Appendix 4 Options

1. INTRODUCTION

1.1 This technical paper sets out the methodology and technical information used by the Council in order to develop the three growth scenarios which form the basis of the first new Local Plan consultation.

1.2 At the time of writing, Regional Spatial Strategies are the planning policy documents which set out the levels of growth to be planned for in the Local Plan. However, in December 2010, the Government published the Localism Bill which includes proposals to abolish Regional Spatial Strategies. It is the Government's stated intention that the Local Plan will determine levels of growth for its local area.

2. METHODOLOGY

Housing

2.1 There is no scientific approach to developing future levels of growth in respect of new housing. To a certain extent, population and household growth is led by the level of new housing development. This is particularly the case in areas such as Warwick District which is an attractive place in which to live and which has traditionally experienced high demand for housing and a strong housing market.

2.2 The Council has adopted a methodology which examines recent available evidence of housing need and demand, including housing affordability, and then considers the supply of housing land taking into account the capacity of the development industry, environmental issues and infrastructure constraints. This approach is in line with current Government policy in Planning Policy Statement 3: Housing (PPS3)[1]. All source documents used to inform this methodology are available on the District Council's website via www.warwickdc.gov.uk/evidencebase. In addition, if this document is read online, clicking on the title of an underlined source document will open it.

Employment

2.3 The inter-relationship between employment, travel-to-work, and housing is important. An important aspect of sustainable development is a balance between homes and jobs in order to reduce the need to travel. In- and out-commuting is determined mainly by the individual choice of employees but Local Plans can help ensure that the right types of homes and jobs are provided to enable people to live near their place of work if they so wish.

[1] PPS3 Housing (June 2010) Paragraphs 32-33

2.4 The Council has adopted a methodology which examines employment demand based on the economic projections for Warwick District produced by the Cambridge Econometrics Local Economy Forecasting Model. Alternative scenarios for economic growth have been prepared taking account of recent economic trends, local economic development aspirations and policies, and the impact of alternative housing growth options. The analysis and results from this work are reported separately within the Employment Land Review and Employment Land Review Addendum.

3 HOUSING NEED AND DEMAND

3.1 Housing need is generally considered to be the housing requirements of those households which are unable to access housing in the market generally without some kind of subsidy. Housing demand, however, refers to the housing requirements of those households which can access the housing market without any form of subsidy. Housing need is generally assessed by way of a Needs Model which looks at the backlog of housing need and future arising need and estimates the annual requirements by tenure. Evidence of future housing demand can be derived from population and economic projections as well as housing market assessments. All evidence of future housing need and demand relies to some extent on projections of past trends.

Population and Household Projections

3.2 The Office for National Statistics (ONS) produces population projections at local authority level every 2 years and the Government then produces household projections based on these. Population projections use trend-based assumptions of future levels of fertility, mortality and migration from the previous 5 years. ONS states that:

"The sub-national population projections are based on the assumption that recent trends in fertility, mortality and migration at local authority level will continue; they take no account of local development policy, economic factors or the capacity of areas to accommodate population. The projections provide the population levels and age structure that would result if the assumptions about future fertility, mortality and migration levels were realised."

3.3 The latest population and household projections use the 2008 population estimates as a starting point.

TABLE 1 2008-BASED POPULATION AND HOUSEHOLD PROJECTIONS

	2008	2013	2018	2023	2028	2033
Population	138,200	146,000	153,100	159,900	166,700	172,400
Households	60,000	64,000	69,000	73,000	77,000	81,000

Sources: ONS 2008-based Sub-national Population Projections and CLG Revised 2008-Based Household Projections

3.4 The following table sets out the increases in households over the different five year periods and shows that the average annual increase is 840 households.

TABLE 2 2008-BASED HOUSEHOLD PROJECTIONS: RATES OF INCREASE

Increase	2008-2013	2013-2018	2018-2023	2023-2028	2028-2033	Annual Average
No.	4,000	5,000	4,000	4,000	4,000	840
%	6.6	7.8	5.8	5.4	5.2	

Source: CLG Revised 2008-Based Household Projections

3.5 The projections show an overall increase in population of 28,500 (20.6%) between 2008 and 2028 with a slowing of the rate of increase after 2013. Households are shown to increase by 17,000 (28%) between 2008 and 2028. It is worth noting that these projections are based on trends dating from between 2003 and 2008 when house building in the district was at a relatively high level (see Table 3 below). The projections assume that these levels of growth will continue, which clearly is not the case in the short term, as evidenced by more recent completion rates and the current slowdown in the growth of the economy.

TABLE 3 ANNUAL COMPLETIONS 2001/02 to 2009/10

Year	2001/02	2002/03	2003/04	2004/05	2005/06
Dwellings	872	973	733	746	782

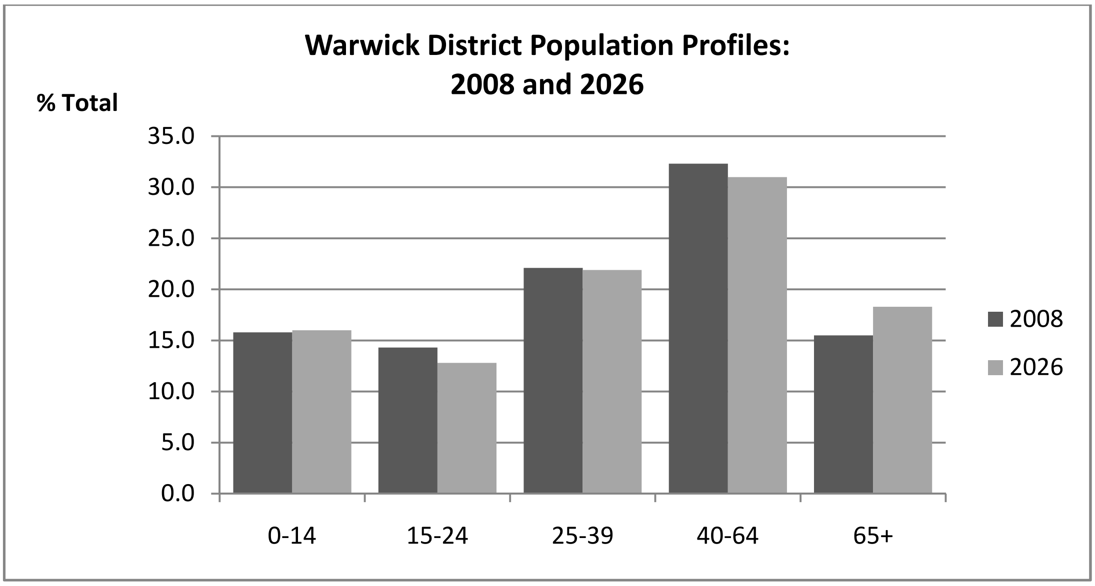
Year	2006/07	2007/08	2008/09	2009/10
Dwellings	523	608	427	188

Source: Warwick District Council Housing Monitoring Database

3.6 The period from 1999 to 2006 was one of high levels of housing growth in the district. This was largely due to two sources of new house building running concurrently – firstly, a number of sites allocated in the Warwick District Local Plan 1995 started to come forward during the period and, secondly, a number of sizeable brownfield windfall sites came forward unexpectedly. These windfall sites largely consisted of former employment sites and the majority of these accommodated apartments. The Council does not consider that this level of brownfield development will continue in the future largely because the Council wishes to protect its employment land in order to maintain a balanced portfolio and also because the market for apartments on the scale seen in previous years has largely disappeared. The results of the population and household projections should therefore be treated with caution.

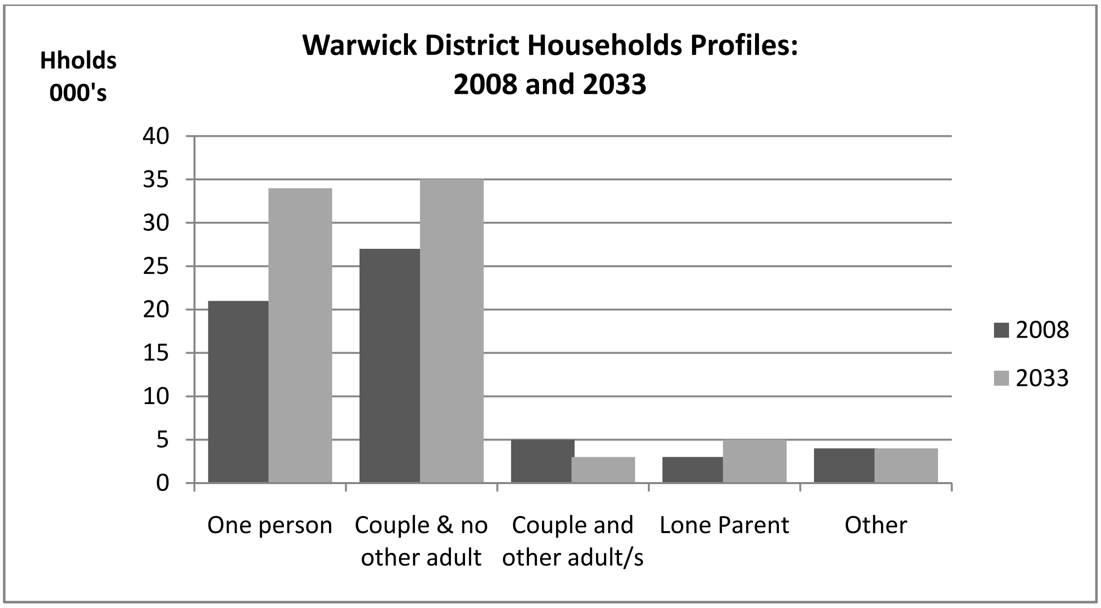
3.7 Although the actual increase in the numbers of people and households in the projections is of limited value in analysing future housing need and demand, the nature of the change in population and households does offer a useful insight into changing trends.

3.8 The 2008-based population projections give an indication of the changing age structure of the population. Currently, Warwick has a relatively young population compared with the national picture. The population projections show that the very young (those under 15) and older people (those aged over 64) will make up a greater proportion of the population in 2026 than in 2008.



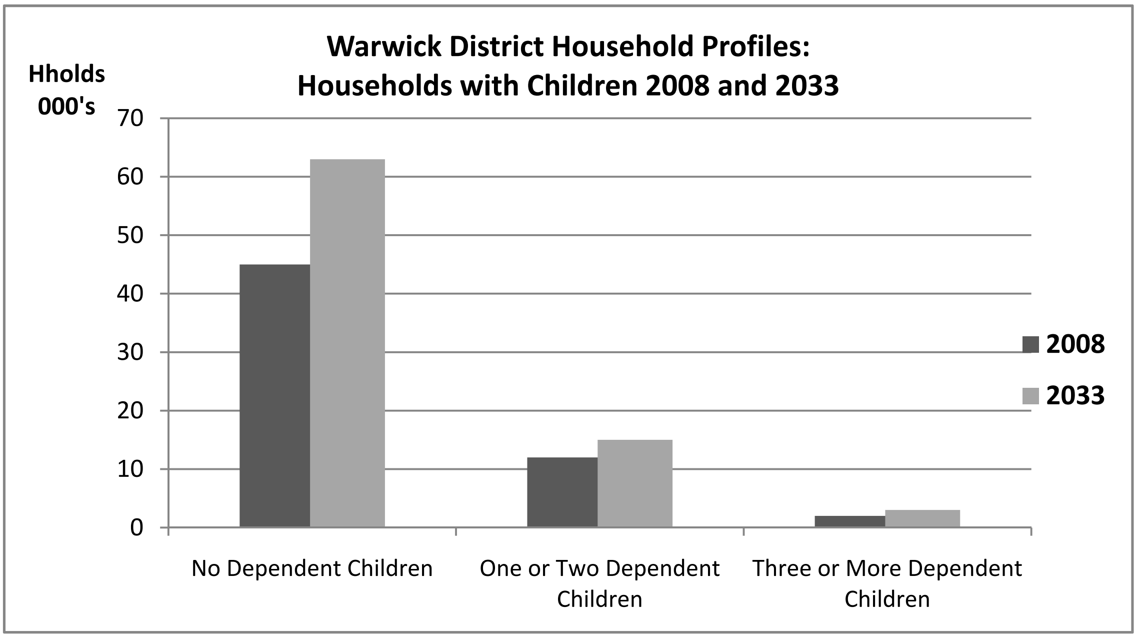
Source: [ONS 2008-based Sub-national Population Projections]

3.9 The household projections indicate that average household size is likely to fall from 2.3 in 2008 to 2.1 in 2026. The following graphs show the material increases in different types of households. The first graph shows a significant projected increase (13,000) in the number of one person households. However the greatest proportionate increase is for lone parent households (67%).



Source: [CLG Revised 2008-Based Household Projections]

3.10 With regard to households and children, the greatest projected increase is in households with no children (18,000). However, there is also projected to be increases in the numbers of households with children, particularly households with less than 3 children.



Source: [CLG Revised 2008-Based Household Projections]

3.11 The increases in one person households and households with no dependent children largely reflect the fact that people are expected to live longer. Many of these households will consist of older people and, therefore, this is not necessarily an indication of an increasing demand for smaller units of accommodation. There will, however, certainly be an increased demand for different types of accommodation to meet the needs of older people. If household size continues to fall as projected, this will have implications for the number of households required in the future.

Strategic Housing Market Assessments and Affordability

3.12 Strategic Housing Market Assessments (SHMAs) give an overall view of the state of the housing market as well as an assessment of future housing need and demand. Government guidance[2] sets out a methodology for carrying out SHMAs.

3.13 A SHMA was carried out for South Warwickshire[3] (Warwick and Stratford on Avon Districts) in 2006. This Joint Assessment used a combination of primary and secondary data to examine the existing and future housing markets and to assess levels of affordability. The source of the primary data was a household survey which provided a range of information on the characteristics of households including their income, occupation, housing aspirations and housing moves. The Assessment shows that:

- The price of an entry-level house would be outside the affordability range of 90% of two (or more) earner households and 95% of single earner households.
- A total of 821 additional affordable homes would need to be provided each year in order to meet housing need over the next five years.
- The priorities for new affordable dwellings in terms of size and type are two- and three-bed houses and two-bed flats.
- Just under half of movers (previous 2 years) moved from outside the district and, of these, about 40% came from elsewhere in the Midlands and 19% from London and the South East.
- The largest absolute movements into the district were from Coventry to Leamington Spa.
- Of those existing households proposing to move out of the district within the following 2 years, about 50% proposed to move to areas outside of the Midlands or the South East. Of newly forming households, 70% cited London or areas outside of the Midlands and the South East.
- Based on planned moves, the types of market homes for which there is a greatest shortfall are 2- and 3-bed owner-occupied houses and 2-bed privately rented flats. If migrant demand is included, the shortfall for 2- and 3-bed houses is even greater and there is a shortfall for privately rented 3- bed houses as well as 2-bed flats.

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[2] Strategic Housing Market Assessments: Practice Guidance Version 2. CLG August 2007

[3] Joint Housing Assessment for South Warwickshire. August 2006. Outside Research & Development.

3.14 In April 2007 a SHMA for the South Housing Market Area[4] was produced on behalf of the South Housing Market Area Partnership. Since 2007, this report has been updated annually in a Monitoring Report, the latest of which is the 2008/09 Monitoring Report.

3.15 The study assesses the annual need for affordable housing by examining the nature of newly forming households and their income levels along with the annual supply of housing by tenure and cost. The outcome is an indication of the annual need for different tenures of low cost housing including homes to buy, privately rented accommodation and intermediate and social rented (subsidised) housing. The SHMA does not attempt to forecast future housing need. It uses the CLG national household projections as baseline data to which ratios are applied to calculate newly forming households and their income.

3.16 The results of the SHMA show the tenure split of homes which would be required on an annual basis to meet the needs of households which cannot afford to buy homes priced above the lowest price quartile. This is set against the supply of the existing stock to show the likely shortfall of low cost and affordable homes. However, it should be noted that the supply of new homes is based on the target figures set out in the emerging RSS (Phase Two Revision) of 550 homes per annum.

[4] The "South" Housing Market Area was one of four housing market areas identified by the West Midlands Regional Agency. It included the Worcestershire authorities and Warwick and Stratford Districts in Warwickshire.

TABLE 4 SOUTH HOUSING MARKET ASSESSMENT (MONITORING 2008/09)
ANNUAL HOUSING NEED AND SUPPLY BY TENURE

Type/Tenure of Home	Annual Gross Need (Households)*	Total Supply (Homes)**	Shortfall or [Surplus]
Homes to Buy at Lower Quartile Price	569	398	171
Homes to Buy at 75% of Lower Quartile Price	98	0	98
Homes for Private Rent	43	132	[89]
Intermediate Homes (Part buy/part rent)	228	0	228
Homes for Social Rent	560	417	143
Annual Need for Subsidised Affordable Housing (Intermediate and Social Rent)			**371**

* This includes meeting the needs of the backlog as well as newly forming households who cannot afford to buy homes priced above the lower quartile price (£104,035 for 1-bed and £135,077 for 2-bed)
** This includes re-sales and re-lets as well as new build homes
NB **The Lower Quartile Price** is determined by ranking all property prices in ascending order and taking the price at the lowest 25% mark. It is generally accepted to be an indicator of the "entry level" to the housing market.

3.17 Warwick District has a relatively high proportion of privately rented homes, which is important to meet the needs of the relatively young adult population, including students from the University of Warwick. The role of the private rented sector becomes more important as other tenure requirements, such as social rented and low cost market housing, are not met. Housing Benefit would make up some of the difference in cost although with changes in Government policy in this direction, the outcomes are more uncertain. The shortfall in the supply of homes to buy is largely due to the recent fall in activity in the housing market although this is expected to recover.

3.18 There is clearly a large unmet need for subsidised housing which is largely unchanged from recent years. This is supported by local information about the Home Choice Register (Waiting List) as set out below.

TABLE 5 HOUSEHOLDS ON LOCAL REGISTER 2005-2010

Households on Home Choice Register excluding Transfer Requests						% of all Households in 2010
2005	**2006**	**2007**	**2008**	**2009**	**2010**	
2,453	3,171	4,692	5,999	3,305	3,754	**6.3**

Source: CLG Live Tables

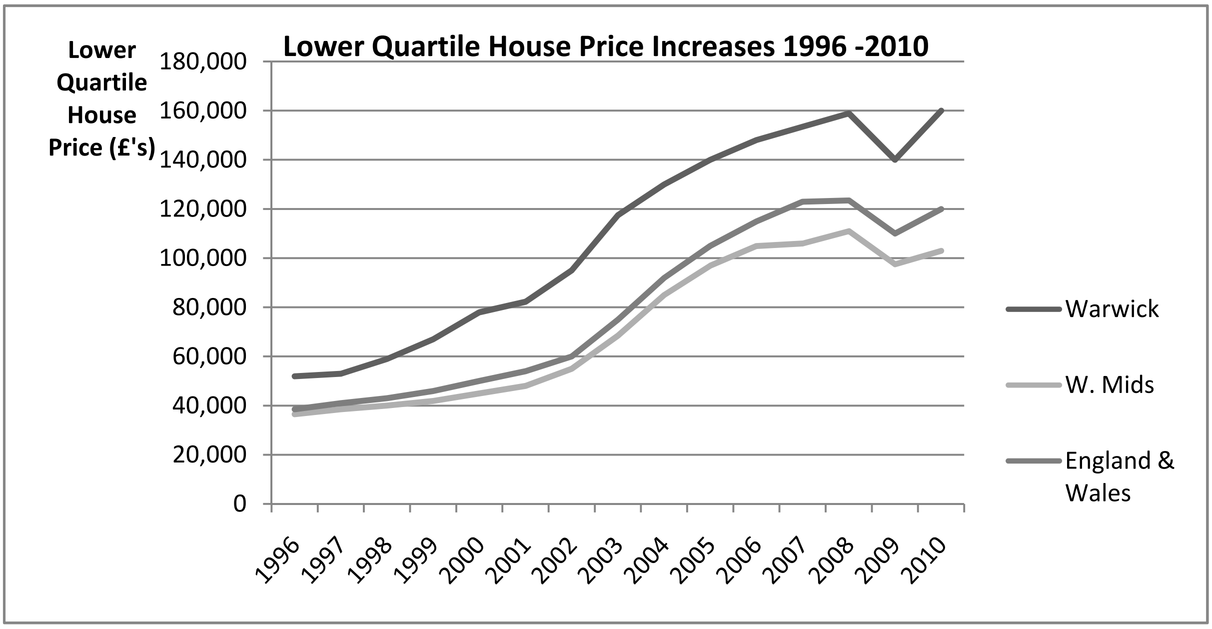
3.19 Affordability is determined by houses prices and income. Although local earnings are generally higher than the regional average, house prices in Warwick District are consistently higher than the averages for the West Midlands region and England. Affordability Ratios take account of both house prices and income. The ratios in the table below show that despite higher earnings, the district still has a relatively higher affordability ratio when compared with other areas.

TABLE 6 AFFORDABILITY RATIOS: NATIONAL, REGIONAL & LOCAL COMPARISONS

	2005	**2006**	**2007**	**2008**	**2009**
England	6.82	7.15	7.25	6.97	6.28
West Midlands	6.47	6.97	6.88	6.61	5.82
Warwickshire	7.33	7.17	7.19	6.96	6.49
Warwick	**8.63**	**8.26**	**8.59**	**8.35**	**7.38**
North Warwickshire	6.59	6.86	6.84	7.25	6.13
Nuneaton & Bedworth	6.43	6.53	6.68	6.32	5.82
Rugby	6.35	7.16	7.09	6.51	5.31
Stratford on Avon	10.19	9.63	8.97	9.00	8.48
Affordability Ratios are a measure of the affordability of “entry level” homes. They are the ratio between lower quartile house prices and lower quartile earnings.					

Source: CLG Live Tables

3.20 In Warwick District changes in house prices have tended to follow the national trend and there is no evidence that prices stabilise or fall when levels of house building increases. During the period 1999 to 2006 house completions averaged 867 a year but there was no evidence of prices falling against the national trend.



Data Source: CLG Live Tables

3.21 The Council has recently commissioned a Strategic Housing Market Assessment for the district to be completed in mid-2011.

The Economic Demand for Housing

3.22 SQW Consulting (SQWC) and Cambridge Econometrics (CE) have carried out work for Advantage West Midlands and the West Midlands Regional Assembly on the economic demand for housing in the region.

3.23 The initial study, entitled "the Economic Demand for Housing in the West Midlands 2006-2026", was carried out for Advantage West Midlands in 2007. It aimed to gain a better understanding of the inter-relationships between housing and the economy and to inform the Regional Housing Strategy, the Regional Economic Strategy and the RSS partial revision. The study developed two economic scenarios and translated the economic projections from each into the required housing supply to meet the demand.

3.24 In 2009 this work was updated to include the new household and economic projections, in the light of the economic downturn, and to disaggregate the findings down to local authority level[5]. This work would then feed into ongoing work at the time on sub-regional housing strategies and the new Regional Strategy.

3.25 The 2009 study used a model which projects employment to 2026, along with occupation mix by workplace. It then applies a travel-to-work model which gives an understanding of the likely future travel-to-work patterns and therefore residents' employment by occupation. The distribution of occupation types can then be used to infer tenure type and associated dwelling type. See the SQWC/CE Housing and the Economy Model step by step guide in Appendix 4b.

3.26 Three economic scenarios were used for the study:

- Baseline – this assumes that future growth is based on historic trends but allowing for the impact of the recession
- Convergence – this assumes that the long term growth rate of the West Midlands increases to be in line with the UK as a whole (2.6% per annum) so that the gap in GVA per capita between the region and the UK gets no wider
- Public Sector Austerity – this scenario incorporates a fall in Government spending in real terms year-on-year through to 2013

3.27 The study was carried out prior to the 2010 General Election and the subsequent austerity measures implemented by the Coalition Government - which were much harsher than the measures outlined by the previous Government. It is considered, therefore that the Public Sector Austerity Scenario is likely to be more realistic than the other two scenarios.

3.28 There are a number of limitations to the study. It takes no account of any policy that might influence future housing and employment growth and relies quite heavily on Census data which is now nearly 10 years out of date. SQWC and CE state that:

"Overall, this report, its findings and analysis should be viewed and considered as providing the economic input into the housing debate. We have provided projections, not predictions in an area of policy that is dominated by people's preferences – preferences which are not always logical and cannot easily be projected through an economic model."

3.29 The identified key issues in respect of Warwick District are:

- Warwick's economy had, so far, been resilient, and only marginally affected by the recession

[5] The economic demand for housing in the West Midlands 2006-2026: A final report to the West Midlands Regional Assembly (February 2010).

- Workplace jobs were forecast to grow, and the district looked set to house additional numbers of people working in neighbouring areas, as well as locally
- A large proportion of Warwick's residents out-commute for work, with a substantial proportion travelling considerable distances to the East Midlands and the Greater South East, indicating strong residential popularity

3.30 Under all three scenarios, the numbers of people in employment in Warwick district is expected to increase. In terms of employment sectors, manufacturing and agriculture are expected to decline and the financial and business sectors are expected to grow along with Government and other services and distribution, hotels and catering.

3.31 The occupational make-up of the district is expected to become more high level, with process and elementary occupations likely to see the heaviest reduction. People in higher level jobs are increasingly likely to have no fixed place of work and combine working at home with travelling to other destinations. A greater proportion of residents are projected to be employed as managers and in personal service jobs.

3.32 In 2006, nearly 25,000 workers lived in the district and commuted to work elsewhere, primarily Coventry, Birmingham and Solihull. A significant number of residents (4,000) commute to locations outside the region, mainly to the Greater South East and the East Midlands.

3.33 The largest projected increase in housing is for owner occupation (30%), although similar proportionate increases are likely for social and private rented housing. Since house prices have remained high in Warwick, there may be a need for some intermediate housing solutions to support owner occupation.

3.34 Households are projected to increase by 16,800 between 2006 and 2026 under the "Austerity" scenario and by 16,900 under the "Baseline" scenario. This increase of around 29% is in line with the 2008-based household projections.

TABLE 7 DWELLINGS AND HOUSEHOLDS 2006-2031 BASED ON ECONOMIC DEMAND FOR HOUSING IN SQWC/CE STUDY (AUSTERITY SCENARIO)

	2006	**2010**	**2020**	**2026**	**2031**
DWELLINGS	57,800	61,400	70,100	74,500	77,700
HOUSEHOLDS	58,300	61,900	70,600	75,100	78,300

3.35 The following table sets out the actual and proportionate changes over the different periods and shows that the annual average increase in households is equivalent to 800 households (1.4%).

TABLE 8 INCREASE IN HOUSEHOLDS 2006-2026 BASED ON ECONOMIC DEMAND FOR HOUSING IN SQWC/CE STUDY (AUSTERITY SCENARIO)

Increase	2006-2010	2010-2020	2020-2026	2026-2031	Annual Average
No.	3,600	8,700	4,500	3,200	800
%	6.2	14.1	6.4	4.3	1.4

3.36 If the findings of the study are compared with the RSS (Phase Two) Revision local housing targets, there are marked disparities due to the spatial policy of the RSS. This sought to encourage the regeneration of the Major Urban Areas of the Birmingham and Black Country conurbations and restrain future growth in the more popular areas of the shires, particularly those in the south and west of the region.

Conclusions on Housing Need and Demand

3.37 There is a clear need for subsidised housing in Warwick District as evidenced by the Needs Models in recent SHMAs and local data on waiting lists and affordability ratios. The backlog is such that, whether or not current trends continue, it would be impossible to meet all the needs. There is no evidence to support the view that house prices will fall if rates of house building increase.

3.38 Much of the evidence on housing demand and household growth is based on the ONS population projections which project past trends. These projections need to be treated with caution because Warwick District experienced unusually high levels of growth between 1999 and 2006 and it cannot be assumed that these levels will continue. Certainly, since the recent contraction of the housing market, starting with the Credit Crunch in 2007, demand has decreased considerably. The projections do, however, give an indication of the likely change in the nature of housing demand.

3.39 A comparison of the different projections of future households are given below. These figures have informed the identification by the Council of the higher growth scenario for the first new Local Plan consultation.

TABLE 9 COMPARISON OF HOUSEHOLD PROJECTIONS

	Period	Annual Average Increase
CLG 2008-based Household Projections	2008 - 2033	840
CQW Consulting/CE Study 2010	2006 - 2031	800

4. EVIDENCE OF SUPPLY OF LAND FOR HOUSING

4.1 The supply of suitable land for housing in Warwick District is constrained by

- The need to preserve the character of its historic towns
- The need to prevent the district's towns from merging with one another and with neighbouring settlements
- Important areas of open space on the edge of towns, in particular historic parks and gardens whose settings it is important to protect, but also allotments and areas of importance for nature conservation
- Areas liable to flood

4.2 In recognition of some of these constraints, and the proximity of the West Midlands conurbation, the majority of the district falls within the West Midlands Green Belt.

4.3 In the case of Warwick District, the main purpose of the Green Belt is to prevent the urban areas of Warwick, Leamington and Kenilworth from merging with the West Midlands conurbation to the north, including Coventry, and to prevent Kenilworth from merging with Warwick and Leamington. The preservation of the settings of the historic towns of Warwick, Leamington and Kenilworth are also important, particularly the historically significant settings of both Warwick and Kenilworth castles which are situated on the edge of the towns.

Strategic Housing Land Availability Assessment

4.4 In March 2009, the Council published its first Strategic Housing Land Availability Study (SHLAA) and this was updated in June 2009. A further review is currently underway. The SHLAA examines the potential suitability for housing development of a number of sites on the edge of towns and villages in the district. The sites have mostly been put forward by landowners and developers. The SHLAA only considered sites in sustainable locations, with good access to jobs, key services and infrastructure in accordance with Government policy in PPS3[6]. Sites in or adjacent to small rural settlements were only considered in relation to their ability to meet

[6] PPS3 Paragraphs 36 and 37

local needs rather than the overall future needs of the district. No sites were submitted, for consideration in the SHLAA, for a new settlement in the rural area.

4.5 The SHLAA is informed by a number of other studies, or consultations with other public bodies, which provide information on:

- the value of the Green Belt;
- areas at risk of flood;
- the ability of the water cycle to meet demand in different parts of the district;
- areas of importance for biodiversity;
- vehicular access and highway safety;
- the ability of the utility companies to supply services;
- ground, air and noise pollution; and
- agricultural land quality.

4.6 The SHLAA identified a potential capacity for 8,920 new homes on identified sites, within and on the edge of the urban areas (including Coventry urban area), between 2011 and 2026. In addition to this, it estimated that a further 2,100 new homes could be built on as yet unidentified urban brownfield sites which come forward within the same period. This equates to a total of 11,020 new homes between 2011 and 2026, which equates to an average of approximately 750 new homes per annum.

4.7 The SHLAA capacity of 8,920 should be treated with caution as it requires changes to be made to planning policy through the Local Plan process. Further, sites have only been assessed at a high level and on an individual basis and there may be issues about developing certain combinations of sites in terms of:

- providing the infrastructure, for example demand for school places or meeting transport requirements, or
- the balance of development between different towns.

TABLE 10 SHLAA HOUSING TRAJECTORY 2011-2026

Time Period	No. of Homes			
	Emerging RSS Requirement	SHLAA Capacity	Windfalls	Total Supply
2011-2016	2,700	4,530	275	4,805
2016-2021	2,700	3,415	550	3,965
2021-2026	2,700	975	1,275	2,250
2011-2026	**8,100**	**8,920**	**2,100**	**11,020**

Source: Warwick District Council SHLAA June 2009

4.8 The SHLAA is currently being reviewed and this will include a reappraisal of the time periods within which development could take place. For example, in the case of some sites where there would be a long lead-in time, development may now no longer be possible within the time frames given.

Infrastructure

4.9 The ability to meet the infrastructure needs of different levels of housing growth is unknown at this stage. This is mainly because it is not possible to assess infrastructure needs until the location of sites to meet the growth is known. This particularly relates to transport and education. However, it is clear that there is a higher risk of being unable to deliver the infrastructure in relation to higher levels of growth. On the other hand, however, with higher levels of growth there is likely to be a greater level of resources available to mitigate the impacts of increased pressure on the existing infrastructure.

5. THE OPTIONS FOR GROWTH

Higher Growth Option

5.1 There is evidence that if existing trends in household growth and economic forecasts are to continue, there will be a need to provide an annual average of around 800 new dwellings a year up until 2026. This level of new development broadly equates to the potential supply of land identified within the SHLAA. The Council are of the opinion that this should be the higher growth option largely because:

- an even higher level of growth would be well in excess of any average growth levels achieved in the recent past, even in times of economic growth with a strong housing market and high levels of windfall development, and is therefore considered to be neither achievable nor deliverable

- the implications of an even higher level of growth would be the development of land considered to be unsuitable for housing
- an even higher level of growth would probably lead to the loss of an unacceptable amount of Green Belt land and areas of importance for biodiversity, and impact upon the character and setting of the district's historic towns
- there is a potential risk that the infrastructure required to meet an even higher level of growth could not be provided within the time scale
- a higher level of growth could lead to the development of more housing than required to meet housing need and demand and the needs of the economy

5.2 It is important to put forward for consideration other alternative options. A greater level of growth is not considered to be realistic for the above reasons, so other options would include less new development with greater weight afforded to the protection of open land and the character of the historic towns.

Lower Growth Option

5.3 The Council considers that the most realistic minimum level of housing growth would be to continue with current levels of development. This includes the development of outstanding allocated sites, such as at Chase Meadow and South Sydenham, and additional brownfield windfall sites as and when they arise. This option equates to an average of about 250 new homes a year.

5.3 The Council does not consider that a "no growth" option is realistic because:

- a number of sites already have planning permission and will be built
- there would be no opportunities to meet either the outstanding need for affordable housing, the additional demand arising from the trend for smaller households, or the changing needs of an ageing population
- there would be limited opportunities for the regeneration of sites which become unused or redundant
- no housing growth would have an adverse impact upon the growth of the local economy as the national economic situation improves
- no growth would be contrary to Government policy in PPS3

Mid Growth Option

5.4 The mid growth level is taken as broadly the midpoint between the higher and the lower growth level. This is around 500 new dwellings per annum.

Growth Scenarios for Consultation

5.5 In conclusion, three growth scenarios are considered to be appropriate for consultation and these are set out in the following table. They include the three housing growth levels, as discussed above, and the corresponding employment land requirements which would be appropriate for each level of housing. The employment land requirements were assessed within the Employment Land Review Addendum.

TABLE 11 Growth Scenarios for Consultation

	Housing (dwellings per annum)	Employment Land (hectares per annum)
Scenario 1	250	4.0
Scenario 2	500	4.5
Scenario 3	800	5.0

5.6 A general guide to the amount of additional greenfield land that would be required for housing development for each scenario is given below. Scenario 1 would not require any significant areas of ***additional*** greenfield land as the housing could be built on land which is already committed or on brownfield sites. In the case of Scenarios 2 and 3, any housing over and above the level of Scenario 1 (3,750 dwellings over the plan period) would need to be built on new greenfield sites. Assuming a density of about 30 dwellings per hectare, approximately 125 hectares would be required for Scenario 2 and 275 hectares for Scenario 3.

TABLE 12 Guide to Greenfield Land Requirement for Housing

	Total Dwellings 2011-2026	Requirement for Additional Greenfield Land	
		Dwellings*	Hectares**
Scenario 1	3,750	0	0
Scenario 2	7,500	3,750	125
Scenario 3	12,000	8,250	275

*This equals the total number of dwellings less 3,750 dwellings for which land is already committed or which could be built on brownfield land
** At 30 dwellings per hectare

5.7 The above guide does not take into account additional land requirements for community facilities, services and public open space to serve any new housing developments.

APPENDIX 4b: THE SQW / CE HOUSING AND THE ECONOMY MODEL – STEP BY STEP GUIDE

STEP ONE: WORK PLACE JOBS BY SECTOR

CE's economic projections for each scenario produce a profile of workplace-based jobs for each year between 2006 and 2026 by industry sector for each local authority, HMA and the region as a whole.

↓

STEP TWO: WORKPLACE JOBS BY OCCUPATION

Workplace-jobs by local authority by Standard Industrial Classification are converted to workplace employment by local authority by Standard Occupational Classification using regional SIC: SOC matrices, which vary over time. These data come from the Working Futures projections[13]

↓

STEP THREE: RESIDENT JOBS BY OCCUPATION

Workplace jobs by occupation are then converted to people employed in the workplace by occupation, scaling back to data from the Census 2001 and revised data from the Annual Population Survey, 2006 (to account for people with more than one job). Residence-based estimates of people in employment are derived, initially assuming commuting patterns remain as at the time of the 2001 Census, with different commuting patterns for each occupational type to reflect that people in elementary occupations tend to travel less far to work than professional occupations. The estimates are developed using the commuting patterns identified from data in the 2001 Census and results for subsequent years from the Annual Population Survey, 2006. This calibration adjusts the results for differences in commuting patterns from those in 2001, although analysis of data on employed people by workplace and residence in 2006 from the Annual Population Survey did not indicate any systemic or sustained variation from the commuting patterns shown in the 2001 Census.

↓

STEP FOUR: TRANSLATION FROM OCCUPATIONS TO RESIDENTIALTENURE DEMAND

In moving from occupations by residence to demand for housing, occupations are translated to socio-economic class. Estimates are also made for non-working elements of the population (e.g. children, elderly, unemployed, economically inactive) using the Labour Force survey, 2006 as the base data. In the Baseline scenario, these non-working components of the population are consistent with CE's forecasts of population by district, and regional unemployment. These forecasts are from the migration element of CE's Employment Prospect projections[14]. With the Convergence scenario, the majority of additional jobs are assumed to be taken by existing residents with a small element of in-migration leading to increased population projections. The reverse is true for Public Sector Austerity in that some residents are assumed to leave the area to find work elsewhere and therefore there is a projected overall reduction in population.

The Census 2001 provided information on the number of people that lived in properties of different tenure. This profile is applied to the projections of population by social class to provide estimates of the number of people living in each type of property. Demand for dwellings by tenure is calculated by applying projections of average household size. Estimates of average household size by tenure are calculated from data on the number of dwellings by tenure in the base year (HSSA, 2006). The average household size by tenure is projected to change in line with the trends in the CLG 2006-based projections of households.

↓

STEP FIVE: TRANSLATION FROM TENURE TO DWELLING TYPE & NUMBER

The relationship between the number of dwellings by tenure and type of property by district is available from Census 2001 (there is no more recent data that updates this profile consistently for all districts in the region). This is used to project housing demand by type from housing demand by tenure.

↓

STEP SIX: OVERALL HOUSING DEMAND

Step 6 results in the projected numbers of properties required by local authority, HMA and at the level of the region and by scenario in 2026 which can then be compared with the number proposed by the RSS Panel Report to identify any projected mismatches.

Source: CE/SQW Consulting