulvae*. There are Mussel *Mytilus edulis* beds and, in Kirby Creek, Oyster *Ostrea edulis* lays.

The mudflats also support a number of local plants such as Small Cord-grass *Spartina maritima*, Narrow-leaved Eelgrass *Zostera angustifolia* and Dwarf Eelgrass *Z. noltii*. These form the main diet, on their autumn arrival, of approximately six thousand Brent Geese which over-winter in Hamford Water. Five other species winter in internationally important numbers - Shelduck, Teal, Grey Plover, Black-tailed Godwit and Sanderling. In addition, six species - Wigeon, Pintail, Ringed Plover, Curlew, Redshank and Dunlin - reach levels of national significance, together with important numbers of Bewick's Swan, Knot and Turnstone. The open areas of water attract many species of dabbling and diving duck including Mallard, Goldeneye and Eider. In very severe winter weather Hamford Water can shelter tens of thousands of duck, especially Wigeon. There are also important autumn and spring passage populations of Lapwing, Ringed Plover, Golden Plover and Grey Plover, Curlew, Bar-tailed Godwit, Black-tailed Godwit and Sanderling. There are major roosts of Grey and Ringed Plover at Pewit Island, Stone Marsh, Middle Beach, and of Curlew, Redshank and godwits at Kirby Creek and on Horsey Island. Birds of prey, including Short-eared Owls, Hen Harriers and Marsh Harriers, are attracted to the area and Merlin have frequently been recorded. There is a Black-headed Gull colony on the breached and eroded seawall of Garnham's Island.

The shingle spits mark the seaward edge from Dovercourt to Crabknow Spit and from Walton to Stone Point, and provide nest sites for internationally important numbers of Little Terns and nationally important numbers of Ringed Plover. The shingle is topped by low, retreating sand dunes which are colonised by grasses such as Sand Couch *Elymus farctus*, Lyme-grass *Leymus arenarius* and Marram *Ammophila arenaria*, and several uncommon plants including Sea-kale *Crambe maritima*, Sea-holly *Eryngium maritimum* and Sea Sandwort *Honkenya peploides*.

Included within the site are the improved grass fields of Horsey Island which are feeding and roosting sites for the Hamford Water flock of Brent Geese, and for thousands of waders including Curlew and godwits. Also included are small remaining areas of unimproved grass marsh at Walton Hall, Old Moze Hall and on Bramble Island, and an area of grass and scrub at The Naze. This is the most easterly point in Essex and as such is major landfall for migrant birds.

8 March 2016



KILOMETRES 0 100 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 KILOMETRES
1:25,000

Local Wildlife Sites for Thorpe-le-Soken area - 2016

LEGEND

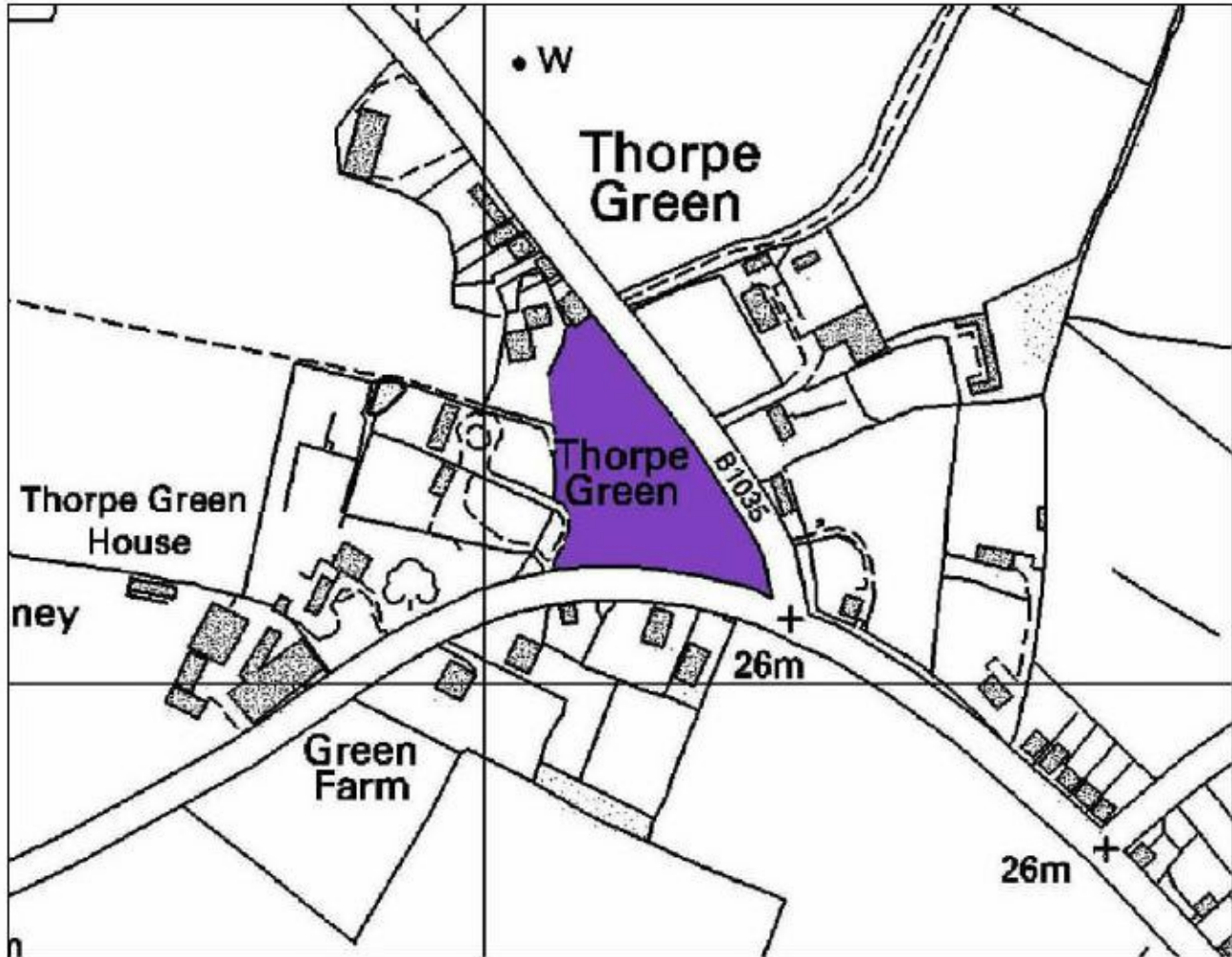
-  Search area (2km radius from TM 18578 22557)
-  Local Wildlife Sites
-  Potential Local Wildlife Sites



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Local Wildlife Site Descriptions for Thorpe-le-Soken area – 2016



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Te95 Thorpe Green (1.0 ha) TM 170231

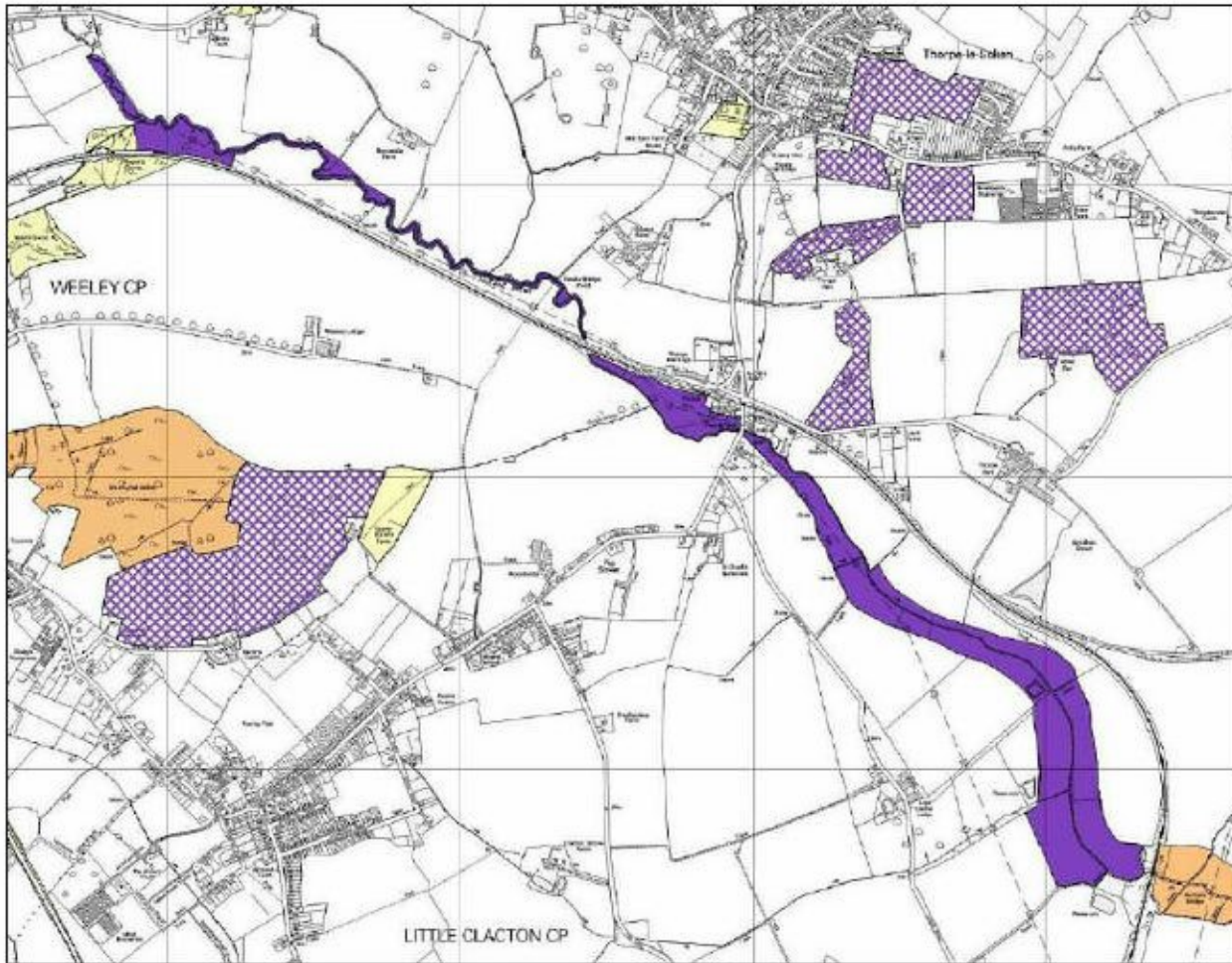
Thorpe Green contains a good mix of grass and herb species, including Sweet Vernal-grass (*Anthoxanthum odoratum*), Red Fescue (*Festuca rubra*), Field Wood-rush (*Luzula campestris*), Common Sorrel (*Rumex acetosa*), Yarrow (*Achillea millefolium*), Greater Stitchwort (*Stellaria holostea*), Creeping Cinquefoil (*Potentilla reptans*) and Common Knapweed (*Centaurea nigra*). Cuckooflower (*Cardamine pratensis*) is abundant in the spring. Soft-rush (*Juncus effusus*) and Water Plantain (*Alisma plantago-aquatica*) are growing in a ditch. The western edge is bordered by Pedunculate Oak (*Quercus robur*) and Hawthorn (*Crataegus monogyna*).

Selection criteria: HCr11

BAP Priority Habitats: Lowland Meadows (UK); Lowland Grassland (Essex)

Date of selection: 1991

Date of last revision: December 2008



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Te98 Upper Holland Brook (42.8 ha) TM 177212

This Site comprises grassland, scattered trees, secondary woodland, scrub and reservoir along the upper reaches of the Holland Brook, beyond the SSSI downstream. Near Hunters Bridge (at the downstream end) the first part of this site is flood plain grazing marsh, currently grazed by cattle. The sward includes Yorkshire-fog (*Holcus lanatus*), Perennial Rye-grass (*Lolium perenne*), Common Couch (*Elytrigia repens*), Creeping Bent (*Agrostis stolonifera*), Timothy (*Phleum pratense*), Meadow Barley (*Hordeum secalinum*), Crested Dog's-tail (*Cynosurus cristatus*), Bird's-foot-trefoil (*Lotus corniculatus*), Common Centaury (*Centaureum erythraea*) and Red Bartsia (*Odontites vernus*). The brook supports Branched Bur-reed (*Sparganium erectum*), Gipsywort (*Lycopus europaeus*), Common Reed (*Phragmites australis*) and Reed Canary-grass (*Phalaris arundinacea*).

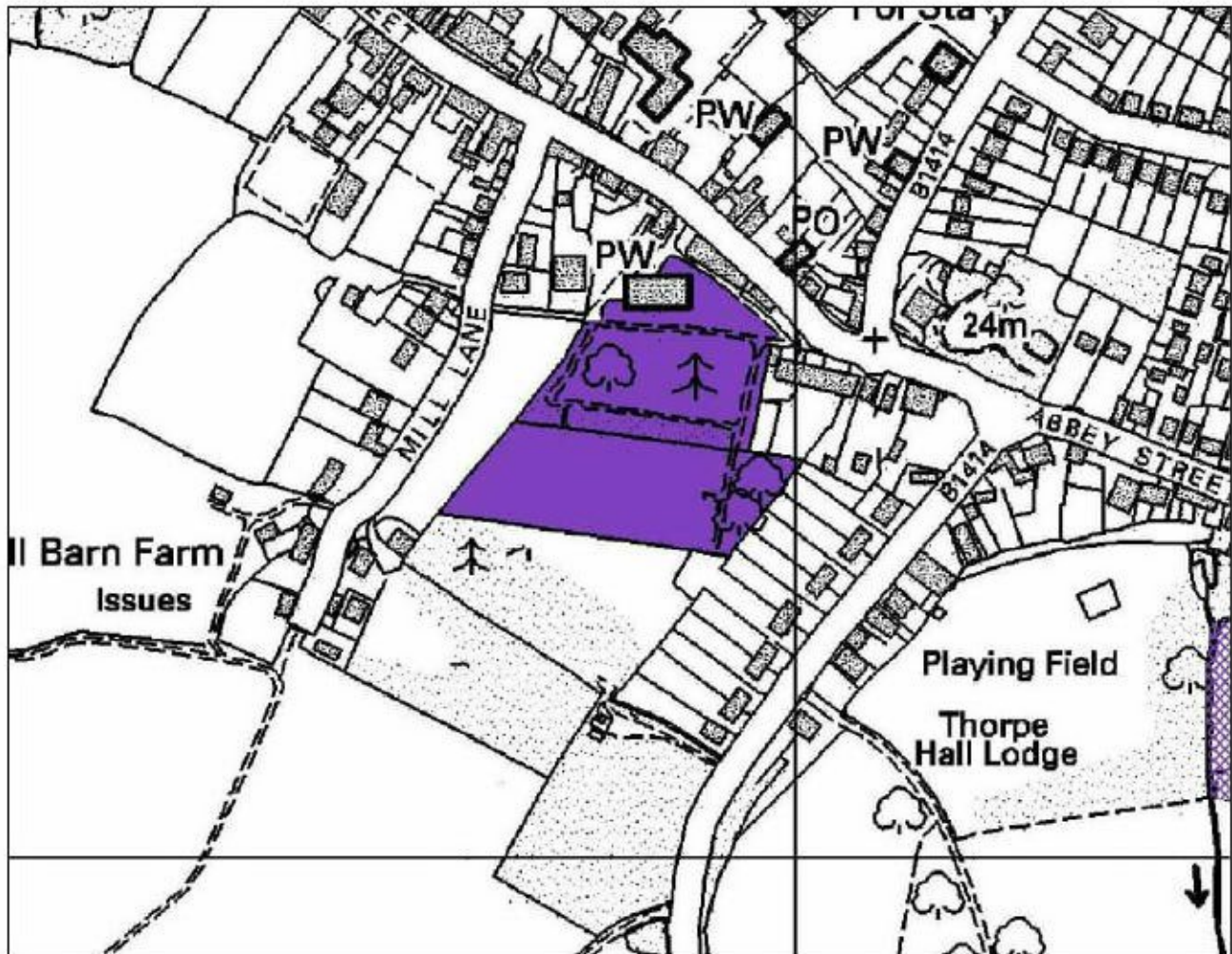
Located west of Rice Bridge, this site continues as a former brickfield which has now developed into scrub woodland, Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Elder (*Sambucus nigra*), pollard Field Maple (*Acer campestre*) and Elm (*Ulmus spp.*) and a few large Sallow (*Salix caprea*). This site provides suitable habitat for many bird species including Lesser Whitethroat, Blackcap and Nightingale. Badger activity has been also recorded. Pedunculate Oak (*Quercus robur*) with Alder (*Alnus glutinosa*) appears further up stream, with Golden Dock (*Rumex maritimus*), Pepper-saxifrage (*Silvaum silaus*) and Water Pepper (*Persicaria hydropiper*) in adjacent meadows.

Selection criteria: HCr6(a), HCr6(b), HCr13, HCr14, HCr27

BAP Priority Habitats: Coastal and Floodplain Grazing Marsh (UK)

Date of selection: 1991 (in part)

Date of last revision: December 2008



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Te99 St. Michael's Churchyard (1.6 ha) TM 179222

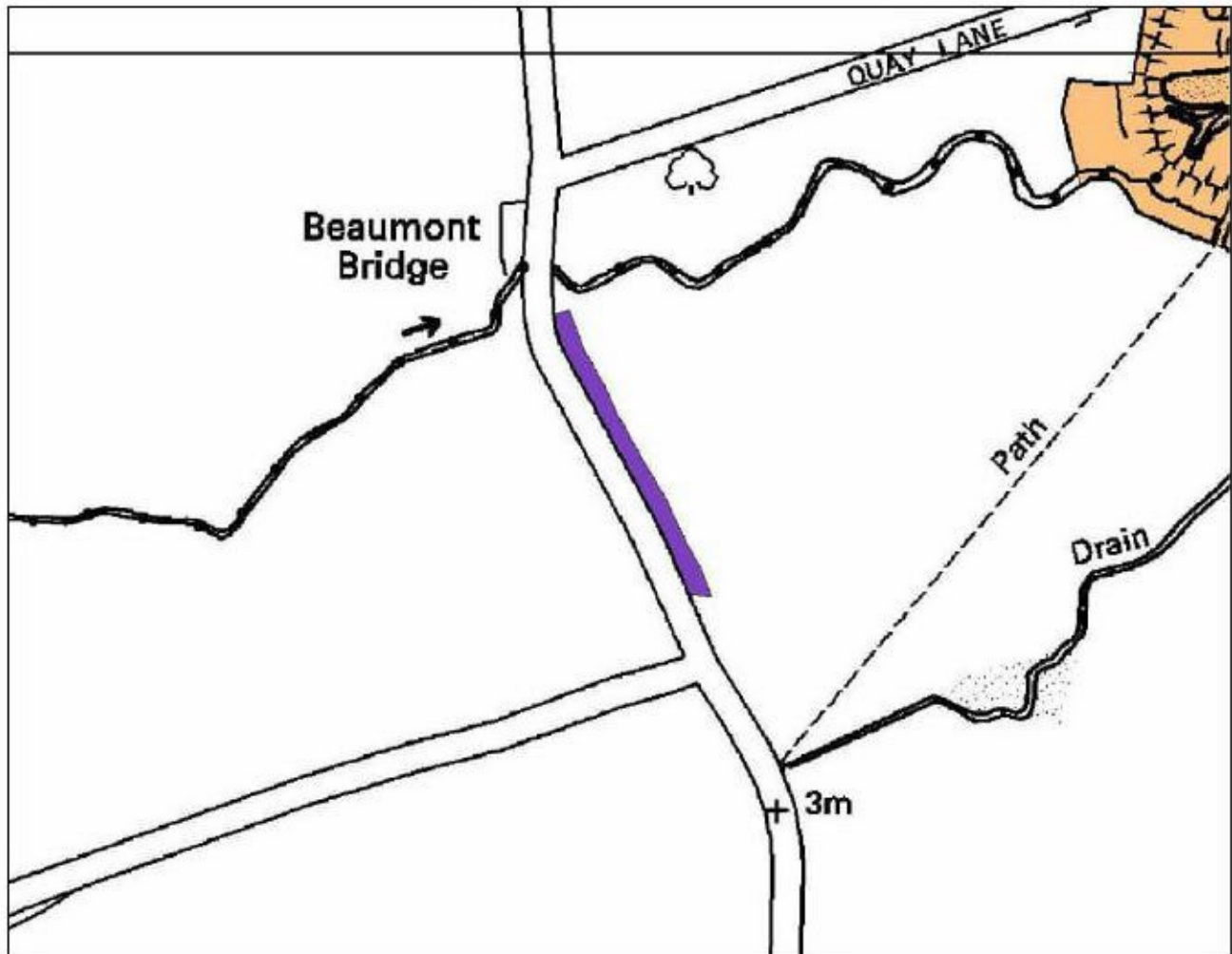
This extensive, well-managed churchyard contains both areas of mown and long sward grassland. The latter is represented by Cock's-foot (*Dactylis glomerata*), False Oat-grass (*Arrhenatherum elatius*), Common Knapweed (*Centaurea nigra*), Yarrow (*Achillea millefolium*), Common Sorrel (*Rumex acetosa*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Yellow-rattle (*Rhinanthus minor*), Common Bent (*Agrostis capillaris*) and Meadow Vetchling (*Lathyrus pratensis*). Tree species include Yew (*Taxus baccata*), Silver Birch (*Betula pendula*), Beech (*Fagus sylvatica*), Pedunculate Oak (*Quercus robur*), Horse Chestnut (*Aesculus hippocastanum*), Lime (*Tilia spp.*) and Sycamore (*Acer pseudoplatanus*). Rue-leaved Saxifrage (*Saxifraga tridactylites*) has been recorded on part of the roof, this being a very rare plant in Essex and is accordingly included on the Essex Red Data List. Other species of interest include Common spotted Orchid (*Dactylorhiza fuchsii*), Marjoram (*Origanum vulgare*) and waxcap fungi. The various conifers within the yard attract year-round Goldcrest and coal Tit. Slow-worm and Common Lizard have both been recorded in recent years.

Selection criteria: HCr11, SCr15

BAP Priority Habitats:

Date of selection: 1991

Date of last revision: December 2008



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Te106 Beaumont Bridge Verge (0.05 ha) TM 185237

This verge is of particular interest due to its population of Sea Hog's-fennel (*Peucedanum officinale*), which is nationally a very rare species, restricted to sites around Hamford Water in Essex and in north Kent. In addition, the Essex populations support the Nationally Rare (RDB2) UK BAP Fisher's Estuarine Moth.

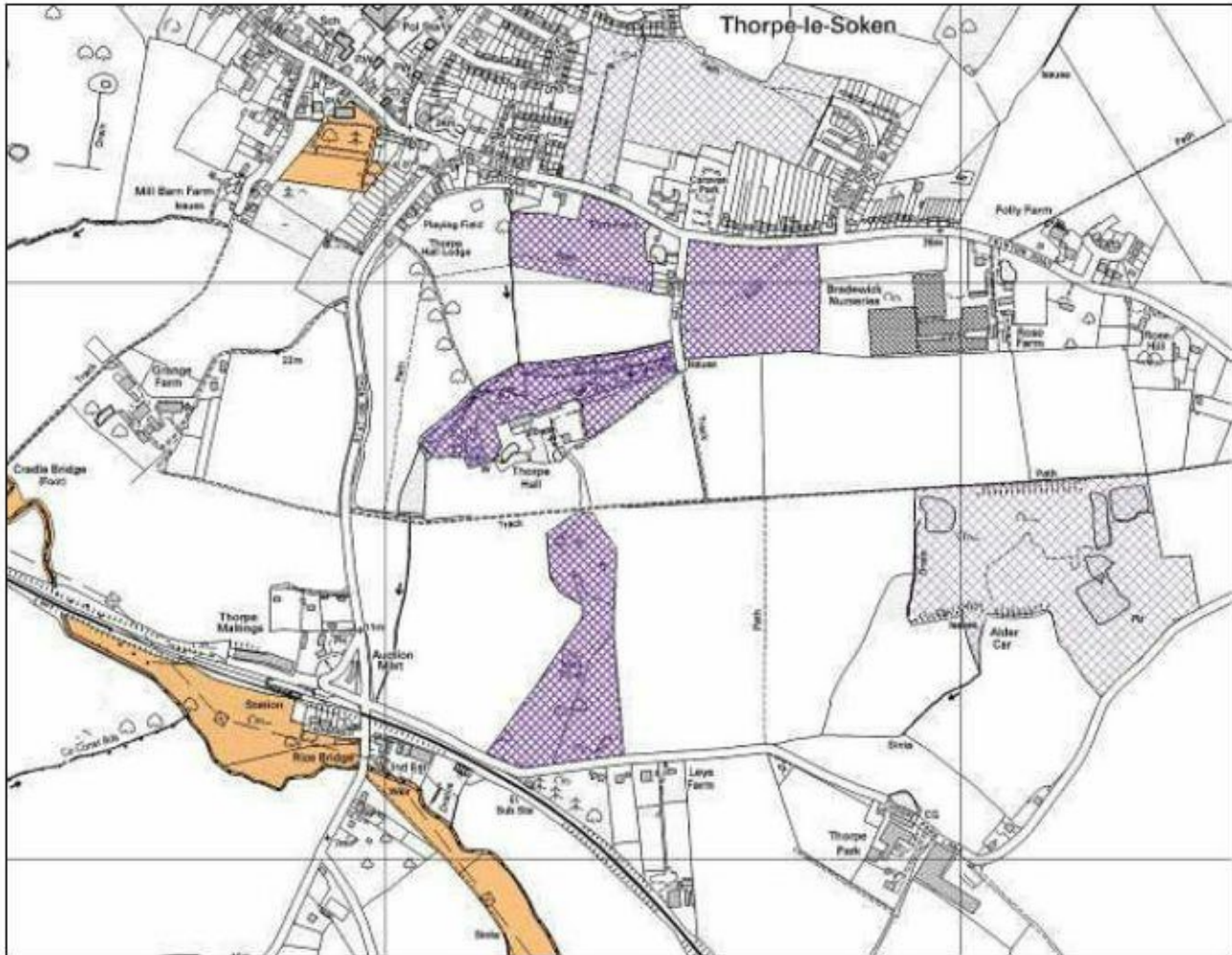
Selection criteria: SCr14, SCr15

BAP Priority Habitats:

Date of selection: 1991

Date of last revision: December 2008

Potential Local Wildlife Sites Descriptions for Thorpe-le-Soken area – 2016

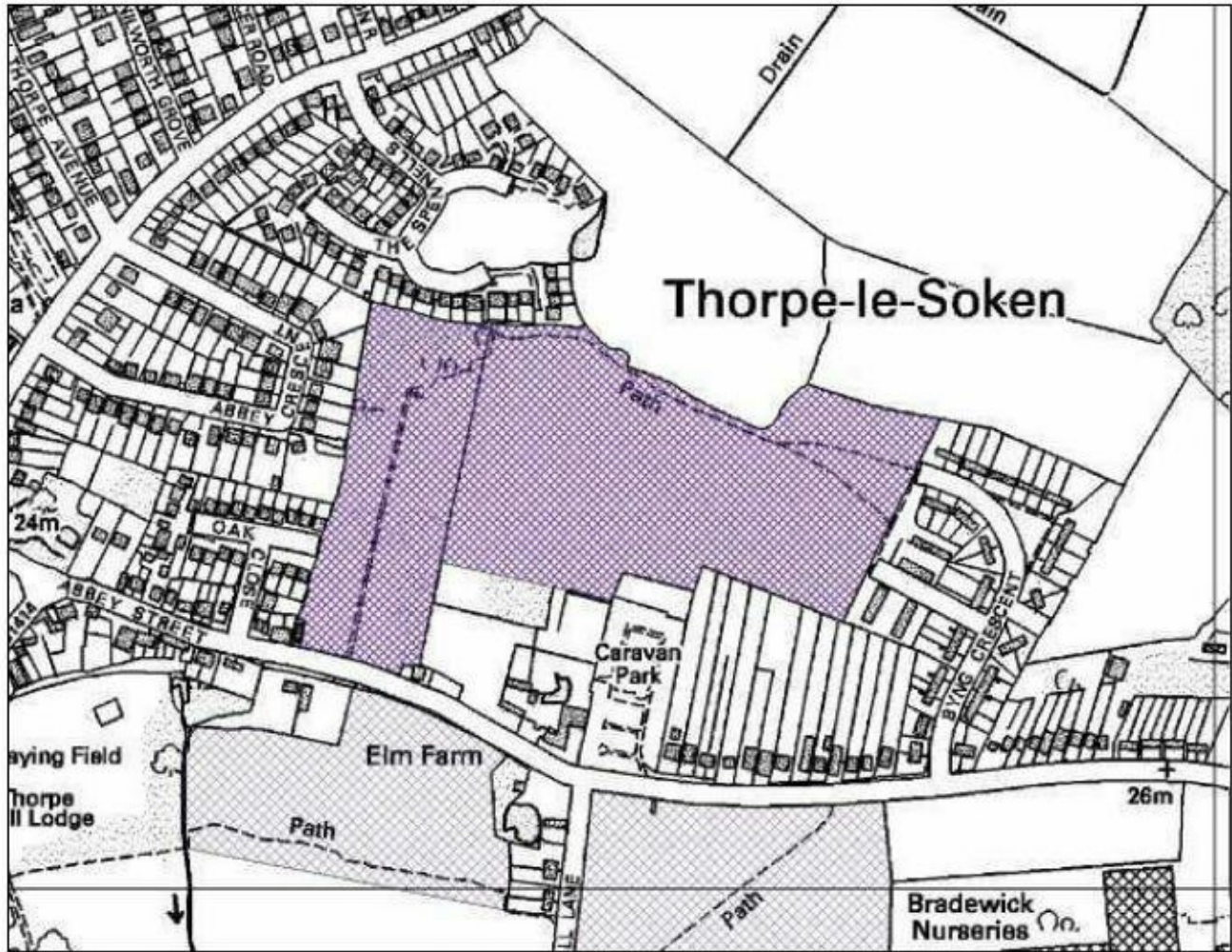


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PTLoWS14 Thorpe Hall (16.9 ha) TM 183217

Potential Interest: Hall Row to the south may include remnant ancient wood. The parkland surrounding the hall itself may be of value of invertebrate habitat associated with old parkland trees, whilst the two areas of grassland to the north have general wildlife appeal. Common Lizard, Grass Snake and Adder have been reported from land hereabouts, but their precise habitats and current status need confirmation.

Action Required: Further survey work.

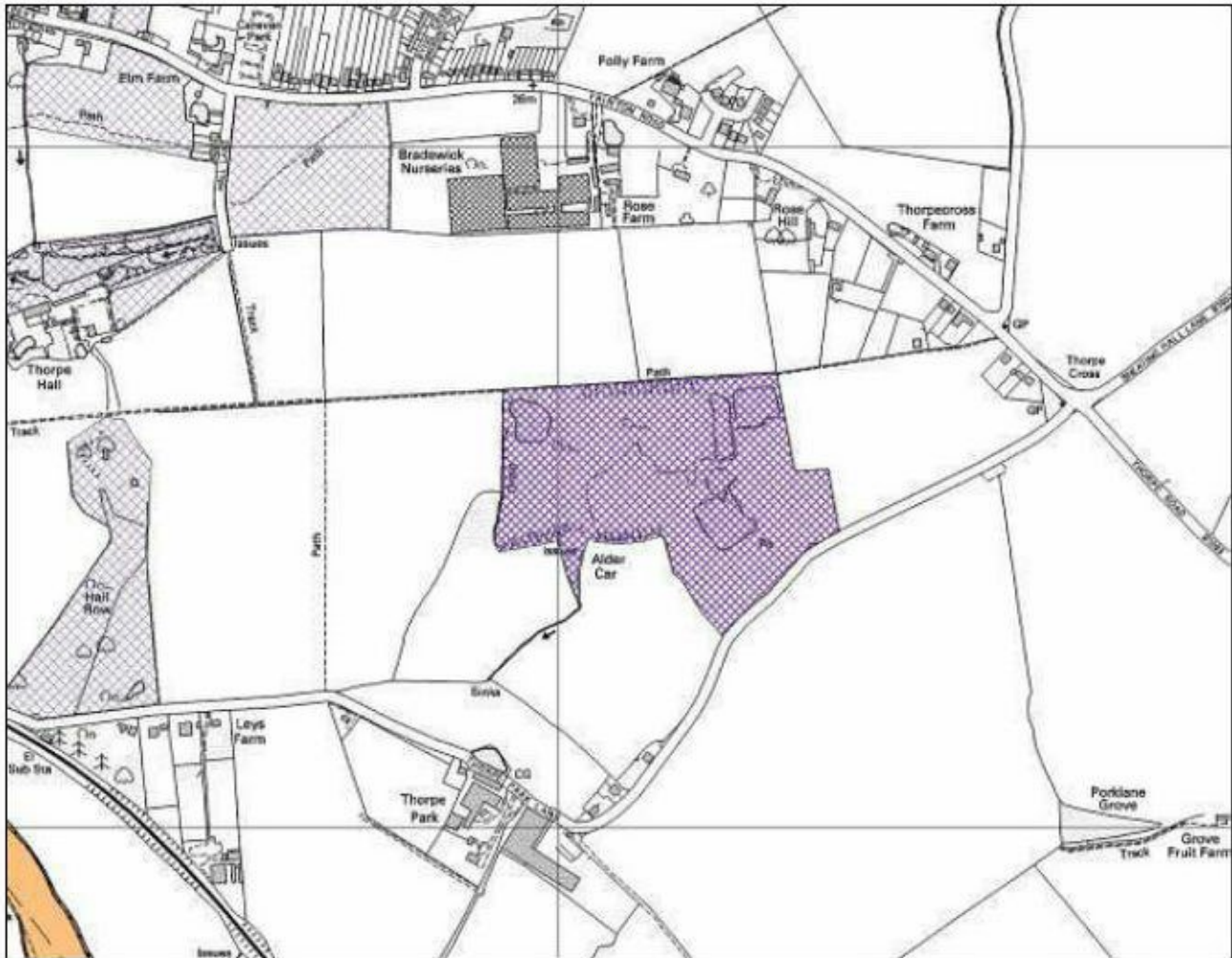


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PTLoWS15 Land off Abbey Street (7.8 ha) TM 185223

Potential Interest: This area of scrubby grassland has the potential to support reptiles, nesting birds and interesting invertebrate populations.

Action Required: Further survey work required.



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PTLoWS16 Thorpe Pits (12.5 ha) TM 190215

Potential Interest: This is an area of “brownfield” ex-sand pit habitat that has undergone partial restoration. The open ground and ponds could support important invertebrate populations. Several nationally scarce bees and wasps have been recorded recently, although their current status is uncertain. The small woodland called Alder Car is a wet woodland habitat.

Action Required: Further survey work required.

APPENDIX 5 – HABITAT SUITABILITY INDEX RESULTS

HABITAT SUITIBILITY INDEX: Assessing a ponds suitability to support Great Crested Newts

Project No:	1696,EC,SK,AR,DS,SK
Project Name:	Landermere Road, Thorpe-le-Soken
Date:	15-Mar-16
Weather:	Overcast, Light air, 10°C

Pond Ref:	1	2	6
SI1 - Location	1.00	1.00	1
SI2 - Pond area	0.20	0.20	0.80
SI3 - Pond Drying	1.00	0.90	0.90
SI4 - Water quality	0.33	0.33	0.33
SI4 - Shade	0.80	1.00	1.00
SI6 - Fowl	0.67	1.00	0.01
SI7 - Fish	0.67	0.01	0.67
SI8 - Ponds	1.00	1.00	0.6
SI9 - Terr'l Habitat	0.67	0.33	0.67
SI10 - Macrophytes	0.40	0.30	0.3
HSI	0.60	0.38	0.42

Pond No	HSI Score	Pond Suitability
1	0.60	Average
2	0.38	Poor
6	0.42	Poor

HSI Score	Pond suitability
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

APPENDIX 6 - TARGET NOTES

Ecological Target Notes Relating to Extended Phase I Habitat Survey

Target Note 1

Arable field seeded with grass



Target Note 2

Dense scrub and Scattered Trees to the southern site boundary



Target Note 3

Species poor hedgerow with trees



Target Note 4

Intact, species poor hedge



Target Note 5

Pond 1 surrounded by scrub and mature trees



Target Note 6

Scattered scrub with piles of logs and other domestic rubbish



Target Note 7

Semi improved grassland in the southern field



Target Note 8

Scrub growing adjacent to the site, two photos showing different scrub density



Target Note 9

Pond 2 located off site



Target Note 10

Mature tree showing a hole beneath deadwood, which could be considered suitable for roosting bats.



APPENDIX 7 – SELECTED PLANTS

GENERAL PLANTS CONSIDERED BENEFICIAL TO WILDLIFE

The lists of plants below are taken from current Natural England guidance (ref. 1), a web-based data based managed on behalf of the RHS and the Wildlife Trusts (ref. 2) and professional judgement. When buying native plants, ensure they are from a reputable source, as many wildflowers are illegally taken from the wild.

Large Trees

Common Name	Latin Name	Common Name	Latin Name
Beech	<i>Fagus sylvatica</i>	Pedunculate Oak	<i>Quercus robur</i>
Wild Cherry	<i>Prunus avium</i>	White Willow	<i>Salix alba</i>
Bird Cherry	<i>Prunus padus</i>	Small-leaved Lime	<i>Tilia cordata</i>
Sessile Oak	<i>Quercus petraea</i>		

Medium/Small Trees

Common Name	Latin Name	Common Name	Latin Name
Field Maple	<i>Acer campestre</i>	Apples	<i>Malus spp.</i>
Alder	<i>Alnus glutinosa</i>	Pears	<i>Pyrus spp.</i>
Silver Birch	<i>Betula pendula</i>	Rowan	<i>Sorbus aucuparia</i>
Holly	<i>Ilex aquifolium</i>		

Other Shrubs for Nectar, Pollen or Fruits

Common Name	Latin Name	Common Name	Latin Name
Serviceberry	<i>Amelanchier canadensis</i>	Himalayan Honeysuckle	<i>Leycesteria formosa</i>
June Berry	<i>Amelanchier lamarckii</i>	Mahonia	<i>Mahonia spp.</i>
Californian lilac	<i>Ceanothus spp.</i>	Mock Orange	<i>Philadelphus spp.</i>
Japanese quince	<i>Chaenomeles japonica</i>	Firethorn	<i>Pyracantha spp.</i>
Creeping Cotoneaster	<i>Cotoneaster frigidus</i>	Lilac	<i>Syringa vulgaris</i>
Daphne	<i>Daphne mezereum</i>	Laurustinus	<i>Viburnum tinus</i>
Hebes	<i>Hebe spp.</i>	Bodant Viburnum	<i>Viburnum x bodnantense</i>
Lavenders	<i>Lavandula spp.</i>		

Drought-Tolerant Herbaceous Plants

Common Name	Latin Name	Common Name	Latin Name
Onion	<i>Allium christophii</i>	Giant dead-nettle	<i>Lamium orvala</i>
False dittany	<i>Ballota acetabulosa</i>	Lavender	<i>Lavandula augustifolia</i>
Calamint	<i>Calamintha nepeta</i>	Myrtle	<i>Myrtus communis</i>
Giant scabious	<i>Cephalaria gigantea</i>	Honey garlic	<i>Nectaroscordum siculum</i>
Honeywort	<i>Cerithe major</i> and <i>C. purpurascens</i>	Golden drops	<i>Onosma</i> spp.
Sun-roses	<i>Cistus</i> spp.	Marjoram	<i>Origanum vulgare</i>
Large-flowered Tickseed	<i>Coreopsis grandiflora</i>	Jerusalem sage	<i>Phlomis russeliana</i>
Crocus	<i>Crocus tommasinianus</i>	Rosemary	<i>Rosmarinus officinalis</i>
Cardoon	<i>Cynara cardunculus</i>	Winter savoury	<i>Satureja montana</i>
Teasel	<i>Dipsacus fullonum</i>	Chile black scabious	<i>Scabious atropurpurea</i>
Coneflower	<i>Echinacea purpurea</i>	Stonecrops	<i>Sedum acre</i> , <i>S. anglicum</i> , <i>S. forsterianum</i> and <i>S. album</i>
Giant Echium	<i>Echium pininana</i>	Lamb's lung/ears	<i>Stachys olympica</i> and <i>S. lanata</i>
Sea-hollies	<i>Eryngium</i> spp.	Thyme	<i>Thymus vulgaris</i>
Escallonia	<i>Escallonia</i> spp.	Crimson clover	<i>Trifolium incarnatum</i>
Hebe	<i>Hebe</i> sp.	Tulip	<i>Tulipa</i> sp.
Rock-roses	<i>Helianthemum</i> spp.		

Native Wildflowers for Borders

Common Name	Latin Name	Common Name	Latin Name
Yarrow	<i>Achillea millefolium</i>	Toadflax	<i>Linaria vulgaris</i>
Agrimony	<i>Agrimonia eupatoria</i>	Yellow loosestrife	<i>Lysimachia vulgaris</i>
Corncockle	<i>Agrostemma githago</i>	Common mallow	<i>Malva sylvestris</i>
Chives	<i>Allium schoenoprasum</i>	Marjoram	<i>Origanum vulgare</i>
Harebell	<i>Campanula rotundifolia</i>	Common poppy	<i>Papaver rhoeas</i>
Cornflower	<i>Centaurea cyanus</i>	Cowslip	<i>Primula veris</i>
Greater knapweed	<i>Centaurea scabiosa</i>	Primrose	<i>Primula vulgaris</i>
Chicory	<i>Chichorium intybus</i>	White campion	<i>Silene alba</i>
Foxglove	<i>Digitalis purpurea</i>	Red campion	<i>Silene dioica</i>
Teasel	<i>Dipsacus fullonum</i>	Goldenrod	<i>Solidago virgaurea</i>
Sea hollies	<i>Eryngium</i> spp.	Devil's-bit scabious	<i>Succisa pratensis</i>
Lady's bedstraw	<i>Galium verum</i>	Tansy	<i>Tanacetum vulgare</i>
Meadow crane's-bill	<i>Geranium pratense</i>	Dandelion	<i>Taraxacum officinale</i>
Herb-robert	<i>Geranium robertianum</i>	Wild thyme	<i>Thymus drucei</i>
Dame's-violet	<i>Hesperis matronalis</i>	Great mullein	<i>Verbascum thapsus</i>
Field Scabious	<i>Knautia arvensis</i>	Germander speedwell	<i>Veronica chamaedrys</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>	Spiked speedwell	<i>Veronica spicata</i>

Cultivated Plants for Borders

Common Name	Latin Name	Common Name	Latin Name
Alliums	<i>Allium</i> spp.	California poppy	<i>Eschscholzia californica</i>
Hollyhock	<i>Althaea rosea</i>	Snowdrop	<i>Galanthus nivalis</i>
Yellow alyssum	<i>Alyssum saxatile</i>	Sunflowers	<i>Helianthus</i> spp.
Grecian windflower	<i>Anemone blanda</i>	Christmas rose	<i>Helleborus niger</i>
Angelica	<i>Angelica archangelica</i>	Lenten rose	<i>Helleborus orientalis</i>
Snapdragon	<i>Antirrhinum majus</i>	Candytuft	<i>Iberis sempervirens</i>
Alpine rock-cress	<i>Arabis alpina</i>	Poached-egg plant	<i>Limnanthes douglasii</i>
Michaelmas daisies	<i>Aster</i> spp.	Hybrids sweet alyssum	<i>Lobularia maritime</i>
Lilacbush	<i>Aubrieta deltoidea</i>	Honesty	<i>Lunaria rediviva</i> or <i>annua</i>
Borage	<i>Borago officinalis</i>	Sweet bergamot	<i>Monarda didyma</i>
Pot marigold	<i>Calendula officinalis</i>	Grape hyacinth	<i>Muscari botryoides</i>
Red valerian	<i>Centranthus ruber</i>	Forget-me-not	<i>Myosotis</i> spp.
Wallflower	<i>Cheiranthus cheiri</i>	Tobacco plant	<i>Nicotiana sylvestris</i>
Corn marigold	<i>Chrysanthemum segetum</i>	Evening primrose	<i>Oenothera biennis</i>
Cosmos	<i>Cosmos bipinnatus</i>	Phlox	<i>Phlox paniculata</i>
Spring crocus	<i>Crocus chrysanthus</i>	Black-eyed Susan	<i>Rudbeckia fulgida</i>
Sweet William	<i>Dianthus barbatus</i>	Scabious	<i>Scabiosa</i> spp.
Purple coneflower	<i>Echinacea purpurea</i>	Ice plant	<i>Sedum spectabile</i>
Globe thistle	<i>Echinops ritro</i>	French marigold	<i>Tagetes</i> spp.
Winter aconite	<i>Eranthis hyemalis</i>	Mulleins	<i>Verbascum</i> spp.
Fleabane	<i>Erigeron</i> spp.		

Plants for Shady Areas

Common Name	Latin Name	Common Name	Latin Name
Bugle	<i>Ajuga reptans</i>	Bluebell	<i>Hyacinthoides non-scripta</i>
Lords and Ladies/ Cuckoopint	<i>Arum maculatum</i>	Yellow archangel	<i>Lamium galeobdolon</i>
Lilly of the Valley	<i>Convallaria majalis</i>	Daffodils	<i>Narcissus pseudonarcissus</i>
Foxglove	<i>Digitalis purpurea</i>	Primrose	<i>Primula vulgaris</i>
Wood avens	<i>Geum urbanum</i>	Sweet Violet	<i>Viola odorata</i>

References

1. Natural England (2007). Plants for Wildlife-friendly Gardens: NE29.
2. RHS and the Wildlife Trusts (2015). Gardening with Wildlife in Mind. <http://www.joyofplants.com/wildlife/>.

APPENDIX 8 – BAT BOXES AND BRICKS

EXAMPLE BAT BRICKS AND BOXES

1. **Integrated Bat Box:** Ibstock Enclosed Bat Box 'B':

http://www.nhbs.com/title/187691/ibstock-enclosed-bat-box-b-large-buff?bkfno=214597&ca_id=1495&gclid=CKqr94nBxcMCFWfJtAodoA8AIQ



Large 215 x 290mm



Large Bespoke
215 x 280 mm



Small Red
215 x 215 mm

The Ibstock Enclosed Bat Box 'B' is designed for integration into the wall of new buildings or conservation projects and is intended to provide summer roosting space for pipistrelles specifically. It provides a discrete home for bats, with several roosting chambers to provide zones of differing temperatures within the box. The bats are contained within the box itself and the entrance at the bottom allows droppings to fall out, meaning that the box is maintenance free.

2. **External Bat Box:** Schwegler 1FQ bat box: <http://www.nhbs.com/title/160551>



The structure of the 1FQ has been designed with bat behaviour in mind. For example, the outside of the front panel has been roughened to enable the animals to land and hang onto it securely. Access is via a step-like recess which enables even young and inexperienced bats, to safely access the box. The inside of the box has rough pieces of wood incorporated which provide good insulation and are also used by the bats as perches. The internal layout provides three different areas from which bats can hang and which offer different levels of light and temperature. There are also non-slip areas,

gaps ranging from 1.5 to 3.5cm in width and various places for individuals to hide.

Installation of the 1FQ is achieved using the four screws and plugs provided. The back panel is initially screwed onto the wall (using four screws) and then the front panel is attached to this. It can easily be attached to most types of external brick, timber or concrete and can also be placed inside a roof space. (If fixing to timber then the gaps between the wall and the box should be sealed with silicone to prevent moisture being trapped here). The box should be positioned a minimum of three metres above the ground and where there is a clear flight path for bats entering and leaving. If desired, the front panel can be painted to match your building using an air-permeable paint.

3. Bat box: Schwegler Bat Box 2F



Tough, long lasting Woodcrete bat box. Position on buildings or trees facing South or South East

4. Bat box: Natural Timber Box



Highly durable with a narrow entrance that helps discourage predators.



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