Greater Essex

Demographic Forecasts

Phase 2: Scenario development

incorporating

Phase 1: Model development

March 2012

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Foreword

The planning system is changing. The era of regional planning, through Regional Spatial Strategies, is being replaced by a more local approach to decision making regarding local growth and future development. This change is placing new and challenging responsibilities on local planning authorities to consider future growth levels for their own areas.

Local planning authorities will retain responsibility for establishing spatial planning strategies for their area through preparation of Local Development Frameworks or Local Plans. This responsibility will now be discharged in the absence of any prescriptive guidance from a regional tier of government on matters such as policy directions and specific quantitative targets, for example concerning future housing provision. Responsibility for establishing the level of future housing provision in their area will in future rest solely with the individual local planning authorities. A key part of estimating this future provision will be an assessment of the likely future population of each authority's area and the implications for provision of housing, jobs, infrastructure, services and facilities.

Against this background of change the Essex Planning Officers Association (EPOA) has identified the need for early collaboration between authorities on the preparation and use of demographic information. EPOA views the availability of robust and consistent demographic information and forecasts across a wide area as a vital component in any local planning authority evidence base; this then facilitates more informed discussion regarding future development with local communities, neighbouring authorities, infrastructure and service providers, developers and others. In particular, demographic data will be a key component to inform and mobilise the 'duty to cooperate' which the Localism Act places on authorities, their neighbours and other organisations when engaged in policy development and Local Plan preparation.

Over recent years authorities have generally made use of demographic forecasts commissioned by the former East of England Regional Assembly (EERA) for preparing and monitoring the Regional Spatial Strategy. In the absence of EERA, EPOA considers that it is important for authorities to gain the best possible understanding of trends in population and household growth for the period 2011 to 2031. A key issue for consideration will be the effect that current and successive rounds of ONS/CLG population and household projections and other trends may have on current spatial planning policies, particularly those concerning the scale and distribution of future housing provision.

The project, as commissioned by EPOA, envisages an agreed programme of work to be conducted in four phases over a fixed term to Summer 2012. A range of demographic forecasts representing a variety of scenarios is to be produced, together with other relevant demographic material. The scenarios will be defined by different parameters, to include migration-led, dwelling-led and economic-led approaches to demographic forecasts.

It is not the intention of this project to produce a recommended or preferred demographic forecast for any area. Rather, the approach is to encourage examination of the demography of each area from different perspectives. Hopefully this will allow appreciation of how the demography of an authority may be influenced by local circumstances and local policy choices. It will be for each local planning authority to determine its use of the forecasts and other outputs from this project to inform its future spatial policy development.

EPOA represents the twelve Local Planning Authorities in Essex, as well as the two unitary authorities of Southend-on-Sea and Thurrock and the County Council of Essex. The Association has also extended a welcome to East Hertfordshire District Council and Welwyn-Hatfield Borough Council as full contributing members of the project. The project also includes preparation of demographic forecast scenarios for additional local planning authorities which are not contributing to the project. This broader approach has been taken in order to provide EPOA members with equivalent demographic data for all their neighbouring authorities or sub-regional partners. This feature of the project is intended to facilitate the 'duty to cooperate' for all EPOA member authorities.

I trust that you find this initiative by the Association to be informative and of assistance at this time of change and uncertainty.

Steve Rogers
Chairman, Essex Planning Officers Association

1. Introduction

1.1.Context

Local authorities in Essex and adjoining areas have historically made use of demographic forecasts commissioned by the former East of England Regional Assembly (EERA). These forecasts informed the preparation and monitoring of the Regional Spatial Strategy (RSS). With the revocation of the RSS and the abolition of the planning functions of the East of England Local Government Association (the successor body to EERA), demographic forecasts and analysis will no longer be available from this source. Local authorities are now charged with the production of a new evidence base to support the preparation of Local Plans and to contribute to other planning activities within the Greater Essex area.

The Essex Planning Officers Association (EPOA) represents the 12 Local Planning Authorities in Essex, as well as the two unitary authorities of Southend-on-Sea and Thurrock and the County Council of Essex. Heads of planning departments from the authorities meet several times a year to discuss planning issues affecting the whole of Essex and to produce planning guidance documents to support local developments. To replace the demographic services provided by the former EERA, the EPOA has commissioned Edge Analytics to prepare a range of population, household and labour force forecasts to ensure consistency and robustness of evidence across the range of technical studies to be undertaken by EPOA and its member authorities.

In addition, the two authorities of East Hertfordshire DC and Welwyn-Hatfield BC are contributing to, and participating in, the project on an equal basis to the EPOA member authorities. The inclusion of forecasts for other, non-contributing authorities is for the purpose of enabling the contributing authorities to have an appreciation of neighbouring authorities for the purposes of facilitating the 'duty to cooperate' as now included in the Localism Act 2011.

Edge Analytics will deliver the required analysis using the POPGROUP suite of demographic forecasting models. These models are used extensively by local authorities across the UK, providing a desktop utility for the evaluation of alternative growth scenarios to support local planning. Under licence to the Local Government Association (LGA), Edge Analytics provides product development and technical support to the product suite and its user base.

1.2. EPOA requirements

EPOA's demographic requirements are to be delivered through an agreed programme of work over a fixed term to summer 2012. EPOA has specified its geographical area of interest, which encompasses a total of 24 local authority districts and unitary authorities plus a number of 'macro' areas, created as aggregates of these. Analysis, forecasting and reporting is to be undertaken for each of these defined geographical areas.

Districts & Unitary Authorities

ID	ONS old Area Code	ONS new Area Code	Area	Short label
1	22UB	E07000066	Basildon	BAS
2	22UC	E07000067	Braintree	BTE
3	22UD	E07000068	Brentwood	BRW
4	22UE	E07000069	Castle Point	CPT
5	22UF	E07000070	Chelmsford	CHL
6	22UG	E07000071	Colchester	COL
7	22UH	E07000072	Epping Forest	EPF
8	22UJ	E07000073	Harlow	HLW
9	22UK	E07000074	Maldon	MAL
10	22UL	E07000075	Rochford	ROC
11	22UN	E07000076	Tendring	TEN
12	22UQ	E07000077	Uttlesford	UTT
13	00KF	E06000033	Southend-on-Sea	SOS
14	00KG	E06000034	Thurrock	THU
15	12UB	E07000008	Cambridge	CamCity
16	12UG	E07000012	South Cambridgeshire	SCambs
17	26UB	E07000095	Broxbourne	Brox
18	26UD	E07000097	East Hertfordshire	EHerts
19	26UL	E07000104	Welwyn Hatfield	WelHat
20	42UB	E07000200	Babergh	Babergh
21	42UD	E07000202	Ipswich	Ipswich
22	42UE	E07000203	Mid Suffolk	MidSuff
23	42UG	E07000205	Suffolk Coastal	SufCoast
24	42UF	E07000204	St. Edmundsbury	StEdmun

Macro Areas

ID	Definition	Area	Short label
25	1-12	Essex CC	EssexCC
26	1-14	Greater Essex	GtrEssex
27	1, 4, 10, 13, 14	Essex Thames Gateway	EsxTham
28	3, 5, 9	Heart of Essex	HrtEssex
29	2, 6, 9, 11	Essex Haven Gateway	EssexHG
30	20-23	Suffolk Haven Gateway	SufflkHG
31	2, 6, 9, 11, 20-23	Haven Gateway	HG
32	7, 8, 12	West Essex	Wessex
33	17, 18	Hertfordshire (East)	EastHert
34	7, 8, 12, 17, 18	Stansted/M11 Corridor	StansM11
35	7, 8, 18	Harlow Joint Working Area	Harlow

Figure 1: EPOA study area definition

The project is to be delivered to a series of specific milestones as follows:

(1) Demographic model configuration & validation (September/October 2011)

The first phase of work used POPGROUP technology to replicate the 2008-based sub-national population projections (SNPP) from the Office for National Statistics (ONS) plus the accompanying household projections from Communities and Local Government (CLG). This initial validation of the POPGROUP technology demonstrated consistency and equivalence of output to the SNPP and to ONS mid-year estimates and Council Tax data on dwelling stock change since 2001 (see Appendix 4). This phase was a key aspect of the project, providing the EPOA authorities with confidence that public discussion of the forecast scenarios can focus on the policy implications of the scenarios rather than technical demographic issues.

(2) Scenario analysis & report (October 2011)

Following the configuration and validation work in phase 1, a suite of scenarios is to be produced to enable an evaluation of alternative growth trajectories. These scenarios include the following:

1. SNPP 2008-base (benchmark)
2. A migration-led scenario (using historical data for 2006-2010)
3. Zero-net migration
4. Dwelling-led – from Annual Monitoring Reports
5. Dwelling-led – draft review RSS
6. Dwelling-led – approved RSS
7. Jobs-led – using output from the Autumn 2010 baseline forecast of the East of England Forecasting Model

Scenarios will be developed for each of the 24 local authority areas, using a 2033 horizon for each forecast. Results for individual areas will be aggregated to produce output for the 11 macro areas. These scenarios will provide the new evidence base to both support the preparation of Local Plans and to contribute to other planning activities within each local area.

(3) Demographic model update, scenario analysis & report (January/February 2012)

This phase will deliver an updated set of forecast scenarios following review of relevant demographic issues that have resulted from the material presented in previous phases. It incorporates any new releases of additional demographic intelligence from ONS. The scenarios can be expected to include updated/revised specifications of migration-led, dwelling-led and jobs-led versions detailed in Phase 2.

(4) Demographic model update, scenario analysis & report (June 2012)

A final phase to the project will deliver a report that reviews the 2011 mid year estimates, availability of 2011 Census data and any other relevant demographic evidence and evaluates the likely impact upon forecasts produced in previous phases. Further scenario forecasts will also be produced.

1.3.Structure of this report

This report constitutes a summary of Phase 1 – 'Model Development' and Phase 2 - 'Scenario Development'. Section 2 details the composition of the seven scenarios that are to be tested. Section 3 provides summary output for each of the scenarios, for the 24 districts and the macro areas. The Appendices provide additional information on methodology, data and assumptions used in the modelling process, including details of the approach taken in Phase 1 to model calibration and validation.

1.4.Study progress and programme

COMPLETED

Phase 1 – Model Development

See Appendices to this Report

COMPLETED

Phase 2 – Scenario Development

See Sections 2 and 3 of this Report

SPRING 2012

Phase 3 – Update and Review of Scenarios

- Review implications for Scenarios of publication of,
  - ONS indicative mid-year population estimates 2006-2010
  - ONS 2010-based national population projection
- Produce further scenarios including updates to AMR dwelling trajectory scenario and economic scenario

SUMMER 2012

Phase 4 – Further Update and Review of Scenarios

- Review implications for Scenarios of publication of,
  - ONS 2011 mid-year population estimates
  - ONS 2010-based sub-national population projection
  - 2011 Census initial results and output tables
- Produce further scenarios.

2. Scenario Development

2.1. Summary

A total of seven scenarios have been tested on each of the 24 local authority districts within the EPOA study area. These scenarios are as follows:

Scenario Name	Description
SNPP	A 'trend' scenario which reproduces the 2008-based sub-national population projections (SNPP) from ONS
Migration-led - R	An alternative 'trend' scenario which uses additional evidence from 2009-2010 to update the trend forecast
Net-nil Migration - R	A 'trend' scenario which maintains in-migration and out-migration to each district but sets the overall net balance to be zero
Approved RSS – R	A 'dwelling-constrained' scenario that is controlled by the annual rate of dwelling provision set out in Policy H1 of the Approved RSS
Draft Review RSS - R	A 'dwelling-constrained' scenario that is controlled by the annual rate of dwelling provision set out in Policy H1 of the Draft Review RSS
AMR Dwelling Trajectory – R	A 'dwelling-constrained' scenario that is controlled by a new housing development trajectory provided by each district
Economic - R	A 'labour-force constrained' scenario that is controlled by an employment growth trajectory derived from the regional economic forecasting model

Note: The 'R' suffix on scenarios indicates that they have used headship rates that have been scaled to ensure consistency with Council Tax property statistics provided for each district.

In addition, four scenarios have been run to take account of alternative housing development trajectories for areas of Epping Forest, Harlow and East Hertfordshire. The scenarios are as follows:

Scenario Name	Description
Approved RSS Pure – R	A 'dwelling-constrained' scenario that is controlled by the annual rate of dwelling provision set out in Policy H1 of the Approved RSS with a redistribution from Harlow to Epping Forest and East Hertfordshire
Approved RSS Realistic – R	A 'dwelling-constrained' scenario that is controlled by a housing development trajectory based on the Approved RSS housing provision that the districts felt appropriate for the purposes of modelling in this study
Draft Review RSS Pure - R	A 'dwelling-constrained' scenario that is controlled by the annual rate of dwelling provision set out in Policy H1 of the Draft

	Review RSS with a redistribution from Harlow to Epping Forest and East Hertfordshire
Draft Review RSS Realistic - R	A 'dwelling-constrained' scenario that is controlled by a housing development trajectory based on the Draft Review RSS housing provision that the districts felt appropriate for the purposes of modelling in this study

2.2. Scenario detail

A note on household scenarios

For all scenarios EXCEPT the SNPP scenario, household forecasts have been derived using a set of household headship rates that have been calibrated to be consistent with Council Tax statistics (see Appendix 2). The household forecast for the SNPP scenario is consistent with that published by CLG in its 2008-based round of household projections; it is the only household forecast that is run with the CLG's headship rates unchanged.

In each scenario, a Household-Dwelling conversion factor has been derived from the 2001 Census. This converts the household forecast to a dwelling equivalent and vice versa. The Household-Dwelling factor remains constant throughout the projection period (see Appendix 2).

All scenarios, apart from SNPP (see below), have been run with a 2010 base year and a 2033 horizon. At the base year the population is the ONS mid year estimate for 2010 (published June 2011) and the dwellings are taken from Council Tax statistics (see Figure 14 in Appendix 2). Household totals at 2010 are adjusted to fit that population/dwelling relationship (see Appendix 2). From 2010 onwards all scenarios maintain fertility, mortality and headship rate trajectories as contained in the ONS/CLG 2008-based round of population and household projections. The age/sex structure of migrants is maintained constant across all scenarios, although the underlying premise of each scenario causes variation in the number of future migrants and population change.

The seven scenarios may be grouped into 3 types,

- Migration-led – assumptions on the future scale of migration are input to the model. The scenario forecast shows the future population, households, dwellings and labour force that would result from that level of migration. There are three scenarios of this type – SNPP; migration-led; and nil net migration.
- Dwelling-led – assumptions on the future scale of dwellings are input to the model. The scenario forecast shows the future migration, population, households and labour force that would result from that level of dwelling provision. There are three scenarios of this type – Approved RSS dwellings; Draft Review RSS dwellings; and AMR dwelling trajectory (plus four

additional scenarios for the three districts of Epping Forest, Harlow and East Hertfordshire - Approved RSS Pure, Approved RSS Realistic, Draft Review RSS Pure and Draft Review RSS Realistic).

- Economic-led – assumptions on the future scale of the labour force are input to the model. The scenario forecast shows the future migration, population, households and dwellings that would result from that level of labour force. There is one scenario of this type – Economic-led.

SNPP

The SNPP scenario is the benchmark against which all other scenarios are compared. This is the scenario which was used to calibrate and validate the model in Phase 1 of the Project. The scenario replicates the 2008-based sub-national projection from ONS; the latest set of 'official' projections for local authority districts in England. This 'trend' scenario is based on historical evidence from 2004-2008 and does not take account of any later information from the 2009 and 2010 mid-year estimates. In comparison to the other 6 scenarios the SNPP uses the projected populations for 2009 and 2010, rather than the mid year estimates. This means that there is some variation in the 2010 population between the SNPP scenario and the remaining scenarios.

Migration-led – R

To take account of more recent evidence from the 2009 and 2010 mid-year estimates, an alternative, 'Migration-led, 'trend' scenario has been run. This uses the later 2006-2010 period as the basis for the derivation of its migration assumptions from the components-of-change evident in the mid-year estimates. The scenario assumes that long-term variations in mortality and fertility are consistent with those evident in the latest (2008-based) national assumptions.

Net-nil Migration – R

An additional 'trend' scenario has been run, assuming that the 'net' impact of migration is zero throughout the projection period. This does not mean zero migration. The scenario assumes that in and out-migration continue (for both internal and international flows) but the overall balance between the two is zero. Fertility and migration assumptions remain consistent with the Migration-led scenario.

Approved RSS – R

The first of the dwelling-led scenarios (Figure 2) is based on the dwelling provisions set out in Policy H1 of the Approved Regional Spatial Strategy (May 2008). For each district, dwelling growth acts as

a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the dwelling target.

Draft review RSS – R

The second of the dwelling-led scenarios (Figure 3) is based on the dwelling provisions set out in Policy H1 of the Draft Review Regional Spatial Strategy (March 2010). For each district, dwelling growth acts as a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the dwelling target.

AMR Dwelling Trajectory – R

The final dwelling-led scenario (Figure 4) is based on the dwelling trajectory published in each authority's 2010 Annual Monitoring Report (AMR) or an updated dwelling trajectory that has been published and used for local planning policy purposes during 2011. For each district, dwelling growth acts as a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the dwelling target.

Economic - R

The final scenario is one which **constrains** future population and household growth to the economic baseline forecast of Autumn 2010 produced by the East of England Forecasting Model (EEFM) (see Appendix 3). Output from the EEFM includes a projected growth trajectory for the size of the labour force in each district. The annual growth associated with this trajectory is illustrated in Figure 5. For each district, the annual labour force growth acts as a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the labour force target.

The relationship between population, the labour force and the number of jobs in a district is controlled by three parameters: economic activity rates, unemployment rates and a commuting ratio. Economic Activity rates by age and sex have been derived from analysis by EERA which informed previous forecasts undertaken during RSS preparation and take account of changing labour force participation expected in the older age-groups as a result of proposed increases in the pension age (Figure 6). For each district, the unemployment rate and the commuting ratio have been derived from the 2001 Census and remain constant throughout the projection period (Figure 7).

Additional scenarios:

For the three Districts of Harlow, Epping Forest and East Hertfordshire four additional scenarios were prepared – two based on the dwelling provisions of the Approved RSS and two based on the dwelling provisions of the Draft Review RSS. This approach was taken in recognition of the fact that Policy H1 of both RSS documents identified a dwelling provision that was accounted against Harlow District, part of which was to be accommodated in Epping Forest and East Hertfordshire Districts.

In this report these four scenarios are presented both for the three Districts and for any Macro Area that includes at least one of them.

Approved RSS Pure – R

First of the two alternative 'Approved RSS' dwelling-led scenarios (Figure 8) is based on the dwelling provisions set out in Policy H1 of the Approved Regional Spatial Strategy (May 2008) but with dwellings redistributed from Harlow to Epping Forest and East Hertfordshire (dwelling provisions for all other districts remain the same as in the 'Approved RSS – R' scenario). For each district, dwelling growth acts as a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the dwelling target.

Approved RSS Realistic – R

Second of the two alternative 'Approved RSS' dwelling-led scenarios (Figure 9) is based on the dwelling provisions set out in Policy H1 of the Approved Regional Spatial Strategy (May 2008) but with dwellings redistributed from Harlow to Epping Forest and East Hertfordshire (dwelling provisions for all other districts remain the same as in the 'Approved RSS – R' scenario). This scenario accommodates the same total dwelling provision as the 'Approved RSS Pure – R' scenario but with annual provision rates varied to those that each of the three districts felt appropriate to their area for the purposes of the modelling exercise as a component of the study. For each district, dwelling growth acts as a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the dwelling target.

Draft review RSS Pure– R

First of the two alternative 'Draft review RSS' dwelling-led scenarios (Figure 10) is based on the dwelling provisions set out in Policy H1 of the Draft Review Regional Spatial Strategy (March 2010) but with dwellings redistributed from Harlow to Epping Forest and East Hertfordshire (dwelling provisions for all other districts remain the same as in the 'Draft review RSS – R' scenario). For each

district, dwelling growth acts as a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the dwelling target.

Draft review RSS Realistic – R

Second of the two alternative 'Draft review RSS' dwelling-led scenarios (Figure 11) is based on the dwelling provisions set out in Policy H1 of the Draft Review Regional Spatial Strategy (March 2010) but with dwellings redistributed from Harlow to Epping Forest and East Hertfordshire (dwelling provisions for all other districts remain the same as in the 'Draft review RSS – R' scenario). This scenario accommodates the same total dwelling provision as the 'Draft review RSS Pure – R' scenario but with annual provision rates varied to those that each of the three districts felt appropriate to their area for the purposes of the modelling exercise as a component of the study. For each district, dwelling growth acts as a **'constraint'** on population and household growth, with 'migration' used to balance the population and households required to achieve the dwelling target.

Scenario: Approved RSS – R

Net Dwellings

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total
Basildon	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	14,490
Braintree	290	290	290	290	290	290	290	290	290	290	290	385	385	385	385	385	385	385	385	385	385	385	385	7,810
Brentwood	170	170	170	170	170	170	170	170	170	170	170	175	175	175	175	175	175	175	175	175	175	175	175	3,970
Castle Point	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	4,600
Chelmsford	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	19,090
Colchester	830	830	830	830	830	830	830	830	830	830	830	855	855	855	855	855	855	855	855	855	855	855	855	19,390
Epping Forest	150	150	150	150	150	150	150	150	150	150	150	175	175	175	175	175	175	175	175	175	175	175	175	3,750
Harlow	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	23,230
Maldon	110	110	110	110	110	110	110	110	110	110	110	120	120	120	120	120	120	120	120	120	120	120	120	2,650
Rochford	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	5,750
Tendring	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	9,890
Uttlesford	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	9,890
Southend	290	290	290	290	290	290	290	290	290	290	290	325	325	325	325	325	325	325	325	325	325	325	325	7,090
Thurrock	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	21,850
Cambridge City	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	25,530
South Cambridgeshire	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330	30,590
Broxbourne	240	240	240	240	240	240	240	240	240	240	240	280	280	280	280	280	280	280	280	280	280	280	280	6,000
East Hertfordshire	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	660	15,180
Welwyn-Hatfield	480	480	480	480	480	480	480	480	480	480	480	500	500	500	500	500	500	500	500	500	500	500	500	11,280
Babergh	245	245	245	245	245	245	245	245	245	245	245	250	250	250	250	250	250	250	250	250	250	250	250	5,695
Ipswich	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	26,220
Mid Suffolk	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	8,625
Suffolk Coastal	295	295	295	295	295	295	295	295	295	295	295	350	350	350	350	350	350	350	350	350	350	350	350	7,445
St Edmundsbury	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	12,420
Essex CC	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,490	5,490	5,490	5,490	5,490	5,490	5,490	5,490	5,490	5,490	5,490	5,490	124,510
Greater Essex	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,765	6,765	6,765	6,765	6,765	6,765	6,765	6,765	6,765	6,765	6,765	6,765	153,450
Essex Thames Gateway	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,355	2,355	2,355	2,355	2,355	2,355	2,355	2,355	2,355	2,355	2,355	2,355	53,780
Heart of Essex	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	25,710
Essex Haven Gateway	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,790	1,790	1,790	1,790	1,790	1,790	1,790	1,790	1,790	1,790	1,790	1,790	39,740
Suffolk Haven Gateway	2,055	2,055	2,055	2,055	2,055	2,055	2,055	2,055	2,055	2,055	2,055	2,115	2,115	2,115	2,115	2,115	2,115	2,115	2,115	2,115	2,115	2,115	2,115	47,985
Haven Gateway	3,715	3,715	3,715	3,715	3,715	3,715	3,715	3,715	3,715	3,715	3,715	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	87,725
West Essex	1,590	1,590	1,590	1,590	1,590	1,590	1,590	1,590	1,590	1,590	1,590	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615	36,870
Hertfordshire (East)	900	900	900	900	900	900	900	900	900	900	900	940	940	940	940	940	940	940	940	940	940	940	940	21,180
Stansted/M11 Corridor	2,490	2,490	2,490	2,490	2,490	2,490	2,490	2,490	2,490	2,490	2,490	2,555	2,555	2,555	2,555	2,555	2,555	2,555	2,555	2,555	2,555	2,555	2,555	58,050
Harlow Joint Working Area	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	42,160
ALL AREAS	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	302,435

Figure 2: Dwelling Growth Trajectory – Approved RSS (Source: RSS, EPOA)

Scenario: Draft Review RSS – R

Net Dwellings

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total
Basildon	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	12,420
Braintree	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	7,590
Brentwood	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	3,910
Castle Point	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	4,600
Chelmsford	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	19,090
Colchester	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	19,320
Epping Forest	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	3,680
Harlow	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	18,400
Maldon	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	2,760
Rochford	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	4,370
Tendring	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	9,890
Uttlesford	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	9,200
Southend	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	6,900
Thurrock	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	21,390
Cambridge City	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	16,100
South Cambridgeshire	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	24,150
Broxbourne	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	5,980
East Hertfordshire	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	12,650
Welwyn-Hatfield	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	6,670
Babergh	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	7,820
Ipswich	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	19,550
Mid Suffolk	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	9,890
Suffolk Coastal	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	10,120
St Edmundsbury	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	12,420
Essex CC	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	115,230
Greater Essex	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	143,520
Essex Thames Gateway	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	49,680
Heart of Essex	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	25,760
Essex Haven Gateway	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	39,560
Suffolk Haven Gateway	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060	47,380
Haven Gateway	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	86,940
West Essex	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	1,360	31,280
Hertfordshire (East)	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	18,630
Stansted/M11 Corridor	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	2,170	49,910
Harlow Joint Working Area	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	1,510	34,730
ALL AREAS	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	268,870

Figure 3: Dwelling Growth Trajectory – Draft Review RSS (Source: RSS, EPOA)

Scenario: AMR Dwelling Trajectory – R

Net Dwellings

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total
Basildon	292	542	603	275	255	397	484	297	278	278	180	37	37	37	37	37	-	-	-	-	-	-	-	4,066
Braintree	368	236	220	321	292	317	318	379	327	240	218	258	268	248	186	185	-	-	-	-	-	-	-	4,381
Brentwood	257	251	230	150	77	136	118	102	101	101	101	101	101	101	101	-	-	-	-	-	-	-	-	2,028
Castle Point	110	113	113	113	113	113	234	234	234	234	234	153	153	153	153	153	-	-	-	-	-	-	-	2,610
Chelmsford	239	628	887	1,140	1,456	1,683	1,218	1,046	882	605	491	-	-	-	-	-	-	-	-	-	-	-	-	10,275
Colchester	633	819	786	925	793	801	1,058	987	909	1,015	954	784	735	714	522	-	-	-	-	-	-	-	-	12,435
Epping Forest	69	316	364	170	113	44	175	175	175	175	175	-	-	-	-	-	-	-	-	-	-	-	-	1,951
Harlow	116	282	287	190	253	480	515	459	442	333	500	500	300	300	300	300	-	-	-	-	-	-	-	5,557
Maldon	36	84	65	54	88	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350
Rochford	57	186	382	456	325	213	210	361	255	265	225	230	230	230	230	230	-	-	-	-	-	-	-	4,085
Tendring	227	246	345	673	628	562	656	629	599	497	319	243	253	228	215	216	200	150	150	150	150	-	-	7,336
Uttlesford	298	298	453	360	375	272	287	79	65	56	57	57	62	106	100	99	40	-	-	-	-	-	-	3,064
Southend	183	219	317	430	498	423	343	378	377	552	484	322	294	114	64	64	-	-	-	-	-	-	-	5,062
Thurrock	292	513	780	949	1,151	1,219	1,720	1,720	1,720	1,720	1,720	950	950	950	950	950	-	-	-	-	-	-	-	18,254
Cambridge City	447	728	1,694	1,577	1,425	1,271	1,281	1,089	832	425	60	-	-	-	-	-	-	-	-	-	-	-	-	10,829
South Cambridgeshire	759	1,052	874	861	1,150	1,218	1,007	600	1,005	1,280	1,355	1,440	1,000	1,000	1,000	-	-	-	-	-	-	-	-	15,601
Broxbourne	152	278	282	281	338	282	153	133	133	133	133	104	104	104	104	104	-	-	-	-	-	-	-	2,818
East Hertfordshire	200	378	404	505	642	655	647	300	300	300	300	300	300	300	-	-	-	-	-	-	-	-	-	5,531
Welwyn-Hatfield	205	246	254	392	434	343	251	174	148	199	91	28	64	40	11	11	23	23	-	-	-	-	-	2,937
Babergh	210	280	457	400	387	312	170	160	120	120	95	70	70	-	-	-	-	-	-	-	-	-	-	2,851
Ipswich	336	426	649	708	886	928	860	821	786	758	710	773	690	690	690	690	-	-	-	-	-	-	-	11,401
Mid Suffolk	542	762	596	596	432	545	545	213	213	163	163	163	163	163	-	-	-	-	-	-	-	-	-	5,259
Suffolk Coastal	246	678	406	320	212	83	39	42	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,047
St Edmundsbury	Data not available at this time - no dwelling scenario forecast to be produced for EPOA project																							
Essex CC	2,702	4,001	4,735	4,827	4,768	5,041	5,273	4,748	4,267	3,799	3,454	2,363	2,139	2,117	1,844	1,220	240	150	150	150	150	-	-	58,138
Greater Essex	3,177	4,733	5,832	6,206	6,417	6,683	7,336	6,846	6,364	6,071	5,658	3,635	3,383	3,181	2,858	2,234	240	150	150	150	150	-	-	81,454
Essex Thames Gateway	934	1,573	2,195	2,223	2,342	2,365	2,991	2,990	2,864	3,049	2,843	1,692	1,664	1,484	1,434	1,434	-	-	-	-	-	-	-	34,077
Heart of Essex	532	963	1,182	1,344	1,621	1,842	1,336	1,148	983	706	592	101	101	101	101	-	-	-	-	-	-	-	-	12,653
Essex Haven Gateway	1,264	1,385	1,416	1,973	1,801	1,703	2,032	1,995	1,835	1,752	1,491	1,285	1,256	1,190	923	401	200	150	150	150	150	-	-	24,502
Suffolk Haven Gateway	1,334	2,146	2,108	2,024	1,917	1,868	1,614	1,236	1,140	1,041	968	1,006	923	853	690	690	-	-	-	-	-	-	-	21,558
Haven Gateway	2,598	3,531	3,524	3,997	3,718	3,571	3,646	3,231	2,975	2,793	2,459	2,291	2,179	2,043	1,613	1,091	200	150	150	150	150	-	-	46,060
West Essex	483	896	1,104	720	741	796	977	713	682	564	732	557	362	406	400	399	40	-	-	-	-	-	-	10,572
Hertfordshire (East)	352	656	686	786	980	937	800	433	433	433	433	404	404	404	104	104	-	-	-	-	-	-	-	8,349
Stansted/M11 Corridor	835	1,552	1,790	1,506	1,721	1,733	1,777	1,146	1,115	997	1,165	961	766	810	504	503	40	-	-	-	-	-	-	18,921
Harlow Joint Working Area	385	976	1,055	865	1,008	1,179	1,337	934	917	808	975	800	600	600	300	300	-	-	-	-	-	-	-	13,039
ALL AREAS	6,274	9,561	11,448	11,846	12,323	12,320	12,289	10,378	9,922	9,449	8,565	6,513	5,774	5,478	4,663	3,039	263	173	150	150	150	-	-	140,728

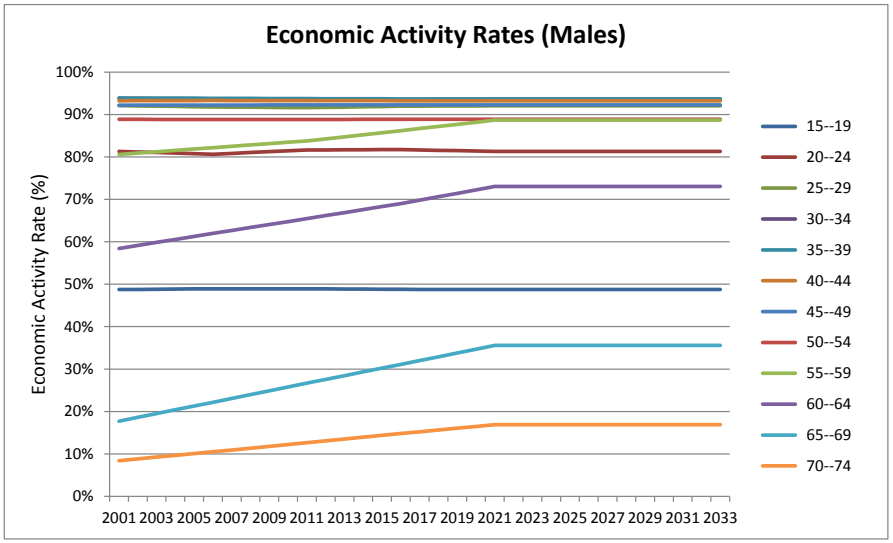
Figure 4: Dwelling Growth Trajectory – 2011 Revised (Source: EPOA)

Scenario: Economic – R

Labour Force - Change

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total Change
Basildon	- 459	318	1,011	1,339	1,296	1,041	771	406	210	197	165	129	124	113	105	97	90	105	105	138	155	155	155	7,765
Braintree	- 341	312	946	1,095	1,029	805	606	313	178	176	105	53	43	36	32	29	24	44	57	78	89	89	89	5,887
Brentwood	- 37	230	511	713	715	599	463	265	130	95	80	68	67	63	60	57	55	62	62	85	99	99	99	4,642
Castle Point	- 296	91	465	619	597	468	346	167	85	87	60	39	35	29	25	20	15	21	21	34	40	40	40	3,048
Chelmsford	23	662	1,359	1,623	1,581	1,318	1,045	661	446	420	348	289	279	270	264	259	252	274	284	319	337	337	337	12,986
Colchester	- 14	490	1,146	1,297	1,243	994	749	428	280	284	210	147	133	123	114	107	98	116	125	141	144	144	144	8,643
Epping Forest	- 142	435	933	1,345	1,319	1,096	841	466	233	179	155	137	132	119	113	103	98	107	100	143	166	166	166	8,409
Harlow	- 408	- 9	343	481	473	356	230	72	- 15	- 17	- 62	- 84	- 90	- 98	- 104	- 110	- 115	- 109	- 108	- 98	- 95	- 95	- 95	244
Maldon	- 35	245	518	571	527	410	312	167	101	96	66	44	39	36	33	31	28	35	38	48	52	52	52	3,467
Rochford	- 214	119	441	567	542	423	307	148	78	81	56	37	33	28	24	20	16	23	24	36	41	41	41	2,911
Tendring	- 298	43	524	626	595	442	305	111	76	112	66	21	11	4	- 2	- 6	- 11	5	15	20	19	19	19	2,718
Uttlesford	- 147	240	585	698	677	557	444	272	168	145	97	61	54	51	50	51	50	68	84	103	114	114	114	4,652
Southend	- 508	32	731	1,020	1,002	770	534	251	143	170	135	95	82	66	52	40	29	36	31	46	49	49	49	4,902
Thurrock	- 422	380	1,012	1,394	1,390	1,146	872	511	313	290	245	210	202	189	180	170	163	179	182	211	222	222	222	9,481
Cambridge City	551	909	1,408	1,550	1,558	1,370	1,173	924	740	721	683	647	647	649	651	656	657	678	696	727	753	753	753	19,852
South Cambridgeshire	535	1,202	1,961	2,153	2,146	1,887	1,628	1,261	993	948	883	823	820	822	825	831	832	861	885	931	970	970	970	26,139
Broxbourne	- 215	285	712	986	978	809	620	353	176	130	101	80	75	67	62	57	53	61	60	88	103	103	103	5,846
East Hertfordshire	- 184	437	1,080	1,347	1,332	1,108	870	525	291	230	147	93	81	73	69	66	62	82	93	128	149	149	149	8,379
Welwyn-Hatfield	24	390	822	1,041	1,059	914	749	523	366	342	310	281	281	279	280	280	279	295	307	334	352	352	352	10,212
Babergh	- 22	344	737	809	783	659	557	396	324	334	282	256	255	256	258	260	260	276	289	307	320	320	320	8,580
Ipswich	- 206	83	618	753	729	567	406	229	169	208	176	136	126	118	110	105	98	112	120	128	129	129	129	5,176
Mid Suffolk	204	427	762	781	718	595	501	356	296	307	274	246	246	250	253	257	258	275	290	306	319	319	319	8,561
Suffolk Coastal	38	324	767	865	848	699	563	365	273	276	226	181	177	176	176	178	175	198	219	236	246	246	246	7,699
St Edmundsbury	116	429	807	832	786	653	527	353	274	279	229	187	182	181	181	182	180	198	212	226	235	235	235	7,721
Essex CC	- 2,370	3,177	8,782	10,975	10,595	8,509	6,416	3,477	1,971	1,855	1,344	943	859	774	715	658	602	752	807	1,047	1,161	1,161	1,161	65,371
Greater Essex	- 3,300	3,590	10,525	13,389	12,987	10,426	7,823	4,239	2,428	2,315	1,724	1,248	1,143	1,028	946	868	793	966	1,020	1,304	1,431	1,431	1,431	79,755
Essex Thames Gateway	- 1,899	941	3,659	4,939	4,828	3,848	2,830	1,483	829	826	660	511	475	425	385	346	313	364	362	466	506	506	506	28,108
Heart of Essex	- 50	1,138	2,389	2,907	2,823	2,328	1,819	1,094	677	611	493	402	385	368	358	347	335	371	384	451	488	488	488	21,094
Essex Haven Gateway	- 689	1,091	3,134	3,589	3,394	2,651	1,971	1,020	635	668	447	266	226	200	178	162	140	200	235	287	304	304	304	20,715
Suffolk Haven Gateway	14	1,179	2,884	3,209	3,077	2,521	2,026	1,346	1,063	1,125	958	819	804	800	797	800	792	862	918	977	1,015	1,015	1,015	30,015
Haven Gateway	- 675	2,269	6,018	6,798	6,471	5,172	3,997	2,366	1,698	1,793	1,405	1,085	1,030	999	974	962	932	1,062	1,154	1,264	1,319	1,319	1,319	50,730
West Essex	- 697	666	1,861	2,524	2,469	2,009	1,514	810	387	307	189	114	96	72	59	44	33	66	77	148	186	186	186	13,305
Hertfordshire (East)	- 400	722	1,791	2,333	2,310	1,917	1,490	877	466	360	247	173	157	140	132	123	115	143	154	215	253	253	253	14,224
Stansted/M11 Corridor	- 1,097	1,388	3,652	4,857	4,779	3,926	3,005	1,687	853	667	437	287	252	212	191	167	148	209	231	363	438	438	438	27,529
Harlow Joint Working Area	- 734	863	2,355	3,174	3,124	2,560	1,941	1,062	509	392	239	146	123	94	78	60	45	80	86	172	221	221	221	17,032
ALL AREAS	- 2,460	8,421	20,198	24,507	23,923	19,688	15,416	9,523	6,328	6,091	5,034	4,178	4,034	3,899	3,812	3,739	3,648	4,004	4,192	4,715	5,009	5,009	5,009	187,918

Figure 5: Labour Force Growth Trajectory (Source: EEFM, EPOA)



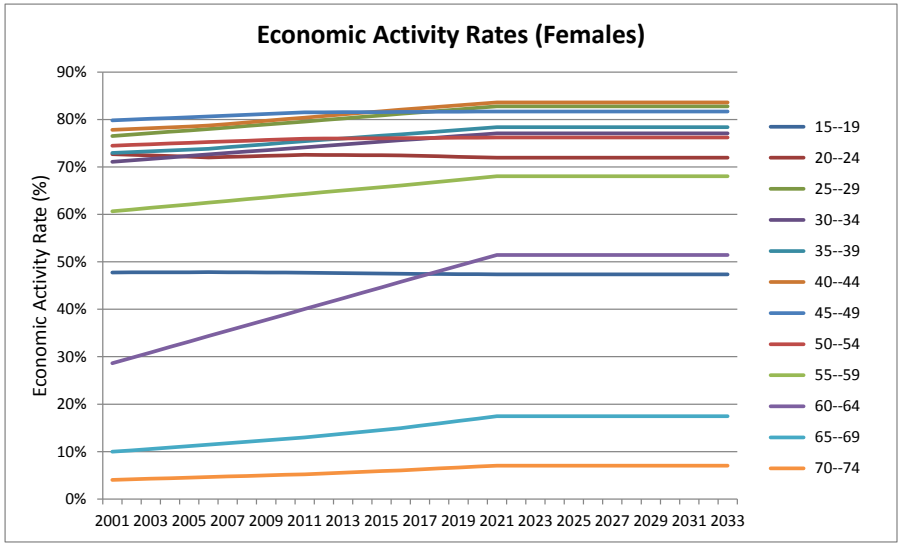


Figure 6: Economic Activity Rate, All Authorities in Project Area, 2001-2033 (Source: EERA, EPOA)

	Unemployment Rate
Basildon	4.5%
Braintree	3.2%
Brentwood	2.7%
Castle Point	3.6%
Chelmsford	2.9%
Colchester	3.4%
Epping Forest	3.8%
Harlow	4.7%
Maldon	3.1%
Rochford	3.0%
Tendring	5.0%
Uttlesford	2.4%
Southend	5.5%
Thurrock	4.8%
Cambridge City	3.8%
South Cambridgeshire	2.2%
Broxbourne	3.3%
East Hertfordshire	2.2%
Welwyn-Hatfield	3.0%
Babergh	3.2%
Ipswich	5.1%
Mid Suffolk	2.9%
Suffolk Coastal	3.2%
St Edmundsbury	3.0%

Source: 2001 Census

	Total Workers	Total Jobs	Commuting Ratio
	a	b	a/b
Basildon	78,497	77,078	1.02
Braintree	68,099	52,608	1.29
Brentwood	33,594	32,999	1.02
Castle Point	41,784	21,498	1.94
Chelmsford	81,848	75,733	1.08
Colchester	77,366	74,914	1.03
Epping Forest	60,380	40,465	1.49
Harlow	39,378	40,546	0.97
Maldon	29,690	20,956	1.42
Rochford	38,601	23,377	1.65
Tendring	55,112	42,257	1.30
Uttlesford	35,746	35,693	1.00
Southend	70,947	64,335	1.10
Thurrock	70,596	58,369	1.21
Cambridge City	49,596	78,863	0.63
South Cambridgeshire	70,800	65,862	1.07
Broxbourne	44,556	33,151	1.34
East Hertfordshire	69,133	59,422	1.16
Welwyn-Hatfield	47,032	56,307	0.84
Babergh	41,258	32,811	1.26
Ipswich	54,367	67,065	0.81
Mid Suffolk	43,902	35,518	1.24
Suffolk Coastal	53,422	49,238	1.08
St Edmundsbury	51,319	51,007	1.01

Source: 2001 Census

Figure 7: Unemployment Rate and Commuting Ratio (Source: 2001 Census)

Scenario: Approved RSS Pure – R

Net Dwellings

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total
Harlow	580	580	580	580	580	580	580	580	580	580	580	0	0	0	0	0	0	0	0	0	0	0	0	6380
Epping Forest	150	550	550	550	550	550	550	550	550	550	550	375	375	375	375	375	375	375	375	375	375	375	375	10150
East Hertfordshire	660	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	26380

Figure 8: Harlow Joint Working Area Dwelling Growth Trajectory – Approved RSS Pure (Source: RSS, EPOA)

Scenario: Approved RSS Realistic – R

Net Dwellings

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total
Harlow	530	530	530	530	530	530	530	530	530	530	530	50	50	50	50	50	50	50	50	50	50	50	50	6430
Epping Forest	150	150	150	150	150	505	505	505	505	505	505	530	530	530	530	530	530	530	530	530	530	530	530	10140
East Hertfordshire	660	660	660	660	660	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	1285	26430

Figure 9: Harlow Joint Working Area Dwelling Growth Trajectory – Approved RSS Realistic (Source: RSS, EPOA)

Scenario: Draft Review RSS Pure – R

Net Dwellings

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total
Harlow	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	0	0	6405
Epping Forest	160	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	8080
East Hertfordshire	550	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	19030

Figure 10: Harlow Joint Working Area Dwelling Growth Trajectory – Draft review RSS Pure (Source: RSS, EPOA)

Scenario: Draft Review RSS Realistic – R

Net Dwellings

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total
Harlow	530	530	530	530	530	530	530	530	530	530	530	50	50	50	50	50	50	50	50	50	50	50	50	6430
Epping Forest	160	160	160	160	160	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	8180
East Hertfordshire	550	550	550	550	550	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	19220

Figure 11: Harlow Joint Working Area Dwelling Growth Trajectory – Draft review RSS Realistic (Source: RSS, EPOA)

3. Scenario Forecasts

3.1. Summary of output

In this section a summary of the results of each of the seven scenarios is provided for each local authority area and for each macro area. The summary takes the form of a 'chart' and an accompanying 'table' of statistics.

The 'chart' illustrates the trajectory of population change resulting from each scenario. Scenarios are colour-coded and symbol-coded for ease of interpretation.

The 'table' then summarises the change in population and household numbers 2010-2033 that result from each scenario. The scenarios are 'ranked (high to low) based upon the level of population change 2010-2033 (so scenarios are not tabulated in the same order for each area). Each table also shows the average annual net migration associated with the population change; plus the expected average annual dwelling and jobs growth based on the assumptions used in each scenario.

The '''AMR Dwelling Trajectory – R''' scenario typically has a dwelling growth trajectory that reverts to zero before the end of the forecast period (the date of which is indicated at the foot of each table). This is because the AMR dwelling trajectories are generally based on the current availability of identified sites for residential development rather than potential housing provision set out in policy documents such as the RSS. This is indicated at the foot of each table. Average annual migration, dwellings and jobs will be influenced by this 'partial' trajectory so any comparison with other scenarios should take due recognition of this fact.

All seven scenarios have been run for all 24 areas, with one exception. No data is currently available for the St Edmundsbury ''AMR Dwelling Trajectory – R'' scenario, due to the evolution of planning policy in the Borough during 2011. This is noted on the summary page for St Edmundsbury, with the 'AMR Dwelling Trajectory – R' scenario included as a 'zero-dwelling change' scenario from 2010 onwards.

3.2. 'All Areas' scenario summary

A total of 24 local authority areas are included within the EPOA study area. These aggregate to produce the 'All Areas' total within the POPGROUP output. A summary of the output from each of the seven scenarios for the 'All Areas' geography is included below.

The SNPP scenario results in the largest population growth over the forecast period (23.4%). Using more recent evidence for its trend assumptions, the migration-led scenario results in a similar growth trajectory (23.4%). The 'Economic – R' scenario growth reduces further from the 'trend' scenarios, resulting in 18.2% population growth over the 2010-2033 forecast period. The two 'RSS' dwelling-constrained scenarios result in lower growth than either the trend or economic scenarios. The Approved-RSS scenario results in 15.3% population growth, the Draft Review RSS scenario 12.4% growth. Finally, the net-nil migration scenario achieves population growth of 2.2%, due solely to natural change with the net balance of migration set to zero.

Comparison of the ''AMR Dwelling Trajectory – R'' scenario with the other six scenarios is not possible for 'All Areas' or indeed any of the Macro areas. This is because the 'AMR Dwelling Trajectory – R' scenario reverts to zero dwelling change in individual authorities at different dates.

Household change statistics follow the sequence of population change estimates although the percentage change is higher in each case. This reflects the trend towards increasing rates of household formation and smaller household sizes over the forecast period.

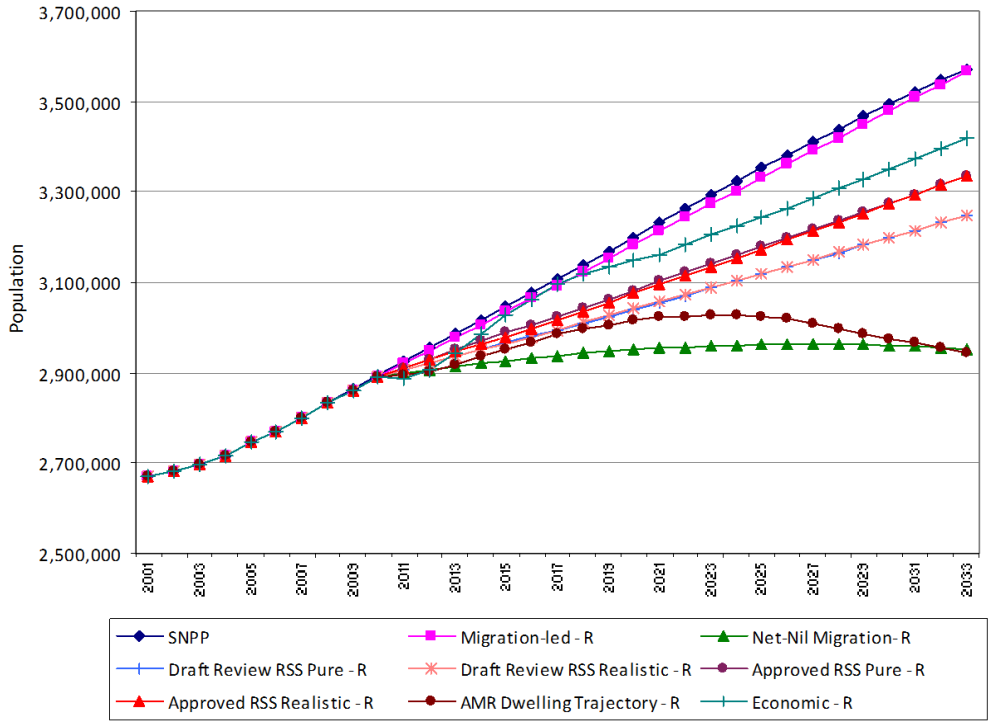
The average annual net migration statistics give an indication of how the 'trend' scenarios compare with the 'constrained' scenarios. For the economic and dwelling scenarios, migration is used to balance the level of population required to meet the labour force or dwelling targets set, year-on-year. In the case of the economic scenario, an average annual net migration of +16k would be required to meet the labour force constraints, a smaller total than the trend scenario would suggest. For the dwelling scenarios the average annual net migration totals reduce further to reflect the lower population required to meet the housing targets set. Net migration in the Net-nil migration scenario is zero in each year of the forecast period.

The average annual dwelling totals reflect the estimated housing requirement resulting from each scenario. In the case of the Approved RSS Pure, Approved RSS Realistic, Draft Review RSS Pure and Draft Review RSS Realistic scenarios, the average annual totals are equivalent to the housing totals provided by each local authority and detailed in Figures 2, and 3, apart from the three Districts of

Harlow, Epping Forest and East Hertfordshire where it is the data presented in Figures 8, 9, 10 &11. For the AMR Dwelling Trajectory scenario the average annual totals are equivalent to the housing totals provided by each authority and detailed in Figure 4.

The average annual jobs totals provide an estimate of the number of new jobs that would result from each growth scenario, taking into account the population, economic activity rates, unemployment rates and commuting ratios detailed previously (Figure 5, 6 & 7).

All Areas



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	677,378	23.4%	387,069	31.6%	20,679	17,365	10,856
Migration-led - R	675,099	23.4%	388,167	32.3%	21,579	17,374	12,340
Economic - R	526,580	18.2%	329,134	27.4%	16,302	14,757	7,669
Approved RSS Realistic - R	444,804	15.4%	294,966	24.6%	13,003	13,186	7,385
Approved RSS Pure - R	444,641	15.4%	294,878	24.6%	12,959	13,182	7,379
Draft Review RSS Realistic - R	357,650	12.4%	260,361	21.7%	9,860	11,651	4,889
Draft Review RSS Pure - R	356,971	12.3%	260,053	21.7%	9,853	11,637	4,879
Net-Nil Migration- R	62,266	2.2%	94,149	7.8%	0	4,191	-3,960
AMR Dwelling Trajectory - R	54,770	1.9%	136,992	11.4%	-2,218	6,119	-1,976

3.3. Local authority scenario summary

Individual local authority scenario summaries are ordered as follows:

Basildon

Braintree

Brentwood

Castle Point

Chelmsford

Colchester

Epping Forest

Harlow

Maldon

Rochford

Tendring

Uttlesford

Southend-on-Sea

Thurrock

Cambridge

South Cambridgeshire

Broxbourne

East Hertfordshire

Welwyn Hatfield

Babergh

Ipswich

Mid Suffolk

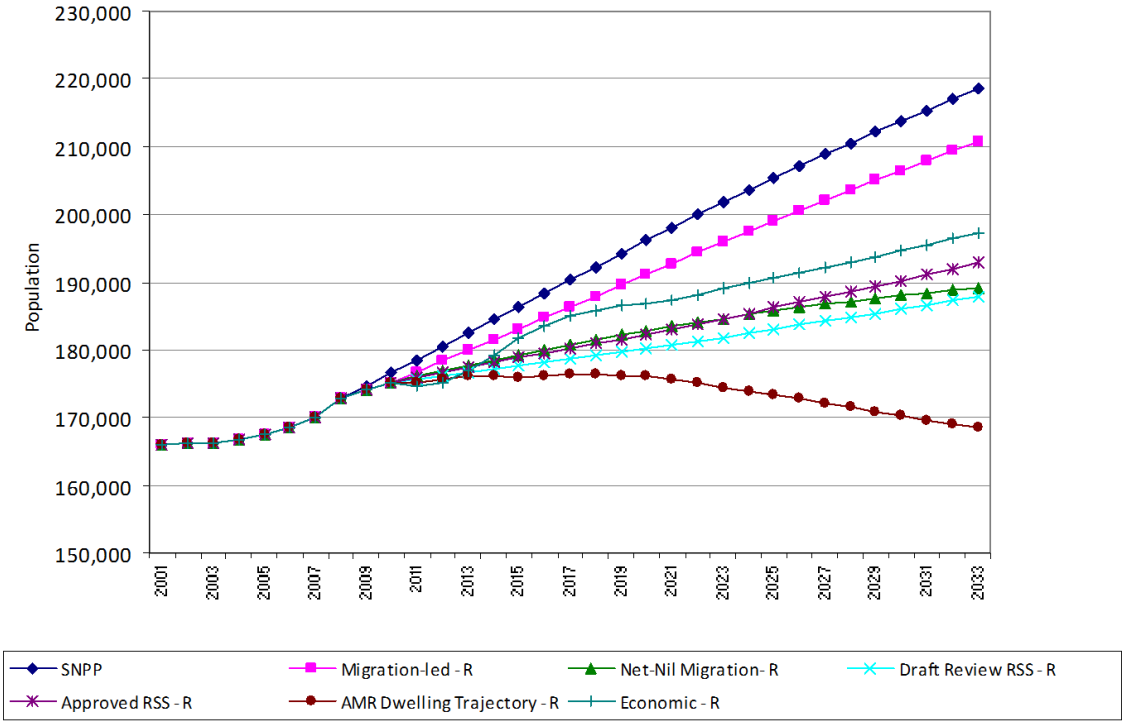
Suffolk Coastal

St. Edmundsbury

Note:

For the three Districts of Harlow, Epping Forest and East Hertfordshire four RSS scenarios are presented - Approved RSS Pure, Approved RSS Realistic, Draft Review RSS Pure and Draft Review RSS Realistic. For all other Districts two RSS scenarios are presented – Approved RSS and Draft Review RSS.

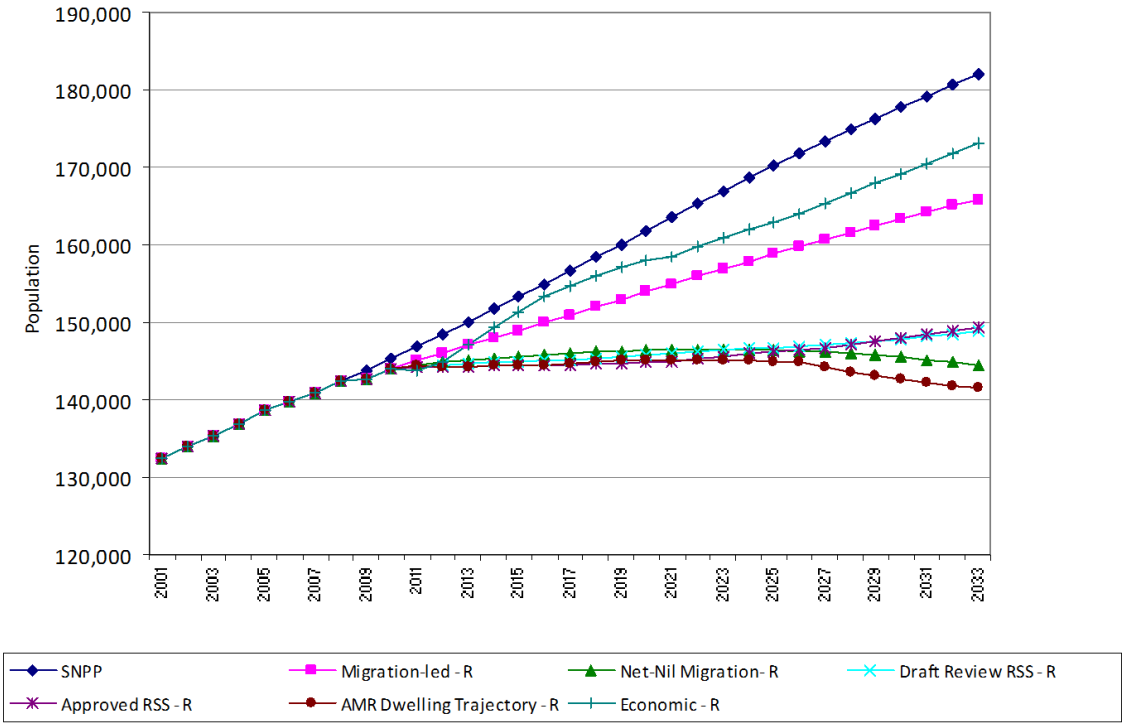
Basildon



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	41,970	23.8%	24,299	32.0%	793	1,081	766
Migration-led - R	35,595	20.3%	21,593	29.8%	689	961	615
Economic - R	22,077	12.6%	15,978	22.1%	187	711	316
Approved RSS - R	17,591	10.0%	14,160	19.5%	35	630	220
Net-Nil Migration- R	13,942	8.0%	10,109	14.0%	0	450	-1
Draft Review RSS - R	12,721	7.3%	12,137	16.8%	-144	540	113
AMR Dwelling Trajectory - R	-6,707	-3.8%	3,973	5.5%	-890	177	-317

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

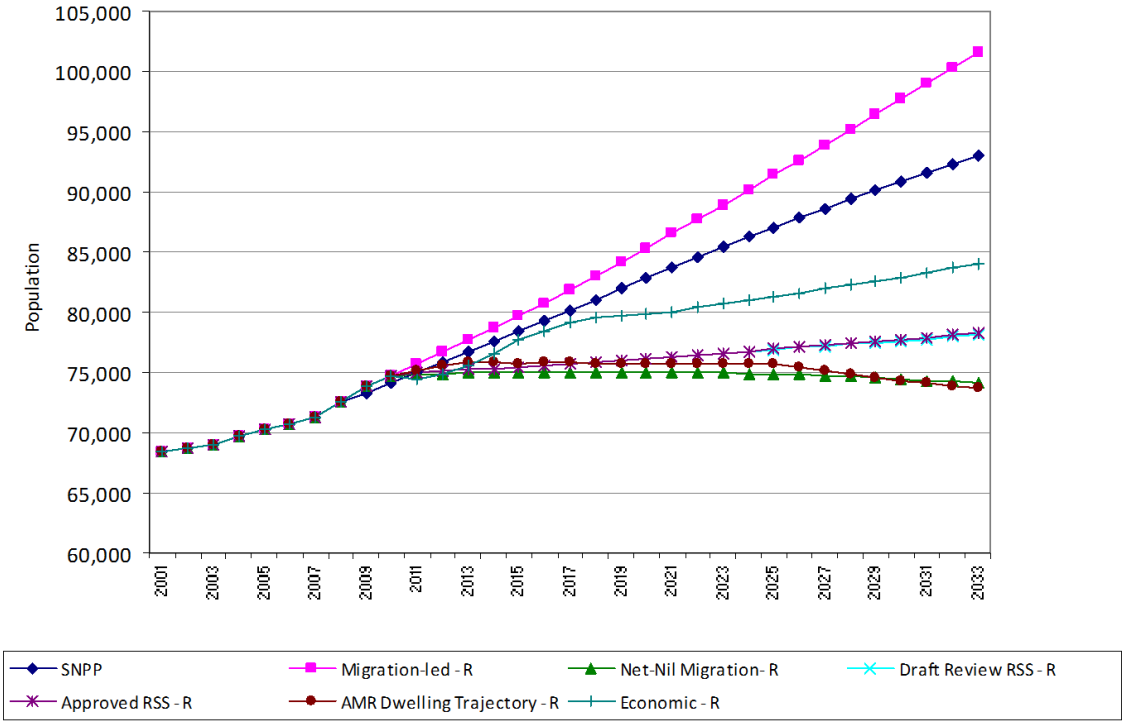
Braintree



Scenario	Change 2010 - 2033				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	36,626	25.2%	20,585	33.5%	1,218	918	417
Economic - R	29,161	20.2%	17,425	29.1%	1,035	777	192
Migration-led - R	21,839	15.2%	14,424	24.1%	757	644	65
Approved RSS - R	5,198	3.6%	7,611	12.7%	139	340	-218
Draft Review RSS - R	4,750	3.3%	7,396	12.3%	116	330	-227
Net-Nil Migration- R	427	0.3%	3,461	5.8%	0	154	-368
AMR Dwelling Trajectory - R	-2,569	-1.8%	4,269	7.1%	-180	190	-354

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

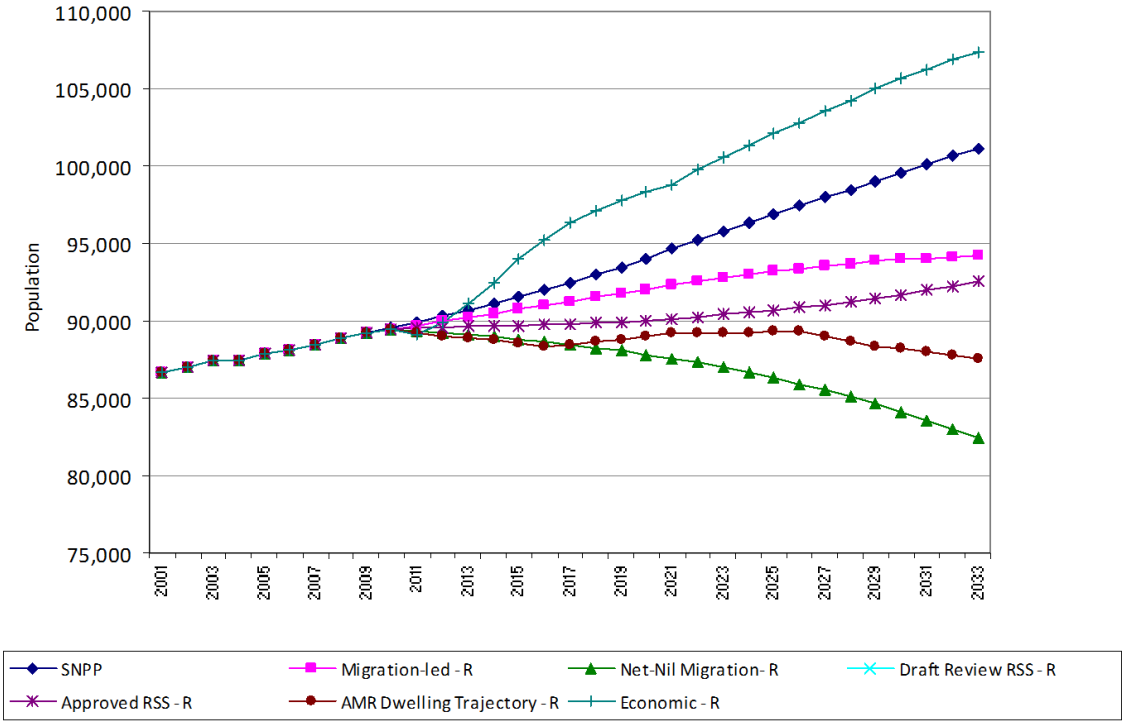
Brentwood



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	26,764	35.8%	13,190	42.8%	1,004	593	619
SNPP	18,898	25.5%	9,243	29.7%	659	415	376
Economic - R	9,225	12.3%	6,126	19.9%	335	275	193
Approved RSS - R	3,518	4.7%	3,842	12.5%	123	173	57
Draft Review RSS - R	3,377	4.5%	3,784	12.3%	117	170	53
Net-Nil Migration- R	-667	-0.9%	761	2.5%	0	34	-103
AMR Dwelling Trajectory - R	-1,072	-1.4%	1,962	6.4%	-62	88	-56

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2025 onwards

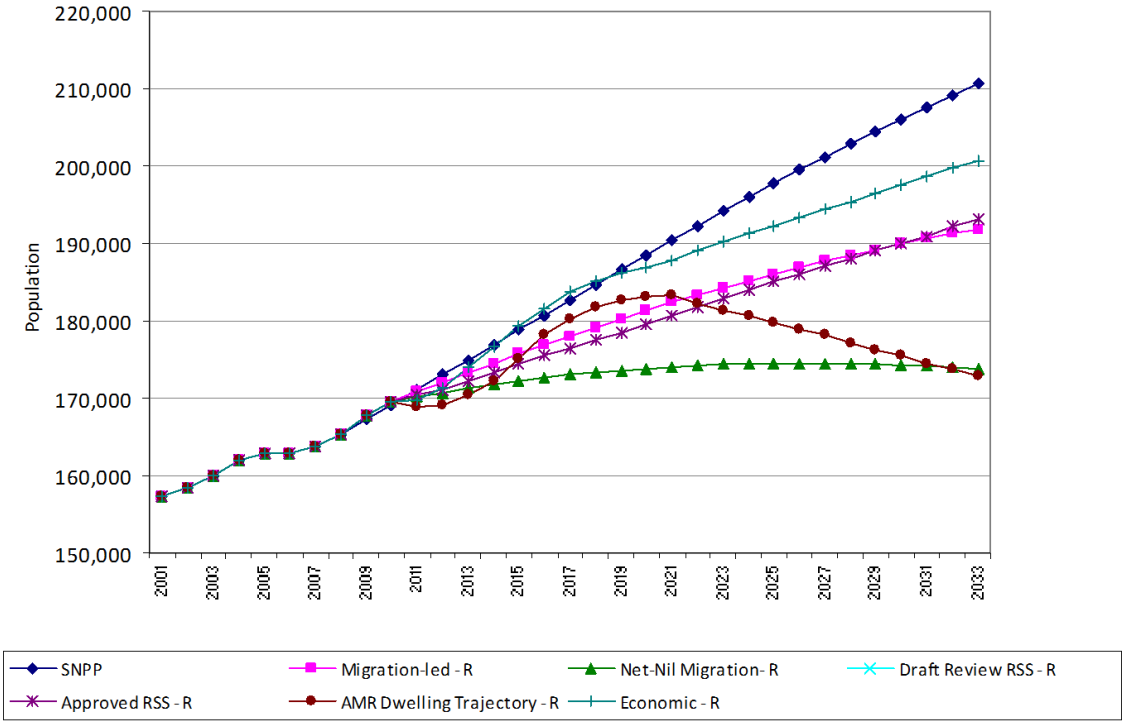
Castle Point



	Change 2010 - 2033				Average per year		
Scenario	**Population Change**	**Population Change %**	**Households Change**	**Households Change %**	**Net Migration**	**Dwellings**	**Jobs**
Economic - R	17,889	20.0%	10,241	28.1%	943	452	69
SNPP	11,561	12.9%	7,844	20.8%	706	346	25
Migration-led - R	4,766	5.3%	5,153	14.1%	423	227	-77
Approved RSS - R	3,171	3.5%	4,537	12.4%	365	200	-95
Draft Review RSS - R	3,171	3.5%	4,537	12.4%	365	200	-95
AMR Dwelling Trajectory - R	-1,799	-2.0%	2,574	7.1%	160	113	-150
Net-Nil Migration- R	-6,921	-7.7%	-546	-1.5%	0	-24	-245

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

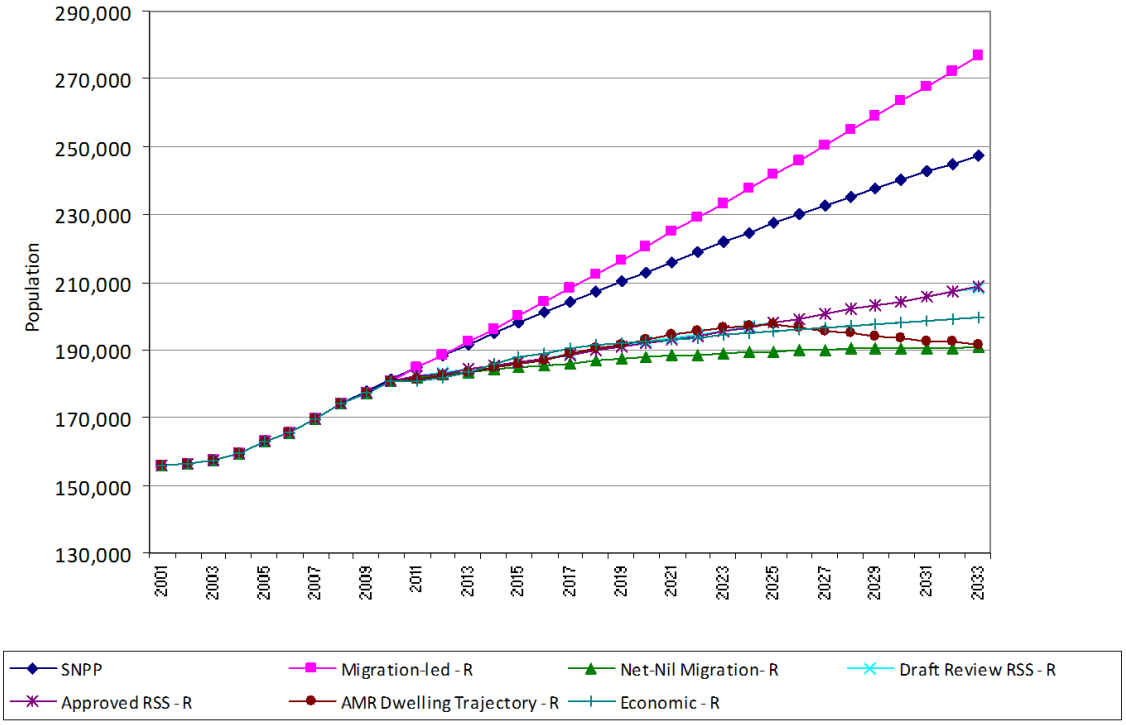
Chelmsford



Scenario	Change 2010 - 2033				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	41,421	24.5%	23,520	32.9%	1,060	1,044	733
Economic - R	31,223	18.4%	21,823	31.3%	942	969	508
Approved RSS - R	23,565	13.9%	18,699	26.8%	674	830	335
Draft Review RSS - R	23,565	13.9%	18,699	26.8%	674	830	335
Migration-led - R	22,293	13.1%	18,144	26.0%	611	805	302
Net-Nil Migration- R	4,346	2.6%	7,805	11.2%	0	346	-235
AMR Dwelling Trajectory - R	3,287	1.9%	10,064	14.4%	-154	447	-147

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2021 onwards

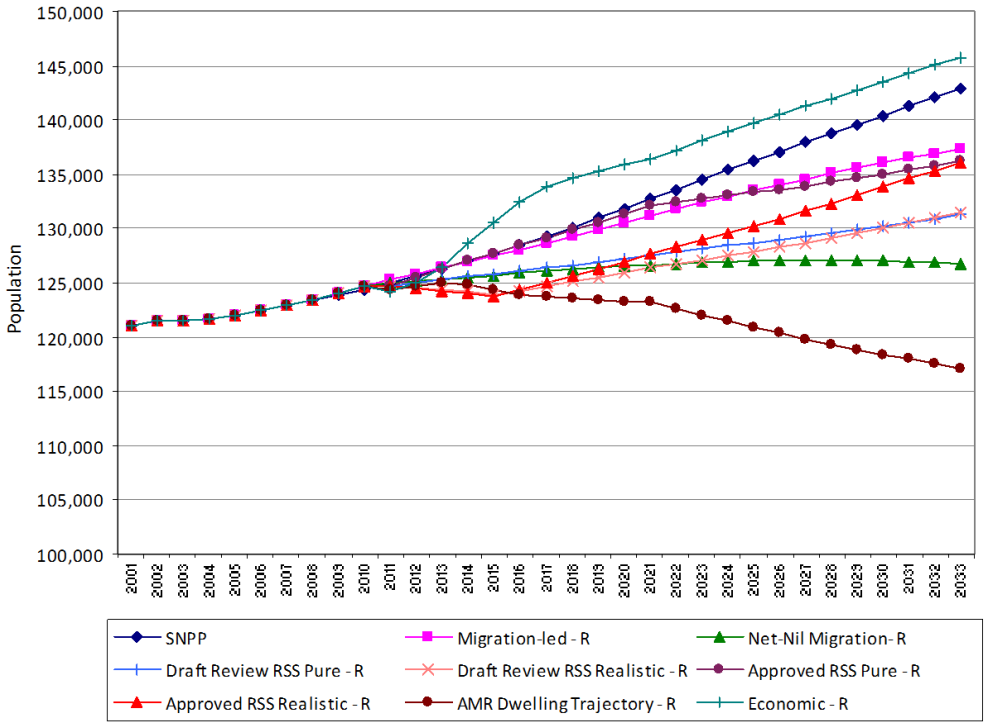
Colchester



	Change 2010 - 2033				Average per year		
Scenario	**Population Change**	**Population Change %**	**Households Change**	**Households Change %**	**Net Migration**	**Dwellings**	**Jobs**
Migration-led - R	95,663	52.8%	46,326	63.7%	3,074	2,066	2,166
SNPP	65,802	36.3%	33,267	44.4%	1,753	1,483	1,260
Approved RSS - R	27,500	15.2%	18,907	26.0%	549	843	565
Draft Review RSS - R	27,327	15.1%	18,839	25.9%	541	840	560
Economic - R	18,641	10.3%	15,356	21.1%	191	685	352
AMR Dwelling Trajectory - R	10,532	5.8%	12,125	16.7%	-149	541	153
Net-Nil Migration- R	9,729	5.4%	7,018	9.7%	0	313	-116

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2025 onwards

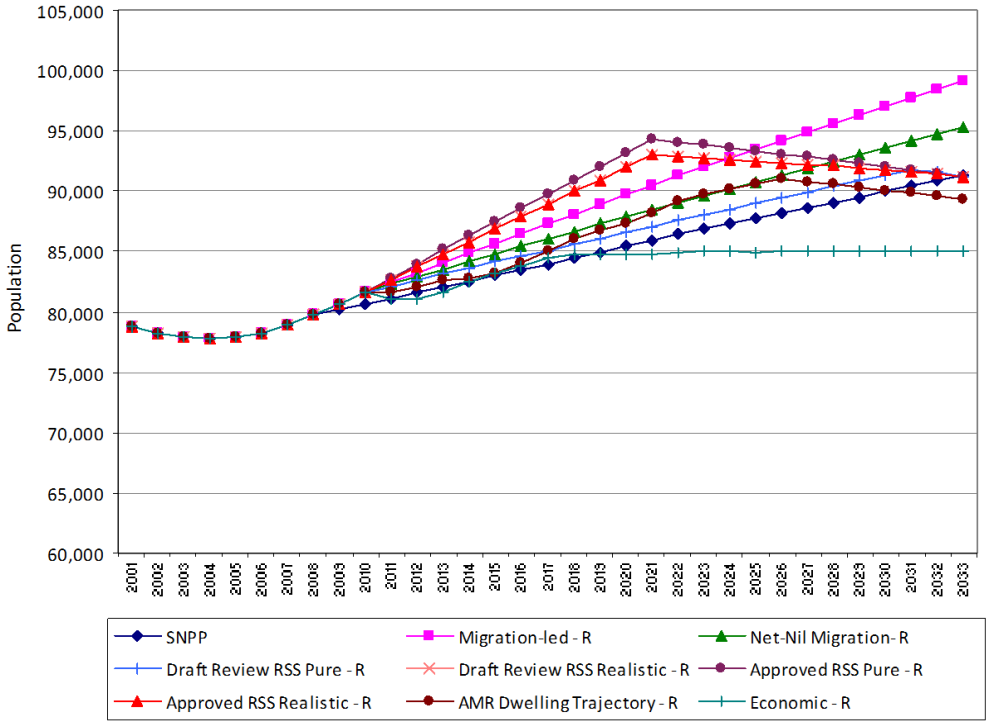
Epping Forest



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Economic - R	20,998	16.8%	13,894	26.4%	657	619	236
SNPP	18,444	14.8%	11,559	21.8%	552	515	200
Migration-led - R	12,586	10.1%	10,402	19.8%	354	463	104
Approved RSS Pure - R	11,443	9.2%	9,910	18.8%	307	441	85
Approved RSS Realistic - R	11,334	9.1%	9,901	18.8%	328	441	86
Draft Review RSS Realistic - R	6,777	5.4%	7,987	15.2%	154	356	14
Draft Review RSS Pure - R	6,566	5.3%	7,889	15.0%	139	351	10
Net-Nil Migration- R	2,037	1.6%	4,046	7.7%	0	180	-106
AMR Dwelling Trajectory - R	-7,648	-6.1%	1,905	3.6%	-402	85	-215

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2021 onwards

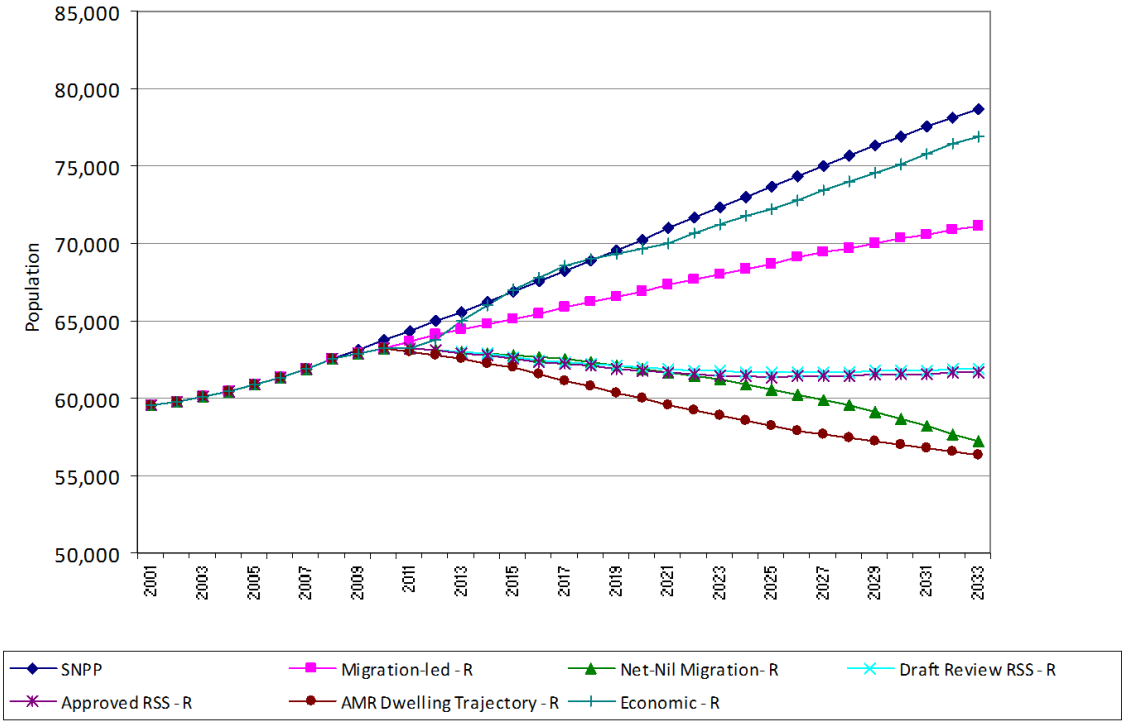
Harlow



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	17,559	21.5%	9,641	27.6%	98	427	361
Net-Nil Migration- R	13,656	16.7%	6,196	17.8%	0	274	187
SNPP	10,701	13.3%	6,348	18.1%	-223	281	194
Draft Review RSS Realistic - R	9,600	11.8%	6,317	18.1%	-226	280	157
Approved RSS Realistic - R	9,600	11.8%	6,317	18.1%	-226	280	157
Draft Review RSS Pure - R	9,578	11.7%	6,293	18.0%	-190	278	161
Approved RSS Pure - R	9,471	11.6%	6,268	18.0%	-241	277	152
AMR Dwelling Trajectory - R	7,641	9.4%	5,460	15.6%	-276	242	106
Economic - R	3,362	4.1%	3,658	10.5%	-407	162	10

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

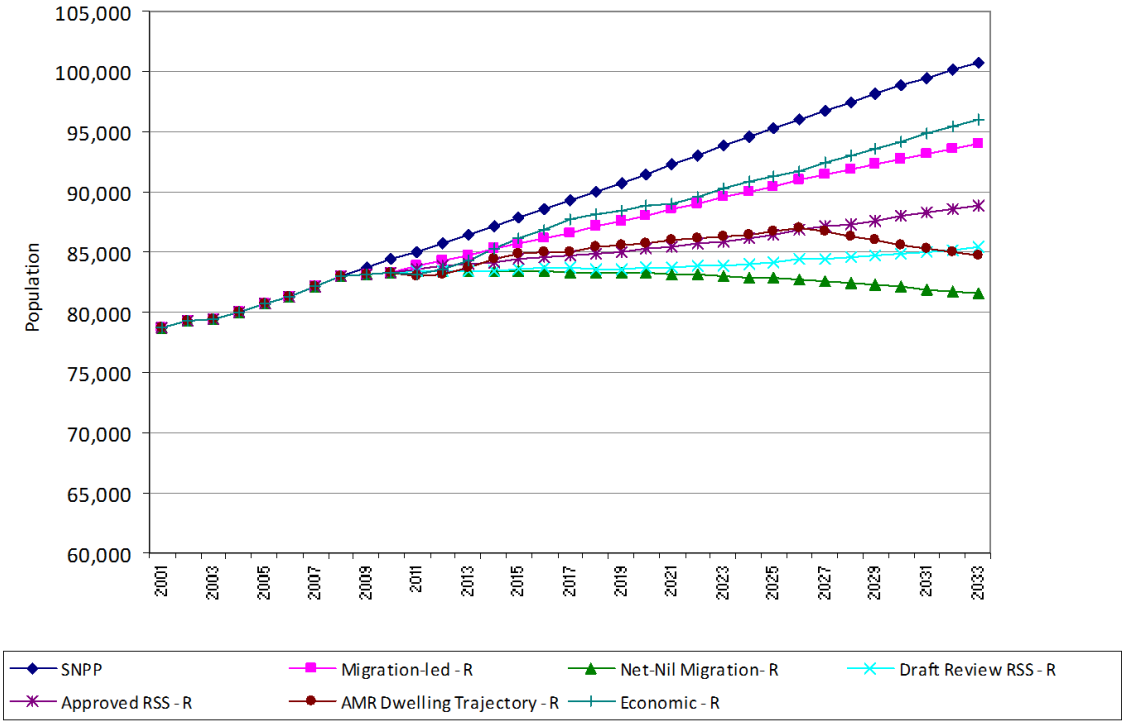
Maldon



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	14,996	23.5%	8,739	32.4%	780	396	142
Economic - R	13,701	21.7%	8,787	34.2%	758	398	103
Migration-led - R	7,828	12.4%	6,396	24.9%	519	289	12
Draft Review RSS - R	-1,312	-2.1%	2,651	10.3%	147	120	-126
Approved RSS - R	-1,568	-2.5%	2,546	9.9%	136	115	-130
Net-Nil Migration- R	-6,064	-9.6%	410	1.6%	0	19	-243
AMR Dwelling Trajectory - R	-6,887	-10.9%	336	1.3%	-85	15	-210

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2016 onwards

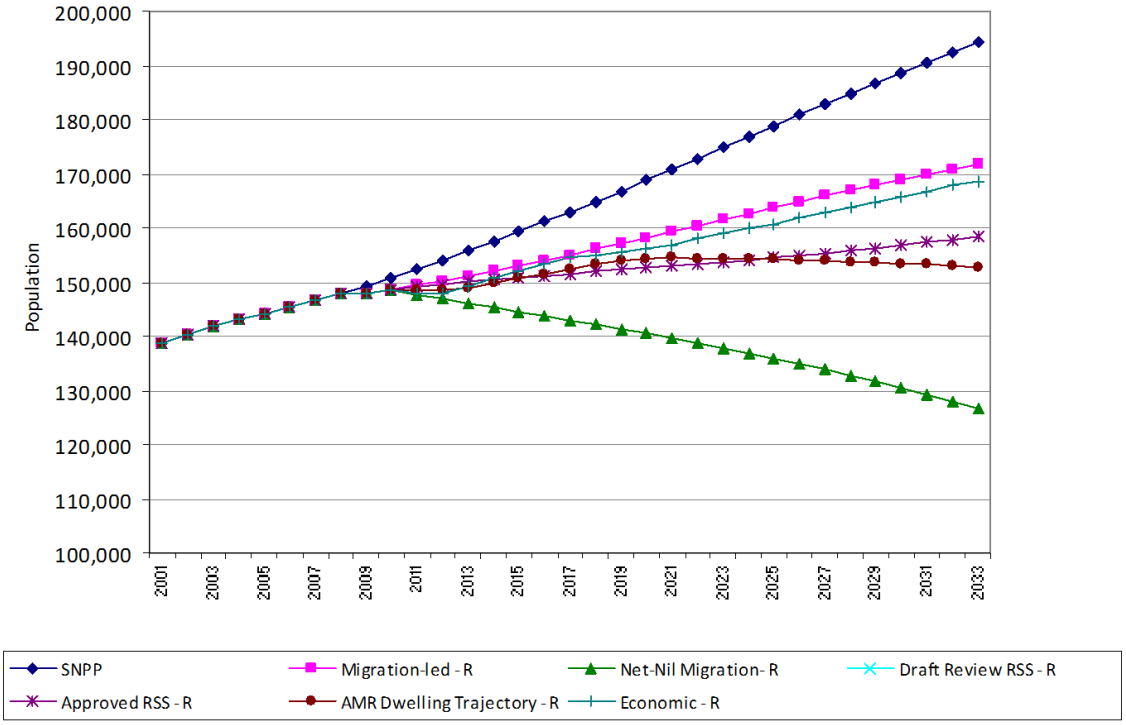
Rochford



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	16,406	19.4%	9,875	28.1%	694	439	143
Economic - R	12,600	15.1%	8,362	24.8%	528	372	74
Migration-led - R	10,647	12.8%	7,612	22.6%	451	339	47
Approved RSS - R	5,485	6.6%	5,618	16.7%	257	250	-24
Draft Review RSS - R	2,008	2.4%	4,270	12.7%	124	190	-71
AMR Dwelling Trajectory - R	1,314	1.6%	3,991	11.8%	81	178	-84
Net-Nil Migration- R	-1,837	-2.2%	1,529	4.5%	0	68	-153

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

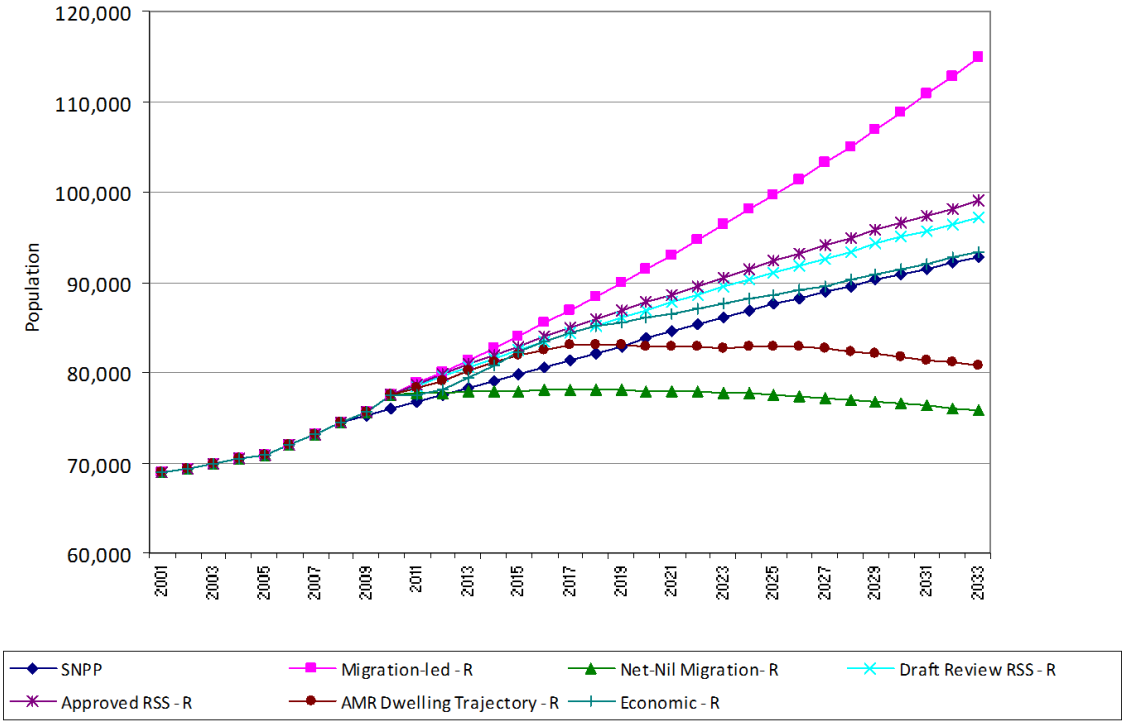
Tendring



	Change 2010 - 2033				Average per year		
Scenario	**Population Change**	**Population Change %**	**Households Change**	**Households Change %**	**Net Migration**	**Dwellings**	**Jobs**
SNPP	43,385	28.8%	25,660	37.8%	2,563	1,176	407
Migration-led - R	23,055	15.5%	14,887	23.3%	1,723	682	128
Economic - R	20,022	13.5%	13,602	21.3%	1,600	623	86
Approved RSS - R	9,953	6.7%	9,385	14.7%	1,187	430	-54
Draft Review RSS - R	9,953	6.7%	9,385	14.7%	1,187	430	-54
AMR Dwelling Trajectory - R	4,135	2.8%	6,961	10.9%	937	319	-140
Net-Nil Migration- R	-21,828	-14.7%	-3,702	-5.8%	0	-170	-628

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2031 onwards

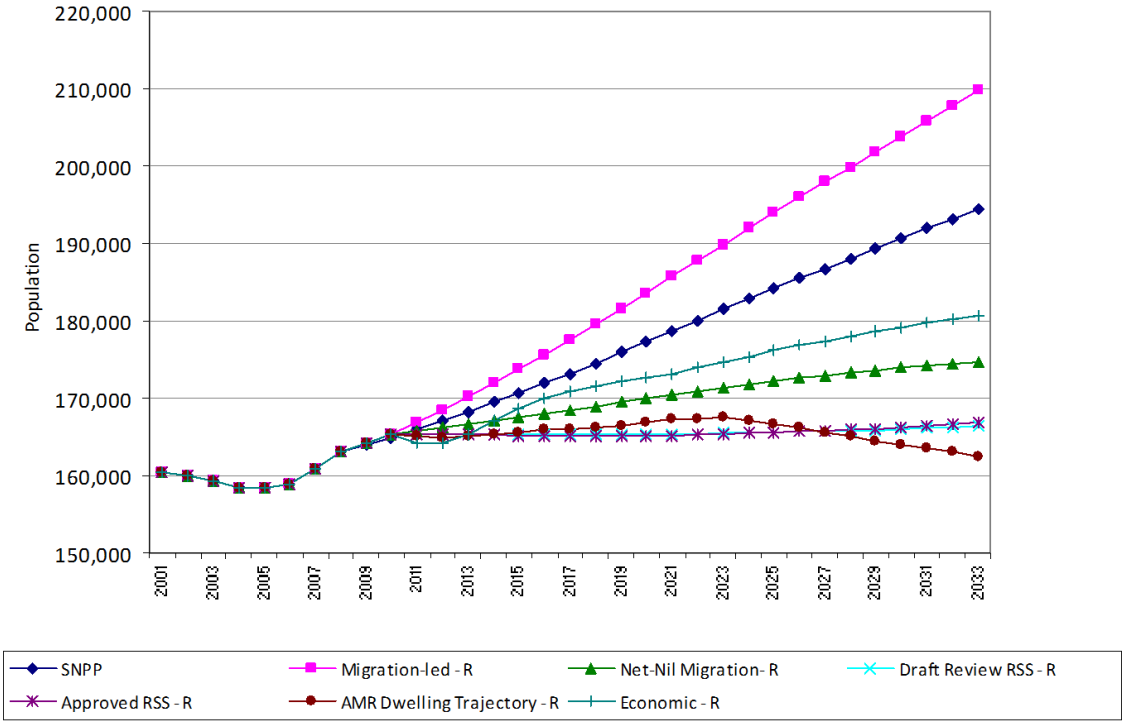
Uttlesford



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	37,394	48.2%	15,210	49.1%	1,393	686	685
Approved RSS - R	21,533	27.8%	9,539	30.8%	787	430	324
Draft Review RSS - R	19,680	25.4%	8,873	28.6%	718	400	282
SNPP	16,667	21.9%	9,087	29.6%	661	410	249
Economic - R	15,891	20.5%	7,500	24.2%	578	338	197
AMR Dwelling Trajectory - R	3,339	4.3%	2,955	9.5%	92	133	-87
Net-Nil Migration- R	-1,724	-2.2%	-572	-1.8%	0	-26	-330

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2027 onwards

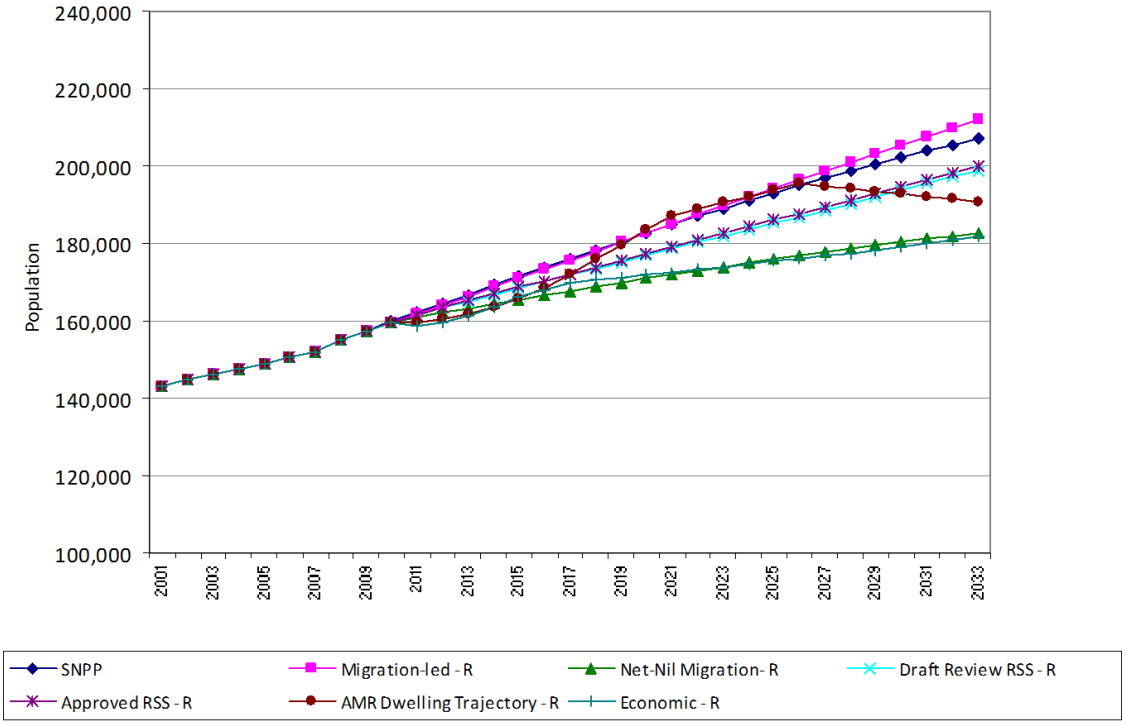
Southend-on-Sea



	Change 2010 - 2033				Average per year		
Scenario	**Population Change**	**Population Change %**	**Households Change**	**Households Change %**	**Net Migration**	**Dwellings**	**Jobs**
Migration-led - R	44,373	26.8%	26,092	34.7%	1,222	1,181	768
SNPP	29,486	17.9%	19,574	26.1%	749	886	425
Economic - R	15,457	9.4%	13,101	17.4%	173	593	183
Net-Nil Migration- R	9,310	5.6%	7,348	9.8%	0	332	-63
Approved RSS - R	1,489	0.9%	6,812	9.1%	-322	308	-90
Draft Review RSS - R	1,087	0.7%	6,630	8.8%	-339	300	-99
AMR Dwelling Trajectory - R	-2,772	-1.7%	4,864	6.5%	-506	220	-186

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

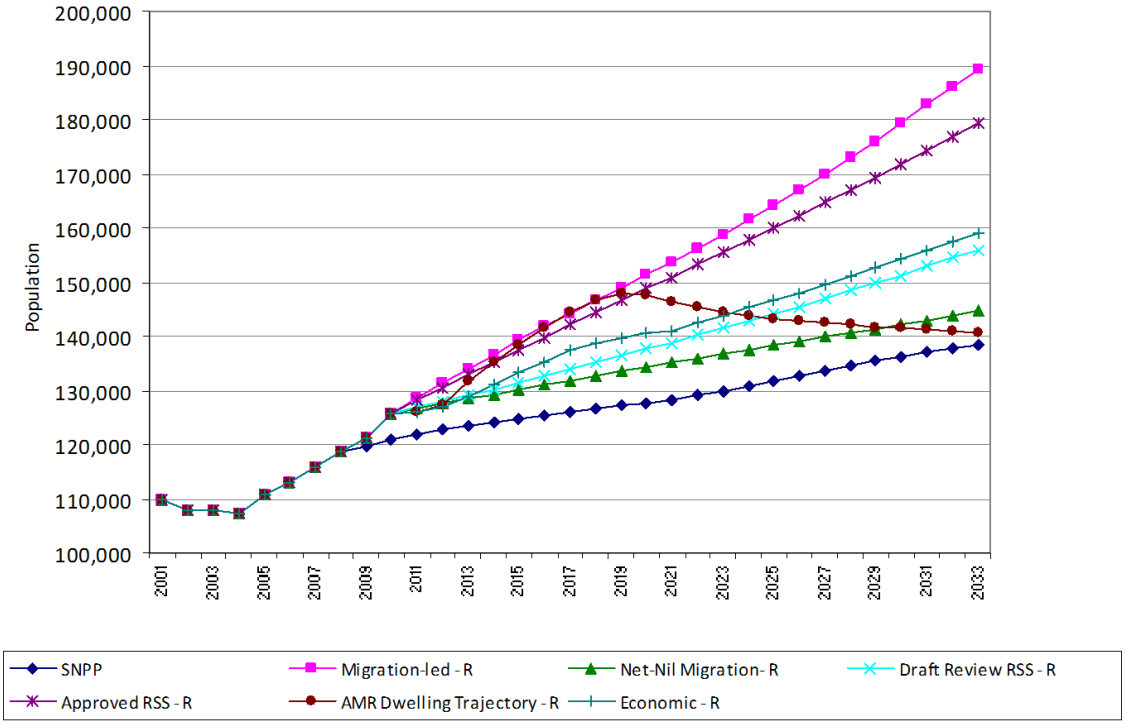
Thurrock



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	52,533	32.9%	26,296	41.8%	981	1,161	915
SNPP	47,435	29.7%	24,370	36.6%	665	1,076	785
Approved RSS - R	40,243	25.2%	21,511	34.2%	549	950	677
Draft Review RSS - R	39,081	24.5%	21,058	33.5%	508	930	654
AMR Dwelling Trajectory - R	31,033	19.4%	17,971	28.6%	117	794	467
Net-Nil Migration- R	23,120	14.5%	11,849	18.9%	0	523	227
Economic - R	22,232	13.9%	14,482	23.0%	-98	640	324

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

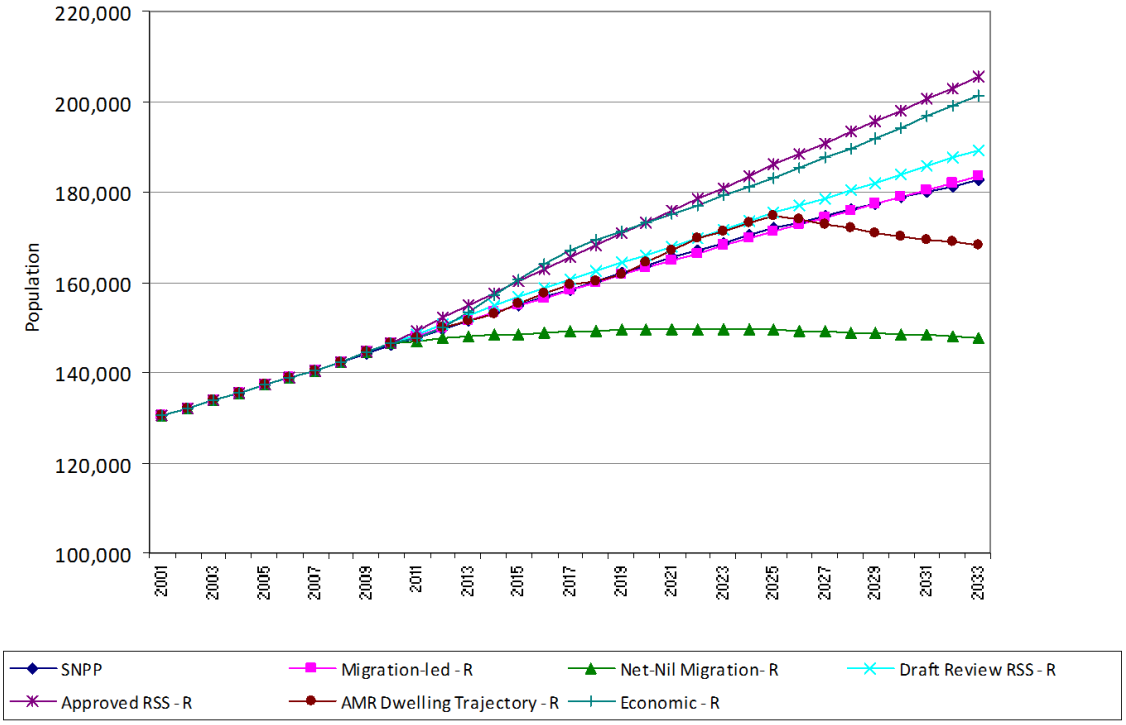
Cambridge



Scenario	Change 2010 - 2033				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	63,430	50.5%	28,747	59.9%	1,592	1,273	2,425
Approved RSS - R	53,670	42.7%	25,068	52.2%	1,225	1,110	2,067
Economic - R	33,399	26.6%	17,141	35.7%	492	759	1,318
Draft Review RSS - R	30,219	24.0%	15,809	32.9%	382	700	1,201
Net-Nil Migration- R	18,982	15.1%	6,070	12.6%	0	269	319
SNPP	17,649	14.6%	10,844	23.8%	175	480	623
AMR Dwelling Trajectory - R	14,937	11.9%	10,633	22.2%	-276	471	644

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2021 onwards

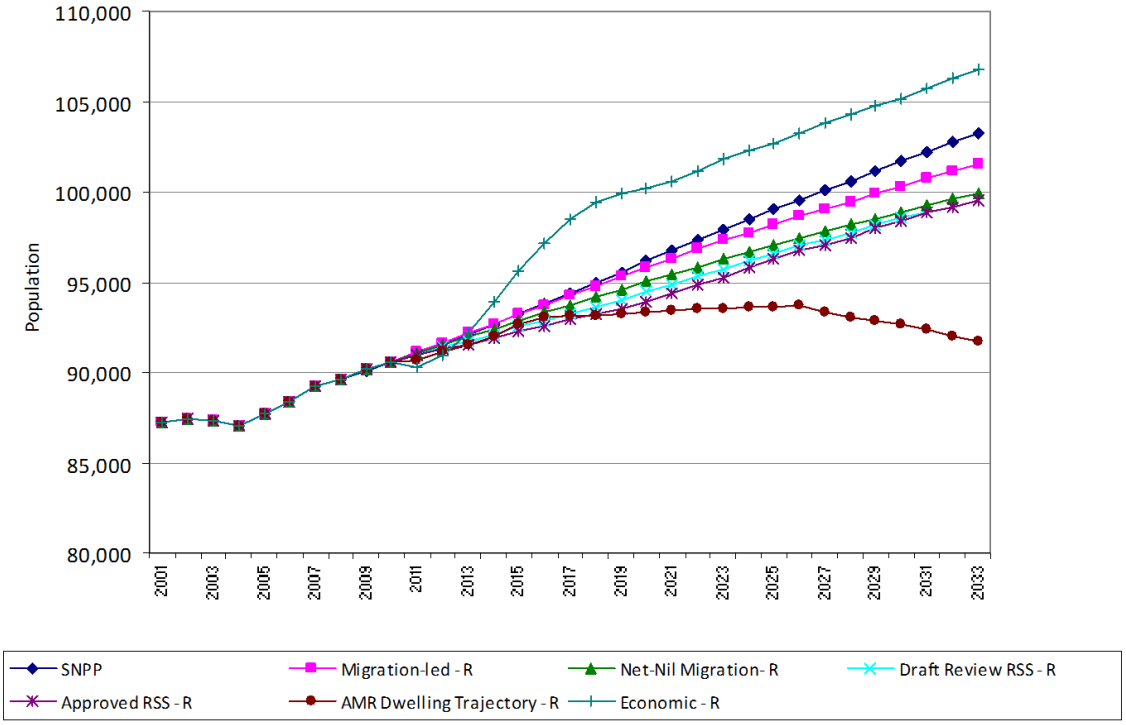
South Cambridgeshire



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Approved RSS - R	59,006	40.3%	29,801	50.2%	2,017	1,330	1,133
Economic - R	55,012	37.6%	28,233	47.5%	1,870	1,260	1,039
Draft Review RSS - R	42,789	29.2%	23,527	39.6%	1,429	1,050	750
Migration-led - R	37,163	25.4%	21,343	35.9%	1,227	953	616
SNPP	36,532	25.0%	20,640	34.5%	1,079	921	600
AMR Dwelling Trajectory - R	21,634	14.8%	15,198	25.6%	577	678	229
Net-Nil Migration- R	1,343	0.9%	5,103	8.6%	0	228	-351

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2025 onwards

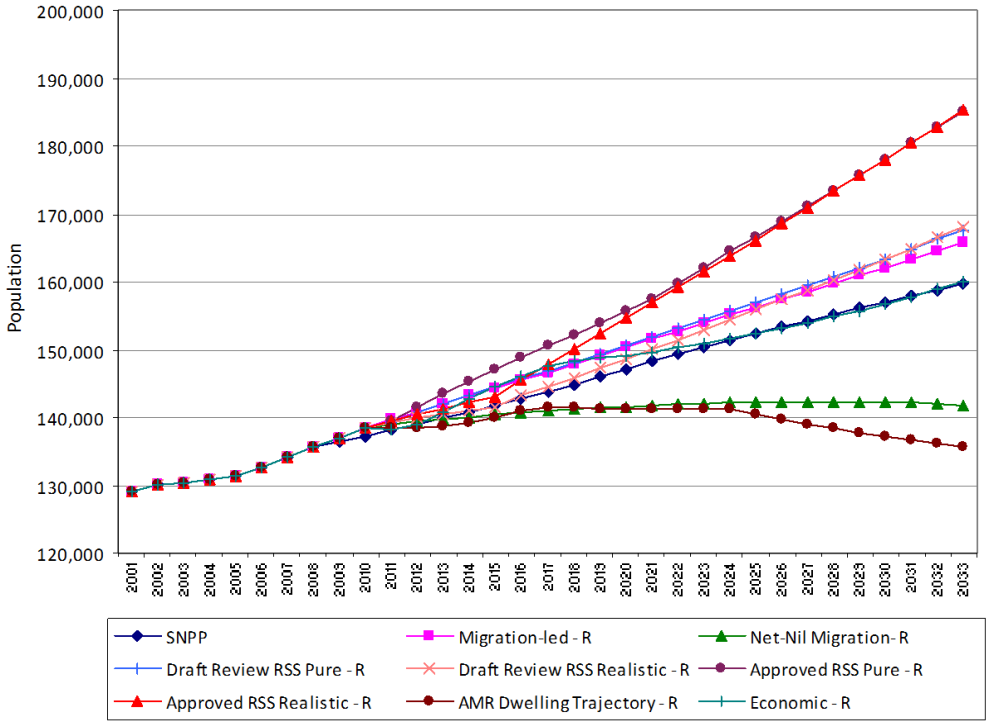
Broxbourne



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Economic - R	16,138	17.8%	8,666	22.9%	220	387	183
SNPP	12,665	14.0%	6,976	18.9%	82	312	143
Migration-led - R	10,960	12.1%	6,633	17.5%	46	296	95
Net-Nil Migration- R	9,320	10.3%	4,020	10.6%	0	180	25
Approved RSS - R	8,937	9.9%	5,837	15.4%	-22	261	60
Draft Review RSS - R	8,890	9.8%	5,818	15.4%	-27	260	59
AMR Dwelling Trajectory - R	1,126	1.2%	2,742	7.2%	-326	123	-78

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

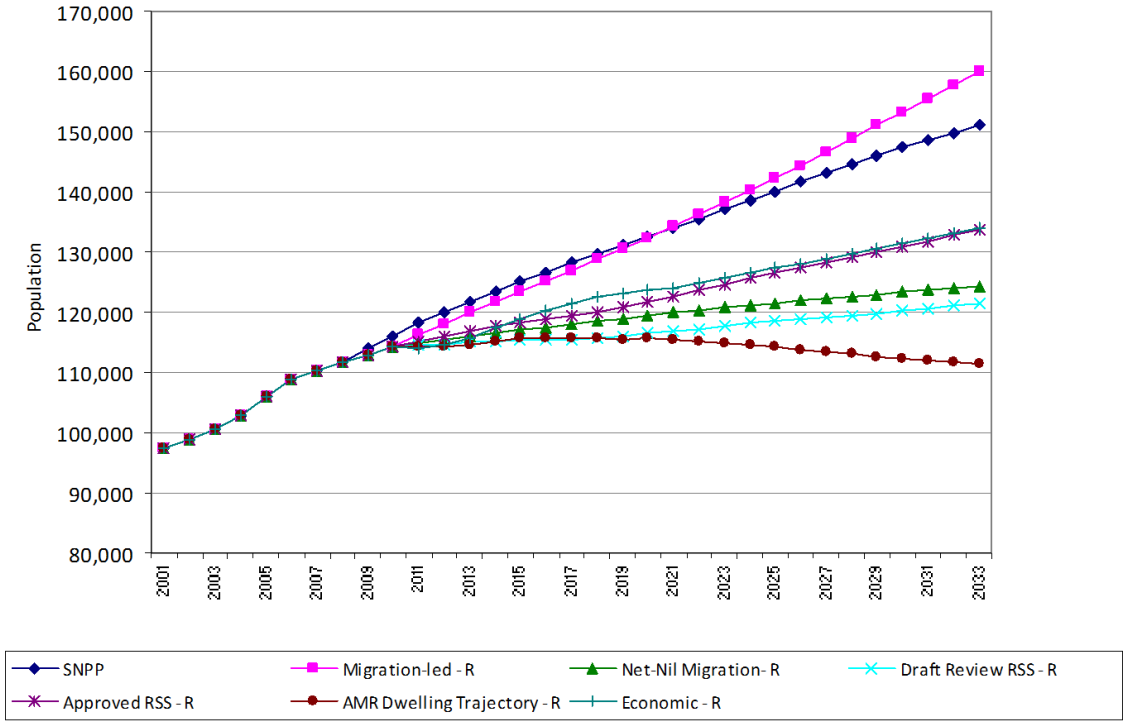
East Hertfordshire



Scenario	Change 2010 - 2033				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Approved RSS Realistic - R	46,773	33.8%	25,819	45.6%	1,559	1,149	865
Approved RSS Pure - R	46,630	33.7%	25,771	45.5%	1,550	1,147	865
Draft Review RSS Realistic - R	29,553	21.3%	18,776	33.2%	920	836	486
Draft Review RSS Pure - R	29,106	21.0%	18,590	32.8%	893	827	475
Migration-led - R	27,296	19.7%	17,850	31.5%	823	794	434
SNPP	22,480	16.4%	14,848	25.9%	525	661	318
Economic - R	21,504	15.5%	15,458	27.3%	608	688	307
Net-Nil Migration- R	3,415	2.5%	6,554	11.6%	0	292	-184
AMR Dwelling Trajectory - R	-2,875	-2.1%	5,403	9.5%	-322	240	-234

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2024 onwards

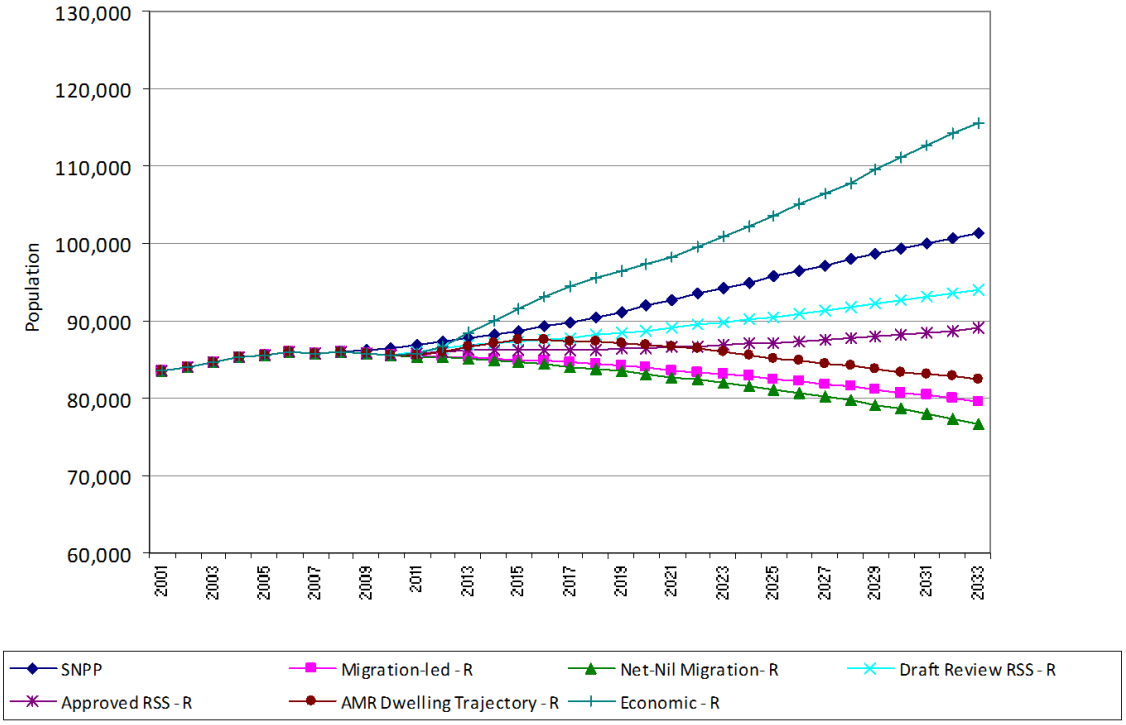
Welwyn Hatfield



	Change 2010 - 2033				Average per year		
Scenario	**Population Change**	**Population Change %**	**Households Change**	**Households Change %**	**Net Migration**	**Dwellings**	**Jobs**
Migration-led - R	45,626	39.9%	20,733	46.6%	1,242	920	1,287
SNPP	34,889	30.0%	16,697	36.2%	787	741	917
Economic - R	19,642	17.2%	11,219	25.2%	300	498	513
Approved RSS - R	19,327	16.9%	11,049	24.8%	297	490	507
Net-Nil Migration- R	10,005	8.7%	4,416	9.9%	0	196	73
Draft Review RSS - R	7,174	6.3%	6,533	14.7%	-137	290	149
AMR Dwelling Trajectory - R	-3,049	-2.7%	2,877	6.5%	-531	128	-156

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2028 onwards

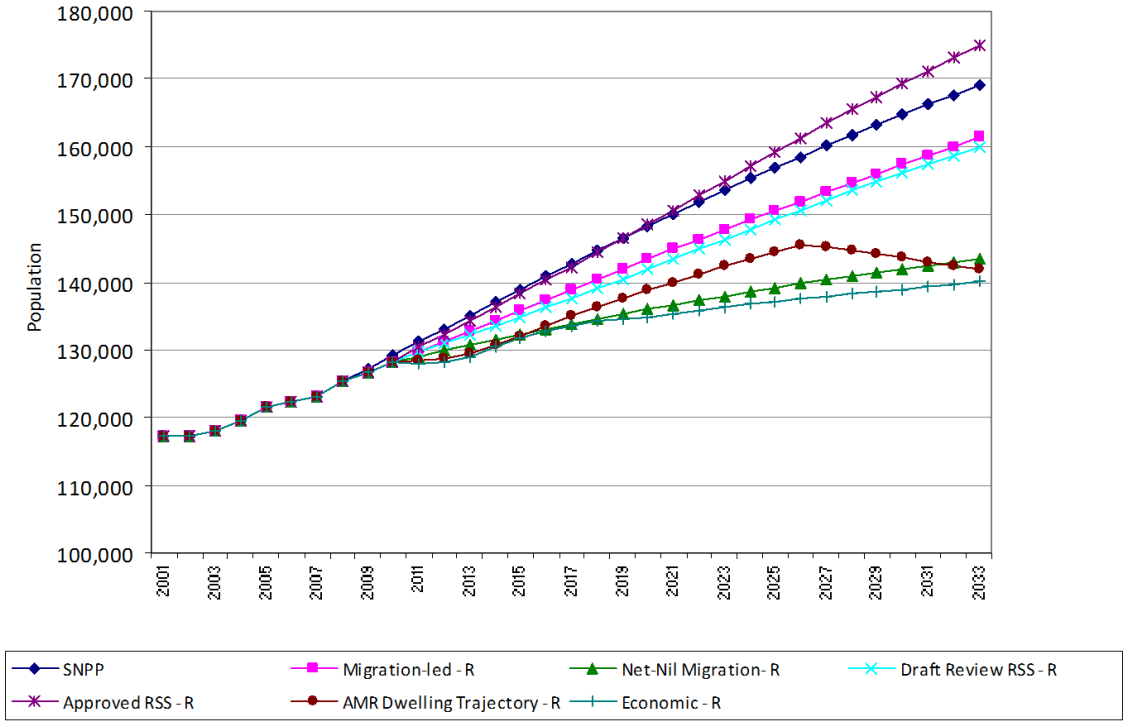
Babergh



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Economic - R	30,028	35.1%	16,425	44.1%	1,492	739	287
SNPP	14,926	17.3%	9,609	25.8%	805	432	114
Draft Review RSS - R	8,416	9.8%	7,561	20.3%	656	340	-82
Approved RSS - R	3,474	4.1%	5,506	14.8%	463	248	-165
AMR Dwelling Trajectory - R	-3,037	-3.5%	2,757	7.4%	195	124	-275
Migration-led - R	-6,046	-7.1%	1,495	4.0%	81	67	-326
Net-Nil Migration- R	-8,885	-10.4%	-859	-2.3%	0	-39	-405

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2023 onwards

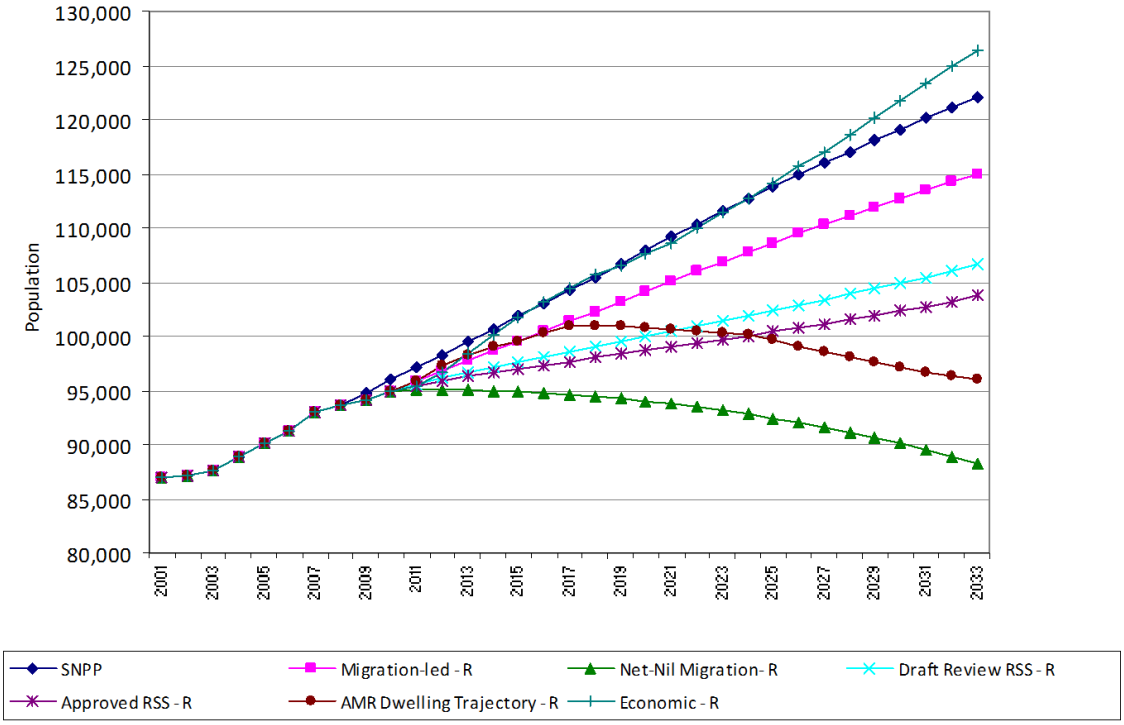
Ipswich



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Approved RSS - R	46,603	36.3%	25,300	44.8%	1,050	1,140	1,295
SNPP	39,959	30.9%	22,969	40.1%	681	1,035	1,041
Migration-led - R	33,166	25.9%	19,525	34.6%	566	880	898
Draft Review RSS - R	31,606	24.6%	18,864	33.4%	514	850	852
Net-Nil Migration- R	15,167	11.8%	9,541	16.9%	0	430	211
AMR Dwelling Trajectory - R	13,696	10.7%	11,001	19.5%	-181	496	301
Economic - R	11,784	9.2%	10,270	18.2%	-208	463	264

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2026 onwards

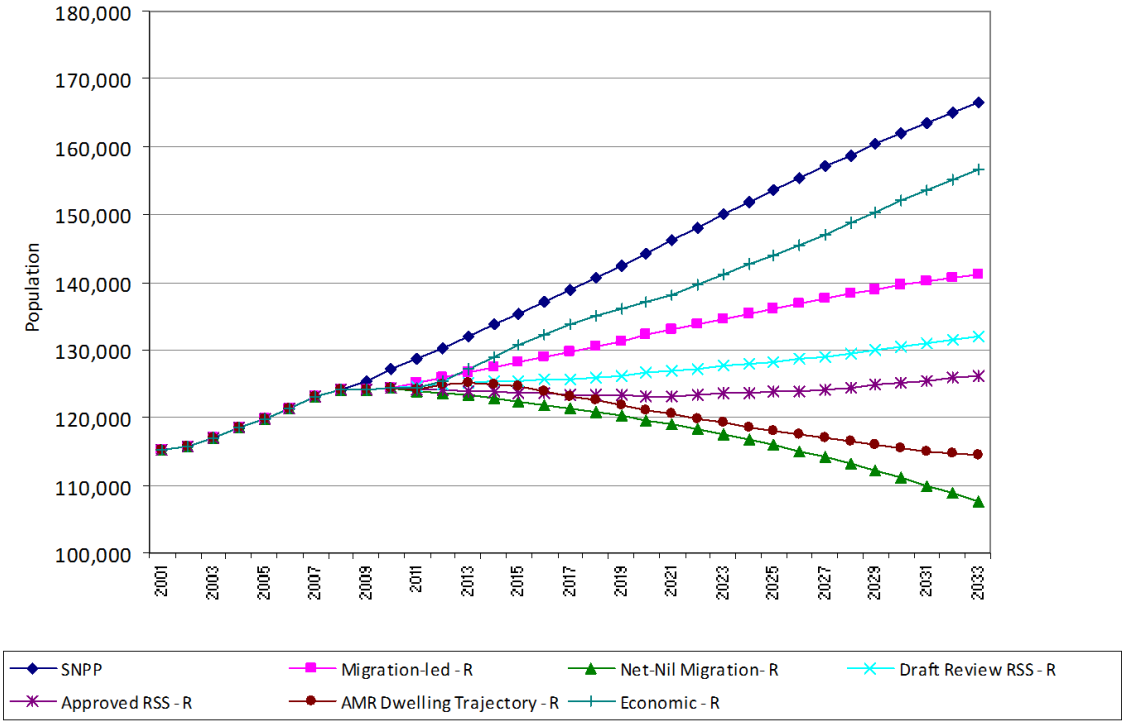
Mid Suffolk



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Economic - R	31,296	32.9%	17,554	44.1%	1,434	793	291
SNPP	26,031	27.1%	14,668	36.3%	1,166	662	263
Migration-led - R	19,984	21.0%	12,917	32.5%	986	583	94
Draft Review RSS - R	11,732	12.4%	9,523	23.9%	668	430	-46
Approved RSS - R	8,791	9.3%	8,305	20.9%	553	375	-96
AMR Dwelling Trajectory - R	1,055	1.1%	5,064	12.7%	225	229	-231
Net-Nil Migration- R	-6,689	-7.0%	1,419	3.6%	0	64	-414

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2024 onwards

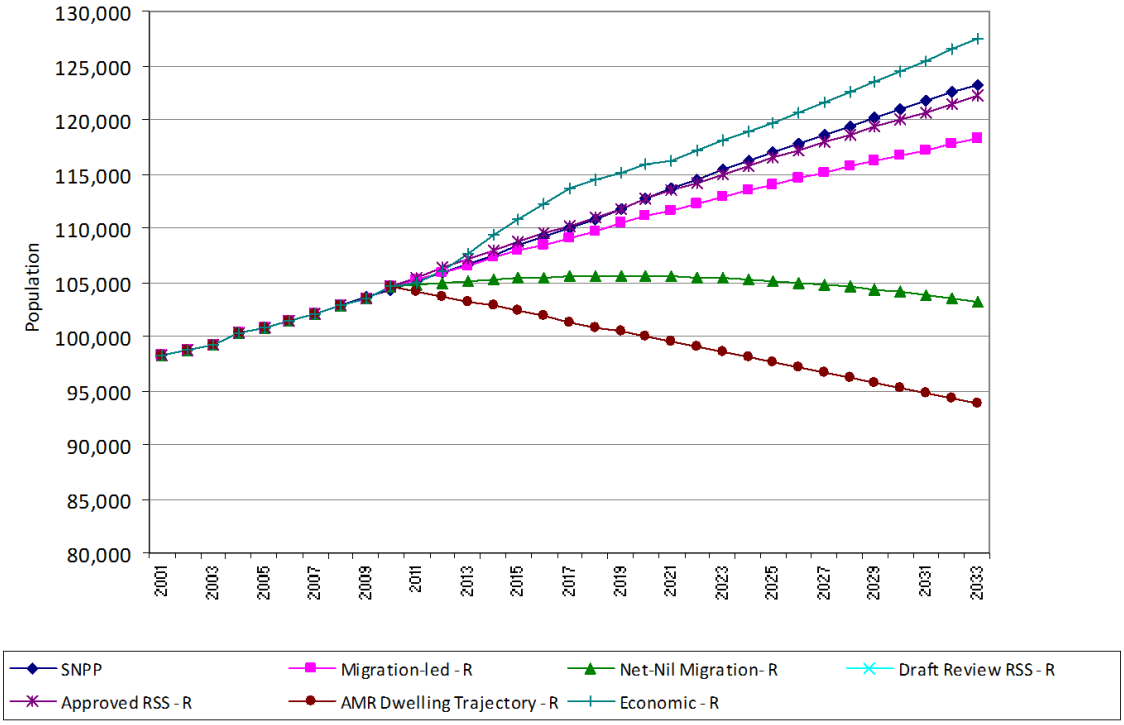
Suffolk Coastal



	Change 2010 - 2033				Average per year		
Scenario	**Population Change**	**Population Change %**	**Households Change**	**Households Change %**	**Net Migration**	**Dwellings**	**Jobs**
SNPP	39,581	31.2%	23,355	41.7%	2,054	1,091	499
Economic - R	32,412	26.1%	19,689	36.5%	1,815	920	300
Migration-led - R	16,965	13.7%	13,260	24.6%	1,198	619	-5
Draft Review RSS - R	7,841	6.3%	9,422	17.5%	845	440	-179
Approved RSS - R	1,964	1.6%	6,931	12.9%	613	324	-293
AMR Dwelling Trajectory - R	-9,880	-7.9%	1,906	3.5%	130	89	-521
Net-Nil Migration- R	-16,545	-13.3%	-678	-1.3%	0	-32	-770

Note: 'AMR Dwelling Trajectory - R' scenario reverts to zero dwelling growth from 2019 onwards

St Edmundsbury



Scenario	Change 2010 - 2033				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Economic - R	22,885	21.9%	14,144	31.6%	859	638	322
SNPP	18,868	18.1%	12,493	28.0%	699	564	217
Approved RSS - R	17,645	16.9%	11,965	26.7%	666	540	203
Draft Review RSS - R	17,645	16.9%	11,965	26.7%	666	540	203
Migration-led - R	13,660	13.1%	10,296	23.0%	517	465	113
Net-Nil Migration- R	-1,376	-1.3%	2,853	6.4%	0	129	-287
AMR Dwelling Trajectory - R	-10,666	-10.2%	0	0.0%	-394	0	-435

Note: No data for 'AMR Dwelling Trajectory - R' scenario; included here as a 'zero-dwelling' trajectory

3.4. Macro area scenario summary

Individual macro-area scenario summaries are ordered as follows:

Essex CC

Greater Essex

Essex Thames Gateway

Heart of Essex

Essex Haven Gateway

Suffolk Haven Gateway

Haven Gateway

West Essex

Hertfordshire (East)

Stansted/M11 Corridor

Harlow Joint Working Area

Note:

For the three Districts of Harlow, Epping Forest and East Hertfordshire four additional scenarios were prepared – two based on the dwelling provisions of the Approved RSS and two based on the dwelling provisions of the Draft Review RSS. This approach was taken in recognition of the fact that Policy H1 of both RSS documents identified a dwelling provision that was accounted against Harlow District, with part to be accommodated in Epping Forest and East Hertfordshire Districts.

For Macro Areas including at least one of the three Districts of Harlow, Epping Forest and East Hertfordshire four RSS scenarios are presented - Approved RSS Pure, Approved RSS Realistic, Draft Review RSS Pure and Draft Review RSS Realistic. The relevant Macro Areas are:

Essex CC

Greater Essex

West Essex

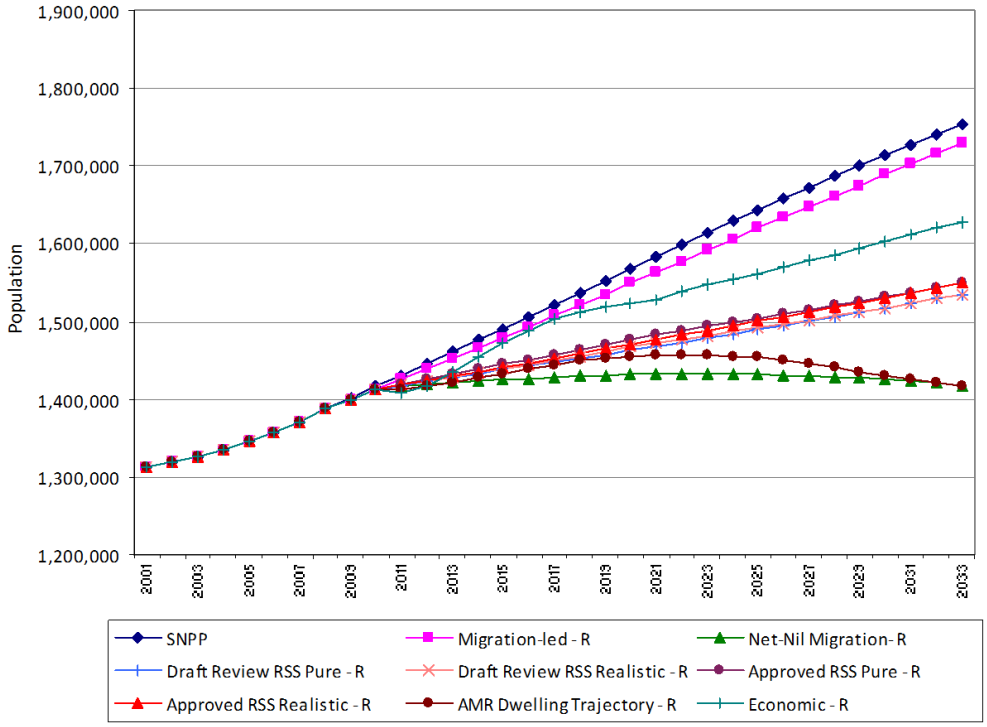
Hertfordshire (East)

Stansted/M11 Corridor

Harlow Joint Working Area

For all other Macro Areas two RSS scenarios are presented – Approved RSS and Draft Review RSS.

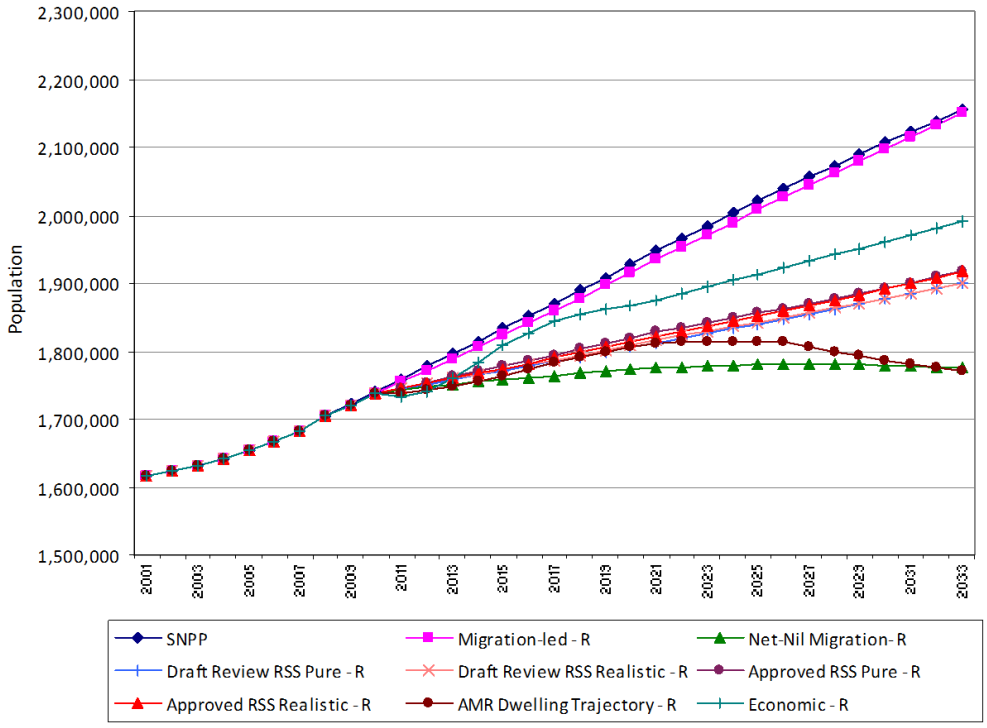
Essex County Council



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	336,877	23.8%	190,025	31.6%	11,214	8,504	4,912
Migration-led - R	315,989	22.4%	182,979	31.3%	11,097	8,181	5,027
Economic - R	214,791	15.2%	142,751	24.4%	7,346	6,380	2,337
Approved RSS Realistic - R	136,881	9.7%	111,060	19.0%	4,354	4,961	1,223
Approved RSS Pure - R	136,861	9.7%	111,021	19.0%	4,319	4,959	1,217
Draft Review RSS Realistic - R	121,618	8.6%	104,875	18.0%	3,773	4,685	942
Draft Review RSS Pure - R	121,385	8.6%	104,753	17.9%	3,793	4,680	943
Net-Nil Migration- R	5,098	0.4%	36,515	6.3%	0	1,619	-2,341
AMR Dwelling Trajectory - R	3,567	0.3%	56,578	9.7%	-928	2,528	-1,501

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

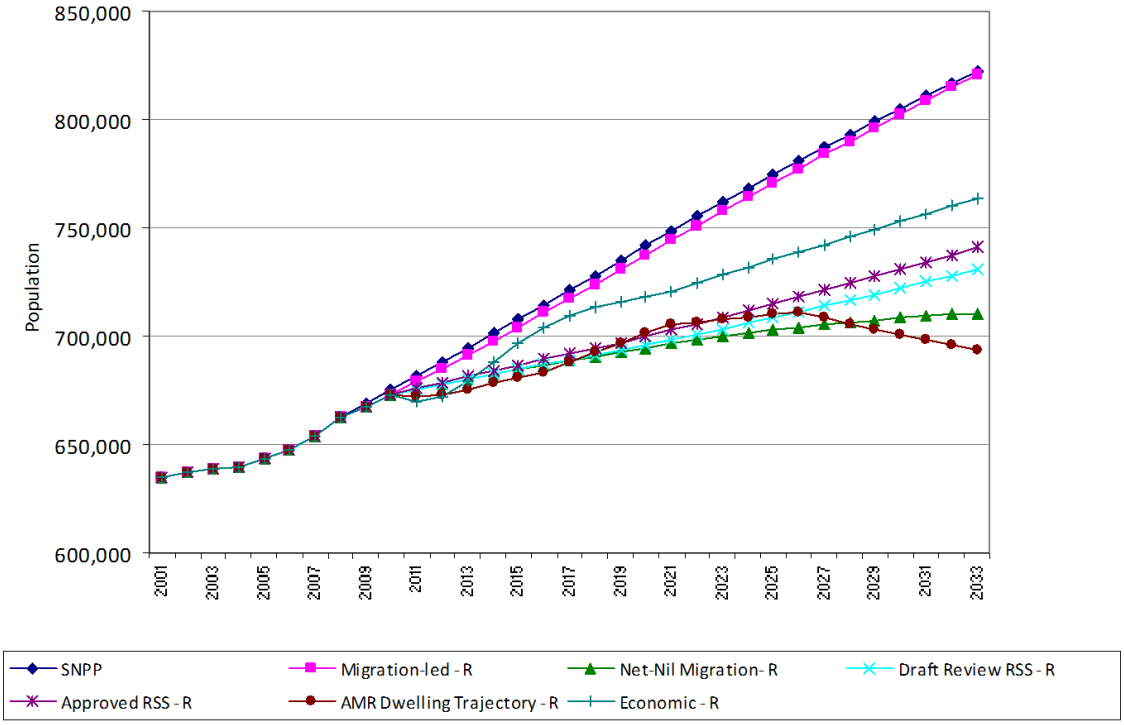
Greater Essex



Scenario	Change 2010 - 2033				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	413,798	23.8%	233,969	31.5%	12,628	10,466	6,122
Migration-led - R	412,895	23.8%	235,367	32.6%	13,300	10,523	6,710
Economic - R	252,480	14.5%	170,334	23.6%	7,421	7,613	2,845
Approved RSS Realistic - R	178,613	10.3%	139,384	19.3%	4,582	6,219	1,809
Approved RSS Pure - R	178,593	10.3%	139,344	19.3%	4,546	6,217	1,803
Draft Review RSS Realistic - R	161,786	9.3%	132,563	18.4%	3,943	5,915	1,497
Draft Review RSS Pure - R	161,553	9.3%	132,441	18.3%	3,963	5,910	1,498
Net-Nil Migration- R	37,528	2.2%	55,711	7.7%	0	2,475	-2,177
AMR Dwelling Trajectory - R	31,829	1.8%	79,412	11.0%	-1,316	3,541	-1,221

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

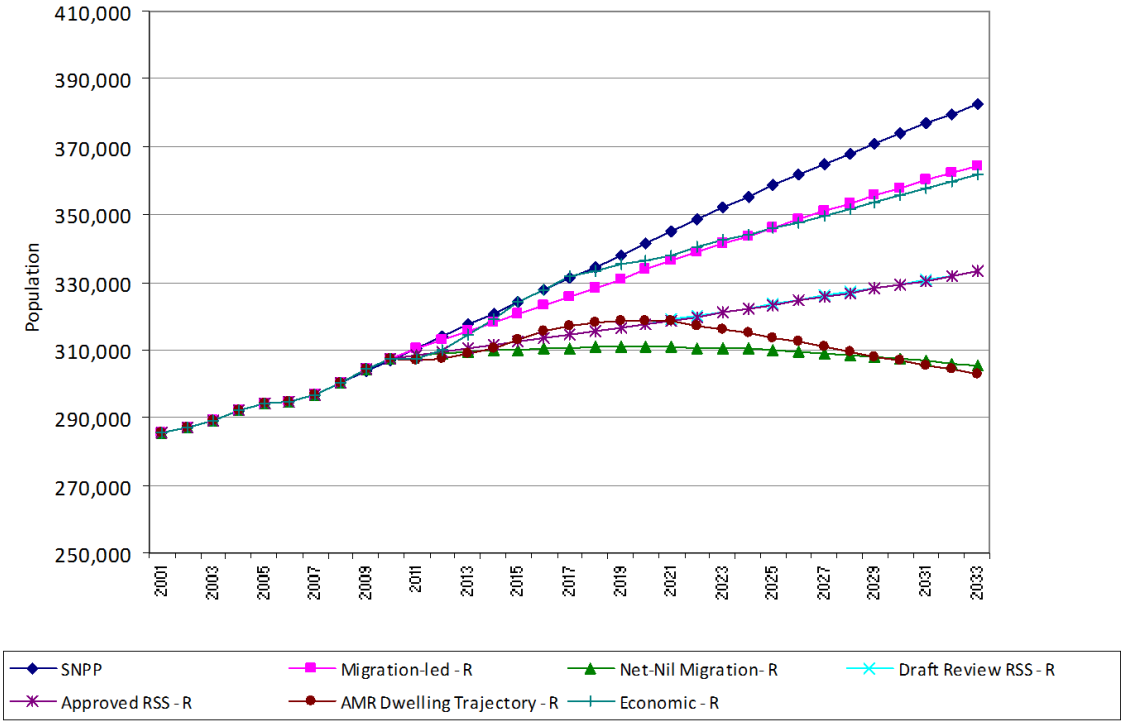
Essex Thames Gateway



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	147,914	22.0%	86,746	30.9%	3,766	3,869	2,267
SNPP	146,858	21.7%	85,961	29.6%	3,606	3,828	2,145
Economic - R	90,254	13.4%	62,164	22.1%	1,732	2,767	967
Approved RSS - R	67,979	10.1%	52,638	18.8%	885	2,338	688
Draft Review RSS - R	58,069	8.6%	48,631	17.3%	515	2,160	502
Net-Nil Migration- R	37,614	5.6%	30,288	10.8%	0	1,350	-235
AMR Dwelling Trajectory - R	21,070	3.1%	33,373	11.9%	-1,037	1,482	-271

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

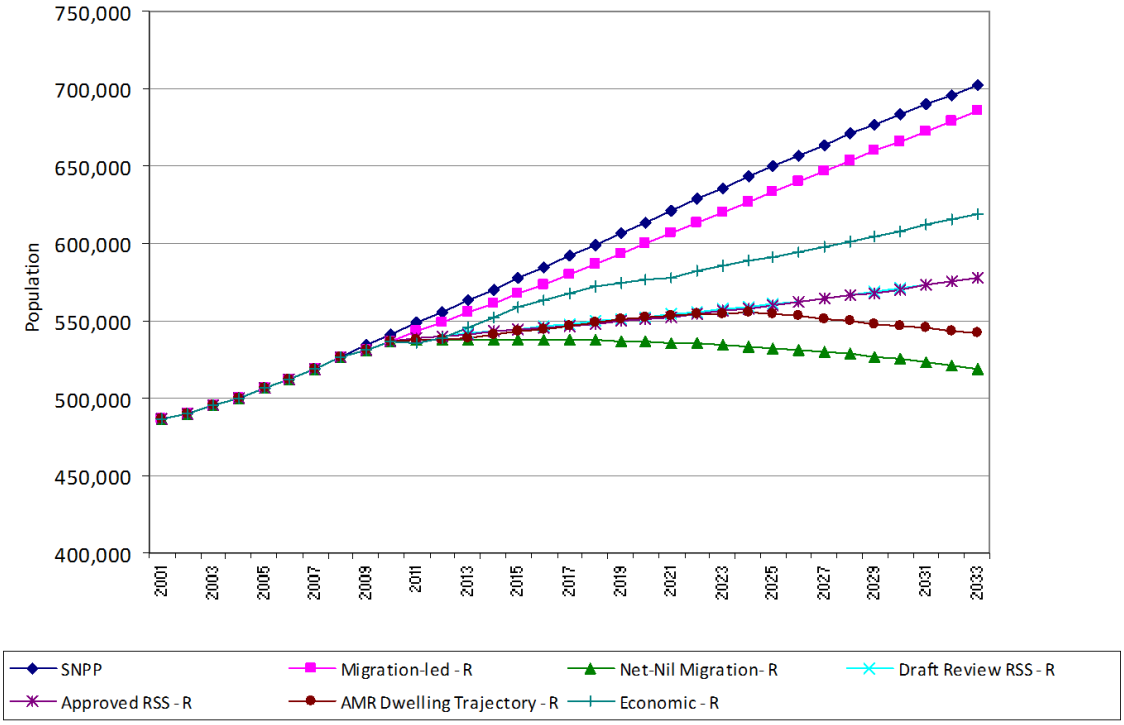
Heart of Essex



	Change 2010 - 2033				Average per year		
Scenario	**Population Change**	**Population Change %**	**Households Change**	**Households Change %**	**Net Migration**	**Dwellings**	**Jobs**
SNPP	75,315	24.5%	41,502	32.0%	2,499	1,855	1,250
Migration-led - R	56,885	18.5%	37,730	29.9%	2,135	1,688	934
Economic - R	54,150	17.6%	36,735	29.1%	2,035	1,642	803
Draft Review RSS - R	25,630	8.3%	25,134	19.9%	937	1,120	262
Approved RSS - R	25,515	8.3%	25,086	19.9%	933	1,118	261
Net-Nil Migration- R	-2,384	-0.8%	8,976	7.1%	0	399	-581
AMR Dwelling Trajectory - R	-4,672	-1.5%	12,363	9.8%	-301	550	-413

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

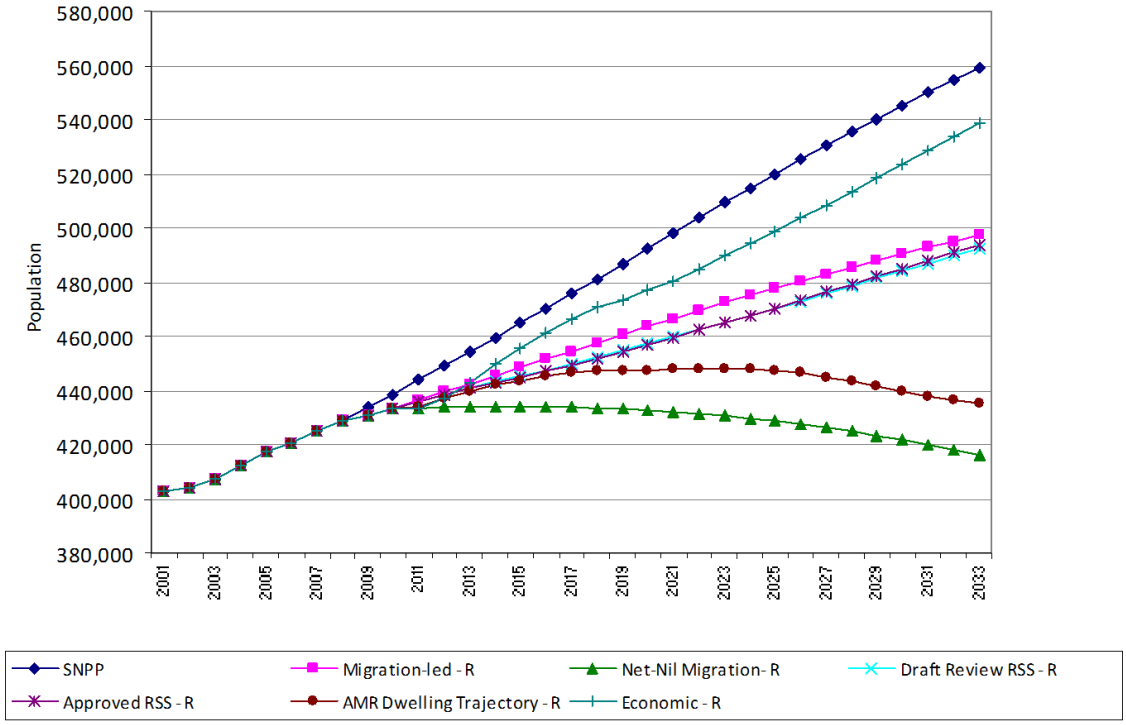
Essex Haven Gateway



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	160,809	29.7%	88,250	38.2%	6,314	3,973	2,226
Migration-led - R	148,385	27.6%	82,033	36.9%	6,073	3,681	2,371
Economic - R	81,526	15.2%	55,170	24.8%	3,585	2,483	734
Approved RSS - R	41,083	7.7%	38,448	17.3%	2,011	1,728	163
Draft Review RSS - R	40,719	7.6%	38,271	17.2%	1,990	1,720	154
AMR Dwelling Trajectory - R	5,212	1.0%	23,692	10.7%	523	1,065	-551
Net-Nil Migration- R	-17,734	-3.3%	7,187	3.2%	0	316	-1,355

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

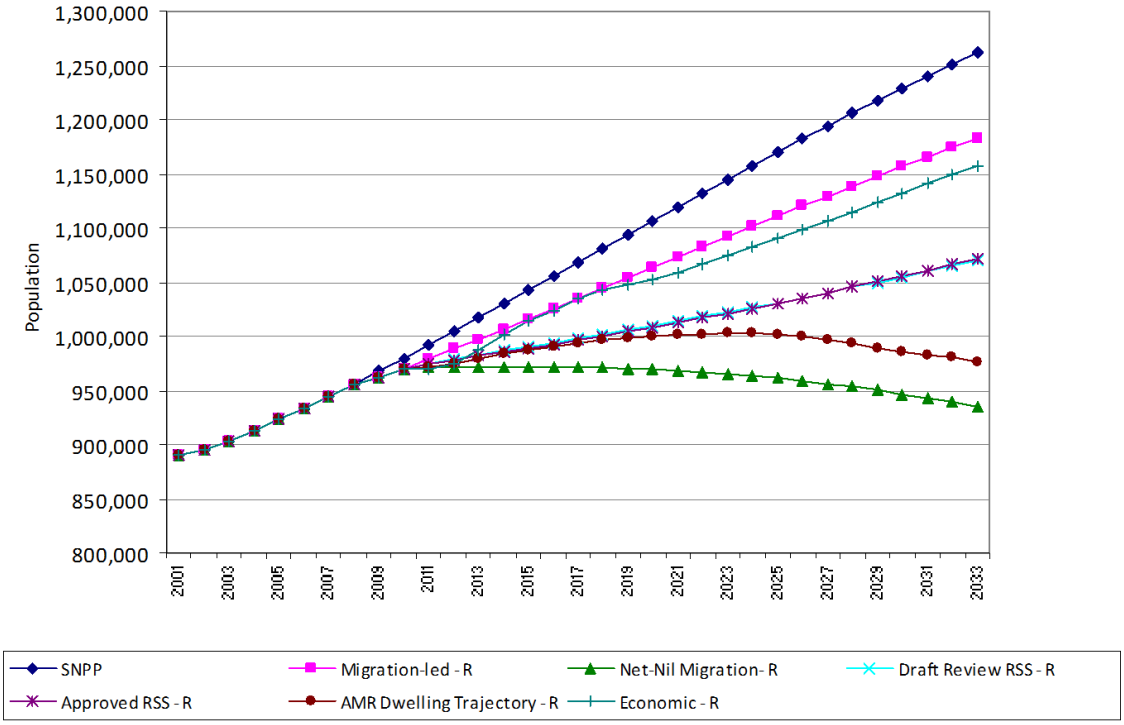
Suffolk Haven Gateway



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	120,497	27.5%	70,601	37.0%	4,706	3,220	1,917
Economic - R	105,520	24.4%	63,939	34.1%	4,534	2,913	1,142
Migration-led - R	64,068	14.8%	47,198	25.2%	2,832	2,150	661
Approved RSS - R	60,833	14.0%	46,042	24.6%	2,679	2,086	741
Draft Review RSS - R	59,594	13.8%	45,370	24.2%	2,683	2,060	544
AMR Dwelling Trajectory - R	1,835	0.4%	20,727	11.1%	369	937	-726
Net-Nil Migration- R	-16,951	-3.9%	9,423	5.0%	0	424	-1,378

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

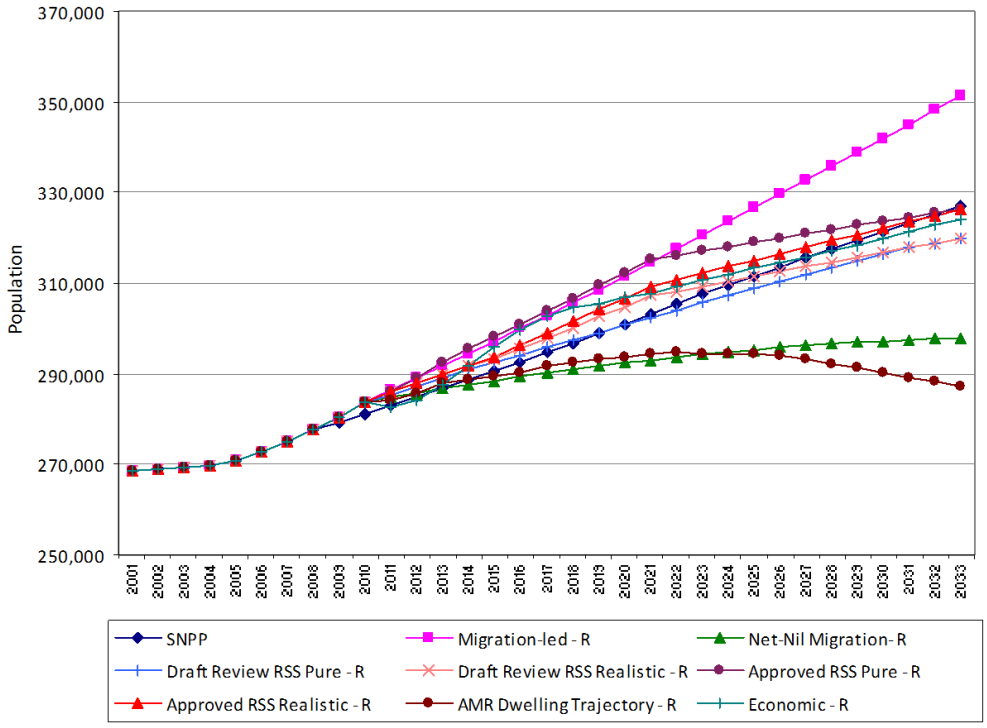
Haven Gateway



Scenario	Change 2010 - 2033				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
SNPP	281,306	28.7%	158,852	37.6%	11,020	7,193	4,143
Migration-led - R	212,454	21.9%	129,231	31.6%	8,905	5,830	3,032
Economic - R	187,046	19.3%	119,108	29.1%	8,118	5,397	1,875
Approved RSS - R	101,916	10.5%	84,491	20.6%	4,691	3,814	904
Draft Review RSS - R	100,313	10.3%	83,641	20.4%	4,673	3,780	699
AMR Dwelling Trajectory - R	7,046	0.7%	44,419	10.8%	892	2,003	-1,276
Net-Nil Migration- R	-34,685	-3.6%	16,609	4.1%	0	740	-2,733

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

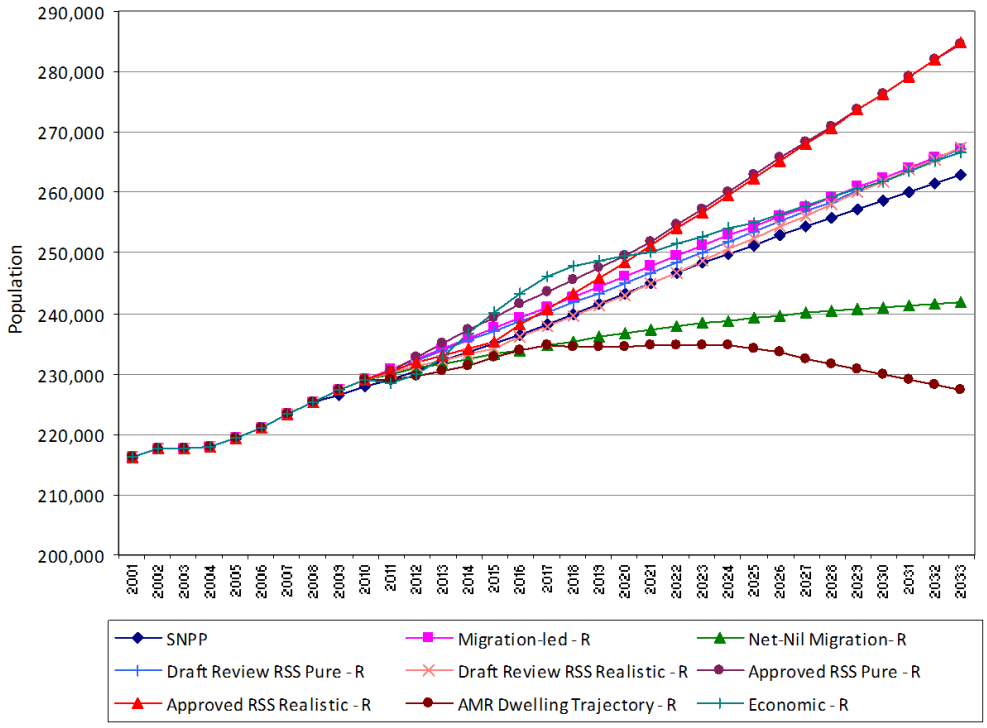
West Essex



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	67,539	23.8%	35,253	29.7%	1,845	1,575	1,150
SNPP	45,812	16.3%	26,994	22.8%	989	1,205	642
Approved RSS Realistic - R	42,467	15.0%	25,757	21.7%	889	1,150	567
Approved RSS Pure - R	42,447	15.0%	25,718	21.7%	853	1,149	561
Economic - R	40,252	14.2%	25,051	21.1%	828	1,119	444
Draft Review RSS Realistic - R	36,057	12.7%	23,178	19.6%	647	1,035	453
Draft Review RSS Pure - R	35,824	12.6%	23,056	19.5%	667	1,030	454
Net-Nil Migration- R	13,969	4.9%	9,670	8.2%	0	429	-250
AMR Dwelling Trajectory - R	3,332	1.2%	10,320	8.7%	-586	460	-195

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

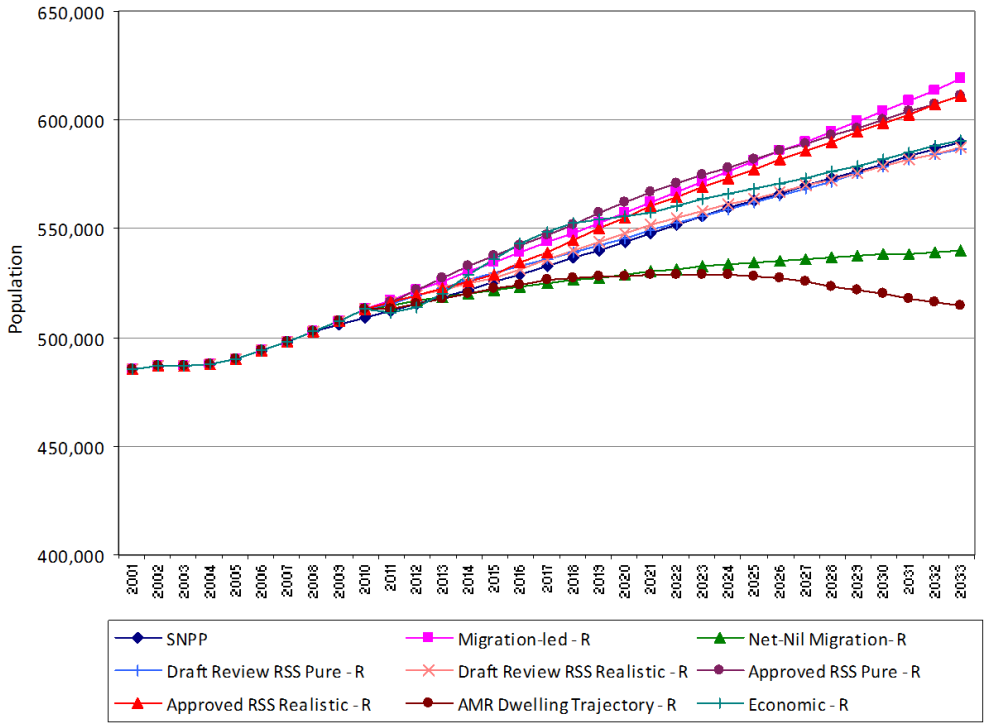
Hertfordshire (East)



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Approved RSS Realistic - R	55,711	24.3%	31,657	33.5%	1,537	1,410	925
Approved RSS Pure - R	55,568	24.3%	31,608	33.5%	1,528	1,408	925
Draft Review RSS Realistic - R	38,444	16.8%	24,594	26.0%	893	1,096	545
Migration-led - R	38,256	16.7%	24,483	25.9%	868	1,091	529
Draft Review RSS Pure - R	37,996	16.6%	24,408	25.8%	866	1,087	534
Economic - R	37,642	16.4%	24,125	25.5%	828	1,075	491
SNPP	35,145	15.4%	21,824	23.2%	607	973	461
Net-Nil Migration- R	12,735	5.6%	10,573	11.2%	0	471	-160
AMR Dwelling Trajectory - R	-1,750	-0.8%	8,145	8.6%	-648	363	-312

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

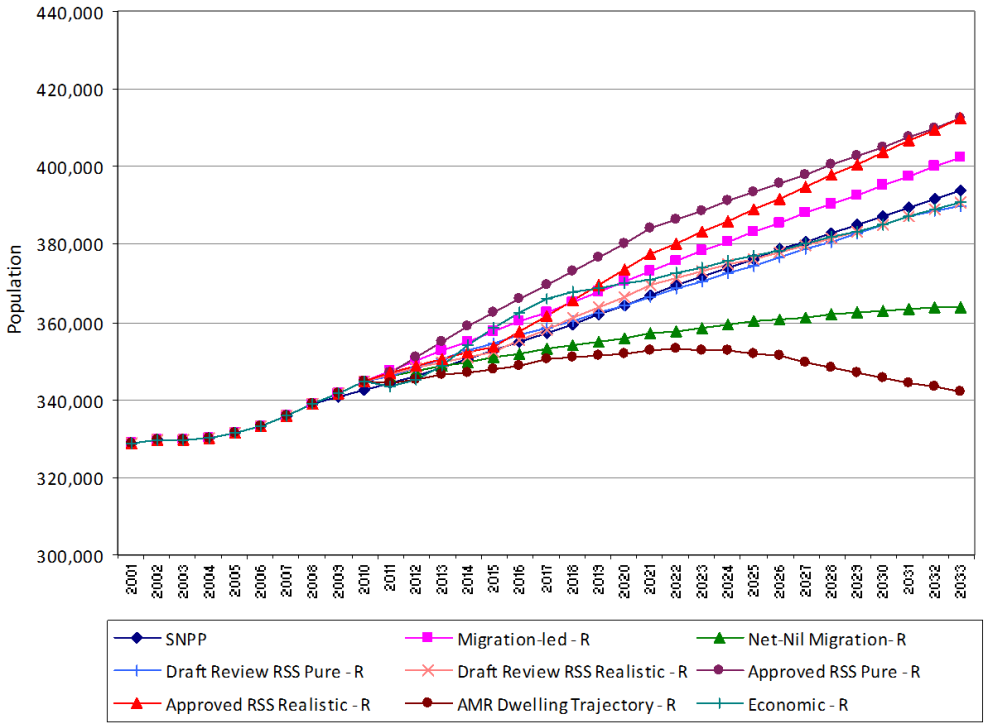
Stansted/M11 Corridor



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Migration-led - R	105,795	20.6%	59,736	28.0%	2,714	2,666	1,679
Approved RSS Realistic - R	98,178	19.1%	57,414	27.0%	2,426	2,560	1,492
Approved RSS Pure - R	98,015	19.1%	57,326	26.9%	2,382	2,557	1,486
SNPP	80,957	15.9%	48,818	22.9%	1,595	2,178	1,103
Economic - R	77,894	15.2%	49,176	23.1%	1,655	2,194	934
Draft Review RSS Realistic - R	74,500	14.5%	47,772	22.4%	1,540	2,131	998
Draft Review RSS Pure - R	73,820	14.4%	47,464	22.3%	1,533	2,117	988
Net-Nil Migration- R	26,704	5.2%	20,243	9.5%	0	900	-409
AMR Dwelling Trajectory - R	1,583	0.3%	18,465	8.7%	-1,234	823	-507

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

Harlow Joint Working Area



	Change 2010 - 2033				Average per year		
Scenario	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Approved RSS Realistic - R	67,707	19.6%	42,038	29.2%	1,661	1,870	1,108
Approved RSS Pure - R	67,544	19.6%	41,949	29.1%	1,616	1,866	1,102
Migration-led - R	57,441	16.7%	37,893	26.3%	1,276	1,684	900
SNPP	51,625	15.1%	32,756	22.6%	853	1,456	711
Draft Review RSS Realistic - R	45,930	13.3%	33,080	22.9%	848	1,471	657
Economic - R	45,864	13.3%	33,010	22.9%	858	1,469	554
Draft Review RSS Pure - R	45,250	13.1%	32,773	22.7%	842	1,457	647
Net-Nil Migration- R	19,108	5.5%	16,796	11.6%	0	746	-104
AMR Dwelling Trajectory - R	-2,882	-0.8%	12,768	8.9%	-999	567	-343

Note: ''AMR Dwelling Trajectory - R'' scenario combines districts for which dwelling growth reverts to zero at different points in time.

Appendix 1: Projection Methodology

POPGROUP suite

The forecasting requirements of this project have been delivered using POPGROUP. POPGROUP is a family of demographic models developed to forecast population, households and the labour force for areas and social groups. It uses MS Excel technology to enable direct integration of inputs and outputs with a user's desktop environment. POPGROUP has over 100 users which include academic and public service staff in housing, planning, policy, research, economic development, and social services. On behalf of the Local Government Association, Edge Analytics is responsible for the development and support of the POPGROUP software.

Population, household & labour force forecasting

Population projections delivered using POPGROUP use a standard **cohort component** methodology (the methodology used by the UK statistical agencies). The household projections use a standard **household headship rate** as employed Communities and Local Government (CLG) for its household projection statistics. Labour force projections use a standard **economic activity rate** methodology. Household and labour force projections are developed using the Derived Forecast model.

A more detailed description of the population and household projection methodologies is available from the User Guide and Reference Manual on the POPGROUP website www.ccsr.ac.uk/popgroup/about/manuals.html.

The following illustrations provide a summary of the POPGROUP and Derived Forecast methodologies.

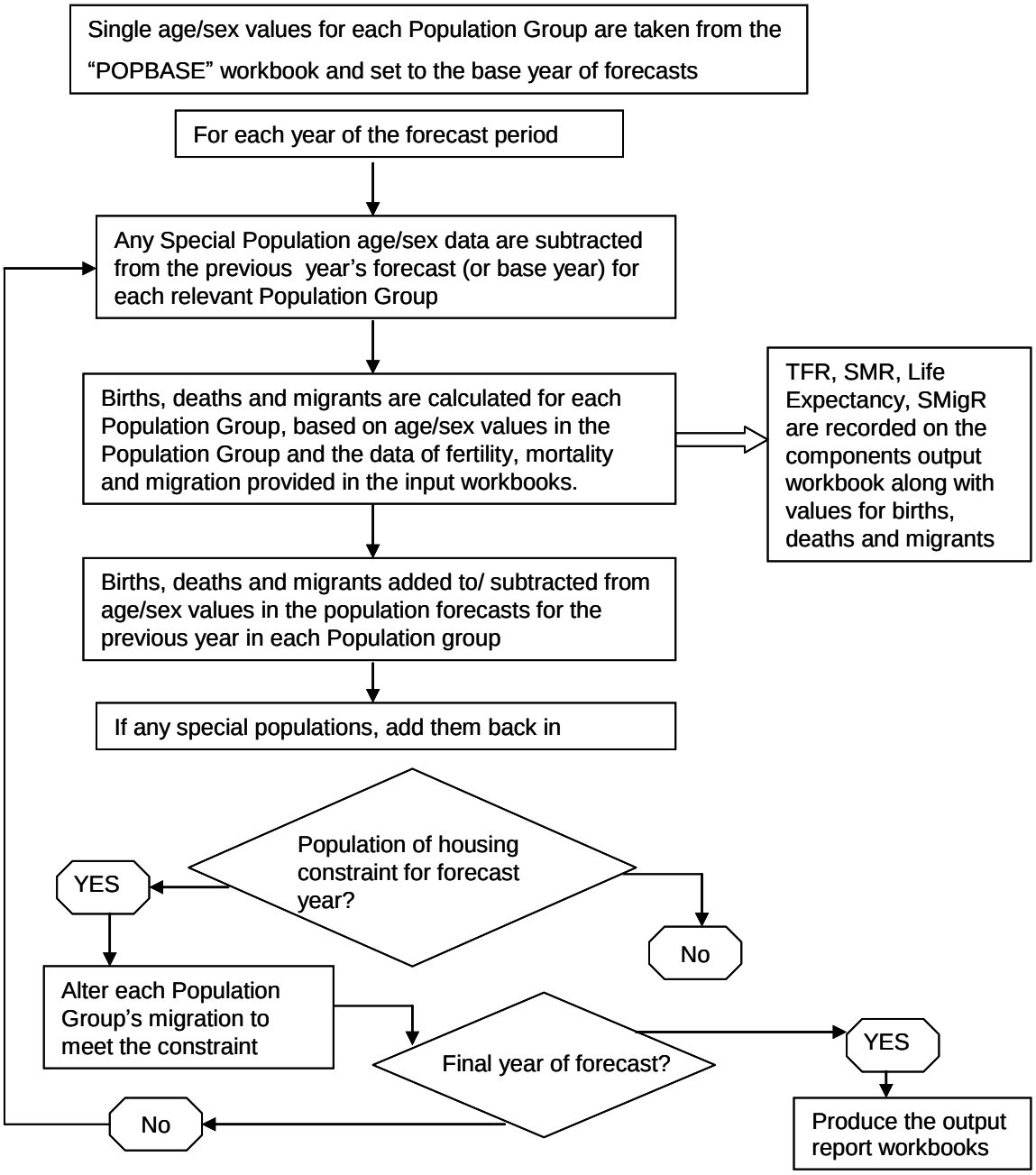
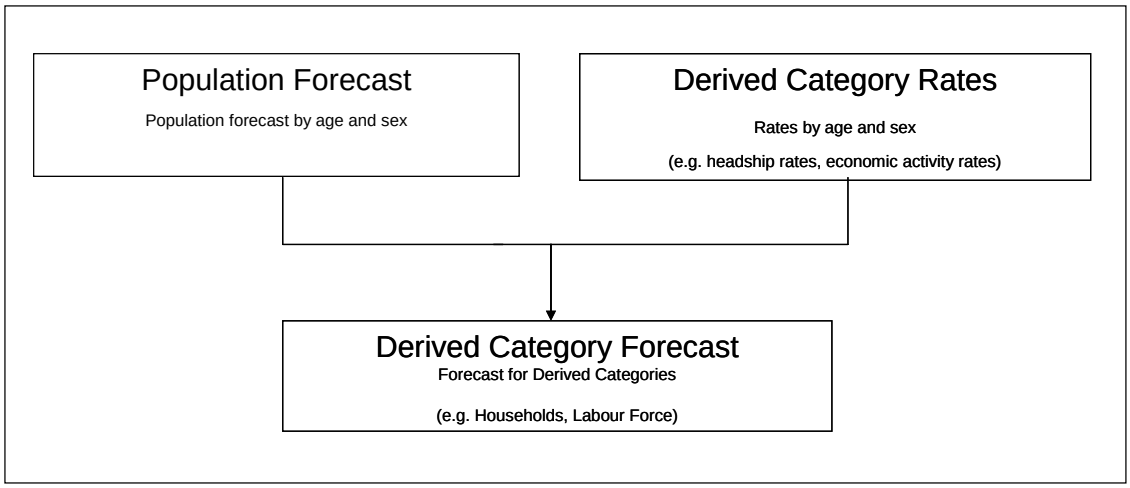


Figure 12: POPGROUP population projection methodology



Algebraically the model is defined as follows:

$$D_{a,s,u,y,d,g} = P_{a,s,u,y,g} * R_{a,s,u,y,d,g} / 100$$

Where:

D = Derived Category Forecast

P = Population 'at risk' Forecast

R = Derived Category Rates

and

a = age-group

s = sex

u = Sub-population

y = year

d = derived category

g = group (usually an area, but can be an ethnic group or social group)

Figure 13: Derived Forecast Model: household & labour force projection methodology

Appendix 2: Data & Assumptions

Phase 1 of this project involved the development and configuration of a complete population, household and labour force forecasting capability for the EPOA study area using POPGROUP and Derived Forecast model technology. This will be managed and maintained by Edge Analytics as the project progresses and provides the basis for all subsequent analysis, scenario forecasting and report development.

The POPGROUP suite of models draw data from a number of sources, building a historical picture of population, households, fertility, mortality and migration on which to base its scenario forecasts. The use of data from 2001 is important; for presentation, for interpretation, and for considering options for assumptions about future trends. A summary of the data being used is as follows:

Population

- Mid 2001 to mid 2010 population by single year of age and sex

Births and fertility

- Mid-year counts of births by sex, 2001-2010
- Standard age-specific fertility schedule from national projections and local authority fertility differentials, used to set the age-pattern of rates for each area
- Long-term assumptions on fertility change from national projections (2008-based)

Deaths and mortality

- Mid-year counts of deaths 2001 – 2010 by age and sex from 2001
- Standard age-specific mortality schedule from national projections and local authority mortality differentials, used to set the age-pattern of rates for each small area
- Long-term assumptions on mortality change from national projections (2008-based)

Migration

- Patient registration statistics for internal migration by five-year age-group and sex, 2001-2010
- Mid-year population estimate assumptions for international migration, 2001-2010

Households

The CLG household model (2008-base) provides all the necessary data inputs on:

- Population not in households
- Headship rates by household type, age and sex (2001-2033)

Using a time-series of Council Tax statistics for each local authority district, in combination with household-dwelling conversion rates from the 2001 Census (Figures 14 & 15), household estimates derived from the CLG model have been rescaled to local data. A set of 'rescaled' headship rates are calibrated to ensure that all household scenarios begin with a 2010/11 total that is consistent with Council Tax numbers. Headship rates follow the CLG trajectory of change thereafter.

Council Tax Data

Area Name	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Basildon	69,743	70,144	70,287	70,729	70,833	71,180	71,458	71,633	72,169	72,456
Braintree	54,420	55,146	55,890	56,546	57,190	57,944	58,665	59,152	59,540	59,969
Brentwood	29,088	29,201	29,442	29,681	29,710	29,902	29,996	30,332	30,669	30,826
Castle Point	35,222	35,311	35,280	35,497	35,620	35,893	36,070	36,198	36,389	36,489
Chelmsford	63,913	64,492	65,273	66,089	66,660	67,291	67,720	68,502	69,260	69,713
Colchester	63,770	64,341	65,238	66,326	67,222	68,019	69,317	70,733	71,869	72,705
Epping Forest	50,310	50,618	50,813	50,988	51,278	51,636	51,845	51,895	52,181	52,664
Harlow	33,305	33,583	33,730	33,827	33,951	34,187	34,351	34,466	34,676	34,891
Maldon	24,409	24,565	24,643	24,772	24,860	25,086	25,261	25,410	25,590	25,728
Rochford	32,249	32,422	32,562	32,722	32,752	32,909	33,277	33,461	33,644	33,701
Tendring	60,556	60,986	61,432	61,767	61,788	62,339	62,837	62,843	63,536	63,793
Uttlesford	27,696	27,930	28,131	28,472	28,674	29,209	29,568	29,984	30,478	30,980
Southend-on-Sea	72,318	72,498	72,736	72,935	73,261	73,881	74,110	74,496	74,842	75,217
Thurrock	57,742	58,507	59,340	60,066	60,565	61,635	62,278	62,257	62,748	62,845
Cambridge	43,405	43,582	43,857	44,343	44,879	45,337	46,147	46,652	47,473	48,000
South Cambridgeshire	52,327	53,159	53,870	54,461	55,201	56,059	56,971	57,875	58,587	59,382
Broxbourne	34,816	35,060	35,199	35,376	35,879	36,712	36,976	37,287	37,499	37,824
East Hertfordshire	52,158	52,673	53,075	53,414	53,698	54,204	54,959	55,715	56,210	56,621
Welwyn Hatfield	40,048	40,113	40,478	41,318	41,857	42,650	43,331	44,086	44,411	44,488
Babergh	34,759	34,990	35,468	35,678	35,791	36,057	36,399	36,727	37,061	37,276
Ipswich	49,993	50,374	50,778	51,294	51,919	52,642	53,558	54,776	55,787	56,416
Mid Suffolk	35,533	35,877	36,164	36,546	36,871	37,420	38,203	38,803	39,310	39,771
Suffolk Coastal	49,111	49,543	50,117	50,554	51,000	51,864	52,650	53,131	53,584	53,923
St. Edmundsbury	40,915	41,393	41,757	42,174	42,398	42,887	43,396	43,905	44,475	44,797

Figure 14: Council Tax statistics by area (Source: District Councils)

	Household-Dwelling Conversion Factor
Basildon	97.7%
Braintree	97.5%
Brentwood	96.8%
Castle Point	98.6%
Chelmsford	98.0%
Colchester	97.5%
Epping Forest	97.6%
Harlow	98.3%
Maldon	96.1%
Rochford	97.7%
Tendring	94.9%
Uttlesford	96.5%
Southend	96.1%
Thurrock	98.5%
Cambridge City	98.2%
South Cambridgeshire	97.4%
Broxbourne	97.3%
East Hertfordshire	97.7%
Welwyn-Hatfield	98.0%
Babergh	96.7%
Ipswich	96.5%
Mid Suffolk	96.3%
Suffolk Coastal	93.1%
St Edmundsbury	96.3%

Source: 2001 Census

Figure 15: Household-Dwelling Conversion Factors (Source: 2001 Census)

The CLG household types used by POPGROUP in its projections are as follows:

1. One person households: Male
2. One person households: Female
3. One family and no others: Couple: No dependent children
4. One family and no others: Couple: 1 dependent child
5. One family and no others: Couple: 2 dependent children
6. One family and no others: Couple: 3+ dependent children
7. One family and no others: Lone parent: 1 dependent child
8. One family and no others: Lone parent: 2 dependent children
9. One family and no others: Lone parent: 3+ dependent children
10. A couple and one or more other adults: No dependent children
11. A couple and one or more other adults: 1 dependent child
12. A couple and one or more other adults: 2 dependent children
13. A couple and one or more other adults: 3+ dependent children
14. A lone parent and one or more other adults: 1 dependent child
15. A lone parent and one or more other adults: 2 dependent children
16. A lone parent and one or more other adults: 3+ dependent children
17. Other households

Note:

A couple with no other adults: a household which contains one family and no others, comprising of a married or cohabiting couple, with or without dependent children.

A couple with other adults: a household which contains one or more married or cohabiting couple families with one or more other adults present, with or without dependent children.

Lone parent household: a household which contains one or more lone parent families, but no married couple or cohabiting couple families.

One person household: a person living alone who shares neither housekeeping nor a living room with anyone else.

Other household: a multi person household that is neither a couple household nor a lone parent household. Examples include, lone parents with only non-dependent children, brothers and sisters and unrelated (and non-cohabiting) adults sharing a house or flat. This category does not include households with dependent children.

A dependent child: a person in a household aged 0 to 15 (whether or not in a family) or a person aged 16 to 18 who is a full time student in a family with parents.

(Source: CLG)

Labour Force

The Derived Forecast model uses the following data items in its labour force projections:

- Economic activity rates by age and sex derived from EERA (Figure 6).
- Unemployment rate from the 2001 Census (Figure 7).
- Commuting Ratio, which measures the relationship between the number of 'employed residents' in a district relative to the total number of jobs, from the 2001 Census (Figure 7)

Dwelling and Economic growth trajectories

To enable dwelling-led scenarios to be run for districts, EPOA members have provided data relating to three future housing growth trajectories (Figures 2-4 and 8-11). To enable the economic scenario to be run for districts, EPOA members have provided labour force and employment forecasts from the EEFM for each year of the projection period (Figure 5). In each case the data provided have been used as 'constraints' on future population and household growth, using migration to balance against the designated target (dwellings, jobs or labour force).

Communal establishments and special populations

The configuration of the POPGROUP models has included a count of the population living in 'communal establishments' originally taken from the 2001 Census and consistent with that used by CLG in its household projections. In Colchester and Uttlesford, POPGROUP has also explicitly identified Armed Forces personnel as a 'special population'.

Appendix 3: East of England Forecasting Model

The East of England Forecasting Model (EEFM) was originally developed for the East of England Development Agency (EEDA) and regional partners by Oxford Economics. Its purpose was to project economic, demographic and housing trends in a consistent fashion and in a way that would help in the development of both the Regional Economic Strategy (RES) and the Regional Spatial Strategy (RSS) for the East of England. The outputs released are available on the Insight East website http://www.insighteast.org.uk/viewArticle.aspx?id=17083. A number of other related resources can also be accessed on the site also.

The abolition of EEDA has resulted in ownership of the EEFM being transferred to the East of England Local Government Association (EELGA). Cambridgeshire County Council is to manage the Model on behalf of the Association and Oxford Economics has been re-appointed to maintain and operate it for a further 2 years. The currently available forecasts were produced in Autumn 2010 and consist of a Baseline forecast (see below) and three scenario forecasts. The next set of forecasts are due to be published in Spring 2012, following updating to the new 2007SIC sectors and geographic expansion to include all local authorities within those Local Enterprise Partnerships now with a role in the East of England region.

The EEFM is primarily designed to produce economic forecasts for local authority areas. However, it also includes some demographic information and also includes a facility for forecasting carbon emissions. It is a spreadsheet-based model (EXCEL) which covers a wide range of variables, and is designed to be flexible so that alternative scenarios can be run and the impacts of different assumptions can be measured. For instance, the Model can show the impact on the local economy of different overall economic growth rates or of accelerated growth or decline in particular sectors and the consequence for future dwelling requirements. Similarly, the Model can show the impact that different scale and distribution of dwelling change between authorities may have on the local economy in terms of job growth, commuting and unemployment.

The EEFM comprises a full database including 147 separate variables for each of the East of England's 48 pre-April 2009 local authorities, as well as for historic counties, strategic authorities, selected other local authority groupings, the East of England as a whole, and the UK. This is supported by a comprehensive set of tables, charts and 'Powerpoint' slides allowing users to select and assemble data on the variables, localities, scenarios and results they want. Key outputs of the Model are:

- Information at local authority level for individual years to 2031;
- Forecasts of employment and Gross Value Added (GVA) by 29 sectors;
- Numbers of employed people by workplace and residence with net commuting;
- Unemployment;
- Total population, households and dwellings
- Carbon emissions by 4 groups

An important feature of the EEFM is its links to other Oxford Economics forecasting models, ensuring that all EEFM forecasts are consistent with Oxford Economics' world, UK national and UK regional forecasts. The links may be summarised as,

The Oxford Economics suite of forecasting models

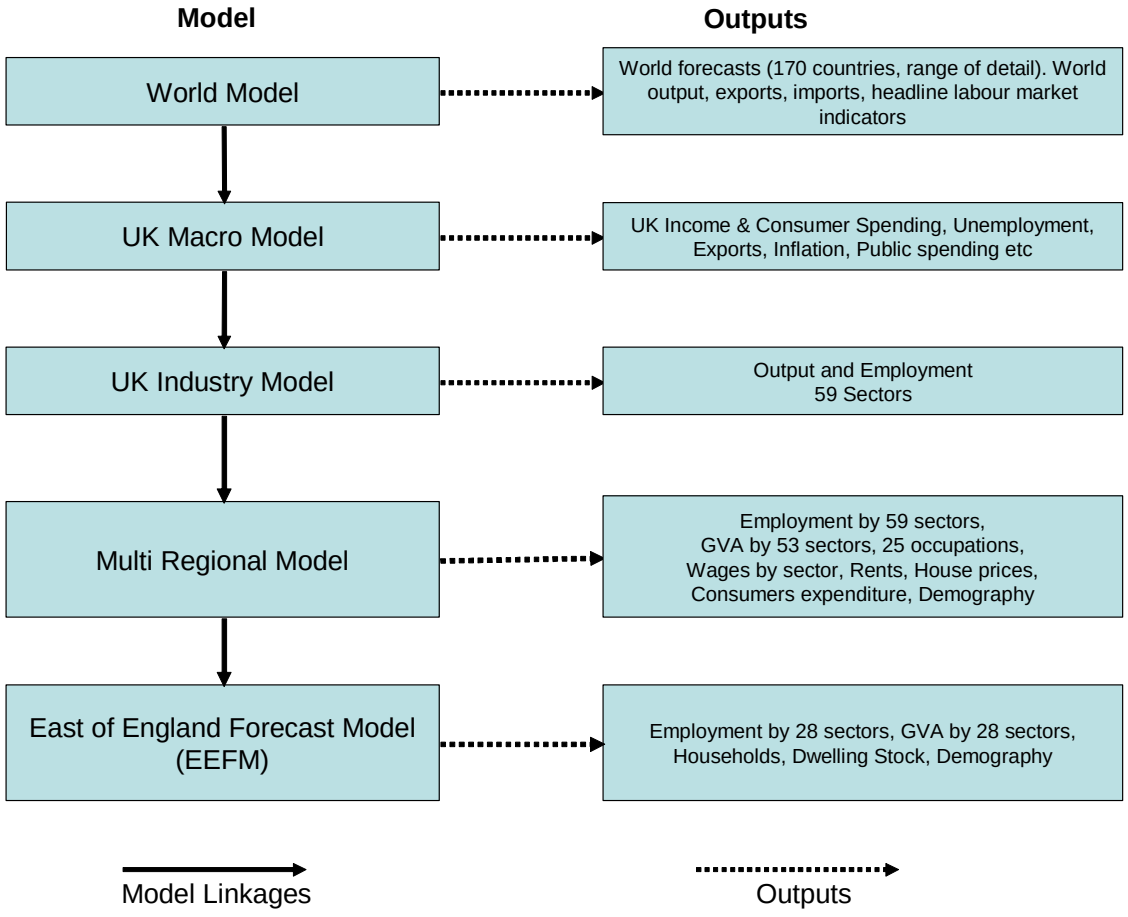


Figure 16: The Oxford Economics suite of forecasting models

The overall Model structure of the EEFM captures the interdependence of the economy, demographic change and housing at a local level, as well as reflecting the impact of broader economic trends on the East of England. The employment forecasts take account of the supply and

demand for labour, the demographic forecasts reflect labour market trends as they are reflected in migration (and natural change indirectly), and the housing forecasts take account of both economic and demographic factors. This structure allows scenarios to be designed which test the impact of variables upon each other – for example, the impact of housing supply on economic variables as well as vice versa.

The EEFM is constructed on an annual basis. Historic data for most variables has been collected over 20 years to provide a basis for estimating the relationships between variables and for forecasting future trends. Forecasts are currently made up to 2031, reflecting the end dates of the available global, national and regional forecasts. But, the longer-term forecasts should be treated with caution, as unforeseen - but inevitable - future change in key causal factors will affect forecast accuracy. Medium-term forecasts are more likely to be better approximations than shorter-term ones, as there can usually be more confidence about medium-term trends than about short-term random fluctuations around the trend.

The EEFM is very large, with over 7,000 economic, demographic and housing indicators. Each of these variables is linked to others within the Model, and many key variables are also linked to others in the wider Oxford Economics suite of models. The main internal relationships between variables are encapsulated below,

Main relationships between variables in the EEFM Model

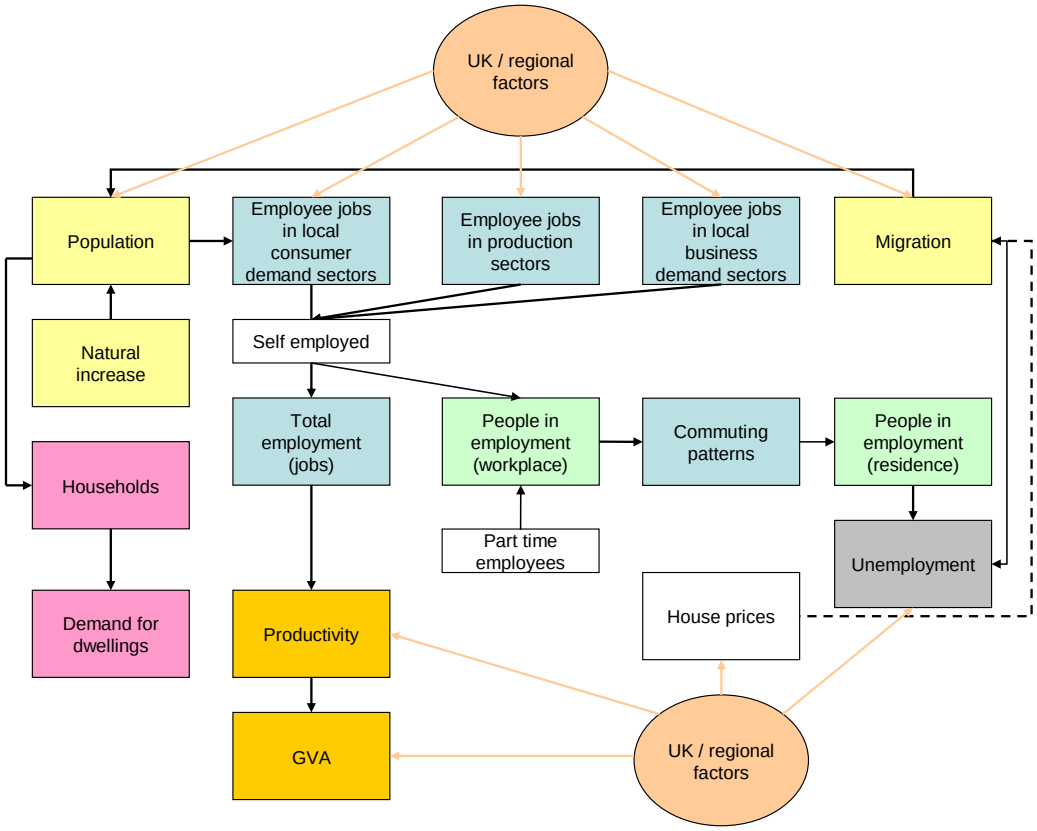


Figure 17: Relationships between variables in the EEFM Model

Appendix 4: Phase 1 Summary

Phase 1 of the Greater Essex Demographic Forecasts project involved the use of POPGROUP technology to replicate the 2008-based SNPP from ONS plus the accompanying household projections from CLG. This initial validation of the POPGROUP technology demonstrated consistency and equivalence of forecast model output to the SNPP and to ONS mid-year estimates.

In addition, Phase 1 also examined the relationship between CLG estimates of household numbers with local data on dwelling stock change since 2001 (taken from Council tax registers). This was an important validation exercise to establish how the CLG's 'household headship rates', in combination with ONS population estimates, have modelled household growth since 2001. For each local authority, a 'vacancy rate' has been assumed to convert CLG households to dwellings; this has allowed direct comparison with the Council Tax totals (Figure 18).

The deviations between the datasets has provided the basis for a 'recalibration' of headship rates to ensure that the historical estimates of household totals are consistent with actual evidence from the Council tax statistics.

Hhld Model Properties vs Council Tax [1]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Basildon	99	100	100	100	100	101	102	103	104	105	106
Braintree	100	101	101	101	101	101	101	101	102	103	103
Brentwood	99	99	99	99	99	99	99	100	100	101	101
Castle Point	100	101	102	101	102	102	102	102	103	103	103
Chelmsford	101	101	101	101	101	101	101	102	102	103	104
Colchester	100	100	99	98	99	100	100	101	102	103	104
Epping Forest	101	101	101	101	100	100	100	101	101	101	101
Harlow	100	99	99	98	99	99	99	100	100	100	100
Maldon	100	100	101	102	102	102	103	103	104	105	106
Rochford	99	100	100	100	101	102	102	103	103	104	105
Tendring	102	102	103	103	104	104	104	105	105	106	107
Uttlesford	100	100	100	100	100	100	100	100	99	99	99
Southend	98	98	98	97	97	97	98	99	99	100	101
Thurrock	101	102	102	101	102	101	101	104	104	106	107
Cambridge City	98	95	94	92	94	94	94	96	94	95	95
South Cambridgeshire	100	100	100	100	101	101	100	100	101	101	101
Broxbourne	100	101	100	100	99	98	98	98	98	98	98
East Hertfordshire	100	100	100	100	100	101	100	101	101	101	101
Welwyn-Hatfield	100	100	100	100	101	101	101	101	102	104	105
Babergh	101	101	100	100	101	101	100	100	99	100	100
Ipswich	100	100	100	100	102	101	101	101	101	102	103
Mid Suffolk	100	100	100	101	101	101	101	101	101	102	103
Suffolk Coastal	100	100	101	101	102	101	102	102	103	104	105
St Edmundsbury	99	99	99	99	100	100	99	99	99	100	100

[1] Index (if greater than 100 then Household model property estimates are higher than Council Tax statistics)

Figure 18: Household Model Properties vs. Council Tax