

Carmarthenshire

Population & Household Forecasts

Addendum

September 2019



For the attention of:

Carmarthenshire County Council



Nexus | Discovery Way | University of Leeds | Leeds | LS2 3AA
0113 819 5087 | www.edgeanalytics.co.uk

Acknowledgements

Demographic statistics used in this report have been derived from data from the Office for National Statistics licensed under the Open Government Licence v.3.0.

The authors of this report do not accept liability for any costs or consequential loss involved following the use of the data and analysis referred to here; this is entirely the responsibility of the users of the information presented in this report.

Contents

Acknowledgements.....	i
Contents.....	ii
1 Introduction.....	1
2 Carmarthenshire Profile	2
3 Demographic Scenarios	7
4 Employment Growth Estimates.....	10
5 Summary.....	12
Appendix A Carmarthenshire Outside Brecon Beacons NP	14
Appendix B Economic Assumptions	15

1 Introduction

Context & Requirements

- 1.1 In 2018, Carmarthenshire County Council commissioned Edge Analytics to provide a range of demographic and economic scenarios to inform its emerging Local Development Plan (LDP)¹. The LDP has a plan period of 2018-2033 and is due for adoption in 2021.
- 1.2 Based upon the range of demographic and economic evidence presented in the report, the Council's Preferred Strategy set out a housing requirement figure of 9,887 dwellings (2018-2033), aligning directly to the **PG Long Term** scenario presented in the Edge Analytics analysis.
- 1.3 The Council now wishes to review its housing requirement in the light of a range of new evidence, including Carmarthenshire's 2018 mid-year population estimate and the draft National Development Framework² (NDF).
- 1.4 The draft NDF identifies Llanelli in Carmarthenshire as part of the primary growth area for the Mid and West Wales region (which comprises Carmarthenshire, Ceredigion, Neath Port Talbot, Pembrokeshire, Powys, Swansea and the Brecon Beacons and Pembrokeshire Coast National Parks). Carmarthen is also identified as a regional centre, which is to be supported by a 'managed growth' approach to enhance its regional role. The Welsh Government has estimated that 23,400 additional homes are required in the Mid and West Wales region by 2038. Apportioning this regional housing requirement based upon population distribution, would allocate approximately 5,000 of these 23,400 additional homes to Carmarthenshire.

Approach

- 1.5 Edge Analytics has re-configured its POPGROUP model for Carmarthenshire County to develop a range of scenarios taking account of the latest demographic evidence, alternative trends and growth aspirations of the Council. The outcomes and analysis of these re-configured scenarios are presented in this *addendum* report.
- 1.6 Analysis of the re-configured POPGROUP scenarios is preceded by an updated demographic profile of Carmarthenshire County. This incorporates the latest components of population change (births, deaths and migration), historical patterns of international and internal migration, in addition to housing completion statistics and an updated analysis of the county's age profile.

¹ Carmarthenshire Population and Household Forecasts – Edge Analytics Ltd (October 2018)

² <https://gov.wales/draft-national-development-framework>

2 Carmarthenshire Profile

Population Change

2.1 Carmarthenshire’s population rose by 1,116 to an estimated 187,568 between mid-year 2017 and mid-year 2018 (Figure 1).

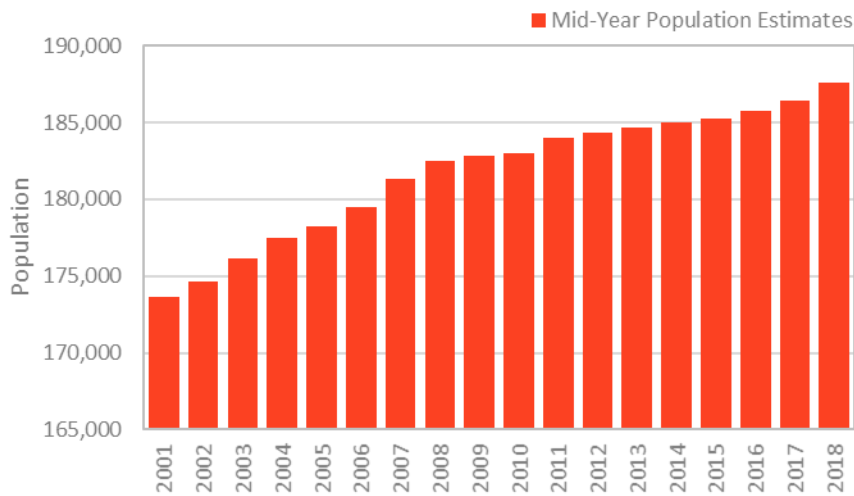


Figure 1: Carmarthenshire UA population 2001–2018

2.2 The rate of annual growth is at the highest annual rate (+0.6%) since 2007/8, a continuation of accelerated annual population growth since 2015 (Figure 2).

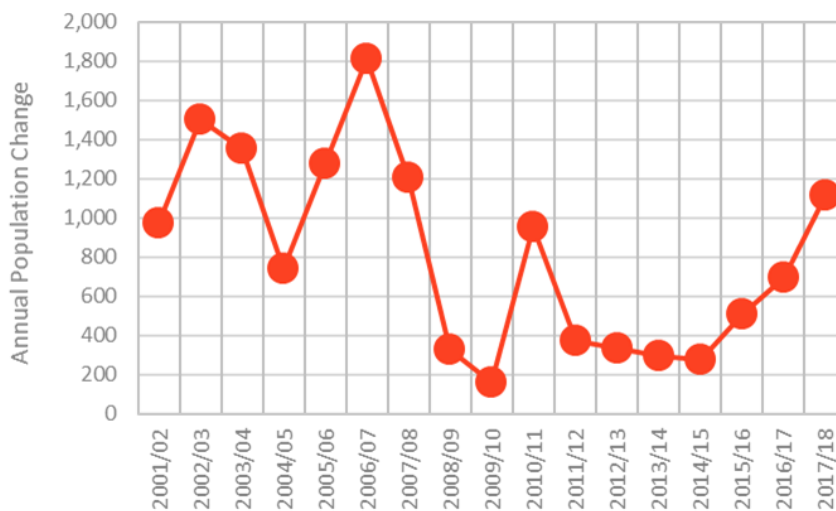


Figure 2: Annual Population Change

2.3 Although Carmarthenshire’s population growth rate of 8.0% since 2001 now exceeds the national rate, it continues to be lower than neighbouring Pembrokeshire (10.6%) and Swansea (10.3%). However, it retains a higher growth rate than Neath Port Talbot (6.3%), Powys (4.8%), and Ceredigion (-3.2%) (Figure 3).

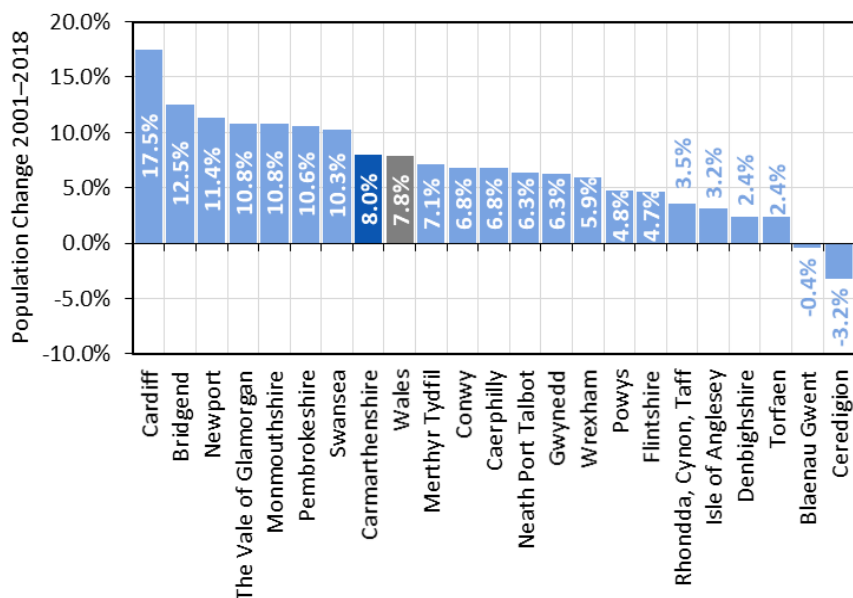


Figure 3: Population Change in Wales 2001-2018

2.4 Net internal migration continues to be the dominant driver of population change, with a sharp increase in the level of net inflow, reaching approximately +1600 in 2017/18 and showing a significant increase of over 700 compared to the previous year (Figure 4).

2.5 As in all previous years since 2001, natural change has continued to have a negative impact on population growth. The 2017/18 period recorded the highest number of deaths (2,453) since 2001.

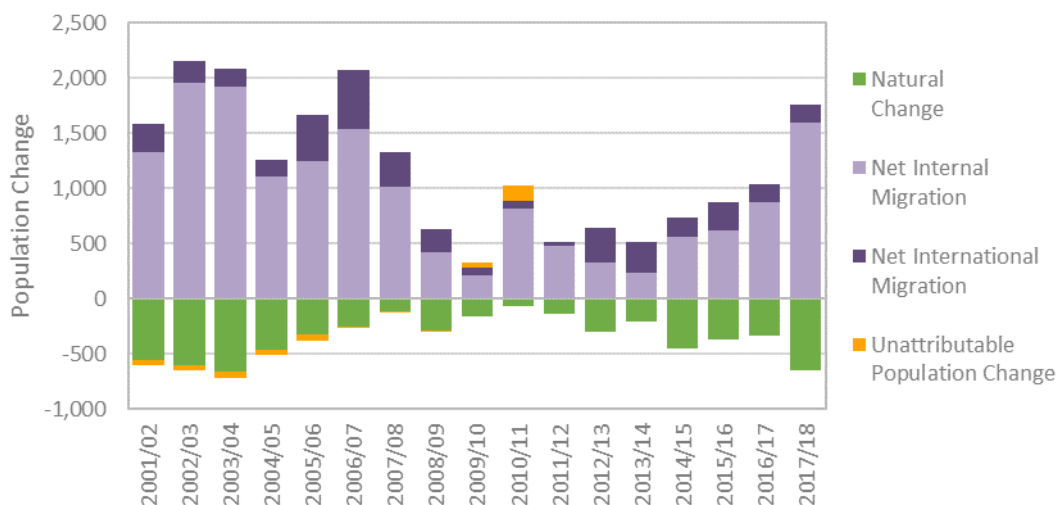


Figure 4 Carmarthenshire UA components of change 2001/2-2017/18

Internal Migration

2.6 Net internal migration has had a positive impact on population change since 2001. The 2017/18 period had the highest net internal migration since 2003/04, as a result of the continued steady rise in inflows but also a greater retention of the current population, reducing outflows (Figure 5).

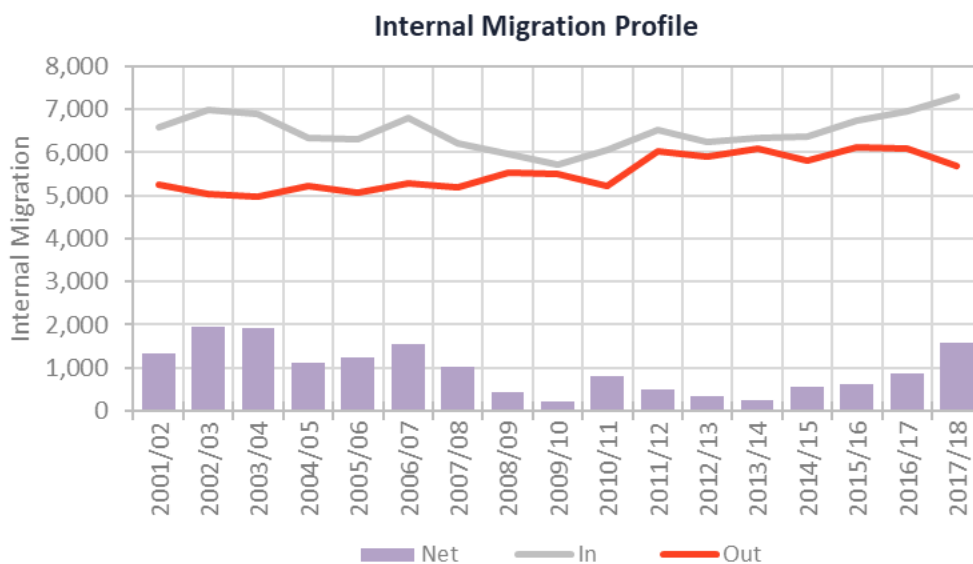


Figure 5: Carmarthenshire UA internal migration flows

2.7 The most recent data on age profiles of domestic migrants presents a continuing trend of predominantly student populations migrating out of Carmarthenshire, with little evidence of return in the 20-29 young adult age groups (Figure 6). The net inflow of migrants is highest in the 30-65 age range and corresponds with an average higher net inflow of 0-14-year olds. This is likely due to family age migration.

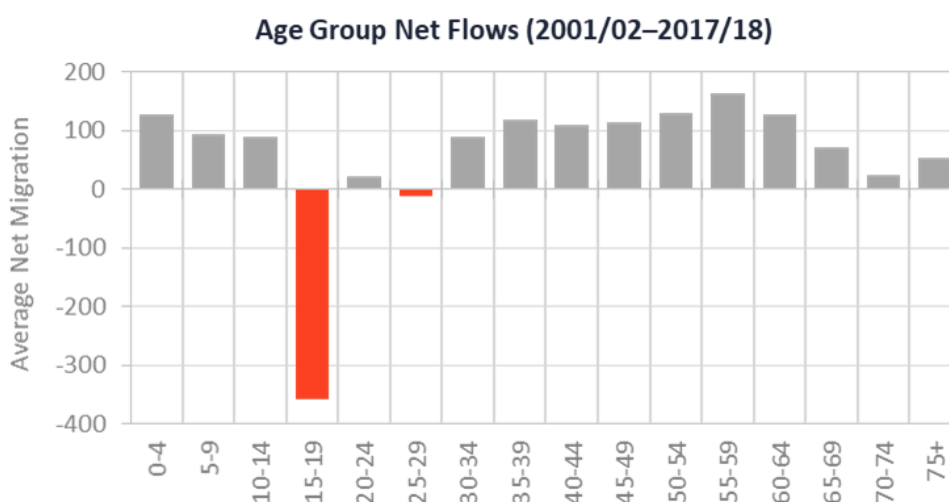


Figure 6: Average annual net migration flow by age group 2001/02–2017/18

2.8 The dominant exchanges of migration to and from Carmarthenshire remain similar to previous years, with Swansea and Ceredigion being the highest average annual exporters of population to Carmarthenshire since 2001/02. Cardiff is overwhelmingly the largest importer of population from Carmarthenshire, most likely driven by student population flows. Pembrokeshire has also been a popular migration destination both to and from Carmarthenshire, with an estimated average annual inflow of 425 and outflow of 424. However, the small difference means the net migration balance is not significant (Figure 7).

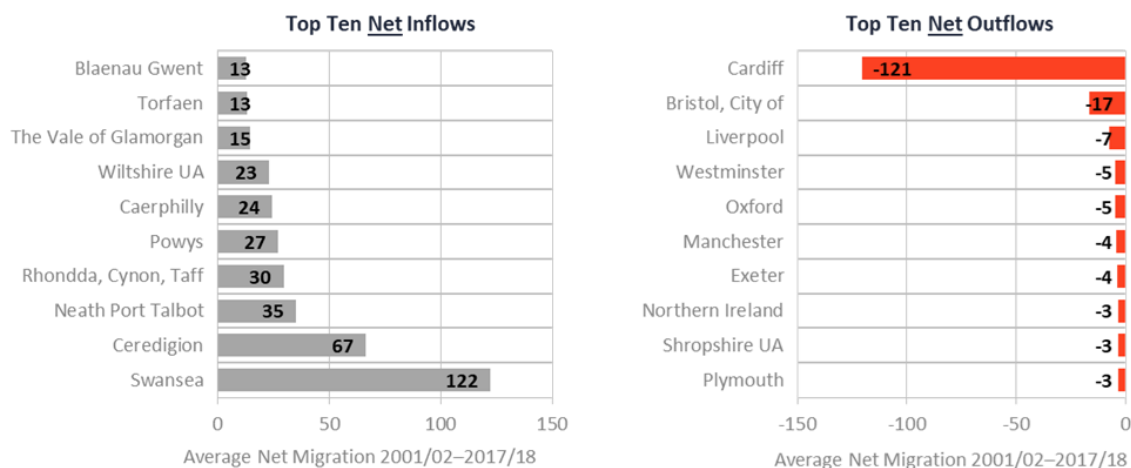


Figure 7: Carmarthenshire Average Top Ten Net Migration Inflow and Outflow Destinations 2001/02–2017/18

International Migration

2.9 The most recent NINo statistics illustrate a plateau in the recent trend of falling NINo registrations since 2015. However, the number of registrations in 2018 was the 3rd lowest since 2008 at 473, remaining consistent with the previous year (Figure 8).

2.10 Whilst Poland has still contributed 58% of all NINo registrations in Carmarthenshire between 2002-2018, Romania was the highest contributor in 2018 (157 registrations).

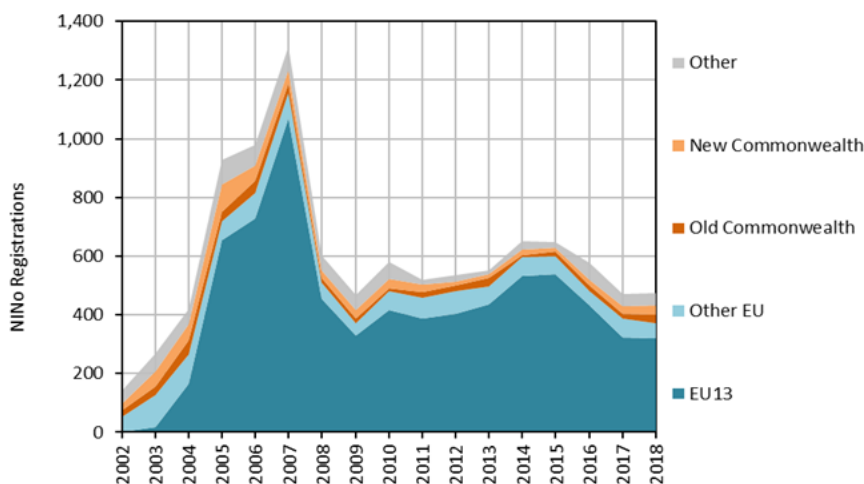


Figure 8: Carmarthenshire UA NINo registrations by country of origin 2002–2018

Age Profile

2.11 The 65+ and 80+ age groups continue to experience the highest annual population growth, having growth rates of 30% and 28% respectively since 2001. In 2017/18, the population aged 16-64 age increased marginally, for the first time since 2006/07 (Figure 9).

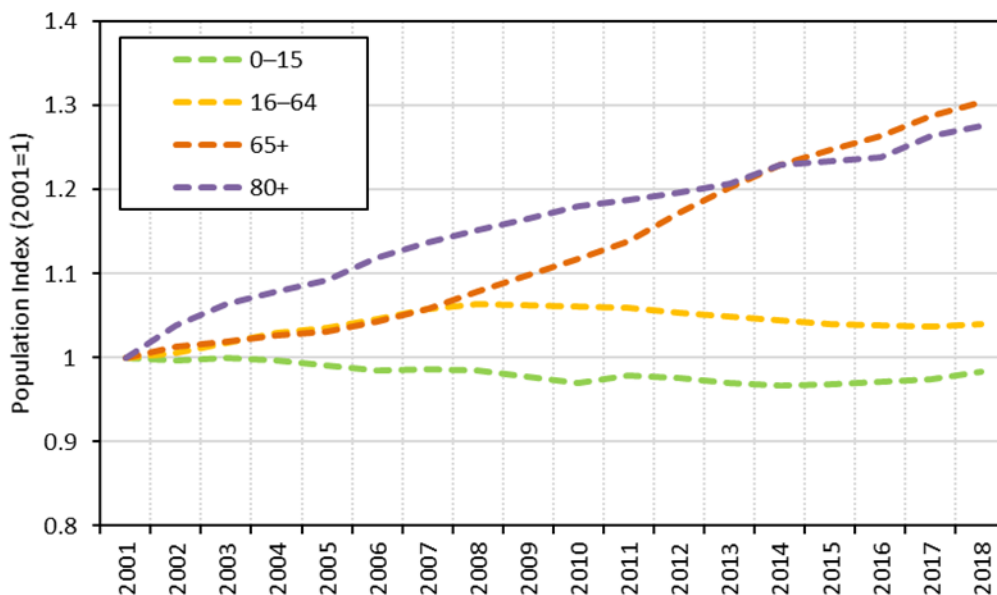


Figure 9: Carmarthenshire population growth index by age group (2001-2018)

Housing Completions

2.12 A comparison of housing completions and population growth reveals a disparity between the two since 2016. Completion rates have fallen since 2016, whilst population growth has accelerated over the same period (Figure 10).

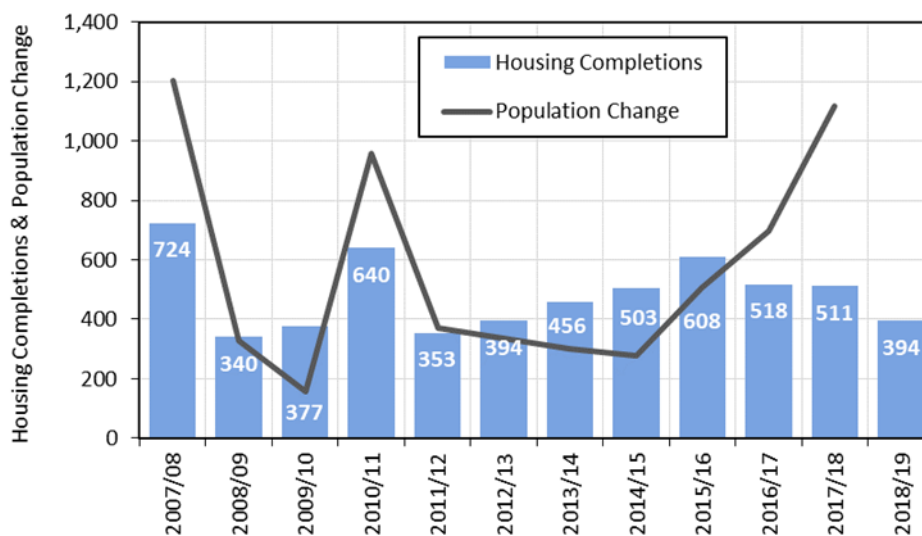


Figure 10: Carmarthenshire housing completions and population change 2007/08 - 2018/19

3 Demographic Scenarios

Scenario Definition

- 3.1 There is no single definitive view on the likely level of growth expected in Carmarthenshire. Ultimately, a mix of demographic, economic and local policy issues will determine the speed and scale of change.
- 3.2 These new scenarios have been re-configured to provide further evidence to support Carmarthenshire's Deposit LDP – especially its planned dwelling growth over the plan period (2018-33). They are presented in the context of the draft NDF and the latest demographic statistics for the county.
- 3.3 In addition to the WG 2014-based scenario, three alternative demographic scenarios have been configured, which consider alternative migration histories from which to derive trend assumptions. The full suite of scenarios is as follows:
- **WG 2014-based:** this replicates the WG 2014-based population projections
 - **PG Short Term:** Internal migration rates and international migration flow assumptions are based on the four-year historical period (2014/15-2017/18) which corresponds with the four-year period of recovery in housing growth.
 - **PG Long Term:** Internal migration rates and international migration flow assumptions are based on the full seventeen-year historical period (2001/02-2017/18).
 - **PG 10yr:** Internal migration rates and international migration flow assumptions are based on a ten-year historical period, ignoring the anomalous years around the immediate aftermath of the financial crash.

Household and dwelling growth under the demographic scenarios has continued to be estimated using assumptions from the WG 2014-based household projection model, with the 2017-based household projections not yet published. Each scenario has been configured using the 2011 Census vacancy rate of 6.3% together with an alternative vacancy rate of 3.4%. The lower vacancy rate results in higher occupancy and subsequently a lower dwelling requirement relative to population growth.

Scenario Outcomes

- 3.4 The 2001-2033 growth trajectories for all re-configured trend-based scenarios in addition to the WG 2014-based scenario are presented in Figure 11. In Table 1, each scenario is summarised in terms of population and household growth for the 2018-2033 plan period, alongside the average annual net migration and dwelling growth outcomes (under the Census and alternative vacancy rates).
- 3.5 The population growth outcomes range from 1.7% under the **WG 2014-based** scenario to 9.6% under the **PG Long Term** scenario. Population change is significantly higher under each of the trend-based demographic scenarios, compared to that estimated under the **WG 2014-based** scenario, driven in each case by higher net migration assumptions and a subsequently smaller net loss due to natural change.
- 3.6 The **PG Short Term** scenario projects the lowest population change over the plan period, consistent with the scenarios in the previous report³. Under this scenario, estimated population growth is 7.6% over the plan period, compared to 5.7% previously. This is due to the sharp rise in net internal migration in 2017/18 that is now captured in this scenario, and the focus on the four years of housing growth recovery. The estimated population growth would support a total dwelling growth of 9,147 over the plan period or 8,871 using the alternative vacancy rate. This would require an average annual dwellings growth of +610/+591 dwellings per annum (dpa).
- 3.7 The **PG 10yr** scenario results in higher population compared to the **PG Short Term** scenario. This is because it captures migration estimates in years immediately preceding the recession and the more recent recovery period. This results in average annual dwellings growth of +615 dpa and +596 dpa with the alternative vacancy rate.
- 3.8 Of the three trend-based scenarios, the **PG Long Term** scenario returns the highest population, household and dwelling growth by a significant margin. This is due to the recent trend of relatively high net internal migration, in conjunction with the higher migration totals pre-recession, which are all encompassed in this scenario. Total dwelling growth in the plan period exceeds 10,000 under each vacancy rate, equivalent to 679 dpa assuming the lower vacancy rate.
- 3.9 A small proportion of Carmarthenshire's population sits within the Brecon Beacons National Park. Excluding this geography from the Carmarthenshire scenarios results in a marginally smaller population total and growth outcomes (Appendix A).

³ Carmarthenshire Population and Household Forecasts – Edge Analytics Ltd (October 2018)

Carmarthenshire Scenario Outcomes

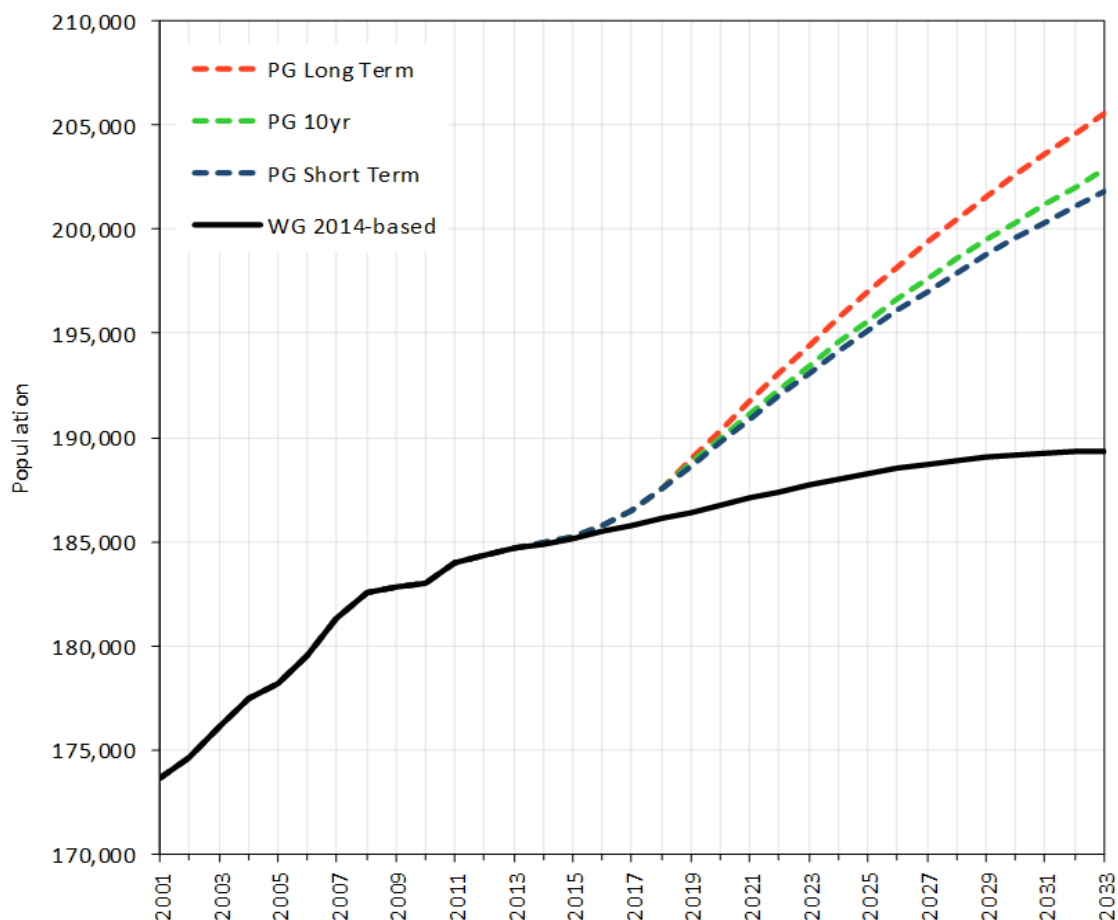


Figure 11: Carmarthenshire population growth 2001-2033

Scenario	Change 2018 - 2033				Average per year			Total Dwellings Growth (Census VR)	Total Dwellings Growth (Alt. VR)
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings (Census VR)	Dwellings (Alt. VR)		
PG Long Term	17,991	9.6%	9,842	12.1%	1,448	700	679	10,502	10,185
PG 10yr	15,284	8.1%	8,641	10.6%	1,266	615	596	9,221	8,942
PG Short Term	14,273	7.6%	8,573	10.5%	1,245	610	591	9,147	8,871
WG 2014-based	3,207	1.7%	3,254	4.0%	546	231	224	3,472	3,367

Table 1: Carmarthenshire Demographic Scenario Outcomes 2018-2033 (In order of population change)

4 Employment Growth Estimates

- 4.1 Each of the scenarios presented above has been configured to consider the potential growth in employment that is implied by each population growth outcome. To quantify the relationship between population and employment, three key assumptions must be determined: age-specific economic activity rates, an unemployment rate, and a commuting ratio (see Appendix B).
- 4.2 **Economic activity rates** quantify the proportion of the population (by age-group) that is actively engaged in the labour market, either employed or unemployed. This analysis uses the latest Office for Budget Responsibility (OBR) long-term forecasts of changing labour force participation levels by age group to estimate changes to Carmarthenshire's economic activity rate profile over its plan period. At the same time, an **unemployment rate** of 3.6% (Carmarthenshire's 2018 figure) is applied throughout the forecast period.
- 4.3 The **commuting ratio** specifies the balance between the number of resident workers and the level of employment. A ratio greater than 1.0 indicates a net out-commute (more workers than jobs), whilst a ratio less than 1.0 indicates a net in-commute (more jobs than workers). In this analysis, the commuting ratio has been fixed at Carmarthenshire's 2011 Census level (1.09) throughout the plan period.
- 4.4 The average annual employment growth outcomes range from -55 under the **WG 2014-based** scenario to +439 under the **PG Long Term** scenario (Figure 12). Table 2 illustrates the total employment change over the 2018-33 plan period. The **PG Long Term** scenario is estimated to support a total employment growth of 8.4% over the plan period, driven by the highest in-migration of people of working age.

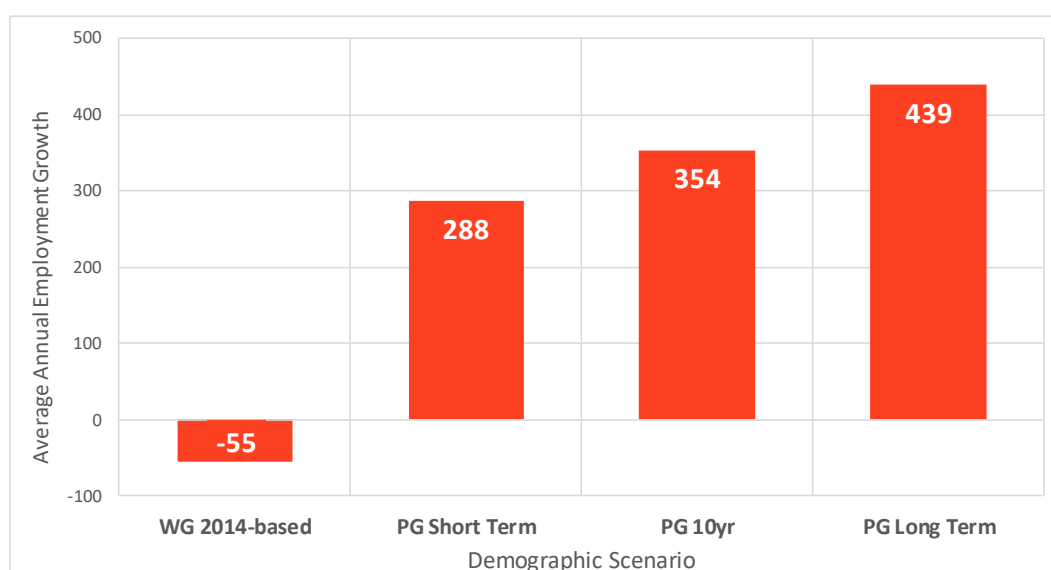


Figure 12: Average Annual Employment Growth for each Demographic Scenario

4.5 However, the **PG 10yr** and **PG Short Term** scenarios also estimate relatively buoyant employment growth over the plan period of 6.7% and 5.5% respectively (Table 2). A range of both demographic factors and economic assumptions drive these estimations of employment growth. Accelerating population growth projections and estimated migration trends are key factors that are also supported by Carmarthenshire's age profile (illustrated in Figure 9) – in which the most recent evidence recorded growth of the working age population for the first time since 2006/07.

Scenario	Change 2018 - 2033		Average Annual Growth
	Employment Change	% Employment Change	
PG Long Term	6,581	8.4%	439
PG 10yr	5,307	6.7%	354
PG Short Term	4,318	5.5%	288
WG 2014-based	-829	-1.1%	-55

Table 2: Employment Outcomes for each Demographic Scenario (In order of employment change)

5 Summary

- 5.1 Carmarthenshire County Council is reviewing its Deposit LDP to include an amended housing requirement figure for the 2018-2033 plan period. The existing preferred strategy has identified a housing requirement figure of 9,887 (average of +659 dpa.), consistent with a **PG Long Term** scenario⁴.
- 5.2 The Council has sought to review its housing requirement in the light of a range of new evidence, including Carmarthenshire's 2018 mid-year population estimate, plus the guidance and regional housing growth aspirations detailed in the draft National Development Framework⁵ (NDF).
- 5.3 A range of scenarios have been presented using POPGROUP technology to consider alternative growth outcomes. The **PG Short Term** and **PG 10yr** scenarios have been reconfigured, ignoring the years in the immediate aftermath of the financial crash (**PG 10yr**), and using a shorter migration history of four years to capture the recovery in housing growth post-2014 (**PG Short Term**).
- 5.4 Figure 13 summarises the total projected dwelling growth during the plan period under each scenario, for both the Census and alternative vacancy rates, together with the percentage population growth (circles).

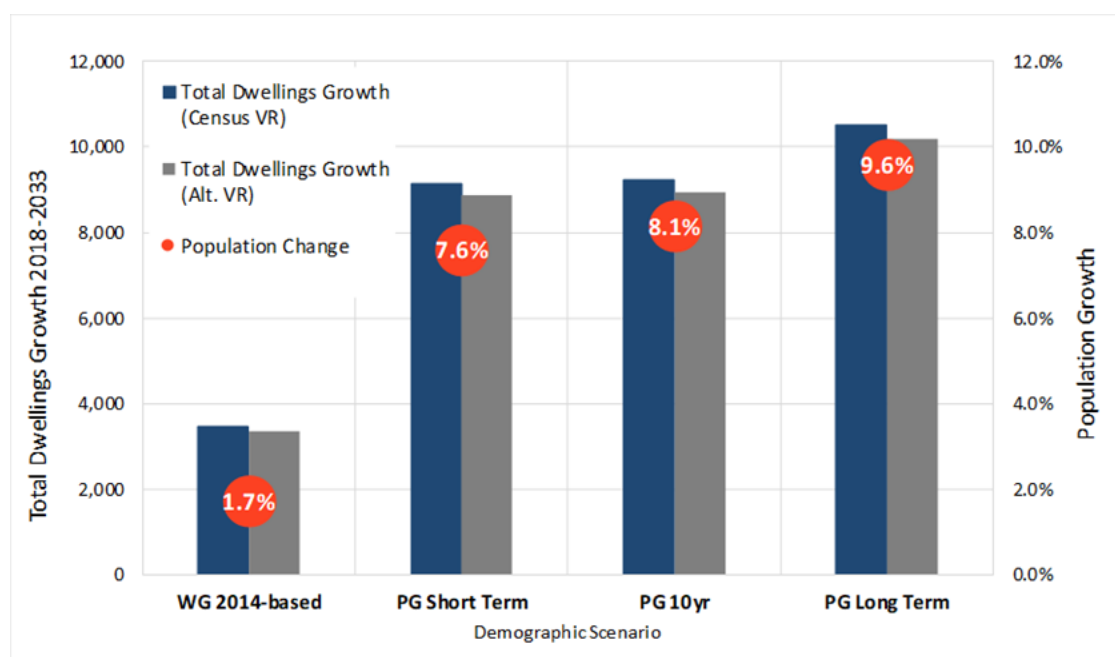


Figure 13: Average Annual Dwellings Growth and Population Growth for each Demographic Scenario

- 5.5 The **PG 10yr** and **PG Short Term** scenarios present very similar outcomes. Total dwelling growth exceeds 9,000 in both scenarios under the Census vacancy rate (9,221 and 9,147), falling below the 9,000 total under the alternative vacancy rate (8,942 and 8,871 respectively). The **PG Long Term**

⁴ Carmarthenshire Population and Household Forecasts – Edge Analytics Ltd (October 2018)

⁵ <https://gov.wales/draft-national-development-framework>

scenario estimates total dwelling growth of over 10,000 under each vacancy rate (692 and 671 dpa) and projects the highest population growth of 9.6% between 2018-2033.

- 5.6 Using a combination of economic activity rates, unemployment rate and commuting ratio assumptions, each scenario outcome has been converted to an estimated employment growth that could potentially be supported by its population change. Whilst the estimate for the **WG 2014-based** scenario is for employment decline, the three PG scenarios, with higher net-migration impacts, estimate an average employment growth of 288-439 pa.

Appendix A

Carmarthenshire Outside Brecon Beacons NP

Carmarthenshire Scenario Outcomes

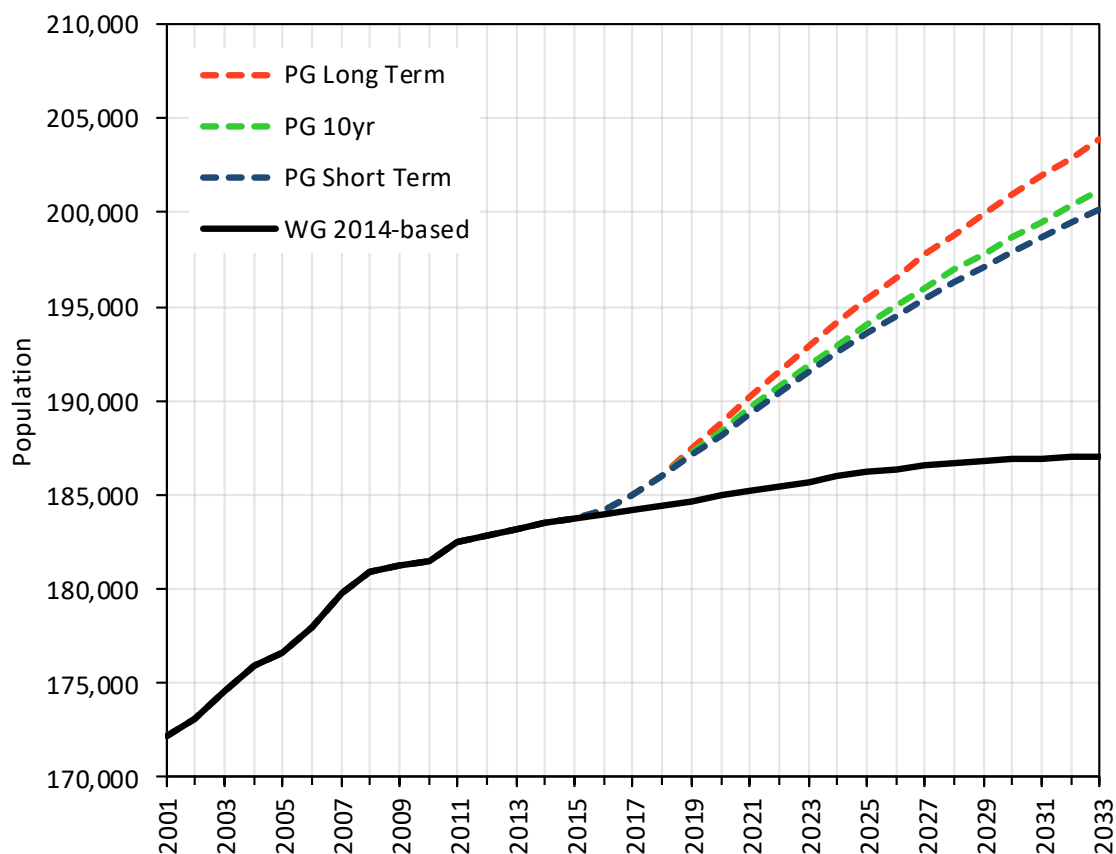


Figure 14: Carmarthenshire Population Growth 2001–2018 - Outside Brecon Beacons National Park

Scenario	Change 2018 - 2033				Average per year			Total Dwellings Growth (Census VR)	Total Dwellings Growth (Alt. VR)
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings (Census VR)	Dwellings (Alt. VR)		
PG Long Term	17,811	9.6%	9,726	12.0%	1,516	692	671	10,375	10,065
PG 10yr	15,115	8.1%	8,538	10.6%	1,337	607	589	9,108	8,835
PG Short Term	14,133	7.6%	8,474	10.5%	1,317	603	585	9,040	8,769
WG 2014-based	2,581	1.4%	2,878	3.6%	481	205	199	3,070	2,978

Table 3: Carmarthenshire Scenario Outcomes – Outside Brecon Beacons National Park

Appendix B

Economic Assumptions

Economic Activity Rates

- B.1 Economic activity rates (also referred to as labour force participation rates) are the proportion of the population that are actively involved in the labour force, either employed or unemployed and looking for work.
- B.2 As a part of the 2018 Fiscal sustainability report⁶, the Office for Budget Responsibility (OBR) published its latest long-term forecasts regarding changes to age and sex-specific economic activity rates. These are informed by age and sex-specific population projections and historical economic activity rates, whilst also accounting for the rising state pension age which increases economic activity rates among older age groups.
- B.3 The OBR national forecasts of economic activity have been used to estimate Carmarthenshire's economic activity rate profile to 2033. For males, the 35-54 age-groups show a marginal reduction in economic activity rates between 2018-33; whilst females have increasing economic activity rates across all age groups, reflecting present and future socio-economic changes.
- B.4 The most significant changes are observed in the 60+ age groups, in which all economic activity rates increase for both sexes over the plan period. There are some especially large changes for older aged females over the plan period, as economic activity rates for 75-89 year-old females is projected to increase from 4.8% in 2018 to 11.9% by 2033.

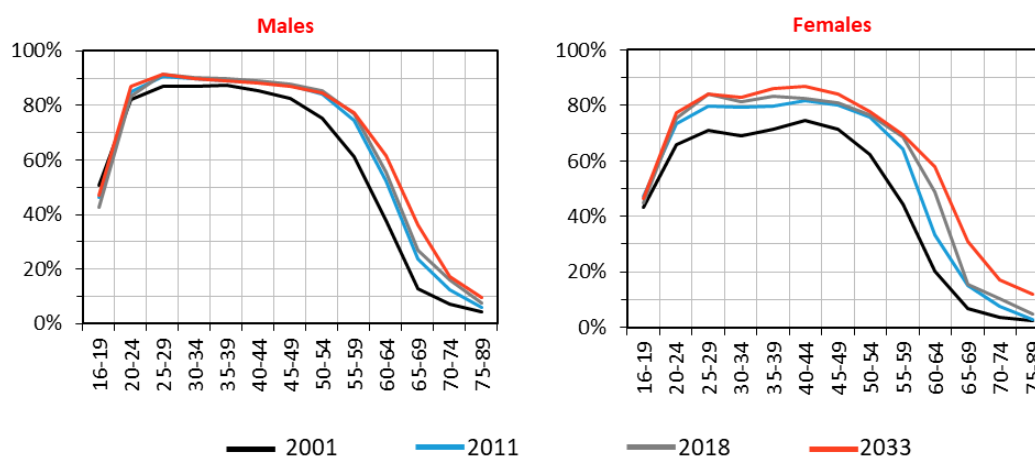


Figure 15: Carmarthenshire Economic Activity Rates: 2001, 2011, 2018 and 2033

Unemployment Rate

- B.5 Carmarthenshire's unemployment rate has fallen steadily since 2013, reaching a low-point of 3.6% in 2018 (Figure 16).

⁶ <https://obr.uk/fsr/fiscal-sustainability-report-july-2018/>

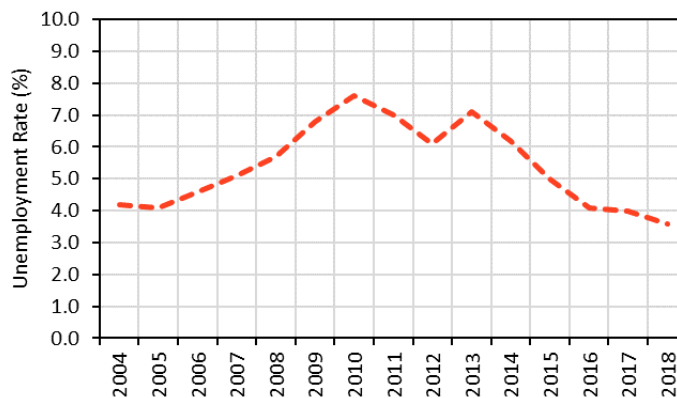


Figure 16: Carmarthenshire Unemployment Rate 2004-2018

- B.6 The unemployment rate is the proportion of unemployed people within the total economically active population. Its value is based on the ONS ‘model based’ estimates derived from the ONS Annual Population Survey⁷ (APS). The model-based approach improves on the raw APS output by also utilising data from the claimant count (a count of people claiming benefit for the principal reason of being unemployed). This increases the precision lost in the small and often unreliable sample size of the APS.
- B.7 Each scenario assumes a fixed 2018 unemployment rate value until the end of the plan period.

Commuting Ratio

- B.8 The commuting ratio indicates the balance between the number of resident workers and the level of employment (Figure 17).

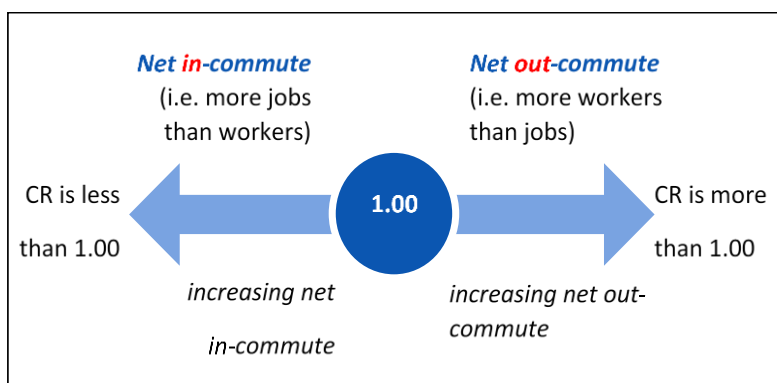


Figure 17: Commuting Ratio Summary

- 5.7 The 2011 Census recorded 81,402 workers in Carmarthenshire and an employment level of 74,569; resulting in a commuting ratio of 1.09 (i.e. more workers than employment in the area, resulting in a net out-commute from the UA).⁸
- 5.8 Each scenario assumes a fixed commuting ratio value of 1.09 until the end of the plan period.

⁷ https://www.nomisweb.co.uk/reports/lmp/la/1946157392/subreports/ea_time_series/report.aspx?

⁸ <https://www.nomisweb.co.uk/census/2011/wu02uk>