Thurrock Local Wildlife Sites Review 2022

Client Thurrock Council **Date:** 2023



Author(s) Neil Harvey





About us

Place Services is a leading public sector provider of integrated environmental assessment, planning, design and management services. Our combination of specialist skills and experience means that we are uniquely qualified to help meet the requirements of the planning process.

Our Natural Environment Team has expertise of arboriculture, biodiversity, countryside management and ecology. This multidisciplinary approach brings together a wide range of experience, whether it is for large complex briefs or small discrete projects. We aim to help our clients protect and improve the natural environment through their planning, regulatory or land management activities. This approach ensures that not only our clients will fulfil their legal duties towards the natural environment, but they do so in a way that brings positive benefits to wildlife and people.

Address: County Hall, Market Road, Chelmsford, Essex, CM1 1QH Contact no: 0333 013 6840 Email: placeservicesecology@essex.gov.uk Website: www.placeservices.gov.uk VAT number: GB 104 2528 13

Version	Date	Author	Description of changes	
1.0	2023	Neil Harvey	Draft for comment	
2.0	10/12/2023	Neil Harvey	Final amended version	
		Name		
Title of report		Thurrock Local Wildlife Sites Review		
Client		Thurrock Council		
Client representative		Neil Harvey BSc (Hons)MCIEEM, Natural Environment Manager		
Report prepared by		Neil Harvey BSc (Hons)MCIEEM, Natural Environment Manager		

Copyright

This report may contain material that is non-Place Services copyright (e.g. Ordnance Survey, British Geological Survey, Historic England), or the intellectual property of third parties, which Place Services is able to provide for limited reproduction under the terms of our own copyright licences or permissions, but for which copyright itself is not transferable by Place Services. Users of this report remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

Disclaimer

The material contained in this report was designed as an integral part of a report to an individual client and was prepared solely for the benefit of that client. The material contained in this report does not necessarily stand on its own and is not intended to nor should it be relied upon by a third party. To the fullest extent permitted by law Place Services will not be liable by reason of breach of contract, negligence, or otherwise for any loss or damage (whether direct, indirect or consequential) occasioned to any person acting or omitting to act or refraining from acting in reliance upon the material contained in the report. Loss or damage as referred to above shall be deemed to include, but is not limited to, any loss of profits or anticipated loss of profits damage to reputation or goodwill, loss of business, or anticipated loss of business, damages, costs, expense incurred or payable to any third party (in all cases whether direct, indirect or consequential) or any other direct, indirect or consequential loss or damage.

This report has been compiled in accordance with BS 42020:2013 Biodiversity – Code of practice for planning and development, as has the survey work to which it relates.

The information, data, advice and opinions which have been prepared and provided are true, and have been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional *bona fide* opinions.

Biological Data:

Ownership of biological data gained through the assessment directly associated with the titled project or named part thereof remains in the ownership of the client who commissioned this assessment. However, as part of membership to our professional body we are required to provide our biological results to applicable biological record centres. As such, it is our intention to supply biological data unless directly instructed in writing not to do so by the commissioning client.

Contents

2. 3.	Introduction Methodology Results Local Geological Sites	5 7 8 13	

Appendices

- Map of Thurrock LoWS 2021
 LoWS selection criteria 2016

1. Introduction

- 1.1. This report has been prepared by Place Services on behalf of Thurrock Council as part of their work to prepare a new development plan. It details the methodology followed during a review of the LoWS within Thurrock carried out during 2022, which updates the evidence base required to support the emerging Local Plan and future development management decisions.
- 1.2. The National Planning Policy Framework (NPPF) (2021) includes at Paragraph 179 reference to the need for development plans to identify locally designated sites for biodiversity and geodiversity as part of measures to safeguard wildlife-rich habitats and wider local ecological networks. It goes on to say that plans should also promote the conservation, restoration and enhancement of such ecological networks.
- 1.3. Within Greater Essex (hereafter used to mean the 12 districts of Essex together with the two unitary authorities of Thurrock and Southend), sites identified as having nature conservation at a county level are known as Local Wildlife Sites (LoWS). Although not receiving any statutory protection, it is expected that LoWS will be protected from significant harm within the planning system. Many LoWS are designated on the basis of the Priority Habitats that they contain, and so additional weight should be given to the need for their protection as a key contribution to the maintenance of biodiversity in England.
- 1.4. With the advent of Local Nature Recovery Strategies, as a requirement of the Environment Act 2021, LoWS and the ecological networks of which they are a part serve a more proactive and positive role within the conservation of biodiversity. Such locally designated sites of nature conservation value should form the core of a Nature Recovery Network, providing the focus for action to restore, enhance and recreate natural habitats throughout the landscape and available to all local communities. This should include measures to:
 - Improve the quality of LoWS, by improving their management, for nature conservation outcomes
 - Increase the area of existing LoWS, by create new habitats to buffer them and improve their resilience
 - Better connect LoWS in the landscape, to facilitate the movement of species and so improve their ability to respond to environmental change (including climate change)
 - Create new high-quality habitats in the right locations so that they rapidly achieve the condition needed to be designated as LoWS
- 1.5. A consequence of this policy shift is that more emphasis must be put on the potential to restore Sites the condition of which is declining, especially through lack of appropriate management, or a complete absence of management. The establishment of a market for sites that can deliver a net gain in biodiversity, following the introduction of a mandatory requirement for all planning consents to deliver a minimum of 10% gain, as set out in the Environment Act 2021, gives such sites a higher value than they may previously have had. It also provides a mechanism for the restoration of LoWS that has previously been lacking, which needs to be communicated to LoWS owners.
- 1.6. Since their original identification in the late 1980s and early 1990s, Greater Essex LoWS have typically been selected as part of borough, district or unitary authority 'reviews' commissioned by the relevant local authority. In line with national guidance on Local Sites, areas which have been designated as Sites of Special Scientific Interest (SSSI) for the same features, have not been included in this Local Wildlife Sites register. Since 2010, Essex LoWS Selection Criteria have been published to guide the designation of LoWS, the most recent version having been prepared in 2016.
- 1.7. The LoWS network is an inclusive one, meaning that any site that objectively satisfies one or more of the published selection criteria should be considered as LoWS and afforded appropriate consideration, whether or not formal designation has been completed.
- 1.8. Identification of land as a Local Wildlife Site within this report does not confer any right of public access to the Site, above and beyond any Public Rights of Way that may exist. The vast majority of the Sites are in private ownership, and this should be respected at all times. Guidance on accessibility is provided within each Site description.

1.9. Whilst reasonable effort has been made to ensure accurate mapping of the site boundaries, the accompanying Local Wildlife Site maps should be considered as being illustrative only and, if necessary, they should be interpreted on site by a suitably qualified ecologist with reference to the LOWS Selection Criteria.

2. Methodology

- 2.1. Local Wildlife Sites (then referred to as Sites of Importance for Nature Conservation) were first identified in Thurrock in 1992 by Essex Wildlife Trust, as part of a county-wide process. Subsequently, the sites were reviewed in 2006 by Essex Ecology Services (EECOS) using selection criteria published in 1999 and intended to cover the whole of Greater Essex, including the Unitary Authority of Thurrock. A further review was undertaken by EECOS in 2016 using the amended Essex LoWS Selection Criteria published in 2010 and updated in 2016, but it was never formally accepted by the Council and so remained unpublished.
- 2.2. This review has taken the unpublished 2016 review as a starting point, as the passage of time and changes in LoWS selection criteria would make a comparison to the 2006 data somewhat meaningless. All of the proposed LoWS and Potential LoWS identified in the 2016 study have been subjected to a new assessment by a suitably qualified ecologist, with information collected on the habitats present and their condition during site visits. The sites were then assessed against the current Essex Local Wildlife Site Selection Criteria (see Appendix 2 for a summary of selection criteria).
- 2.3. In response to recent policy changes that are not yet reflected in the selection criteria document, the potential for LoWS to be enhanced or restored has been considered in setting the somewhat subjective thresholds for selection. Decisions have always been made in the context of the available ecological resources across the administrative area, where a continued decline in overall biodiversity within the landscape is reflected in a lowering of the thresholds for selection.
- 2.4. Any existing Sites considered to not meet any of the published criteria for which they were selected, with reference to the previous site descriptions, are recommended for deletion from the LoWS register. Boundaries have been remapped where parts of Sites no longer meet criteria, or where additional qualifying habitat has been identified. Site descriptions have been reviewed and adjusted as necessary to reflect any changes within the Sites and to provide as full a description of the habitats present as possible. Candidate sites considered to meet one or more criteria are proposed for inclusion in the register.
- 2.5. As part of the assessment of every Site, their condition was recorded as one of 'good', 'moderate' or 'poor', with an additional descriptor relating to trend: 'stable', 'improving, or declining. This is a relatively crude approach, based on a subjective assessment by the surveyor, which is all that is possible without considerable survey effort, which was not possible within the scope of this review.
- 2.6. The Site descriptions also highlight any management issues that were identified during the site visits, either as a result of current inappropriate management methods, lack of management, or through the use of the Sites for activities other than delivering nature conservation outcomes.
- 2.7. The review detailed within this report and the resultant network of LoWS and PLoWS have been validated and approved by the Essex Local Wildlife Sites Partnership, hosted by Essex County Council. The final suite of sites and their descriptions were subject to amendments in response to the recommendations of the Partnership.

3. Results

Summary

- 3.1. As a result of this review, the following changes have been made:
 - There are six new Sites, totalling 71.2 hectares
 - 41 Sites have been increased by a total of 507.7 hectares
 - 29 Sites have been reduced by a total of 81.7 hectares
 - One site has been reinstated, having been amalgamated with another in 2016
 - One site has been demoted to Potential LoWS (PLoWS) status, totalling 0.4 hectares
 - Four Sites have been deleted, totalling 29.4 hectares
- 3.2. Overall, there are now 68 Sites with a total area of 1738.8 hectares, a net increase of one site and 411.3 hectares since the last, unpublished review in 2016. The percentage of Thurrock covered by LoWS designation is now 9.4%, which is one of the highest in Greater Essex. In general, the small and medium sized administrative areas with high populations along the Thames corridor have a higher proportionate area of LoWS than the larger, rural districts in the north.
- 3.3. It is notable that there is an area that probably amounts to about a quarter of Thurrock, around Bulphan, where there are no LoWS at all, which suggests a complete lack of semi-natural habitat, and a significant deficit in biodiversity.
- 3.4. Compared to the 2006 review, when there were 70 Sites totalling 1056.4 hectares, there has been a net loss of two Sites, but a net increase of 682.4 hectares
- 3.5. Full details of all LoWS are included within the accompanying Thurrock LoWS Register 2022.

Changes to existing Local Wildlife Sites

3.6. The following table of previously designated LoWS includes a brief summary of the changes, if any, applied as a result of the current assessment.

Site code	Site Name	Change	
Th3	Jill's Field	Split into two sites with new site Th93 Fanns Farm to south of A13; minor reduction, with small area moved to new site Th94 Love Lane Pasture	-3.4
Th5	Purfleet Pit	Minor reduction: remapped by air photo to remove habitat lost to operational use	-0.1
Th7	Watt's Wood	Reduction: removed campsite from western end of site	-0.6
Th10	Belhus Park East	No change	0.0
Th11	Mar Dyke Valley	Boundary changes: small net gain in area after removal of landfilled sections and addition of further river floodplain habitats	
Th12	Hangman's Wood	No change	
Th13	Oak Wood and Ash Plantation		
Th15	West Thurrock Reedbed	No change; re-mapped for greater accuracy	
Th16	Arena Essex	No change; re-mapped for greater accuracy	
Th17	Little Dilkes Wood	No change; re-mapped to match extent of old woodland	
Lh18 West Lhurrock Brownfields		Reduction: removed land in southern section that has been lost to development	-1.5
Th19	Brannett's Wood Complex	Minor boundary changes	-2.4

Table 1. Changes to LoWS at this review

Site code	Site Name	Change	Change in area (ha)
Th20	Brickbarn Wood Complex	No change; re-mapped for greater accuracy	0.1
Th22	Grenville Road Grasslands	Increase: additional grassland habitat included; original boundary re-mapped for greater accuracy	0.2
Th23	Anchor Field	Reduction: removed land lost to development	-1.0
Th24	Mill Wood and Cliff	Reduction: removed planted non-native woodland from east side of southern limb	-0.8
Th25	South Ockendon Church	Minor reduction: re-mapped to remove church and surfaced roadway	-0.2
Th27	Warren Gorge	No change; re-mapped for greater acccuracy	-0.4
Th28	Lion Gorge	No change; re-mapped for greater accuracy	-0.1
Th29	Great Palmer's Shaw	No change; re-mapped for greater accuracy	-0.1
Th30	Wooldham Cliffs	No change Change name from Clockhouse Cliff	0.8
Th31	Grays Pit Extensions	No change; re-mapped for greater accuracy	0.2
Th32	Sandmartin Cliff	No change	0.0
Th34	Blackshots Nature Area	No change; re-mapped for greater accuracy	0.4
Th35	Little Thurrock Reedbeds	Increase: added further swamp habitat in ditch adjacent to western block to recognise broader corridor of semi- natural habitat	0.6
Th36	Terrels Heath	No change; re-mapped for greater accuracy	0.1
Th37	Tilbury Marshes	Increase: additional grazing marsh habitat included	3.3
Th38	Broom Hill	No change; re-mapped for greater accuracy	0.2
Th39	West Tilbury Marshes Complex	Significant increase; developed areas removed; former landfill areas reinstated	
Th41	Mucking Heath Complex	Reduction: Removed fairways and greens	
Th42	West Tilbury Hall	No change	
Th43	West Tilbury Church	Reduction: removed garden area	
Th45	Rainbow Wood and Ashen Shaw	No change; re-mapped for greater accuracy	-0.1
Th46	Linford Pit	No change; re-mapped for greater accuracy	0.2
Th47	Low Street Pit	No change; re-mapped for greater accuracy	
Th48	Horndon Meadow	No change	
Th50	Buckingham Hill	Increase: Added additional grassland and scrub to north and east	16.7
Th51	Linford Wood LNR Complex	Increase: matched to LNR boundary and added grassland and scrub	4.6
Th52	Goldsmith's Meadow	No change; re-mapped for greater accuracy	0.1
Th56	Fell-me-down Shaw	No change	0.0
Th59	Grovehouse Wood and Marsh	Re-established split from Th60 Mucking Creek	2.5
Th60	Mucking Creek	Boundary changes: removed fishing lakes with shaded banks; Re-established Th59 Grovehouse Wood and Marsh as a separate site; added Stanford Wharf intertidal area	
Th66	Hawksbury Grasslands	Increase: added additional grassland to the west	
Th69	Corringham and Fobbing Marshes	Increase: added restored grassland habitat north of the SSSI	
Th71	Rainham Gateway	No change; remapped for greater accuracy	
Th72	Purfleet Thames-side	No change; remapped for greater accuracy	
Th73	Belhus Woods Country Park	No change; extended and renamed Belhus Woods Country Park	

Site code	Site Name	Change	Change in area (ha)
Th74	Stifford Road Pit	No change; re-mapped for greater accuracy	0.1
Th75	Little Belhus Country Park	Reduction; remove active operational area	-10.7
Th76	Back Lane	No change; re-mapped for greater accuracy	0.1
Th77	North Ockendon Pit (Part)	No change; re-mapped for greater accuracy	-0.2
Th78	Stifford Hill Grasslands	Increase: added additional grassland to east and scrub woodland habitat	1.6
Th79	St Mary's Churchyard	Minor reduction: re-mapped to remove church	-0.02
Th80	Titan Works	Reduction: removed areas affected by site operation	-0.6
Th81	Stifford Clays Copse	No change	0.0
Th82	Lower Shaw	Minor reduction: removed area destroyed by railway works; added additional woodland habitat to east	
Th83	Little Thurrock Marshes	No change	0.0
Th84	Baker Street Brownfield	No change	0.0
Th85	Hob Hill & Sandy Lane Pit	No change; remapped for greater accuracy	0.6
Th87	Thurrock Thameside Nature Park	Reduction: remove area disturbed by operational use	-7.7
Th88	St Catherine's Churchyard	Minor reduction: re-mapped to remove church	-0.04
Th89	Tilbury Riverfront	Significant increase: extend westward to Tilbury Power Station; change name from Coalhouse Fort Marshes;	
Th90	Lodge Hall Shaw	No change	0.0

Deleted Sites

3.7. The following LoWS have been deleted as part of this review.

Site code	Site Name	Reason for deletion	
Th62	Warren Lakes	Fishing lakes with banks now almost entirely shaded by marginal scrub	
Th67	Vange Depot	Lost to development	
Th86	Victoria Road Grassland	Lost to development	
Th91	Stanhope Industrial Park	ark Lost to development	

- 3.8. The deleted Sites are not insubstantial, being between 6 and 10 hectares in size, and three of them were lost as a result of consented development. Two of these lost sites were only proposed to be added to the network in the 2016 review.
- 3.9. The ecological value of the fourth had diminished as a combination of land use (angling) that is not conducive to nature conservation outcomes, and a lack of active management, leading to a loss of higher value open habitats. Two of these sites were brought into the LoWS network in 2018.

New Local Wildlife Sites

3.10. The following new sites were identified during this review as meeting one or more of the current selection criteria.

Table 3. LoWS new at this review

Site code	Site name	Area (ha)	Summary description
Th92	Kennington Park	ngton Park 33.0 Promoted from ThPLoWS2; habitat mosaic a public open space	
Th93	Fanns Farm	3.3	Split from Th3 Jill's Field; acid grassland
Th94	Love Lane Pasture 2.8 Promoted from ThPLoWS3; acid grassland		Promoted from ThPLoWS3; acid grassland
Th95	East Tilbury Pit	23.8 Promoted from ThPLoWS12; new scrape and stab grassland	
Th96	Stifford Road Paddocks	5.5	Promoted form ThPLoWS5; open mosaic habitat with invertebrate importance
Th97	The Wilderness 2.8		New site; recently added to Ancient Woodland Inventory

- 3.11. The newly designated sites are split into two size classes, with four small sites and two larger, former landfill sites. Th93 Fanns Farm is an area of old grassland that has been split from Th3 Jill's Field, as they are separated by the A13 and are quite different in character. Th94 Love Lane Pasture is also old grassland and has previously been identified as a PLoWS. Th96 is promoted from PLoWS as a result of invertebrate survey information and Th97 is a small woodland, part of which is now included in the Ancient Woodland Inventory.
- 3.12. Th92 Kennington Park has a good mosaic of semi-natural habitats, but its designation in this review partly recognises the importance of accessible natural green space to local communities. It is important that the management of such spaces has a focus on nature conservation outcomes, otherwise it not only loses its biodiversity value, but also provides a lower quality experience to those people that use it.
- 3.13. The Th95 East Tilbury Pit Site is a good example of what can be achieved in the restoration of landfill sites, with the creation of a scrape that is more or less unique in that part of Thurrock. Although it is still very new, it is already well-used by water birds for which the adjacent estuary has been designated, nationally and internationally. This feature could serve as a focus for further habitat creation measures over the remainder of the landfill site.

Potential LoWS

- 3.14. In 2006, nearly 70 PLoWS were identified across Thurrock, comprising sites thought to have value, but about which detailed biological data were lacking and sites where it was considered that condition had declined so far as to prevent the thresholds of the criteria from being reached. The implication was that any development threats to those sites should be informed by detailed ecological survey in the former case, or that some form of appropriate management would be needed to improve condition in the latter case.
- 3.15. The 2016 review considered those sites, and the conclusion was a more focused set of 13 PLoWS, although ThPLoWS13 was confusingly also mapped as a LoWS (and has been treated as such in this review, being retained and extended).
- 3.16. Table 4 sets out the PLoWS following this review, with notes explaining their inclusion. Fuller descriptions are provided within the accompanying Local Wildlife Sites Register document.

Site code Site name		Area (ha)	Notes	
ThPLoWS4	Purfleet Farm	11.7	This site is subject to ongoing development pressure, but habitats of value may remain once that is completed.	

Table 4. Potential LoWS

ThPLoWS6	Warren Lane Grassland	0.8	The site is extensively covered in scrub, but could be restored to grassland with appropriate management.
ThPLoWS7 Buckles Lane		47.2	This site does not meet any habitat criterion and there is no new survey information available. There is a threat of development.
ThPLoWS9	ThPLoWS9 Treetops Paddocks 10.6 ha		Flowery grassland with heavy horse-grazing in places; the grassland does not meet any habitat criteria and no new survey information is available.
ThPLoWS11 Horndon Road Grasslands		7.7	Does not meet habitat criteria and no new survey information available; part incorporated into gardens
ThPLoWS12 East Tilbury Landfill 81.2		81.2	Part included in the new Th95 East Tilbury Pit LoWS; remainder retained as PLoWS; name change from 'pit' to 'landfill'
ThPLoWS15	Mucking Landfill	183.7	This comprises the remaining, active part of the landfill site, but it is anticipated that it will meet habitat criteria once it becomes part of the adjacent Nature Park
ThPLoWS16	Tank Lane	0.4	Very little open grassland remaining due to scrub encroachment and key species now missing, but could be restored to grassland with appropriate management

- 3.17. These potential Sites are split between recently operational waste sites, where an appropriate restoration and management plan has the potential to create habitats of high biodiversity value, and sites where modest changes to management could lead to higher quality habitats and/or where detailed survey work could reveal significant populations or assemblages of plant and animal species. The waste sites are all within the coastal belt and could lead to the establishment of landscape scale semi-natural green spaces.
- 3.18. Table 5 sets out those sites proposed as PLoWS in 2016, which are no longer considered to merit that status following this review. Two of these have been promoted to LoWS and three have been wholly or partially lost to consented development. One site has been modified by the landowners as an extension to a garden space. The final site was mistakenly included in the 2016 network as a LoWS and a PLoWS and in this review has been retained as a full LoWS.

ThPLoWS1	Botany Way Pit	Lost to development	
ThPLoWS2 Kennington Landfill		Promoted to Th92 Kennington Park	
ThPLoWS3	Love Lane Paddocks	Promoted to Th94 Love Lane Pasture	
ThPLoWS8 Devonshire Road		The southern half of the site has been lost to development and much of the remainder has been overtaken by dense scrub	
ThPLoWS10 Coppy Hall		Much of the original vegetation has been cleared in recent years, and although the landform is interesting, there is no evidence of any ecological value	
ThPLoWS13 Vange Park Paddock		Mapped as Th66 in 2016, retained and extended in 2022	

Table 5. Potential LoWS deleted at this review

4. Local Geological Sites

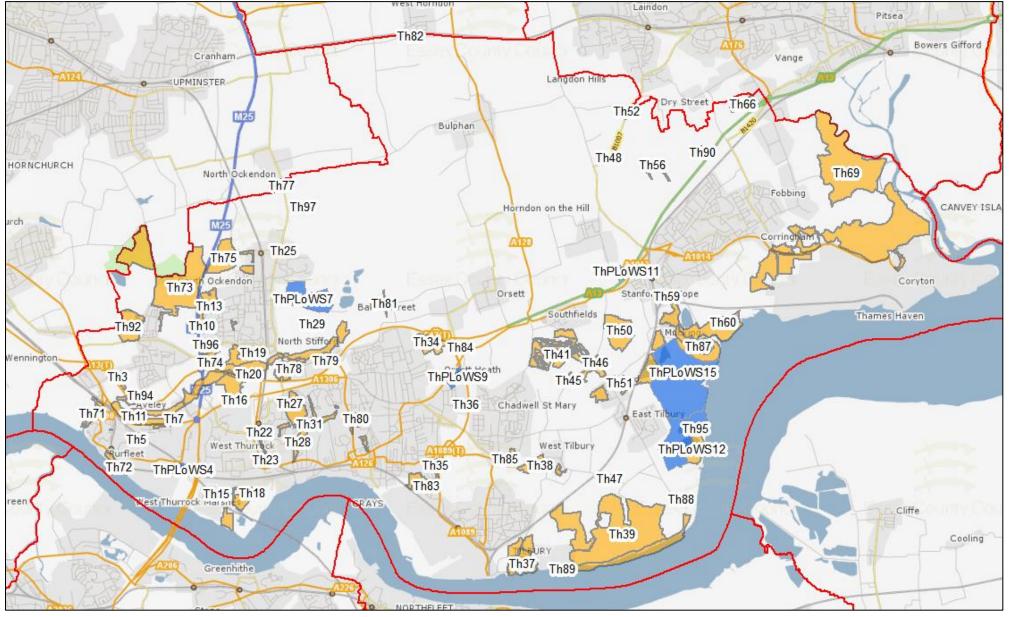
- 4.1. Geo Essex has kindly provided details of the sites of geological interest in Uttlesford District that have already been assessed as meeting the relevant selection criteria and have been ratified as Local Geological Sites (LoGS).
- 4.2. There are not yet any designated LoGS in Thurrock, but 18 sites have been identified as Potential LoGS (PLoGS) on the basis that they meet the necessary selection criteria but have not yet been ratified by a Local Sites Partnership. Some of these sites coincide with LoWS. The sites are listed in Table 5.

Location	Site name	Grid reference
Aveley	Belhus Woods Country Park	TQ565825
Aveley	Kennington Park & Sandy Lane Pit	TQ560812/
	(site of)	TQ553807
Chafford Hundred	Chafford Gorges Nature Park	TQ599793
Fobbing	Vange Mineral Well	TQ700863
Grays	Grays Park	TQ618781
Grays	Hangmans Wood Deneholes	TQ631794
Grays	The Dell	TQ617786
Grays	Thurrock College Sarsen Stone	TQ635788
Langdon Hills	Langdon Hills Country Park	TQ683866
North Stifford	North Stifford North Stifford Puddingstone	
Purfleet	Purfleet Submerged Forest.	TQ544787
South Ockendon	Brickbarn Wood	TQ586799
South Ockendon	Davy Down Sarsen Stone	TQ592800
South Ockendon	St. Nicholas Church	TQ594828
West Thurrock	West Thurrock Dolphin Chalk Quarry	
West Thurrock	West Thurrock Lakeside (Tunnel Cement Works	
Quarry)		
West Thurrock	Greenlands Quarry, south	TQ570781
West Tilbury Gun Hill/Broom Hill		TQ656780

Table 5. Uttlesford Potential Local Geological Sites



Appendix 1 Map of Thurrock LoWS and PLoWS



Appendix 2 LoWS selection criteria (from ELSP, 2016)

Habitat criteria:

Habitat Criterion 1 (HC1) - Ancient Woodland Sites

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

Habitat Criterion 2 (HC2) – Lowland Mixed Deciduous Woodland on Non-ancient Sites "All significant areas of non-ancient Lowland Mixed Deciduous Woodland will be eligible for selection".

Habitat Criterion 3 (HC3) - Other Priority Habitat Woodland Types on Non-ancient Sites

"Any area of Lowland Beech and Yew woodland (e.g. NVC type W15) or Wet Woodland, as defined in the Habitats of Principal Importance in England descriptions, will be eligible for selection."

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

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

Habitat Criterion 5 (HC5) – Woody Scrub

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

Habitat Criterion 6 (HC6) – Veteran Trees

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

Habitat Criterion 7 (HC7) – Old Orchards

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

Habitat Criterion 8 (HC8) – Hedgerows and Green Lanes

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

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

Habitat Criterion 9 (HC9) – Lowland Meadows

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

Habitat Criterion 10 (HC10) – River Floodplain

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

Habitat Criterion 11 (HC11) - Other Neutral Grasslands

"Unimproved or semi-improved12 pastures or meadows that do not clearly fit criterion HC9 shall be eligible for selection if they support features that indicate long continuity as grassland or support notable populations of invertebrates. Special consideration should be given to sites listed in the Grassland Inventory for Essex and to sites supporting plants listed in Appendix4".

Habitat Criterion 12 (HC12) - Lowland Calcareous Grassland

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

Habitat Criterion 13 (HC13) – Heathland and Acid Grassland

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

Habitat Criterion 14 (HC14) – Lowland Fen Vegetation

"Significant areas of lowland fen vegetation14, or such habitat known to support notable species, will be eligible for selection. Usually such sites will include the associated water body or source of groundwater, if applicable."

Habitat Criterion 15 (HC15) - Reedbeds

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

Habitat Criterion 16 (HC16) – Lakes and Reservoirs

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

Habitat Criterion 17 (HC17) – Ponds

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

Habitat Criterion 18 (HC18) – Rivers

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

Habitat Criterion 19 (HC19) – Extended Riverine Habitat

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

Habitat Criterion 20 (HC20) – Complex Riverine Habitats

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

Habitat Criterion 21 (HC21) – Coastal Grazing Marsh

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

Habitat Criterion 22 (HC22) – Tidal Transition Zones

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

Habitat Criterion 23 (HC23) – Saltmarsh and Mudflats

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

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

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

Habitat Criterion 25 (HC25) - Sand Dune and Shingle Beach Vegetation

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

Habitat Criterion 26 (HC26) – Maritime Cliffs and Slopes

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

Habitat Criterion 27 (HC27) – Post-industrial Sites

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

Habitat Criterion 28 (HC28) - Small-Component Mosaics

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

Habitat Criterion 29 (HC29) – Habitat Extension Mosaics

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

Habitat Criterion 30 (HC30) – Wildlife Corridors

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

Habitat Criterion 31 (HC31) – Accessible Natural Greenspace 57

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

Species criteria:

Species Criterion 1 (SC1) – Vascular Plants

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

Species Criterion 2 (SC2) – Bryophytes

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

Species Criterion 3 (SC3) – Lichens

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

Species Criterion 4 (SC4) – Fungi

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

Species Criterion 5 (SC5) – Notable Bird Species

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

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

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

Species Criterion 7 (SC7) – Dormouse

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

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

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

Species Criterion 9 (SC9) – Other Bat Breeding Colonies

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

Species Criterion 10 (SC10) – Bat Hibernation Sites

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

Species Criterion 11 (SC11) – Protection of Otter Holts

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

Species Criterion 12 (SC12) – Breeding Water Vole Colonies

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

Species Criterion 13 (SC13) - Hotspots for Amphibian Diversity

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

Species Criterion 14 (SC14) - Palmate Newts

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

Species Criterion 15 (SC15) - Great Crested Newts

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

Species Criterion 16 (SC16) - Hotspots for Reptile Diversity

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

Species Criterion 17 (SC17) – White-clawed Crayfish

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

Species Criterion 18 (SC18) – Invertebrates listed as Species of Principal Importance in England

"All significant populations of terrestrial and freshwater aquatic invertebrates listed as Species of Principal Importance in England will be eligible for selection."

Species Criteria 19 (SC19) – Important invertebrate assemblages

"Significant populations of notable invertebrate species, and/or important invertebrate assemblages (i.e. unusual or uncommon assemblages, or exceptional diversity) will be eligible for selection. In deciding the

significance of a species, reference should be made to any available Essex Red Data List, national Red Data Book or "Review".

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

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

Place Services Essex County Council County Hall, Chelmsford, Essex CM1 1QH

T: +44 (0)333 013 6840 **E:** enquiries@placeservices.co.uk

www.placeservices.co.uk

✓@PlaceServices



