

Analysis of Accessible Natural Greenspace Provision for Essex, including Southend-on-Sea and Thurrock Unitary Authorities



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Contents

Overview by Natural England	3
Introduction	4
Background to ANGSt	4
Accessible natural greenspace definition	4
Methodology	4
Study area	5
Accessible natural greenspace datasets	5
Data analysis	6
Results	6
Braintree District, Colchester Borough, Tendring District and Uttlesford District	10
Brentwood Borough, Epping Forest District and Harlow	12
Chelmsford Borough, Maldon District and Rochford District	14
Basildon District, Castle Point Borough, Southend-on-Sea Borough and Thurrock	16
Conclusions	18
References	19

Overview by Natural England

For most people, particularly the 80 percent of people in England who live in urban areas, having nature nearby in their local greenspace is very important. It provides a daily experience of wildlife. Contact with nature boosts people's physical and mental health. Exercise in the outdoors reduces obesity and is shown to reduce heart disease, blood pressure and diabetes – among England's most common medical problems.

Natural England's Accessible Natural Greenspace Standard (ANGSt) provides a set of benchmarks for ensuring access to places near to where people live. These standards recommend that people living in towns and cities should have:

- an accessible natural greenspace of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometres of home;
- one accessible 100 hectare site within five kilometres of home;
- one accessible 500 hectare site within ten kilometres of home.

In addition it proposes statutory Local Nature Reserves at a minimum level of one hectare per thousand population.

By identifying accessible natural sites and applying range buffers, an overview of provision – and gaps – can be quickly grasped. This document provides, for the first time, an excellent summary of accessible natural greenspace provision for the whole of Essex.

Natural England intend to follow this survey up with our continuing work with local authorities, access bodies and through influencing or delivering funding programmes. This will be done directly through green infrastructure strategies, and through additional targeted activity aimed at areas with low provision and low accessibility to natural environments.

- 29%** of households within Essex have access to a site of at least 2 hectares within 300 metres
- 68%** of households within Essex have access to a site of at least 20 hectares within 2 kilometres
- 72%** of households within Essex have access to a site of at least 100 hectares within 5 kilometres
- 19%** of households within Essex have access to a site of at least 500 hectares within 10 kilometres
- 7%** of households within Essex have all of their ANGSt requirements met
- 14%** of households within Essex have none of their ANGSt requirements met

Box 1. Summary of key findings

Looking within the results, a standout feature is the relatively low provision of small, local, sites (2 to 20 Ha). Across the whole of the study area, only 29% of households are within 5 minutes walk of an accessible natural greenspace. Natural England have identified one of our five-year measures of success in delivering increased access as *an increased proportion of the population with high quality greenspace a short walk from their home*. This survey provides a baseline.

ANGSt has limitations, and we accept the standard does not work as well in rural as urban areas. To overcome this, Natural England are producing a complimentary dataset of regional access maps, which will be available later in 2009. These will take into account greenspace, but also the rights of way network, and other access provision relevant to rural communities. A further ANGSt study, of Hertfordshire, is being planned. This activity will be shared with partners, and will provide a key tool in understanding, targeting and developing provision of access to natural environments.

Ian Trowse
ANGSt lead for Natural England's East of England region.

Produced by Stefanie Buell,
Essex Wildlife Trust, with funding
provided by Natural England.
Report published August 2009.



Introduction

The inclusion of Local Indicator 10.1 Living Landscapes in the Essex Local Area Agreement 2 presented the opportunity for a countywide Accessible Natural Greenspace Standard (ANGSt) analysis. The Living Landscapes vision is to establish large areas of quality countryside throughout Essex which are good for wildlife and people, recognise the importance of history and culture, and which integrate social and economic benefits. A key part of this is assessing and improving the accessibility of natural greenspace.

Initiated for use in the LI 10.1 Living Landscapes vision documents, the ANGSt analysis results will also raise awareness of Natural England's ANGSt model (Box 2), highlight areas in Essex with adequate and deficient provision, and be of wider use for local authorities and other organisations working on access and greenspace provision.

Box 2. Accessible Natural Greenspace Standards (ANGSt)

Natural England's ANGSt state that:

- no person should live more than 300m from their nearest area of accessible natural greenspace of at least 2ha in size;
- there should be at least one accessible 20ha site within 2km of home;
- there should be one accessible 100ha site within 5km of home;
- there should be one accessible 500ha site within 10km of home.

Background to ANGSt

Planning Policy Guidance 17 (PPG17) (ODPM [now DCLG], 2002a) recommends that local authorities carry out assessments and audits to identify deficits or surpluses in the provision of open space (including natural and semi-natural greenspace), sports and recreational facilities. The Companion Guide to PPG17 (ODPM [now DCLG], 2002b) highlights the use of Natural England's Accessible Natural Greenspace Standard (ANGSt) as the model to assess the provision of natural and semi-natural greenspace, although it does not constrain local authorities from developing alternative approaches.

The East of England Biodiversity Delivery Plan (East of England Biodiversity Forum, 2008) aims to push for regional compliance with the Accessible Natural Greenspace Standard; the Essex analysis will serve as a pilot study to establishing a baseline of how ANGSt are being delivered at a regional level.

Accessible natural greenspace definition

The Essex analysis uses the ANGSt model's definition of naturalness as "places where human control and activities are not so intensive so that natural processes are allowed to predominate" (Handley *et al*, 2003a).

Within the ANGSt model, accessibility means the "ability of visitors to physically gain access to a site" (Handley *et al*, 2003b). In the Essex analysis, sites with unrestricted entry (full access sites) were included, but those with known access restrictions (e.g. footpath only, entrance fee, restricted opening hours) or no right of access were excluded from the analysis of accessible natural greenspace provision.

Methodology

The methodology followed was based on the ANGSt analysis toolkit (Handley *et al*, 2003b). An inventory of accessible natural greenspace data was compiled in a Geographic Information System (GIS), to which the ANGSt model was then applied, with the results showing areas of adequate provision or deficiency, as described in the ANGSt model. The flowchart in Figure 1 (McKernan & Grose, 2007, adapted from Handley *et al*, 2003b) shows the analysis process.

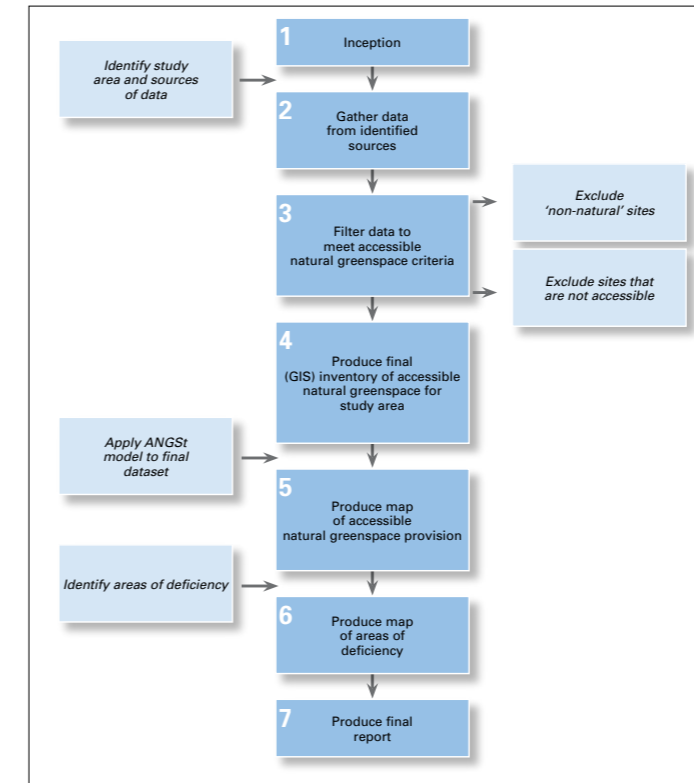


Figure 1. Flowchart showing Essex ANGSt analysis process

Study area

The study aimed to produce an analysis for Essex, including the unitary authorities of Southend-on-Sea and Thurrock. For clarity within this document, 'Essex' refers to the administrative areas of Essex County Council and the Unitary Authorities of Southend-on-Sea and Thurrock. In order to take account of areas of accessible natural greenspace outside of Essex that may be serving the needs of the population within Essex, accessible natural greenspace data were collated from within a ten kilometre buffer of the study area, as required by the ANGSt toolkit (Handley *et al*, 2003b). The ten kilometre buffer was not extended across the Thames Estuary due to the limited crossing points.

Accessible natural greenspace datasets

Data were collated from a variety of sources (Box 3) and filtered to the criteria in the ANGSt definition (Box 2). Data were provided in digital (GIS) format and attribute information for the data was checked to ensure compliance with the criteria. For Local Authorities' PPG17 data, sites within some categories of data (e.g. parks and gardens, common/amenity space) were checked against aerial photographs to ascertain 'naturalness'. Where there was doubt over a site it was removed from the inventory.

The following datasets were included in the analysis:

Country Parks; Countryside & Rights of Way Act access land; Doorstep and Millennium Greens; Forestry Commission land; Forestry Commission 'Walkers Welcome' woodland grant scheme; Local Authority PPG17 datasets; Local Nature Reserves; National Nature Reserves (excluding those with limited accessibility); National Trust sites; Natural England agri-environment grant schemes providing access; RSPB reserves; Thames Gateway Accessible Natural Greenspace Study; Utility company land; Wildlife Trust reserves; Woodland Trust sites; Woods for People.

Data were kindly provided by:

Braintree District Council; Brentwood Borough Council; Chelmsford Borough Council; Colchester Borough Council; Epping Forest District Council; Essex & Suffolk Water; Essex Wildlife Trust; Forestry Commission; Harlow Council; Herts and Middlesex Wildlife Trust; Land Use Consultancy; Lee Valley Regional Park Authority; London Borough of Havering; London Wildlife Trust; National Trust; Natural England; Southend-on-Sea Borough Council; Suffolk Biological Records Centre; The Wildlife Trust for Bedfordshire, Cambridgeshire, Northamptonshire and Peterborough; Thurrock Council; Uttlesford District Council; Woodland Trust.

Box 3. Data Sources

Data analysis

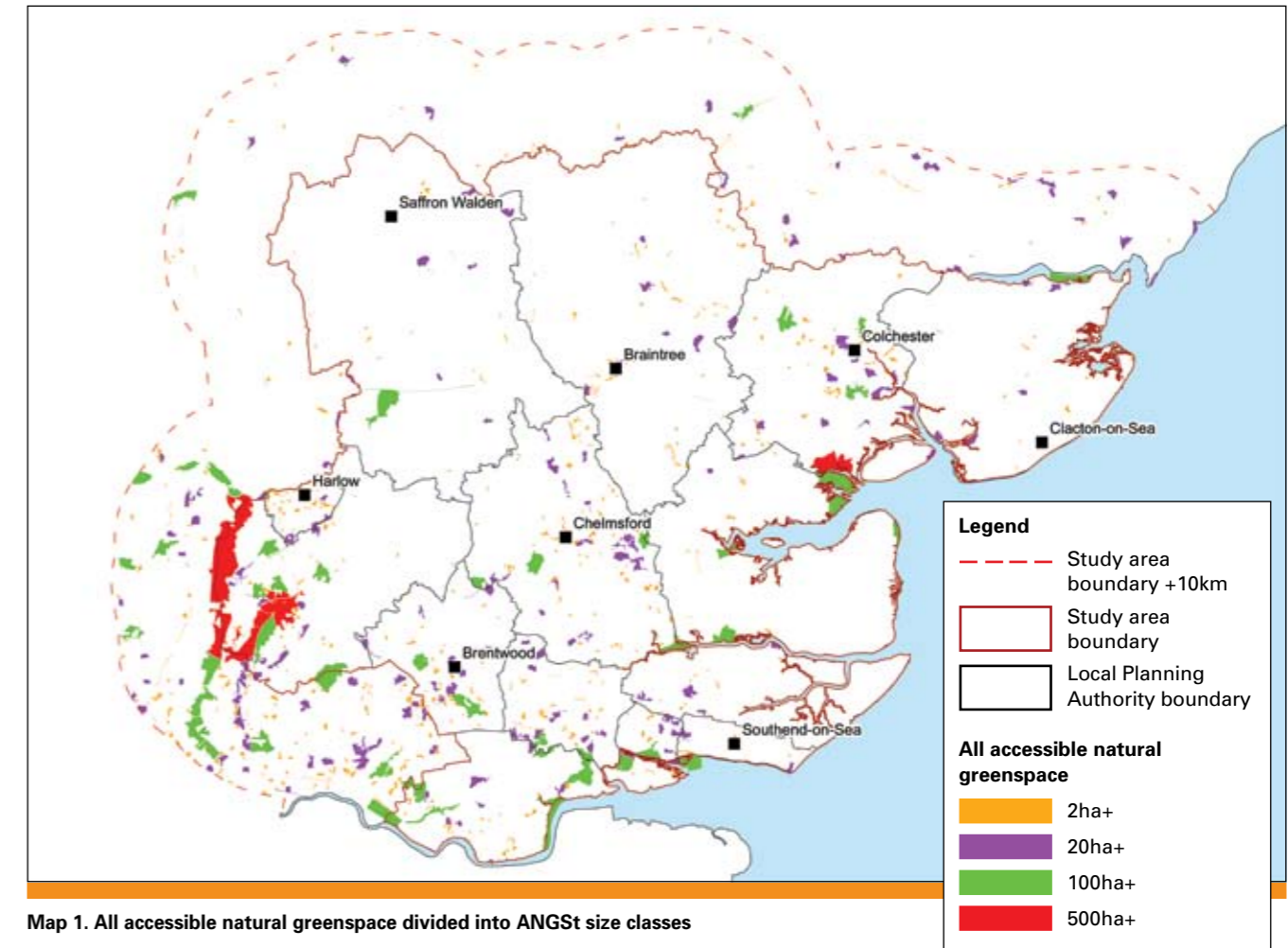
The data analysis was carried out using GIS software. All overlapping and adjoining sites within the accessible natural greenspace inventory were aggregated and assigned to their relevant size class (2, 20, 100 or 500 hectares). Sites of less than 2 hectares were removed from the inventory and the areas within each size class had buffers created around them according to the catchment zone stated within the ANGSt model (Box 2).

Data for residential households (using AddressPoint, 2005) within the study area were extracted according to the buffers of each size class to establish the number of households served by each size class in the ANGSt model. In order to ensure consistency across the data analysis, population levels have been represented as percentages.

Results

The results of the analysis of accessible natural greenspace provision for Essex are displayed in the maps, tables and text on the following pages.

Map 1 shows all the accessible natural greenspace within the study area and the 10km buffer zone, displayed by ANGSt model size class. Table 1 shows the area of these accessible natural greenspaces and the number of households within each local planning authority in Essex. It can be seen that Southend-on-Sea, with the highest number of households, has 4% of its area classed as accessible natural greenspace; whereas Basildon, with the second highest number of households, has 8% coverage of accessible natural greenspace; accessible natural greenspace coverage for the whole Essex area stands at 5%.



Map 1. All accessible natural greenspace divided into ANGSt size classes

Table 1. Area of accessible natural greenspace in local planning authorities in Essex

Local Planning Authority	LPA area (ha)	Area (ha) of accessible natural greenspace	Accessible natural greenspace as % of the LPA	Total number of households*
Basildon	10,999	842	8	72,135
Braintree	61,171	633	1	56,413
Brentwood	15,312	1,064	7	30,196
Castle Point	4,481	677	15	35,450
Chelmsford	34,224	1,852	5	65,959
Colchester	33,400	2,028	6	65,635
Epping Forest	33,899	4,745	14	51,890
Harlow	3,054	366	12	34,313
Maldon	35,823	1,233	3	25,102
Rochford	16,914	289	2	33,315
Southend-on-Sea	4,189	188	4	75,932
Tendring	33,577	432	1	63,332
Thurrock	16,341	1,469	9	59,525
Uttlesford	64,118	894	1	28,898
Essex (excluding Thurrock and Southend-on-Sea)	346,972	15,055	4	562,638
Combined Essex Total:	367,502	16,712	5	698,095

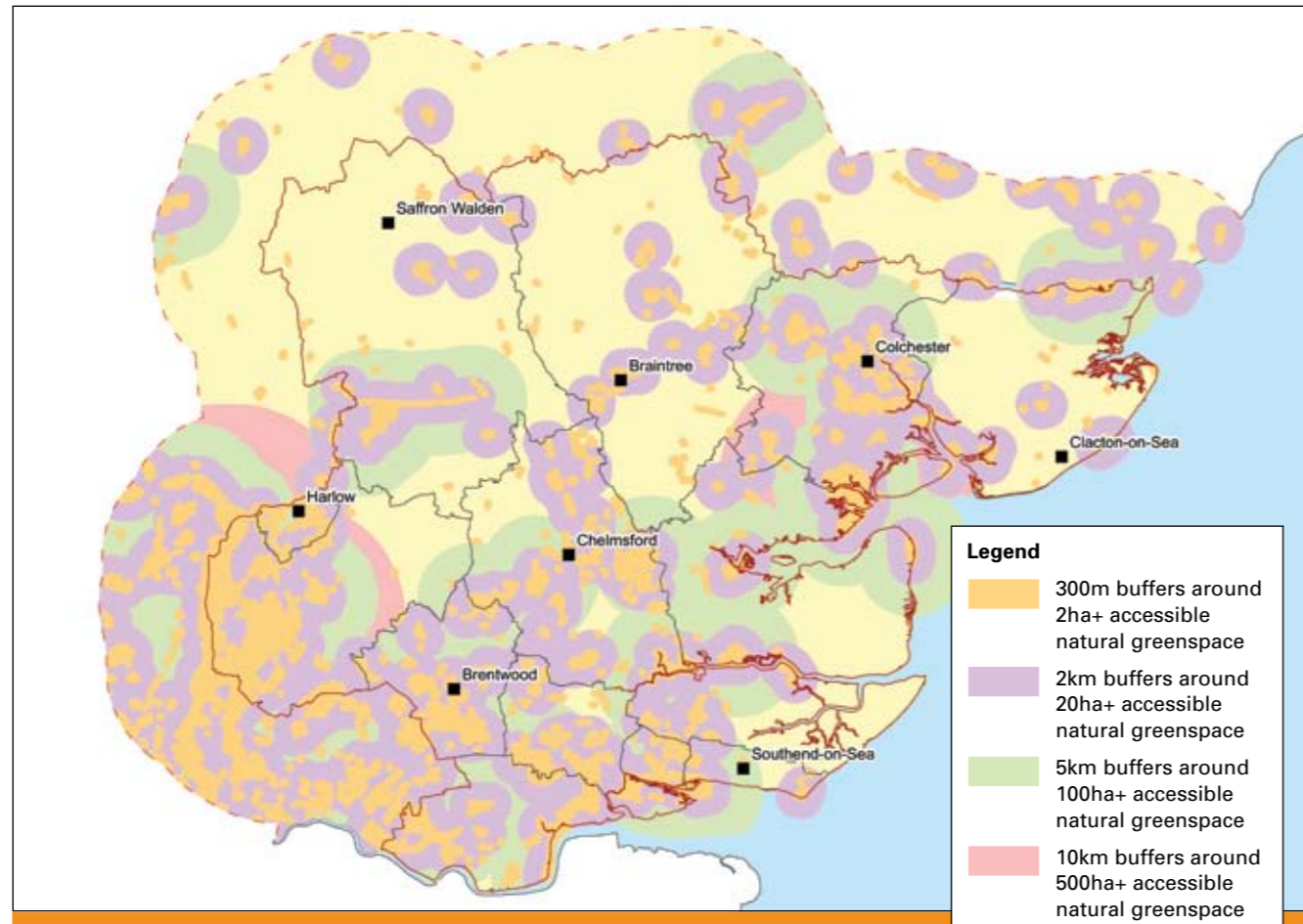
* Estimate from 2005 AddressPoint data

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Map 2 shows the combined buffers around the accessible natural greenspace for the study area as a whole, with the varying colours representing the 300m, 2km, 5km and 10km distances from the relevant size classes of accessible natural greenspace. It can be seen that a site of 20 hectares would not only have a two kilometre buffer but would also serve as a two hectare site for those households situated within the 300m buffer.

Maps 4 to 17 display these accessible natural greenspace combined buffers by each local planning authority. Tables 3 to 6 provide detail of the percentages of households served by each size class of accessible natural greenspace. The discussion is broken down by local planning authorities of similar character and geographical location within Essex.

For the administrative area of Essex (excludes the Unitary Authorities of Thurrock and Southend-on-Sea), the summary of accessible natural greenspace provision can be seen in Table 2. Using data from the South East analysis of accessible natural greenspace provision (McKernan & Grose, 2007), two counties of equivalent geographical and population size have been included to enable comparison of the levels of ANGSt fulfilment. Although less than a third of Essex households are within 300m of a two hectare site, this is better than the provision for Hampshire and Kent households. There is however a lack of availability of 500 hectare sites to Essex households, with Kent and Hampshire households faring almost twice and three times better respectively.

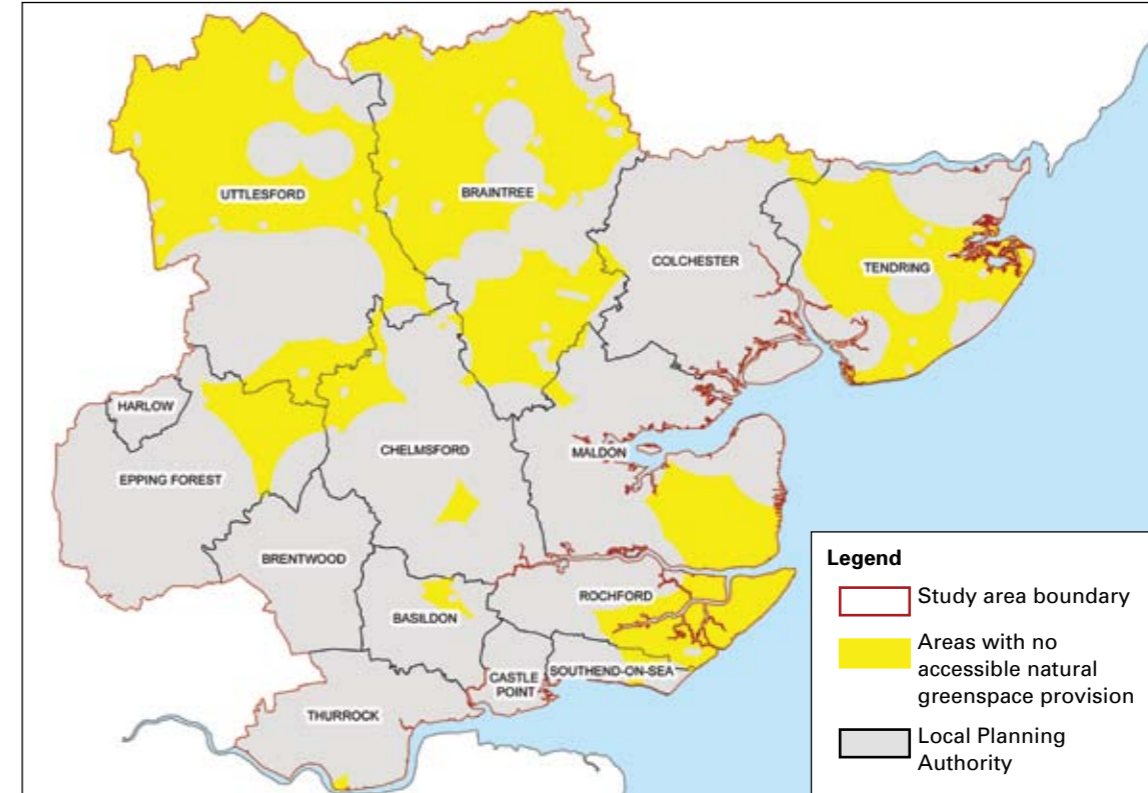


Map 2. All combined buffers for ANGSt size classes

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Local Planning Authority	Number of households*	% of households					
		within 300m of 2ha+ site	within 2km of 20ha+ site	within 5km of 100ha+ site	within 10km of 500ha+ site	meeting all ANGSt requirements	meeting none of the ANGSt requirements
Essex (excluding Thurrock and Southend-on-Sea)	562,638	32	69	69	23	9	16
Hampshire [†]	535,602	25	74	88	63	15	4
Kent [†]	592,257	15	57	69	44	3	8

* Estimate from 2005 AddressPoint data. [†]Results from McKernan & Grose, 2007.



Map 3 highlights those areas with no accessible natural greenspace provision and the accompanying table displays the percentages of households within each local planning authority that have some or none of their ANGSt requirements met.

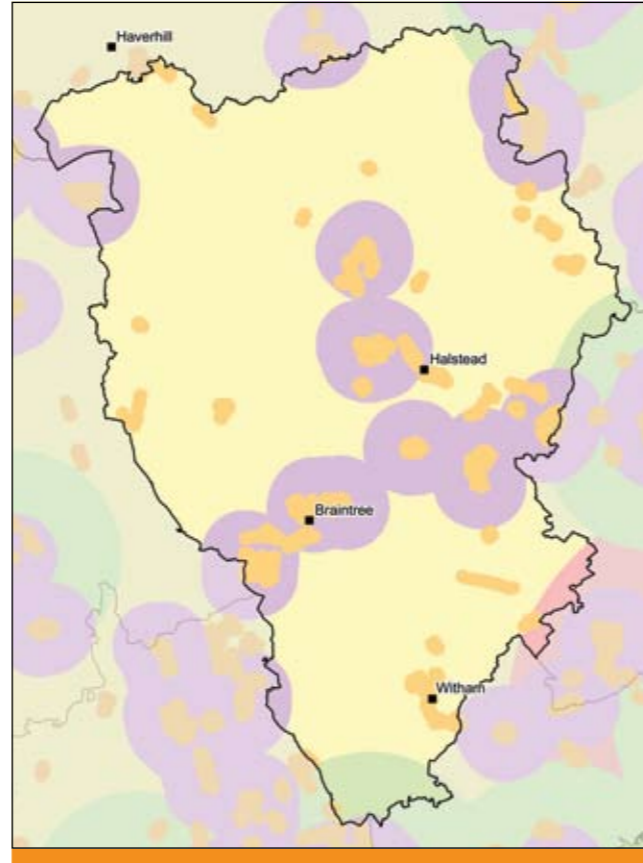
Local Planning Authority	% of households	
	Meeting no ANGSt criteria	Meeting some ANGSt criteria
Basildon	2	98
Braintree	35	65
Brentwood	0	100
Castle Point	0	100
Chelmsford	3	97
Colchester	1	99
Epping Forest	2	98
Harlow	0	100
Maldon	23	77
Rochford	20	80
Southend-on-Sea	12	88
Tendring	59	41
Thurrock	1	99
Uttlesford	54	46
Essex (excluding Thurrock and Southend-on-Sea)	16	84

Table 2. ANGSt analysis results for Essex compared with selected counties from the South East analysis

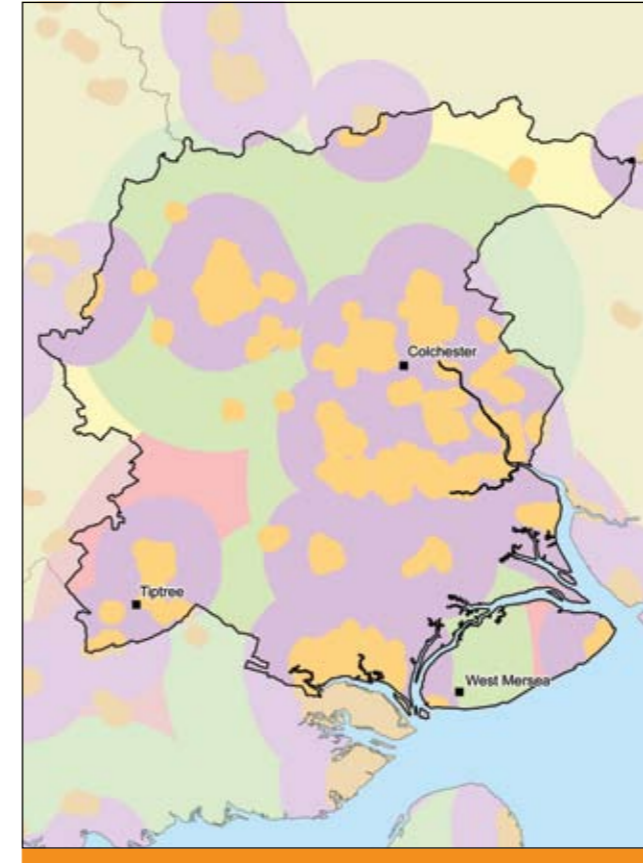
Map 3. Areas and percentages of households in each LPA meeting some or none of the ANGSt requirements

Braintree District, Colchester Borough, Tendring District and Uttlesford District

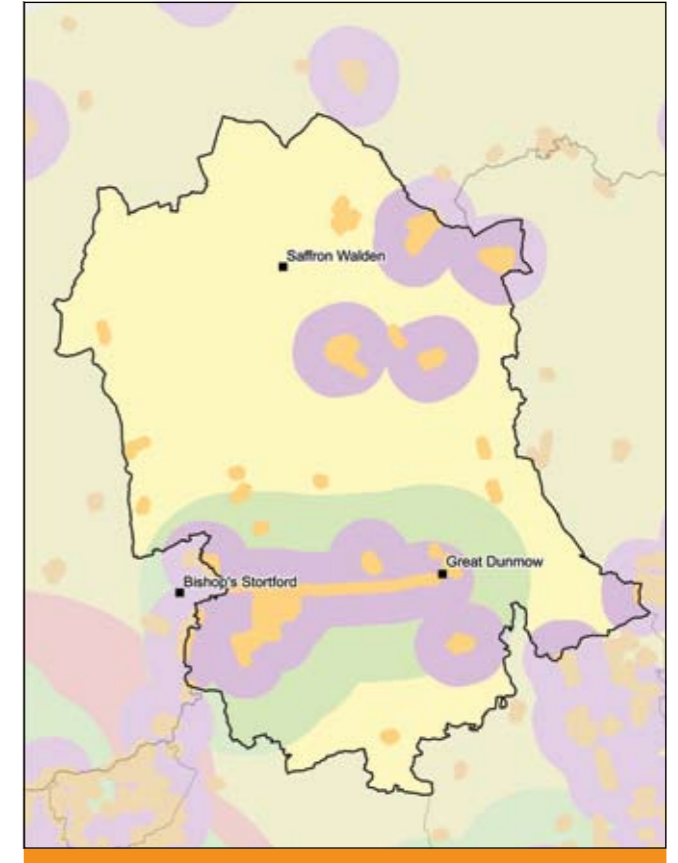
It can be seen in **Table 3** that, with the exception of Colchester Borough which is above the Essex average in the provision of all ANGSt size categories, households in northern Essex are poorly served by accessible natural greenspace; with over half of households meeting none of the ANGSt requirements in both Tendring and Uttlesford local planning authority areas. Braintree fares somewhat better with over a third of residents within walking distance (300m) of a site of at least 2 hectares, but there is minimal provision of larger sites and none of the households within Braintree or Uttlesford Districts have all of their ANGSt requirements met.



Map 4. Braintree District
All combined buffers
for ANGSt size classes



Map 5. Colchester Borough
All combined buffers
for ANGSt size classes

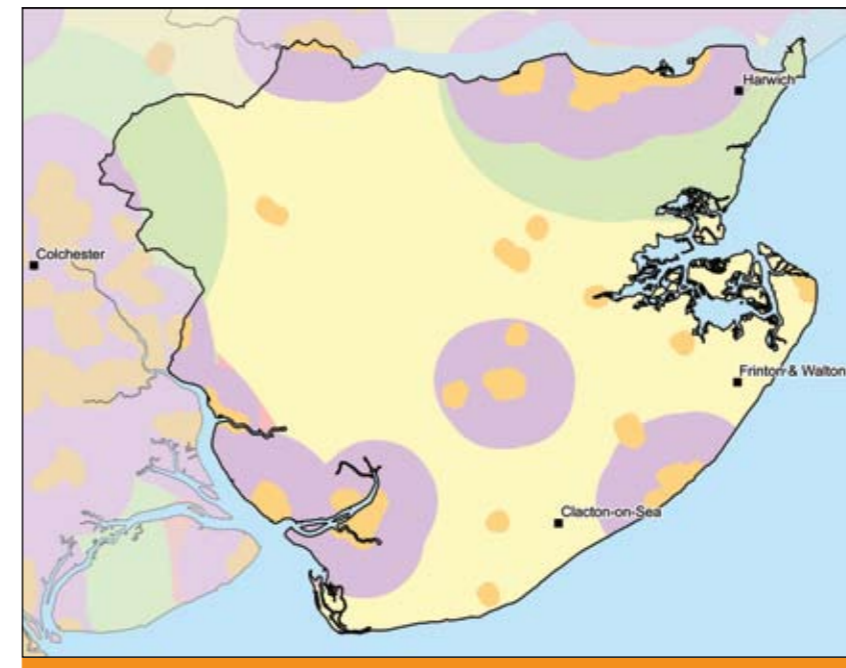


Map 6. Uttlesford District
All combined buffers
for ANGSt size classes

Local Planning Authority	Number of households*	% of households					
		within 300m of 2ha+ site	within 2km of 20ha+ site	within 5km of 100ha+ site	within 10km of 500ha+ site	meeting all ANGSt requirements	meeting none of the ANGSt requirements
Braintree	56,413	39	46	4	<1	0	35
Colchester	65,635	34	86	93	58	19	1
Tendring	63,332	4	29	17	5	<1	59
Uttlesford	28,898	8	28	39	0	0	54
Combined Essex Total:	698,095	29	68	72	19	7	14

* Estimate from 2005 AddressPoint data.

Table 3.
ANGSt analysis
results for
local planning
authorities
within the
study area



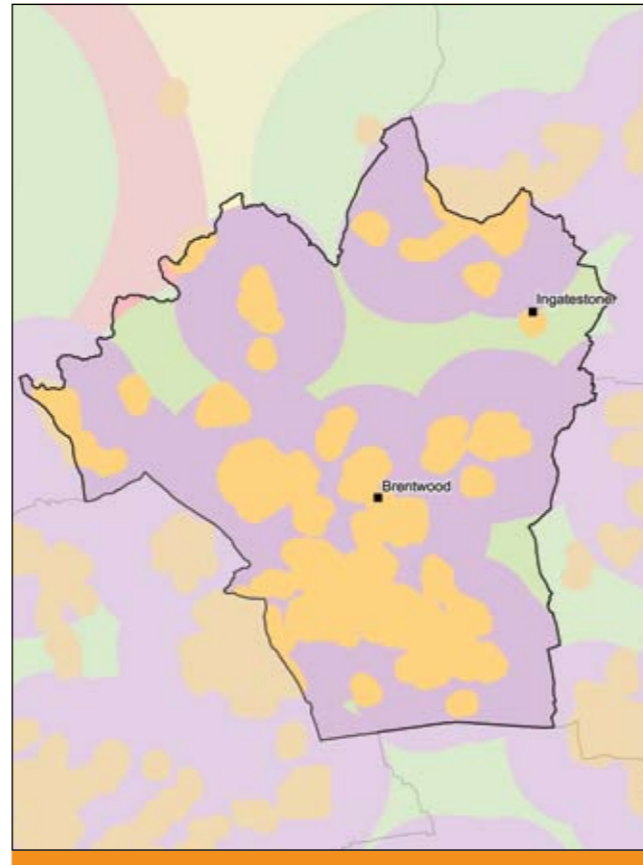
Map 7. Tendring District
All combined buffers
for ANGSt size classes

Legend – maps 4, 5, 6 and 7

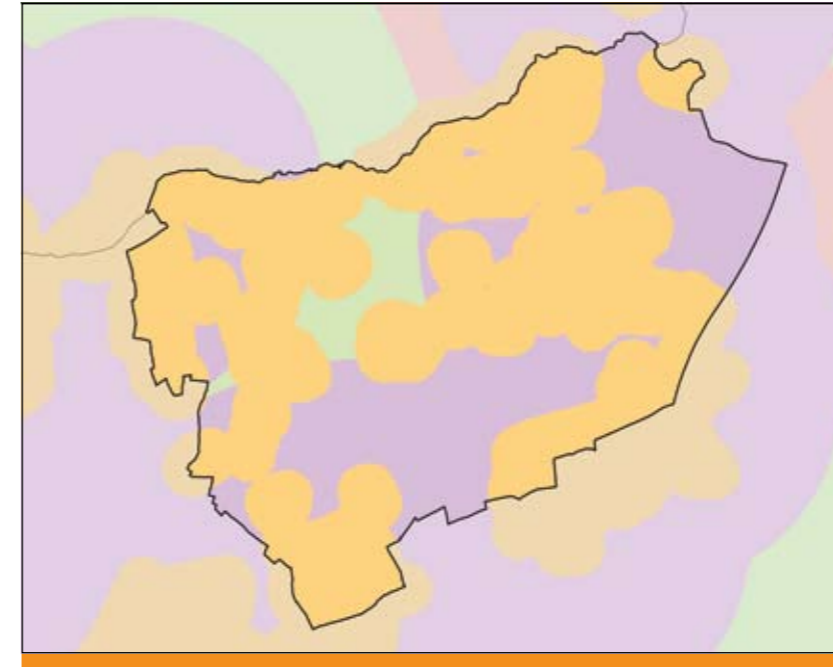
- 300m buffers around 2ha+ accessible natural greenspace
- 2km buffers around 20ha+ accessible natural greenspace
- 5km buffers around 100ha+ accessible natural greenspace
- 10km buffers around 500ha+ accessible natural greenspace
- Areas with no accessible natural greenspace provision
- Local Planning Authority

Brentwood Borough, Epping Forest District and Harlow

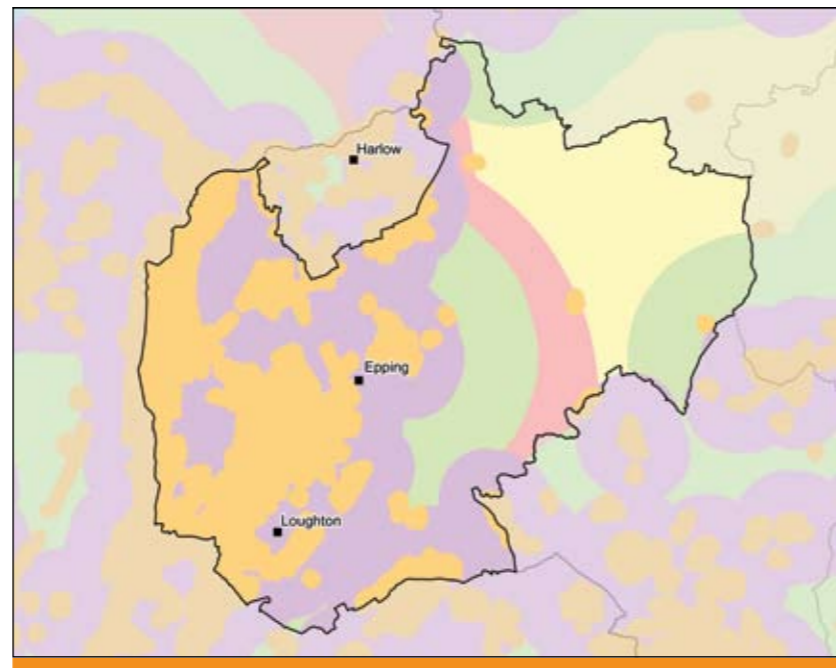
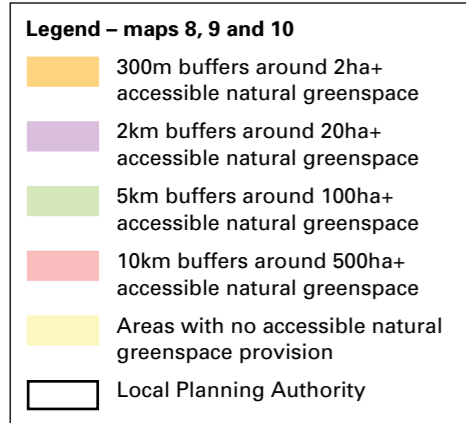
Table 4 shows that the households in these areas are well served according to the Accessible Natural Greenspace Standard. All households in Brentwood have access to a 100 hectare site and all households in Harlow have access to a 500 hectare site. Of the whole Essex area, Epping Forest and Harlow LPA areas have the highest percentage of households meeting all of the ANGSt requirements. With the exception of access to 500 hectare sites for Brentwood, all of the ANGSt size categories for these three LPA areas are above the Essex average.



Map 8. Brentwood Borough
All combined buffers
for ANGSt size classes



Map 10. Harlow
All combined buffers
for ANGSt size classes



Map 9. Epping Forest District
All combined buffers for
ANGSt size classes

Local Planning Authority	Number of households*	% of households					
		within 300m of 2ha+ site	within 2km of 20ha+ site	within 5km of 100ha+ site	within 10km of 500ha+ site	meeting all ANGSt requirements	meeting none of the ANGSt requirements
Brentwood	30,196	49	94	100	<1	<1	0
Epping Forest	51,890	44	89	92	96	44	2
Harlow	34,313	53	89	92	100	45	0
Combined Essex Total:	698,095	29	68	72	19	7	14

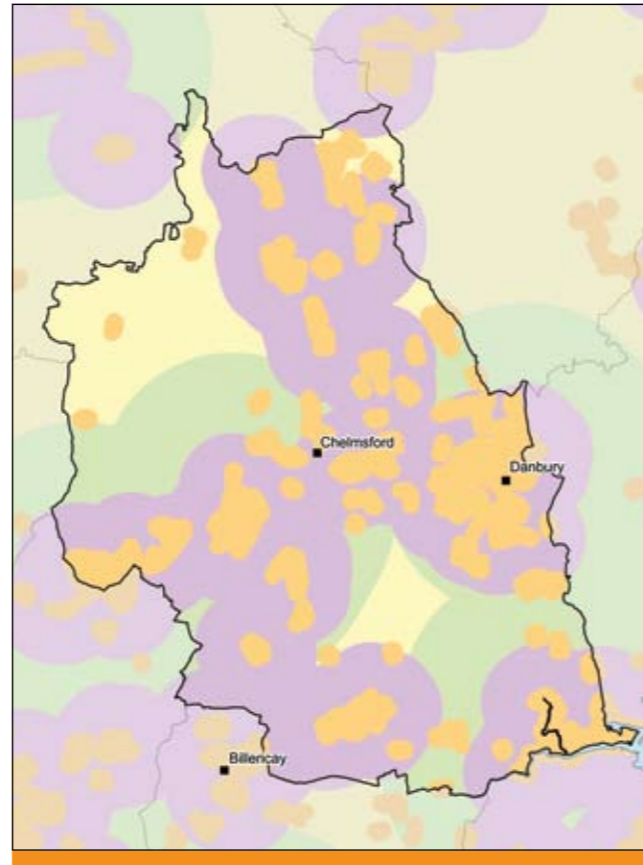
* Estimate from 2005 AddressPoint data.

Table 4.
ANGSt analysis results for local planning authorities within the study area

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Chelmsford Borough, Maldon District and Rochford District

As can be seen in **Table 5**, the limited provision of 500 hectare sites within 10 kilometres of these three LPA areas means that almost none of the households have all of their ANGSt requirements met. Chelmsford households have above Essex-average provision of 100, 20 and 2 hectare sites and Rochford households have near Essex-average provision for these size categories. Maldon is the least populated LPA in Essex but these households fall within the bottom four LPAs for provision of 100, 20 and 2 hectare accessible natural greenspace areas.



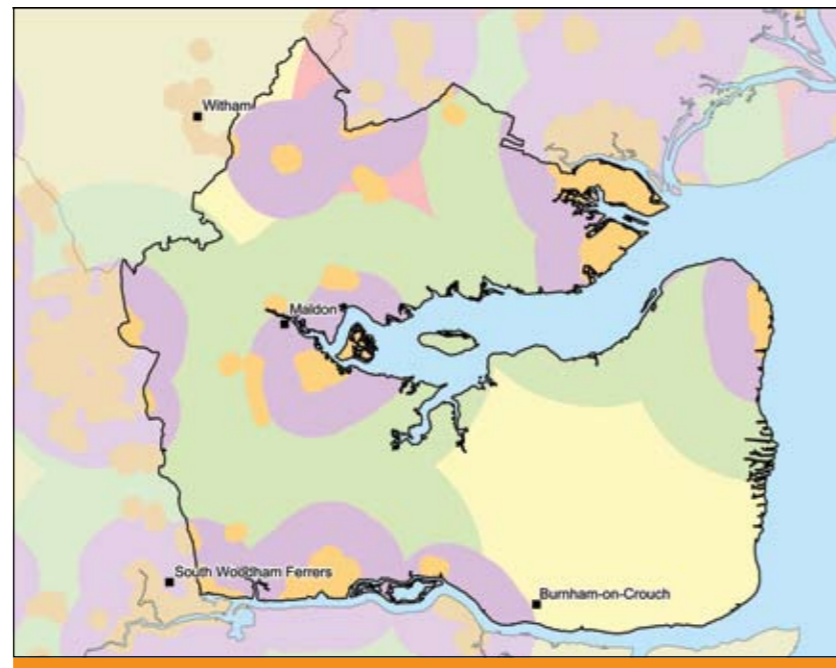
Map 11. Chelmsford Borough
All combined buffers
for ANGSt size classes



Map 13. Rochford District
All combined buffers
for ANGSt size classes

Legend – maps 11, 12 and 13

- 300m buffers around 2ha+ accessible natural greenspace
- 2km buffers around 20ha+ accessible natural greenspace
- 5km buffers around 100ha+ accessible natural greenspace
- 10km buffers around 500ha+ accessible natural greenspace
- Areas with no accessible natural greenspace provision
- Local Planning Authority



Map 12. Maldon District
All combined buffers
for ANGSt size classes

Local Planning Authority	Number of households*	% of households					
		within 300m of 2ha+ site	within 2km of 20ha+ site	within 5km of 100ha+ site	within 10km of 500ha+ site	meeting all ANGSt requirements	meeting none of the ANGSt requirements
Chelmsford	65,959	30	80	87	0	0	3
Maldon	25,102	4	45	68	13	<1	23
Rochford	33,315	23	67	79	0	0	20
Combined Essex Total:	698,095	29	68	72	19	7	14

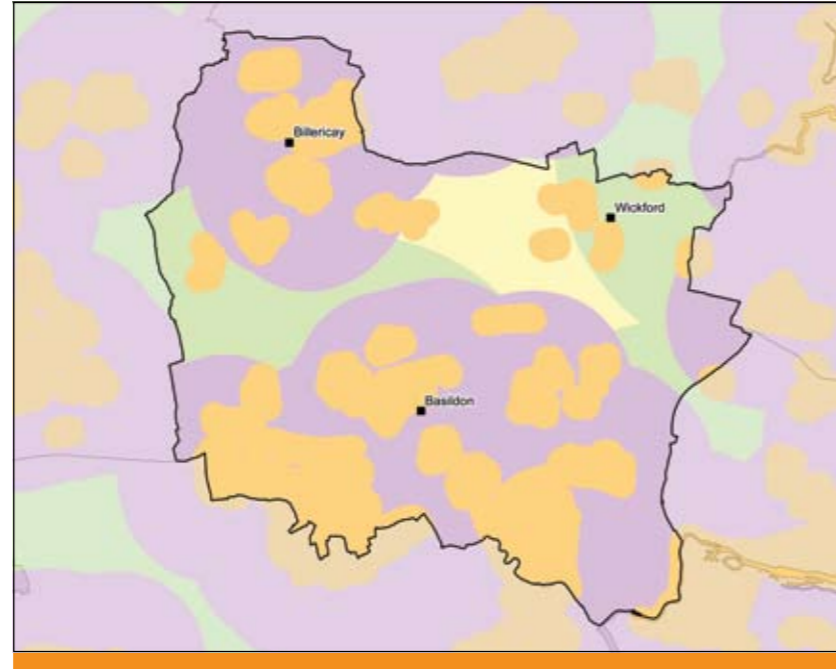
* Estimate from 2005 AddressPoint data.

Table 5.
ANGSt analysis results for local planning authorities within the study area

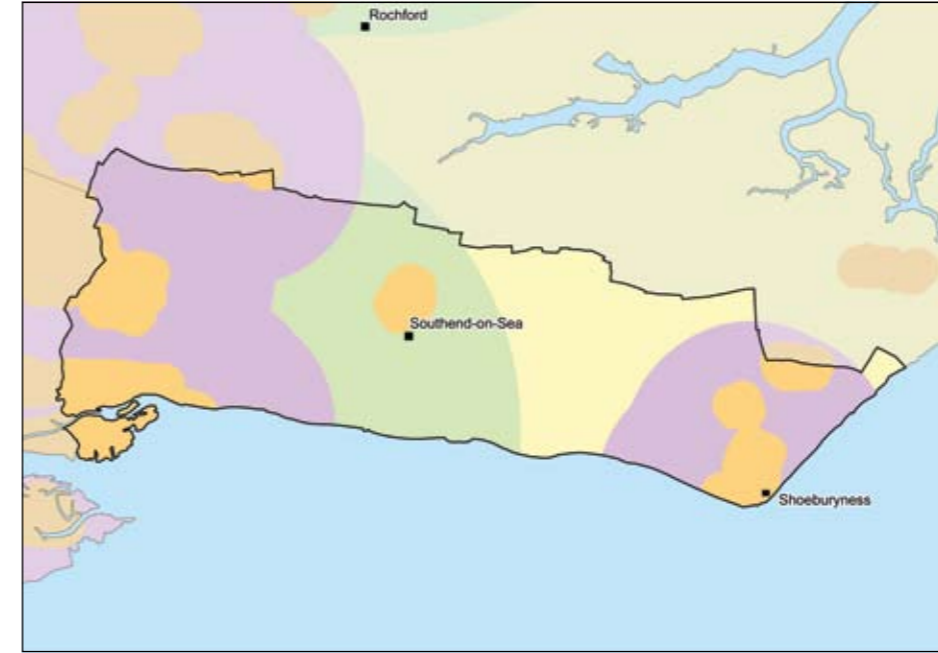
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Basildon District, Castle Point Borough, Southend-on-Sea Borough and Thurrock

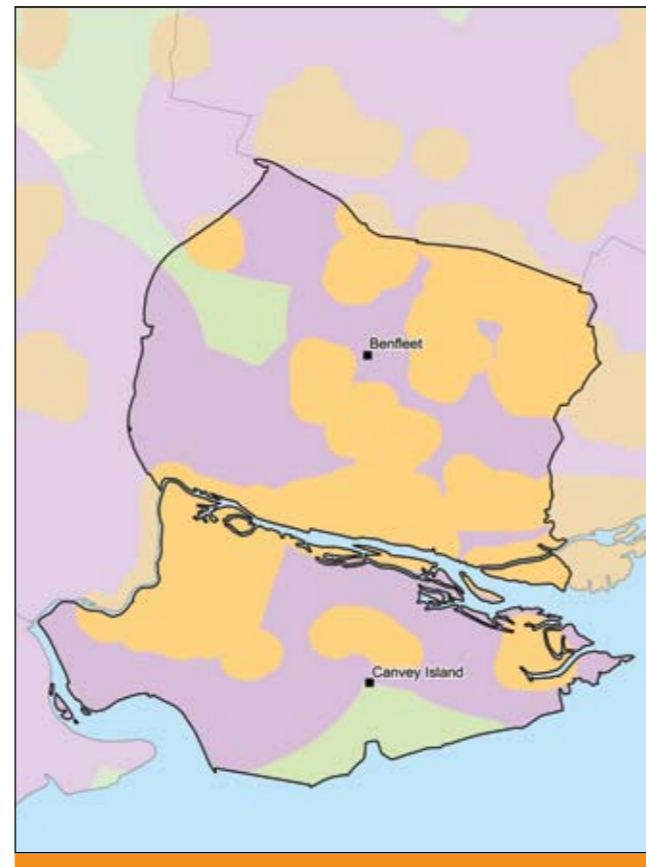
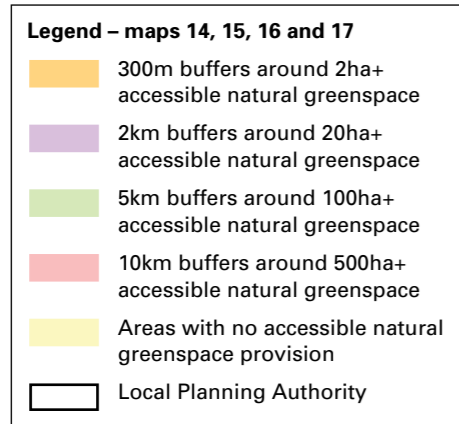
Table 6 shows that none of the households in these southern Essex LPA areas have access to a 500 hectare accessible natural greenspace. There is above Essex-average provision of 100 hectare site access for all four LPAs; 100% of Castle Point households are within 5 kilometres of an accessible natural greenspace area of this size. With the exception of Southend-on-Sea, there is also above Essex-average provision of 20 hectare site access. Basildon households are afforded above Essex-average provision of 2, 20 and 100 hectare site access.



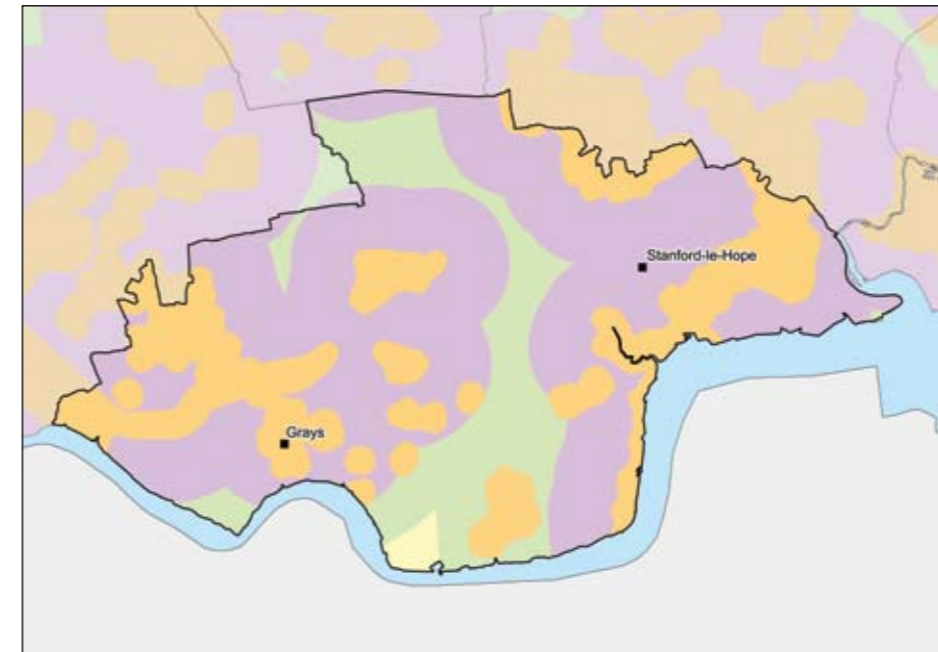
Map 14. Basildon District
All combined buffers
for ANGSt size classes



Map 16. Southend-on-Sea Borough
All combined buffers
for ANGSt size classes



Map 15. Castle Point Borough
All combined buffers
for ANGSt size classes



Map 17. Thurrock
All combined buffers
for ANGSt size classes

Table 6.
ANGSt analysis
results for
local planning
authorities
within the
study area

Local Planning Authority	Number of households*	% of households					
		within 300m of 2ha+ site	within 2km of 20ha+ site	within 5km of 100ha+ site	within 10km of 500ha+ site	meeting all ANGSt requirements	meeting none of the ANGSt requirements
Basildon	72,135	47	82	79	0	0	2
Castle Point	35,450	28	84	100	0	0	0
Southend-on-Sea	75,932	11	50	74	0	0	12
Thurrock	59,525	26	85	99	0	0	<1
Combined Essex Total:	698,095	29	68	72	19	7	14

* Estimate from 2005 AddressPoint data.

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Conclusions

This analysis highlights the provision of accessible natural greenspace within the Essex area, according to the Accessible Natural Greenspace Standard. The key findings of the Essex ANGSt analysis are summarised in **Box 1**.

Overall, the Essex results match those found for the South East England region analysis (McKernan & Grose, 2007). Eight percent of the households in the South East had all of their ANGSt requirements met and 10% had none of their ANGSt requirements met, compared with 7% and 10% respectively of Essex households. The greatest disparity comes in the availability of access to 500 hectare accessible natural greenspace areas, of which just 19% of Essex households were within 10 kilometres, compared with 46% of South East England households.

This ANGSt analysis indicates that, generally, rural communities are less well-served by accessible natural greenspace than their urban equivalents. There is a perception within rural areas that the natural greenspace surrounding them fulfils their needs. However, there is often limited public access to these sites and it is this that needs to be addressed, whether through environmental stewardship access options, the creation of new areas of accessible natural greenspace or by allowing areas within existing amenity spaces to become more natural.

Fourteen of the fifteen local planning authorities in the Essex area had less than 50% of their populations meeting the ANGSt by being within 300m (walking distance) of a two hectare accessible natural greenspace. By supporting the provision of a greater number of these small sites, decision-makers will not only promote the health and well-being of the population, but also enable people to walk to these sites, encouraging the associated benefits and potentially reducing the levels of vehicle use.

- 29%** of households within Essex have access to a site of at least 2 hectares within 300 metres
- 68%** of households within Essex have access to a site of at least 20 hectares within 2 kilometres
- 72%** of households within Essex have access to a site of at least 100 hectares within 5 kilometres
- 19%** of households within Essex have access to a site of at least 500 hectares within 10 kilometres
- 7%** of households within Essex have all of their ANGSt requirements met
- 14%** of households within Essex have none of their ANGSt requirements met

Box 1.
Summary of
key findings

References

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Essex Wildlife Trust
Abbotts Hall Farm
Great Wigborough
Colchester
Essex CO5 7RZ

Telephone: 01621 862960
Email: admin@essexwt.org.uk
Website: www.essexwt.org.uk

Registered Charity No. 210065

