



**Analysis of Accessible Natural Greenspace  
Provision for **Norfolk****

Commissioned and funded by:



[www.naturalengland.org.uk](http://www.naturalengland.org.uk)

Analysis and report undertaken by:

**thelandscapepartnership**

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Front cover photograph: Foxley Wood, Norwich.  
The Landscape Partnership

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## Overview

Natural England believes that everyone should have access to good quality natural greenspaces near to where they live. Natural England published its 'Nature Nearby' report in March 2010, which provides guidance for the planners and managers of greenspace; guidance on the amount, quality, and visitor services we believe everyone is entitled to. The 'Nature Nearby' report complements this report, which analyses the accessible natural greenspace provision across Norfolk using the Accessible Natural Greenspace Standard (ANGSt), and provides the evidence for greenspace planners and managers to look at improving both the quantity and quality of this important resource.

Natural greenspaces are very important to our quality of life. They provide a wide range of benefits for people and the environment. Recent evidence shows that access to natural greenspaces for fresh air, exercise and quiet contemplation has benefits for both physical and mental health. Research provides good evidence of reductions in levels of heart disease, obesity and depression where people live close to greenspaces. In addition to their potential ecological value, greenspaces also help us adapt to changes in climate through their role in reducing the risk of flooding and by cooling the local environment. Where trees are present they also act as filters for air pollution.

So it is timely that Natural England commissioned this analysis of accessible natural greenspace provision in Norfolk. The report uses the best data available, and by applying the Natural England recommended standard for provision, it provides the evidence to help plan for future improvements to the quantity and location of natural greenspaces. This is particularly important for a county where substantial new growth is planned, and green infrastructure planning is just getting underway. The findings of this analysis will provide a strong evidence base in the green infrastructure planning process, which gives the opportunity to make recommendations on how to rectify existing deficits in greenspaces at neighbourhood, town, and sub-regional scales.

### The report shows that:

- 18.1%** of households have access to an accessible natural greenspace of at least 2 hectares within 300 metres
- 48.9%** of households have access to an accessible natural greenspace of at least 20 hectares within 2 kilometres
- 36.2%** of households have access to an accessible natural greenspace of at least 100 hectares within 5 kilometres
- 16.1%** of households have access to an accessible natural greenspace of at least 500 hectares within 10 kilometres
- 3.2%** of households have access to all the areas of accessible natural greenspace within the standard
- 29.7%** do not have access to any of the accessible natural greenspace within the standard

Using the evidence from this report and the guidance provided in 'Nature Nearby', Natural England looks forward to working in partnership with local authorities and other organisations in Norfolk to achieve improvements in the quantity, location and quality of natural greenspaces as part of the wider green infrastructure network.

#### Diana Curtis

Access Mapping Adviser  
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## Introduction

ANGSt was developed in the early 1990's and was based on research into minimum distances people would travel to the natural environment. Natural England reviewed the standard in 2008 and concluded that the standard was still useful, but that further guidance was required to explain how the standard should be applied. The "Nature Nearby" report, published in March 2010, provides this additional clarity, and should therefore be read in conjunction with this report.

## What is the Accessible Natural Greenspace Standard (ANGSt)?

ANGSt recommends\* that everyone, wherever they live, should have one 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; and;
- one accessible 500 hectare site within ten kilometres of home; plus
- a minimum of one hectare of statutory Local Nature Reserves per thousand population

ANGSt is a powerful tool in assessing current levels of accessible natural greenspace, and planning for better provision. The three underlying principles of ANGSt are:

- Improving access to greenspaces
- Improving naturalness of greenspaces
- Improving connectivity with greenspaces

\* Information sourced from 'Nature Nearby', Accessible Natural Greenspace Guidance document

## Background to ANGSt

Planning Policy Guidance 17 (PPG17) (ODPM [now CLG], 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 CLG], 2002b) highlights the use of Natural England's 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 ANGSt. This study undertaken for and on behalf of Natural England will support the Delivery Plan by contributing to an understanding of the regional provision of green infrastructure, together with similar reports for other counties in the region.

## Accessible Natural Greenspace (ANG) definition

The 'Nature Nearby' report gives clear explanations on how to interpret the standard with respect to naturalness and accessibility. This analysis was commissioned ahead of the publication of 'Nature Nearby', and uses the definition '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 Norfolk, sites with unrestricted entry were included, but those with known access restrictions or no rights of access were excluded. Also excluded were sites where accessibility and naturalness were not clear from supporting information, and sites not easily discernable from desktop assessments of aerial photography or internet searches. This was particularly important when dealing with datasets provided by local authorities in place of PPG17 data (because, it is presumed, no PPG17 study has yet been undertaken) where the quality and depth of the supporting information varied.

## 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.

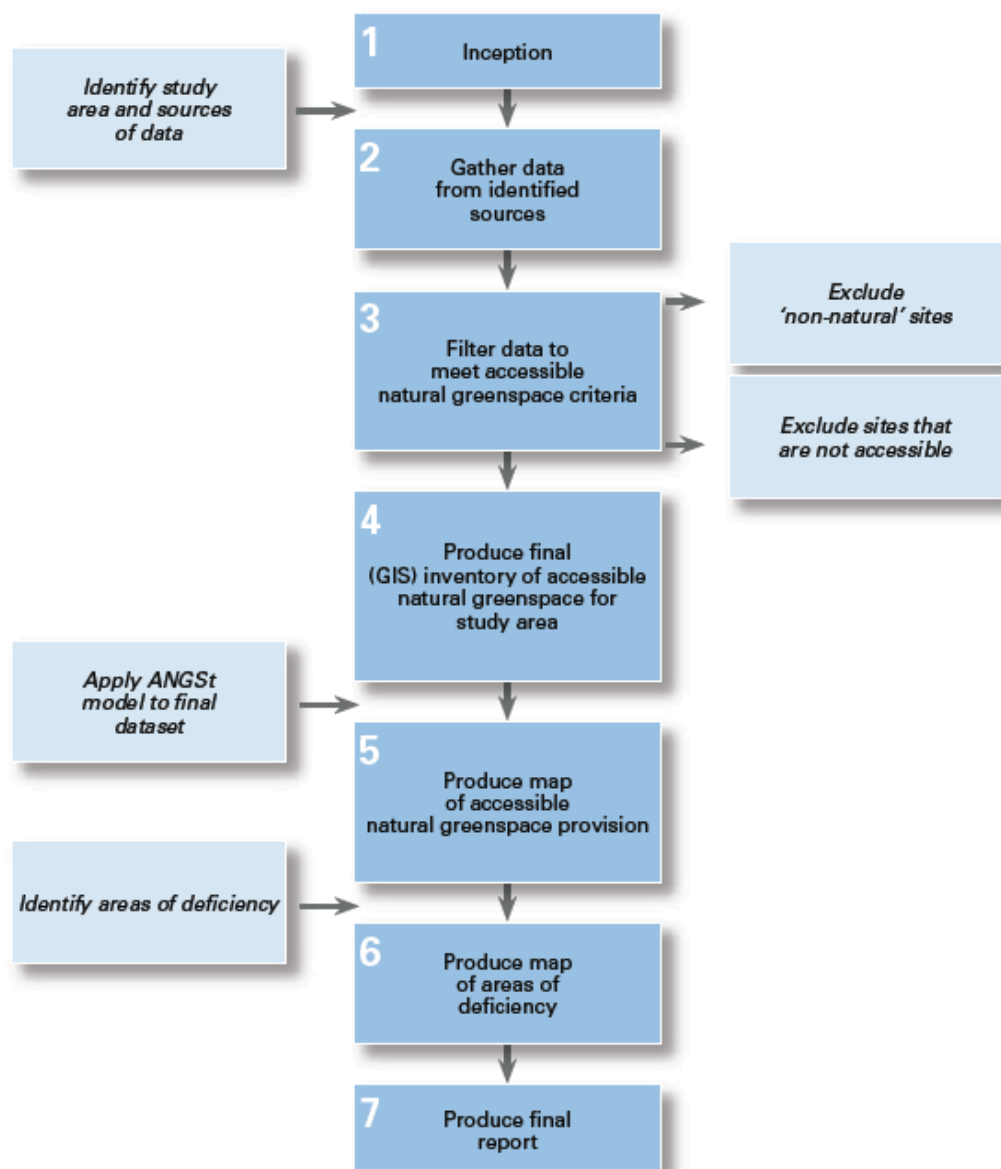
Limitations to the data analysis included some local authorities being unable to provide PPG17 data or they provided 'open space' data which did not feature the typologies that PPG17 data includes.

This had the effect of potentially reducing the supply of smaller sites for analysis in the affected areas; it is advised that the results be regarded in light of this.

With respect to the Village Green data this was only available in point format. To enable these important sites to be included in the overall analysis, circular features were generated which were equal to the size of the sites on the ground. It was envisaged that any differences resulting from the analysis in terms of proximity of households to these sites would be minimal and not affect the validity of the final report in terms of its intended use.

**Figure 1**

Flowchart showing Study area ANGSt analysis process



## Study area

The study aimed to produce an analysis for Norfolk. In order to take account of areas of accessible natural greenspace outside of Norfolk that may be serving the needs of the population within Norfolk, accessible natural greenspace data were collated (where providers were able to do so) from within a ten kilometre buffer of the study area, as required by the ANGSt toolkit (Handley et al, 2003b).

## Accessible natural greenspace datasets

Data were collated from a variety of sources, (detailed below) and filtered to the criteria in the ANGSt definition (in the introduction).

Data were provided in digital (GIS) format and attribute information for the data was checked to ensure compliance with the criteria.

When requesting data from suppliers the need for it to represent accessibility and naturalness was expressed. This was intended to provide an initial sifting effect to remove non-natural sites.

For local authorities' PPG17 data, sites within some categories of data (e.g. parks and gardens, commons, amenity space) were checked against aerial photographs to ascertain 'naturalness'. The Landscape Partnership's local knowledge helped with the sifting exercise and where there was doubt over a site it was removed from the inventory.

## The following datasets were included in the analysis:

Accessible county wildlife sites; commonland; Country Parks; open access under the Countryside and Rights of Way Act 2000 (CRoW); Doorstep Greens; Forestry Commission Freehold Land with unrestricted access; Forestry Commission Walkers Welcome Woodland Grant Scheme; local authority PPG17 datasets; Local Nature Reserves; Millenium Greens; National Nature Reserves (excluding those with limited accessibility); Natural England agri-environment grant schemes providing access; Village Greens; Woodland Trust sites; Woods for People; National Trust sites that are accessible all year.

## Data were kindly provided by:

Natural England, Woodland Trust, the Forestry Commission, Norfolk County Council, Norfolk Biodiversity Information Service and the following local authorities.

Local authorities that supplied PPG17 data:

Broadland District Council, South Norfolk District Council

Local authorities that supplied other open space data:

King's Lynn and West Norfolk Borough Council

Local authorities unable to provide data:

Breckland District Council, Great Yarmouth Borough Council, North Norfolk District Council, Norwich City Council

## Data analysis

The data analysis was carried out using the GIS programme ArcView 9.3 by ESRI. All overlapping and adjoining sites within the accessible natural greenspace inventory were aggregated and extracted to the ANGSt.

The aggregated sites were subjected to further scrutiny by eye – where sites were immediately adjacent but not abutting (so the GIS programme did not merge them) they were manually merged where the nature of the division could be ascertained by reference to Ordnance Survey maps and aerial photos. If the sites were separated by a minor road this was considered ‘acceptable’, where the division was caused by a river, railway line or major road the division remained. This manual aggregation was undertaken mostly at the 100ha+ level where aggregation of sites meant they moved up to the 500ha+ level and therefore provided a more realistic 10km catchment. Some 100ha+ sites were generated this way too.

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 (as per introduction).

Data for residential households (using AddressPoint, 2005) within the study area were extracted to each local authority area 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 were represented as percentages. As a method of quality control the figures for households in each local authority area were compared against figures from the 2001 Census from the Office of National Statistics website. In all cases the 2001 figure was lower than the 2005 figure as would logically be expected.

In Plan 1 overleaf the ANG that is ‘visible’ represents sites:

- 500ha and above
- 100ha and above but below 500ha
- 20ha and above but below 100ha
- 2ha and above but below 20ha

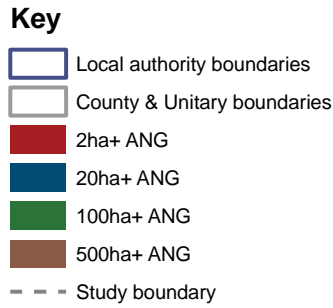
The ANG provision is represented graphically following this hierarchy. The mapping featured in this report is also being issued to Natural England as a layered GEO.pdf (a layered pdf). Using this format the user can turn off, for instance, the 500ha+ layer revealing the relevant sites at the other ANGSt levels.



# Results

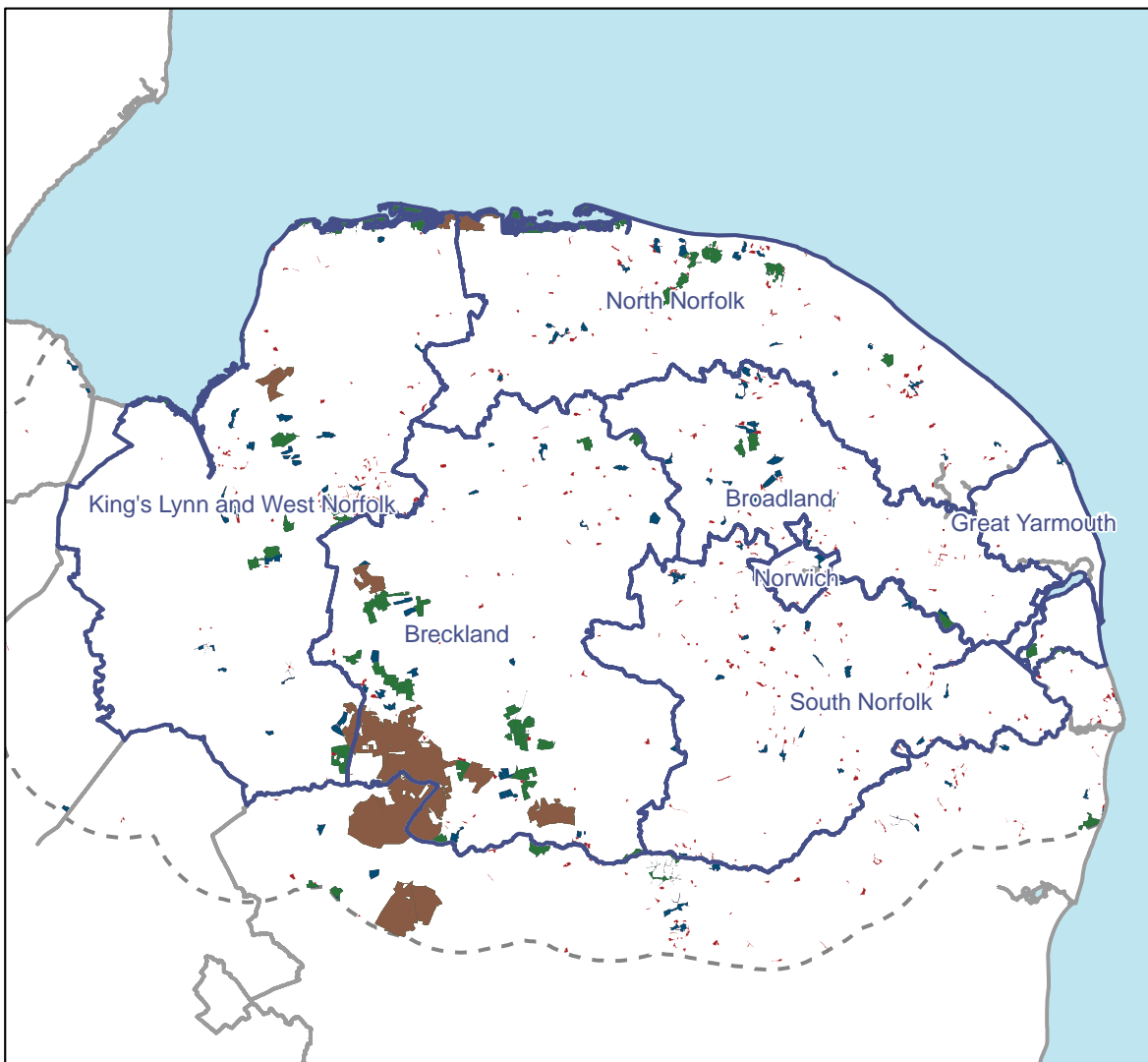
The results of the analysis of accessible natural greenspace provision for Norfolk are provided in this section.

**Plan 1** shows all the accessible natural greenspace within the study area and the 10km buffer zone, displayed by ANGSt model size classes.



## Plan 1

All accessible natural greenspace divided into ANGSt size classes



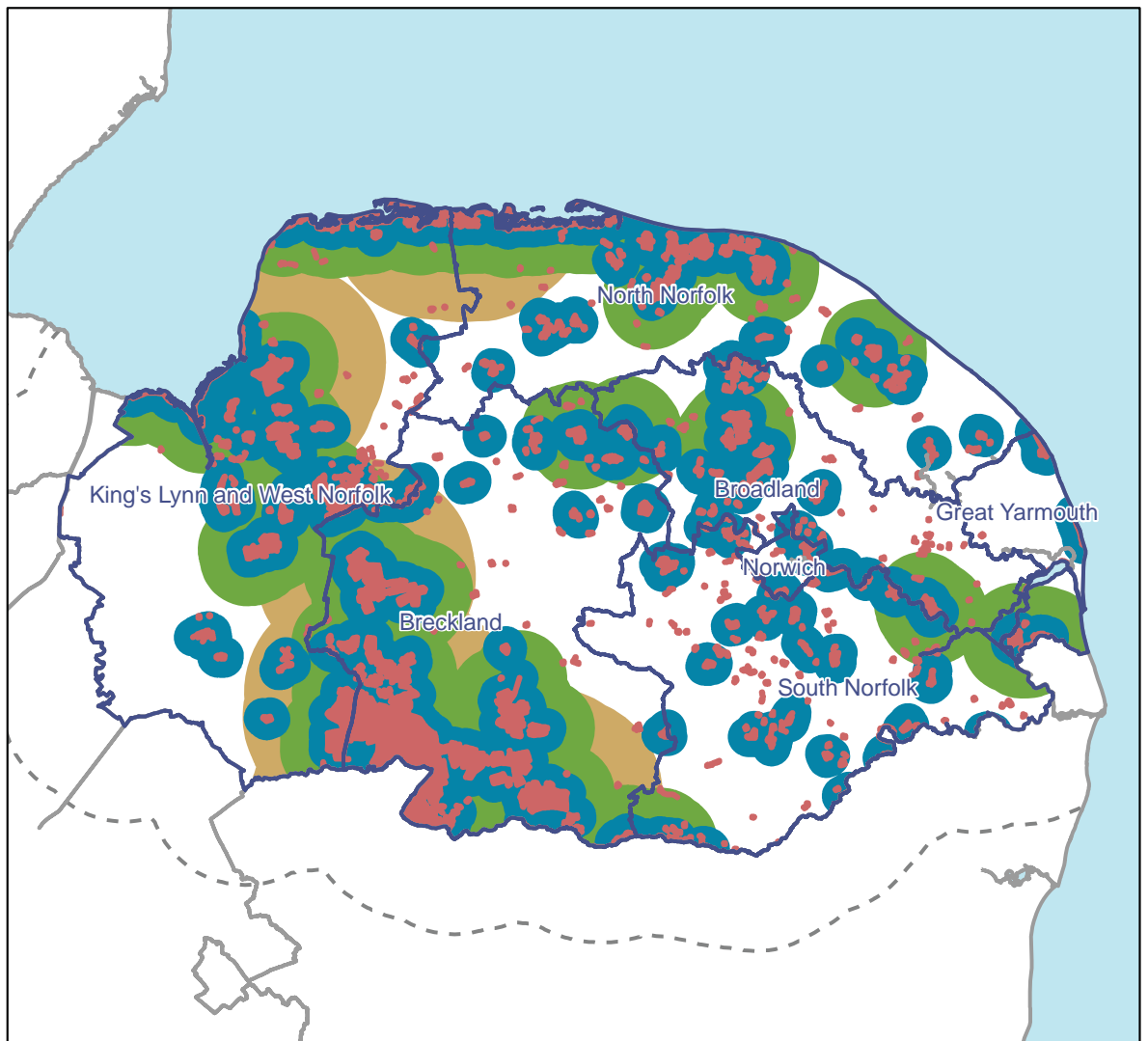
**Plan 2** shows the combined buffers around the accessible natural greenspace for the study area as a whole, with the varying colours representing the 300m, 2km, 5km and 10km distances from the relevant size classes of accessible natural greenspace. It can be seen that a site of 20 hectares would not only have a two kilometre buffer but would also serve as a two hectare site for those households situated within the 300m buffer. The areas not covered by the buffers and therefore not benefiting from any ANG provision are more clearly shown in Plan 3.

**Key**

- Local authority boundaries
- County & Unitary boundaries
- 300m buffer
- 2km buffer
- 5km buffer
- 10km buffer
- Study boundary






**Plan 2**

All combined buffers for ANGst size classes



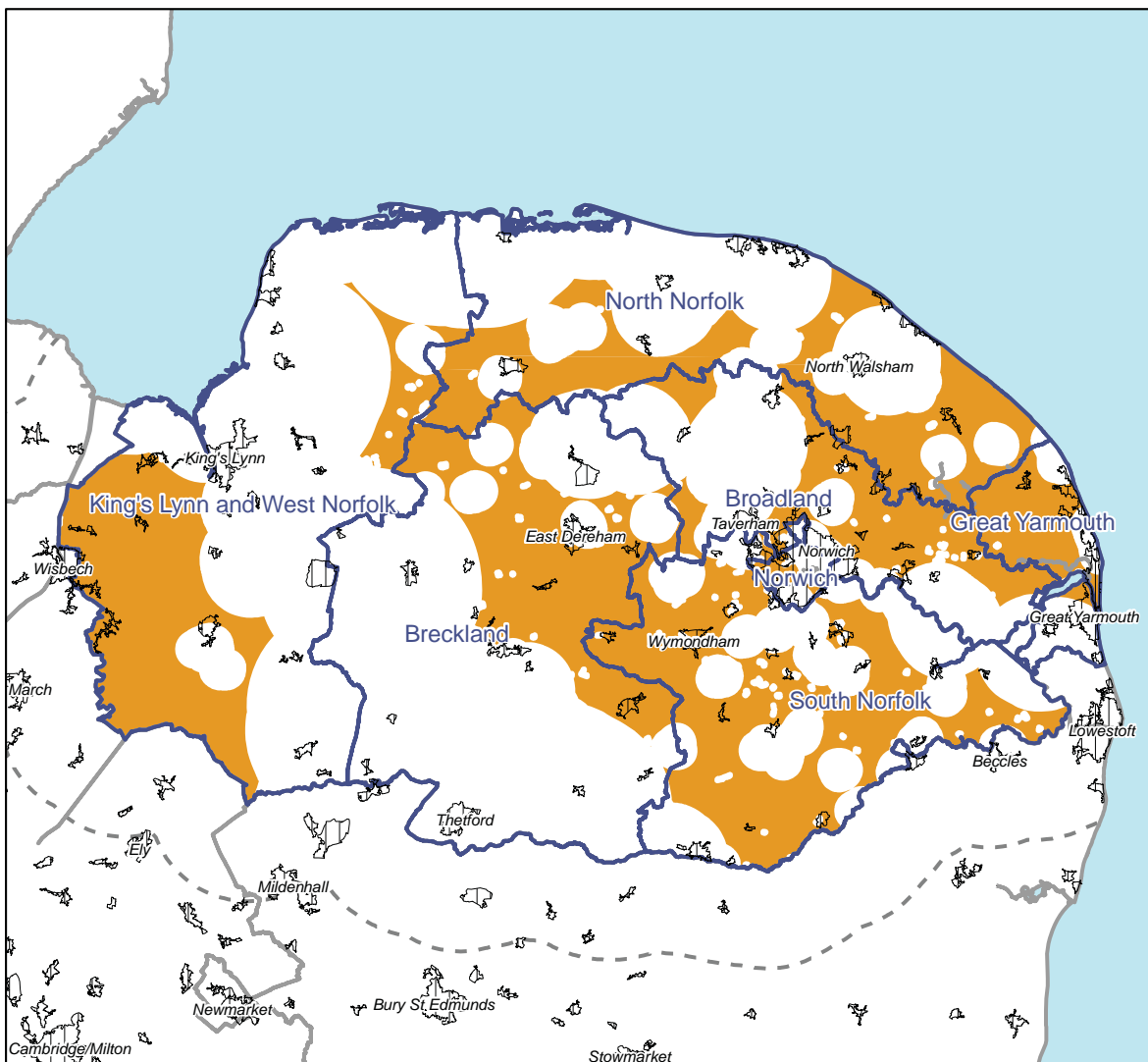
**Plan 3** highlights areas with no accessible natural greenspace provision and the accompanying table displays the percentages of households within each local planning authority that have some or none of their ANGSt met. Plan 3 shows that the main areas of deficiency at all ANGSt are in the west of King's Lynn and West Norfolk, South Norfolk through Breckland to North Norfolk, and across large areas of North Norfolk, Great Yarmouth and South Norfolk.

**Key**

-  Urban areas (2001 census)
-  Local authority boundaries
-  County & Unitary boundaries
-  Norfolk combined deficiency
-  Study boundary

**Plan 3**

Highlights those areas with no accessible natural greenspace provision at all levels of ANGSt analysis



**Table 1** Area of accessible natural greenspaces and the number of households within each local planning authority in Norfolk

Breckland has the largest proportion of its area made up of ANG and is approximately double the county average. The remaining six local authorities all performed below the county average; of particular interest are Broadland and South Norfolk, while being two of the lowest, they had provided PPG17 data. The provision or otherwise of PPG17 or open space while clearly contributing to the relevant local authorities area of ANG provision, does not seem to have had a significant impact when compared to those local authorities that were unable to provide data.

Local planning authority (LPA)	LPA area (ha)	Area (ha) of ANG	ANG area as % of LPA	Total number of households*
Breckland	130,512	12,692	9.7	58,502
Broadland	55,324	1,594	2.9	56,505
Gt. Yarmouth	18,218	327	1.8	45,874
King's Lynn & West Norfolk	151,313	6,166	4.1	70,861
North Norfolk	99,438	3,943	4.0	53,811
Norwich	3,916	148	3.8	66,716
South Norfolk	90,891	1,314	1.4	54,884
<b>Combined Norfolk total</b>	<b>549,612</b>	<b>26,184</b>	<b>4.8</b>	<b>407,153</b>

\*Estimate from 2005 AddressPoint data checked against 2001 Census data

PPG17 data provided
Open space data provided
No data provided

**Table 2** Summary data for accessible natural greenspace provision in Norfolk compared to other counties assessed by Natural England for their greenspace provisions

Norfolk has the lowest proportion of its population meeting all the ANGSt and the second highest proportion meeting none when compared to the other counties. It is comparable to Suffolk in those respects.

Local Planning Authority	No of households*	% of households*					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
<b>Norfolk</b>	<b>407,153</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>
Suffolk	337,001	18.9	45.9	25.9	28.3	3.4	32.9
Herts	484,287	36.2	75.4	69.7	26.5	6.7	6.4
Essex	698,095	29.0	68.0	72.0	19.0	7.0	14.0

\*Estimate from 2005 AddressPoint data checked against 2001 Census data

**Table 3** Summary results for provision of ANG in the districts studied in Norfolk

This shows the percentage of households in each of the ANGSt, eg. within 300m of at least a 2 hectare site. All seven local authorities can be compared to one another and against the county average. It also shows the percentage of households meeting both all and none of the ANGSt. Here are some of the key results:

- Broadland, King's Lynn & West Norfolk and South Norfolk all perform above the county average at the 2ha+/300m level
- Great Yarmouth scores less than half the county average for the provision of 20ha+/2km ANG
- 0% of households in Norwich have access to at least one 100ha+ ANG site
- 62.2% of households in King's Lynn & West Norfolk have access to at least one 500ha+ ANG site
- Around 10% of households in Breckland, King's Lynn & West Norfolk meet all the ANGSt
- The proportion of households meeting none of the ANGSt across the county ranges from 21% in King's Lynn & West Norfolk to 42.1% in South Norfolk

Local Planning Authority	% of households						
	Number of households*	within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
Breckland	58502	17.1	57.8	51.1	46.4	10.6	24.2
Broadland	56505	24.2	60.9	21.1	0.0	0.0	23.4
Great Yarmouth	45874	2.2	21.0	42.4	0.0	0.0	39.9
King's Lynn West Norfolk	70861	22.7	42.9	62.2	60.1	10.4	21.0
North Norfolk	53811	14.6	52.8	59.4	5.8	1.3	25.8
Norwich	66716	12.5	67.0	0.0	0.0	0.0	31.5
South Norfolk	54884	33.5	40.0	16.9	0.4	0.0	42.1
<b>Norfolk averages</b>	<b>407153.0</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>

\*Estimate from 2005 AddressPoint data checked against 2001 Census data

## Breckland

Breckland has the highest percentage of its area made up by ANG at 9.7%. Breckland however were unable to supply any PPG17 data, which is likely to have had an effect in the result of the analysis at the 2ha+/300m level, because as can be seen in Plan 4a the larger urban areas of Thetford and East Dereham are relatively under provisioned. However, when considering 20ha+/2km and 100ha+/5km levels a higher proportion of Breckland's urban areas are catered for, this can be seen in Table 4 which shows Breckland performs above the county average at these levels.

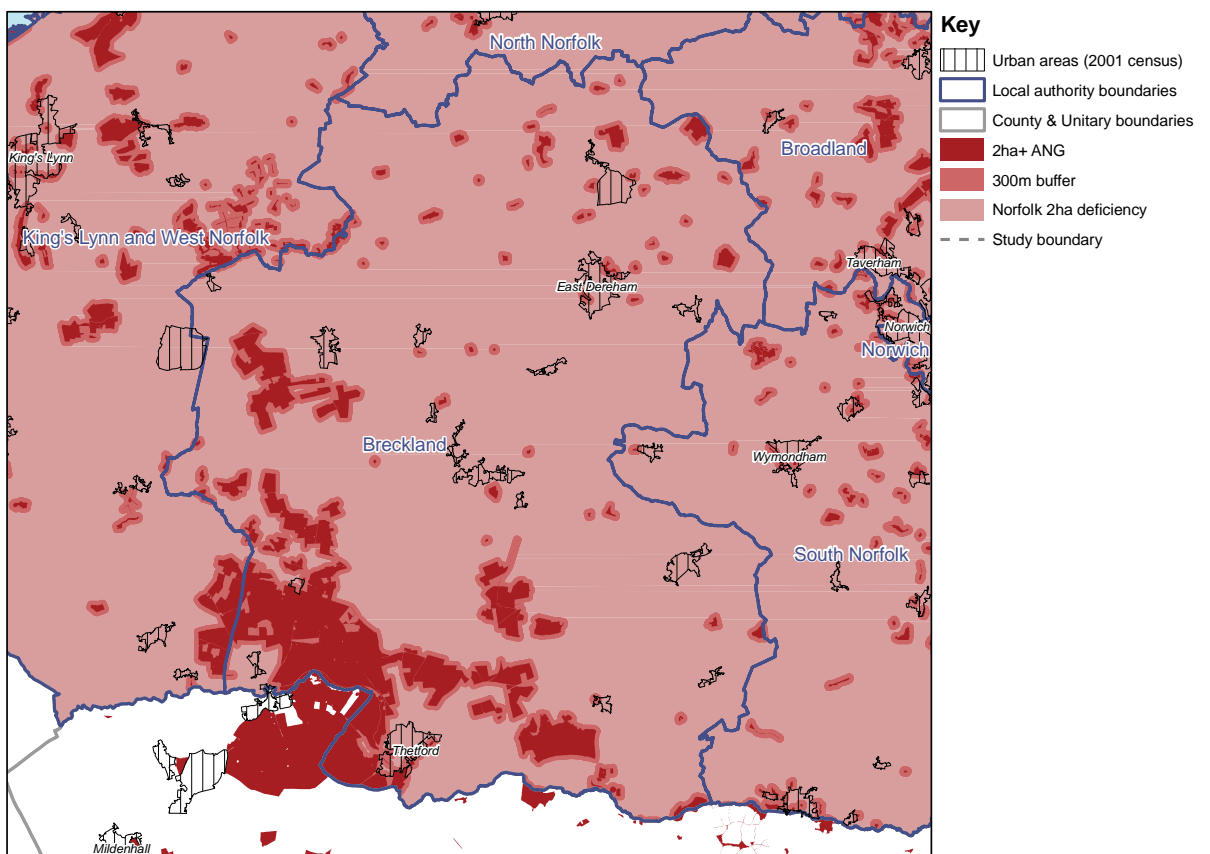
Breckland performs particularly well at the 500ha+/10km level in comparison to the county average – this is contributed to by sites in the southwest half of the district. Breckland also has the highest proportion of households meeting all the ANGSt at 10.6% compared to 3.2% for the county.

**Table 4** ANGSt analysis results for Breckland

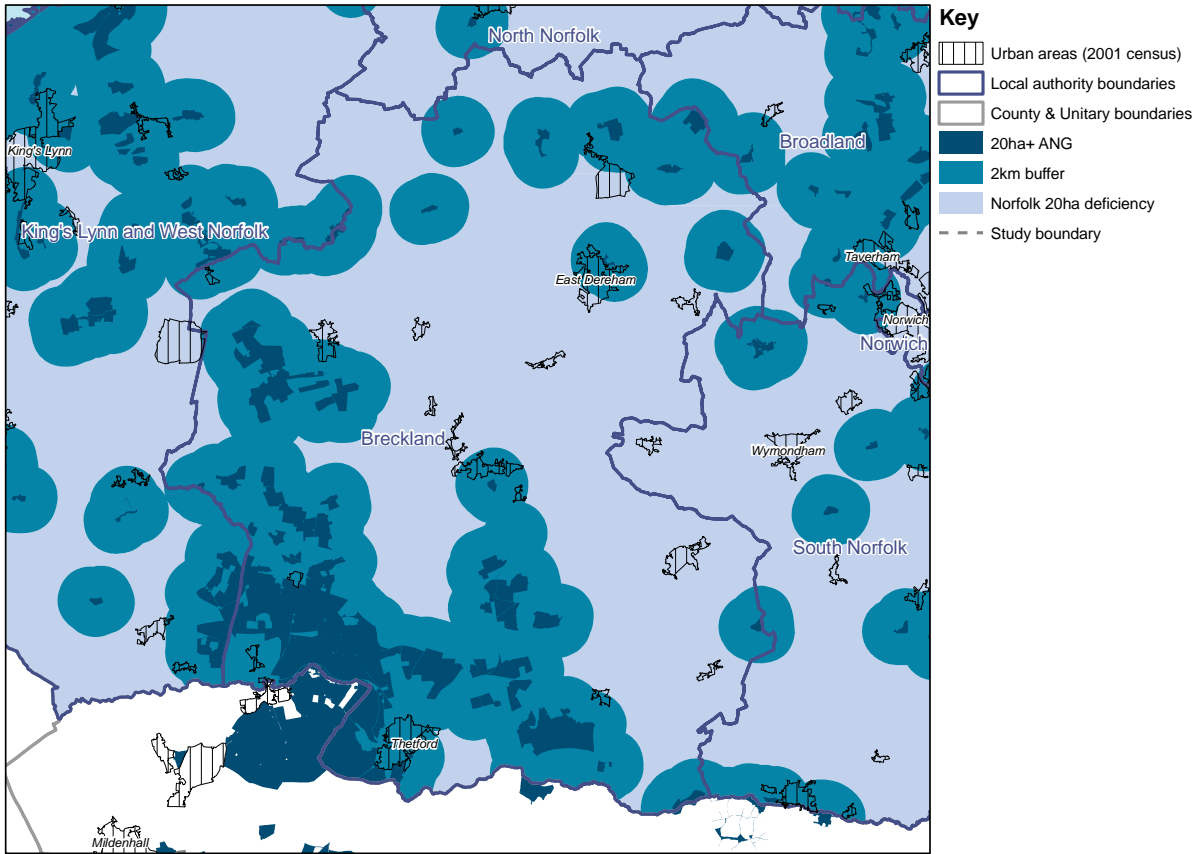
Local Planning Authority	Number of households*	% of households					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
Breckland	58502	17.1	57.8	51.1	46.4	10.6	24.2
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\*Estimate from 2005 AddressPoint data checked against 2001 Census data

## Plan 4a Accessible natural greenspace provision (2ha and above)

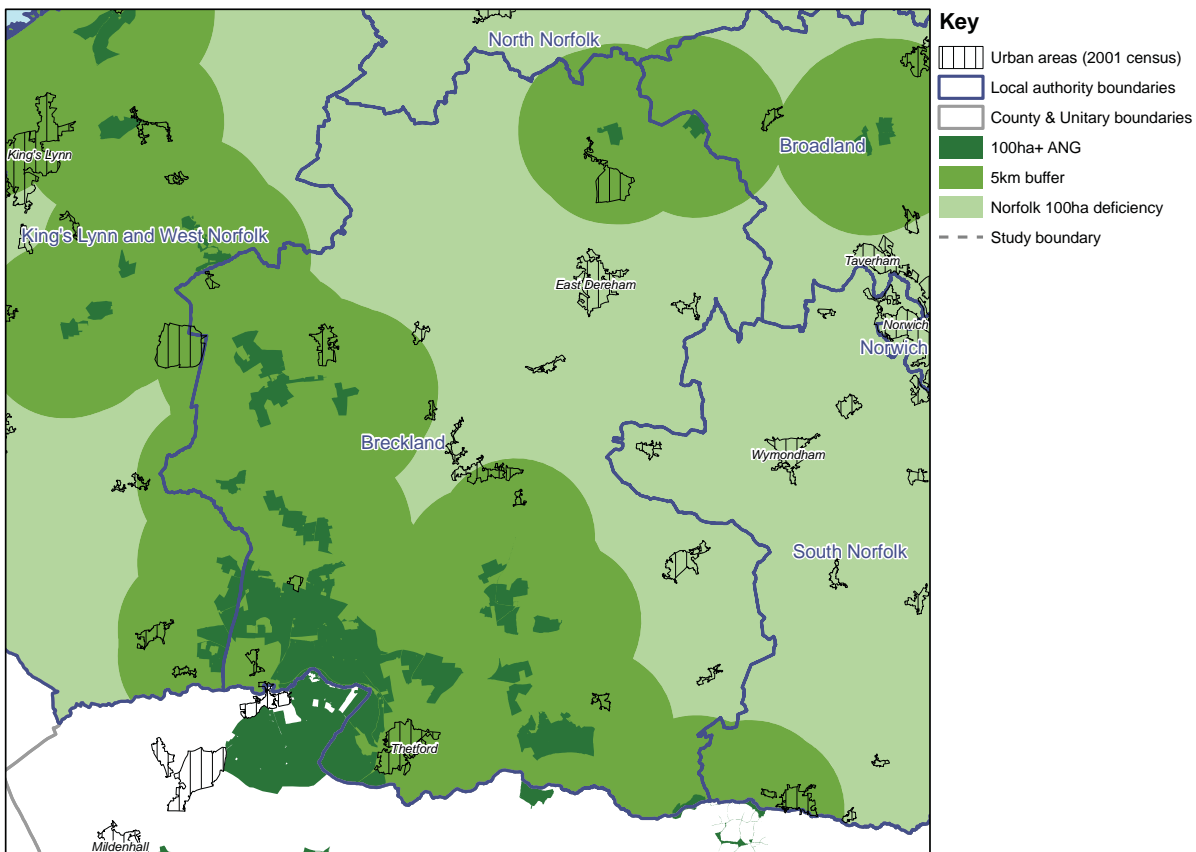


## Plan 4b Accessible natural greenspace provision (20ha and above)

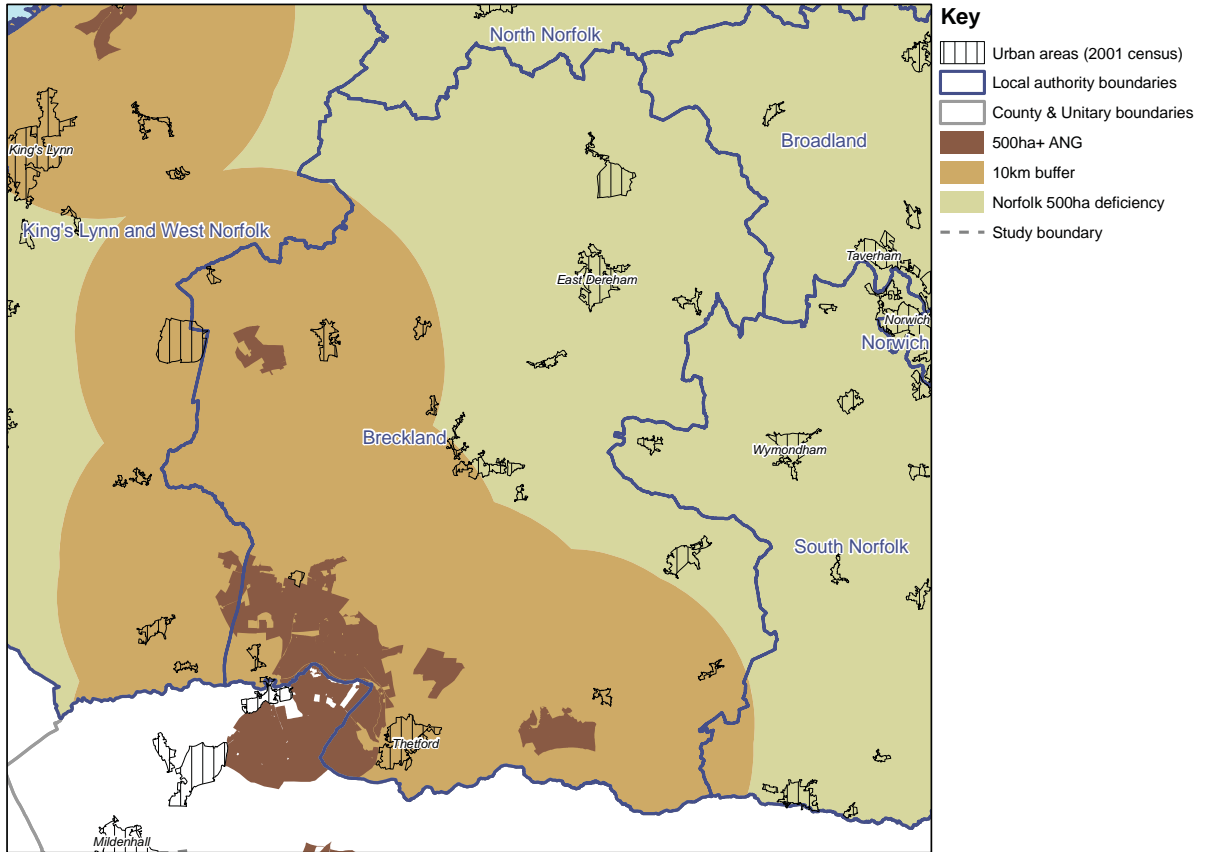


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## Plan 4c Accessible natural greenspace provision (100ha and above)



# Plan 4d Accessible natural greenspace provision (500ha and above)



## Broadland

Broadland provided PPG17 data, and this contributed to the, albeit low proportion of the district made up of ANG. Plans 5a and 5b show how the spatial distribution of ANG sites at the 2ha+/300m and 20ha+/2km levels in Taverham and the built up areas of Norwich City that are within Broadland has allowed Broadland to perform above the county averages.

As can be seen in Plan 5c the locations of the few 100ha+ ANG sites in the district mean that their 5km buffers do little to serve the more densely populated urban areas. Broadland has 0% of its households meeting both the 500ha+/10km and the combined ANGSt.

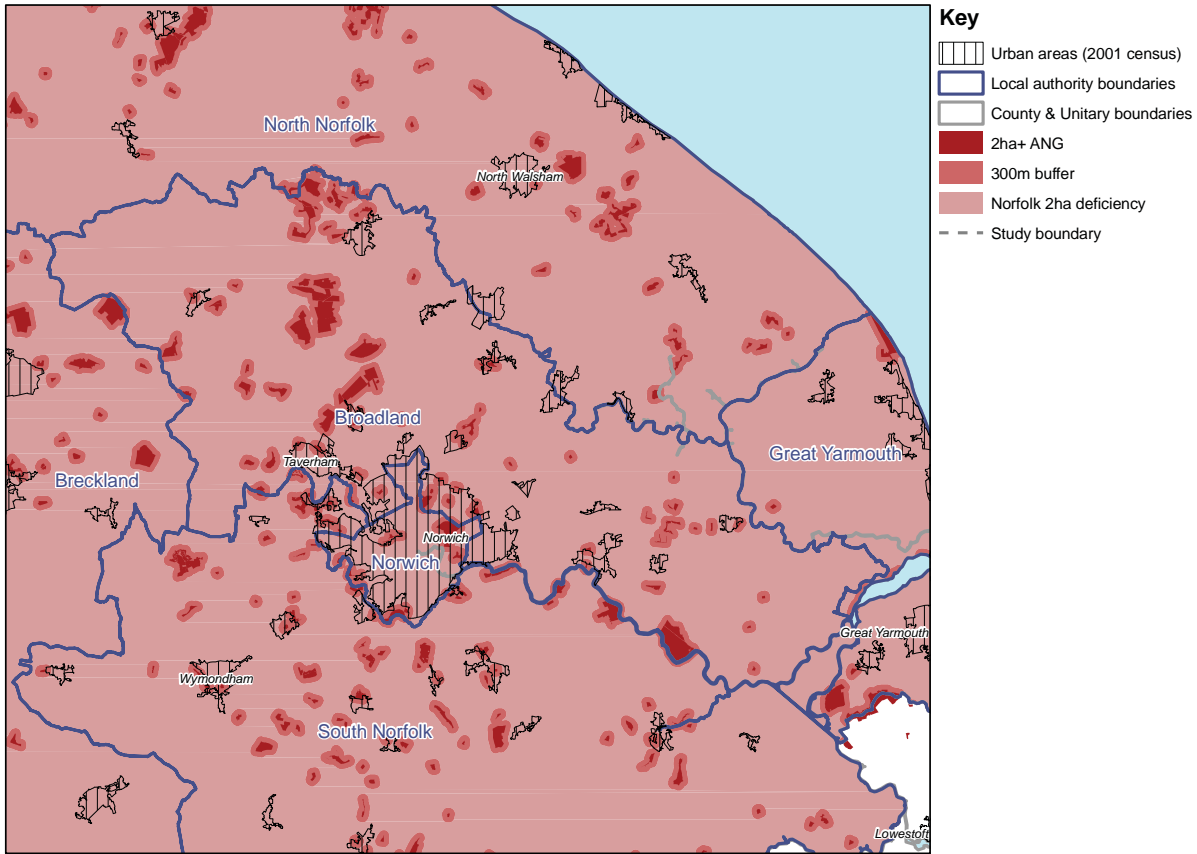
**Table 5** ANGSt analysis results for Broadland

Local Planning Authority	Number of households*	% of households					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
Broadland	56505	24.2	60.9	21.1	0.0	0.0	23.4
<b>Norfolk averages</b>	<b>407153.0</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>

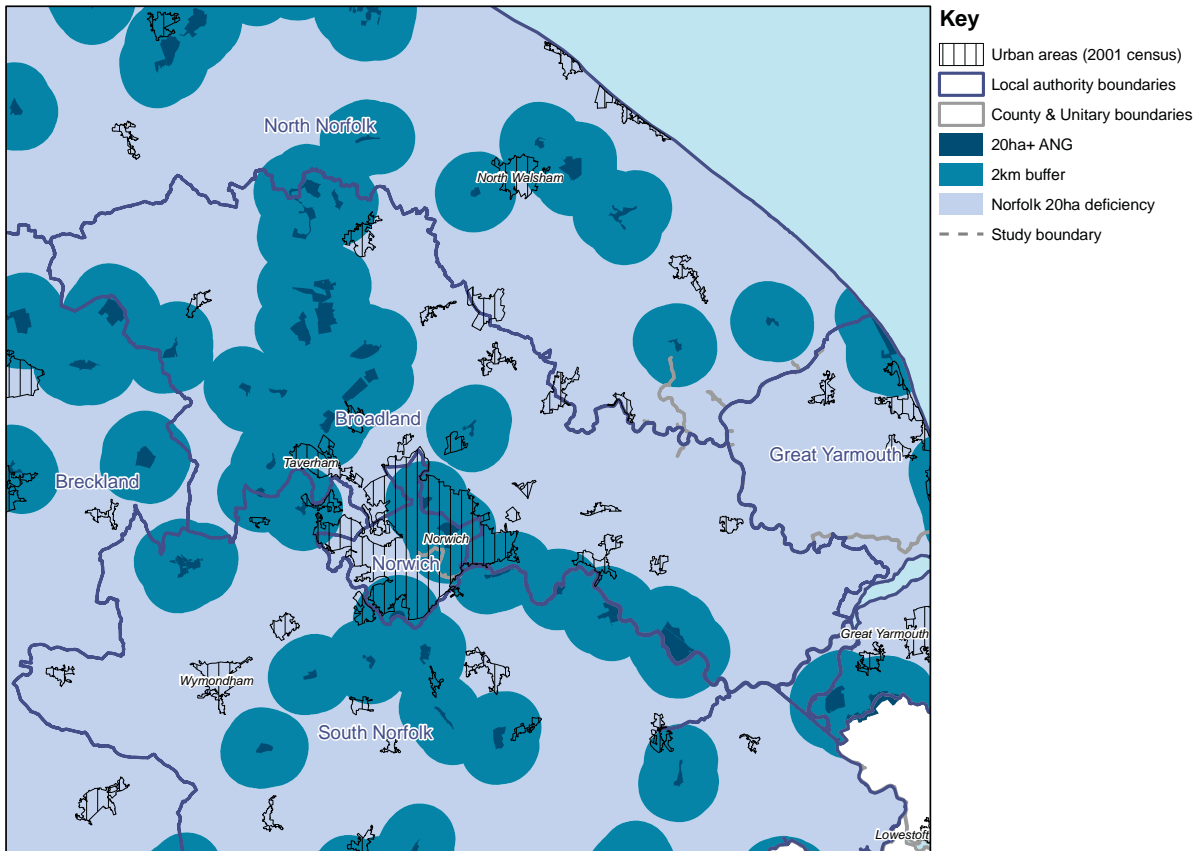
\*Estimate from 2005 AddressPoint data checked against 2001 Census data



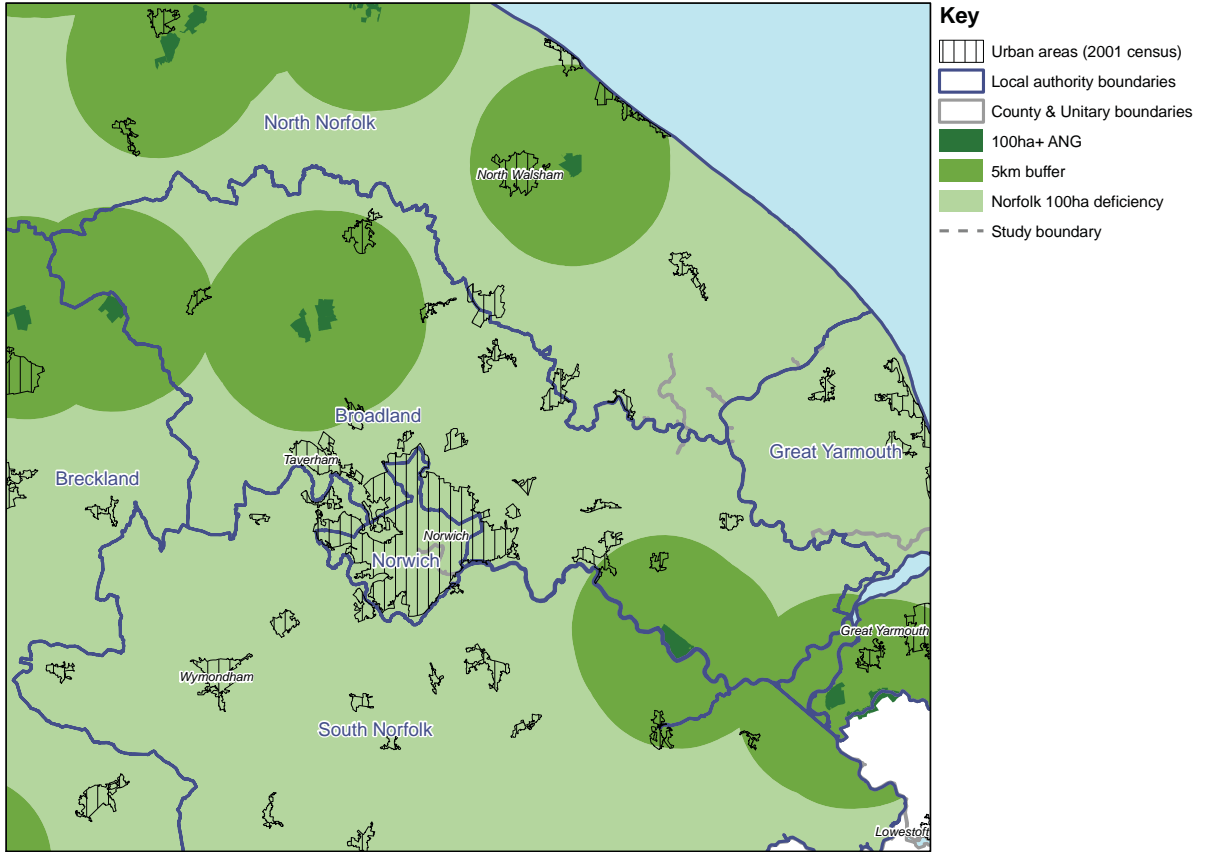
## Plan 5a Accessible natural greenspace provision (2ha and above)



## Plan 5b Accessible natural greenspace provision (20ha and above)



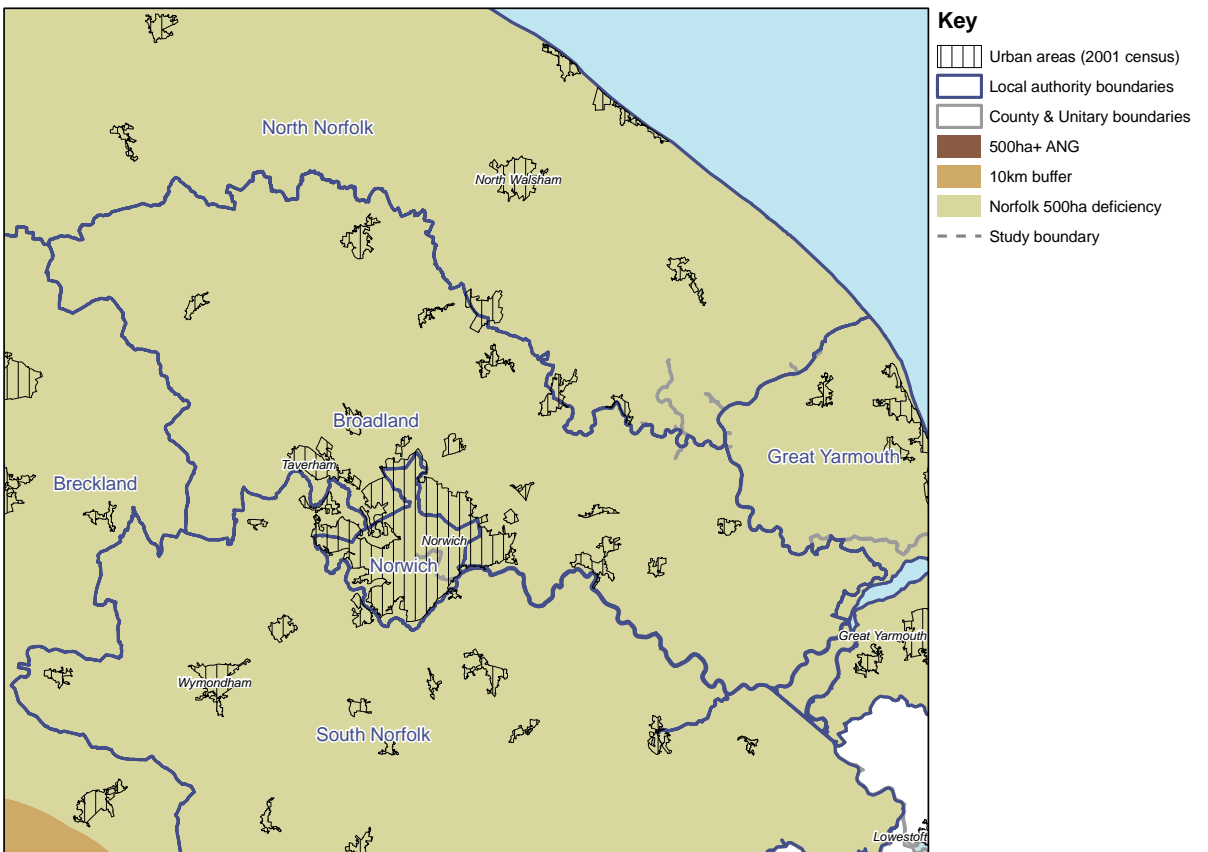
## Plan 5c Accessible natural greenspace provision (100ha and above)



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## Plan 5d Accessible natural greenspace provision (500ha and above)



## Great Yarmouth

Great Yarmouth has the second lowest proportion of its area made up by ANG, also Great Yarmouth were unable to provide any PPG17 data. Great Yarmouth performs below the county averages at all levels of ANGSt analysis as can be seen in Table 6, with the exception of the 100ha+/5km level.

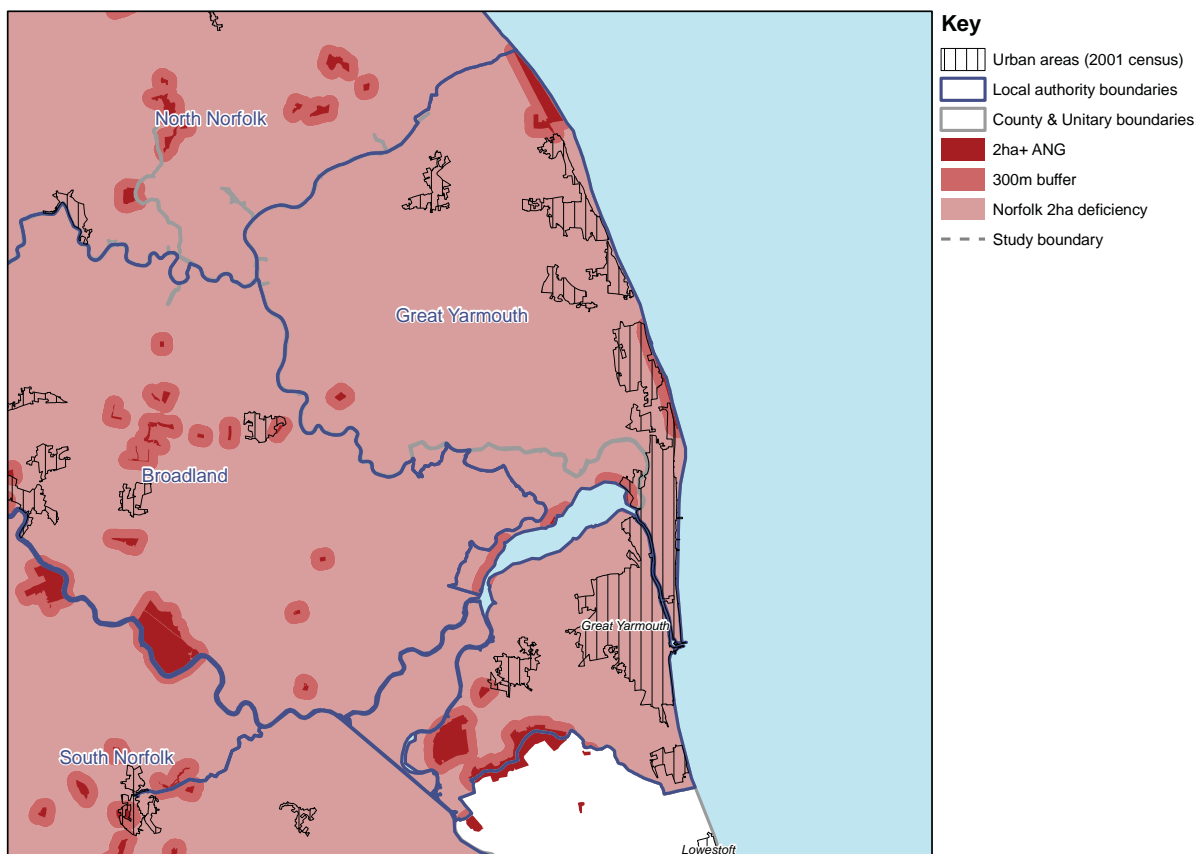
Two ANG sites in the south of the borough enable ANG provision to the south of Great Yarmouth town itself which can be seen in Plan 6c.

**Table 6** ANGSt analysis results for Great Yarmouth

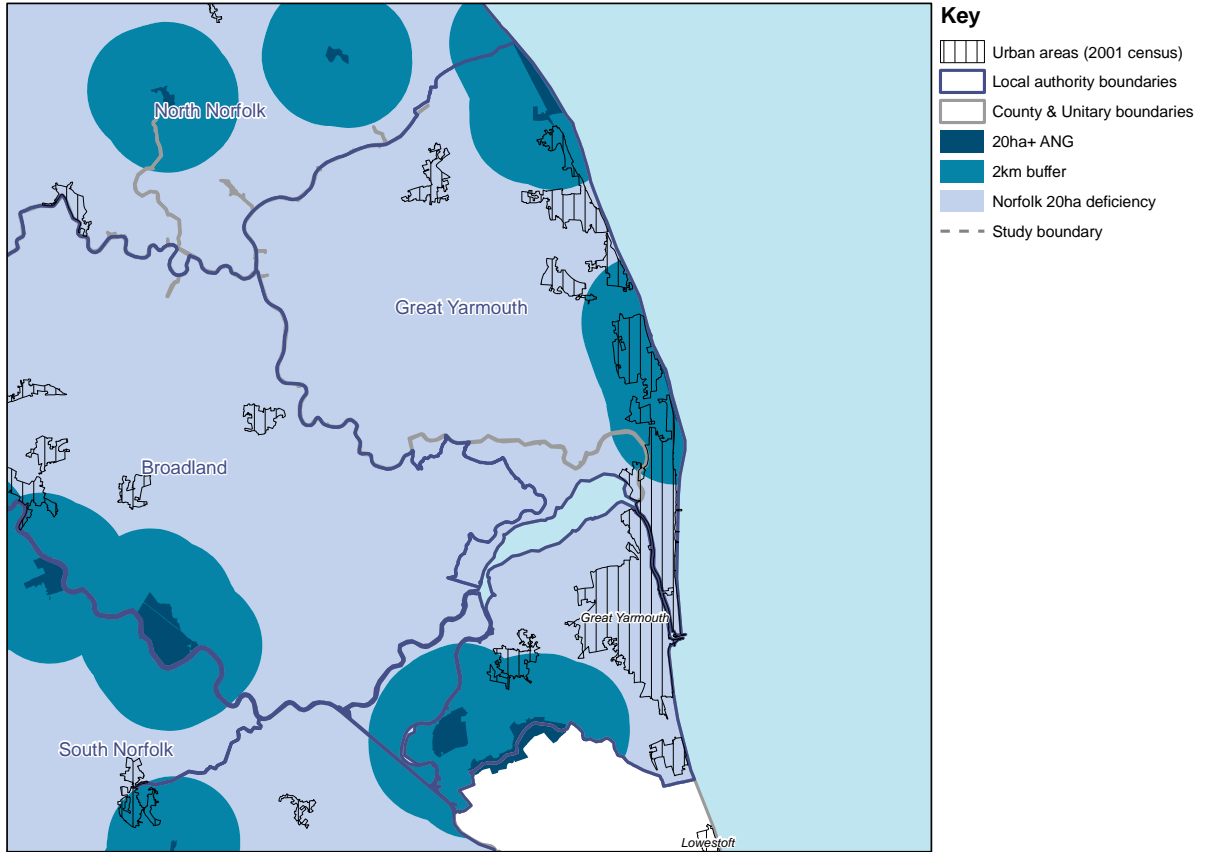
Local Planning Authority	Number of households*	% of households					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
Great Yarmouth	45874	2.2	21.0	42.4	0.0	0.0	39.9
<b>Norfolk averages</b>	<b>407153.0</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>

\*Estimate from 2005 AddressPoint data checked against 2001 Census data

### Plan 6a Accessible natural greenspace provision (2ha and above)



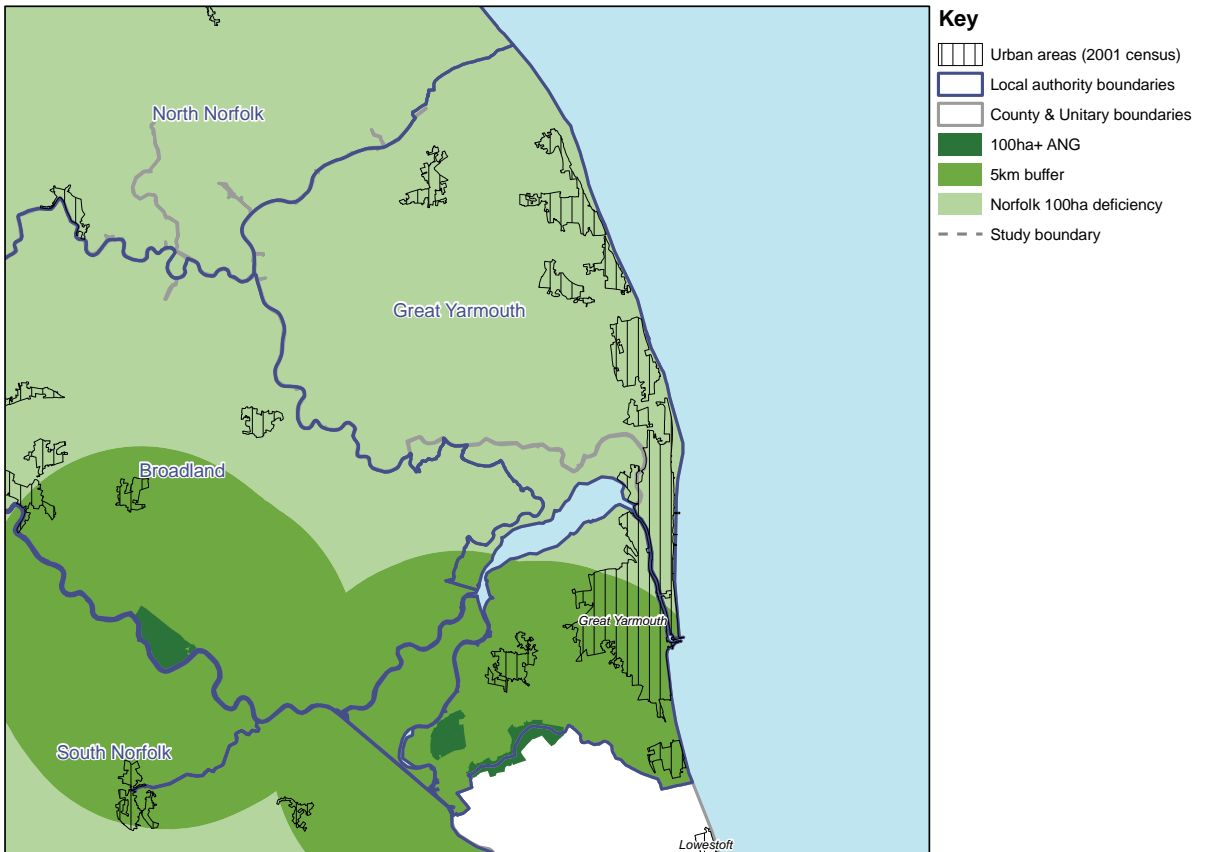
## Plan 6b Accessible natural greenspace provision (20ha and above)



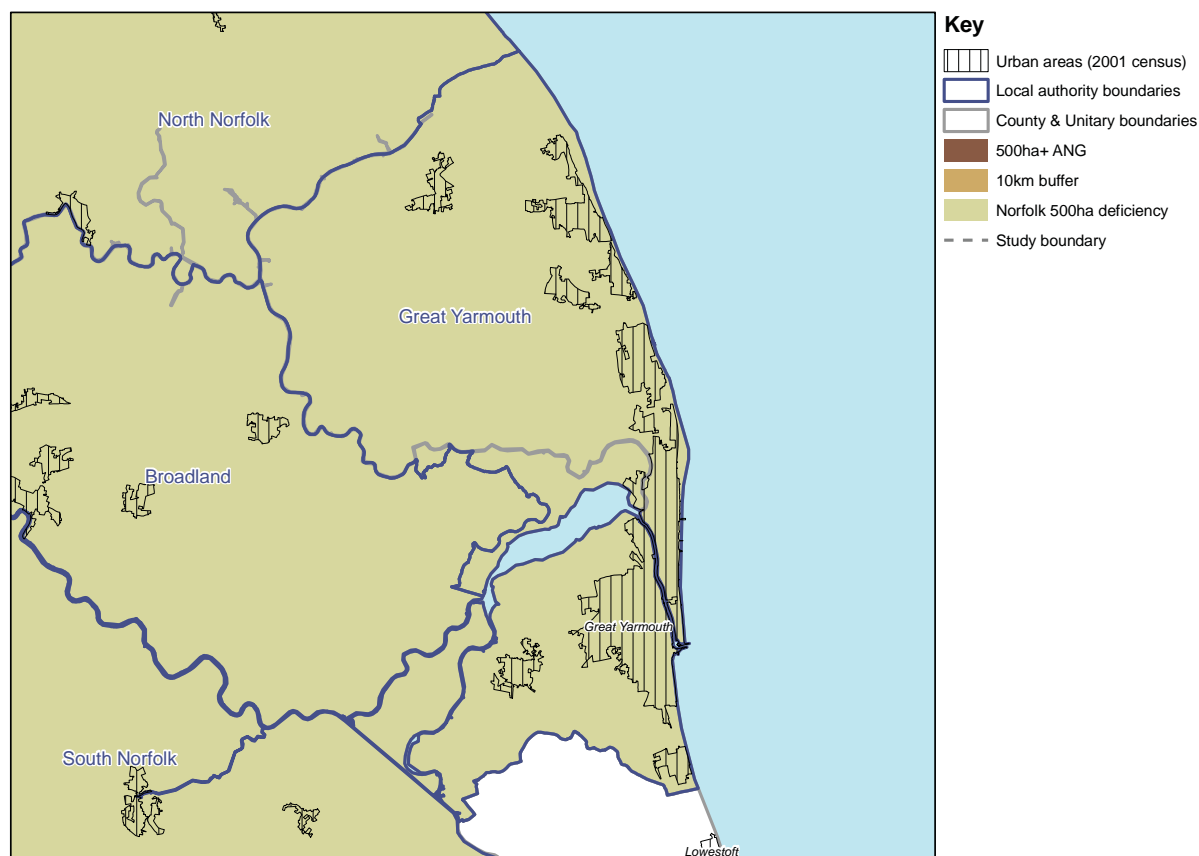
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## Plan 6c Accessible natural greenspace provision (100ha and above)



## Plan 6d Accessible natural greenspace provision (500ha and above)



### King's Lynn and West Norfolk

King's Lynn and West Norfolk has a slightly lower proportion of its area made up of ANG than the county average. As a consequence the results for the 2ha+/300m and 20ha+2km analyses are broadly in line with the county averages. It is the 100ha+/5km and 500ha+/10km levels where King's Lynn and West Norfolk performs better than the county averages by the order of three and four times respectively. In both cases it is the location of the ANG sites and not the quantity that has provided for the higher than average results – see Plans 7c and 7d.

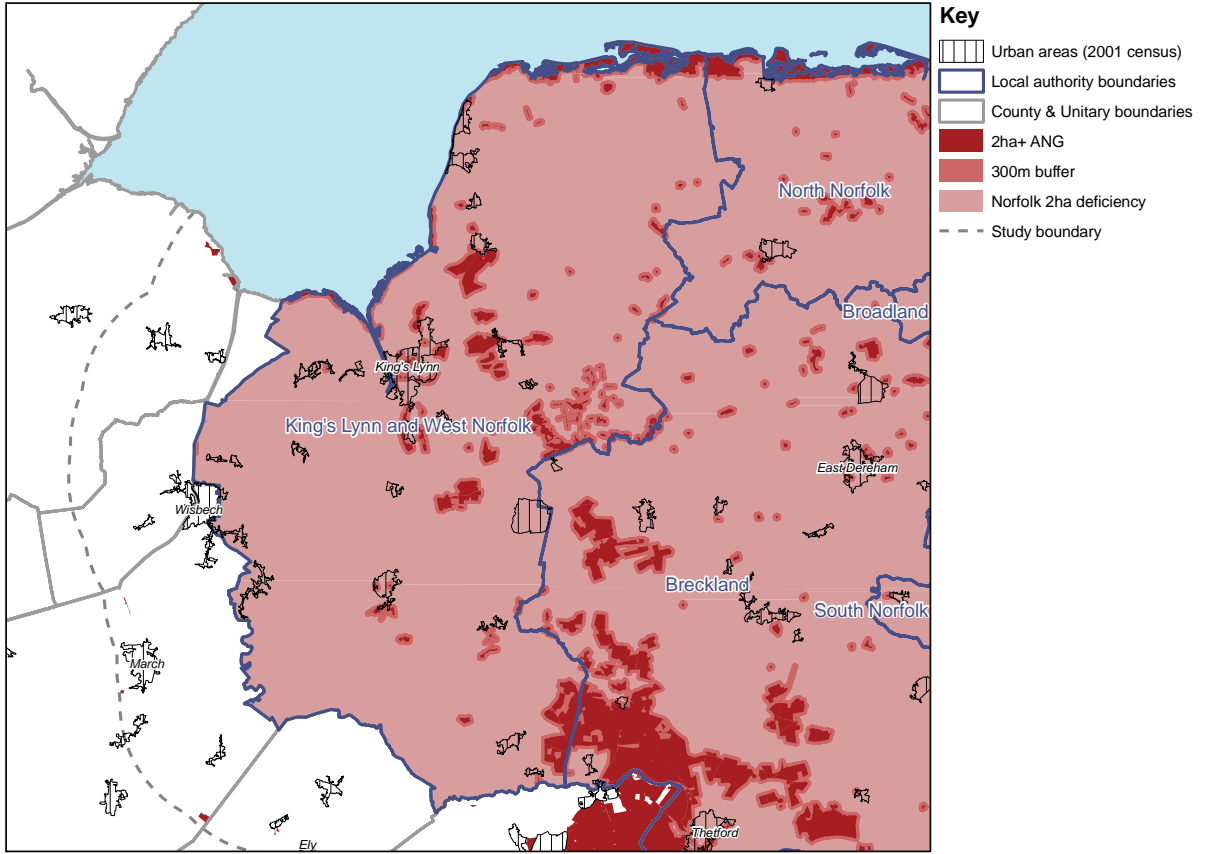
Provision of 100ha+ and 500ha+ ANG in the west of the borough would cater for the currently deficient urban areas there. King's Lynn and West Norfolk has the second highest proportion of households meeting all the ANGSt and a lower than average proportion meeting none.

**Table 7** ANGSt analysis results for West Norfolk

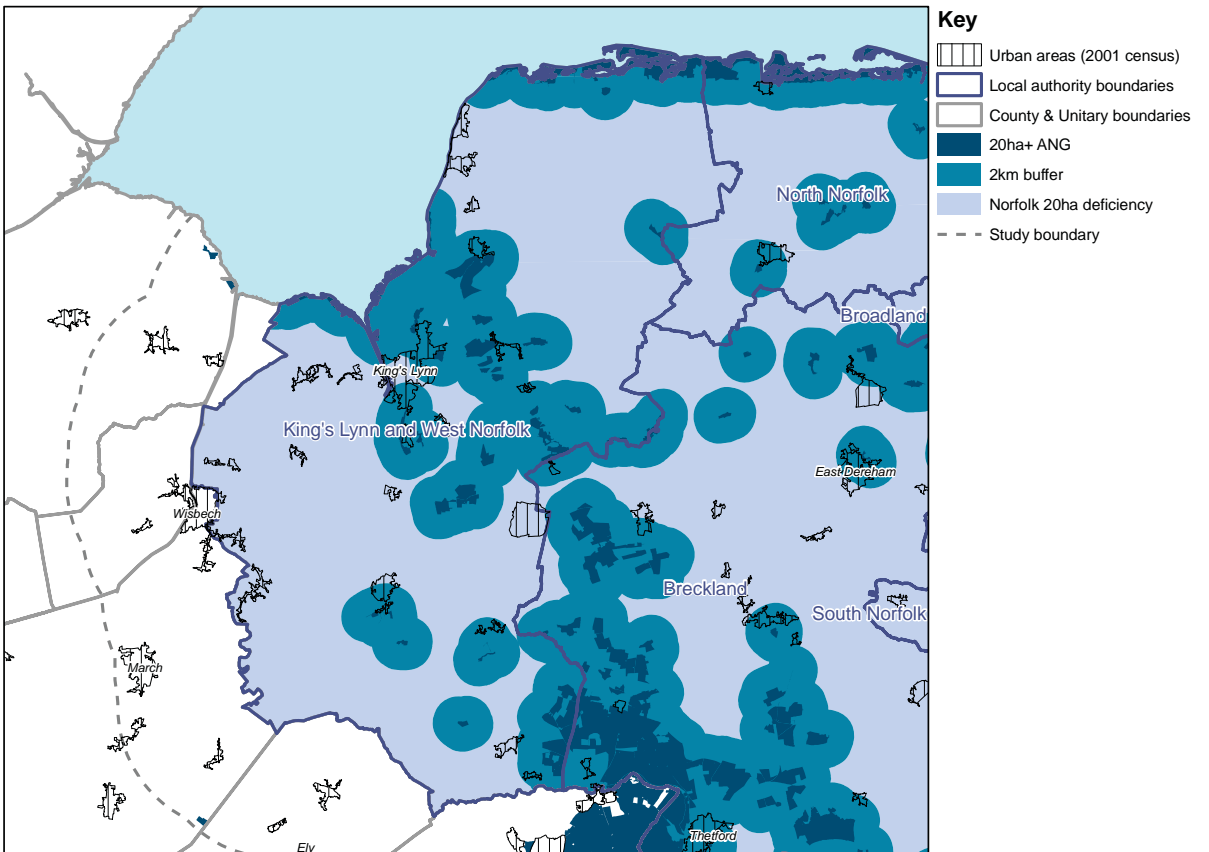
Local Planning Authority	Number of households*	% of households					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
King's Lynn West Norfolk	70861	22.7	42.9	62.2	60.1	10.4	21.0
<b>Norfolk averages</b>	<b>407153.0</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>

\*Estimate from 2005 AddressPoint data checked against 2001 Census data

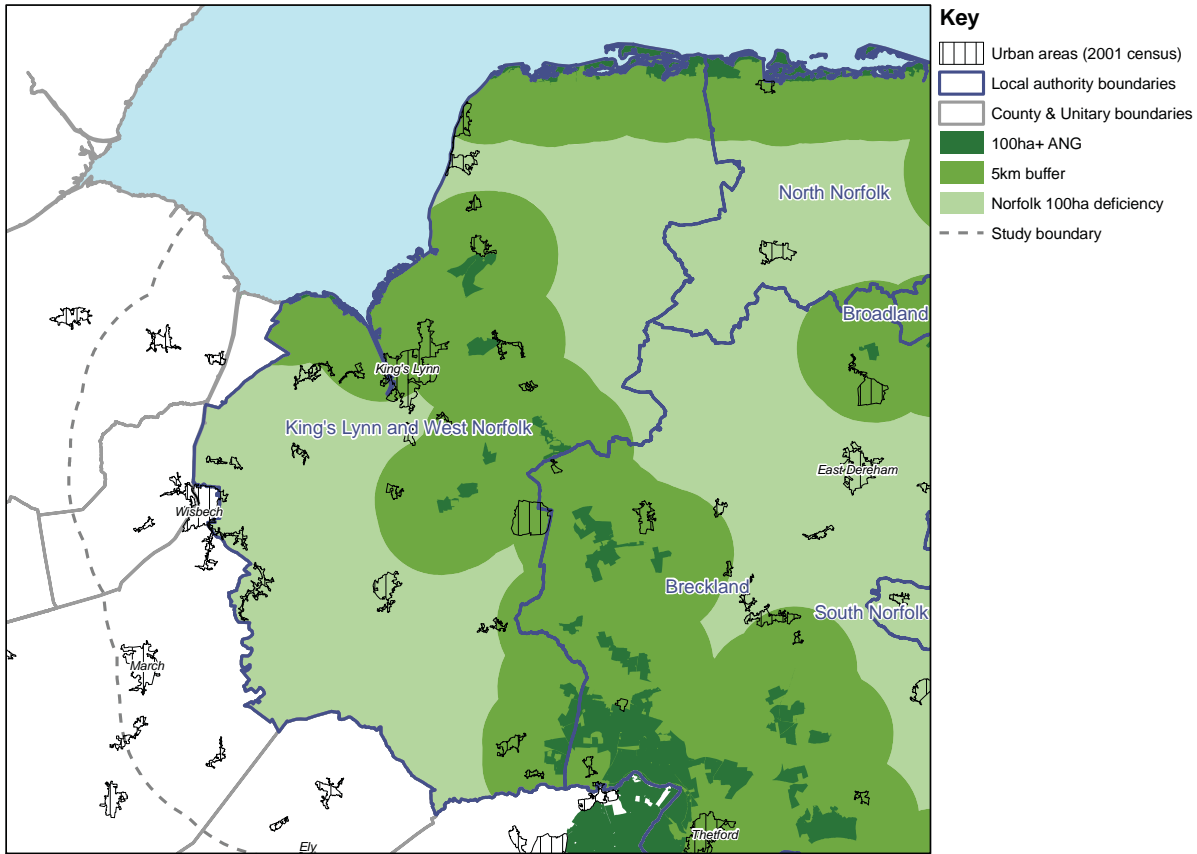
**Plan 7a Accessible natural greenspace provision (2ha and above)**



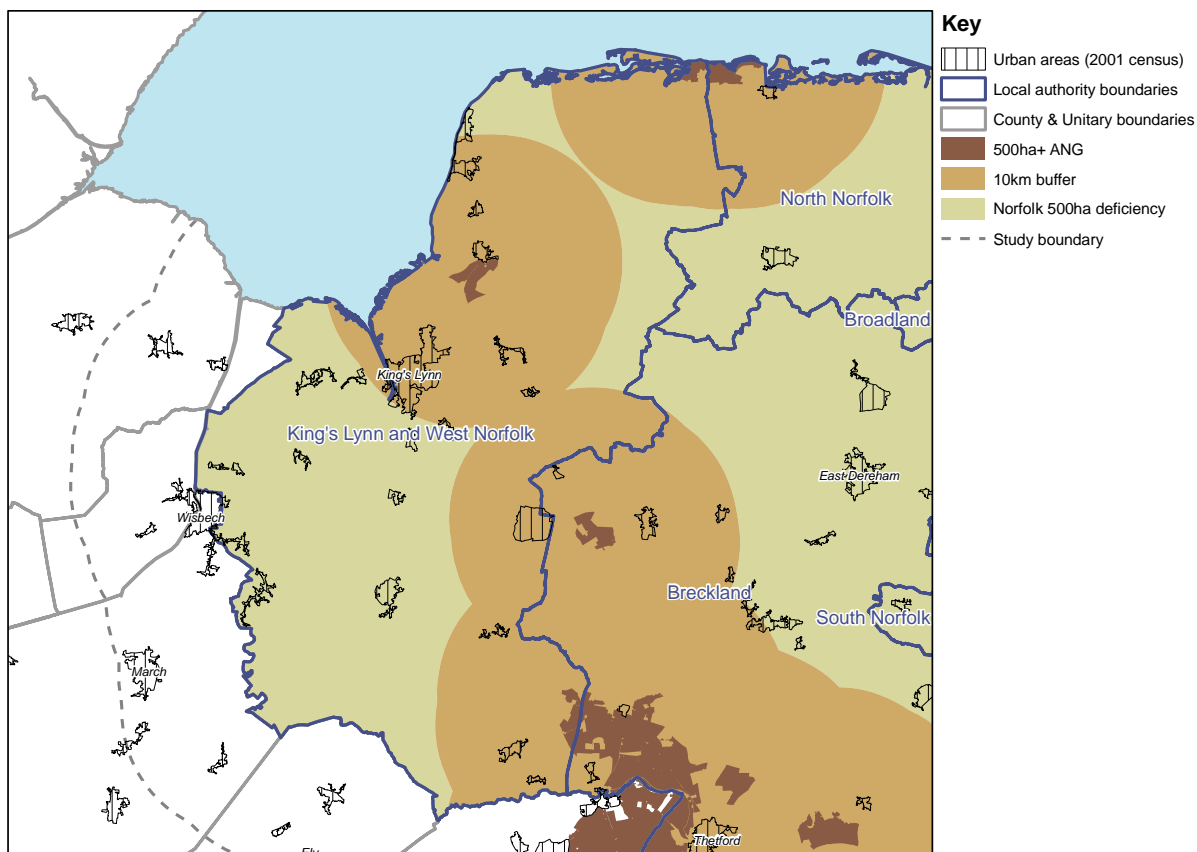
**Plan 7b Accessible natural greenspace provision (20ha and above)**



## Plan 7c Accessible natural greenspace provision (100ha and above)



## Plan 7d Accessible natural greenspace provision (500ha and above)



## North Norfolk

North Norfolk has a slightly below average proportion of its area made up of ANG and were unable to provide any PPG17 data. Nonetheless it performs comparably to the county averages at the 2ha+/300m and 20ha+/2km levels of analysis, shown in Table 8. The favourable locations (as opposed to the quantity) of the ANG sites contributing to the 100ha+/5km level of analysis means that North Norfolk performs well above the county average at this level.

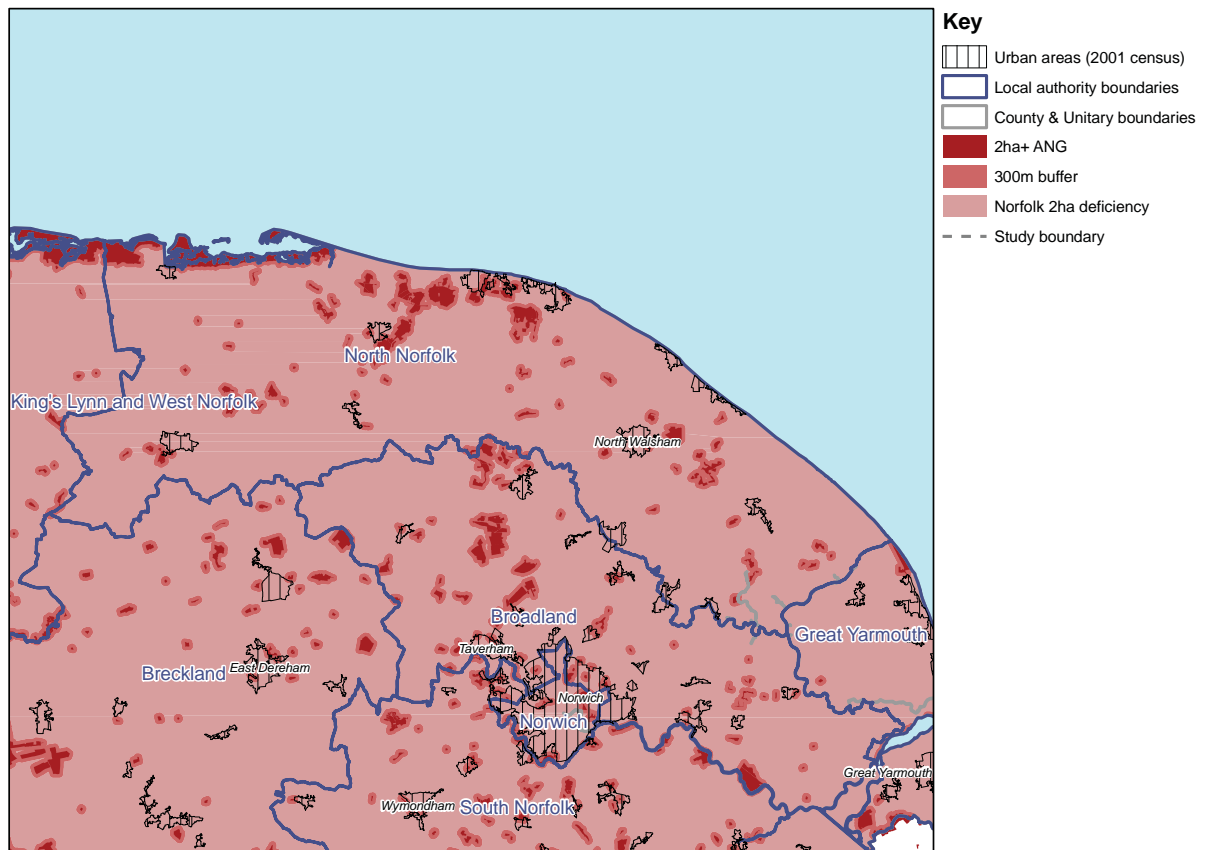
However, North Norfolk only has one 500ha+ ANG site on the boundary with King's Lynn and West Norfolk; the 10km catchment does not reach the relatively densely populated urban areas which can be seen on Plan 8d. As a result North Norfolk has a below average proportion of households meeting all the ANGSt.

**Table 8** ANGSt analysis results for North Norfolk

Local Planning Authority	Number of households*	% of households					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
North Norfolk	53811	14.6	52.8	59.4	5.8	1.3	25.8
<b>Norfolk averages</b>	<b>407153.0</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>

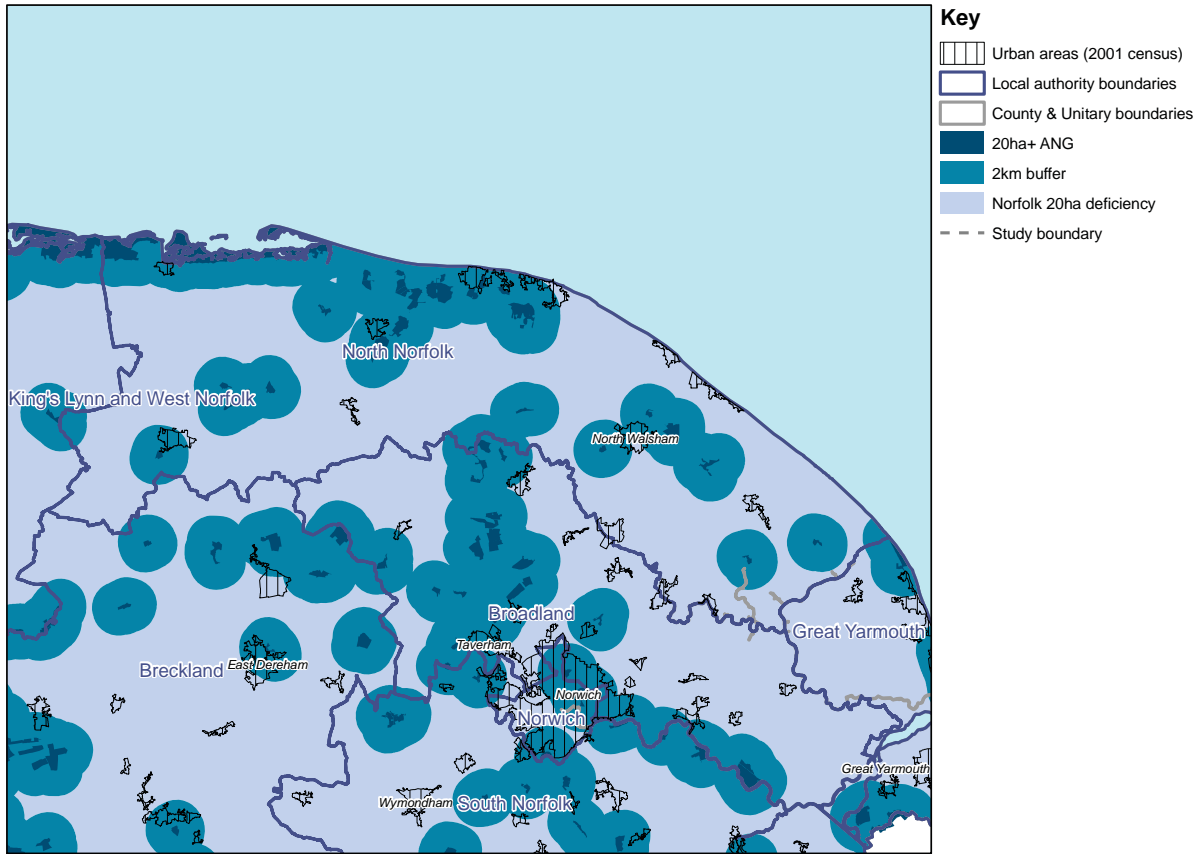
\*Estimate from 2005 AddressPoint data checked against 2001 Census data

## Plan 8a Accessible natural greenspace provision (2ha and above)

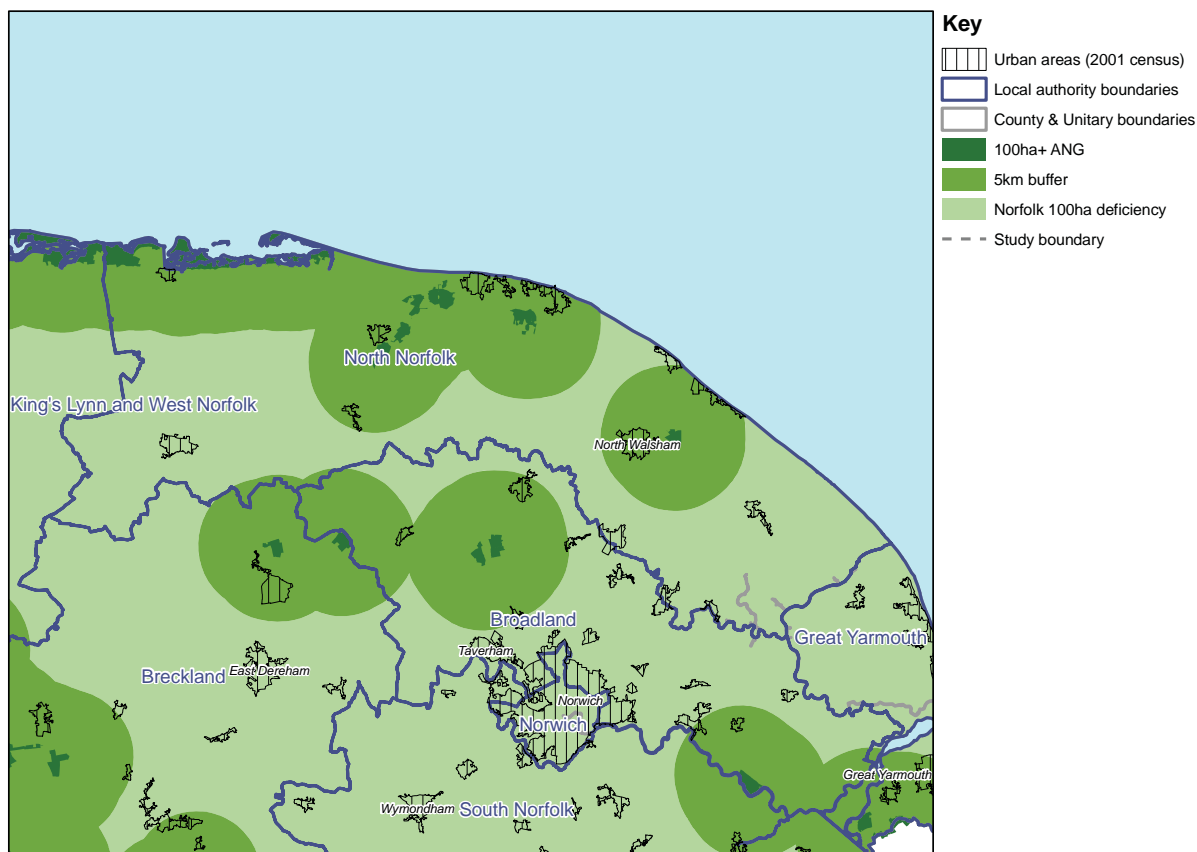




## Plan 8b Accessible natural greenspace provision (20ha and above)

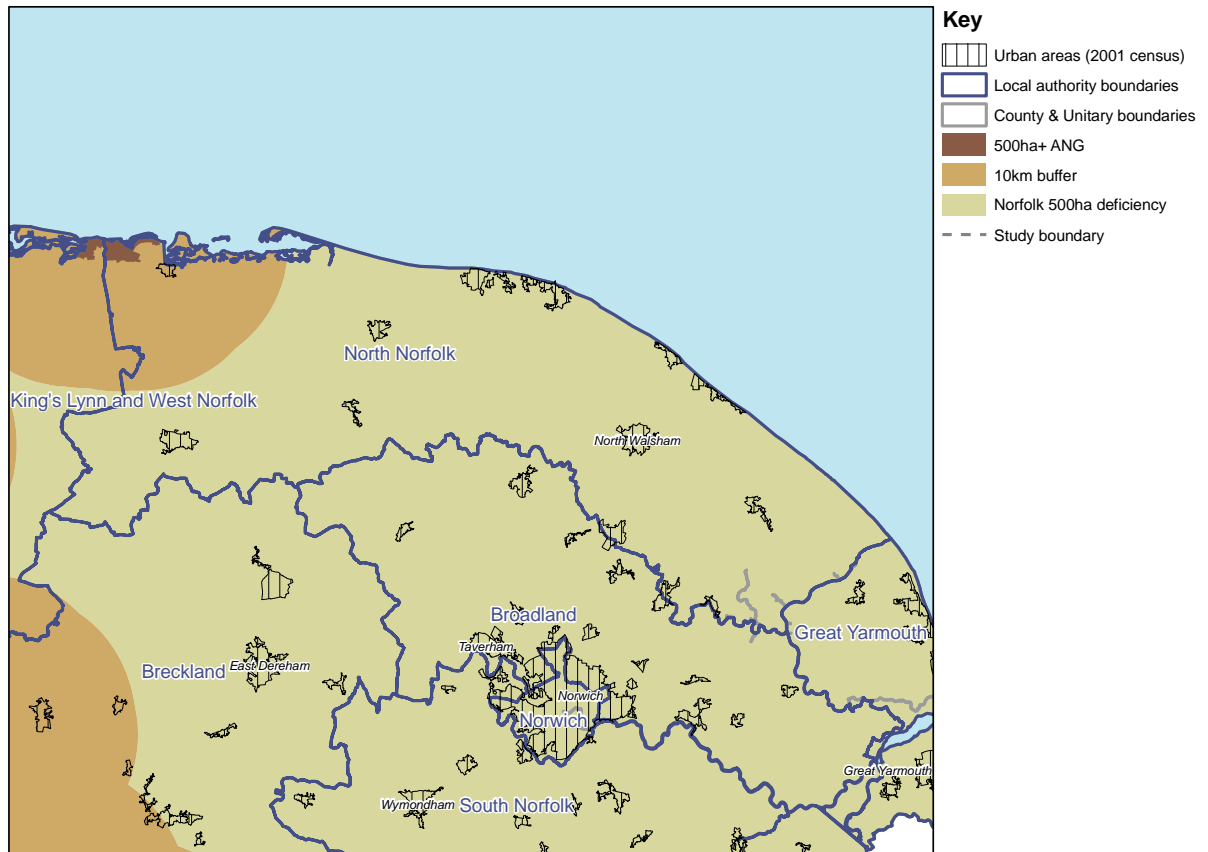


## Plan 8c Accessible natural greenspace provision (100ha and above)



## Plan 8d Accessible natural greenspace provision (500ha and above)

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### Norwich

Norwich has a below average proportion of its area made up by ANG. Also Norwich were unable to provide PPG17 data. This is likely to have been part of the reason that Norwich performs below the county average at the 2ha+/300m level despite its relatively small area. Also much of the provision at this level is on the outskirts of Norwich and does not coincide with the defined urban area.

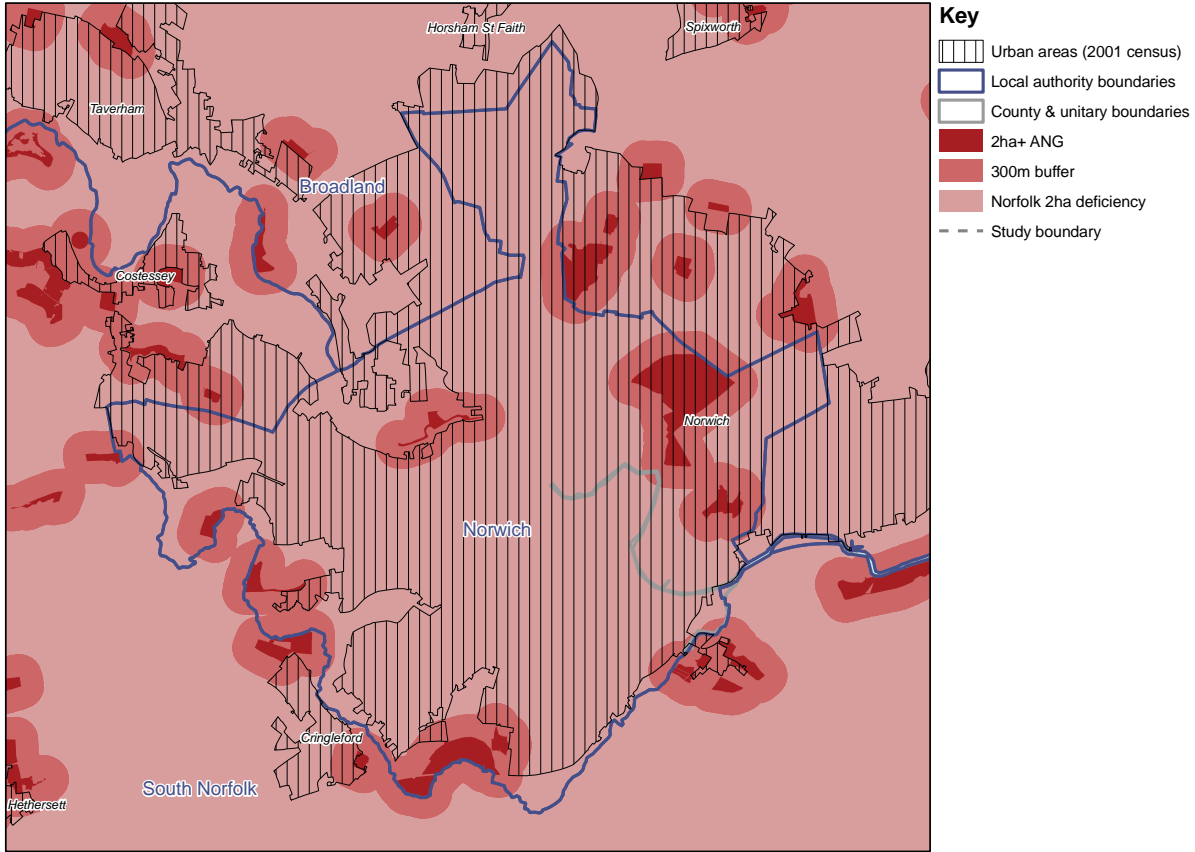
Because a few of the ANG sites analysed at the 2ha+/300m level are sufficient in size to also feature in the 20ha+/2km analysis, the proportion of households meeting that level is higher than the county average. Norwich performs below the county average at the 100ha+/5km, 500ha+/10km and combined ANGSt because of a deficiency of ANG sites at these levels.

**Table 9** ANGSt analysis results for Norwich

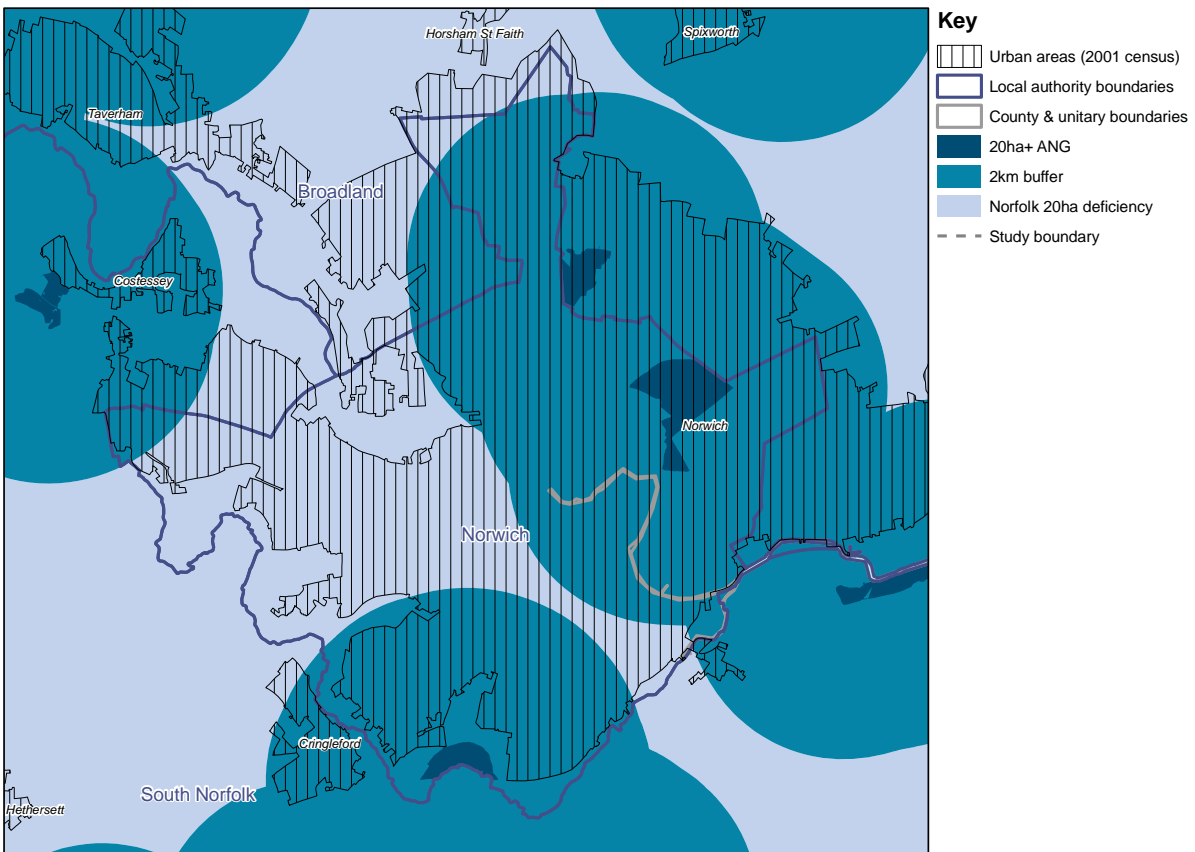
Local Planning Authority	Number of households*	% of households					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
Norwich	66716	12.5	67.0	0.0	0.0	0.0	31.5
<b>Norfolk averages</b>	<b>407153.0</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>

\*Estimate from 2005 AddressPoint data checked against 2001 Census data

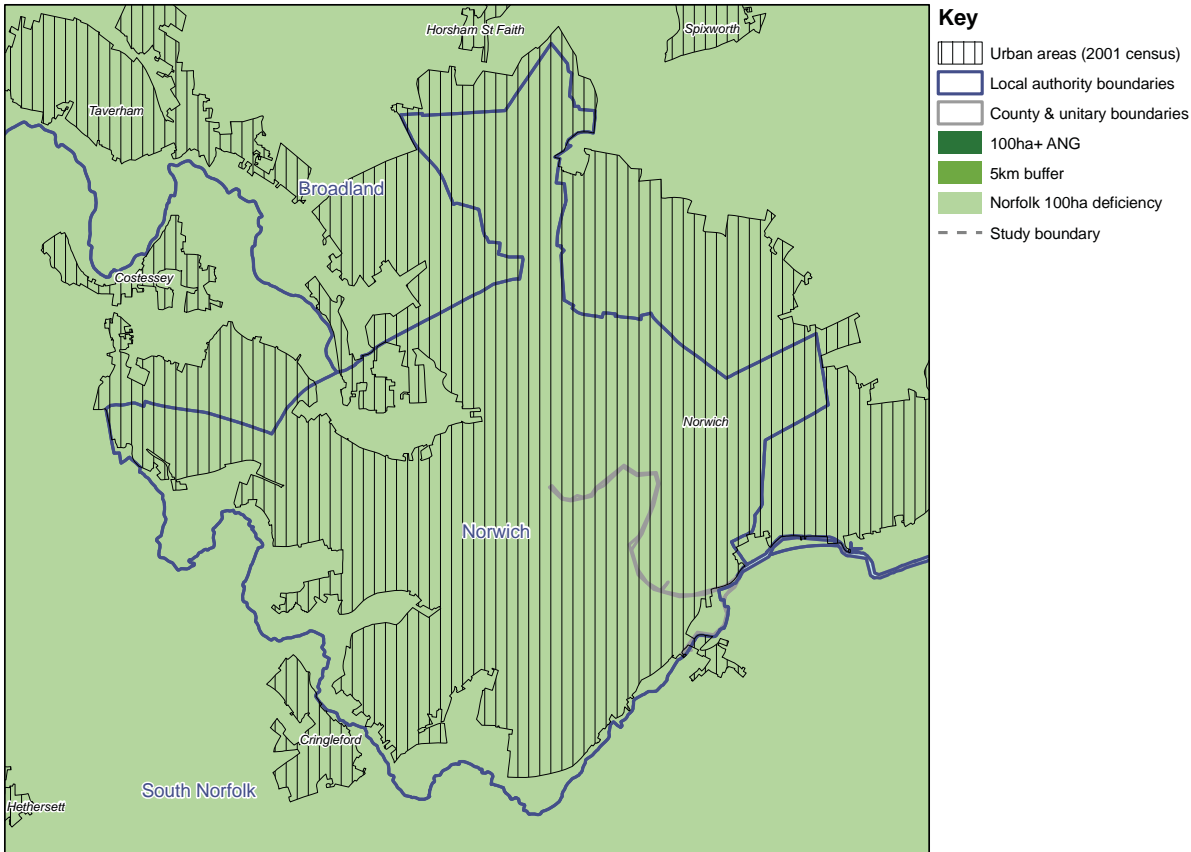
## Plan 9a Accessible natural greenspace provision (2ha and above)



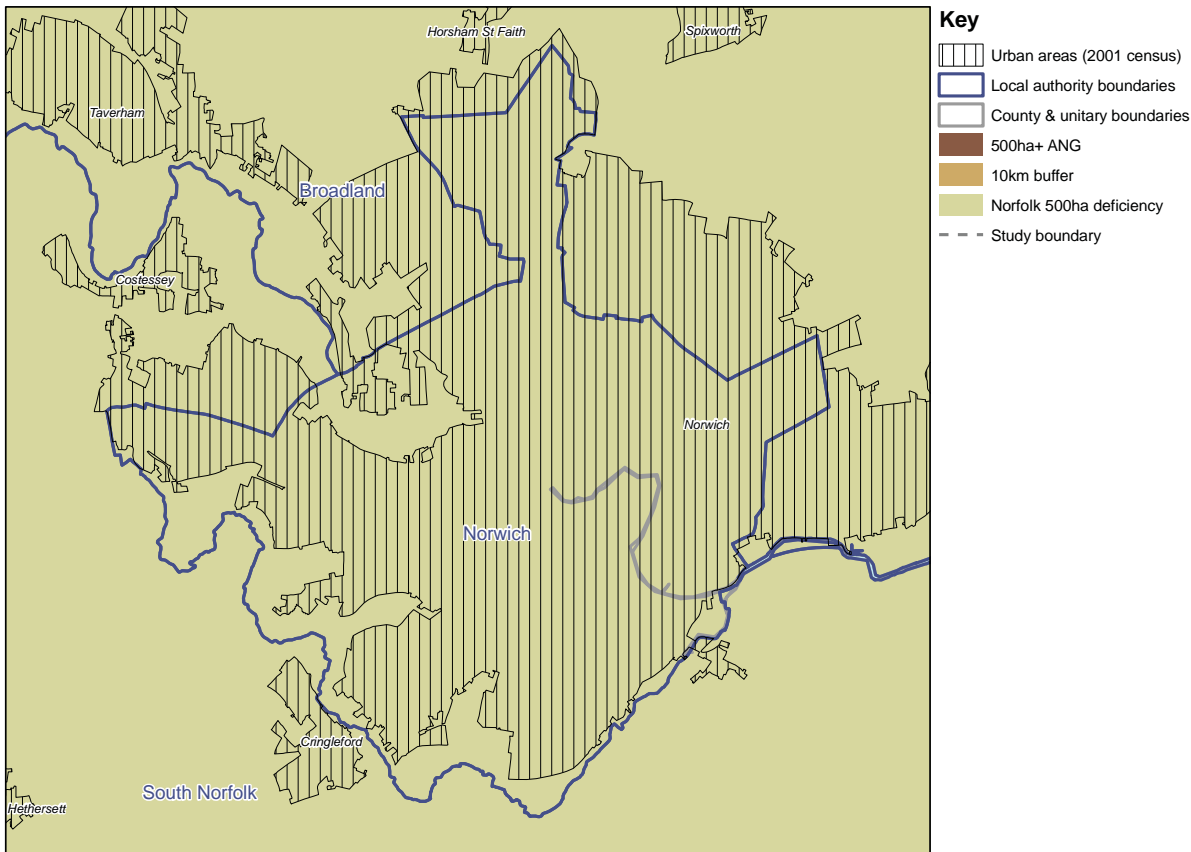
## Plan 9b Accessible natural greenspace provision (20ha and above)



## Plan 9c Accessible natural greenspace provision (100ha and above)



## Plan 9d Accessible natural greenspace provision (500ha and above)



## South Norfolk

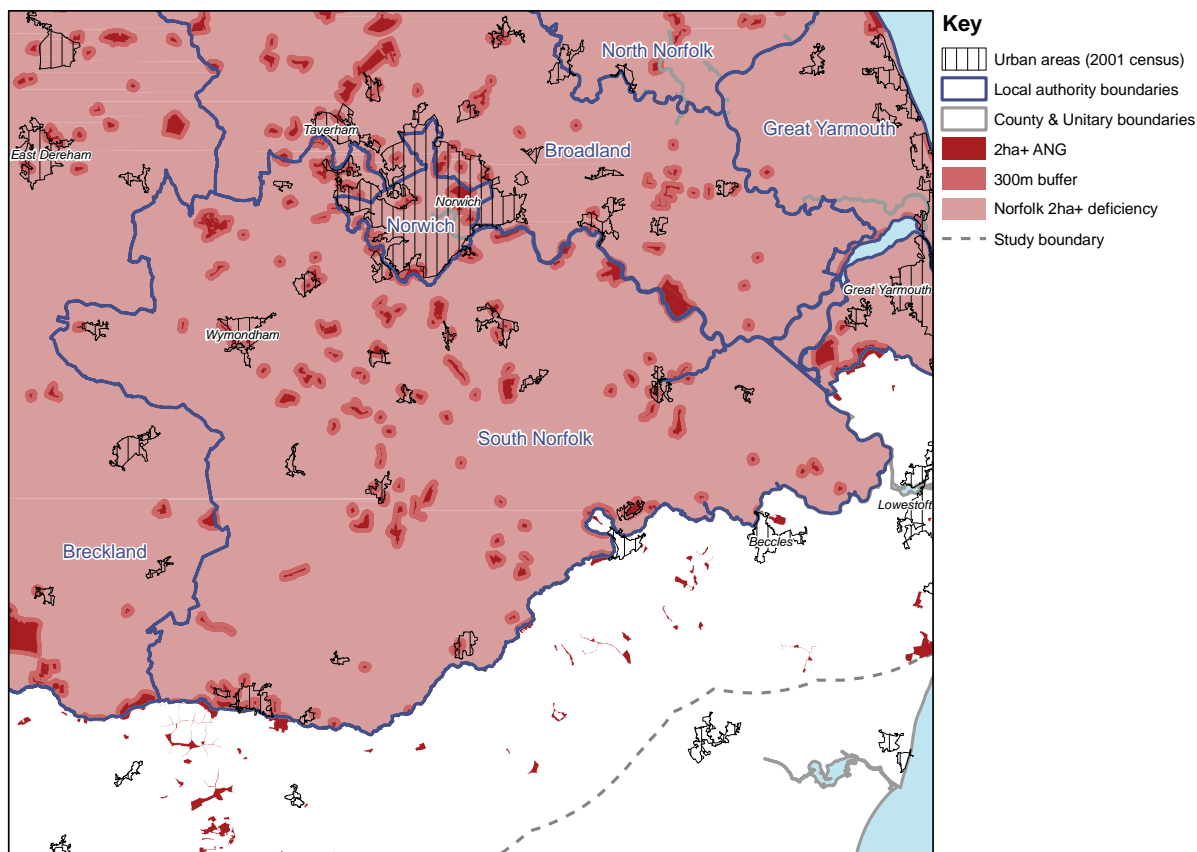
South Norfolk has a below average proportion of its area made up of ANG, despite having kindly supplied PPG17 data. The inclusion of that data probably explains, in part, why South Norfolk performs above the county average at the 2ha+/300m level of analysis. However, South Norfolk performs poorly at each of the next stages of ANGSt analysis; the 20ha+/2km, 100ha+/5km and 500ha+/10km levels, when compared to the county averages. South Norfolk has 0% of its households meeting all the ANGSt and the highest percentage meeting none at 42.1%.

**Table 10** ANGSt analysis results for South Norfolk

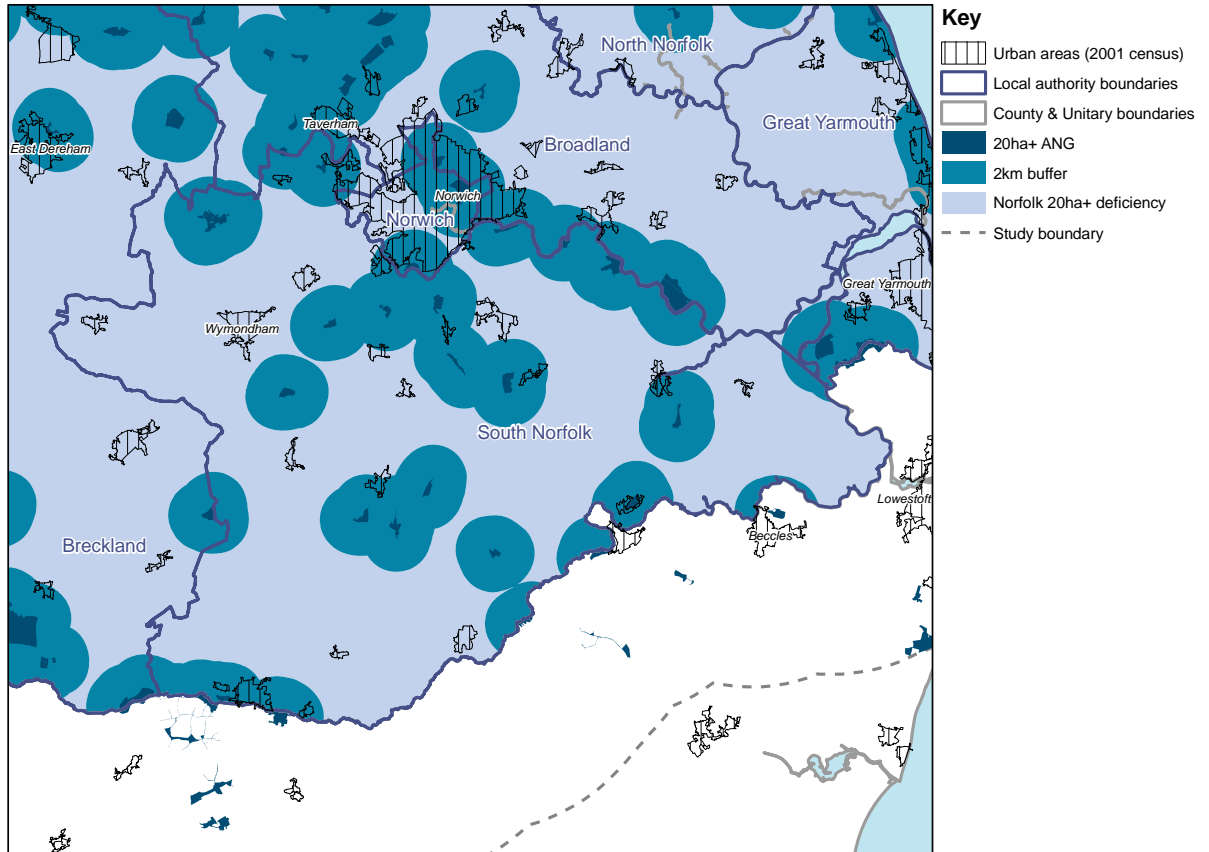
Local Planning Authority	Number of households*	% of households					
		within 300m of a 2ha+ site	within 2km of a 20ha+ site	within 5km of a 100ha+ site	within 10km of a 500ha+ site	meeting all the ANGSt (%)	meeting none of the ANGSt (%)
South Norfolk	54884	33.5	40.0	16.9	0.4	0.0	42.1
<b>Norfolk averages</b>	<b>407153.0</b>	<b>18.1</b>	<b>48.9</b>	<b>36.2</b>	<b>16.1</b>	<b>3.2</b>	<b>29.7</b>

\*Estimate from 2005 AddressPoint data checked against 2001 Census data

## Plan 10a Accessible natural greenspace provision (2ha and above)



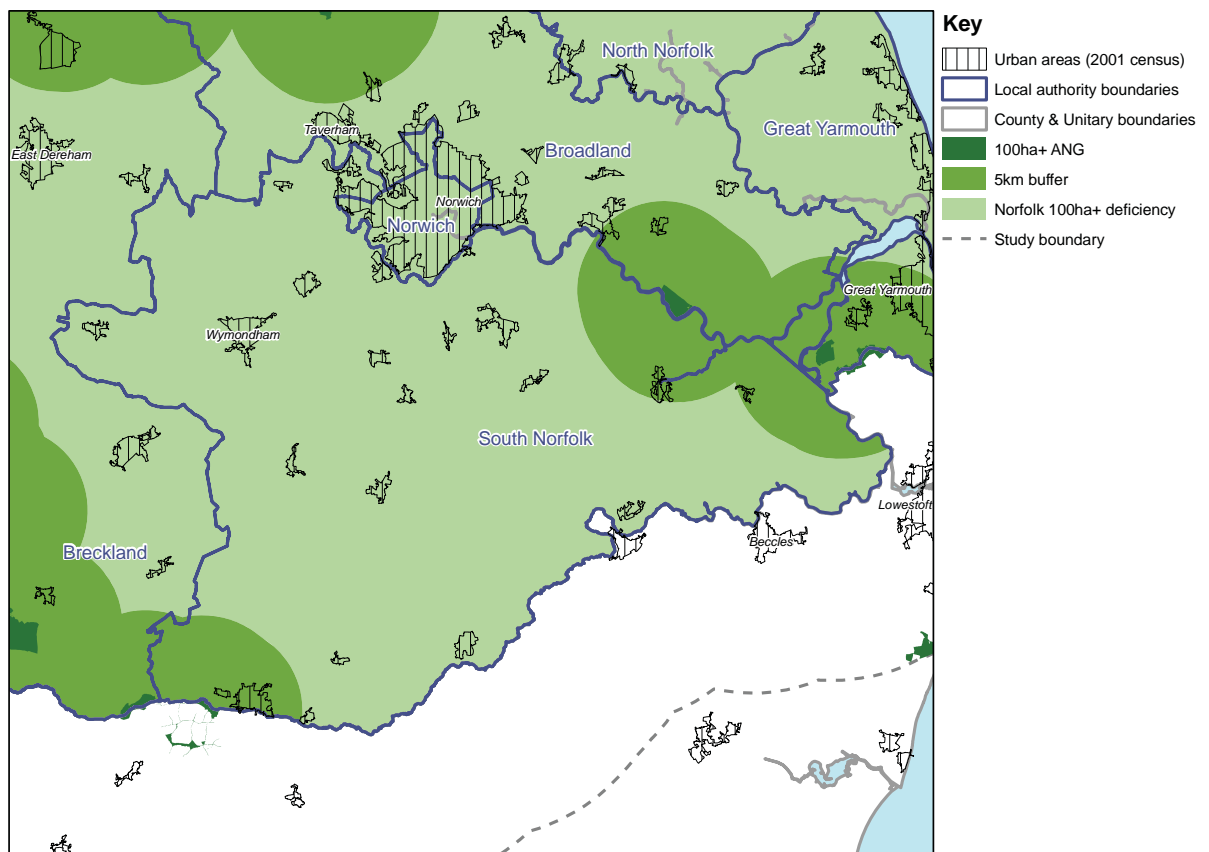
## Plan 10b Accessible natural greenspace provision (20ha and above)



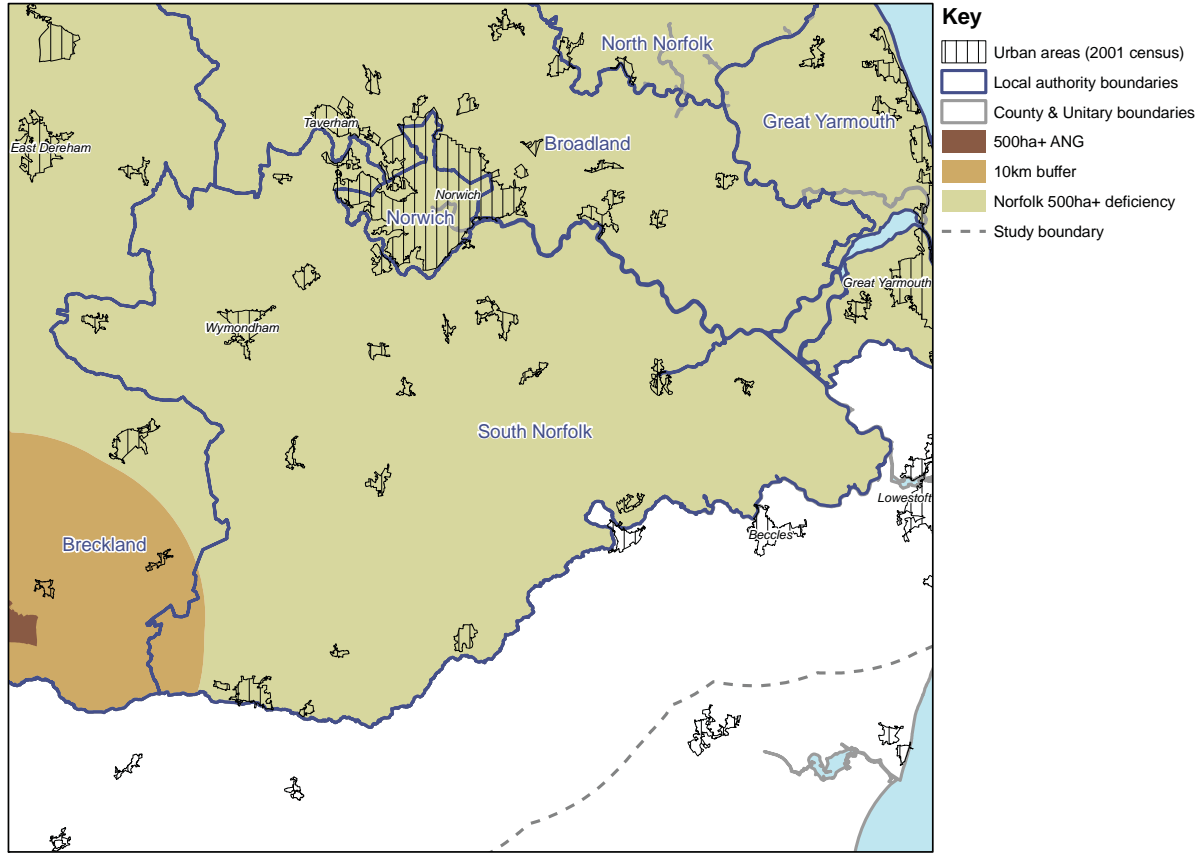
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Analysis of Accessible Natural Greenspace Provision for Norfolk

## Plan 10c Accessible natural greenspace provision (100ha and above)



# Plan 10d Accessible natural greenspace provision (500ha and above)



## Conclusions

This analysis highlights the provision of accessible natural greenspace within Norfolk, according to the Accessible Natural Greenspace Standard. The key findings of the Norfolk ANGSt analysis are summarised as follows:

### Summary of key findings

**18.1%** of households have access to an accessible natural greenspace of at least 2 hectares within 300 metres

**48.9%** of households have access to an accessible natural greenspace of at least 20 hectares within 2 kilometres

**36.2%** of households have access to an accessible natural greenspace of at least 100 hectares within 5 kilometres

**16.1%** of households have access to an accessible natural greenspace of at least 500 hectares within 10 kilometres

**3.2%** of households have access to all the areas of accessible natural greenspace within the standard

**29.7%** do not have access to any of the accessible natural greenspace within the standard

Overall the results for Norfolk are reasonably comparable to the analysis undertaken for Suffolk but perform less well against Hertfordshire and Essex – which was the pilot study. 3.2% of households in Norfolk have all of their ANGSt met in comparison to 6.7% for Hertfordshire, 3.4% for Suffolk and 7% for Essex. 29.7% of households do not have access to any of the greenspaces within the standard which is comparable to Suffolk at 32.9% and particularly high in comparison to 6.4% for Hertfordshire, and 14% for Essex.

The average proportion of households meeting the lowest of the ANGSt in Norfolk is 18.1%. Four out of seven of the local authorities in Norfolk are below this figure. At the 20ha+ and 100ha+ levels the proportions of households meeting the ANGSt are higher than those for Suffolk but much lower than those for Hertfordshire and Essex.

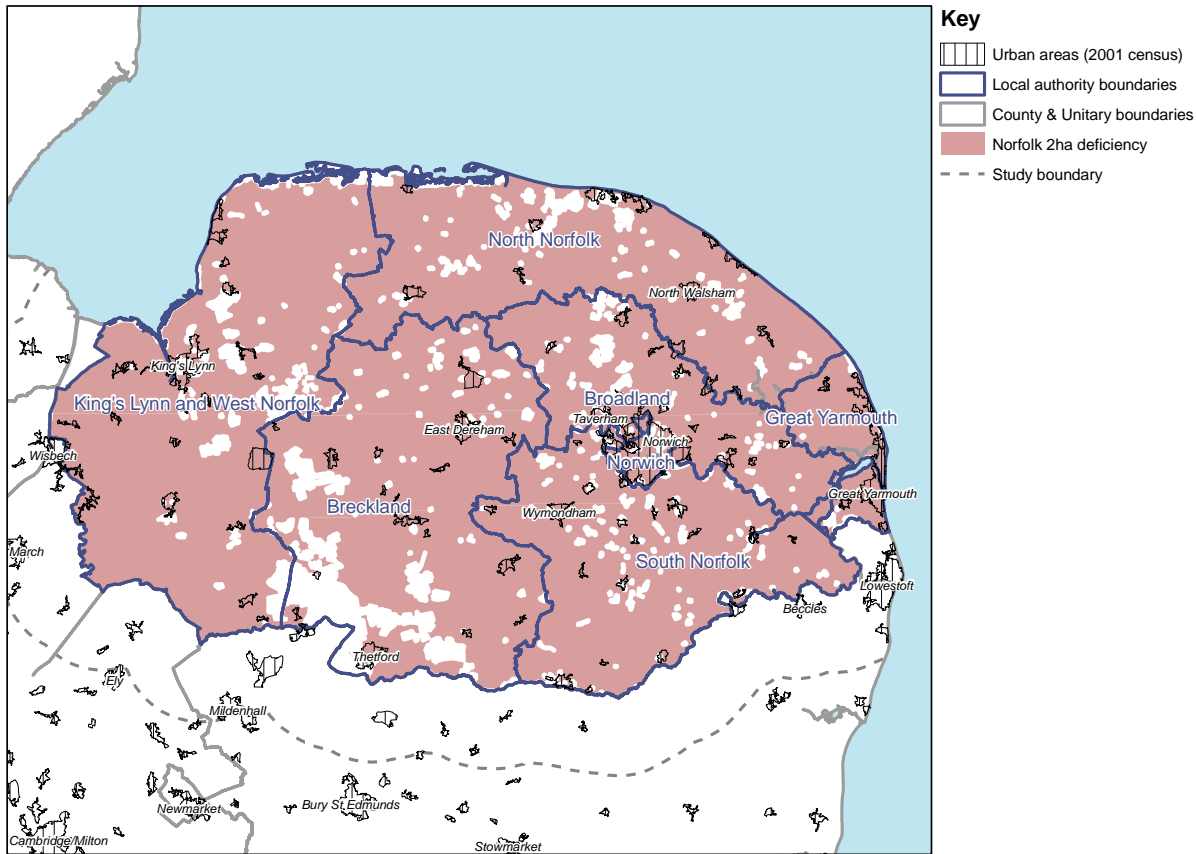
At the 500 hectare level Broadland, Great Yarmouth, Norwich, and South Norfolk have little ANG provision. Breckland and King's Lynn & West Norfolk perform best at this level.

This ANGSt analysis shows that the first priorities are to address ANG provision in the areas of deficiency highlighted in plans 11a-11d and in particular:

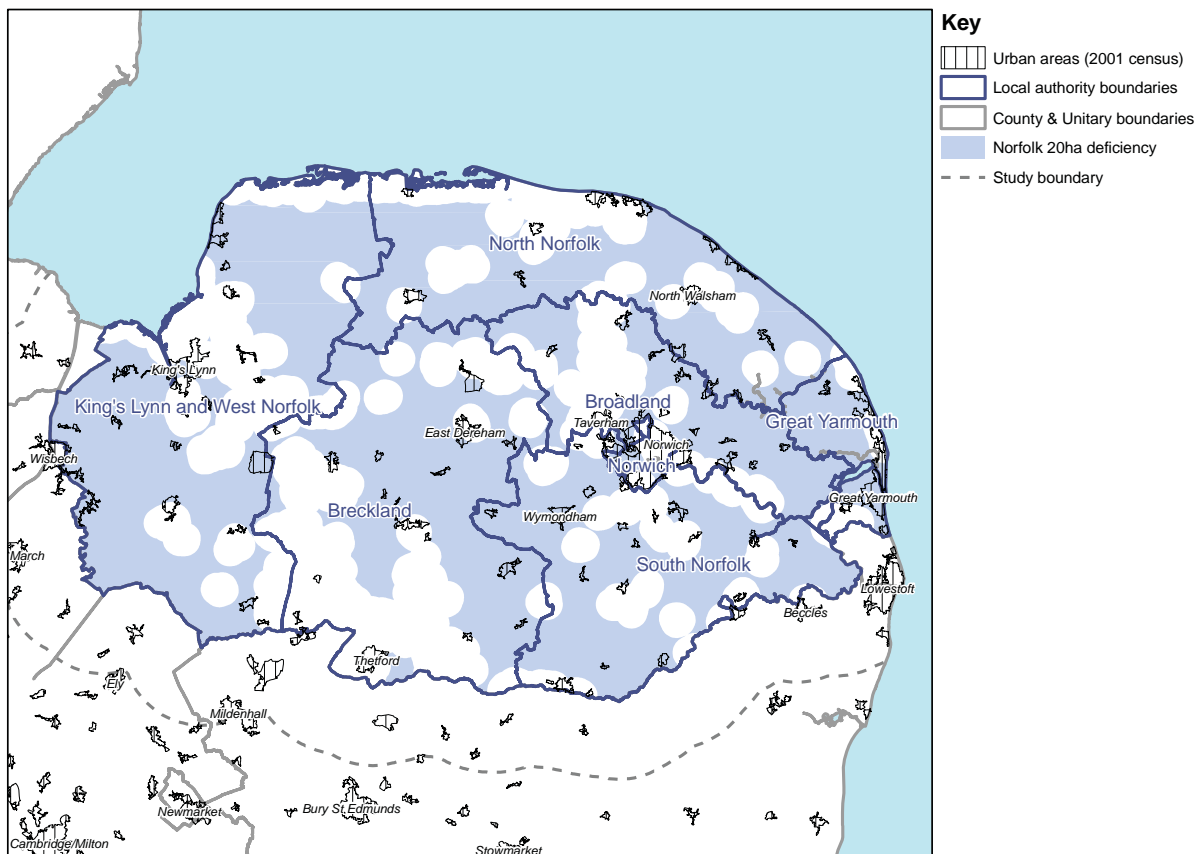
- the provision of 2 hectare sites and above in locations where they will be most effective in meeting the ANG needs of existing populations
- provision of 500 hectare sites within the areas of deficiency in the west and across much of the east of the county.



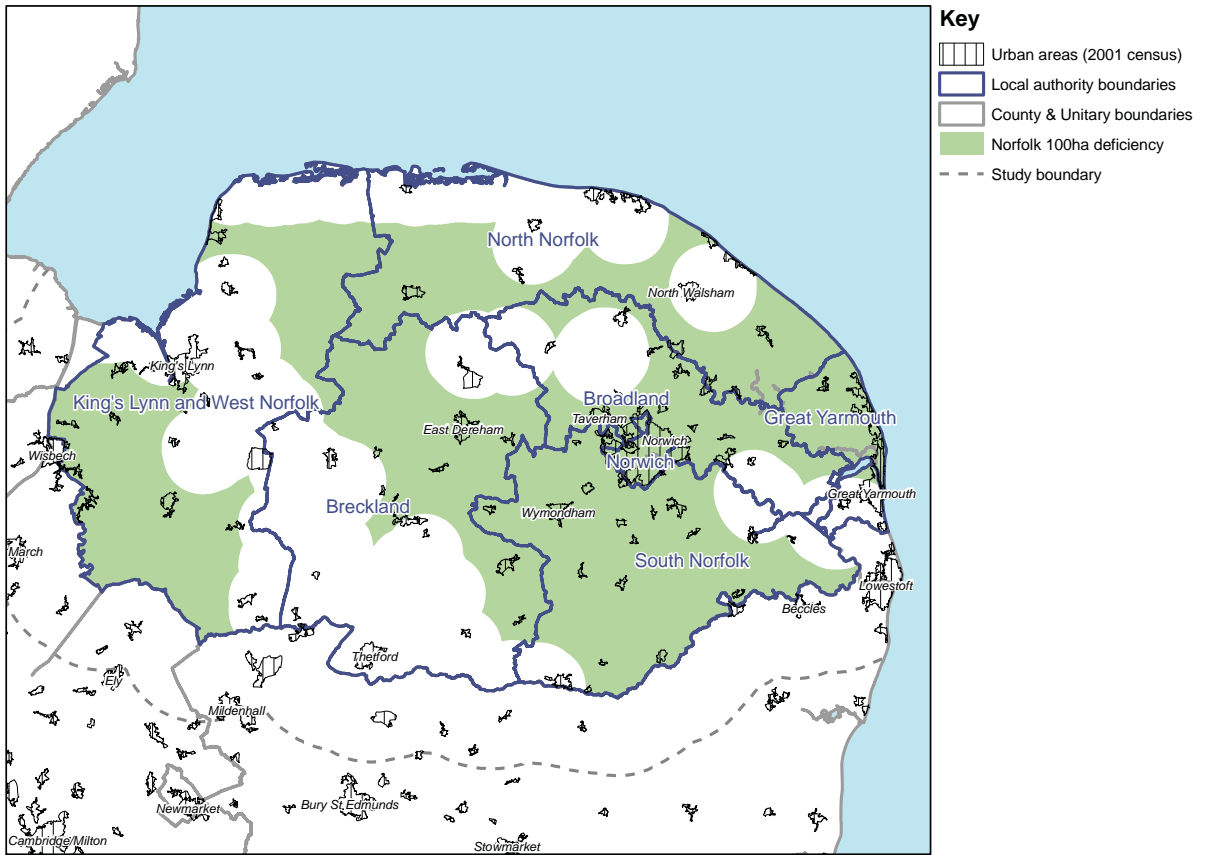
## Plan 11a Highlights those areas with no accessible natural greenspace provision at the 2ha level of ANGSt analysis



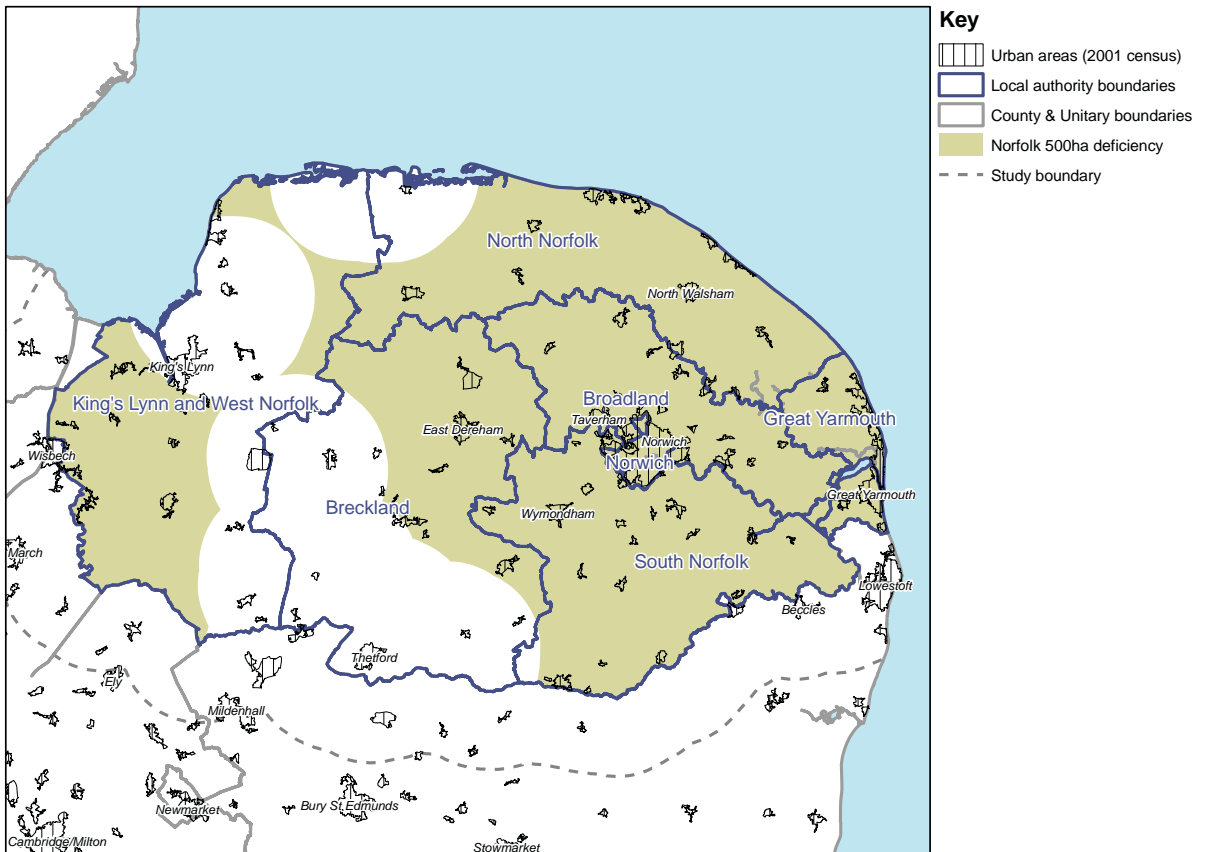
## Plan 11b Highlights those areas with no accessible natural greenspace provision at the 20ha level of ANGSt analysis



**Plan 11c Highlights those areas with no accessible natural greenspace provision at the 100ha level of ANGSt analysis**



**Plan 11d Highlights those areas with no accessible natural greenspace provision at the 500ha level of ANGSt analysis**





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