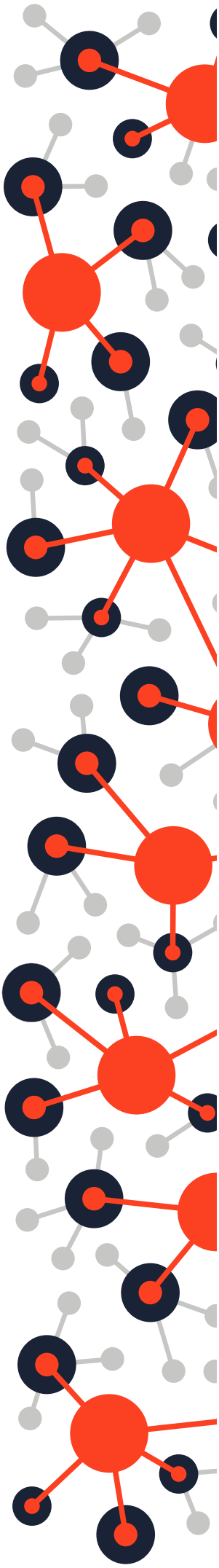
Yorkshire Dales National Park

Demographic Evidence

October 2019



edge analytics

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Acknowledgements

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1 Introduction

Context

1.1 The Yorkshire Dales National Park (YDNP) Authority, together with funding from Craven, Richmondshire and North Yorkshire County Councils, has commissioned the development of a 'Social, Economic and Housing Study of the National Park'. There are two core outputs of the study: (i) a Socioeconomic Wellbeing Assessment (SEA), undertaken by Edge Economics; (ii) a Strategic Housing Market Assessment (SHMA), undertaken by Arc4. The study will inform a new Local Plan for the National Park, coordinating and collaborating with its surrounding local planning authorities in the process.

1.2 A key focus of the study will be an examination of the social and economic challenges that are facing the National Park. The YDNP Authority has identified its concerns with regard to the National Park's ageing and declining population, the potential diminution of local services and the challenge of maintaining the economic vitality of its local communities.

1.3 The study will consider the socio-economic opportunities and threats that exist within and outside the YDNP boundaries, providing key evidence to support: its long-term, sustainable planning objectives; housing growth targets in line with the latest National Planning Policy Framework[1] (NPPF) and Planning Practice Guidance[2] (PPG); and its desire to attract and retain younger population cohorts within the National Park.

1.4 A robust examination of the demographic evidence is a key component of the study, informing both the SEA and the SHMA in considering both the historical profile of population change and the prospects for future growth. In November 2015, Edge Analytics provided a range of evidence to the YDNP Authority[3], informing and validating its Local Plan[4] housing growth objective for the 2015-2030 plan period. Since the Local Plan evidence was produced in 2015, the geographical extent of the YDNP has grown by approximately 24% (417km^2), with the addition of land within the districts of Lancaster, Eden and South Lakeland. Furthermore, a range of new statistical evidence has been published, including:

- Mid-year population estimates, plus birth and death statistics to mid-year 2017
- 2014-based and 2016-based sub-national population projections (SNPP) from the Office for National Statistics (ONS)

[1] https://www.gov.uk/government/publications/national-planning-policy-framework--2
[2] https://www.gov.uk/government/collections/revised-national-planning-policy-framework
[3] Yorkshire Dales National Park. Demographic Forecasts. November 2015
[4] Yorkshire Dales National Park Authority. Yorkshire Dales Local Plan 2015-2030. October 2015

- 2014-based and 2016-based sub-national household projections (SNHP) from the Ministry for Housing Communities and Local Government (MHCLG)
- Updated NPPF and PPG guidance (February 2019)
- Labour market analysis from the Office for Budget Responsibility (OBR)

1.5 This report draws together the latest evidence to produce an updated profile of demographic change in the YDNP, plus a suite of population, housing and labour force growth outcomes under different conditions and assumptions, that can provide the basis for further SEA and SHMA analysis.

Approach

1.6 The YDNP now intersects five districts: Craven, Eden, Lancaster, South Lakeland and Richmondshire. The new demographic evidence and forecasts have been compiled and presented for the YDNP geographical portions that reside in each of the five districts. The proportional split of each district has been accomplished using a combination of Output Area (OA) populations, plus Royal Mail Postcode Address File (PAF) property distributions.

1.7 POPGROUP technology (see Appendix A) has been used to develop a range of growth scenarios for the YDNP in aggregate and for the geographical portions that fall within each of the five districts. All scenarios are based on historical evidence for the period 2001–2017 and have a 2040 forecast horizon. Household growth assumptions have been drawn from MHCLG's 2014-based SNHP, scaled for consistency with the YDNP geography.

1.8 Section 2 of this report presents a profile of demographic change in the YDNP, considering the extended geographical area, its constituent parts and the components of change that have driven population change since 2001. The changing age-structure of the National Park, plus economic indicators of employment and commuting are presented as context for the scenario analysis.

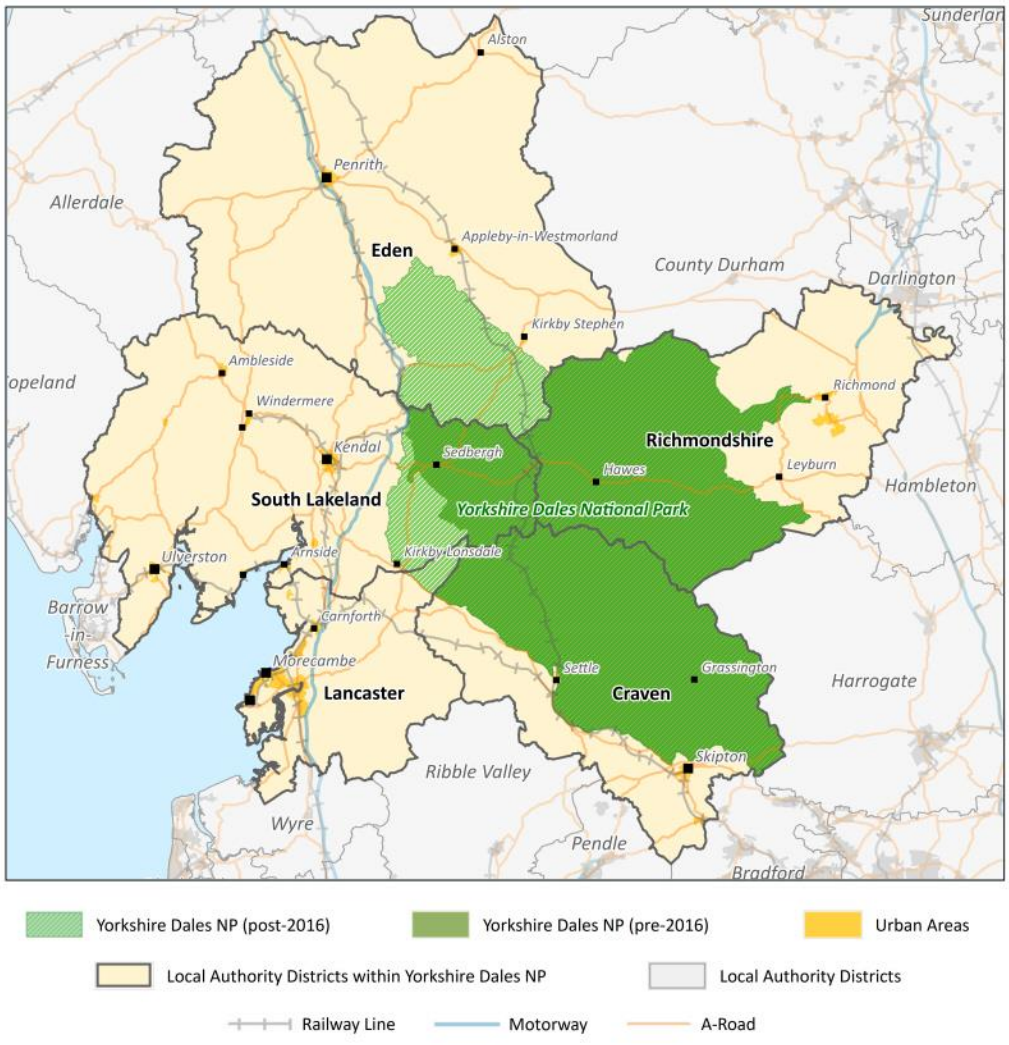
1.9 Section 3 provides a description of the suite of growth scenarios that have been formulated and presents population, household, dwelling and labour force outcomes for each, illustrating how the age profile of the YDNP is likely to change under each scenario.

1.10 A concluding section draws the evidence together, to summarise the findings and to present the key demographic evidence for consideration in the formulation of the SEA and SHMA analyses and their assessment of the socio-economic outlook for the YDNP.

2 Area Profile

Geography

2.1 On 1st August 2016, the YDNP was extended to include new areas in Cumbria and Lancashire, increasing its size by approximately 24%. Originally straddling the three local authority districts of Craven, Richmondshire and South Lakeland, additional land has been included within South Lakeland, plus territory in Eden and Lancaster (Figure 1). Major transport links surround the borders of the Park, with the M6 to the west, the A65 and A59 to its immediate south-west and south respectively and the A66 to the north.



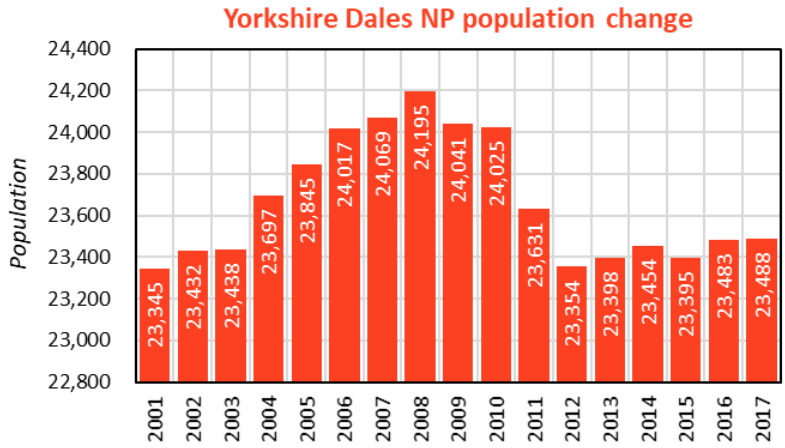
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Figure 1: YDNP – old and new boundary

Population Change 2001–2017

2.2 The population of the YDNP was estimated as 23,488 at mid-year 2017. This total has been derived using OA populations, apportioned to the YDNP geography based upon PAF property distributions.

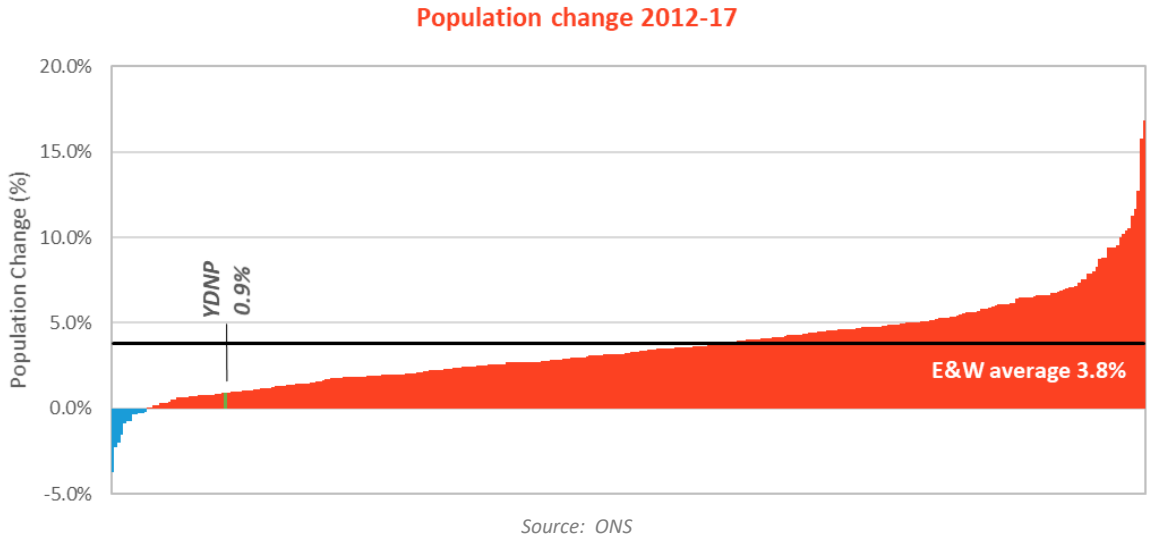
2.3 Since 2001, the YDNP population estimates suggest only limited growth, with a rise in population numbers to 2008, reducing as the recession set in thereafter. Since 2012, growth has been positive but below 1% over the six-year period (Figure 2).



Source: Edge Analytics, ONS

Figure 2: YDNP – population totals 2001–2017

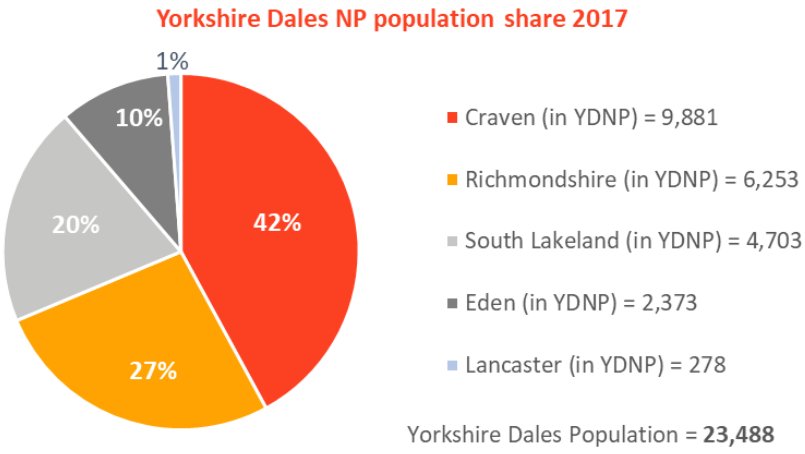
2.4 When compared to local authority districts in England & Wales, the modest population growth in the National Park places it towards the lower end of the spectrum, 2.9 percentage point below the national average (Figure 3).



Source: ONS

Figure 3: England & Wales Local Authority Districts – population growth 2012–2017

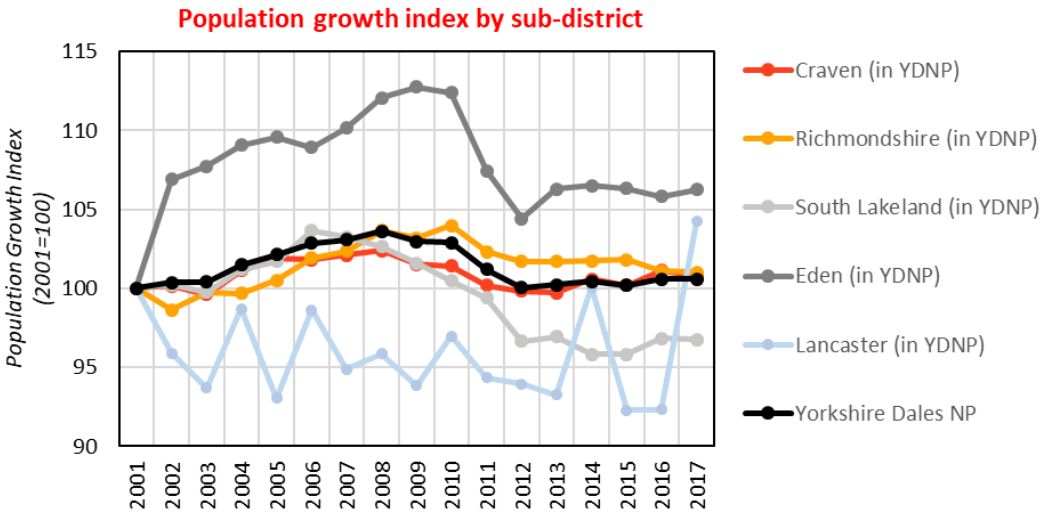
2.5 Within the YDNP, Craven district contributes the majority of the population (42%) with the smallest share living in Lancaster (1%). Richmondshire, South Lakeland and Eden account for 27%, 20% and 10% of population respectively (Figure 4).



Source: Edge Analytics, ONS

Figure 4: YDNP – share of population by district 2017

2.6 Examination of the component parts of the YDNP geography, indicates that the Craven and Richmondshire portions have generally followed the National Park trend in population change. Annual change in South Lakeland, Eden and Lancaster portions is more variable, with the small numbers associated with each of these areas being a contributory factor in this variation (Figure 5).

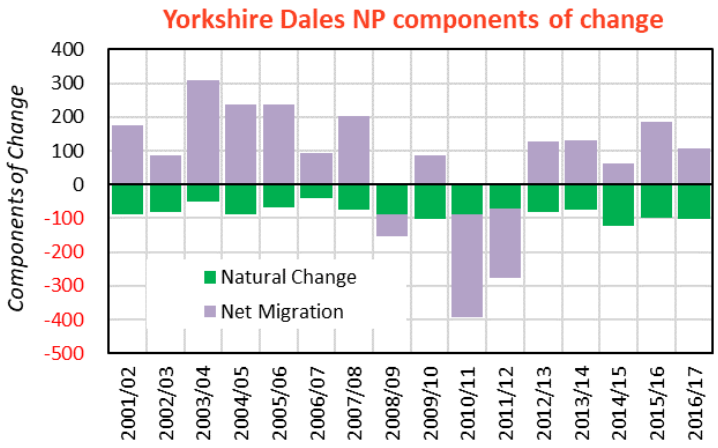


Source: Edge Analytics, ONS

Figure 5: YDNP – population growth index (2001=100)

2.7 The growth and decline of the YDNP population are reflected in the 'components-of-change' profile for the 2001–2017 period (Figure 6). Natural change is the annual balance between births and deaths; net migration is the balance of the inflow and outflow of population moving to and from the YDNP. With an ageing population, natural change has resulted in a consistent population decline since 2001,

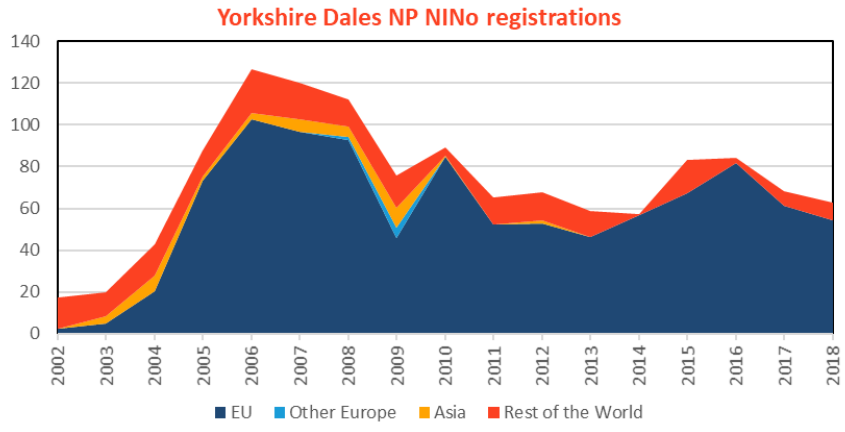
with the largest deficit post-2014. Net migration had its most significant impact pre-2008, with the net inflow recorded since 2012/13 countered by the relatively high natural change deficit.



Source: Edge Analytics, ONS

Figure 6: YDNP – components of change 2001/2–2016/17

2.8 International migration has had an impact upon demographic change within the National Park, supporting the local economy, particularly the hospitality industry. The Department for Works and Pensions (DWP) records National Insurance Number (NINo) registrations associated with foreign workers. The NINo statistics are not a direct measure of migration as they do not include a comparable measure of 'return' migration, however they do give an indication of the impact of foreign workers based on place of residence at the time of registration (Figure 7).



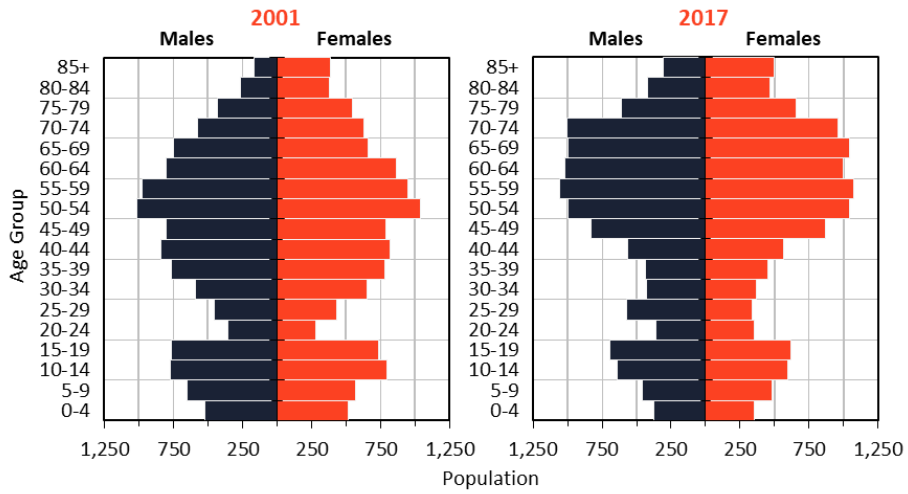
Source: DWP

Figure 7: YDNP – NINo registrations 2002–2018

2.9 There have been 1,200 NINo registrations in the YDNP since 2002, peaking in 2006-07 and averaging approximately 70 per year since 2009. The overwhelming majority of registrations have been from migrant workers from within the European Union (EU). Over 52% of NINo registrations have been associated with migrant workers resident in the Craven portion of the YDNP, 25% in the Park's portion of the Richmondshire district.

Population Age Profile

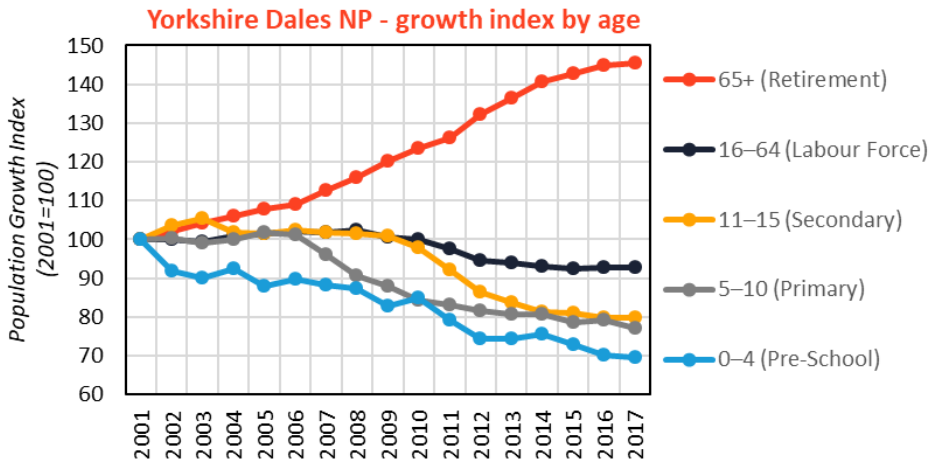
2.10 The low-growth profile of the YDNP is reflected in its changing age structure. In 2001, 21% of its population was aged 65+; by 2017, this had increased to 30%. The Park's age-pyramid is becoming increasingly 'top-heavy', with a striking imbalance between younger and older age-cohorts (Figure 8).



Source: Edge Analytics, ONS
Accompanying sub-district profiles are provided in Appendix B

Figure 8: YDNP – population age profile 2001–2017

2.11 An illustration of growth rates by age-group since 2001 emphasises the variations that exist in the younger and older cohorts (Figure 9). The size of the core labour-force population has reduced by 7% since 2001. In contrast the size of the 65+ age-group has increased year-on-year, achieving a 45% growth rate over the sixteen-year period.



Source: Edge Analytics, ONS

Figure 9: YDNP – population age profile 2001–2017

2.12 Pre-school, primary school and secondary school age-group populations have all declined since 2001 and particularly since 2010. At mid-year 2017, pre-school populations were at approximately 70% of their 2001 totals, with primary and secondary totals at 80%.

2.13 The latest statistics from the Department for Education (DfE) indicate that there are 23 mainstream primary schools in the YDNP, two mainstream secondaries, plus four independent schools (Table 1).

Table 1: YDNP Schools

School Name	District	Number on Roll		
		2014	2019	Change
Austwick CofE VA Primary School	Craven	53	58	5
Burnsall VA Primary School	Craven	34	24	-10
Clapham CofE VC Primary School*	Craven	37	28	-9
Cracoe and Rylstone VC CofE Primary School	Craven	46	39	-7
Embsay CofE VC Primary School	Craven	208	209	1
Grassington CofE VC Primary School	Craven	62	59	-3
Kettlewell Primary School	Craven	26	30	4
Kirkby in Malhamdale United VA Primary School	Craven	44	51	7
Long Preston Endowed VA Primary School	Craven	56	69	13
The Boyle and Petyt Primary School	Craven	59	86	27
Threshfield School	Craven	62	58	-4
Asby Endowed School	Eden	21	18	-3
Crosby Ravensworth CofE School	Eden	38	34	-4
Orton CofE School	Eden	68	72	4
Leck St Peter's CofE Primary School	Lancaster	39	40	1
Arkengarthdale CofE Primary School	Richmondshire	31	6	-25
Askrigg VC Primary School	Richmondshire	32	37	5
Bainbridge CofE Primary and Nursery School	Richmondshire	49	52	3
Gunnerside Methodist Primary School	Richmondshire	7	19	12
Hawes Primary School	Richmondshire	95	97	2
Reeth Community Primary School	Richmondshire	53	53	0
West Burton CofE Primary School	Richmondshire	39	21	-18
Dent CofE VA Primary School	South Lakeland	38	30	-8
Sedbergh Primary School	South Lakeland	170	160	-10
Mainstream Primary Total		**1,367**	**1,350**	**-17**
Upper Wharfedale School	Craven	296	296	0
Settlebeck School	South Lakeland	164	197	33
Mainstream Secondary Total		**460**	**493**	**33**
Wharfedale Montessori School	Craven	22	48	26
Casterton, Sedbergh Preparatory School	South Lakeland	164	198	34
Sedbergh School	South Lakeland	480	547	67
Underley Garden School	South Lakeland	31	55	24
Independent Total		**697**	**848**	**151**

** Clapham CofE VC Primary School is situated just outside the YDNP boundary.*

Source: DfE

2.14 In total, mainstream primary school numbers on roll (NOR) have fallen only slightly since 2014 but there have been significant reductions in numbers in some localities, notably West Burton and

Arkengarthdale. Secondary NOR has grown by a class size since 2014, whilst the independent school total has increased by +151.

Housing Growth

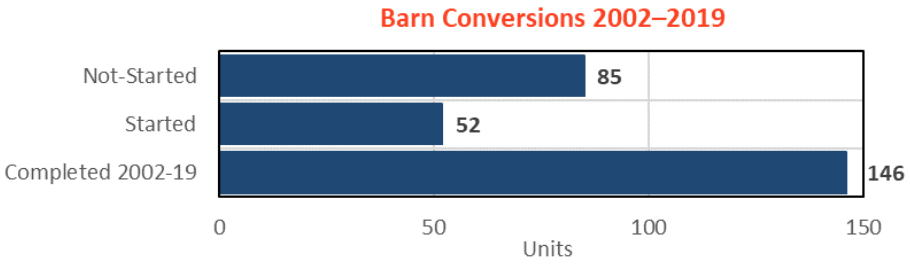
2.15 With the recent extension of the YDNP geography, a definitive set of statistics on historical housing completions within all five sub-district areas is not yet available. However, data for the Craven, South Lakeland and Richmondshire components of the National Park suggest a ten-year average of just less than 30 completions per year (Table 2).

Table 2: YDNP – housing completions

Sub-District	Completions	
	Last 5 Years	Last 10 Years
Craven	84	139
South Lakeland	19	50
Richmondshire	31	97
Total	**134**	**286**

Source: YDNP Planning Authority

2.16 In addition, evidence on barn conversion activity, reveals that a total of 146 housing units have been added to the housing stock since 2002 (Figure 10), which would increase the average completion rate over the last ten years to approximately 38 per year. A further 52 barn units are under-construction, with another 85 in the pipeline.



Source: YDNP Planning Authority

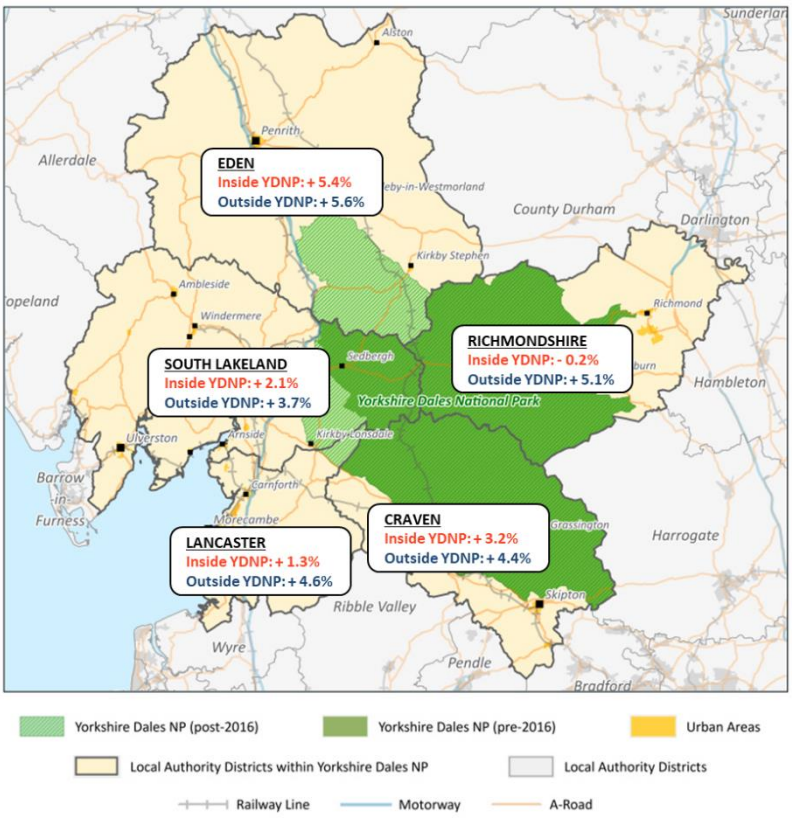
Figure 10: YDNP – barn conversions 2002–2019

2.17 These average housing growth statistics hide the large variation between pre-2009 and post-2009 completions. The previous demographic analysis completed for the YDNP Authority[5] indicated that there in excess of 85 new homes built within the YDNP in each of 2006/07, 2007/08 and 2008/09, contrasting to sub-40 units per year thereafter.

2.18 An alternative perspective on housing growth is provided by the Royal Mail's Postcode Address File (PAF) which provides a record of the total number of residential 'addresses'. A comparison of 2012

[5] Yorkshire Dales National Park. Demographic Forecasts. November 2015

and 2019 PAF evidence reveals how growth rates have differed between the sub-district areas of the YDNP and how they compare with the district geographies which sit outside the YDNP boundary (Figure 11).



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Source: Royal Mail's PAF

Figure 11: YDNP – address growth 2012–2019

2.19 Residential address growth in the Park averages 2.2% for the 2012-2019, seven-year period, highest in Eden and lowest in the Richmondshire YDNP geographies (Table 3). Evidence for Eden suggests its growth was concentrated in the period to 2017, with little growth thereafter.

Table 3: YDNP – housing growth 2012–2019

Sub-district	Estimated Address Count (PAF)			
	2012	2019	Change	%
Craven	4,934	5,094	160	3.2%
Richmondshire	3,844	3,836	-8	-0.2%
South Lakeland	2,328	2,377	49	2.1%
Eden	1,208	1,274	66	5.4%
Lancaster	105	106	1	1.3%
TOTAL	**12,420**	**12,688**	**268**	**2.2%**

Source: Royal Mail's PAF

2.20 The YDNP area has a distinct mix of properties that are both primary residencies and second or holiday homes. A 'vacancy rate', defined as the ratio between the number of properties and the number of resident households has been derived from the 2011 Census, the most definitive source of evidence on small-area housing and household statistics.

Table 4: YDNP – 2011 vacancy rates

Sub-district	Inside YDNP	Outside YDNP
Craven	16.1%	7.3%
Eden	16.4%	8.6%
Lancaster	7.0%	4.8%
Richmondshire	30.7%	7.0%
South Lakeland	15.6%	12.7%
TOTAL	**20.7%**	**8.2%**

Source: 2011 Census

2.21 These data reveal an average vacancy rate in excess of 20% across the YDNP geography, varying between just 7% in the very small portion of the Park that sits within the Lancaster district, to over 30% in the Richmondshire sub-district area.

Commuting Flows

2.22 The 2011 Census provides an illustration of the number of employed people living in the YDNP in 2011, together with a count of the level of employment that was evident. The balance between the two provides an indication of the Park's commuting balance (Table 5).

Table 5: YDNP – 2011 travel-to-work statistics

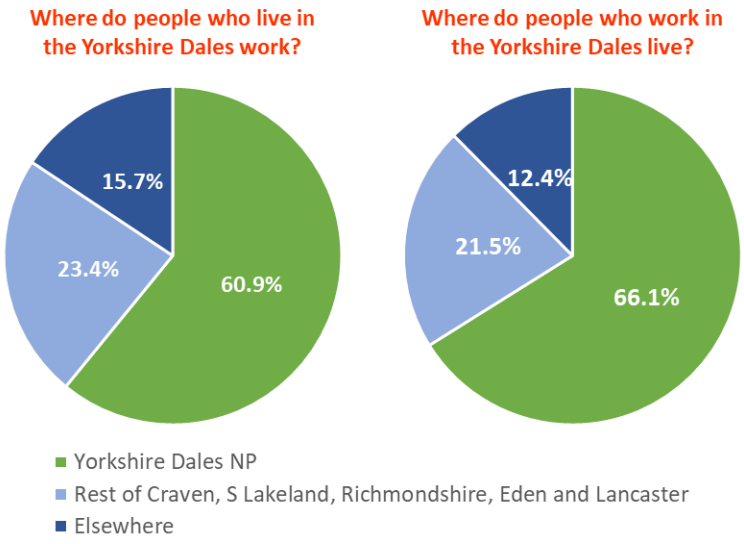
Yorkshire Dales National Park	2011 Census
Resident Workers	12,022
Workplace-based Employment	11,077
Commuting Ratio	**1.09**

Source: 2011 Census

Accompanying sub-district profiles are provided in Appendix C

2.23 The Census recorded 12,022 workers aged 16+ living in the YDNP and 11,077 people aged 16–74 working within the National Park borders. The higher number of resident workers compared to the workplace-based employed results in a net out-commute, at a ratio of 1.09.

2.24 Closer inspection of these commuting flows, illustrates that over 60% of people who live in the Park also work there, and nearly a quarter work outside the National Park but still within the districts of Craven, Richmondshire, South Lakeland, Eden and Lancaster (Figure 12).



Source: 2011 Census

Figure 12: YDNP – travel-to-work dynamics

Accompanying sub-district profiles are provided in Appendix C

2.25 Of those working within the Park, the majority (66.1%) also live within its borders, with the remaining workers coming from the rest of Craven, Richmondshire, South Lakeland, Eden and Lancaster (21.5%) or from elsewhere (12.4%). Further detail on the commuting flows associated with the sub-district areas of the YDNP is provided in Appendix C.

3 Growth Scenarios

Approach

3.1 Every two years, ONS publishes its national and sub-national population projections (SNPP), setting key assumptions on the long-term effects of fertility, mortality and migration to estimate population growth outcomes. The 2016-based SNPP is the latest projection released by ONS, using demographic assumptions derived from a pre-2016, 5–6-year historical period and incorporating national assumptions on fertility, mortality and international migration to formulate a 25-year (2016–2041) projection for each local authority area. The 2016-based Principal and variant projections provide an updated population growth outlook to the previous 2014-based population projection, which covered the 2014–2039 time-period and based its assumptions on the 5–6-year period pre-2014.

3.2 ONS population projections inform its household projections, providing key assumptions on the future number of households, average household size and household formation by age group and sex. The ONS 2016-based household projections are underpinned by the associated population projections and incorporate a number of methodological changes, compared to previous household projections published by the MHCLG.

3.3 The 2016-based projections reflect more recent trends, but it is the 2014-based household projections which remain the starting point in the assessment of future housing need within local authority areas; generally estimating an overall higher level of household growth over the 25-year forecast horizon.

3.4 The latest PPG and NPPF, provide a 'standard methodology' to calculate the minimum housing need for local authorities in England using the average annual household growth under the 2014-based household projections for a ten-year period, together with the latest affordability ratio as its starting point.

3.5 For National Parks, where strategic policy-making authority boundaries do not align with local authority boundaries and where ONS population and household projections are not routinely available, the PPG provides alternative guidance for local housing need assessment.

> *"Where strategic policy-making authorities do not align with local authority boundaries (either individually or in combination), or the data required for the model are not available such as in National Parks and the Broads Authority, where local authority boundaries have changed due to reorganisation within the last 5 years or local authority areas where the samples are too small, an alternative approach will have to be used. Such authorities may continue to identify a housing need figure using a method determined locally, but in doing so will need to consider the best available information on anticipated changes in households as well as local affordability levels."* PPG Paragraph: 014 Reference ID: 2a-014-20190220

3.6 The YDNP now intersects five districts: Craven, Eden, Lancaster, South Lakeland and Richmondshire. In compiling the demographic evidence and forecasts presented in this report, it has been necessary

to identify the YDNP geography that resides in each of the five districts, achieving the proportional split using a combination of OA populations, plus PAF property distributions.

3.7 POPGROUP technology (see Appendix A) has been used to develop a range of growth scenarios for the YDNP in aggregate and for the geographical portions that fall within each of the five districts. All scenarios are based on historical demographic evidence for the period 2001–2017 and have a 2040 forecast horizon. Household growth assumptions have been drawn from MHCLG's 2014-based SNHP (consistent with PPG guidelines), scaled for consistency with the YDNP geography.

Scenario Development

3.8 The preceding demographic analysis of the YDNP has indicated a relatively low growth profile since 2001, coupled with a rapid ageing of the population. Five trend scenarios consider how the YDNP's population profile might evolve under different migration assumptions:

- **SNPP-2014**: this scenario uses the ONS 2014-based SNPP for each of the five intersecting local authorities and applies its growth assumptions to the YDNP geography;
- **SNPP-2016:** this scenario uses the ONS 2016-based SNPP for each of the five intersecting local authorities and applies its growth assumptions to the YDNP geography;
- **PG-Short Term:** this scenario considers the most recent mid-year population evidence, to derive a trend scenario based upon migration histories from the last six years (2011–2017);
- **PG-Long Term:** this scenario considers a longer-term history of evidence, drawing its migration assumptions from the 2001–2017 time-period;
- **Net-Nil:** this scenario is included to provide an indication of demographic change that would result from a situation where migration is having no overall net effect upon the YDNP's annual population growth/decline, whilst continuing to affect age-group differences.

3.9 To mitigate the ongoing effects of low population growth and rapid ageing of the population, the YDNP will require a change to its net migration profile, maintaining and attracting younger age cohorts. Longer-term alterations to the migration profile will invariably be underpinned by suitable housing provision. To complement the trend scenarios and to consider how different levels of housing provision might alter the demographic profile of the YDNP, a series of 'dwelling-led' scenarios have been formulated:

- **Dwelling-led +10**: this scenario evaluates the impact of a housing growth trajectory of +10 new homes per year;

- **Dwelling-led +30:** this evaluates the impact of a housing growth trajectory of +30 new homes per year;
- **Dwelling-led +50**: this evaluates the impact of a housing growth trajectory of +50 new homes per year;
- **Dwelling-led +70**: this evaluates the impact of a housing growth trajectory of +70 new homes per year.

3.10 These 'dwelling-led' scenarios evaluate the demographic implications of a defined housing growth trajectory, matching dwelling numbers to household numbers using a vacancy rate and matching households to population using household representative rates and communal population statistics.

Scenario Outcomes

3.11 The 2001–2040 population growth trajectories for all scenarios are presented in Figure 13. In Table 6, each of the scenarios is summarised in terms of population, household and net migration change, with an estimate of the change in dwelling numbers that would result over the 2017–2040 forecast period.

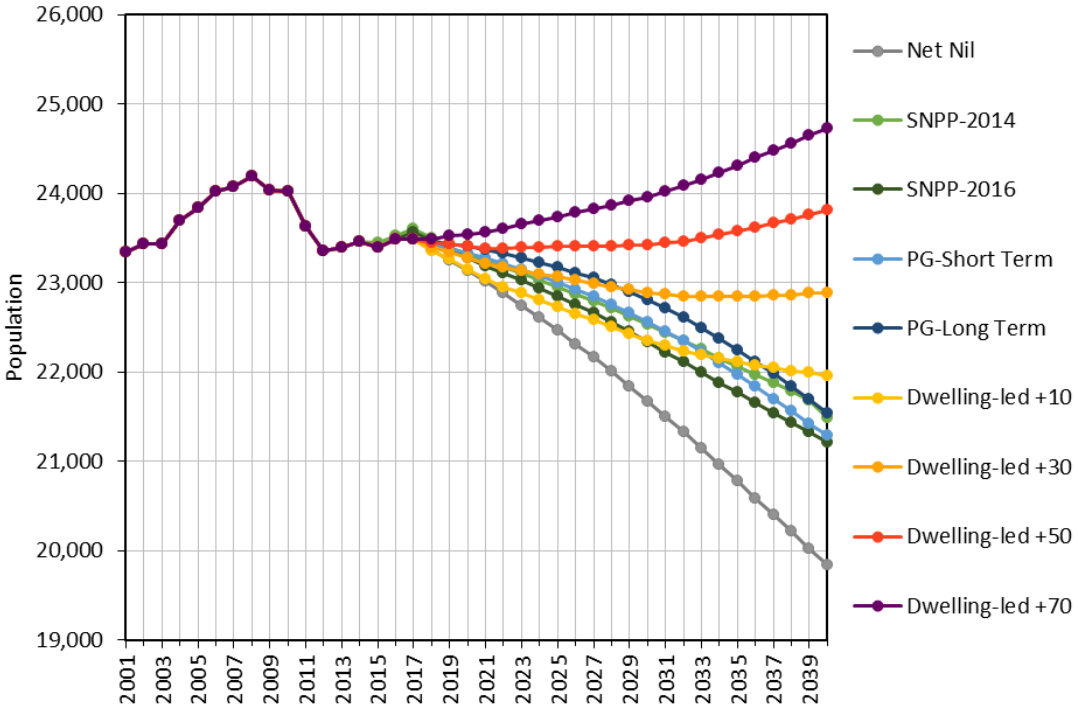
3.12 The **Net-Nil** scenario indicates the degree to which the YDNP's population would decline in the absence of annual migration effects, with a 15.5% reduction estimated by 2040. All other scenarios record a positive annual impact of migration, with a range of population growth outcomes from -10% under the **SNPP-2016** scenario to +5.3% under the **Dwelling-led +70** scenario.

3.13 A 9% decline in population is projected by 2040 under the **SNPP-2014** which, under MHCLG's standard methodology, provides the starting point for the assessment of future housing need. The **PG-Short Term** and **PG-Long Term** scenarios, using more recent historical evidence, estimate relatively similar growth outcomes to the **SNPP-2014** but with a less severe decline in the housing requirement, with the maintenance of a slightly more youthful migration profile.

3.14 With its relatively old age profile, the process of population ageing will accelerate in the YDNP over the course of the plan-period, to 2040. The Dwelling-led scenarios indicate the potential effects that different levels of housing provision might have, not only on population growth but also on the maintenance of a more youthful population profile through net in-migration to the YDNP.

3.15 The current age-profile of the YDNP means that its population growth outlook will always be constrained, indicated by the fact that even with housing growth of +70 per year, population change is estimated at a modest 5.3% between 2017–2040.

Yorkshire Dales National Park **Scenario Outcomes**



Source: Edge Analytics, ONS

Figure 13: YDNP – population growth trajectory 2001–2040

Table 6: YDNP – demographic scenario outcomes 2017–2040

Scenario	Change 2017 - 2040				Average per year	
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings
Dwelling-led +70	1,246	5.3%	1,282	11.9%	224	70
Dwelling-led +50	323	1.4%	916	8.5%	186	50
Dwelling-led +30	-601	-2.6%	550	5.1%	149	30
Dwelling-led +10	-1,525	-6.5%	183	1.7%	112	10
PG-Long Term	-1,945	-8.3%	60	0.6%	93	4
SNPP-2014	-2,116	-9.0%	-193	-1.8%	102	-15
PG-Short Term	-2,204	-9.4%	2	0.0%	73	0
SNPP-2016	-2,353	-10.0%	-196	-1.8%	73	-14
Net Nil	-3,646	-15.5%	-1,105	-10.2%	0	-60

Source: Edge Analytics, ONS

Note: Scenario profiles for each YDNP district sub-area are provided in Appendix D.

Age Structure

3.16 The ageing population profile of the YDNP is a key factor in planning future housing within the National Park and in considering its future economic vitality and development. The changing population age profiles associated with each of the nine scenarios is illustrated below (Figure 14).



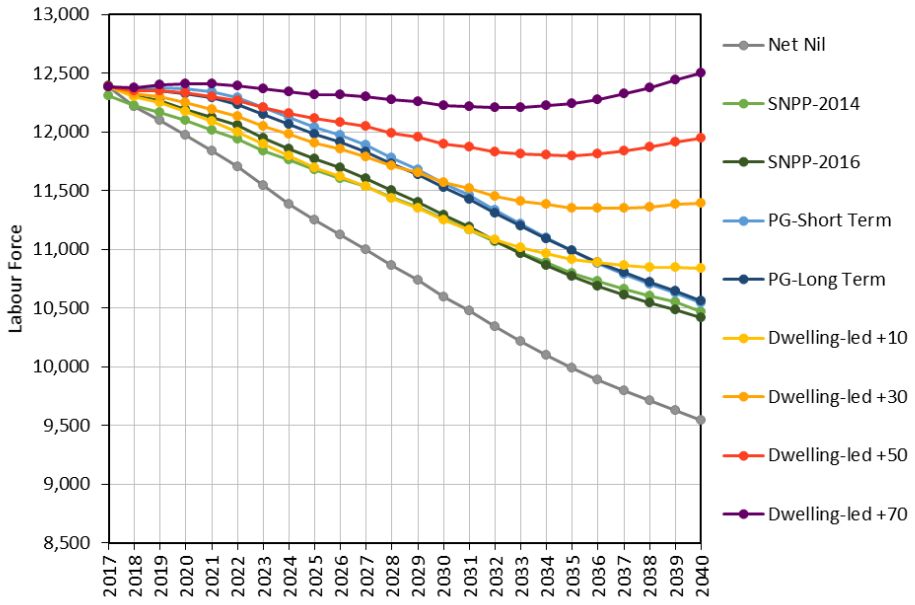
Source: Edge Analytics, ONS

Figure 14: YDNP – population change by 5-year age group 2017–2040

3.17 Under all scenarios, growth of the older-age population is immutable, emphasising the impact that further ageing of an already relatively old age-profile has upon the YDNP. What does alter under each of the scenarios is the change in the younger, 0–70 age-groups, depending upon the degree to which in-migration (driven by higher housing growth) influences the scenario.

3.18 None of the scenarios revert to a strong growth profile in the 0–70, although the higher migration variants do dampen the decline by ensuring that a more youthful population is maintained within the YDNP, avoiding the extreme profile of decline evident in the **Net Nil** scenario outcome, for example.

3.19 The changing population age profiles under each of the scenarios have been combined with age-specific rates of economic activity (also known as participation rates), to provide an indication of the changing size of the YDNP's resident **labour force** (Figure 15). The base economic activity rates have been drawn from the 2011 Census but have been updated and projected forward to take account of the OBR's latest long-term outlook for labour force participation. The OBR outlook considers both changes to state pension age (SPA), higher female participation rates and the trend towards higher rates of participation in older age-groups.



Source: Edge Analytics, ONS

Figure 15: YDNP – labour force growth trajectory 2017–2040

3.20 Under the **Net Nil** scenario, the current labour force estimate of almost 12,500, declines to approximately 9,500 by 2040. In contrast, the highest housing growth scenario, **Dwelling-led +70**, maintains a labour force of approximately 12,500 throughout the forecast period.

4 Summary

Context

4.1 The YDNP Authority, together with funding from Craven, Richmondshire and North Yorkshire County Councils, has commissioned the development of Social, Economic and Housing Study, providing critical evidence to inform a new Local Plan for the National Park. The Park is challenged to maintain the economic vitality of its local communities, in the face of an ageing and declining population. The study will support long-term, sustainable planning objectives, including housing growth targets that are in general compliance with specific NPPF/PPG guidance for National Park Planning Authorities and that seek to attract and retain younger population cohorts.

4.2 Informing the core SEA and SHMA reports which underpin the Social, Economic and Housing Study, this analysis has considered both the historical profile of population change within the Park and the prospects for future growth. The demographic evidence and forecasts have been compiled and presented for the newly extended YDNP geography, encompassing portions of the Craven, Eden, Lancaster, South Lakeland and Richmondshire districts.

4.3 Since 2001, ONS population estimates suggest only limited growth within the YDNP, with a rise in population numbers to 2008, reducing thereafter. Since 2012, growth has been positive but below 1%, in total, to 2017. Low growth or population decline has become a characteristic of the majority of the National Park areas.

4.4 In the absence of definitive statistics on past housing growth from the newly extended areas of the Park, PAF statistics have been used to illustrate a growth of approximately 38 new addresses per year across the YDNP, with approximately 60% of this growth within the Craven district portion. Second homes proliferate across the YDNP, with 'vacancy' rates in excess of 30% in the Richmondshire area, 15–16% in Craven, Eden and South Lakeland.

4.5 The low-growth profile of the YDNP is reflected in its changing age structure. Pre-school, primary school and secondary school age-group populations have all declined since 2001 and particularly since 2010. In addition, the size of the core labour-force population has reduced by 7% since 2001. In contrast the size of the 65+ age-group has increased year-on-year, achieving a 45% growth rate over the sixteen-year period. In 2001, 21% of the Park's population was aged 65+; by 2017, this figure had increased to 30%. Without intervention these trends are projected to continue.

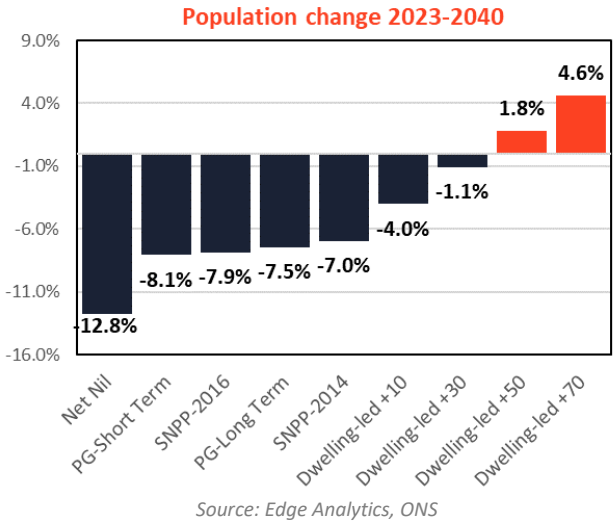
Growth Outcomes

4.6 POPGROUP technology has been used to develop a range of growth scenarios for the YDNP in aggregate and for the geographical portions that fall within each of the five districts. All scenarios

have been based on historical demographic evidence for the period 2001–2017 and have a 2040 forecast horizon. Household growth assumptions have been drawn from MHCLG's 2014-based SNHP, scaled for consistency with the YDNP geography.

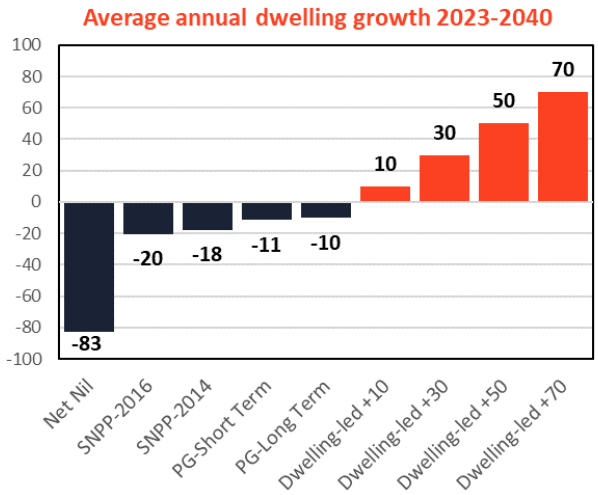
4.7 Five trend scenarios have been formulated to consider how the YDNP's population profile might evolve under different migration assumptions. In addition, 'dwelling-led' scenarios have been presented which evaluate the demographic implications of fixed housing growth trajectories, matching dwelling numbers to household numbers using a vacancy rate and matching households to population using household representative rates and communal population statistics.

4.8 In summary, scenario outcomes are presented here for 2023-2040, a plan-period that is consistent with the YDNP's new Local Plan. Population change under each scenario (Figure 16) is presented alongside estimated dwelling growth (Figure 17).



Source: Edge Analytics, ONS

Figure 16: YDNP – population change (%) 2023–2040



Source: Edge Analytics, ONS

Figure 17: YDNP – average annual dwelling growth 2023–2040

4.9 Population decline is a characteristic of all but the **Dwelling-led +50** and **Dwelling-led +70** scenarios, with higher housing growth associated with higher net in-migration to the YDNP. The higher net-migration outcomes, underpinned by higher housing provision, will support the maintenance of the Park's resident labour force and help to dampen the increasing imbalance between younger and older age-groups.

4.10 The YDNP combines a unique landscape with an increasingly challenging socio-economic profile. The Park is characterised by a rapidly ageing population profile coupled with a large number of holiday letting properties, supporting its critical tourist industry. Whilst maintaining the unique identity of the YDNP is a key objective of the Planning Authority, a desire to promote economic vitality of its local communities and to maintain a more youthful population profile in the face of rapid population ageing, are likely to require particular policy interventions related to new housing provision. The evidence in this report is provided to inform appropriate socio-economic strategies and policies within and around the YDNP geographical area.

Appendix A
POPGROUP Methodology

A.1 Evidence is often challenged on the basis of the appropriateness of the methodology that has been employed to develop growth forecasts. The use of a recognised forecasting product which incorporates an industry-standard methodology (a cohort component model) removes this obstacle and enables a focus on assumptions and output, rather than method.

A.2 Demographic forecasts have been developed using the POPGROUP suite of products. POPGROUP is a family of demographic models that enables forecasts to be derived for population, households and labour force, for areas and social groups. The main POPGROUP model (Figure 18) is a cohort component model, which enables the development of population forecasts based on birth, death and migration inputs and assumptions.

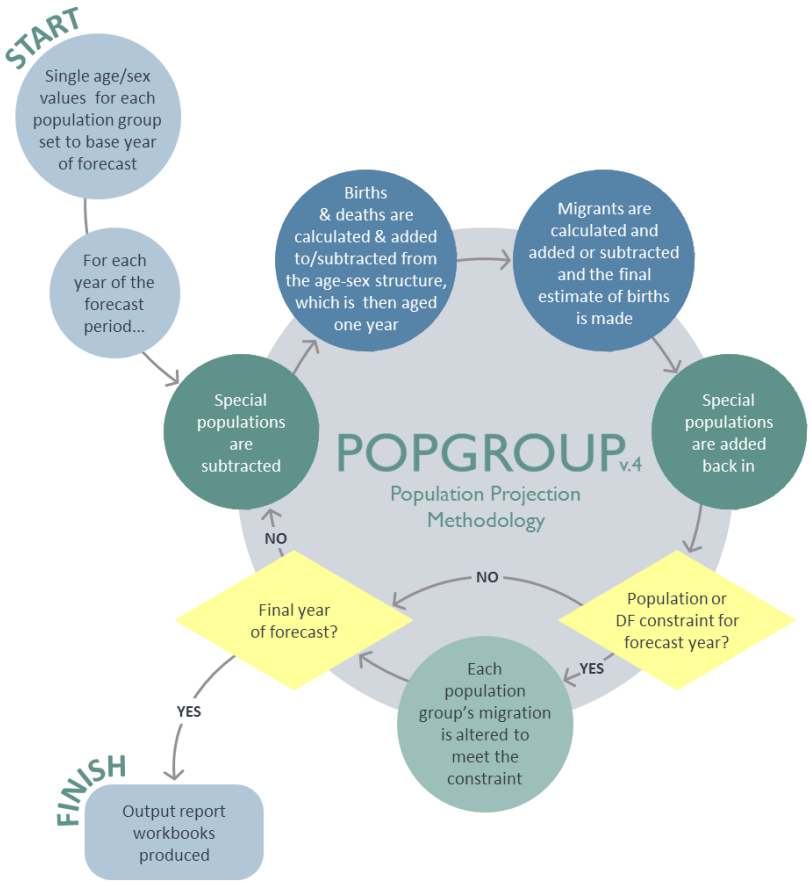
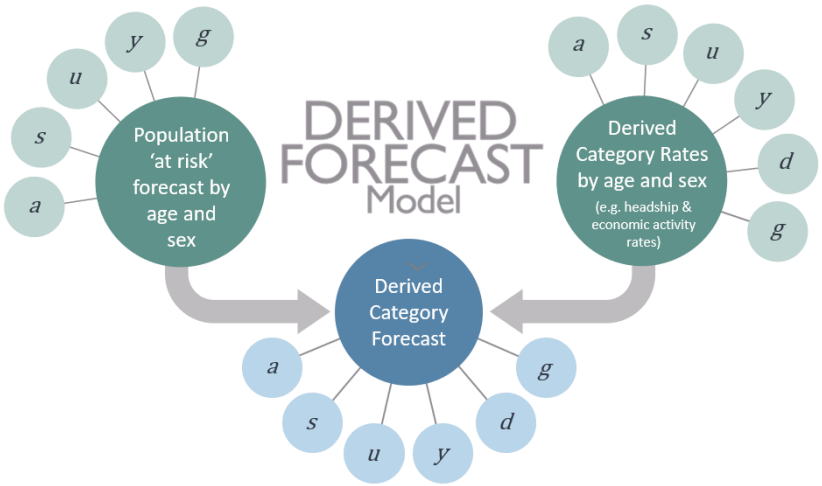


Figure 18: POPGROUP population projection methodology

A.3 The Derived Forecast (DF) model (Figure 19) sits alongside the population model, providing a headship rate model for household projections, and an economic activity rate model for labour force projections.



$$D_{a,s,u,y,d,g} = \frac{P_{a,s,u,y,g} \; R_{a,s,u,y,d,g}}{100}$$

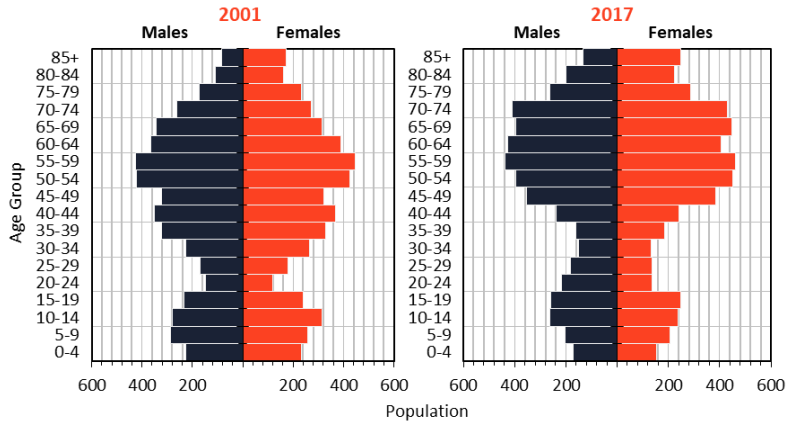
D	Derived Category Forecast	y	Year
P	Population 'at risk' Forecast	d	Derived category
R	Derived Category Rates	g	Group (usually an area, but can be an ethnic group or social group)
a	Age-group		
s	Sex		
u	Sub-population		

Figure 19: Derived Forecast (DF) model

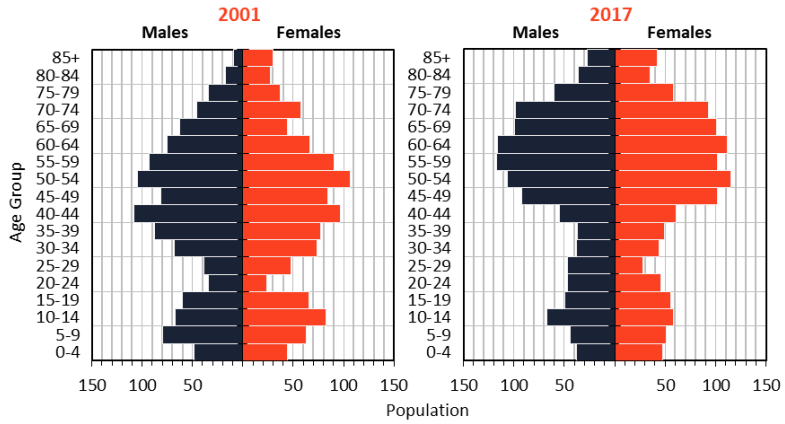
A.4 For further information on POPGROUP, please refer to the Edge Analytics website: https://www.edgeanalytics.co.uk/

Appendix B
Population Age Profiles – Sub-district Areas

Craven-YDNP



Eden-YDNP

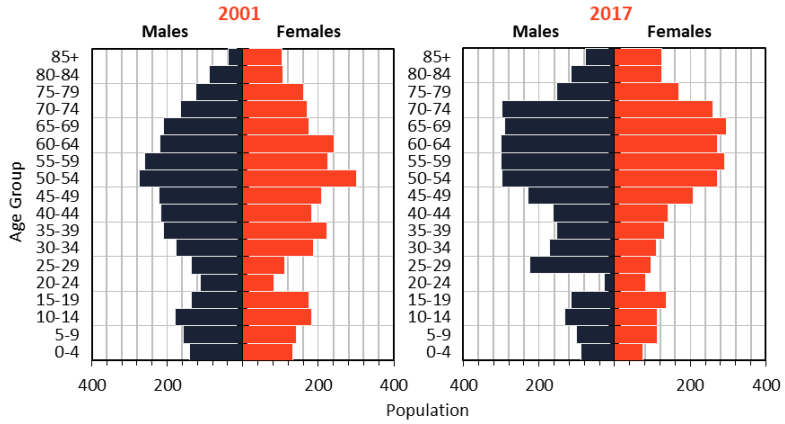


Lancaster-YDNP

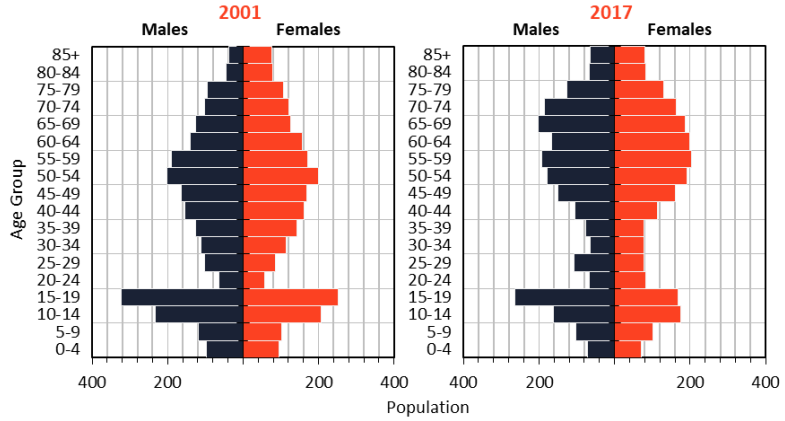


Note: the Lancaster-YDNP area is very small, making its data less robust.

Richmondshire-YDNP



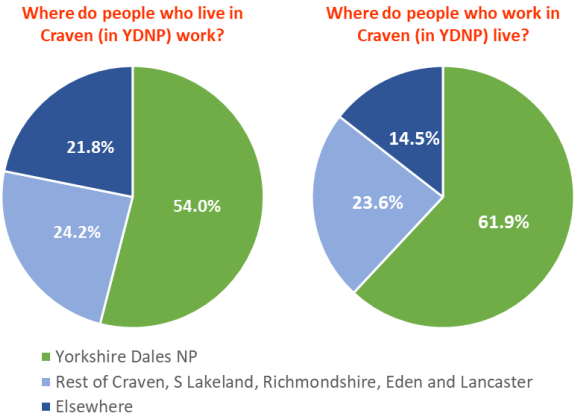
South Lakeland-YDNP



Appendix C
Commuting Statistics – Sub-district Areas

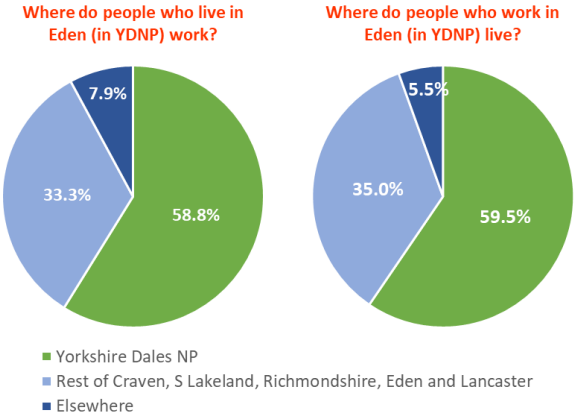
Craven-YDNP

Craven (in YDNP)	2011 Census
Resident Workers	4,978
Workplace-based Employment	4,317
Commuting Ratio	**1.15**



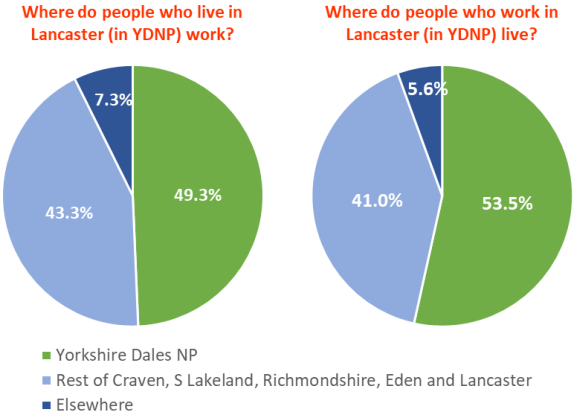
Eden-YDNP

Eden (in YDNP)	2011 Census
Resident Workers	1,329
Workplace-based Employment	1,290
Commuting Ratio	**1.03**



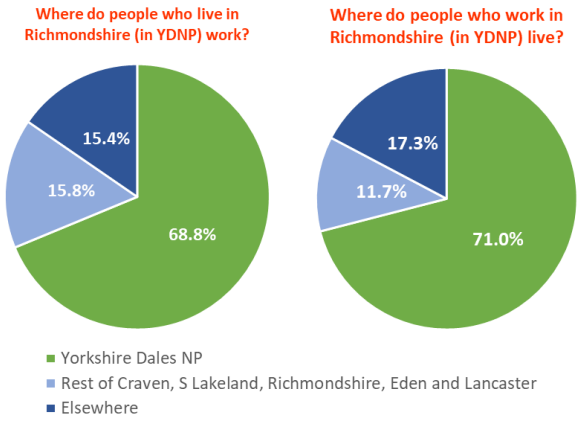
Lancaster-YDNP

Lancaster (in YDNP)	2011 Census
Resident Workers	150
Workplace-based Employment	144
Commuting Ratio	**1.04**



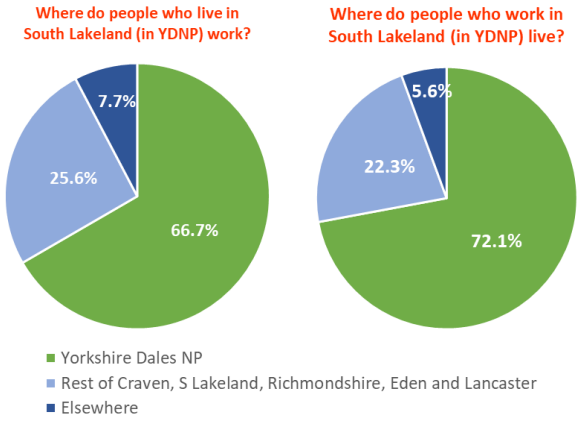
Richmondshire-YDNP

Richmondshire (in YDNP)	2011 Census
Resident Workers	3,288
Workplace-based Employment	3,195
Commuting Ratio	**1.03**

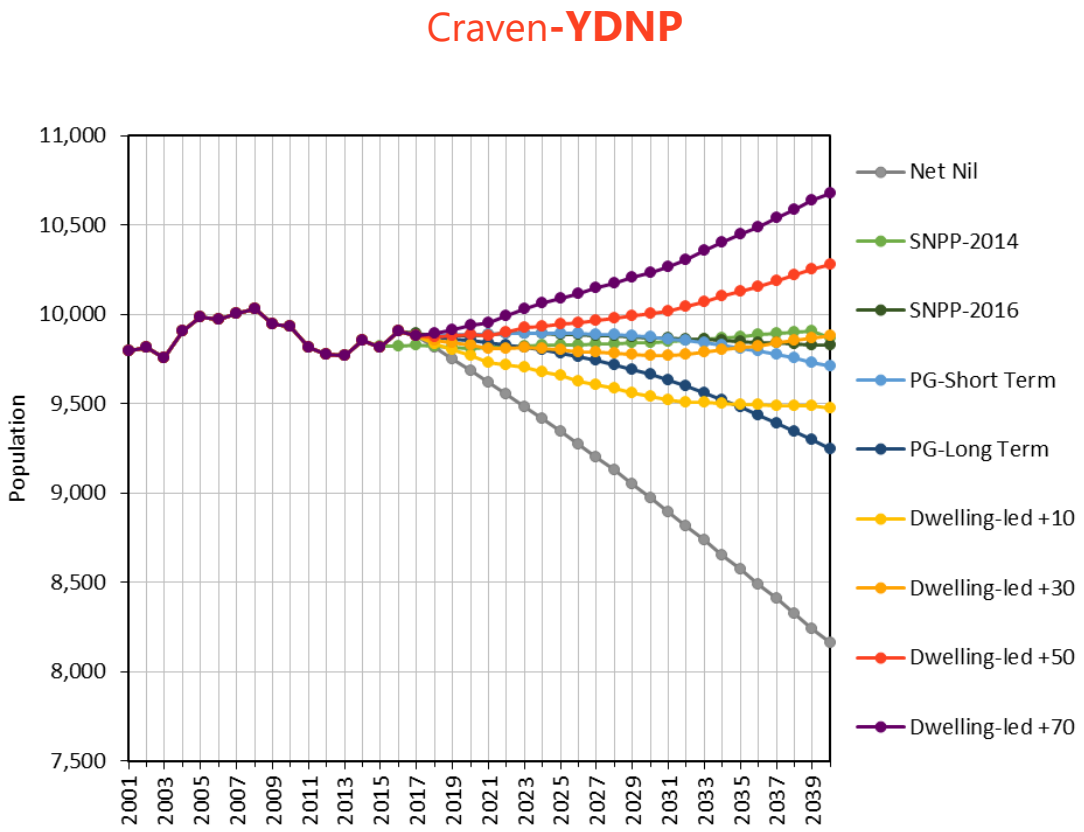


South Lakeland-YDNP

South Lakeland (in YDNP)	2011 Census
Resident Workers	2,277
Workplace-based Employment	2,131
Commuting Ratio	**1.07**



Appendix D
Scenario Outcomes – Sub-district Areas



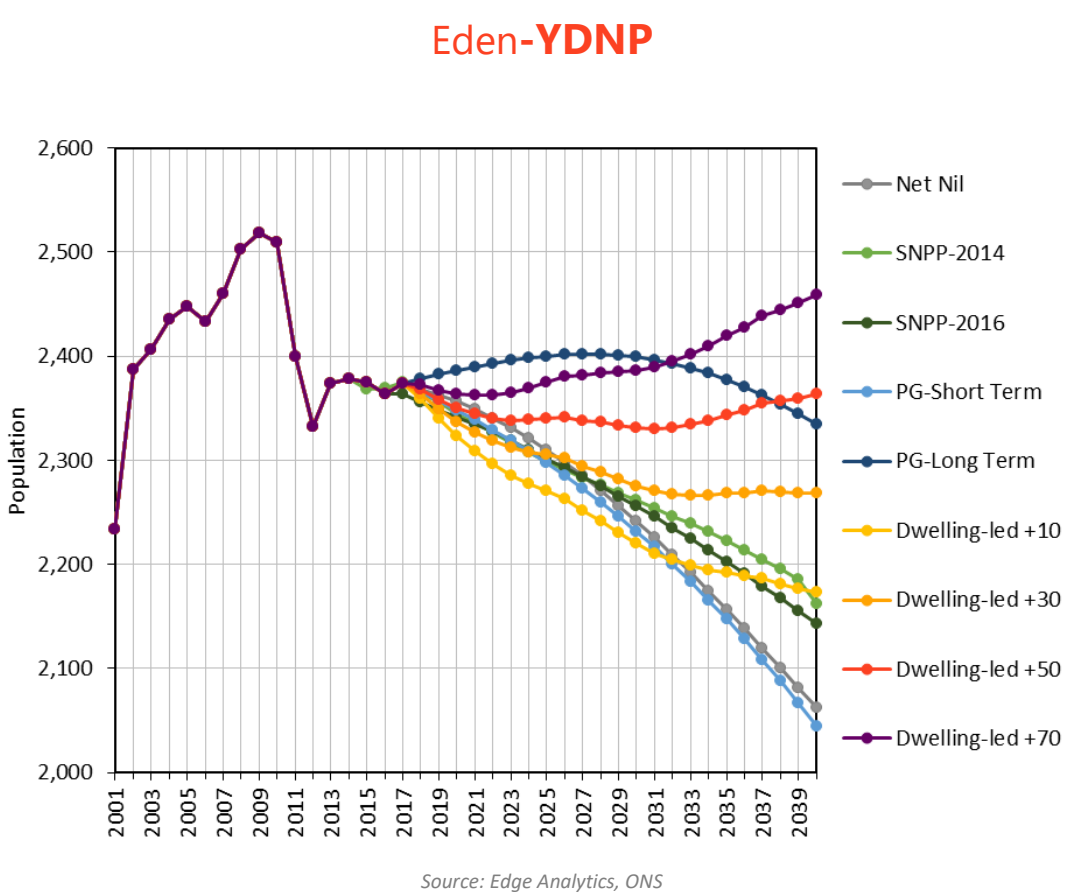
Source: Edge Analytics, ONS

Figure 20: Craven-YDNP – population growth trajectory 2001–2040

Table 7: Craven-YDNP – demographic scenario outcomes 2017–2040

Scenario	Change 2017 - 2040				Average per year	
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings
Dwelling-led +70	798	8.1%	542	12.2%	117	28
Dwelling-led +50	398	4.0%	387	8.7%	101	20
SNPP-2014	37	0.4%	157	3.5%	92	8
Dwelling-led +30	-2	0.0%	232	5.2%	85	12
SNPP-2016	-64	-0.6%	197	4.4%	81	10
PG-Short Term	-169	-1.7%	117	2.6%	68	6
Dwelling-led +10	-402	-4.1%	77	1.7%	69	4
PG-Long Term	-632	-6.4%	-2	-0.1%	59	0
Net Nil	-1,718	-17.4%	-688	-15.5%	0	-36

Source: Edge Analytics, ONS



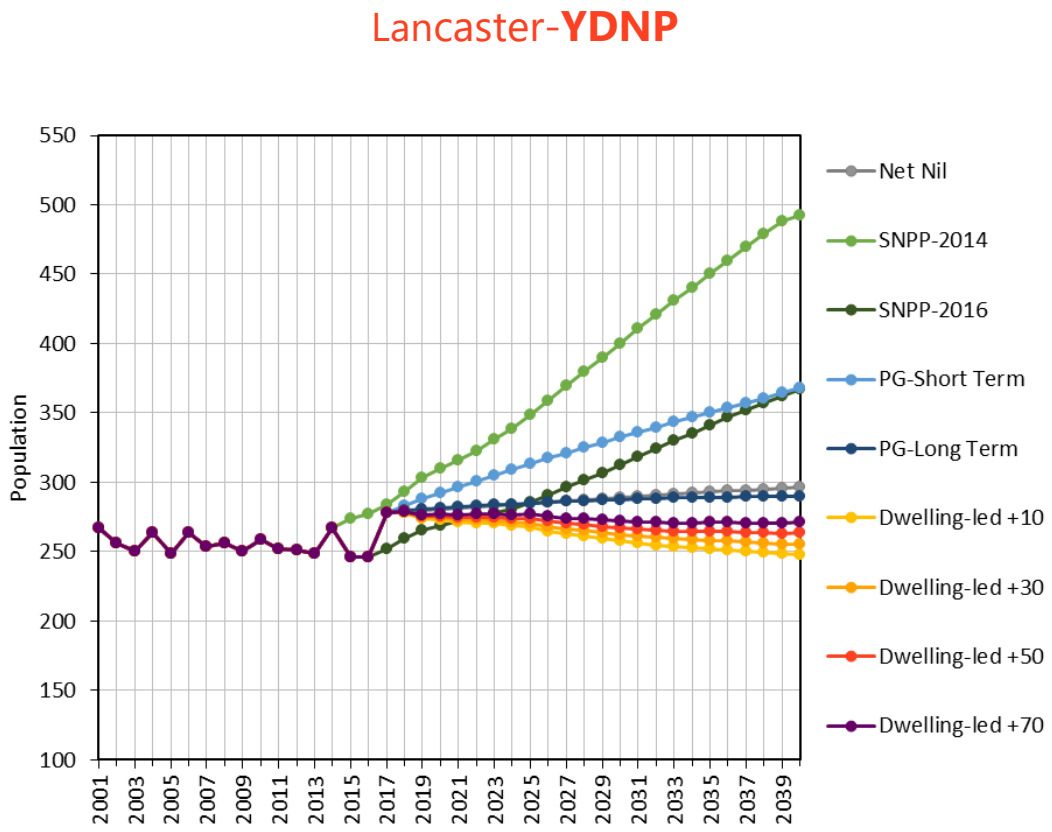
Source: Edge Analytics, ONS

Figure 21: Eden-YDNP – population growth trajectory 2001–2040

Table 8: Eden-YDNP – demographic scenario outcomes 2017–2040

Scenario	Change 2017 - 2040				Average per year	
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings
Dwelling-led +70	86	3.6%	135	12.9%	15	7
Dwelling-led +50	-10	-0.4%	97	9.2%	11	5
PG-Long Term	-39	-1.6%	87	8.3%	10	5
Dwelling-led +30	-105	-4.4%	58	5.5%	7	3
Dwelling-led +10	-201	-8.4%	19	1.8%	3	1
SNPP-2014	-213	-9.0%	-36	-3.4%	5	-2
SNPP-2016	-221	-9.3%	-25	-2.4%	3	-1
Net Nil	-311	-13.1%	-25	-2.4%	0	-1
PG-Short Term	-328	-13.8%	-43	-4.2%	-2	-2

Source: Edge Analytics, ONS



Source: Edge Analytics, ONS

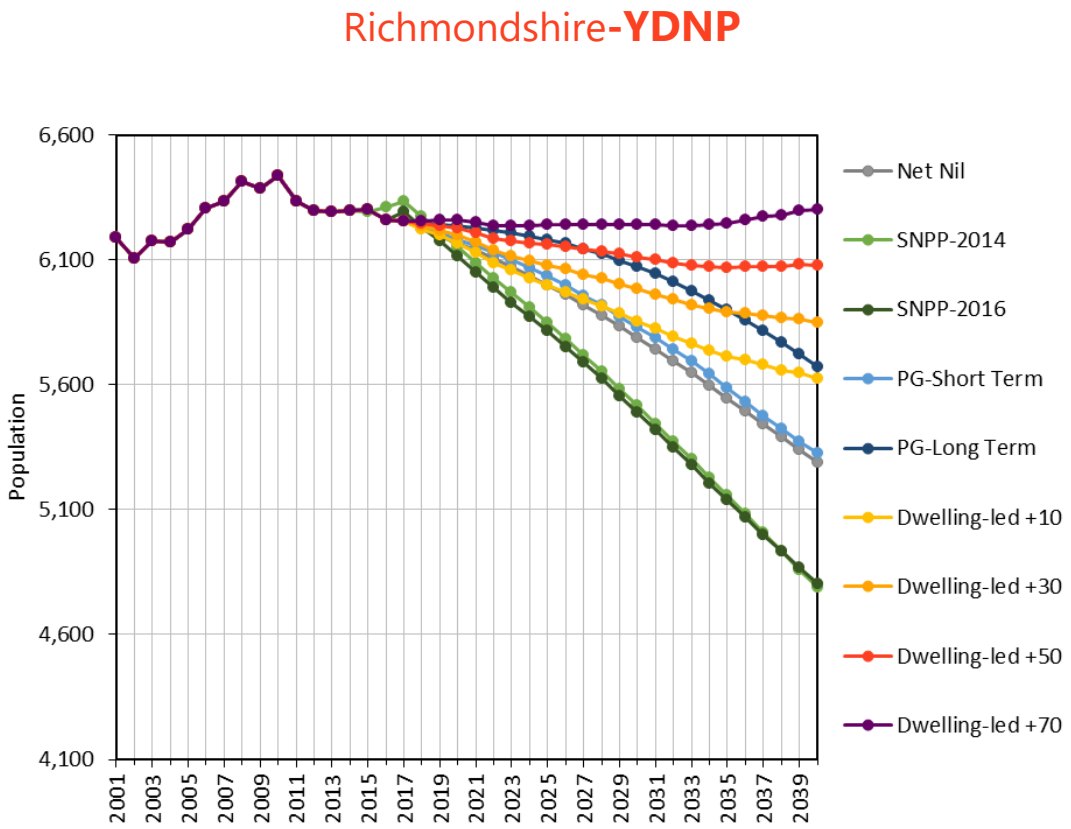
Figure 22: Lancaster-YDNP – population growth trajectory 2001–2040

Table 9: Lancaster-YDNP – demographic scenario outcomes 2017–2040

Scenario	Change 2017 - 2040				Average per year	
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings
SNPP-2014	208	73.4%	100	84.8%	9	5
SNPP-2016	115	45.7%	54	52.1%	5	3
PG-Short Term	89	32.1%	45	38.6%	5	2
Net Nil	18	6.6%	18	15.1%	0	1
PG-Long Term	11	4.1%	21	18.2%	1	1
Dwelling-led +70	-7	-2.5%	13	10.7%	0	1
Dwelling-led +50	-15	-5.3%	9	7.7%	0	0
Dwelling-led +30	-23	-8.1%	5	4.6%	0	0
Dwelling-led +10	-30	-10.9%	2	1.6%	-1	0

Source: Edge Analytics, ONS

Note: the Lancaster-YDNP area is very small, making its data and forecasts less robust.



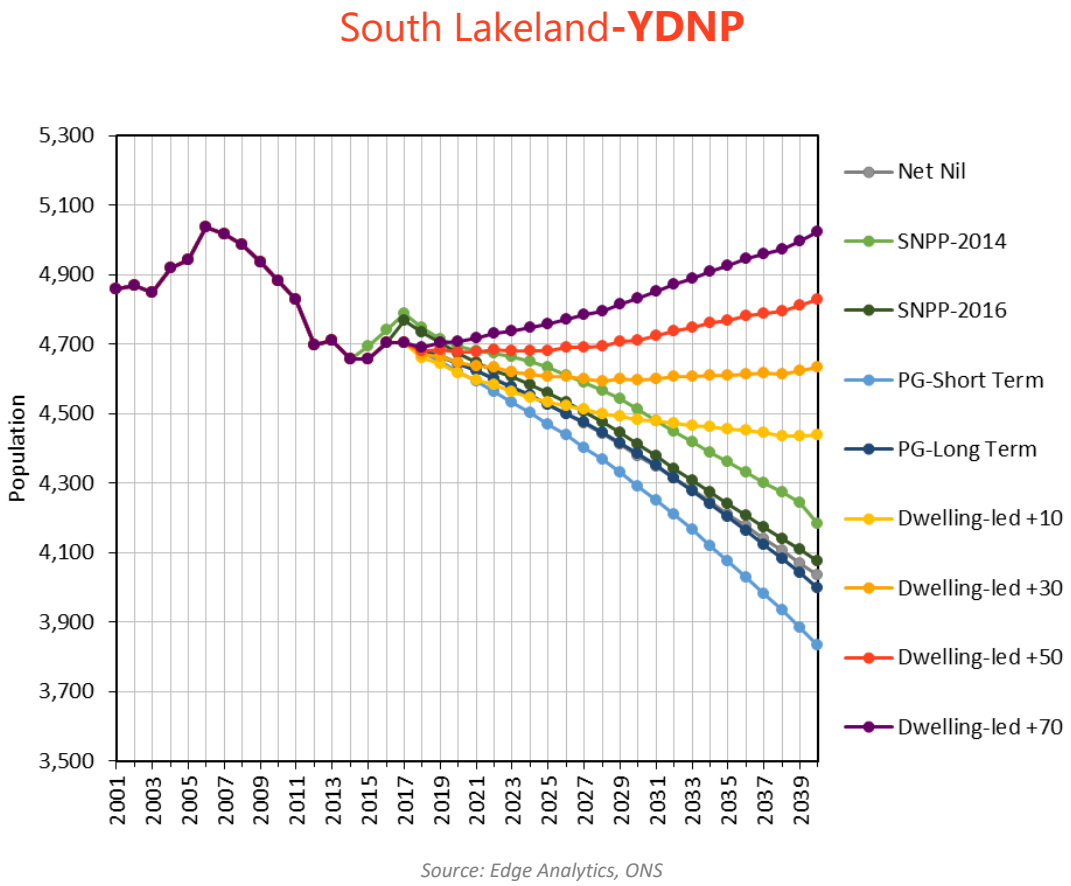
Source: Edge Analytics, ONS

Figure 23: Richmondshire-YDNP – population growth trajectory 2001–2040

Table 10: Richmondshire-YDNP – demographic scenario outcomes 2017–2040

Scenario	Change 2017 - 2040				Average per year	
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings
Dwelling-led +70	49	0.8%	338	10.6%	50	21
Dwelling-led +50	-177	-2.8%	241	7.6%	41	15
Dwelling-led +30	-403	-6.4%	145	4.6%	31	9
PG-Long Term	-581	-9.3%	73	2.3%	23	5
Dwelling-led +10	-629	-10.1%	48	1.5%	22	3
PG-Short Term	-926	-14.8%	22	0.7%	11	1
Net Nil	-965	-15.4%	-232	-7.3%	0	-15
SNPP-2016	-1,492	-23.7%	-359	-11.2%	-16	-22
SNPP-2014	-1,543	-24.4%	-383	-11.9%	-14	-24

Source: Edge Analytics, ONS



Source: Edge Analytics, ONS

Figure 24: South Lakeland-YDNP – population growth trajectory 2001–2040

Table 11: South Lakeland-YDNP – demographic scenario outcomes 2017–2040

Scenario	Change 2017 - 2040				Average per year	
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings
Dwelling-led +70	321	6.8%	254	12.6%	41	13
Dwelling-led +50	126	2.7%	182	9.0%	34	9
Dwelling-led +30	-69	-1.5%	109	5.4%	26	6
Dwelling-led +10	-264	-5.6%	36	1.8%	18	2
SNPP-2014	-605	-12.6%	-31	-1.5%	10	-2
Net Nil	-669	-14.2%	-178	-8.8%	0	-9
SNPP-2016	-691	-14.5%	-63	-3.1%	1	-3
PG-Long Term	-704	-15.0%	-118	-5.9%	0	-6
PG-Short Term	-869	-18.5%	-138	-6.9%	-9	-7

Source: Edge Analytics, ONS