Business Intelligence Report

Economic and demographic forecasts for Thanet District Council

February 2013

Final

Contents

1. Introduction

Kent County Council's (KCC's) Business Intelligence, Research & Evaluation (R&E) team have been working with Thanet District Council (TDC) to assess the demographic and dwelling implications of Thanet's future employment scenarios.

Consultants Experian were appointed by TDC to undertake the Thanet Economic and Employment Assessment in November 2012. The study considered three options for the District's future job growth. R&E have assessed the labour supply required to meet the proposed job growth options and also the level of housing required to support each growth option. The assessment has been carried out alongside an examination of changing needs within the existing population. In total, R&E have considered five scenarios – the three Experian job-led scenarios and two demographic-led scenarios.

This paper begins by introducing the five scenarios TDC have commissioned followed by an outline of the methodology along with the data sources and assumptions used to produce the forecasts. The report then goes on to present a summary of the main findings. Detailed statistical outputs have been provided separately in spreadsheet format.

Forecasting work undertaken by R&E is part of an on-going process. In producing this report, R&E are providing an independent assessment of the scenarios being tested for TDC, based on the data currently available. This assessment does not reflect any policy position adopted by KCC.

2. The five scenarios

TDC has requested R&E assess the job, labour supply, population and dwelling requirements of five scenarios.

Scenarios 1 to 3 are economic job-led scenarios based on a future level of job growth taken from the work for the District Council by consultants Experian. These forecasts assess the workforce needed to support the required level of job growth and the associated level of house building necessary to accommodate the changing population. The economic scenarios provide an indication of the different demographic and housing impacts of varying levels of job growth.

Scenarios 4 and 5 are demographic population-led scenarios based on future population trends. These projections assume a constant migration trend into the future. Whilst it is unlikely that a trend will continue indefinitely (as it is likely to be affected by future policy decisions) this type of projection can provide a useful indication of the District's changing demographic profile and housing needs. This includes an assessment of the District's resident-based labour supply and the number of jobs that could be supported by such a population.

Section 3.2 provides more detail on the different types of forecasts.

Scenario 1 – Experian baseline

A forecast based on the assumption that there will be 3,100 net additional jobs in Thanet District over the period 2011-2031. Section 4.2 outlines the annual phasing for the given job growth.

This job figure is a baseline estimate that assumes over the next two decades there will be year on year growth of 0.5% in the first decade and 0.2% over the second decade, in job growth particularly in the services sectors and declines within manufacturing.

Scenario 2 – Risk based scenario

A forecast based on the assumption that there will be 1,200 net additional jobs in Thanet District over the period 2011-2031. Section 4.2 outlines the annual phasing for the given job growth.

This job figure assumes that the economy returns to recession with 1,900 fewer jobs than the baseline over the two decades to 2031. It is based on the assumption that employment levels will experience a sharp downturn and will only return to pre-recession levels by around 2020, which is significantly later than anticipated under the baseline scenario. Growth over the two decades is anticipated to be more muted at 0.1% year on year in the first decade and 0.2% year on year in the second decade.

Scenario 3 – Policy-on scenario

A forecast based on the assumption that there will be 5,100 net additional jobs in Thanet District over the period 2011-2031. Section 4.2 outlines the annual phasing for the given job growth.

This job figure is based on the assumption that there has been a strong boost to the wider economy, in particular within the Green sector and Tourism sector which has a positive knock-on effect on the wider economy as a whole. The impact is evident with a markedly stronger job growth trajectory post 2012 which is 2,000 more jobs above the baseline scenario.

Scenario 4 – Zero Net Migration

This projection assumes zero net migration to the District. It looks at how the District's population will change if in and out migration is assumed to be equal. Therefore the only change in the population will be as a result of natural change (the balance of births and deaths) and population churn (people will still move in and out but there is no net effect).

This is a hypothetical scenario because migration cannot be prevented. However, this projection provides a useful assessment of future resident-based labour growth and the number of dwellings needed to accommodate the existing population after consideration of the natural increase, the ageing of the population and the formation of new households.

Scenario 5 – Short-Term Migration trend

This projection assesses the future demographic profile of Thanet if past migration levels to the District were to continue into the future.

The projection has been based on an average of net migration levels to Thanet between 2005/6 and 2009/10. This equates to 820 migrants per annum. A 5-year average of migration is commonly referred to as a short-term migration trend.

3. Methodology

3.1 The forecasting model

The five scenarios have been produced for the TDC area as a whole using the POPGROUP and Derived Forecast (DF) model. The POPGROUP and DF model is used by over 90 organisations including academic and public service staff in housing, planning, health, policy, research, economic development, and social services. The model is therefore widely used and accepted as the industry standard.

The POPGROUP and DF model is currently owned by the Local Government Association with the technical maintenance undertaken by Edge Analytics.

The POPGROUP model is based on the basic principles of the cohort survival methodology:

1. Take a base population (by age and gender);
2. Add births and 'in' migration (by age and gender) for year 1;
3. Subtract deaths and 'out' migration (by age and gender) for year 1;
4. Age the entire population by one year;
5. Results for year 1 can be noted;
6. Repeat the process above for year 2 and onwards

Whilst the cohort survival method may sound simple, the process actually requires a lot of complex input and output figures in order to model real-life events. A diagram illustrating the forecasting process can be found in Appendix 1.

Section 4.3 outlines the data sets and their sources used within POPGROUP and DF model to calculate the TDC forecasts.

3.2 Introduction to the different forecasting types

The POPGROUP and DF model allows three main types of forecasts to be produced:

- **Population-led forecasts**. These are usually a conventional migration-led projection based on a past migration trend or a migration assumption needed to support an economic aspiration for example. Alternatively zero net migration could be assumed. In this type of projection the model projects the population through the cohort component methodology but constrains migration to the level set. This projection can provide an assessment of the number of dwellings needed to support the given population growth by applying age/ gender specific headship rates and vacancy rates. Likewise, this projection can provide an assessment of the number of jobs that could be filled by the given population by applying economic activity rates, unemployment and commuting assumptions.

- **Housing-led forecasts**. In a housing-led forecast (or strategy-based forecast) the forecasting of population is evaluated in terms of the capacity of an area to accommodate dwellings. This is calculated from a base number of dwellings and future building/ demolition rates. In this type of forecast the model forecasts the population through the cohort component methodology but increases (or decreases) the population accordingly to meet the set housing levels by altering migration levels. This allows an assessment of the impact that different house building programmes would have on the population and future resident labour supply. The POPGROUP and DF model does not differentiate between the type and size of dwelling to be built. This projection can provide an assessment of the number of jobs that could be filled by the given population by applying economic activity rates, unemployment and commuting assumptions.

- **Job-led forecasts**. In a job-led forecast the model calculates the required population and dwelling growth needed to support a future job growth target. In this type of forecast the model forecasts the population through the cohort component methodology but increases (or decreases) the population accordingly to meet the set job target by altering migration levels. In calculating this associated population growth the model needs to apply economic activity rates to the resident population and take account of unemployment rates and commuting patterns. The future dwelling requirements are calculated by applying age/ sex specific headship rates to the generated population, along with assumptions for future vacancy.

Further guidance on the relationship between population, housing and jobs is provided in Section 5: Advice on interpreting the results.

4. Data sources and assumptions

4.1 Base year and variable

TDC requested a base year of 2011.

The 2011 Mid Year Population Estimates, which take account of the population recorded through the 2011 Census, have been used as the base variable for all five scenarios. This includes the overall population count and full consistency with the population profile at 2011 by single year of age and gender.

The 2011 Mid Year Population Estimates were published on 25 September 2012 by the Office for National Statistics (ONS).

4.2 Control variables

The POPGROUP model only allows you to control to one variable in a given year. As mentioned above, the decision was made to control all five scenarios at 2011 to a Mid-Year Population Estimate. Controlling to a 2011 population count, results in the number of dwellings and jobs for this year being calculated by the POPGROUP model. Therefore the dwelling and job count for 2011 presented in the results is likely to differ from the dwelling and job count for the same year published via alternative sources.

The control variable for each subsequent year differs for each scenario. Table 1 outlines the control variables and values used to produce each of the three job-led scenarios from 2011 through to 2031. Table 2 outlines the control variables and values used to produce both of the population-led scenarios.

Table 1: Control variables for each of the three job-led TDC scenarios

	Scenario 1		Scenario 2		Scenario 3	
	Experian baseline		Risk based scenario		Policy-on scenario	
	Number	Unit	Number	Unit	Number	Unit
2011-12	642	Jobs	-225	Jobs	762	Jobs
2012-13	164	Jobs	-578	Jobs	280	Jobs
2013-14	164	Jobs	-172	Jobs	235	Jobs
2014-15	164	Jobs	-7	Jobs	247	Jobs
2015-16	164	Jobs	245	Jobs	264	Jobs
2016-17	164	Jobs	308	Jobs	275	Jobs
2017-18	164	Jobs	164	Jobs	277	Jobs
2018-19	164	Jobs	165	Jobs	273	Jobs
2019-20	164	Jobs	166	Jobs	275	Jobs
2020-21	164	Jobs	167	Jobs	275	Jobs
2021-22	108	Jobs	111	Jobs	212	Jobs
2022-23	104	Jobs	107	Jobs	204	Jobs
2023-24	101	Jobs	104	Jobs	198	Jobs
2024-25	98	Jobs	102	Jobs	193	Jobs
2025-26	96	Jobs	100	Jobs	189	Jobs
2026-27	94	Jobs	98	Jobs	185	Jobs
2027-28	93	Jobs	96	Jobs	182	Jobs
2028-29	91	Jobs	95	Jobs	185	Jobs
2029-30	90	Jobs	93	Jobs	181	Jobs
2030-31	88	Jobs	91	Jobs	177	Jobs
Total 2011-2031	**3,082**	**Jobs**	**1,229**	**Jobs**	**5,071**	**Jobs**

Source: Experian, Thanet District Council

Table 2: Control variables for the two population-led TDC scenarios

	Scenario 4		Scenario 5	
	Zero Net Migration		Short Term Migration Trend	
	Number	Unit	Number	Unit
Per annum 2011-12 through to 2030-31	0	Net migrants	820	Net migrants
Total 2011-2031	**0**	**Net migrants**	**16,400**	**Net migrants**

Source: Research & Evaluation, Kent County Council

4.3 Data set sources

The data variables used to produce the district level forecasts are outlined in Appendix 1 which contains a diagram of the forecasting process. Table 3 provides the source of these variables. The same input variables have been used to produce all five of the scenarios. The only difference is the control variable which was outlined in Tables 1 and 2.

Table 3: Data sets used to create the five TDC forecasts

Variable	Data set	Source
Base population	2011 Mid Year Population Estimates (2011 Census based) by single year of age and gender	ONS
Fertility rates	Age specific fertility rates for Thanet District as used in the 2010-based Sub National Population Projections.	ONS
Mortality rates	Age standardised mortality ratios for Thanet District as used in the 2010-based Sub National Population Projections.	ONS
Migrant profile	Age specific profiles of migrants for Thanet District have been taken from the 2010-based Sub National Population Projections. The total number of migrants will vary between each of the scenarios as migration levels are adjusted to meet the criteria set. In a migration-led scenario, the total number of migrants has been constrained to the value given, but the age profile will follow that from the 2010-based SNPP.	ONS
Institutional population	Population not in households has been based on the CLG 2008-based Household Projections	CLG
Household representative rates	Headship rates have been based on the CLG 2008-based Household Projections	CLG
Vacancy rate	Thanet's dwelling vacancy has been set at 5.65% for year 2011 based on a three-year (2009-2011) average recorded value from the Housing Strategy Statistical Appendix (HSSA). The vacancy rate is then gradually reduced over the forecast period to reach a	CLG/ KCC

	vacancy target of 5% by 2031. The target rate has been provided by Thanet District Council.	
Commuting ratio	A residence to workplace ratio of 1.10 has been applied throughout the whole forecast period. This ratio was provided by Experian/ Thanet District Council. This implies that Thanet has more working people living in Thanet than working in Thanet and therefore it is a net exporter of labour i.e. Thanet exports 10% (net) of its workplace labour.	Experian/ TDC
Economic activity rates	Economic activity rates are based on local 2001 Census rates which are age and gender specific. These have been rolled forward to 2020 based on labour force projections from ONS. Beyond 2020 KCC have made some broad assumptions regarding future growth in activity rates to reflect changes made by the Government to standardise state pension age for men and women and to effectively abolish a fixed retirement age. See also paragraph 4.4 below. Appendix 2 sets out the detailed activity rates by age and gender.	ONS/ KCC
Unemployment rate	Unemployment rates for 2011 and 2012 are based on Thanet's actual claimant count and for subsequent years the rates are gradually reduced to reach a target unemployment rate of 3% by 2031 as requested by Thanet District Council. See Appendix 3 for more detail.	NOMIS/ KCC/ TDC

There are two variables – economic activity rates and commuting rates - which will have a significant impact on the modelling results and at this point it is worth discussing these in more detail.

4.4 Activity rates

A key component in the calculation of future resident labour supply is an assessment of the level of economic activity within the working age population, through the application of age-specific activity rates.

There is uncertainty over future economic activity rates with regards to the economic activity of those people who will be affected by the changes to the State Pension Age (SPA).

The last set of national labour force projections, which included an estimate of future age and gender-specific activity rates, was published in January 2006. In the absence of an updated national set of economic activity rate projections there is much debate over what level the future economic activity rates should be set at.

Kent County Council has produced its own set of economic activity rate projections. The methodology for these activity rates is set out in the technical paper Activity rate projections to 2036. To summarise, the activity rates are calculated for each gender/age band based on local 2001 Census data, which are then rolled forward to 2020 using the national growth rates as set out in the national projections. All post-2020 activity rates are held constant at the 2020 level.

The activity rates for males and females, by age band, are shown in Charts 1 and 2. The detailed rates are provided in Appendix 2.

Chart 1: Male activity rates

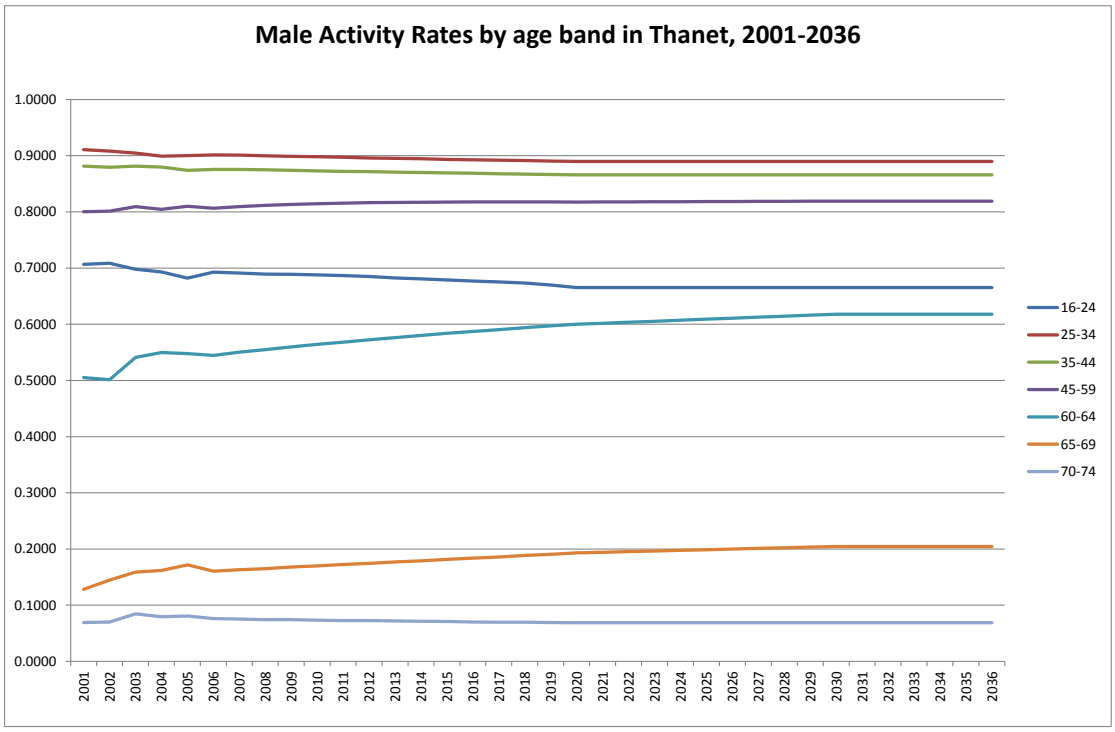
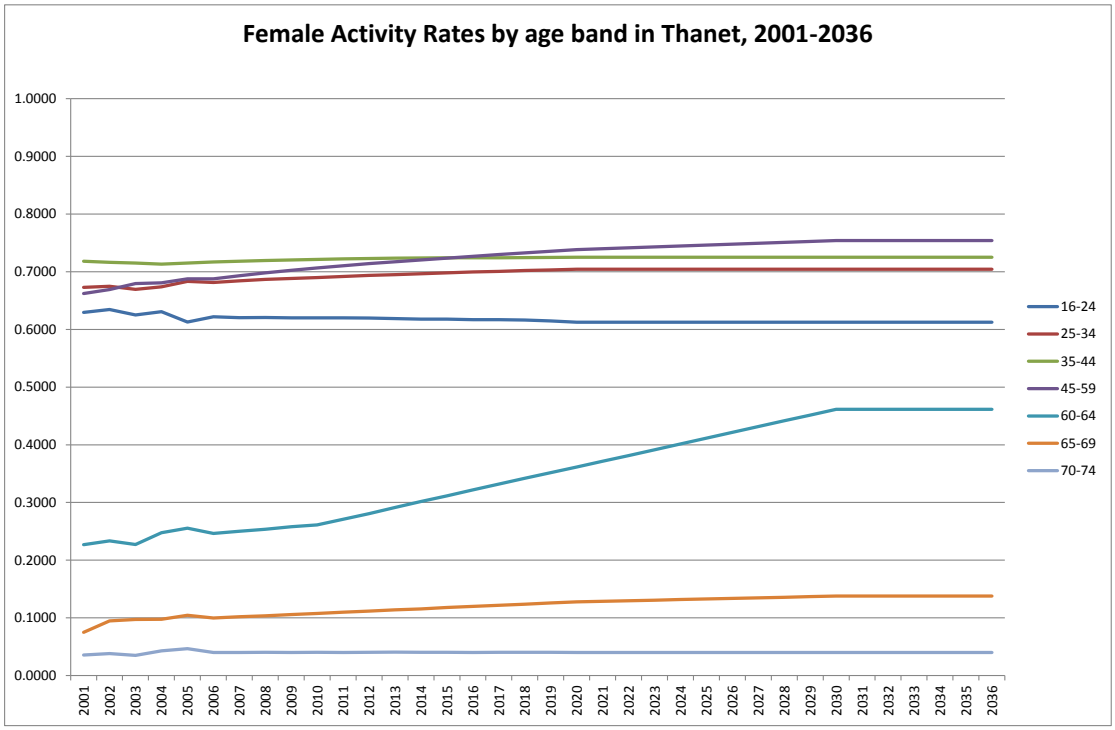


Chart 2: Female activity rates



The same economic activity rate assumptions have been used in all five of the TDC scenarios.

Activity rates are applied to the working age population in order to estimate the number of people who will be "economically active". Those who are economically active *should* be available for employment, so will include those who are (or who will be) unemployed. The economically active are also referred to as the 'resident workforce' or 'resident labour supply'. Section 6.2 presents the calculated resident labour supply for each of the five scenarios based on applying KCC activity rate forecasts to the generated population profile of each scenario.

Beyond 2020 it becomes more difficult to forecast activity rates with certainty but KCC believes its long-term forecasts of economic activity offer a reasonable approach to accommodating the proposed changes to State Pension Age and the subsequent impact on activity rates. We believe that there will be some uplift in the activity rates of those in the older age bands as a result of the government's proposed changes to State Pension Age. However, activity rates cannot continue to increase indefinitely and we have chosen to limit the growth to 2030, with rates being held constant thereafter.

KCC does not intend to revise the assumptions on activity rates until the release of data from the 2011 Census, or until any robust national forecasts become available. Whilst there is unlikely to be a new set of national economic activity rates produced in the short term, the next update of current economic activity rates will be possible once the 2011 Census results are released. Age and gender specific activity rates

from the 2011 Census, at local authority level, are expected in the Census "fourth release" scheduled for publication between July and October 2013.

If a different set of economic activity assumptions are applied in the model calculations, then a different set of results will be generated. For example, if economic activity rates are increased then a larger resident labour supply could be generated from a population, than that which could be generated if lower economic activity rates were applied. **However, economic activity rates should not be adjusted without sound reasoning for doing so.** Economic activity rates will largely be influenced by macro-economic conditions rather than anything that the District Council can locally influence.

An alternative factor that the District Council does have more control over is the commuting flow of residents/ workers which is examined in more detail in the next section.

4.5 Commuting ratio

The commuting ratio (or otherwise known as a residence to workplace ratio) is expressed as:

$$\frac{\text{Resident population in employment}}{\text{Workplace population in employment}}$$

Essentially, the commuting ratio converts the resident labour supply into a workplace "catchment" population, which better measures those likely to be available for work in the area.

The last official data on commuting ratios comes from the 2001 Census, which showed at that time Thanet to have a commuting ratio of 1.19. This implies that Thanet is a net exporter of labour.

The next official update will not become available until the 2011 Census results on commuting flows are published towards the end of 2013/ early 2014. In the meantime, evidence from Experian suggests that the ratio has fallen between 2001 and 2011 based on workplace based employment estimates generated from key official sources (Business Register and Employment Survey) and estimates of residence based employment (generated from the Labour Force Survey and Annual Population Survey). The evidence suggests that Thanet's commuting ratio may be as low as 1.10 in 2011. However, Experian do state that the uncertainty around this figure is very high and a figure between 1.05 and 1.20 is possible.

Nonetheless Thanet District Council has requested that a commuting ratio of 1.10 be used in the forecast calculations.

The conversion of jobs to dwellings in the model is therefore based on a ratio that is an estimate only and which is likely to be subject to change. For this reason, the ratio is likely to generate output results in the model that need *interpretation*, rather than just being taken at face value.

For example, the results may show that *x* number of dwellings are required to support the population needed to meet one of the job-led scenarios. However, this assessment is based on the assumptions contained within the model. If the model was to assume increased out-commuting then the results would show the need for more dwellings in the future than shown currently. If the model was to assume reduced out-commuting then the results would show the need for fewer dwellings than currently shown. More detail is provided in Section 5: Advice on interpreting the results.

To some extent the District Council's policies and actions – for example, if it is successful in promoting the Green and Tourism sectors – may influence the commuting ratio. However, how this works in reality is difficult to predict, as there are many other wider issues that will influence this and it remains largely a matter of personal choice and circumstance that determines where people live and where they work.

So not only is there uncertainty over Thanet's current commuting ratio, it will be influenced again in the future, by wider issues (e.g. the cost of travel) and as a result of the choices made by TDC in its plan. This uncertainty requires informed interpretation, through sensitivity testing and an understanding of Thanet District Council's ambitions and policies for the future of the District.

Commuting ratios have been held as a constant value throughout the entire forecast period in each of the five scenarios presented in this report. However, TDC may wish to test the impact of alternative commuting assumptions to illustrate the varying impact and what this means in terms of future dwelling need in the District to support the desired economic growth.

4.6 Accuracy of forecasts

Forecasting is always uncertain. Even in demographic forecasts, where variables such as birth and death rates, fertility rates and average household size tend to change relatively slowly and on fairly predictable paths, there is still a degree of uncertainty particularly with regards to migration. Further uncertainty comes into play when considering the economic assumptions.

Section 4.4 outlined the assumptions made regarding economic activity rates. Due to the uncertainty over how rates are expected to change in the future, the results for the calculated resident labour supply could differ to those presented in the results section of this report if a different set of assumptions were to be used. Likewise, applying an alternative commuting ratio could lead to different results as outlined in Section 4.5.

The model has also made an allowance for future unemployment. Unemployment levels change quickly in response to economic fluctuations and in recent times there has been a high level of uncertainty with regard to the state of the economy. This makes forecasting unemployment very difficult. For this reason an alternative method is used, which is to set "target" unemployment rates, which for local planning purposes are set at a low level, in order to maximize the labour supply that has to be planned for. Thanet District Council has requested that a target vacancy rate of 3% by 2031 is used within the forecast calculations. Further details are provided in Annex 3 of this report.

The forecasts are not intended to provide the answer as to what Thanet District's future dwelling growth should be. However, they attempt to illustrate what the future impact may be based on the assumptions used.

Therefore the forecasts are as accurate as they can be based on the information known at the time of their production and the assumptions used. It is important for the user to fully understand the basis on which the forecasts have been produced so as not to misinterpret the information and to understand what, if any of the assumptions were to change, the impact would be. Further guidance for users is presented in the next section.

5. Advice on interpreting the results

Section 3.2 introduced the three main types of forecasts; population-led, housing-led and job-led forecasts. TDC has commissioned two of the three forecast types; three job-led scenarios and two population-led scenarios.

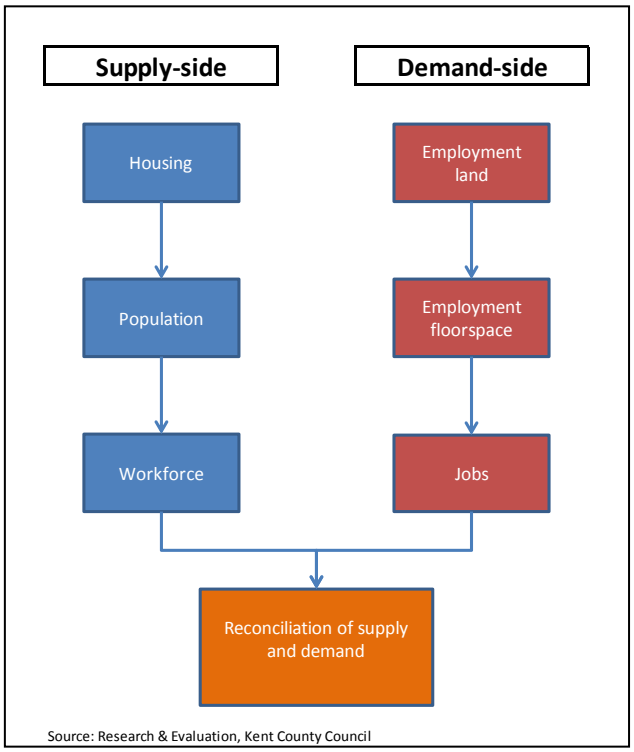
Population, housing (referred to as dwellings) and job outputs, are all available from each type of forecast. For example, a job-led scenario will provide an assessment of the number of houses required to support a given level of job growth and a population-led scenario will provide an assessment of the number of jobs that could be filled from the resulting population.

Here is an explanation of the way in which POPGROUP determines the level of housing required to support a given job-led scenario.

Traditionally, the supply (labour) and demand (job) streams are treated separately as illustrated in Figure 1:

- Housing land generates housing, which in turn generates population and then labour supply.
- Employment land generates employment floorspace which in turn generates jobs.
- The balance of the two streams is then reconciled.

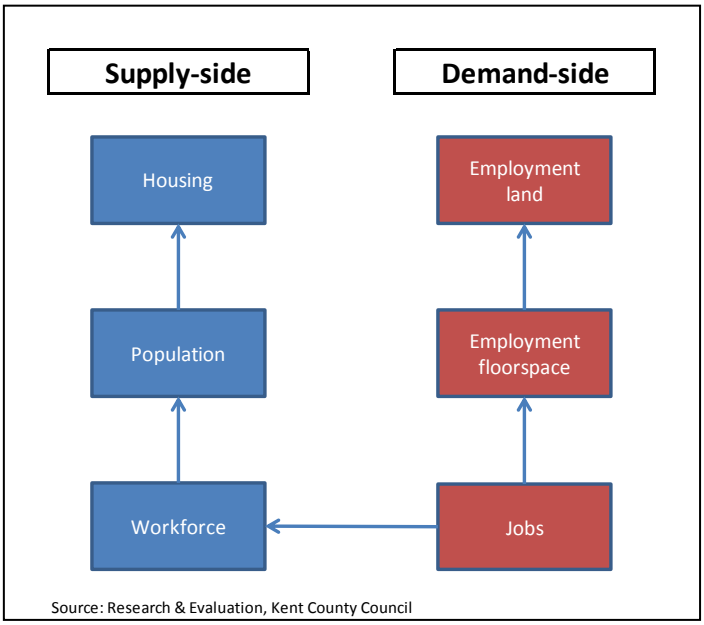
Figure 1:



Source: Research & Evaluation, Kent County Council

However, the functionality of POPGROUP allows the development of job-led scenarios, where a target job number can be set and the level of housing growth required to achieve the job target, can be determined. The same key stages shown in Figure 1 remain, but the sequence, or flow, between them is different as is shown in Figure 2.

Figure 2:



Source: Research & Evaluation, Kent County Council

In a job-led scenario, the number of jobs is the 'control variable' (explained in Section 4.2). POPGROUP determines the level of workforce required to fill those jobs, the level of population growth required to generate the workforce and the level of housing to accommodate that population.

However, it is important to understand that the link POPGROUP makes between jobs and workforce is, in many ways, *artificial*. It simply gives a result based on the assumptions contained within the model, based on either what we know now or what we assume will happen in the future.

The results will be dependent on:

- The level of net commuting
- The level of unemployment
- The level of economic activity
- The level of in-migration
- The age profile of the in-migrants

In reality, there is no direct link between the number of jobs in an area and the number of houses. Jobs come from the provision and take-up of employment land, followed by subsequent occupation of the premises by businesses that go on to

create employment opportunities. A job is then only created when one of those opportunities is filled by an employee. Dwellings come from housing land sites, which are then developed. The two are, therefore, not directly related. However, for modelling purposes, POPGROUP *assumes* a link between the two streams, so that job-led scenarios produce an output in terms of dwellings and dwelling-led scenarios produce an output in terms of jobs.

It is vital that the output from scenarios produced by POPGROUP is fully understood.

Part of the decision a local planning authority has to make, is to assess the "balance" between the two streams. Consideration has to be given to the fact that the workforce is mobile and that both the residents in the area and the people who work there can choose where they want to live and work. This factor alone makes the relationship between jobs and housing dynamic, rather than static, let alone other factors like the level of unemployment and overall state of the economy.

Areas, such as Thanet, that are net exporters of labour (according to the 2001 Census), will find that a job-led forecast will generate relatively high dwelling numbers. This is because the model increases net inward migration to reach the desired job growth target. Net inward migration is relatively high because it has to counterbalance the net out-commuting. When adjusting the migrant flows, the model applies the migrant profile specific to Thanet which will include people of all ages not just those of working age. High net inward migration will increase demand for dwellings.

The purpose of the output is to produce *indicative* results, based on the assumptions within the model, in order to inform discussion and debate around both job and dwelling quantities. The default output will not necessarily give the desired housing number in a job-led forecast, nor will it necessarily give the desired job number in a dwelling-led forecast. The results need to be interpreted, based on an understanding of the assumptions used - not just read.

In reality, there may be changes to the key assumption providing the 'link' between jobs and dwellings; commuting patterns and economic activity rates. For example, more people may choose to work locally, reducing the out-commuting flows and thus the future demand for dwellings would fall as net inward migration would be reduced accordingly.

6. Results

This section provides a summary of the results. In addition to the information presented here, a series of accompanying Excel spreadsheets which contain the detailed information have been produced and provided to TDC.

6.1 Job growth

In 2011 there were estimated to be 50,400 jobs in the TDC area. This is a calculated job figure based on the 2011 Mid Year Population Estimates and assumptions incorporated in the model regarding unemployment, economic activity and commuting. This figure may differ to a 2011 job count published via other sources.

Chart 3 summarises the job growth for each of the five scenarios with the full detail outlined in Table 4.

Chart 3:

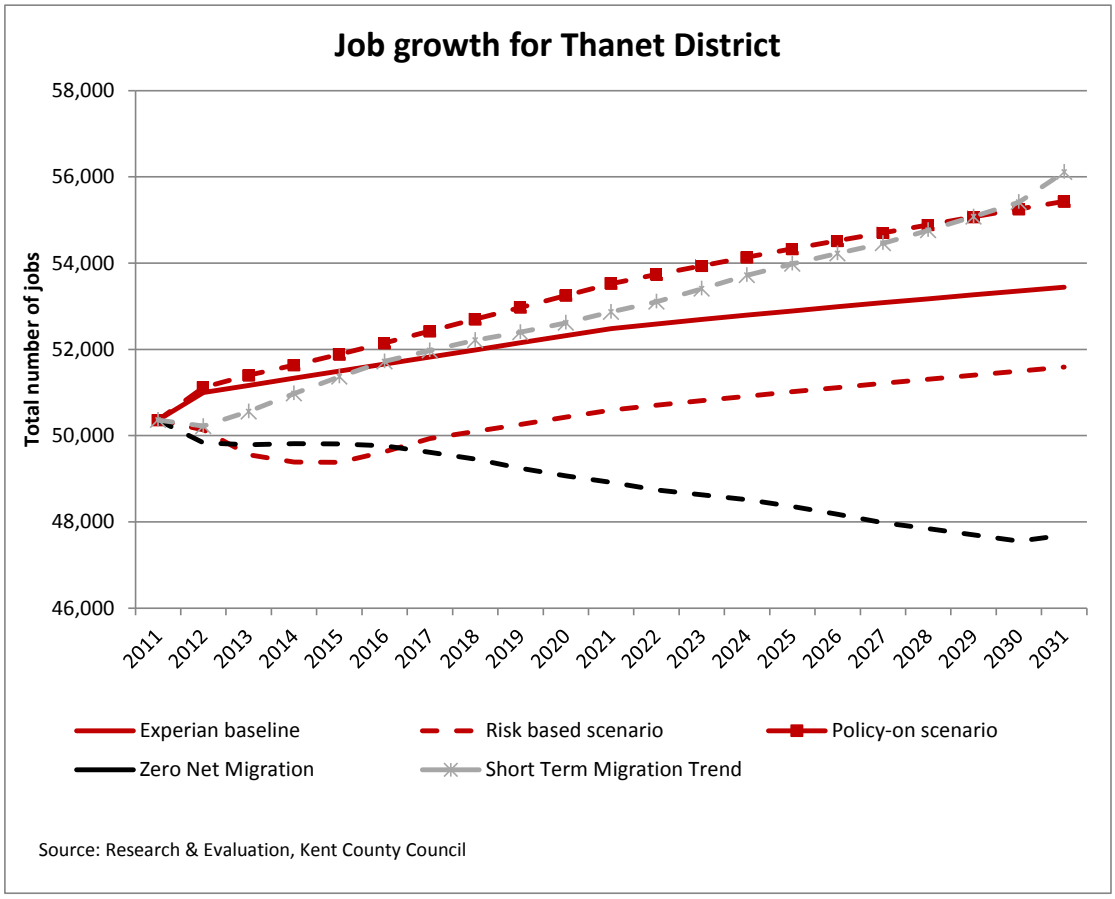


Table 4: Forecast of job growth for Thanet District

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Experian baseline	Risk based scenario	Policy-on scenario	Zero Net Migration	Short Term Migration Trend
2011	50,400	50,400	50,400	50,400	50,400
2012	51,000	50,100	51,100	49,800	50,200
2013	51,200	49,600	51,400	49,800	50,600
2014	51,300	49,400	51,600	49,800	51,000
2015	51,500	49,400	51,900	49,800	51,400
2016	51,700	49,600	52,100	49,800	51,700
2017	51,800	49,900	52,400	49,600	52,000
2018	52,000	50,100	52,700	49,500	52,200
2019	52,200	50,300	53,000	49,200	52,400
2020	52,300	50,400	53,200	49,100	52,600
2021	52,500	50,600	53,500	48,900	52,900
2022	52,600	50,700	53,700	48,700	53,100
2023	52,700	50,800	53,900	48,600	53,400
2024	52,800	50,900	54,100	48,500	53,700
2025	52,900	51,000	54,300	48,400	54,000
2026	53,000	51,100	54,500	48,200	54,200
2027	53,100	51,200	54,700	48,000	54,500
2028	53,200	51,300	54,900	47,800	54,800
2029	53,300	51,400	55,100	47,700	55,100
2030	53,400	51,500	55,300	47,600	55,400
2031	53,400	51,600	55,400	47,700	56,100
Change 2011-2031	3,100	1,200	5,100	-2,700	5,800
%	*6.1*	*2.4*	*10.1*	*-5.3*	*11.4*

Source: Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been calculated using unrounded numbers

Three of the TDC scenarios were job-led and therefore the job growth results reflect the input targets set out in Table 1. However, the job growth figures have been calculated for the two population-led scenarios.

The Short Term Migration Trend projection suggests an additional 5,800 jobs could be supported by the population growth associated with this projection. This level of job growth is broadly comparable, though slightly above, the job growth driving the Policy-on scenario.

In contrast, the Zero Net Migration projection shows that if migration was constrained so that there was no net effect, then Thanet would see a reduction in the number of jobs that could be supported in the future by the population growth associated with this scenario. The Zero Net Migration scenario projects a reduction of -2,700 jobs in the District. This is because the level of job growth is restricted by the available population. This will be discussed further in both the resident labour

supply and population sections (6.2 and 6.3). It should be remembered that the Zero Net Migration scenario is a hypothetical scenario.

If 5,100 jobs are created in Thanet District between 2011 and 2031, as suggested by the Policy-on scenario – the largest job growth of all scenarios, then there will be a total of 55,400 jobs in the District by 2031. This is equivalent to a +10.1% increase.

However, if 1,200 jobs are created in Thanet District between 2011 and 2031, as suggested by the Risk based scenario – the lowest job growth of all scenarios, then there will be a total of 51,600 jobs in the District by 2031. This is equivalent to a +2.4% increase.

6.2 Resident labour supply growth

The resident labour supply is calculated by applying activity rates to the population aged 16-74. Sections 4.3 and 4.4 outlined the source of the economic activity rates with Appendix 2 providing the detailed rates. The future resident labour supply will therefore be influenced by the future population profile of Thanet (which will be discussed in more detail in Sections 6.3 and 6.4) and also the applied economic activity assumptions.

Chart 4 summarises the level of resident labour supply generated from each of the five TDC scenarios with Table 5 providing the detailed data.

Chart 4:

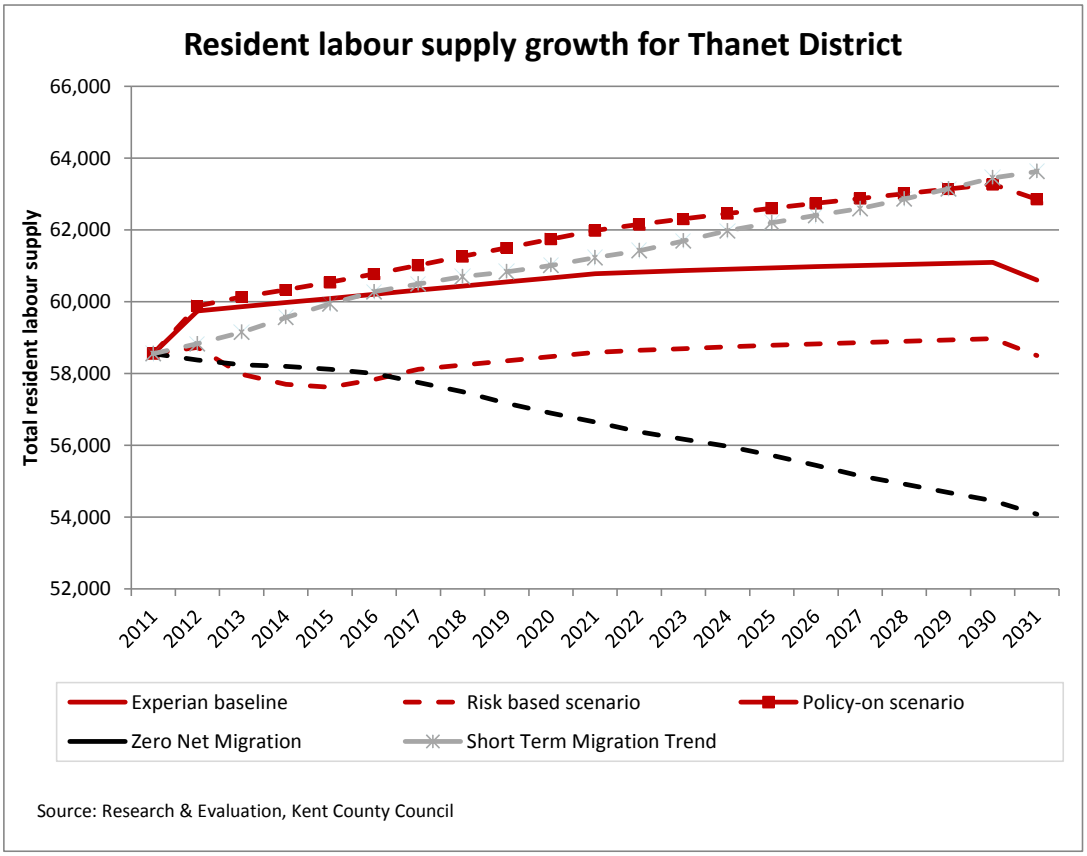


Table 5: Forecast of resident labour supply for Thanet District

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Experian baseline	Risk based scenario	Policy-on scenario	Zero Net Migration	Short Term Migration Trend
2011	58,600	58,600	58,600	58,600	58,600
2012	59,700	58,700	59,900	58,400	58,800
2013	59,900	58,000	60,100	58,200	59,200
2014	60,000	57,700	60,300	58,200	59,600
2015	60,100	57,600	60,500	58,100	59,900
2016	60,200	57,800	60,800	58,000	60,300
2017	60,300	58,100	61,000	57,800	60,500
2018	60,400	58,200	61,300	57,500	60,700
2019	60,600	58,400	61,500	57,200	60,800
2020	60,700	58,500	61,700	56,900	61,000
2021	60,800	58,600	62,000	56,700	61,200
2022	60,800	58,600	62,200	56,400	61,400
2023	60,900	58,700	62,300	56,200	61,700
2024	60,900	58,700	62,500	56,000	62,000
2025	60,900	58,800	62,600	55,700	62,200
2026	61,000	58,800	62,700	55,400	62,400
2027	61,000	58,900	62,900	55,100	62,600
2028	61,000	58,900	63,000	54,900	62,900
2029	61,100	58,900	63,100	54,700	63,100
2030	61,100	59,000	63,300	54,500	63,500
2031	60,600	58,500	62,900	54,100	63,600
Change 2011-2031	2,000	-100	4,300	-4,500	5,100
%	*3.5*	*-0.1*	*7.3*	*-7.6*	*8.7*

Source: Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been calculated using unrounded numbers

The same economic assumptions have been applied to each scenario and therefore the differences seen in resident labour supply between each of the scenarios are as a result of the changing population profile. In a population-led forecast the level of population growth and thus resident labour supply will be restricted by the population constraint. However, in a job-led forecast the population is increased accordingly to provide the necessary resident labour supply to meet the job target.

The pattern of resident labour supply growth follows a very similar pattern to the overall job growth. Four of the five TDC scenarios show an increase in the resident labour supply. Two scenarios – the hypothetical Zero Net Migration scenario and the Risk based scenario, show the resident labour supply to decline over the period 2011 to 2031, albeit marginally in the case of the Risk based scenario.

Scenario 3 – the Policy-on job-led scenario, forecasts the largest increase in resident labour supply which is expected given it is based on the largest job growth target. Between 2011 and 2031 resident labour supply is forecast to increase by +4,300

(+7.3%) under this scenario bringing the total resident workforce to 62,900 in 2031. The Short Term Migration Trend scenario shows a slightly higher level of growth in resident labour supply to the Policy-on scenario, which is higher than both the Experian baseline and Risk based scenarios.

The resident labour supply is higher than the number of jobs. For example, Table 4 showed there to be 53,400 jobs in 2031 under the Experian baseline scenario. Table 5 shows that for this scenario the resident labour supply in 2031 will be 60,600. This is because a proportion of the available workforce will be unemployed. The model has factored in an assumption for unemployment and this assumption is based on the desire to reduce unemployment over the forecast period to a target of 3.0% by 2031. The unemployment rate is gradually reduced over the forecast period. Details are provided in Appendix 3.

The age profile of the calculated resident labour supply under each of the scenarios is set out in Appendix 4.

For all scenarios, the age profile of resident labour supply is similar in that 45-59 year olds represent the largest proportion of the resident labour, with proportions decreasing gradually for all younger and older age groups. However despite 45-59 year olds representing the largest proportion of the resident labour supply, all scenarios except the Policy-on scenario show a slight decline in the resident labour supply aged 45-49 years over the forecast period. This is because this age cohort is decreasing in the wider population as will be seen in Section 6.4.

The resident labour supply aged 65+ represents the smallest proportion of resident workforce in 2011 and despite increasing over the forecast period, still remains the smallest group in 2031. However, the resident labour supply aged 65+ is forecast to see the largest percentage increase between 2011 and 2031. Numerically there are very few people who are economically active beyond the age of 65 as was shown in Section 4.4. However, with the ageing population it is possible to double the number of 65+ year olds in the resident labour supply thereby giving it the largest percentage increase despite numerically remaining the smallest group.

The largest overall increase in resident labour supply can be seen in the job-led Policy-on scenario where there is forecast to be a +7.3% increase in resident labour supply. The Policy-on scenario shows the largest increase because it has the highest job target to meet and thus the highest increase in overall resident labour supply in order to meet this job target.

The Zero Net Migration projection shows that without any net inward migration Thanet's resident labour supply will decline in the future by -7.6%.

As mentioned previously, the profile of resident labour supply will be influenced by the changing demographic profile of the resident population. The next two sections consider how the resident population profile is forecast to change for each of the scenarios.

6.3 Population growth

The population of the TDC area was estimated to be 134,400 in 2011 according to the 2011 Mid Year Population Estimates as published by the Office for National Statistics.

By 2031, the population of Thanet District could be anywhere between 133,500 and 152,500 depending on the scenario.

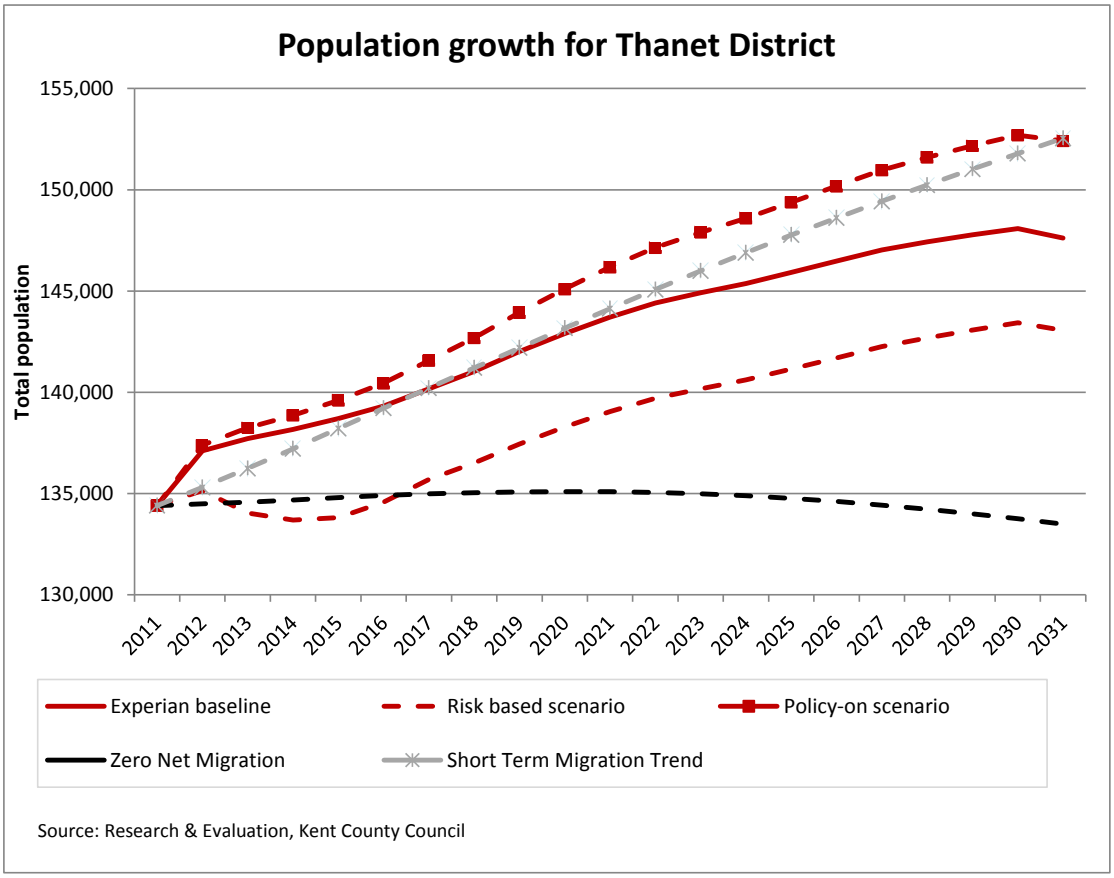
Chart 5 summarises the population growth generated from each of the five TDC scenarios with Table 6 providing the detailed data.

The Policy-on job-led scenario forecasts the highest rate of population growth out of the three job-led scenarios. This is expected given that this scenario is based on the highest level of job-growth and thus the population is increased accordingly to meet the given job growth. The Short Term Migration trend scenario also forecasts a similar level of population growth to the Policy-on scenario but as this scenario is a population-led scenario it is population (through migration) which is driving this scenario from the outset.

Population growth is lower for the Experian baseline and Risked based job-led scenarios because population growth is constrained to meet the given job growth.

The Zero Net Migration projection shows the population of Thanet to decline over the period 2011 to 2031 by -900 people. This illustrates migration is required for Thanet's population to increase. Without migration Thanet's population will fall as a result of negative natural change (more deaths than births) in the future.

Chart 5:



Source: Research & Evaluation, Kent County Council

Table 6: Forecast of population growth for Thanet District

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Experian baseline	Risk based scenario	Policy-on scenario	Zero Net Migration	Short Term Migration Trend
2011	134,400	134,400	134,400	134,400	134,400
2012	137,100	135,100	137,400	134,500	135,300
2013	137,700	134,000	138,300	134,600	136,200
2014	138,200	133,700	138,900	134,700	137,200
2015	138,700	133,800	139,600	134,800	138,200
2016	139,300	134,600	140,400	134,900	139,200
2017	140,200	135,700	141,600	135,000	140,200
2018	141,000	136,500	142,700	135,000	141,200
2019	142,000	137,400	143,900	135,100	142,200
2020	142,900	138,300	145,100	135,100	143,200
2021	143,700	139,000	146,200	135,100	144,100
2022	144,400	139,700	147,100	135,000	145,100
2023	144,900	140,200	147,900	135,000	146,000
2024	145,400	140,600	148,600	134,900	146,900
2025	145,900	141,100	149,400	134,800	147,800
2026	146,500	141,700	150,200	134,600	148,600
2027	147,000	142,300	151,000	134,400	149,400
2028	147,400	142,700	151,600	134,200	150,200
2029	147,800	143,100	152,200	134,000	151,000
2030	148,100	143,400	152,700	133,800	151,800
2031	147,600	143,100	152,400	133,500	152,500
Change 2011-2031	13,200	8,700	18,000	-900	18,100
%	*9.8*	*6.4*	*13.4*	*-0.7*	*13.5*

Source: Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been calculated using unrounded numbers

6.4 Changing population age profile

The previous section indicated the overall level of population change for Thanet District. However, there will be some significant changes to the age profile of the District as a result of the natural ageing of the population, births and deaths, and also the level of migration along with the migrant age/ sex profile.

Population pyramids that show the population profile of Thanet District by 5-year age group in 2011 and how the age profile is forecast to look in 2031 according to each of the five scenarios are presented in Appendix 5. Tables presenting the

percentage change in each age group over the period 2011 to 2031 according to each of five scenarios are also presented in Appendix 5.

All five scenarios show a significant growth in the number of people aged 60+ which reflects the impact of the ageing population.

All three of the job-led scenarios show a decrease in people aged 0-4 years, 25-29 years and 40-54 years. The Risk based scenario (the lowest of the job-led scenarios) also shows a decline in the population aged 20-24 years.

The changing age profile associated with Short Term Migration Trend scenario also follows a similar pattern to the each of the job-led scenarios. Again, this is because the Short Term Migration Trend scenario produces a demographic profile which is very similar to the Policy-on scenario.

The Zero Net Migration projection shows a decline in all population age groups up to the age of 59 years. This scenario is based on zero net migration, so whilst net migration has boosted these age groups in the other scenarios, the lack of net migration under this scenario causes the population to decline in this scenario. The middle-aged groups decline because of the natural transition of age cohorts over time (the ageing of the population). The child population also declines because although there will be residents of child bearing age to which fertility rates are applied, the child-bearing cohort is declining over the forecast period under this scenario and also the projection is based on the assumption that fertility rates will also gradually decline over the forecast period in-line with Central Government predictions. As mentioned in the introductory sections, a ZNM scenario is hypothetical because in reality you cannot prevent migration occurring. However, it is useful to understand the effect on the population profile if migration did not exist.

The next section examines migration in more detail.

6.5 Migrant profile

Both of the population-led scenarios are based on an assumed future migration level. The Short Term Migration trend scenario has been based on an average of annual net migration recorded between the five-year period 2005/06 to 2009/10. The ZNM scenario is based on the assumption of a zero net effect of migration. In the Zero Net Migration projection, migration still occurs but the overall balance of inward and outward migration is made to balance so that there is no net addition to the population as a result of migration.

The migration levels for each of the three job-led scenarios have been calculated by the forecasting model.

It is helpful to compare the results of the two population-led scenarios alongside the three job-led scenarios in order to understand how past performance (on which the two population-led scenarios are based) compares to Thanet's future proposals.

Table 7 outlines the age profile of net migrants to Thanet District for each of the five scenarios.

Table 7: Age profile of net migrants for Thanet District

	Net migrant total 2011-2031				
	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Experian baseline	Risk based scenario	Policy-on scenario	Zero Net Migration	Short Term Migration Trend
0-4	1,100	800	1,500	300	1,400
5-9	1,500	1,300	1,700	800	1,700
10-14	1,200	1,000	1,400	400	1,100
15-19	-7,300	-7,600	-7,000	-10,000	-6,400
20-24	2,800	2,300	3,400	2,300	3,400
25-29	0	-400	300	-1,000	1,100
30-34	600	400	1,000	-200	1,500
35-39	1,600	1,300	1,800	900	2,200
40-44	1,000	700	1,200	600	1,100
45-49	1,500	1,300	1,700	1,100	1,400
50-54	1,800	1,600	2,000	1,200	1,600
55-59	2,200	2,100	2,500	1,600	2,100
60-64	2,200	2,100	2,500	1,900	2,000
65-69	1,700	1,600	1,900	1,400	1,700
70-74	600	600	700	300	800
75-79	300	200	400	0	300
80-84	-200	-200	-100	-500	-100
85+	-500	-600	-400	-900	-400
All ages	**12,100**	**8,500**	**16,400**	**0**	**16,400**

Source: Thanet District Council scenarios, Research & Evaluation, KCC
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been calculated using unrounded numbers

Net migration is highest for the Policy-on job-led scenario. As indicated in earlier sections, the level of net inward migration is increased for the job-led scenarios in order to create the necessary population base to reach the desired job targets. Net migration is highest for the Policy-on scenario because there is a higher job target to meet.

The level of migration required to meet the Policy-on job target is just slightly higher than the level of net migration to that on which the STM trend scenario is based. Therefore, if migration to Thanet District continues in similar form to what it has done over the past 5-years, then this (along with changes taking place within the existing resident population) should provide the necessary resident labour supply to nearly meet the job target of the Policy-on scenario.

Whilst it is useful to look at the overall net migration levels, it is also helpful to look at the age profile of the migrants, and how this differs between each of the scenarios, in order to understand the varying impact on the District's overall age profile of the population and thus available labour supply.

The migrant profile for each scenario is based on the age profile of migrants for Thanet District as used in the ONS 2010-based Sub National Population Projections. In part, this profile is based on the historic age profile of migrants to Thanet but the actual number of migrants changes for each scenario.

Traditionally Thanet has seen a net outflow of people aged 15-19 which is likely to represent students leaving the District to attend university. Whilst Thanet attracts people aged 65+ to the District, Thanet does see a net outflow of people aged 85+. This historic outflow of 15-19 year olds and 85+ year olds is reflected in each of the five scenarios as is shown in Table 7.

Thanet District has historically seen a net inflow of people of all other ages. The inward migration of the working age groups is of particular importance to Thanet's future labour supply because even with net inward migration, Section 6.4 showed that the working age groups are seeing the lowest increase (if not decline) of all of the age groups in all scenarios.

If Thanet continues being a net exporter of labour as it has been traditionally, then Thanet needs to continue attracting people to the District in order to meet its desired job targets. As the model assumes that there is a net outflow of workers equivalent to 10% of Thanet's working population, the model has to increase the level of net inward migration to the District in order to take account of the proportion that will be working elsewhere. However, if the level of out-commuting from Thanet were to reduce in the future, meaning that more people live and work in Thanet District, then net migration to the District could be reduced (but not prevented because a net inflow of working age people will be required due to the ageing population).

If Thanet is to attract people to the District, then these people will need somewhere to live. Section 6.6 translates the population growth into households and then Section 6.7 looks at how many dwellings will be needed to accommodate the additional households.

6.6 Household growth

TDC has a need to consider how many dwellings will be required in the future to support future economic growth in the District. The previous sections have shown how the population will have to change to reach the job targets outlined in each of the three job-led scenarios, and for the two population-led scenarios how the population will change if past migration trends were to continue into the future.

In order to assess the level of housing required to support each of the five scenarios, it is necessary to have an understanding of how the population is structured in terms of family groups.

Groups of people living together are referred to as a household, whereas the actual bricks and mortar in which a group lives is referred to as a dwelling. This section examines household growth, whereas the next section (6.7) sets out the resulting dwelling growth.

In 2011 the average size of a household in Thanet District was 2.20 persons per household.

The average size of a household has been falling steadily over recent years and latest projections produced by Central Government assume that average household size will continue to reduce in future years.

Table 8 illustrates the extent to which average household size will fall in Thanet District according to each of the five scenarios.

Average household size is an output variable from the model calculated by applying projected household representative rates to the generated population forecast.

The average household size differs for each scenario because the population forecast and age profile of the population will be different for each scenario. Household representative rates are applied by age/ sex. Applying such rates to a different population base will result in the formation of slightly different household types.

By 2031 the average size of a household in Thanet District is forecast to be between 2.04 and 2.09 depending which of the scenarios is considered. This is a decline of approximately 0.11 persons per household over the 20-year period. A single dwelling in 20-years' time will therefore by occupied by a smaller household than currently. What this means is that more dwellings will be needed in the future to accommodate 1,000 people (for example) than would be needed today to accommodate 1,000 people.

Table 8: Forecast of average household size for Thanet District

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Experian baseline	Risk based scenario	Policy-on scenario	Zero Net Migration	Short Term Migration Trend
2011	2.20	2.20	2.20	2.20	2.20
2012	2.20	2.20	2.20	2.20	2.20
2013	2.20	2.19	2.20	2.19	2.20
2014	2.20	2.19	2.20	2.19	2.19
2015	2.19	2.18	2.19	2.18	2.19
2016	2.18	2.17	2.19	2.17	2.18
2017	2.18	2.17	2.18	2.16	2.18
2018	2.17	2.16	2.17	2.15	2.17
2019	2.17	2.16	2.17	2.15	2.17
2020	2.16	2.16	2.17	2.14	2.16
2021	2.16	2.15	2.16	2.13	2.16
2022	2.15	2.14	2.16	2.12	2.15
2023	2.14	2.13	2.15	2.12	2.15
2024	2.14	2.13	2.14	2.11	2.14
2025	2.13	2.12	2.13	2.10	2.13
2026	2.12	2.11	2.13	2.09	2.13
2027	2.11	2.10	2.12	2.08	2.12
2028	2.10	2.10	2.11	2.07	2.11
2029	2.10	2.09	2.10	2.06	2.11
2030	2.09	2.08	2.09	2.05	2.10
2031	2.08	2.07	2.09	2.04	2.09

Source: Research & Evaluation, Kent County Council

A falling average household size is linked to societal changes in the way people live and also the ageing population. Appendix 6 outlines the types of households likely to form from each of the five scenarios based on applying household representative rates to the changing population profile.

In all five scenarios there is forecast to be a significant increase in the number of one person households, which will contribute to the reduced average household size in future years. There is also forecast to be a significant increase in the number of lone parent households in all scenarios, whereas the number of other family household types (particularly those with children) is forecast to decline.

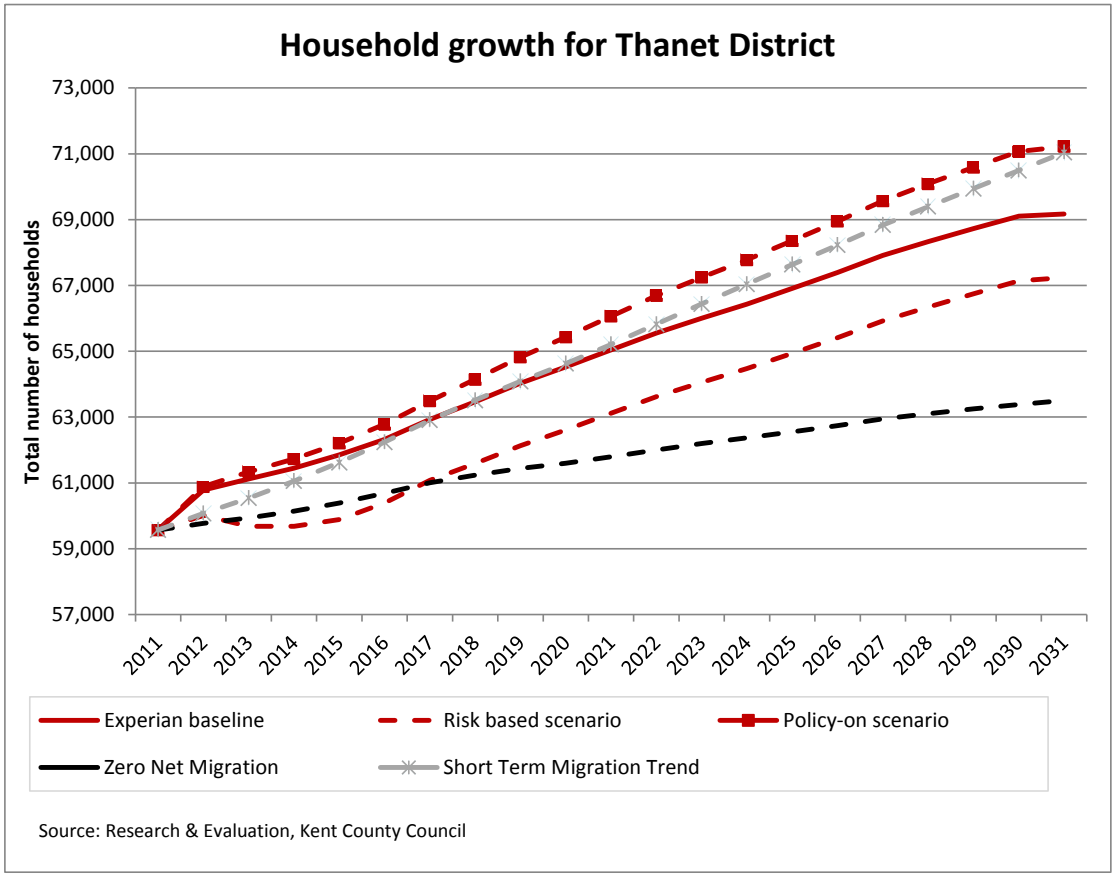
Due to the changes taking place in household size as a result of the way people live, the household growth rate is much higher than the population growth rate. For example, Table 6 showed that under the Experian baseline scenario the population of Thanet is forecast to increase by +9.8% over the period 2011 to 2031. However, Table 9 (below) shows the number of households for this scenario to increase by +17.2%.

Chart 6 compares the overall household growth for each scenario with Table 9 providing the detail.

In 2011 there were estimated to be 59,600 households in Thanet District. By 2031 there is forecast to be anywhere between 63,500 (a +6.6% increase) and 71,200 (+19.6% increase) in households depending on which of the scenarios is considered.

The scenarios forecast to see the largest job growth are also forecast to see the largest increase in households. This is because the population is required to increase significantly to fulfil the given job targets and the increase in population results in a higher number of additional households being formed.

Chart 6:



Source: Research & Evaluation, Kent County Council

Table 9: Household growth for Thanet District

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Experian baseline	Risk based scenario	Policy-on scenario	Zero Net Migration	Short Term Migration Trend
2011	59,600	59,600	59,600	59,600	59,600
2012	60,800	60,000	60,900	59,800	60,100
2013	61,100	59,700	61,300	59,900	60,500
2014	61,500	59,700	61,700	60,100	61,100
2015	61,800	59,900	62,200	60,400	61,600
2016	62,300	60,400	62,800	60,700	62,200
2017	62,900	61,100	63,500	61,000	62,900
2018	63,500	61,600	64,100	61,200	63,500
2019	64,000	62,100	64,800	61,400	64,100
2020	64,500	62,600	65,400	61,600	64,600
2021	65,000	63,100	66,100	61,800	65,200
2022	65,600	63,600	66,700	62,000	65,800
2023	66,000	64,100	67,200	62,200	66,400
2024	66,400	64,500	67,800	62,400	67,000
2025	66,900	64,900	68,400	62,600	67,600
2026	67,400	65,400	69,000	62,700	68,200
2027	67,900	65,900	69,600	62,900	68,800
2028	68,300	66,300	70,100	63,100	69,400
2029	68,700	66,700	70,600	63,200	69,900
2030	69,100	67,100	71,100	63,400	70,500
2031	69,200	67,200	71,200	63,500	71,000
Change 2011-2031	9,600	7,700	11,700	3,900	11,500
%	*16.1*	*12.9*	*19.6*	*6.6*	*19.3*

Source: Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been calculated using unrounded numbers

The next section looks at how household growth translates into dwelling growth.

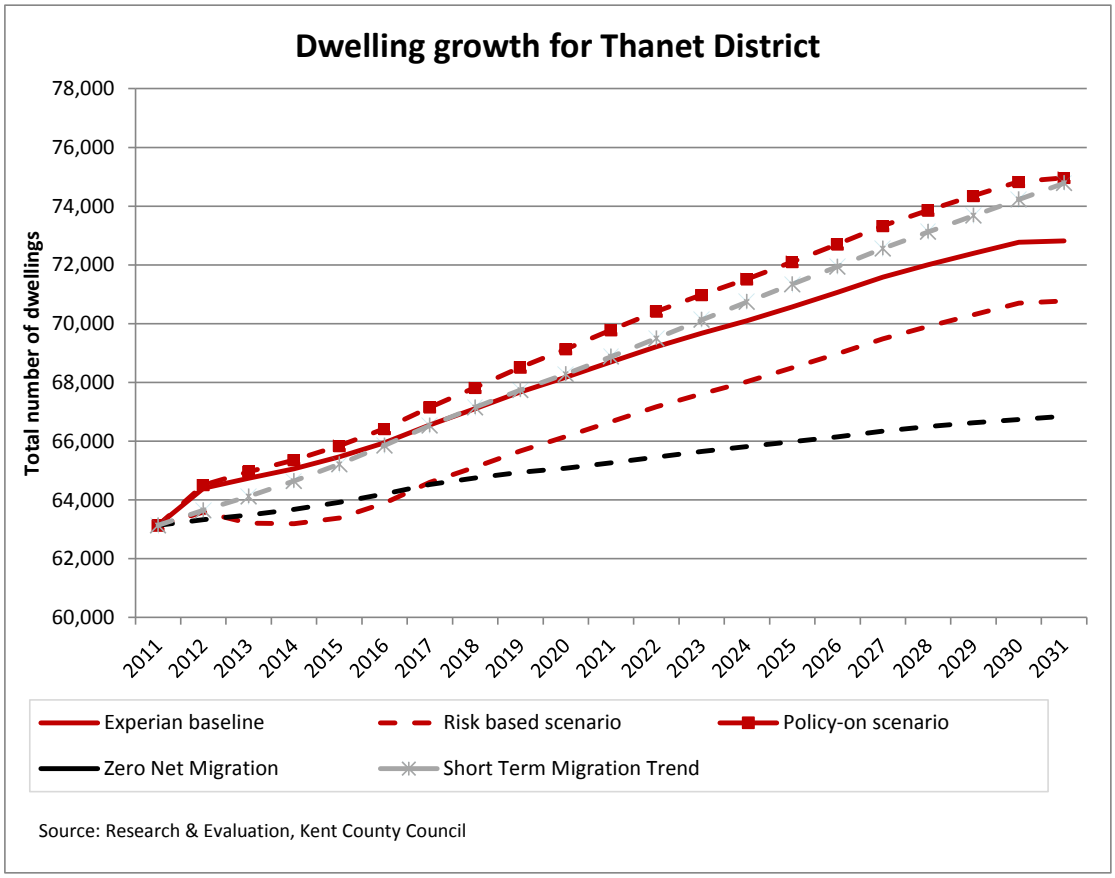
6.7 Dwelling growth

The relationship between a dwelling and a household is not a one-to-one relationship. Although typically one household will occupy one dwelling, on occasions there will be a shared dwelling which is occupied by two or more households. In contrast there will be some dwellings which are not occupied by any household and are vacant.

The model accounts for both sharing and vacancy in the calculations. Whilst sharing is accounted for within the household representative rates, a separate assumption for vacancy has to be set within the model. Vacancy has been set at 5.65% for the year 2011 based on recorded data and throughout the forecasting period vacancy has been reduced to reach a target vacancy rate of 5.0% by 2031.

Chart 7 summarises the associated dwelling growth with each of the five scenarios, with Table 10 providing the detail.

Chart 7:



Source: Research & Evaluation, Kent County Council

Table 10: Forecast of dwelling growth for Thanet District

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Experian baseline	Risk based scenario	Policy-on scenario	Zero Net Migration	Short Term Migration Trend
2011	63,100	63,100	63,100	63,100	63,100
2012	64,400	63,600	64,500	63,300	63,600
2013	64,700	63,200	65,000	63,500	64,100
2014	65,100	63,200	65,400	63,700	64,600
2015	65,500	63,400	65,800	63,900	65,200
2016	65,900	63,900	66,400	64,200	65,800
2017	66,600	64,600	67,200	64,500	66,500
2018	67,100	65,100	67,800	64,700	67,100
2019	67,700	65,700	68,500	64,900	67,700
2020	68,200	66,200	69,100	65,100	68,300
2021	68,700	66,700	69,800	65,300	68,900
2022	69,200	67,200	70,400	65,500	69,500
2023	69,700	67,600	71,000	65,600	70,100
2024	70,100	68,000	71,500	65,800	70,700
2025	70,600	68,500	72,100	66,000	71,300
2026	71,100	69,000	72,700	66,200	71,900
2027	71,600	69,500	73,300	66,300	72,600
2028	72,000	69,900	73,900	66,500	73,100
2029	72,400	70,300	74,400	66,600	73,700
2030	72,800	70,700	74,800	66,700	74,200
2031	72,800	70,800	75,000	66,800	74,800
Change 2011-2031	9,700	7,600	11,800	3,700	11,600
%	*15.3*	*12.1*	*18.7*	*5.9*	*18.4*

Source: Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been calculated using unrounded numbers

In 2011 there were estimated to be 63,100 dwellings in Thanet District – a higher number compared to the number of households (59,600). The difference between the two can be accounted for by the applied vacancy rate.

By 2030 there could be anywhere between 66,800 and 75,000 dwellings depending on which of the scenarios is considered.

The ZNM trend projection shows the lowest dwelling growth over the 20-year period with an increase of +3,700 dwellings equivalent to a +5.9% in the District's dwelling stock. As the ZNM trend projection is based on the assumption that there will be no population growth from net migration, just population churn and natural change, this scenario provides an indication of the amount of future housing needed to meet demographic changes within the existing population before any additional economic growth is planned for.

It is interesting to note that the ZNM scenario shows a need for additional dwellings in the future despite this scenario showing a decline in the overall population (as illustrated in Table 6). The reason for this is to accommodate changes to the way in which people live as reflected through household formation patterns which generally show a move towards smaller households.

Therefore an additional +3,700 dwellings would be required in the District over the next 20-years (as shown through the ZNM projection) to accommodate the existing population after consideration of the natural increase, the ageing of the population and the formation of new households, even before consideration is given to the dwellings required to support each of the job targets.

In order to meet the future job targets of each of the three job-led scenarios, Thanet District needs net inward migration to provide the necessary resident labour supply as was illustrated in Sections 6.2 and 6.5. The inward migrants will need somewhere to live and thus all three of the job-led scenarios show a significant increase in the number of additional dwellings. Depending on the scenario, this ranges from between +7,600 to +11,800 dwellings. This increase can be translated into the additional dwellings required to support each of the job-led scenarios. However, please note that the dwelling growth shown for each of the job-led scenarios includes the number of additional dwellings required by the existing population too.

The Policy-on job-led scenario has the highest job growth target and therefore needs the largest increase in workforce of all the scenarios to meet this target. As a result, the dwelling growth associated with this scenario is also the largest at +11,800 dwellings over the period 2011 to 2031. The Risk based job-led scenario has the lowest job growth target and thus needs the smallest increase in workforce of all the scenarios to meet the target, and as a result has the smallest dwelling growth of all the job-led scenarios at +7,600 dwellings over the 20-year period.

As mentioned in Section 5 – Advice on interpreting the results, the dwelling outputs from a job-led scenario should be interpreted with caution. This is because the dwelling growth is the number of dwellings required to accommodate the changes in the entire population. In order to meet the given job-target, the population is increased accordingly to provide the necessary labour supply. This is done by increasing inward migration but the in-migration assumptions mean that people of all ages (reflecting Thanet's historic migrant profile) are assumed to move into the District, not just those of working age. Therefore some of the additional dwelling growth shown in the job-led scenarios will be to accommodate the inward migrants who are economically inactive, for example, older people. Thanet District Council may therefore like to interpret the presented dwelling growth accordingly.

Likewise the associated dwelling growth for each of the job-led scenarios would be lower if out-commuting from the District reduces; economic activity increases; or unemployment is reduced further. The reason being, that there would be a larger pool of labour supply resident within the District itself, reducing the requirement to attract additional people to the District and thus reducing the need to provide dwellings for these additional people. This is discussed in more detail in the 'Conclusions and Recommendations' section.

6.8 Dwelling to jobs ratio

Earlier sections of this report have illustrated that the job-led scenarios tend to show a significantly higher level of future growth than the population-led scenarios. Understanding the resulting dwelling to jobs ratios can help to explain the outcomes of the scenarios.

Table 11 presents the dwellings to job ratios for each of the five scenarios comparing ratios as at 2011 and 2031 for illustration purposes.

Table 11: Dwelling to job ratios for Thanet District in 2011 and 2031

Scenario	Jobs		Dwellings		Ratios: Dwellings per job	
	2011	2031	2011	2031	2011	2031
Scenario 1 - Experian baseline	50,400	53,400	63,100	72,800	1.254	1.363
Scenario 2 - Risk based scenario	50,400	51,600	63,100	70,800	1.254	1.372
Scenario 3 - Policy-on scenario	50,400	55,400	63,100	75,000	1.254	1.352
Scenario 4 - Zero Net Migration	50,400	47,700	63,100	66,800	1.254	1.402
Scenario 5 -Short Term Migration trend	50,400	56,100	63,100	74,800	1.254	1.333

Source: Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest one hundred

Ratios have been calculated using unrounded numbers

In the base year (2011), the dwelling to job ratio is the same for all scenarios, at 1.254. As we move towards the horizon year of the forecasts - 2031, the ratio increases. Part of the demand for housing will come from the natural population increase, as the resident population ages, yet this does not increase demand for additional jobs.

The effect of this varies at 2031 depending on the scenario. As is shown in Table 11, the job-led scenarios produce lower dwelling to job ratios and as the number of jobs increases, the ratio is reduced. To summarise, the Policy-on job-led scenario has a ratio of 1.352 dwellings per one job by 2031, whereas the Risk based job-led scenario

generates 1.372 and the ZNM trend population-led scenario generates 1.402 dwellings per job.

This may at first seem counter-intuitive but what is happening is that the dwellings become more “efficient” in delivering labour to fill the jobs. The three job-led scenarios for Thanet require a higher level of housing, which in turn will lead to higher levels of in-migration. The in-migrants to Thanet, as was shown in Section 6.5, are likely to be middle-aged people with relatively high levels of economic activity.

7. Conclusion

Over the next 20-years, the population of Thanet District is naturally going to decrease (as indicated by the results of the ZNM projection) as a result of the ageing population and the Government's predictions that fertility rates are going to decline in the future.

The effect of the ageing population will act as a constraint on the future level of the resident labour supply, which will make it difficult to realise the full job potential without some level of net inward migration. The only way that Thanet's resident labour supply can increase in the future is by continuing to attract net migrants into the District. The results of the STM trend projection illustrate this.

Although the STM trend projection merely projects forward past trends, the number of net inward migrants on which the projection is based is very similar to the level of net inward migration that is needed to support the job-led Policy-on scenario. This indicates that if migration trends were to continue at the same rate as they have done in the past, then a job target of +5,100 jobs over the period 2011 to 2031 is potentially achievable in Thanet from a demographic labour supply perspective. However, this is based on the assessment that assumptions remain set at the levels used within the forecasting model. In reality, circumstances may change. For example, economic activity rates may change and until updated economic activity rates from the 2011 Census are available it is unknown whether the current economic recession has caused economic activity rates to fall or indeed increase as there is more of a necessity for people to work. If economic activity rates are indeed lower than currently assumed then greater net inward migration would be required to provide the necessary labour supply to meet a job target of +5,100.

Increasing the District's population through net inward migration to provide the necessary labour supply to fulfil the job targets of the three job-led scenarios, will require dwellings to be built to accommodate these additional residents.

The ZNM scenario showed that despite Thanet's population naturally decreasing over the next 20-years, an additional +3,700 dwellings would be required in the District over the next 20-years to accommodate the existing population after consideration of the natural increase, the ageing of the population and the formation of new households, even before consideration is given to the dwellings required to support each of the job targets. The need for additional dwellings despite the population naturally declining is to accommodate changes to household formation patterns which generally show a move towards smaller households.

The number of additional dwellings required in the District to support each of the three TDC job target options as set out in this report is based on the assumptions set

within the model. If conditions are to change or are assumed to change, for example, Thanet's out-commuting or unemployment reduces, or economic activity increases, then the relationship between dwellings to jobs will change and the number of dwellings required to support the District's job capacity will reduce below those currently forecast.

The dwelling outputs from a job-led scenario should be interpreted with caution. This is because the dwelling growth is the number of dwellings required to accommodate the changes in the entire population. In order to meet the given job-target, the population is increased accordingly to provide the necessary labour supply. This is done by increasing inward migration but the in-migration assumptions mean that people of all ages (reflecting Thanet's historic migrant profile) are assumed to move into the District, not just those of working age. Therefore some of the additional dwelling growth shown in the job-led scenarios will be to accommodate inward migrants who are economically inactive, for example, older people. Thanet District Council may therefore like to interpret the presented dwelling growth accordingly.

It is also important to remember that in reality there is no direct link between jobs and dwellings. For modelling purposes, a link has to be assumed between the two.

R&E believe this assessment to be a robust and well founded piece of research into various scenarios for the future population of Thanet District and its need for jobs and housing based on the information available at the current time. However, forecasting is always full of uncertainty and therefore it is important that TDC monitor and update the forecasts accordingly as and when data becomes available.

8. Further information

For further information or any questions relating to the content of this report please contact KCC's Business Intelligence, Research & Evaluation team.

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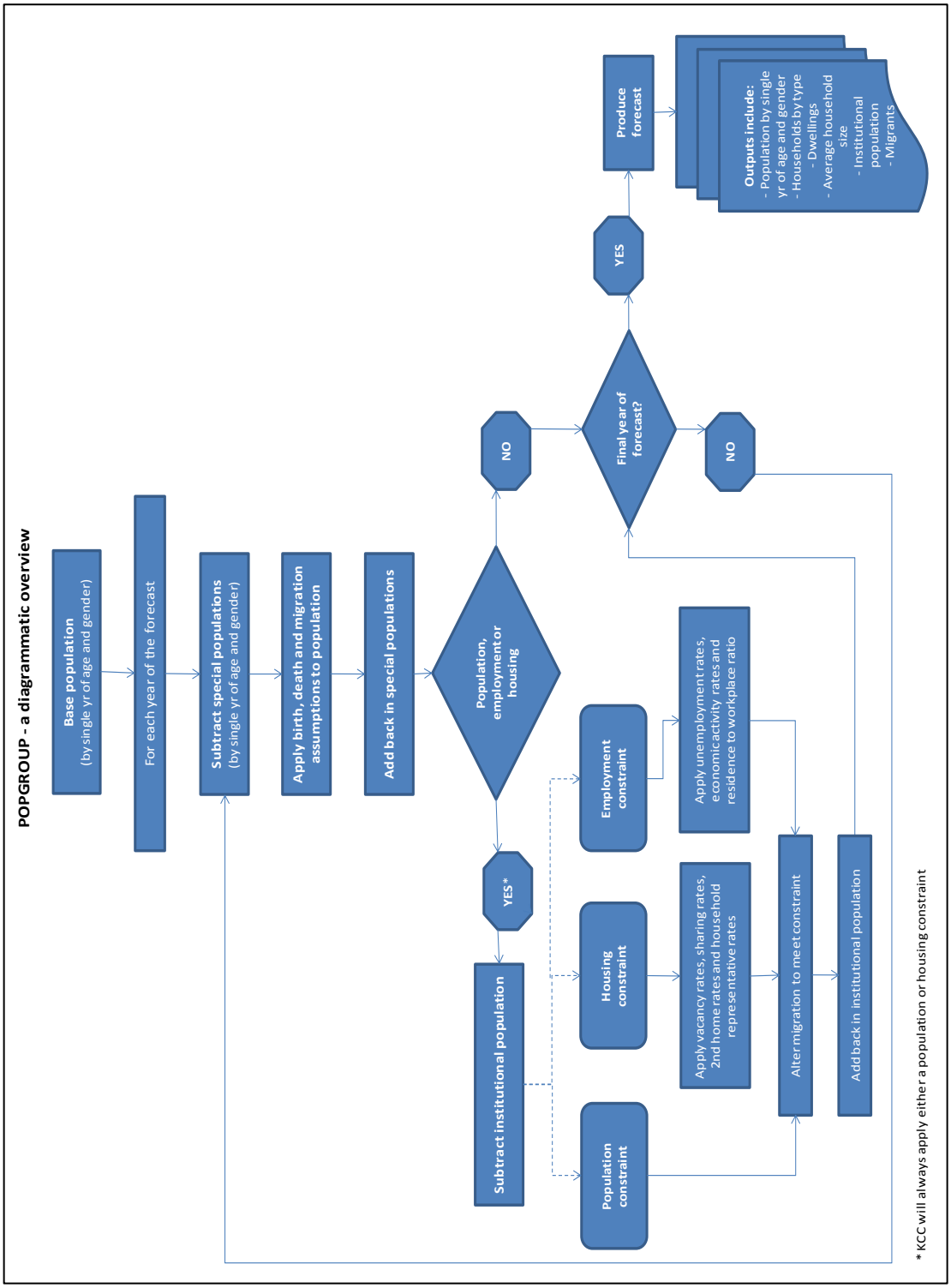
Appendix 1

Diagrammatic outline of the POPGROUP forecasting process



Appendix 2

Economic activity rate forecasts for Thanet District, by age and gender, 2001-2036.

Males	16-24	25-34	35-44	45-59	60-64	65-69	70-74
2001	0.7067	0.9109	0.8815	0.8003	0.5052	0.1284	0.0691
2002	0.7085	0.9083	0.8793	0.8014	0.5014	0.1447	0.0701
2003	0.6978	0.9045	0.8816	0.8094	0.5410	0.1591	0.0845
2004	0.6933	0.8992	0.8797	0.8044	0.5497	0.1618	0.0793
2005	0.6820	0.9000	0.8739	0.8099	0.5477	0.1717	0.0808
2006	0.6929	0.9015	0.8756	0.8064	0.5446	0.1605	0.0761
2007	0.6910	0.9012	0.8757	0.8093	0.5502	0.1631	0.0753
2008	0.6892	0.8999	0.8748	0.8115	0.5549	0.1650	0.0744
2009	0.6889	0.8990	0.8741	0.8132	0.5598	0.1678	0.0742
2010	0.6880	0.8981	0.8731	0.8144	0.5643	0.1698	0.0733
2011	0.6866	0.8971	0.8721	0.8155	0.5683	0.1724	0.0727
2012	0.6852	0.8960	0.8716	0.8165	0.5724	0.1745	0.0726
2013	0.6825	0.8951	0.8708	0.8169	0.5763	0.1768	0.0719
2014	0.6808	0.8946	0.8700	0.8171	0.5802	0.1788	0.0715
2015	0.6789	0.8934	0.8693	0.8174	0.5838	0.1816	0.0712
2016	0.6770	0.8928	0.8687	0.8176	0.5871	0.1839	0.0702
2017	0.6755	0.8919	0.8678	0.8177	0.5904	0.1858	0.0699
2018	0.6733	0.8913	0.8672	0.8177	0.5939	0.1885	0.0697
2019	0.6700	0.8905	0.8667	0.8178	0.5973	0.1906	0.0691
2020	0.6652	0.8899	0.8658	0.8176	0.6000	0.1930	0.0687
2021	0.6652	0.8899	0.8658	0.8177	0.6018	0.1941	0.0687
2022	0.6652	0.8899	0.8658	0.8179	0.6036	0.1953	0.0687
2023	0.6652	0.8899	0.8658	0.8181	0.6054	0.1965	0.0687
2024	0.6652	0.8899	0.8658	0.8182	0.6072	0.1976	0.0687
2025	0.6652	0.8899	0.8658	0.8184	0.6090	0.1988	0.0687
2026	0.6652	0.8899	0.8658	0.8185	0.6108	0.1999	0.0687
2027	0.6652	0.8899	0.8658	0.8187	0.6125	0.2011	0.0687
2028	0.6652	0.8899	0.8658	0.8188	0.6143	0.2022	0.0687
2029	0.6652	0.8899	0.8658	0.8190	0.6161	0.2034	0.0687
2030	0.6652	0.8899	0.8658	0.8192	0.6179	0.2046	0.0687
2031	0.6652	0.8899	0.8658	0.8192	0.6179	0.2046	0.0687
2032	0.6652	0.8899	0.8658	0.8192	0.6179	0.2046	0.0687
2033	0.6652	0.8899	0.8658	0.8192	0.6179	0.2046	0.0687
2034	0.6652	0.8899	0.8658	0.8192	0.6179	0.2046	0.0687
2035	0.6652	0.8899	0.8658	0.8192	0.6179	0.2046	0.0687
2036	0.6652	0.8899	0.8658	0.8192	0.6179	0.2046	0.0687

Source: ONS Labour Force Projections 2006-2020 (January 2006), with growth assumptions accomodating changes to retirement age, to 2037
Research & Evaluation, Kent County Council

Females	16-24	25-34	35-44	45-59	60-64	65-69	70-74
2001	0.6295	0.6728	0.7183	0.6623	0.2269	0.0751	0.0358
2002	0.6344	0.6748	0.7163	0.6691	0.2334	0.0947	0.0383
2003	0.6252	0.6693	0.7149	0.6795	0.2270	0.0974	0.0351
2004	0.6308	0.6739	0.7130	0.6806	0.2475	0.0976	0.0429
2005	0.6129	0.6831	0.7148	0.6876	0.2554	0.1046	0.0468
2006	0.6218	0.6815	0.7167	0.6876	0.2464	0.0999	0.0401
2007	0.6204	0.6842	0.7181	0.6929	0.2502	0.1019	0.0399
2008	0.6205	0.6867	0.7194	0.6980	0.2537	0.1036	0.0403
2009	0.6202	0.6883	0.7205	0.7023	0.2579	0.1057	0.0401
2010	0.6201	0.6900	0.7212	0.7065	0.2612	0.1078	0.0404
2011	0.6198	0.6916	0.7222	0.7104	0.2709	0.1099	0.0402
2012	0.6196	0.6934	0.7228	0.7139	0.2808	0.1118	0.0405
2013	0.6188	0.6948	0.7235	0.7171	0.2913	0.1139	0.0405
2014	0.6179	0.6965	0.7239	0.7205	0.3018	0.1156	0.0404
2015	0.6177	0.6979	0.7240	0.7234	0.3116	0.1180	0.0403
2016	0.6170	0.6995	0.7242	0.7266	0.3219	0.1198	0.0401
2017	0.6169	0.7006	0.7241	0.7296	0.3320	0.1217	0.0405
2018	0.6163	0.7021	0.7244	0.7326	0.3420	0.1237	0.0404
2019	0.6148	0.7032	0.7246	0.7355	0.3517	0.1259	0.0405
2020	0.6125	0.7043	0.7249	0.7382	0.3614	0.1278	0.0402
2021	0.6125	0.7043	0.7249	0.7398	0.3714	0.1288	0.0402
2022	0.6125	0.7043	0.7249	0.7414	0.3814	0.1298	0.0402
2023	0.6125	0.7043	0.7249	0.7430	0.3914	0.1308	0.0402
2024	0.6125	0.7043	0.7249	0.7446	0.4015	0.1318	0.0402
2025	0.6125	0.7043	0.7249	0.7462	0.4115	0.1328	0.0402
2026	0.6125	0.7043	0.7249	0.7478	0.4215	0.1338	0.0402
2027	0.6125	0.7043	0.7249	0.7493	0.4315	0.1348	0.0402
2028	0.6125	0.7043	0.7249	0.7509	0.4415	0.1358	0.0402
2029	0.6125	0.7043	0.7249	0.7525	0.4515	0.1368	0.0402
2030	0.6125	0.7043	0.7249	0.7541	0.4616	0.1378	0.0402
2031	0.6125	0.7043	0.7249	0.7541	0.4616	0.1378	0.0402
2032	0.6125	0.7043	0.7249	0.7541	0.4616	0.1378	0.0402
2033	0.6125	0.7043	0.7249	0.7541	0.4616	0.1378	0.0402
2034	0.6125	0.7043	0.7249	0.7541	0.4616	0.1378	0.0402
2035	0.6125	0.7043	0.7249	0.7541	0.4616	0.1378	0.0402
2036	0.6125	0.7043	0.7249	0.7541	0.4616	0.1378	0.0402

Source: ONS Labour Force Projections 2006-2020 (January 2006), with growth assumptions accomodating changes to retirement age, to 2037
Research & Evaluation, Kent County Council

Appendix 3

Target unemployment rates for Thanet District, 2011-2031

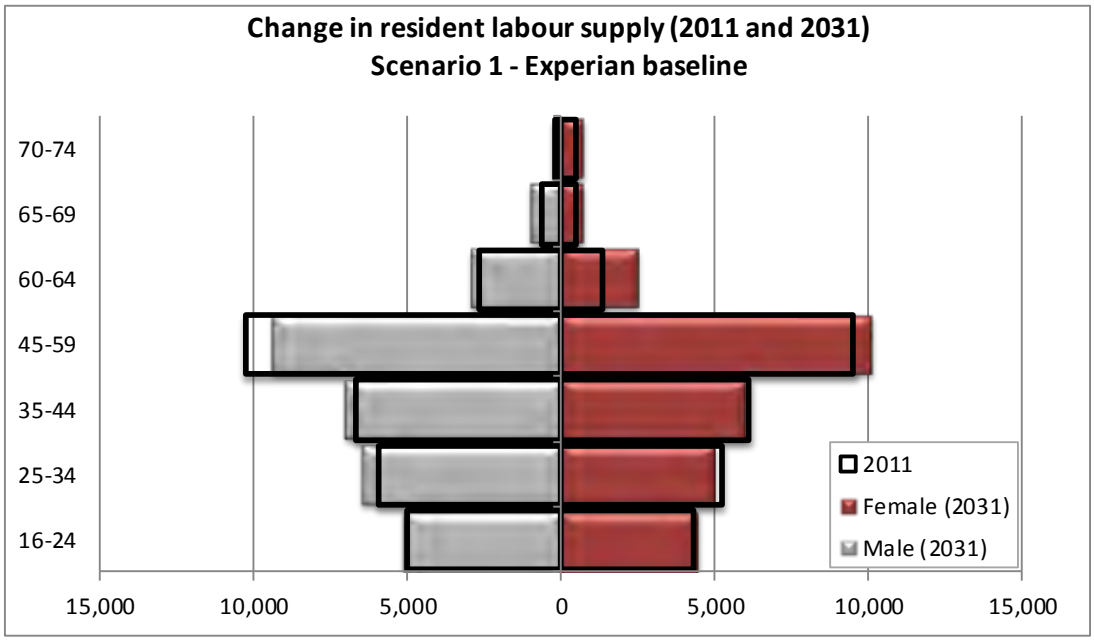
Year	Unemployment rate		
2011	5.4%	}	Actual claimant count figure based on mid-year point
2012	6.1%	}	
2013	6.0%	}	Straight line transition between actual rate at 2012 and
2014	5.9%	}	target rate at 2031.
2015	5.7%	}	
2016	5.6%	}	
2017	5.5%	}	
2018	5.4%	}	
2019	5.3%	}	
2020	5.1%	}	
2021	5.0%	}	
2022	4.9%	}	
2023	4.8%	}	
2024	4.7%	}	
2025	4.5%	}	
2026	4.4%	}	
2027	4.3%	}	
2028	4.2%	}	
2029	4.1%	}	
2030	3.9%	}	
2031	3.0%	}	2031 'target' rate provided by Thanet DC

Source: Research & Evaluation, Kent County Council

Appendix 4

Calculated age profile of the resident labour supply in Thanet District under each of the five scenarios

Chart A4.1:



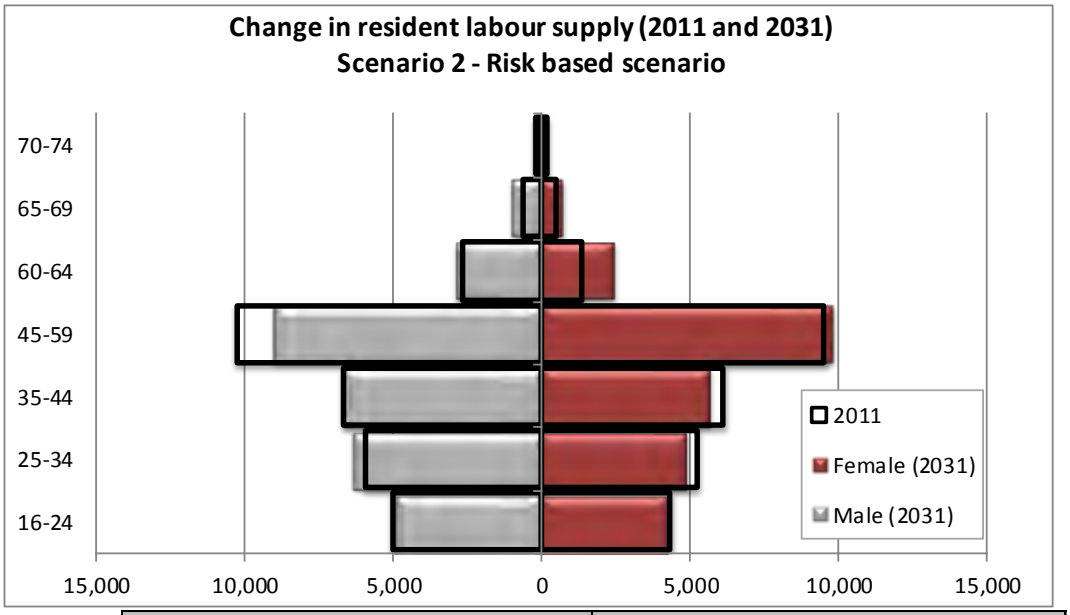
	MALES				FEMALES			
			Change 2011-2031				Change 2011-2031	
	2011	2031	Number	%	2011	2031	Number	%
16-24	5,000	5,100	100	*1.6*	4,300	4,500	200	*3.7*
25-34	6,000	6,500	500	*8.8*	5,200	5,000	-200	*-3.4*
35-44	6,700	7,000	300	*4.7*	6,100	6,000	-100	*-1.0*
45-59	10,300	9,400	-900	*-8.9*	9,500	10,100	600	*6.2*
60-64	2,600	3,000	300	*12.1*	1,300	2,500	1,200	*91.5*
65-69	700	1,000	400	*56.6*	500	800	300	*62.6*
70-74	200	300	100	*38.5*	100	200	100	*36.7*

Source: Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Chart A4.2:



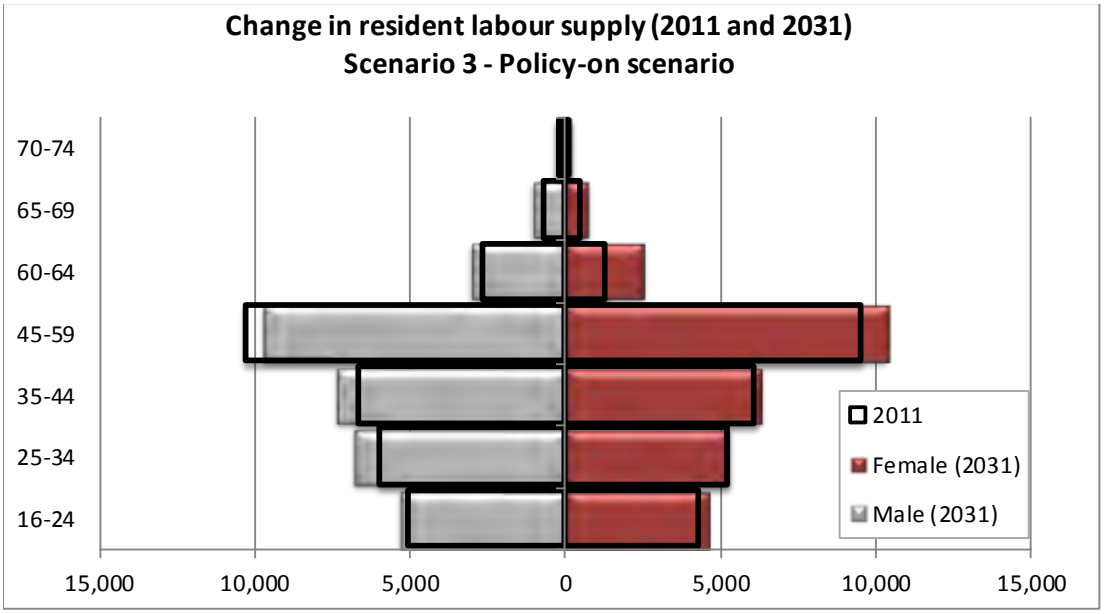
	MALES				FEMALES			
			Change 2011-2031				*Change 2011-2031*	
	2011	**2031**	***Number***	***%***	**2011**	**2031**	***Number***	***%***
16-24	5,000	4,900	-100	*-2.2*	4,300	4,300	0	*-0.3*
25-34	6,000	6,300	400	*6.1*	5,200	4,900	-300	*-5.5*
35-44	6,700	6,700	0	*-0.2*	6,100	5,700	-400	*-6.7*
45-59	10,300	9,000	-1,300	*-12.4*	9,500	9,800	300	*3.1*
60-64	2,600	2,900	300	*9.5*	1,300	2,500	1,200	*88.2*
65-69	700	1,000	400	*53.6*	500	700	300	*60.0*
70-74	200	300	100	*36.0*	100	200	0	*34.5*

Source: Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Chart A4.3:



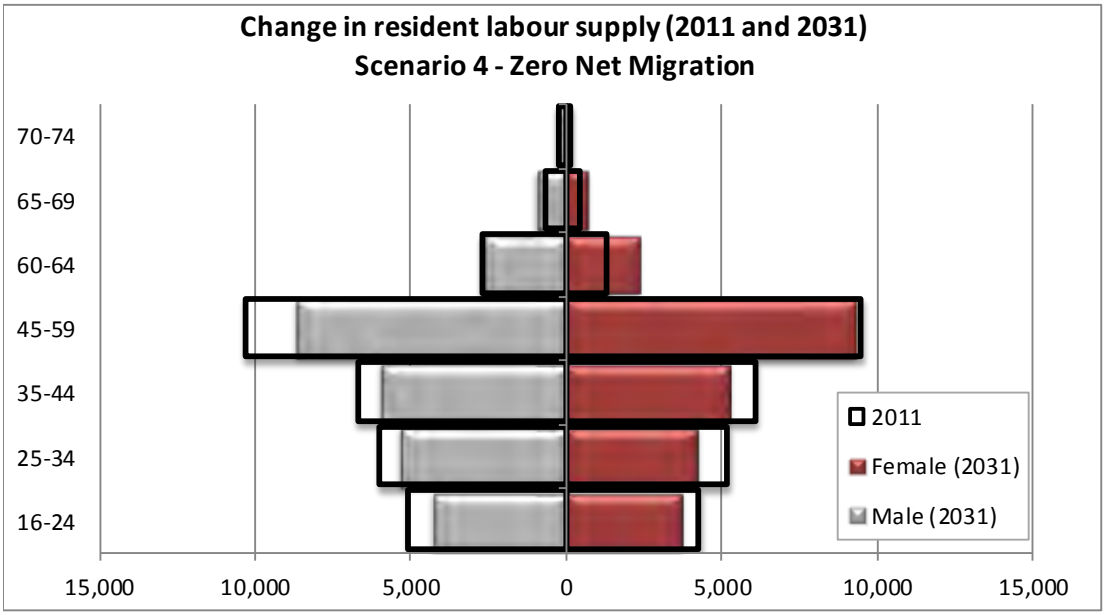
	MALES				FEMALES			
			Change 2011-2031				Change 2011-2031	
	2011	2031	Number	%	2011	2031	Number	%
16-24	5,000	5,300	300	*5.1*	4,300	4,600	300	*7.5*
25-34	6,000	6,800	800	*13.7*	5,200	5,300	100	*1.5*
35-44	6,700	7,300	700	*9.9*	6,100	6,300	200	*3.6*
45-59	10,300	9,700	-600	*-5.6*	9,500	10,400	800	*8.9*
60-64	2,600	3,000	400	*14.9*	1,300	2,600	1,300	*95.4*
65-69	700	1,100	400	*60.2*	500	800	300	*65.9*
70-74	200	300	100	*41.4*	100	200	100	*39.3*

Source: Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Chart A4.4:



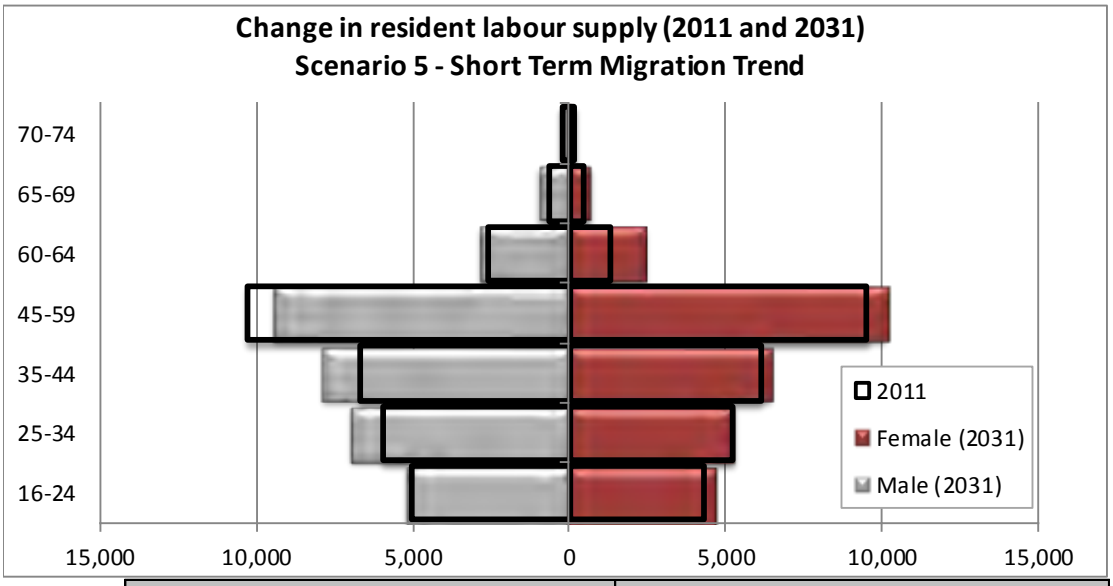
	MALES				FEMALES			
			Change 2011-2031				Change 2011-2031	
	2011	2031	Number	%	2011	2031	Number	%
16-24	5,000	4,300	-800	*-15.1*	4,300	3,700	-500	*-12.8*
25-34	6,000	5,300	-600	*-10.5*	5,200	4,300	-900	*-18.1*
35-44	6,700	6,000	-700	*-10.9*	6,100	5,300	-800	*-13.3*
45-59	10,300	8,700	-1,600	*-15.9*	9,500	9,300	-200	*-2.3*
60-64	2,600	2,700	100	*3.2*	1,300	2,400	1,000	*79.7*
65-69	700	1,000	300	*46.5*	500	700	200	*53.8*
70-74	200	300	100	*31.1*	100	200	0	*30.3*

Source: Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Chart A4.5:



	MALES				FEMALES			
			Change 2011-2031				*Change 2011-2031*	
	2011	**2031**	***Number***	***%***	**2011**	**2031**	***Number***	***%***
16-24	5,000	5,200	200	*3.3*	4,300	4,700	400	*8.5*
25-34	6,000	7,000	1,000	*17.2*	5,200	5,200	0	*0.7*
35-44	6,700	7,900	1,200	*17.9*	6,100	6,500	400	*6.4*
45-59	10,300	9,500	-800	*-8.2*	9,500	10,100	600	*6.4*
60-64	2,600	2,900	200	*8.2*	1,300	2,500	1,200	*88.5*
65-69	700	1,000	300	*51.6*	500	700	300	*59.2*
70-74	200	300	100	*35.6*	100	200	0	*34.5*

Source: Research & Evaluation, Kent County Council

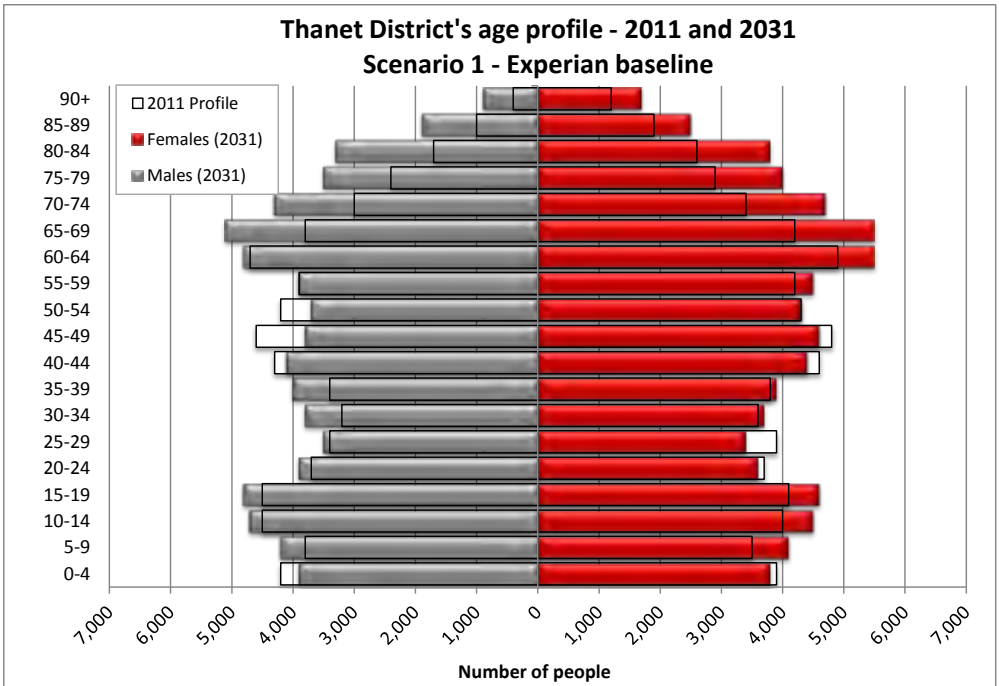
All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Appendix 5

Changing age profile of Thanet District's population under the five scenarios

Chart A5.1:



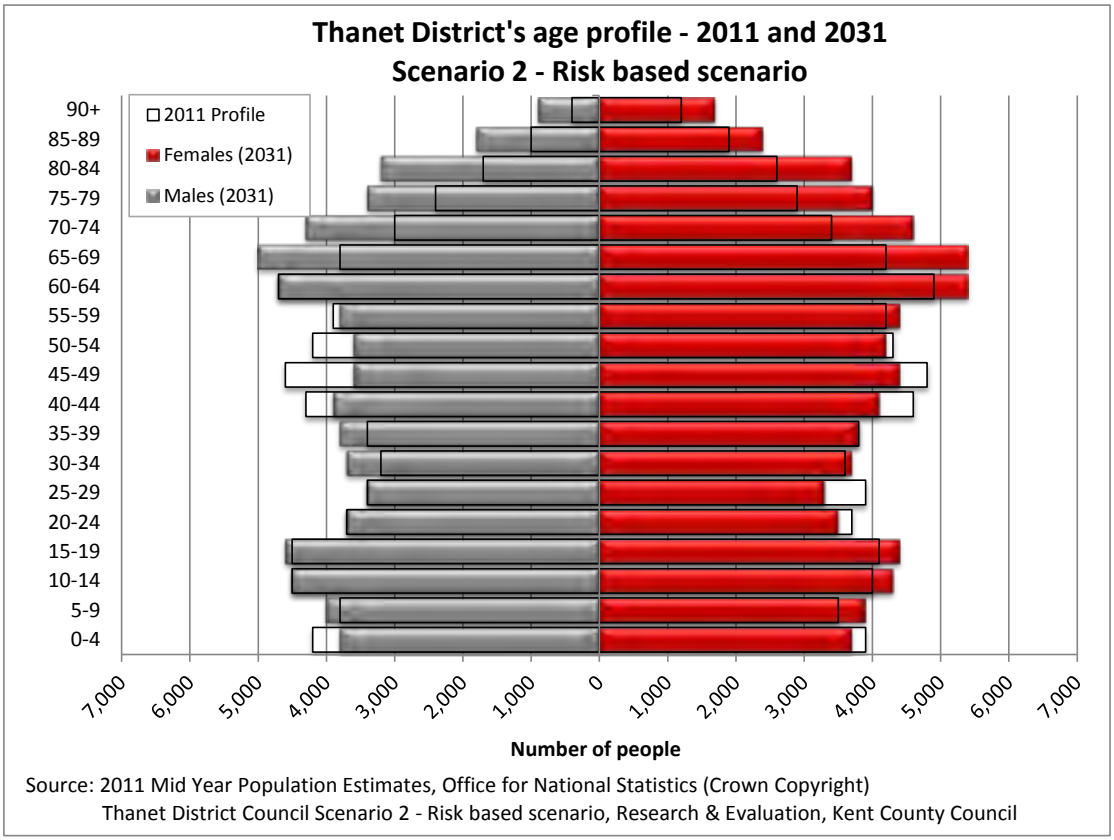
Source: 2011 Mid Year Population Estimates, Office for National Statistics (Crown Copyright)
Thanet District Council Scenario 1 - Experian baseline, Research & Evaluation, Kent County Council

Table A5.1: Forecast of Thanet District's population Scenario 1 – Experian baseline

			Change 2011-2031	
	2011	2031	No.	%
0-4	8,100	7,700	-400	*-5.3*
5-9	7,300	8,200	900	*12.3*
10-14	8,500	9,200	700	*8.6*
15-19	8,600	9,500	800	*9.4*
20-24	7,400	7,500	100	*0.9*
25-29	7,300	6,900	-300	*-4.7*
30-34	6,900	7,500	600	*8.8*
35-39	7,200	7,900	700	*10.0*
40-44	8,900	8,500	-400	*-4.6*
45-49	9,400	8,300	-1,000	*-10.9*
50-54	8,500	8,100	-500	*-5.3*
55-59	8,100	8,400	300	*3.8*
60-64	9,500	10,300	700	*7.9*
65-69	8,100	10,600	2,500	*30.8*
70-74	6,400	9,000	2,600	*41.3*
75-79	5,300	7,500	2,300	*43.2*
80-84	4,300	7,000	2,700	*62.3*
85-89	2,900	4,300	1,500	*51.2*
90+	1,700	2,700	1,000	*57.5*
All ages	**134,400**	**149,200**	**14,800**	***11.0***

Source: Thanet District Council Scenario 1 - Experian baseline, Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been uncalculated using unrounded numbers

Chart A5.2:



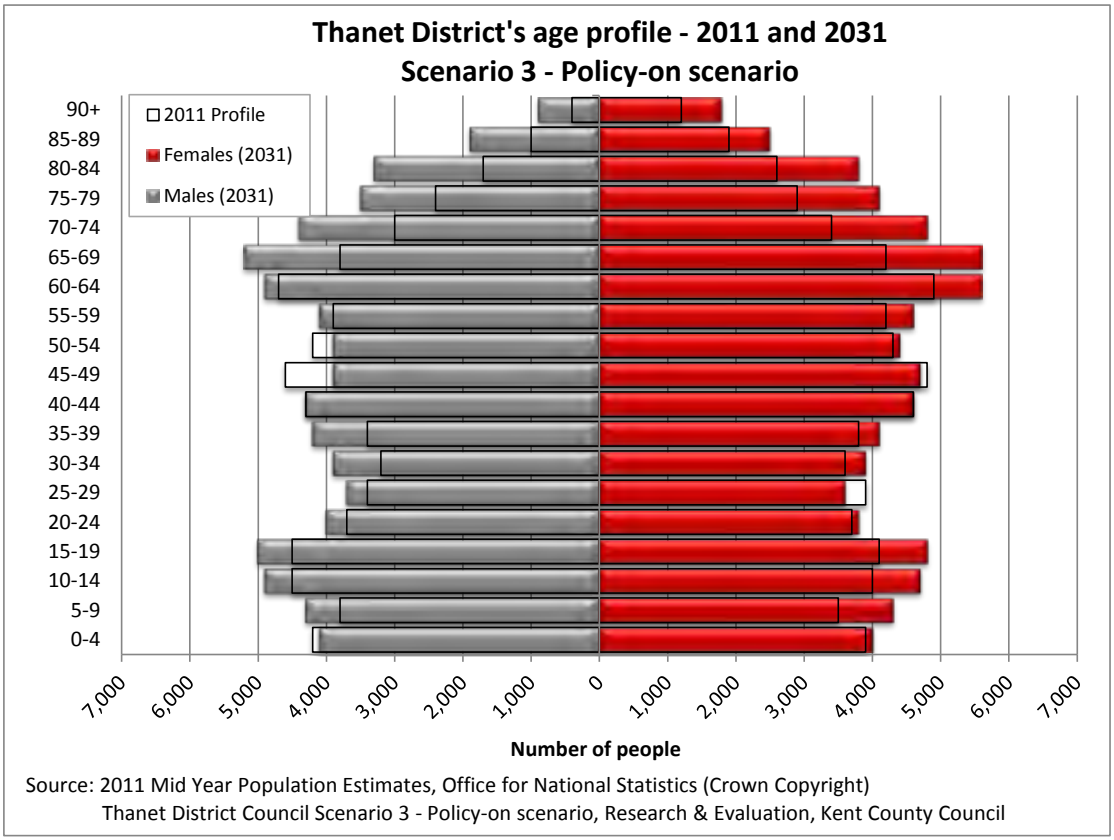
Source: 2011 Mid Year Population Estimates, Office for National Statistics (Crown Copyright)
Thanet District Council Scenario 2 - Risk based scenario, Research & Evaluation, Kent County Council

Table A5.2: Forecast of Thanet District's population Scenario 2 – Risk based scenario

			Change 2011-2031	
	2011	2031	No.	%
0-4	8,100	7,500	-700	*-8.3*
5-9	7,300	7,900	600	*7.8*
10-14	8,500	8,800	300	*3.6*
15-19	8,600	9,000	400	*4.5*
20-24	7,400	7,200	-200	*-2.3*
25-29	7,300	6,800	-500	*-7.1*
30-34	6,900	7,300	400	*6.3*
35-39	7,200	7,600	400	*5.6*
40-44	8,900	7,900	-1,000	*-10.7*
45-49	9,400	8,000	-1,400	*-14.5*
50-54	8,500	7,800	-700	*-8.6*
55-59	8,100	8,200	100	*1.0*
60-64	9,500	10,100	500	*5.7*
65-69	8,100	10,400	2,300	*28.5*
70-74	6,400	8,900	2,500	*38.8*
75-79	5,300	7,400	2,100	*40.4*
80-84	4,300	6,900	2,600	*59.3*
85-89	2,900	4,300	1,400	*48.8*
90+	1,700	2,600	900	*55.6*
All ages	**134,400**	**144,500**	**10,100**	***7.5***

Source: Thanet District Council Scenario 2 - Risk based scenario, Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been uncalculated using unrounded numbers

Chart A5.3:



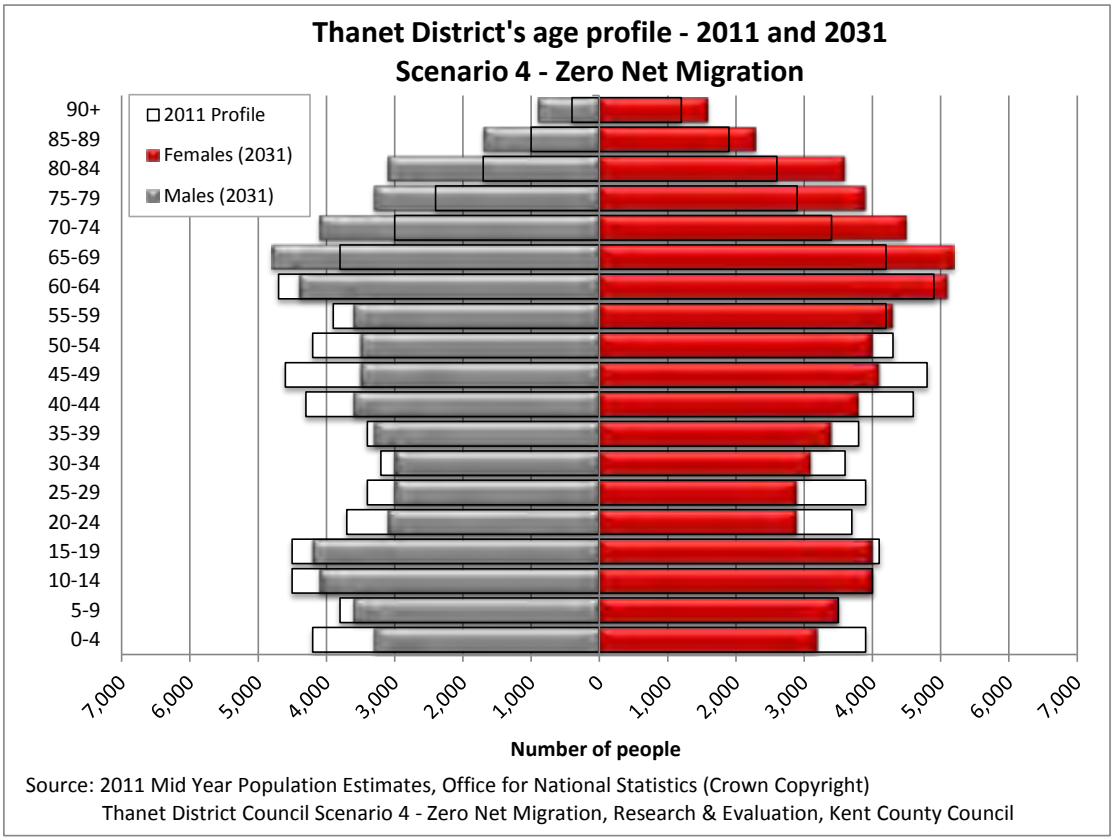
Source: 2011 Mid Year Population Estimates, Office for National Statistics (Crown Copyright)
Thanet District Council Scenario 3 - Policy-on scenario, Research & Evaluation, Kent County Council

Table A5.3: Forecast of Thanet District's population Scenario 3 – Policy-on scenario

			Change 2011-2031	
	2011	2031	No.	%
0-4	8,100	8,100	-100	*-0.8*
5-9	7,300	8,600	1,300	*17.3*
10-14	8,500	9,600	1,100	*12.6*
15-19	8,600	9,800	1,100	*12.9*
20-24	7,400	7,800	400	*4.9*
25-29	7,300	7,300	0	*-0.4*
30-34	6,900	7,900	1,000	*14.1*
35-39	7,200	8,300	1,100	*15.6*
40-44	8,900	8,900	0	*-0.3*
45-49	9,400	8,600	-700	*-7.7*
50-54	8,500	8,300	-200	*-2.5*
55-59	8,100	8,700	500	*6.4*
60-64	9,500	10,500	1,000	*10.3*
65-69	8,100	10,800	2,700	*33.6*
70-74	6,400	9,200	2,800	*44.1*
75-79	5,300	7,700	2,400	*45.7*
80-84	4,300	7,100	2,800	*64.7*
85-89	2,900	4,400	1,500	*53.1*
90+	1,700	2,700	1,000	*59.6*
All ages	**134,400**	**154,000**	**19,600**	***14.6***

Source: Thanet District Council Scenario 3 - Policy-on scenario, Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been uncalculated using unrounded numbers

Chart A5.4:



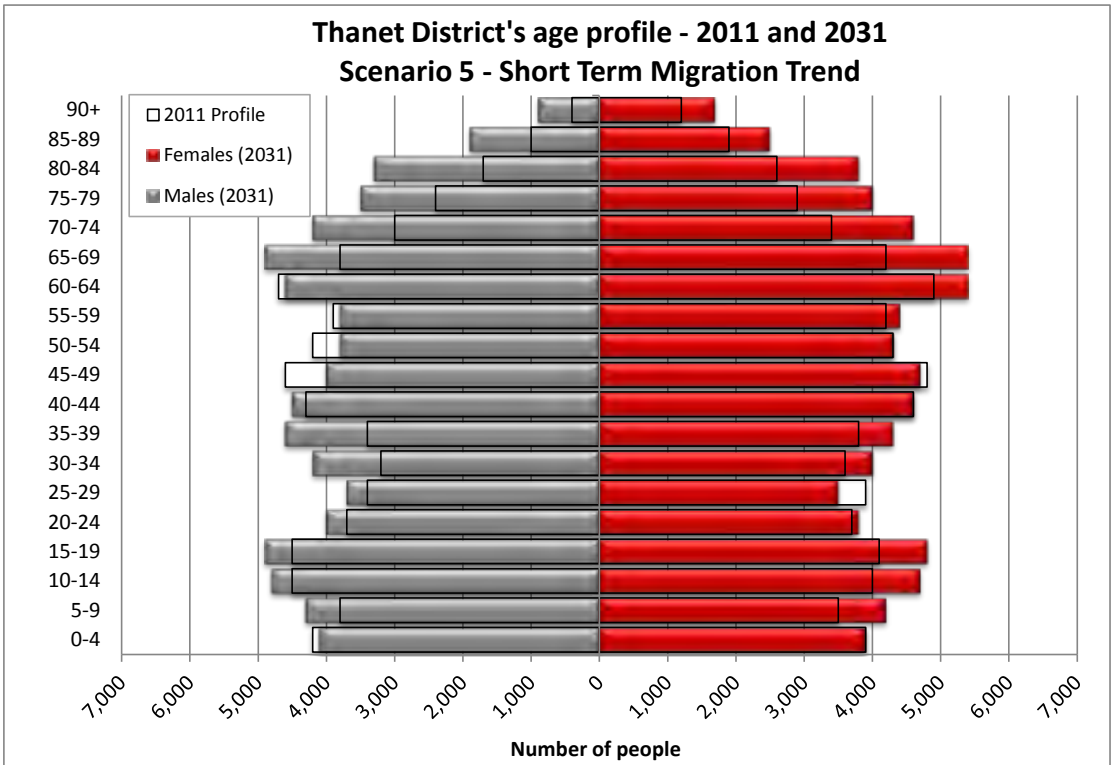
Source: 2011 Mid Year Population Estimates, Office for National Statistics (Crown Copyright)
Thanet District Council Scenario 4 - Zero Net Migration, Research & Evaluation, Kent County Council

Table A5.4: Forecast of Thanet District's population Scenario 4 – Zero Net Migration

			Change 2011-2031	
	2011	2031	No.	%
0-4	8,100	6,600	-1,600	*-19.4*
5-9	7,300	7,100	-200	*-2.9*
10-14	8,500	8,100	-400	*-5.0*
15-19	8,600	8,200	-500	*-5.3*
20-24	7,400	6,100	-1,300	*-17.9*
25-29	7,300	5,900	-1,400	*-19.1*
30-34	6,900	6,200	-700	*-10.6*
35-39	7,200	6,800	-400	*-6.2*
40-44	8,900	7,400	-1,500	*-16.8*
45-49	9,400	7,500	-1,800	*-19.5*
50-54	8,500	7,500	-1,100	*-12.5*
55-59	8,100	7,900	-200	*-2.9*
60-64	9,500	9,500	0	*0.3*
65-69	8,100	9,900	1,900	*23.1*
70-74	6,400	8,600	2,200	*34.2*
75-79	5,300	7,200	1,900	*36.2*
80-84	4,300	6,700	2,300	*53.6*
85-89	2,900	4,100	1,200	*41.8*
90+	1,700	2,500	800	*45.3*
All ages	**134,400**	**133,500**	**-900**	***-0.7***

Source: Thanet District Council Scenario 4 - Zero Net Migration, Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been uncalculated using unrounded numbers

Chart A5.5:



Source: 2011 Mid Year Population Estimates, Office for National Statistics (Crown Copyright)
Thanet District Council Scenario 5 - STMTrend, Research & Evaluation, Kent County Council

Table A5.5: Forecast of Thanet District's population Scenario 5 – Short Term Migration Trend

			Change 2011-2031	
	2011	2031	No.	%
0-4	8,100	8,100	-100	*-0.9*
5-9	7,300	8,600	1,200	*16.7*
10-14	8,500	9,500	1,000	*11.4*
15-19	8,600	9,600	1,000	*11.4*
20-24	7,400	7,800	400	*5.4*
25-29	7,300	7,200	-100	*-1.5*
30-34	6,900	8,100	1,200	*17.9*
35-39	7,200	8,900	1,700	*24.1*
40-44	8,900	9,100	200	*2.4*
45-49	9,400	8,600	-700	*-7.8*
50-54	8,500	8,100	-400	*-5.1*
55-59	8,100	8,200	100	*1.3*
60-64	9,500	10,000	500	*5.2*
65-69	8,100	10,300	2,200	*27.4*
70-74	6,400	8,800	2,500	*38.6*
75-79	5,300	7,500	2,200	*42.6*
80-84	4,300	7,100	2,700	*63.3*
85-89	2,900	4,400	1,500	*52.1*
90+	1,700	2,700	1,000	*57.9*
All ages	**134,400**	**152,500**	**18,100**	***13.5***

Source: Thanet District Council Scenario 5 - Short Term Migration Trend, Research & Evaluation, Kent County Council
All figures have been individually rounded to the nearest 100 and may not sum
Percentages have been uncalculated using unrounded numbers

Appendix 6

Forecast of changing household types in Thanet District under each of the five scenarios

Table A6.1: Forecast of household types in Thanet District, Scenario 1 – Experian baseline

Household type		2011	2031	Change 2011-2031 Number	Change 2011-2031 %
One person household	Male	9,800	14,600	4,800	*49.3*
	Female	13,300	17,400	4,100	*31.2*
One family couple household	No dependent children	16,100	18,100	2,000	*12.3*
	1 dependent child	2,700	2,200	-500	*-18.1*
	2 dependent children	2,900	2,000	-900	*-30.7*
	3+ dependent children	1,900	1,800	-100	*-2.8*
Lone parent family household	1 dependent child	2,600	3,700	1,100	*42.4*
	2 dependent children	1,700	2,200	500	*30.6*
	3+ dependent children	900	1,200	300	*35.7*
Couple household with 1 or more other adults	No dependent children	3,000	2,400	-500	*-18.3*
	1 dependent child	700	400	-400	*-50.0*
	2 dependent children	500	500	0	*4.5*
	3+ dependent children	200	200	0	*-23.7*
Lone parent household with 1 or more other adults	1 dependent child	400	500	0	*7.0*
	2 dependent children	200	200	0	*12.2*
	3+ dependent children	100	100	0	*6.5*
Other households		2,700	2,300	-300	*-12.4*
Total households		**59,600**	**69,800**	**10,300**	***17.2***

Source: Thanet District Council Scenario 1 - Experian baseline, Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Table A6.2: Forecast of household types in Thanet District, Scenario 2 – Risk based scenario

Household type		2011	2031	Change 2011-2031 Number	Change 2011-2031 %
One person household	Male	9,800	14,200	4,400	*45.0*
	Female	13,300	17,000	3,700	*28.1*
One family couple household	No dependent children	16,100	17,600	1,600	*9.7*
	1 dependent child	2,700	2,100	-600	*-21.4*
	2 dependent children	2,900	1,900	-1,000	*-33.7*
	3+ dependent children	1,900	1,800	-100	*-7.4*
Lone parent family household	1 dependent child	2,600	3,500	1,000	*37.2*
	2 dependent children	1,700	2,200	400	*26.1*
	3+ dependent children	900	1,200	300	*30.3*
Couple household with 1 or more other adults	No dependent children	3,000	2,400	-600	*-20.3*
	1 dependent child	700	300	-400	*-51.5*
	2 dependent children	500	500	0	*0.2*
	3+ dependent children	200	100	-100	*-26.3*
Lone parent household with 1 or more other adults	1 dependent child	400	400	0	*2.6*
	2 dependent children	200	200	0	*8.2*
	3+ dependent children	100	100	0	*1.5*
Other households		2,700	2,300	-400	*-14.5*
Total households		**59,600**	**67,900**	**8,300**	***13.9***

Source: Thanet District Council Scenario 2 - Risk based scenario, Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Table A6.3: Forecast of household types in Thanet District, Scenario 3 – Policy-on scenario

Household type		2011	2031	Change 2011-2031 Number	Change 2011-2031 %
One person household	Male	9,800	15,000	5,300	*53.7*
	Female	13,300	17,800	4,600	*34.4*
One family couple household	No dependent children	16,100	18,500	2,400	*15.0*
	1 dependent child	2,700	2,300	-400	*-14.7*
	2 dependent children	2,900	2,100	-800	*-27.7*
	3+ dependent children	1,900	1,900	0	*1.7*
Lone parent family household	1 dependent child	2,600	3,800	1,200	*48.2*
	2 dependent children	1,700	2,300	600	*36.6*
	3+ dependent children	900	1,300	400	*42.2*
Couple household with 1 or more other adults	No dependent children	3,000	2,500	-500	*-16.1*
	1 dependent child	700	400	-300	*-48.4*
	2 dependent children	500	600	0	*8.7*
	3+ dependent children	200	200	0	*-21.0*
Lone parent household with 1 or more other adults	1 dependent child	400	500	100	*11.6*
	2 dependent children	200	200	0	*17.0*
	3+ dependent children	100	100	0	*11.2*
Other households		2,700	2,400	-300	*-10.1*
Total households		**59,600**	**71,900**	**12,300**	***20.7***

Source: Thanet District Council Scenario 3 - Policy-on scenario, Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Table A6.4: Forecast of household types in Thanet District, Scenario 4 – Zero Net Migration

Household type		2011	2031	Change 2011-2031 Number	Change 2011-2031 %
One person household	Male	9,800	13,300	3,500	*35.8*
	Female	13,300	16,100	2,800	*21.1*
One family couple household	No dependent children	16,100	16,800	700	*4.4*
	1 dependent child	2,700	1,900	-800	*-28.3*
	2 dependent children	2,900	1,800	-1,200	*-39.7*
	3+ dependent children	1,900	1,600	-300	*-16.0*
Lone parent family household	1 dependent child	2,600	3,200	600	*23.2*
	2 dependent children	1,700	1,900	200	*11.2*
	3+ dependent children	900	1,100	100	*15.8*
Couple household with 1 or more other adults	No dependent children	3,000	2,200	-700	*-24.8*
	1 dependent child	700	300	-400	*-54.1*
	2 dependent children	500	500	0	*-7.4*
	3+ dependent children	200	100	-100	*-31.8*
Lone parent household with 1 or more other adults	1 dependent child	400	400	0	*-7.4*
	2 dependent children	200	200	0	*-2.7*
	3+ dependent children	100	100	0	*-6.6*
Other households		2,700	2,100	-500	*-19.8*
Total households		**59,600**	**63,500**	**3,900**	***6.6***

Source: Thanet District Council Scenario 4 - Zero Net Migration, Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers

Table A6.5: Forecast of household types in Thanet District, Scenario 5 – Short Term Migration Trend

Household type		2011	2031	Change 2011-2031 Number	Change 2011-2031 %
One person household	Male	9,800	14,900	5,100	*52.3*
	Female	13,300	17,500	4,300	*32.0*
One family couple household	No dependent children	16,100	17,900	1,900	*11.6*
	1 dependent child	2,700	2,300	-400	*-13.5*
	2 dependent children	2,900	2,200	-800	*-25.8*
	3+ dependent children	1,900	2,000	100	*5.5*
Lone parent family household	1 dependent child	2,600	3,800	1,300	*49.5*
	2 dependent children	1,700	2,400	700	*39.1*
	3+ dependent children	900	1,300	400	*46.4*
Couple household with 1 or more other adults	No dependent children	3,000	2,400	-600	*-18.6*
	1 dependent child	700	400	-300	*-49.7*
	2 dependent children	500	600	100	*10.0*
	3+ dependent children	200	200	0	*-21.4*
Lone parent household with 1 or more other adults	1 dependent child	400	500	100	*13.7*
	2 dependent children	200	200	0	*18.4*
	3+ dependent children	100	100	0	*14.4*
Other households		2,700	2,300	-300	*-12.3*
Total households		**59,600**	**71,000**	**11,500**	***19.3***

Source: Thanet District Council Scenario 5 - Short Term Migration Trend, Research & Evaluation, Kent County Council

All figures have been individually rounded to the nearest 100 and may not sum

Percentages have been uncalculated using unrounded numbers