

# London Arc East Sub-area Profile

East of England Plan > 2031

Scenarios for housing and economic growth



## EAST OF ENGLAND PLAN REVIEW > 2031

### LONDON ARC EAST SUB-AREA PROFILE

#### 1. Introduction

- 1.1. A series of sub-area profiles have been prepared to provide more local information about the growth scenarios described in the main consultation document for the East of England Plan review. The sub-areas are based on unitary and district council boundaries, for convenience of data collection, and are broadly based on the groupings used in the draft East of England Implementation Plan.
- 1.2. It is important to recognise that the groupings have been used for reporting purposes only. They do not replace existing sub-regional designations within the Plan (the relationship is described in the relevant sub-areas) nor do they have any implications for local governance arrangements or local government reorganisation.
- 1.3. All the sub-areas and their constituent local authorities are shown in the table below.

<b>Sub-area</b>	<b>Local authority</b>
Bedford	Bedford
Cambridgeshire	Cambridge, East Cambridgeshire, Fenland, Huntingdonshire, South Cambridgeshire
Essex Thames Gateway	Basildon, Castle Point, Rochford, Southend-on-Sea, Thurrock
Greater Norwich	Broadland, Norwich, South Norfolk
Great Yarmouth and Waveney	Great Yarmouth, Waveney
Haven Gateway	Babergh, Colchester, Ipswich, Mid Suffolk, Suffolk Coastal, Tendring
Heart of Essex	Braintree, Brentwood, Chelmsford, Maldon
London Arc East	Broxbourne, East Hertfordshire, Epping Forest, Harlow, Uttlesford,
London Arc West	Dacorum, Hertsmere, North Hertfordshire, St Albans, Stevenage, Three Rivers, Watford, Welwyn Hatfield
Luton and Central Bedfordshire	Luton, Central Bedfordshire
North	Breckland, King's Lynn and West Norfolk, North Norfolk
Peterborough	Peterborough
West Suffolk	Forest Heath, St Edmundsbury

#### 2. Information in each sub-area profile

- 2.1. Each of the profiles has two parts. Part 1 includes:
  - a. a short description of the sub-area;
  - b. an indication of what the four growth scenarios mean in terms of housing numbers for the sub-area. The origin and role of the scenarios are described in part 3 of the main consultation document but in summary are: scenario 1 is the continuation of the current Plan (26,000 new dwellings each year between 2011 and 2031); scenarios 2 and 3 are designed to meet the lower end of the housing range that Government has asked the Assembly to test

(about 30,000 new dwellings each year) with albeit with different distributions of the growth; and scenario 4 is based on the Government's latest household projections (33,700 new dwellings each year);

- c. the population, household, and economic estimates and projections for the sub-area, namely:
- mid-2007 population estimates (Office for National Statistics August 2008);
  - dwelling stock data 2007/08 (Housing Strategy Statistical Appendix Department for Communities and Local Government January 2009)
  - 2006-based population projections (Office for National Statistics June 2008);
  - 2006-based household projections (Department for Communities and Local Government March 2009);
  - 2007 jobs estimates and projections to 2031 - East of England Forecasting Model (Insight East spring 2009 run);

The projections indicate what might happen if existing trends continue. They do not take account of policy, such as dwelling targets or regeneration schemes. However, they do give an indication of likely development pressures that will require policy management. The economic projections show what might happen on the basis of how the economy is anticipated to perform, as well as the level of jobs associated with scenarios 1, 2 and 3.

- d. a summary of the advice the Assembly has already received from county and unitary authorities on, amongst other things, the level and distribution of future dwelling provision and employment targets. Councils were provided with an initial set of growth scenarios for comment and were also invited to provide an alternative scenario if they thought there was one more appropriate. It should be noted that their advice refers to the initial set not to the revised scenarios described in the 'growth scenarios' section in each profile. In preparing their advice, county councils were asked to consult with district and borough councils within the county area. The full advice can be found at <http://www.eera.gov.uk/What-we-do/developing-regional-strategies/east-of-england-plan/east-of-england-plan-review-to-2031/east-of-england-plan-review-to-2031-strategic-advice/>;
- e. the response to a 'call for proposals' made to developers and others. This sought to identify the potential that exists for new small scale sustainable settlements / urban extensions i.e. from 2000 to 10,000 dwellings. It is important to note that this call was made to assist the testing of options for growth and does not confer any special status on the proposals received or any guarantee that they will be considered favourably if / when a planning application is submitted. A summary of the appropriate county / unitary authority's assessment of these proposals is also included and where proposals relate to more than one local authority area this is shown. This does not necessarily represent a comprehensive account of all sites being promoted by developers;
- f. a summary of the specific East of England policies which apply to all or part of each sub-area. The Plan contains a series of 'generic' policies i.e. they apply across the whole region in relation to, for example, the spatial strategy, economic development, housing, transport and the environment, as well as specific policies which apply to the 'key centres for development and change' and to sub-regions. It is the latter that is included here; and

- g. the progress made in preparing local development documents. These are the principle tool for implementing the Plan policies. Details of the local delivery In addition, an indication of progress made in implementing the Plan in term through the local development.
- 2.3. Part 2 provides baseline information for the sub-area using the themes or 'sustainability topics' identified in the Integrated Sustainability Framework's topic papers<sup>1</sup>. It draws on the information sources within the topic papers and additional material that has been published since the topic papers were published in June 2009. A separate paper provides an explanation of the sources used. Scott Wilson, the consultants appointed by the Assembly to carry out the Integrated Sustainability Appraisal, have used the baseline information to assess the likely significant effects of growth for each sub-area. This can be found in the 'Interim Integrated Sustainability Report' available on EERA's website ([www.eera.gov.uk](http://www.eera.gov.uk)).

**We would like to make this evidence base as complete as possible so if you have any further information you think we should include, please submit this in response to supplementary question 7 in the main consultation document.**

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<sup>1</sup> <http://www.eera.gov.uk/What-we-do/developing-regional-strategies/east-of-england-plan/east-of-england-plan-review-to-2031/east-of-england-plan-review-to-2031-integrated-sustainability-appraisal/>

### 3. LONDON ARC EAST SUB-AREA – PART 1

- 3.1. The sub-area covers the five administrative areas of Broxbourne and East Hertfordshire, within Hertfordshire, and Epping Forest, Harlow and Uttlesford within Essex. The area is heavily influenced by its proximity to London.
- 3.2. It has key transport links of the M25, the M11 and Stansted Airport within it. It has an excellent strategic location allowing good access to national and international markets. The quality of the natural environment is strong and, in Epping Forest, Hatfield Forest and the Lee Valley Regional Park it benefits from nationally and regionally important natural environment and greenspace. Although relatively affluent, it has, in Harlow and Lee Valley, a location with significant areas of deprivation.
- 3.3. The sub-area has a population of 498,000, living in 214,000 dwellings, with about 250,000 jobs.

#### Growth scenarios

- 3.4. The growth being tested for this sub-area is between 39,000 and 63,320 new dwellings between 2011 and 2031 distributed as shown below.

Local authority	New dwellings 2011-2031			
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Epping Forest	3,200	3,200	7,760	11,000
Harlow*	20,200	20,200	20,200	4,000
Uttlesford	8,600	21,600	8,600	7,000
Broxbourne	5,120	5,120	6,540	6,000
East Hertfordshire	13,200	13,200	15,300	11,000
Sub-area total	50,320	63,320	58,400	39,000

\*Harlow has a tightly drawn boundary so most of the growth indicated would need to occur in surrounding areas

- 3.5. Scenario 1 shows the consequences of continuing the current Plan rate. In scenario 2 the increase in Uttlesford reflects a potential capacity for regional scale growth to the south of the A120, although the Regional Scale Settlement Study notes that this is only an option if there is significant growth at London Stansted Airport. The study considered that Braintree was also a strong location for a new settlement, and so it could alternatively be located in that council area (see the Heart of Essex sub-area profile). In scenario 3 the increases in Epping Forest, Broxbourne and East Hertfordshire, as compared to scenario 1, reflect the potential for economic growth in those districts. For Harlow, the economic baseline projections suggest that 15,500 fewer dwellings would be needed but, as this is a regeneration area, the housing growth is held at the scenario 1 level as it is assumed interventions would be made to raise economic performance. Scenario 4 shows the number of dwellings that would be required if past demographic trends, including migration patterns, continue. For Harlow, this scenario significantly reduces growth, as the planned urban expansion of Harlow in the current Plan has not yet started and therefore is not reflected in past migration trends.

## **Population and economic change**

- 3.6. National population projections suggest that if recent trends continue London Arc East's population will be 567,000 by 2031. This is 73,000 or 15% more people than in 2006. Of this change:
- 50,000 is due to natural change (more births than deaths)
  - 24,000 is due to people moving into the area  
(numbers rounded to nearest thousand and do not sum)
- 3.7. Unlike the regional average, the area's population change is dominated by natural change. This is more certain to occur than migration which is harder to predict.
- 3.8. Government's household projections, which have been used to develop scenario 4, predict that between 2011 and 2031 there will be an additional 39,000 households in the sub-area.
- 3.9. This is the only sub-area in the region where the baseline economic projections suggest a need to supply more dwellings (41,000) than implied by the Government's household projections (39,000). This is particularly so for East Hertfordshire.
- 3.10. Scenarios 1 to 3 suggest the jobs that would need to be created between 2011 and 2031 could be of the order of 36,800 (scenario 1), 43,500 (scenario 3) or 47,000 (scenario 2).

## **Views on growth**

- 3.11. The sub-area straddles two counties. Essex County Council has advised the Regional Assembly that, for Epping Forest, Harlow, and Uttlesford, an approach based on the current Plan rate is the most appropriate. It advises that regional strategic growth to 2031 should be focussed primarily upon Harlow as a 'key centre for development and change', with limited growth to meet local needs at smaller towns, but that there are delivery problems up to 2021, let alone up to 2031. It notes that it is important to safeguard open Green Belt in the southern part of the area. It also advises that it does not support the proposed Elsenham Eco Town (in Uttlesford Council area).
- 3.12. Hertfordshire County Council has advised that only the current Plan rate should be considered for the county as a whole, and that even this level of growth will be challenging and raises significant deliverability issues. At even this scale of growth there would need to be substantial greenfield releases.
- 3.13. The submissions received in response to the Assembly's 'call for proposals' and which met the criteria are shown below.

Name	Reference	Number of dwellings
Epping East (Epping Forest)	CP31	2000
Waltham Abbey East (Epping Forest)	CP50	2000
Sawbridgeworth East (Epping Forest)	CP53	2000
North Weald Airfield (Epping Forest)	CP57	4000
North Weald Airfield (Epping Forest)	CP79	6000
East of Harlow (Harlow & Epping Forest)	CP35	4500
South of Harlow (Epping Forest)	CP95	4500
West Harlow (Harlow)	CP20	1900
North Harlow (Harlow & East Herts)	CP49	2000
North Harlow (Harlow & East Herts)	CP54	16,000+
North Harlow (East Herts)	CP89	8000
Easton Park (Uttlesford)	CP14	8050-9200
Chelmer Mead, Little Dunmow (Uttlesford)	CP19	3000
Andrewsfield New Settlement (Uttlesford & Braintree)	CP40	10,000
Boxted Wood Eco Settlement (Uttlesford & Braintree)	CP48	10,000
Elsenham (Uttlesford)	CP63	5000
NW Braintree (Braintree)	CP103	2000
High Leigh (Broxbourne)	CP42	2000
Bishop's Stortford North (East Herts)	CP3	2700
NES 5 Stevenage (East Herts)	CP25	5000
Ware East (East Herts)	CP52	2000
Harlow North - east Briggens Estate (East Herts)	CP68	4000

3.14. Essex County Council has had broad regard to proposals within its area in its assessment of the scale and distribution of growth.

3.15. Hertfordshire County Council has not assessed the submissions to the call for proposals. The Hertfordshire Spatial Development Options Study, accompanying the council's advice to EERA, acknowledges where 'call for proposals' sites exist, under all the scenarios considered.

3.16. Although not included among the first tranche of potential eco-town locations announced in July 2009, Government has indicated that North-East Elsenham in Uttlesford could be among the second wave if issues are resolved.

#### **Current Plan policies for the sub-area**

3.17. The East of England Plan sets housing targets relating to the London Arc East sub-area as shown below.

Local authority	Number of additional dwellings
Broxbourne	5,600
East Hertfordshire	12,000
Epping Forest	3,500
Harlow	16,000
Uttlesford	8,000
Sub-area total	45,100

3.18. The Plan also sets two indicative targets for additional jobs provision for 2001-2021 both of which relate partially to this sub-area.

<b>Area</b>	<b>Indicative jobs target 2001-21</b>
Hertfordshire (incs Broxbourne & East Hertfordshire)	68,000
Rest of Essex (incs Epping Forest, Harlow & Uttlesford)	56,000

- 3.19. The Plan identifies Saffron Walden in Uttlesford as part of the Cambridge sub-region.
- 3.20. The Plan indicates that a strategic review of the Green Belt is needed at Harlow, involving land at Harlow, East Hertfordshire and Epping Forest to meet regional development needs, with a more local review at Broxbourne.
- 3.21. The East of England Plan has a specific policy in relation to the whole of the London Arc (East and West) (policy LA1) which, in summary, indicates that the emphasis should be on Green Belt restraint and urban regeneration, with the need for towns in the London Arc to develop their existing individual roles. The need to work with Greater London and those responsible for delivering strategic transport networks is also stressed (but note that details of this policy have been amended as a consequence of the legal challenge as described in the main consultation document).
- 3.22. Harlow is identified as a 'key centre for development and change' and the strategy for the town is set out in policy HA1 of the Plan. The emphasis in the strategy is on the economic and physical regeneration of this post war new town, with the policy providing guidance in relation to a review of the Green Belt, the creation of a network of green spaces, the development of the town centre and employment areas, the transport priorities for the town and the approach to delivery of the strategy.
- 3.23. The Plan also identifies Harlow as a 'major town centre' in relation to retail and other town centre purposes, and as a 'regional transport node'. Harlow and the Lee Valley is identified as a priority area for regeneration having areas of significant deprivation within it.
- 3.24. The Plan gives flexibility to local councils to determine how much development is needed to support other settlements and villages within the rest of the sub-area.

### **Implementation**

- 3.25. Broxbourne's and Uttlesford's core strategies have reached the 'preferred option' stage. East Hertfordshire, Epping Forest and Harlow are looking at joint working opportunities to help inform their own 'issues and options' documents. Public consultation on these is expected to take place during spring 2010.
- 3.26. Harlow Renaissance has been established as a delivery vehicle to take forward the growth and regeneration of the town. It comprises Harlow District Council, Essex County Council, the East of England Development Agency and the Homes and Communities Agency.

#### 4. LONDON ARC EAST SUB-AREA – PART 2

##### **Air Quality**

- 4.1. Air Quality Management Area (where levels of specified air pollutants are predicted to be above limits set through the National Air Quality Strategy) have been declared as follows:
- one in Epping (Epping Forest);
  - three in Saffron Waldon (Uttlesford);
  - one in Bishops Stortford (East Hertfordshire);
  - three in Broxbourne where the cause of poor air quality is related to traffic on the M25 motorway.
- 4.2. There are potential issues in this sub-area relating to the impact of Stansted airport (existing and expanded) on Hatfield Forest (East Hertfordshire). It will also be a driver for increased surface traffic and attendant pollution. Ozone levels have been exceeded at Throcking, Buntingford (East Hertfordshire), and nitrogen dioxide concentrations at other sites in the district are all predicted to be below the annual mean objective level.

##### **Biodiversity**

- 4.3. 58% of Sites of Special Scientific Interest in Essex as a whole are in a 'favourable' or 'unfavourable recovering' condition leaving a significant proportion which are in a relatively poor condition. The reason given for unfavourable conditions include: agricultural run-off, water pollution and discharge, public access and disturbance, overgrazing and air pollution. 87% of Sites of Special Scientific Interest in Hertfordshire are in a 'favourable' or 'unfavourable recovering' condition, and here the reasons given for unfavourable conditions in the remainder include: agricultural run-off, water pollution, inappropriate water levels, inappropriate weed control and under grazing.
- 4.4. Only 64% of the area of Epping Forest is in a favourable condition. One of the most significant factors for unfavourable condition here is nitrogen deposition due to air pollution. In Hertfordshire there is increased pressure from the expansion of Harlow (Essex), due to the loss of greenfield habitats, in particular development to the north of Harlow, raising concerns over loss of high quality habitat.
- 4.5. Biodiversity Action Plan priority habitats in this sub-area include:
- woodlands - within the Northern Thames Basin Joint Character Area in South Essex there are several hills and ridges (including Thorndon, Galleywood and the Danbury to Tiptree ridge) formed by the resistant beds of the underlying Bagshot Sands, which together make up the most wooded part of the area. Most ridges are crowned by characteristic woods of former common land, and many are ancient with an important resource of veteran trees. Ancient parklands and wood pasture were also previously found in other areas such as Broxbourne Woods in East Hertfordshire, internationally important ancient coppiced hornbeam woodland; and
  - grassland - flood Plain grazing marsh along the River Lee.

## Climate change and flood risk

4.6. **Carbon emissions** - estimates of carbon emissions and sectoral source for 2006<sup>2</sup> are shown below.

Local authority	Industry and commercial (% total CO <sub>2</sub> )	Domestic (% total CO <sub>2</sub> )	Road transport (% total CO <sub>2</sub> )	Land use and land use change (% total CO <sub>2</sub> )	Total (k tonnes CO <sub>2</sub> )	Per capita emissions (tonnes)
East Hertfordshire	36	36	29	-1	979	7.38
Uttlesford	29	23	48	-1	878	12.29
Epping Forest	21	29	49	0	1,187	9.66
Harlow	57	30	14	0	597	7.65
Broxbourne	32	41	28	0	521	5.86

4.7. Per capita carbon emissions are mixed in this sub-area, with Uttlesford and Epping Forest having higher, and the rest lower, per capita emissions than the national and East of England averages (8.78 and 8.09 respectively). The proportion of emissions from transport is generally higher than the national and regional averages (25% and 31% respectively), although much lower in Harlow. Transport emissions from Uttlesford are particularly high, probably due to transport to and from Stansted Airport.

4.8. **Renewable energy** - approximately 72 Giga Watt Hours of renewable energy is generated in Hertfordshire as a whole and the main source is landfill gas and sewage gas. There is one on-shore wind project with two in the planning process. Approximately 762 Giga Watt Hours of renewable energy is currently generated in Essex mainly from landfill gas and biomass. There are no on-shore wind projects, although there is one with planning approval, and two in the planning process.

4.9. **Current flood risk** - the sub-area is covered by the Thames Catchment Flood Risk Management Plan. Current risks are:

- fluvial flooding – approximately 5,200 properties are at risk of flooding from 1 river flood event every 100 years in the Thames catchment area within the East of England;
- other sources – surface water flooding has occurred as a result of extreme rainfall overwhelming the surface water drainage systems. However, the risk of surface water flooding in the catchment area within the East of England boundary is medium to low.

4.10. **Future flood risk** - sea level rise and higher peak river flows as a result of climate change, combined with land tilt in south east England, is expected to increase the probability of tidal and coastal flooding. As sea level and tides rise, the length of time that the fluvial rivers can discharge under gravity will decrease and the frequency of the Thames Barrier closure will increase. As climate change is expected to result in more frequent fluvial flooding, the tide-locking situation is likely to get worse. Under climate change, the area at risk of a 1 in 100 years flood event will increase by 19% in the River Lee.

<sup>2</sup>Data published by Defra:

<http://www.defra.gov.uk/environment/statistics/globalatmos/galocalghg.htm>

Approximately 6,400 properties will be at risk of flooding from the 1 in 100 years flood event in the Thames catchment area within the East of England (an increase of 25%). Demand for more housing is likely to put increased pressure on surface water and sewer drainage systems. The flooding situation will get worse as sewers reach the limits of their capacity and flood more frequently.

- 4.11. **Flood defences** - channel maintenance is carried out in rural areas. Generally major defences in the Thames catchment area tend to be designed to provide additional storage or additional conveyance of water rather than raised walls or embankments, such as the flood storage ponds at the Lee Flood Relief Channel. Where there are raised defences, there is a significant residual risk associated with overtopping as happened during the autumn 2000 floods at Waltham Abbey.
- 4.12. **Inappropriate development on the flood plain** - one minor scheme<sup>3</sup> was granted permission in Harlow and five in East Hertfordshire in 2007/8, contrary to the advice of the Environment Agency.

### Community wellbeing

- 4.13. **Deprivation and social inclusion** – within the sub-area there is a contrast with the southern districts (Broxbourne, Harlow and Epping Forest) being relatively more deprived than the rest of the sub-area according to the Index of Multiple Deprivation 2007 (where the district ranked 1 is the most deprived).
- 4.14. The table below shows the ranking of districts within the sub-area in the national and regional context.

Local authority	England ranking 2007 (out of 354)	East of England ranking 2007 (out of 48)
Epping Forest	229	21
Harlow	121	9
Uttlesford	347	47
Broxbourne	193	17
East Hertfordshire	336	45

- 4.15. **Health** - the health of the people living in this sub-area is generally better than the England average. There is, however, an exception - in Harlow the health of people is generally worse than the England average. This is largely associated with the levels of deprivation.
- 4.16. **Public perception** – according to the 2008 Place Survey levels of satisfaction within this sub-area as a place to live were similar to, or exceeded, the regional and national averages. Broxbourne and Harlow were the only two areas where area satisfaction was below average, with Broxbourne ranking third lowest in the region and Harlow fifth. Broxbourne also displayed a perceived issue with community cohesion ranking eighth lowest in the region.

<sup>3</sup> Minor schemes – less than 10 dwellings or less than 1000 sq m floorspace or 1 hectare

## **Economy and employment**

- 4.17. Harlow is one of the areas that economic projections suggest will have very little jobs growth over the review period. This is due to the dominance of the manufacturing sector which is predicted to decline further over the review period. However, the forecasts take no account of the major expansion and regeneration planned for Harlow. Regeneration will allow Harlow to diversify into other sectors predicted for growth such as research and development companies. Planned transport improvements will also allow for better links within the sub area to the key economic drivers of Cambridge, Stansted and London.
- 4.18. Economic projections for the area suggest an increase in jobs of 34,000 or 14% between 2011 and 2031. This is below the regional average which is an 18% increase in jobs. Even with this below regional average growth, this is only sub-area in the region where the economic baseline projection suggested more dwellings would be needed than shown in the national household projections (scenario 4). This affects East Hertfordshire the most.
- 4.19. Consultants were asked to look at the strategic employment provision required to meet the region's economic needs and aspirations, at a regional and sub-regional level and compare it with current provision. Further work is to be undertaken to assess the implications of the study but, among other things, it identified the following regional or sub-regional significant sites in this sub-area:
- East Hertfordshire - Glaxosmithkline Cluster (1) (25 ha);
  - Harlow - Glaxosmithkline Cluster (3) (37 ha);
  - Uttlesford - London Stansted Airport (N/K).

## **Historic environment**

- 4.20. The north and central areas of Essex possess many small hamlets, greens and farmsteads that are integral components of a historic countryside. This is especially evident, and vulnerable to change, in the M11 corridor. Small towns such as Great Dunmow have important central conservation areas. The south of the county was not as prosperous until the twentieth century, but has smaller market towns such as Ongar, which still have historic cores.
- 4.21. The new town at Harlow is increasingly valued for its architectural and town planning innovation, and has a number of conservation areas as well as listed buildings.
- 4.22. In Hertfordshire, the preponderance of high quality parks and historic gardens has contributed much to the historic landscape. The county has notable mediaeval city and town centres including Hertford. Many villages still have a distinctive landscape setting and have continually prospered with a wide range of vernacular and later listed buildings.
- 4.23. The table below shows the number of historic features in the sub-area.

Local authority	Listed buildings	Scheduled monuments	Heritage features at risk <sup>4</sup>	Registered parks and gardens
East Hertfordshire	3034	45	4	15
Broxbourne	260	8	1	1
Harlow	164	13	1	1
Epping Forest	1324	34	7	5
Uttlesford	3727	73	7	7

4.24. Natural England's National Landscape Character Assessment describes historic features within the primary Joint Characterisation Area that covers this sub-area:

- South Suffolk and North Essex Claylands - There are a number of impressive churches, a rich heritage of barns and surviving medieval enclosure. Sunken hollow lanes are a feature, lined with hedgerows. There is a concentration of historic moated sites in this area. There are a number of well preserved medieval towns and villages with elaborate timber-frame houses e.g. Thaxted. The Countryside Quality Counts assessment for notes a 52% loss of historic parkland in this Joint Character Area over the 20<sup>th</sup> Century, and the neglect of important aspects of the historic landscape; and
- the Northern Thames Basin – notable medieval and later historic homes are a feature here. The Countryside Quality Counts assessment comments that 52% of the historic parkland here has been lost during the 20<sup>th</sup> century, and suggests about 73% of historic farm buildings remain unconverted, with about 93% are intact structurally. The data suggests that important aspects of the historic resource remain neglected.

## Housing

4.25. In terms of overall dwelling completions, the London Arc East sub-area achieved a mixed performance over the period 2001 -2008. The sub-area as a whole delivered a build rate of 71% against its Plan target. At local authority level there was significant disparity with Epping Forest and Broxbourne achieving build rates of 134% and 128% respectively. Harlow achieved only 20% against its target, but its target includes dwellings to be built in neighbouring authorities, and major expansion that has yet to proceed through the local planning framework.

4.26. The sub-area is characterised by a large degree of variation in affordability. Using the 2008 lower quartile house price to earnings ratio as a measure, Uttlesford, (10.90), and East Hertfordshire, (10.90), can both be ranked within the ten least affordable areas in the Region, whilst Harlow, (at 6.81), is one of the most affordable.

4.27. Affordable housing completions accounted for 19% of all completions in 2007/08, representing a marginal improvement over the 18% achieved over the seven years from 2001-2008. This compares to the Plan's regional target for monitoring purposes of 'some 35%' which applies to permissions granted since May 2008.

<sup>4</sup> As listed in Heritage at Risk in the East of England 2009, English Heritage: [http://www.english-heritage.org.uk/upload/pdf/190609east\\_of\\_england\\_2009\\_har\\_register.pdf](http://www.english-heritage.org.uk/upload/pdf/190609east_of_england_2009_har_register.pdf)

## Land

4.28. The sub area covers 265,300 hectares of which 56,980 hectares (21%) is Green Belt.

4.29. **Previously developed land** - the East of England Plan gives priority to the re-use of previously developed land in and around urban areas and sets a target of 60% of development to be located on such land. The latest information on development on previously developed land and its availability is shown below. As the table indicates not all the available previously developed land will be physically suitable for housing and even where it is, it may not be in an appropriate location

Local authority	Percentage of dwellings completed on previously developed land 2001-08	Area of previously developed land unused or available	
		Total at 2007 (hectares)	Suitable for housing 2007 (hectares)
Epping Forest	82%	47	42
Harlow	44%	23	23
Uttlesford	63%	18	18
Broxbourne	62%	51	20
East Hertfordshire	85%	68	51

4.30. **Agricultural land** is divided into five grades of which grades 1, 2 and 3a are defined as the best and most versatile for crop production. Grade 2 land predominates in the area north and east of Harlow, with grade 3 land dominating to the west and south.

## Landscape

4.31. Natural England's National Landscape Character Assessment provides a consistent and comprehensive understanding of what gives England's landscape its character. This sub area is covered by the following Joint Character Areas:

- South Suffolk and North Essex Claylands - an undulating landscape of wooded arable countryside incised by small river valleys;
- part of the East Anglian chalk is found to the north of Uttlesford. This is a narrow continuation of the chalk ridge that runs south-west/north-east across southern England; and
- Northern Thames Basin along the south of Essex and Hertfordshire, which includes the Hertford plateau and river valleys and the Essex wooded hills and ridges. This is an area of transitional countryside as rural areas merge into the northern London suburbs.

4.32. The Countryside Quality Counts project was developed as a national indicator of how the countryside is changing. This shows that the Northern Thames Basin is showing change that is resulting in the erosion of its distinctive characteristics. This is a continuation of a trend that has been recognised since 1990. The assessment states that the continued erosion of the character of the

farmed landscape, together with the pressures from development, suggests that overall the character of the area continues to transform. Woodland has however, been maintained or strengthened locally.

- 4.33. The landscape character of the other Joint Character Areas in this sub-area are described as “maintained”; however, the diverging nature of settlements are reported as weakening local character.
- 4.34. The Regional Landscape Partnership has developed an Integrated Landscape Framework which provides more detail of landscape character and its sensitivity to inform the latter stages of the Plan review.

### **Rural areas**

- 4.35. The rural and urban typology map<sup>5</sup> shows that this sub-area is comparatively less rural than the north east of the region. However, there are still large rural areas within East Hertfordshire and Uttlesford.
- 4.36. Rural parts of this sub-area generally experience higher income levels than in north east rural areas of the region. High house prices in its rural areas are thought to be related to proximity to London rather than just rural location
- 4.37. In general, rural locations are linked to poor access to services including public transport, poor provision of affordable homes, increased likelihood of needing more than one vehicle, and an increased occurrence of vulnerable households living in non-decent homes.

### **Transport**

- 4.38. The London Arc East sub-area contains one of the key radial road routes into London (M11), as well as one of the three main east-west routes (A120 providing a link between the M11 to the A12). In addition, the A10 performs an important intra-regional role in the region’s road network.
- 4.39. Several areas of congestion are forecast to occur in the morning peak period on the M11 by 2031, for example moderate to severe congestion is predicted south of Junction 8. In particular, traffic flows approaching the M25 (between Junctions 7 and 6) are expected to reach the motorway’s capacity, due to the high levels of traffic joining at Junction 7.
- 4.40. The A10 will suffer from congestion by 2031, particularly with the southbound flows that are expected to exceed capacity approaching the junctions with the M25 and the A120.
- 4.41. By 2021, there will be congestion on the northern, southern and eastern strategic approaches to Harlow, in morning peak hour. In Epping there is generally no congestion on the northern, eastern and south-eastern approaches. However, the south-western approach will have severe congestion issues.

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<sup>5</sup> See the Integrated Sustainability Appraisal Scoping Report, Topic Paper 10 – Rural Areas and the Coast

- 4.42. The approaches to Bishops Stortford's ring road are generally not congested by 2021. However, there is likely to be congestion relating to both the M11 and the A120 at Little Hadham. Therefore, the latent demand on the A120 could be released by junction improvements that in turn would increase congestion closer to the urban area. In relation to the town of Hertford, there is no congestion to the north and south, but the eastern and western approaches are moderately congested, by 2021.
- 4.43. The London Arc East sub-area contains the third busiest airport in the UK. It has seen substantial levels of growth over the past decade, from under 7 million passengers per annum (mppa) to 24 mmpa in 2007. This, alongside growth in the housing and economy has resulted in the volume capacity ratio for the A120 between Great Dunmow and the M11 ranging from 90% to over 100% (concentrated between Stansted Airport and the M11).
- 4.44. The West Anglia Main Line serves the London-Stansted-Cambridge growth corridor linking central and north east London with Essex, Hertfordshire and Cambridge via the Lea Valley. It carries around 30 million passengers per annum. Use of the route is heavily related to commuting, particularly to the City of London. However, it also has an important function in providing surface access to Stansted Airport; as a result business and leisure travel is more evident on this route. Peak rail travel demand on the West Anglia Main Line builds significantly on the approaches to London.
- 4.45. Demand patterns are dominated by commuting to central London, but there are a number of other important markets, including growing demand at Docklands, Stansted Airport and Cambridge. Train overcrowding is experienced on peak period trains from towards the London boundary inwards, where the line splits into two with services operating via Seven Sisters on the Southbury Loop and via Tottenham Hale on the main line. This is a key issue for the West Anglia Main Line where the wide mix of traffic types operating on the route range from the slower stopping inner suburban services through to the express Stansted airport and commuter services from the East of England.
- 4.46. Work is underway to identify network capacity improvements necessary to meet the current capacity constraints and anticipated future demand on the route. Additional rolling stock is planned for introduction of the route for services to Stansted Airport and Cambridge. The Department of Transport is leading with this work on longer term requirements for the route. It has identified the challenges that need to be overcome if longer term 'growth' objectives are to be met:
- three distinct and sometimes conflicting markets - namely inner suburban, outer commuter and leisure, and Stansted Airport traffic;
  - route capacity within the existing timetable structure and mix of fast, semi-fast and stopping trains will become an increasing constraint;
  - both the above are affected by the configuration of two track lines, at-grade junctions and inadequate provision for train service recovery in perturbation.
- 4.47. The West Anglia Main Line has a significant number of level crossings on the route. With more frequent trains, crossings would be closed to road traffic for longer periods. This already has an effect on the local environment and transport services in the vicinity of these crossings.

- 4.48. Rail freight has also experienced significant growth in recent years and the West Anglia Main Line route is expected to play an increasing role in longer distance freight movements from the Thames ports to the north.
- 4.49. At Harlow, the provision of increased rail capacity to support the growth of the town is considered necessary and this can be either through longer trains or more frequent services and improved local access to the station will be important.

## **Waste**

- 4.50. Because this sub-area straddles the boundaries of Hertfordshire and Essex, the waste collection authorities in this sub-region are members of either the Hertfordshire Waste Partnership or the Essex Waste Management Board. The membership of both these partnership boards include all of the districts in the respective counties. The table below shows that there is a particularly large range in recycling performance between waste collection authorities within this sub-area.

**Household and composting rates for the year 2007/8**

<b>Local authority</b>	<b>Dry recycling %</b>	<b>Green recycling %</b>	<b>Combined recycling &amp; composting rate %</b>
Broxbourne	15.83	14.00	29.83
East Hertfordshire	17.71	12.16	29.87
Epping Forest	27.51	13.49	41.00
Harlow	21.27	1.18	22.45
Uttlesford	34.69	19.81	54.50

- 4.51. Uttlesford has the sixth highest recycling rate in England and is also in the top ten of improving councils for recycling for the year 2007/8.
- 4.52. In 2007/8, Hertfordshire landfilled 56% of municipal waste arisings with a 38.55% recycling and composting rate. In the same year, Essex landfilled 60% of municipal arisings with a 39.8% recycling and composting rate. Both of these recycling rates have increased for the year 2008/9 although official figures are yet to be published.
- 4.53. Essex County Council has adopted its joint Waste Management Strategy and has obtained Government funding under the private finance initiative for the development of treatment and disposal facilities.
- 4.54. There are significant amounts of hazardous waste arising from the chemical and pharmaceutical industries in this sub-area and increased capacity for treating these wastes will increasingly be needed in the future.

## **Water**

- 4.55. This sub-area is considered an area of serious water stress, as is most of the East of England. In most of this sub-area water resources are over-licensed or over-abstracted, except for part of Epping Forest district.

- 4.56. The sub-area is covered by two water resource zones run by Three Valleys and Thames Water Companies. Water resource plans will be finalised later in 2009, and will show how the water companies intend to manage the supply and demand of water over the next 25 years. Three Valleys Water currently records the highest per capita consumption in the region, of 176 litres per person per day, compared to a national average of 150 litres per person per day. Less than 30% of households have a water meter in this sub-area, compared to more than 50% elsewhere in the East of England.
- 4.57. A recent study by the Environment Agency<sup>6</sup> shows that the current surplus / deficit balance in the Three Valleys and Thames Water resource zones has a current surplus of 20-50 and a deficit of -20 - -5 mega litres per day, respectively. Projections, that take into account planned improvements, show that the surplus could be reduced to a deficit -20 - -5 mega litres per day in the Three Valleys zone, but increased to a 100-200 mega litres per day surplus in the Thames Water zone by 2031, if the East of England continues to grow and per capita water consumption remains at current rates.
- 4.58. Significant improvements were seen in river quality in Essex in the early 1990s. However, these improvements could not always be sustained and in parts started to deteriorate in 2000.
- 4.59. In 2006, the chemical quality of Hertfordshire's rivers deteriorated; from 61.2% to 56.77% in the 'very good or good' category. Overall, 9.57% of Hertfordshire river lengths failed to achieve their 'river quality objectives' in 2006, which was 7% more than the previous year.
- 4.60. The weather in 2007 reduced Hertfordshire's demand for water and gave groundwater levels a chance to recharge. However, bigger adjustments will have to be made to provide for a rising population and the changing climate.
- 4.61. Water issues are a key consideration in the Harlow area, and will have a strong bearing on the location of any future urban extension. A water cycle study has recently been completed but is not yet available.

### **Habitats assessment**

- 4.62. The Habitats Directive requires EU Member States to create a network of protected wildlife areas, known as Natura 2000, across the European Union. This network consists of Special Areas of Conservation, Special Protection Areas and Ramsar Sites (wetlands of international importance, designated under the Ramsar Convention). These sites are part of a range of measures aimed at conserving important or threatened habitats and species. As such, the Habitats Directive applies the precautionary principle to protected areas and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question.
- 4.63. Special Areas of Conservation, Special Protection Areas or Ramsar sites in this sub-area are summarised below:
- Epping Forest (SAC) consists of beech forests which remains important for a range of rare species. The long history of pollarding, and resultant large

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<sup>6</sup> The Impact of Housing and Water Efficiency policies on Water Supplies to the East of England. Environment Agency, March 2009

number of veteran trees, ensures that the site is also rich in fungi and dead-wood invertebrates;

- Wormley Hoddesdonpark Woods (SAC) have large stands of almost pure hornbeam, with sessile oak standards. There are areas dominated by bluebell, but elsewhere there are stands of great wood-rush with carpets of the mosses;
- Lee Valley (SPA) - these wetland habitats support wintering wildfowl, in particular Gadwall and Shoveler, which occur in numbers of European importance. Areas of reedbed within the site also support significant numbers of wintering bittern.