

Demographic projections and planning: a collaborative partnership

Research Briefing

November 2019



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Senedd Research

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This briefing has been prepared by Ludi Simpson, Professor of Population Studies, University of Manchester, for Senedd Research's Academic Fellowship Scheme. The briefing is provided to support Assembly Members in their scrutiny of the draft National Development Framework.

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Introduction

How can the National Development Framework (NDF) and regional Strategic Development Plans (SDPs) make use of a ‘central estimate’ of housing need that is neither a forecast nor a housing target?

The draft NDF gives responsibility to three SDPs to set a housing requirement and refers to a range of housing need estimates. It includes a ‘central estimate of additional housing need’ for each of the regions over the period 2018-2038 and a central estimate of the proportion of affordable (below market value) housing that is required in the first five years (pp51, 58, 66).

Articles from the Welsh Government’s housing statistics team, which prepared the range and central estimate of housing need, stress that their figures are neither forecasts nor housing targets.

This briefing:

- 1.** Defines the partnership between demographic projections and planning (Section 2).
- 2.** Explains the range and central estimate of housing need for Wales, its regions and local planning authority areas, and how they will be significantly updated. They show continuity with the past, and are helpful despite not being forecasts or targets (Sections 3 and 4).
- 3.** Describes how SDPs can adjust the central estimate using other information, to develop a housing requirement and plan led by regional and local policy within the NDF (Section 5).

The briefing also makes recommendations to amend and implement the NDF’s use of estimates of housing need.

Projections and plans

It is standard practice for a national government to project population and households based on the levels of population change in the recent past. If this were the only input to local plans, it would comprise an approach of ‘predict and provide’ which has been criticised as a desertion of imagination and planning (for example by reports on **English household projections**, **UK Government transport policy**, **the Campaign to Protect Rural England**, and others).

The alternative to ‘predict and provide’ is to support a dynamic relationship between demographic projections and planning, recognised since the pioneers of modern planning in the mid-20th century:

- demographers should provide planners with a continuity prediction of future demographic need **if policies were not to change**, along with measures of uncertainty in that prediction. This is a starting point, not a required target or forecast of need;
- planners define changes to policy or its implementation which they and politicians are considering and request the demographers to project the demographic consequences of those changes.

This approach was championed by RJS Baker’s Administrative theory and public administration (1972, not online), and used for example in the Royal Town Planning Institute (RTPI) Cymru’s **Manual of integrated demographic forecasting for local planning in Wales** (PDF, 1.81MB) published in 2017.

The insistence of government demographers that their projections are neither forecasts nor targets is stated clearly no fewer than five times in the Welsh Government’s projected ‘central estimate’ which is the basis of the draft NDF evidence on housing need.

This review clarifies how the continuity ‘central estimate’ of housing need is a helpful starting point, but misleading if seen as prescriptive because, by its nature, it does not accommodate new policy.

The Welsh Government’s estimate of housing need – methods and interpretation

This section describes the methods used by the Welsh Government to estimate **Housing Need 2018-2038**, and **Housing Need by Tenure**, two articles published in 2019 and used in the draft NDF.

Box 1, starting on page 5 of this briefing, describes the methods of population and household projection. In summary, future housing need is projected on the simple but transparent continuation of past fertility, mortality, migration and household formation into the future. This ‘continuity’ is sometimes referred to as ‘trend-based’, ‘business as usual’, or ‘policy-off’: it assumes that the impact of past policies on migration and household formation will continue unchanged. To this future need Welsh Government has added an estimate of currently unmet need due to those unable to enter the housing market for lack of income.

The methods are generally standard but the following improvements in content and interpretation are needed:

- The range of variant projections published by the Welsh Government, fortuitously or by design, includes two on either side of the central projection for Wales as a whole. The range is interpreted as a maximum and minimum need for housing (the Welsh Government articles on housing demand talk of need ‘up to’ the top of the range). However, the range cannot be interpreted as a maximum and minimum as the variants are arbitrary. Experience in the first four years of the projection is already considerably outside the range (see Section 4).
- Different methods are used in each country of the UK to represent household formation, but no uncertainty from this source is included in the draft NDF’s range of housing need. It is not that one or other method is more acceptable or more accurate but that the uncertainty about future household formation adds to the range of potential future housing need.
- By accepting the Welsh Government’s central estimate, the draft NDF aims to satisfy currently unmet housing need by 2023. This is in addition to satisfying housing need emerging from continuing demographic change. It is a policy aspiration that will require planned mechanisms to achieve.

- Unmet need is under-estimated in the draft NDF’s central estimate: is there an intention to meet the needs of adults living in their parental home because they cannot afford a market-rent home? of the street-homeless? or of families sharing another’s household space but are not officially overcrowded? These questions are excluded from the measure of unmet need, which is as stated, an underestimate (**Housing Need 2018-2038**, p12).
- An allowance for unoccupied new homes (vacant dwellings and second homes) should be included in the need for additional housing units.
- The proportion of households requiring ‘affordable housing’ is estimated from the whole population and then applied to the new housing need. The suitability of this assumption is neither explicit nor tested.

Comment on the role of an ageing population on housing need could be better evidenced in the NDF, and the housing need articles that inform it.. Using Welsh Government figures, Table 1 below decomposes the expected newly arising need for housing units, into that due to:

- increase in population;
- a change in the age composition of the population, principally ageing; and
- projected changes in household formation.

Table 1: The draft NDF’s central estimate of newly arising need for housing units, 2018 - 2038

<i>Change in household numbers 2018-2038 due to:</i>				
	<i>Change in Total Population</i>	<i>Change in age structure</i>	<i>Change in household formation</i>	<i>Total change in number of households</i>
Wales	57,074	43,273	8,001	108,347
North	9,523	9,552	-869	18,206
Mid & South West	7,535	12,871	1,797	22,204
South East	40,015	20,849	7,072	67,937

Source: Calculated by the author from Welsh Government household projections used by the NDF.

Age structure is responsible for increasing housing need when there is a shift to ages that are usually in smaller households, including the elderly. The proportion of those aged 65 and older relative to those aged 16-64 is to rise throughout the period 2018-2038 in every local authority area in Wales, and in Wales as a whole rises from less than a third to a little over a half. Table 1 shows that this changing age structure is expected to be responsible for nearly half of the growing housing need in Wales (43,000 of 108,000), and for over half of the growing housing need in North Wales and Mid & South West Wales, the two regions that are already more aged.

Box 1: Methods for the continuity ‘central estimate’ of housing need, unmet need, and the proportion requiring below-market housing

◆ **Sub-national population projections.** The **Welsh Government projections technical report** (PDF, 1.04MB) describes the methods for population projections, a range of variants, and for newly arising need for housing units. For population, the method first estimates past fertility, mortality, UK migration and migration overseas for each local authority area. It uses the average of the past five years as an assumption for the future development of the population. The calculations are made for males and females and for each single year of age. Future trends for fertility and mortality are taken from a national projection for Wales. The local authority population projections are not constrained to agree with the national projection results.

This method of ‘cohort component projection’ is common to each UK country’s statistical agency (apart from the lack of forced control to the national results which is a Welsh Government decision). It is the strategy recommended by the United Nations.

◆ **A range: variants to sub-national population projections.** The Welsh Government method makes four variations to the assumptions – higher growth from fertility mortality, lower growth from fertility and mortality, a 10-year average of past migration, and zero migration. These are applied to each local authority area. The approach is a common one to illustrate uncertainty in a projection due to demographic events being imprecisely predicted. The approach has been welcomed by local authorities and other users of the projections. Wales has been in the forefront of publishing such variants.

◆ **Newly arising need for housing units.** This is measured in the Welsh Government's sub-national household projections. The method starts with the continuity population projection and its age-sex composition, deducts the number of residents in communal establishments (prisons, care homes, boarding schools, prisons and so on), and applies household membership rates to the remaining future 'household population'. The membership rates show the proportion of all people in each size of household (1-person, 2-person, and so on), taken from the past two national censuses and projected forward. The resulting future number of people in each size of household is divided by the household size to give the number of households. The annual change in this projected number of households is used by the Welsh Government as its central estimate of 'newly arising need'.

The methods of household projection used in the four UK countries are different as described in a **Household Projections Comparative Guide**. A major difference is that in England and Scotland household representative (headship) rates are used rather than household membership rates as in Wales and Northern Ireland. One cannot say that the Welsh Government method is better or worse than others. It is commendable that the method is transparent and available.

◆ **Currently unmet housing need.** Currently unmet housing need, additional to the newly arising need for housing units, is calculated as the sum of:

- ◆ homeless households in temporary accommodation: and
- ◆ families concealed within another household that is overcrowded.

The Welsh Government directly measures unmet need in each local authority area, a practice discontinued in other parts of the UK even though the existence of unmet need or 'historic undersupply' is often highlighted in planning discussions and for example in **England's planning advice**.

◆ **The proportion of households that can afford housing provided by the market.** Annex 4 of the Welsh Government article on housing need by tenure describes the method in detail. In its article, 'tenure' is a dichotomy between those households that can afford market housing and those who cannot. Assumptions about four variables are made. The percentage of household income that should be used on housing (central estimate of 30%) is matched to the median private rent to determine the minimum income required to enter the market, after applying an assumed annual growth in private rent (3%). The proportion with income above this minimum is calculated from an income distribution calculated from surveys (with median income assumed to grow annually by 3%, and an assumed slowly growing inequality). This calculation of the proportion of households which can afford market rent (a central estimate for Wales of 53%) is applied to the newly arising need for housing units, described above. In addition, all of those with currently unmet housing need are assumed to be unable to afford market values.

While this is also the approach now used in Scotland, there is not an accepted standard method, nor is it the approach used previously in Wales by **Holmans in 2015** (PDF, 1.6MB) which focused on the changing age structure of the future population.

Updating the estimates of housing need as new data becomes available

The **article** by the Welsh Government estimating housing need states that a review will be undertaken ‘as and when more up-to-date information becomes available’ (p1). This commitment should be explicit in the NDF and apply to SDPs and LDPs.

Demographic data will be updated several times during the planning horizon of each SDP, underlining the important steer from the Minister for Housing and Local Government, Julie James, in her preface to the draft NDF, arguing for resilience to change rather than fixed predictions (p5):

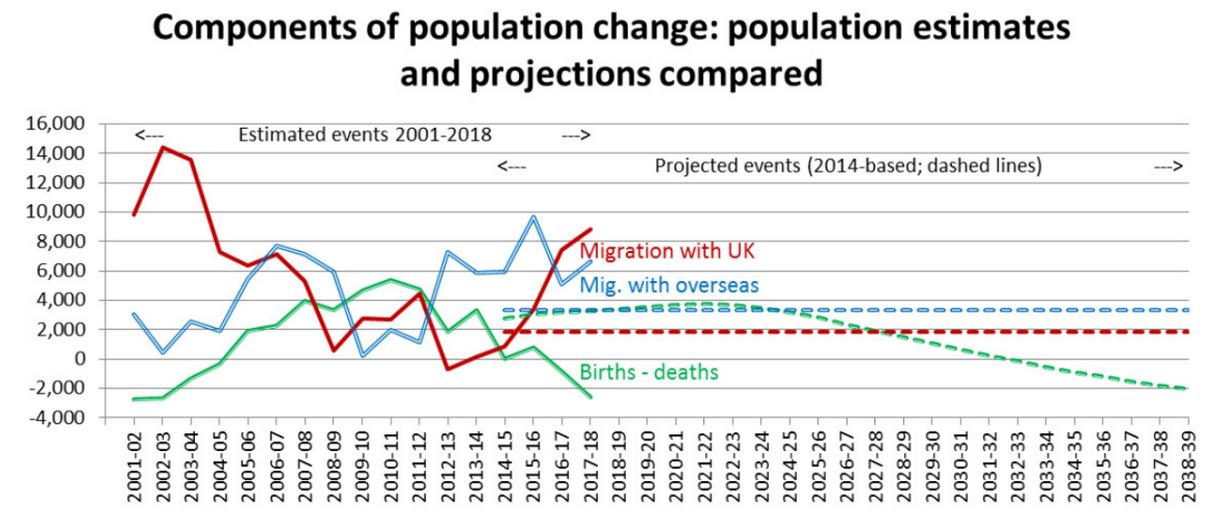
The challenge for a plan like the NDF is not necessarily to predict how Wales might change over the next twenty years, but to make sure we can build a society and an economy that is flexible and resilient, to enable all of us to benefit from the changes in a sustainable way.

Demographic change has already deviated from the continuity ‘central estimate’ of housing need, showing the need for contingency planning. The continuity ‘central estimate’ uses the 2014-based demographic projections. The four years of subsequent population estimates that have been released by ONS for Wales up to 2018 show an increase in population higher than the central projection by 42%, outside the range in the draft NDF not just for 2018 but for all years up to 2030 (see Chart 1 below).

The most recent four years have seen much higher net in-migration to Wales from other parts of the UK than foreseen in the central estimate, as well as higher net immigration from overseas, while the deficit of births in comparison to deaths has also been greater. Overall these differences add up to an increase in population from 2014 to 2018 which is 42% higher than expected in the figures that the draft NDF uses.

The 2017-based population and household projections for Wales and its local planning authorities are likely to be released by the Welsh Government before the finalised NDF is published. The Welsh Government’s **Chief Statistician has warned** that the revised projections will differ significantly from the current set on which the draft NDP is based. National fertility and mortality trends have already been revised. Economic data to update the calculations for market and non-market needs will also be revised.

Chart 1: Components of population change: population estimates and projections compared



Source: Prepared by the author from Mid-Year Estimates 2001-2018 published by the Office for National Statistics, and the Welsh Government 2014-based population projections (sum of 22 local authorities).

All these revisions should be included in the housing need estimates of the final NDF. However, it must be recognised that there always remains a lag between the evidence available to prepare a plan, and the subsequent evidence that builds up almost continuously as the plan is being discussed and while it is in force. The NDF and Plans must explicitly build in contingency and responsiveness as a part of their resilience

Plans, policies and housing need

The draft NDF has no caution against targets based on the Welsh Government articles' continuity 'central estimate' and mentions this as the only quantification of need in each region (pp 51, 58, 66).

The spatial strategy of the draft NDF (p24) expects developments to 'predominantly' remain in the same areas of Wales as have seen economic and housing development in the past: Cardiff, Newport and the Valleys; Swansea Bay and Llanelli; Wrexham and Deeside. It is not calling for a redistribution of population. This stability justifies the use of the continuity 'central estimate' as a starting point.

Updating the continuity 'central estimate' as discussed in Section 4 is one demand that planning should make of demographers. The draft NDF figures of housing need should not be those used in the SDPs.

In addition, planning must go beyond repeating an imperfect past. If the Welsh Government and local planning authorities wish to implement practical policies that change the distribution of residents across Wales or change access to housing from some sectors of the population, then they will need to consider scenarios of housing need that reflect these policies. The planners require of demographers more than the continuity projections.

With this perspective it has been the view of RTPI Cymru that alternative demographic scenarios are required in the preparation of LDPs (RTPI Cymru's **Process for Developing Housing Evidence for LDPs**).

It is not being suggested that **aspirations** for more housing should drive a plan for releasing land for housing. This would likely only lead to cherry-picking of land for development, the opposite of planning. On the contrary, coherent Plans include policies that will achieve their targets, and policies adopted are tested for their impact on housing need.

At present the NDF's policy on affordable housing is more of an aspiration than a plan, in Policy 5, p31:

The Welsh Government will increase delivery of affordable homes by ensuring that funding for affordable homes is effectively allocated and utilised. Strategic and Local Development Plans should develop strong evidence based policy frameworks to deliver affordable housing, including setting development plan targets based on regional estimates of housing need and local assessments. In response to local and regional needs, they should identify sites for affordable housing led developments and explore all opportunities to increase the supply of affordable housing.

Scenarios for policy-led demographic projections of housing need

Satisfying previously unmet need within five years is an example of a change of policy already implicit within the draft NDF by adopting Welsh Government's central estimate of housing need, which assumes currently unmet need will be cleared during 2018-23. By definition unmet need is need that has not been met by previous Plans and is in addition to the newly forming households projected by continuing current demographic change. For demographers to provide projections of housing need consistent with these policy intentions, planners will need to answer more specific questions, for example:

- Is the target to satisfy current unmet housing need correct, i.e. ambitious enough, too challenging, or just right? The Welsh Government believes it is an underestimate of unmet housing need. Have planners and politicians agreed that this should be the limit of meeting unmet need?
- Once the target is set, are the mechanisms that will achieve it explicit in the draft NDF? Should the draft NDF outline what form they may take in the SDPs and LDPs, or explicitly leave it to those Plans to devise?

Achieving a specific proportion of non-market housing is equally a target that requires mechanisms to fulfil it. There is a mix of mechanisms by which this could be achieved, from direct social housing, subsidies to housebuilders to achieve lower prices, mixed rent/purchase schemes, restrictions on buy to let, other levers to reduce rents and house prices, and so on.

It is not for this review or for demographers to suggest what those policies or mechanisms might be, but the mechanisms that planners and politicians propose require analysis of their likely impact which will include economic and demographic evidence.

Transport policy may, by design or as an unintended consequence, change the attraction of locations for employment and housing. Modelling the demographic consequences and redistribution of housing need is part of the development of SDPs and LDPs.

Resources to allow local planning

Collaboration between planners, demographers and other analysts underpins effective LDPs, and requires support.

The Welsh Government updates the continuity ‘central estimate’ projections authoritatively, making use of an advisory group of local planning authority staff. This collaborative approach is commendable and leads to little argument about these continuity projections.

However, Plans assess local housing need, going beyond the ‘predict and provide’ starting point of nationally prepared continuity projections. Few local planning authorities have the capacity to develop policy-led assumptions and their demographic consequences for housing need, to stand up to scrutiny. The scrutiny need not involve the technical wrangling that beset Planning Inspections in England but does require a supportive questioning to ensure that the elected authorities support their vision and aspiration with policies that will be more effective because tested and justified with evidence.

Recommendations

The NDF can be improved by recognition of the following.

1. The ‘central estimate’ of housing need prepared by Welsh Government can be a guide to policies of providing for newly arising housing need and providing for those currently in need of housing (unmet need). It is neither a target nor a forecast.
2. The central estimate is in need of updating due to existing new evidence, and will need to be updated within SDPs as each year’s evidence becomes available.
3. The range of possible housing need is larger than that prepared by Welsh Government due to uncertain population change, uncertain household formation, lack of allowance for unoccupied housing, and an underestimate of currently unmet housing need.
4. Plans must be resilient and incorporate contingency to cope with evolving assessments. Future need is not predictable with accuracy, and new relevant evidence becomes available frequently.
5. The needs and representation of a significantly larger proportion of older residents deserves more attention in the NDF and SDPs.
6. The NDF should specify mechanisms for satisfying currently unmet need, or require SDPs to specify such mechanisms.
7. The NDF should specify mechanisms to ensure that those unable to afford market housing get accommodation they can afford, or require SDPs to specify such mechanisms.
8. Local plans involve the assessments of housing need and of the demographic consequences of providing housing or employment. Convincing evidence underpins policy, helps to implement it, and stands up to public scrutiny.