# Core Homeless Estimates and Projections for Wales as reported in the Homelessness Monitor Wales 2025

# **Technical Note**

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# Overview

The previous edition of the Homelessness Monitor Wales was published in 2021. It was accompanied by a full Technical Report on the Core Homeless Estimates and Projections for both Scotland and Wales (Bramley 2021). That reflected a comprehensive update and upgrade of both the base period estimates and the projections, and a very full account of both was provided in the Technical Report.

The Homelessness Monitor Wales published in 2025 was based on work done during 2024 using data compiled for periods up to 2023/4, but the main base period for the estimates of actual core homeless numbers as reported in Chapter 5 was up to 2022/23. The projections part of the analysis in that chapter ran forward to 2041, including projected numbers at 5 yearly intervals from 2026.

This Technical Note provides background information on the data sources, assumptions and judgements used to generate the base period estimated numbers. It goes on the review the models, methods and assumptions used to project these numbers forward, both in a neutral baseline scenario and for 11 variant contextual and/or policy scenarios, singly and in sequential combination.

Readers should be aware that, while we use whatever primary and secondary data are available in suitable form for Wales, nationally and down to local authority level, in order to fill some gaps and to strengthen the evidence base about trends and relationships, some analyses which cover Wales and Scotland together, and some that refer to Great Britain (GB) as a whole or (in one case) England are used to estimate certain key numbers and relationships.

# Core Homelessness

The core homelessness concept was developed with Crisis in 2017, arising from a search for a robust measurement framework that overcomes limitations in traditional approaches to homelessness measurement used in the UK. In particular, the reliance on statutory homelessness statistics, which track only those people seeking and eligible for LA homelessness assistance, vary in their coverage over time, region and UK nation depending on eligibility, supply-demand pressures, individual awareness and administrative discretion. At the more extreme end, periodic counts or estimates of rough sleeping, and associated management information relating to rough sleepers in touch with relevant local services, persistently underestimate the total population affected, judging by other independent sources<sup>1</sup>.

An important point to underline about Core Homelessness is that it is a 'Point in Time', or Stock measure (also sometimes called a 'snapshot'). This helps to ensure consistency and avoid double counting. However, many of the numbers which are frequently quoted from the Statutory Homeless system (for example new applications, cases accepted as owed a main duty, cases where prevention has been successful in some sense, or cases rehoused) are not stocks but rather annual flows (some key numbers quoted are stocks, particularly temporary accommodation numbers at a given date).

This definition has remained basically unchanged since 2017, but the practical detail of measuring some elements has been refined somewhat over time. This is particularly the case for Sofa Surfing, where additional questions in the English Housing Survey enabled a distinct group of people staying temporarily with other households, who would otherwise have been homeless, and where their presence would have led to overcrowding, to be included (see footnote 3). During the Covid emergency period, various special hotel and other accommodation was brought into use for a period and this was generally treated as 'Hostels etc.' where data were available. The categories of temporary accommodation as reported by local authorities vary between the UK countries and significant numbers may be in 'other' categories which may be a mixture of 'suitable' and 'unsuitable' types.

<sup>&</sup>lt;sup>1</sup> See in particular Bramley, G. (2021) *Research on core homelessness and homeless projections: Technical report on new baseline estimates and scenario projections*, Edinburgh: Heriot-Watt University. **10.17861/fex5-jg80** 

| Category                                 | Description  |
|--|--|
| Rough Sleeping                           | Sleeping in the open e.g. in streets, parks, carparks, doorways  |
| Unconventional<br>Accommodation          | Sleeping in places/spaces not intended as normal residential<br>accommodation, e.g. cars, vans, lorries, caravans/motor<br>home, tents, boats, sheds, garages, industrial/commercial<br>premises   |
| Hostels etc.                             | Communal emergency and temporary accommodation<br>primarily targeted at homeless people including hostels,<br>refuges, shelters (and special COVID-19 provision)   |
| Unsuitable<br>Temporary<br>Accommodation | Homeless households placed in temporary accommodation of<br>certain types, viz Bed and Breakfast, Private Non-self-<br>contained Licensed/Nightly Let, and Out of Area Placements  |
| Sofa Surfing                             | Individuals or family groups staying temporarily (expecting or<br>wanting to move) with another household, excluding<br>nondependent children of host household and students <sup>2</sup> , who<br>are also overcrowded on the bedroom standard; this also now<br>includes cases of people staying temporarily with the<br>household who would otherwise have been homeless, which<br>would also have infringed he bedroom standard <sup>3</sup> |

Table A.1: Core homelessness categories and definitions

#### **Base Period Estimates**

For the base year (2022, generally based on financial year), numbers for each category have been estimated for Wales as a whole and for each local authority. Table 3 identifies the sources for each element and comments on particular assumptions and weightings applied. Judgement is used in some instances to determine relative weightings, or when to take the higher of two estimates rather than the average. In general, with the exception of Unconventional Accommodation, we have at least two independent estimates to draw upon.

For rough sleeping, as already indicated, we reflect a wider body of evidence previously reviewed in taking the view that estimates based on street counts and/or local outreach etc. service contact lists are generally underestimates of the true overall numbers, but the degree of this underestimation varies depending on among other things the geographical character of a locality, the extent of development of the local network of services, and the demographic profile of the at risk population. It is noteworthy that, as a likely result of these differences, we

<sup>&</sup>lt;sup>2</sup> Strictly, the exclusion is intended to cover all-student sharing households

<sup>&</sup>lt;sup>3</sup> As in the more recent Monitors for England and Scotland, we have included an additional allowance for households reporting having people staying with them temporarily in the last year, and thereby overcrowded, who would otherwise have been homeless, based on recent data from the English Housing Survey.

find that the count/estimate numbers for the main cities of South Wales tend to be higher than the numbers generated by our predictive model based on national surveys (Family Resources Survey (FRS) + Destitution in the UK (DUKS)), whereas for most other local authorities in Wales the count/estimates are well below the predicted levels. From our national work on core homelessness over recent years we regard the Destitution (DUKS) survey as probably the best estimate of national numbers at a point in time.

The policy context in Wales has been changing and in particular there has been a significant move to treat rough sleeping as a basis for priority need in the statutory homelessness system, more or less coinciding with the special measure taken during and after Covid to address rough sleeping and the types of temporary or emergency accommodation offered to those at risk. Whereas rough sleeping appeared to have been increasing up to 2019, numbers dropped sharply during the Covid year (2020), but have climbed back up since, albeit to a lower level than that of years 2016-19.

Table A.2 Sources and assumptions underlying base year estimates of each category of core homelessness in Wales, showing central, low and high estimate assumptions.

| Category of<br>Core<br>Homelessness      | Central Estimate   | Notes & comments   |
|--|--|--|
| Rough Sleeping                           | Larger of {Count estimate or<br>(0.35 x Count/estimate +0.65x<br>Family Resources Survey-<br>Destitution in the UK 2022<br>survey composite model<br>prediction)} <sup>4</sup> | In general, the local count estimates are<br>higher than the predictive model in the large<br>cities of South Wales, but lower in most<br>other areas.   |
| Unconventional<br>Accommodation          | Public Voice Survey 2020<br>predictive formula   | This sample survey uses retrospective<br>questions to flag such experiences and a<br>logistic regression model to predict them.<br>However, numbers are significantly driven<br>by other core homeless experiences<br>including rough sleeping and hostels.                              |
| Hostels etc. (incl<br>shelters, refuges) | Higher of LA return or DWP FOI<br>number for short term exempt<br>accom  | DWP numbers adjusted to exclude<br>transitional & rehab type accom, and<br>recognising v high proportion of hostel users<br>on HB.   |
| Unsuitable<br>Temporary<br>Accommodation | Higher of LA return or DWP FOI   | LA return includes Bed & Breakfast & half of<br>'Other' T A. DWP includes B & B, non-<br>selfcontained licensed, & half of 'Other', all<br>x 1.3 (to allow for non HB cases). Note that<br>LA & DWP based numbers are similar.   |
| Sofa Surfing                             | Average of UKHLS & LFS<br>estimates + 20% adjustment for<br>temporary residents; and FRS +<br>DUKS composite model<br>prediction 2022  | The FRS+UKHLS estimates (enhanced for<br>non-usual residents) give estimate of 5,860<br>for 2022 but 7,190 on 3 year moving<br>average; the FRS+DUKs composite model<br>gives 6,525 which sits centrally between<br>these two and also provides a consistent LA<br>level set of numbers. |

We do not have any more recent data specifically on the Unconventional Accommodation category following the 2020 Public Voice survey. As indicated in Table comment, the predictive model from that source underlined the close link with other core homeless experiences, including rough sleeping and hostels.

For hostels and other emergency short term congregate accommodation (including shelters and refuges) our best source is Department for Work and Pensions (DWP) Single Housing Benefit Extract ('SHBE') data, adjusting for excluding certain types of transitional and rehab

<sup>&</sup>lt;sup>4</sup> For three local authorities the count estimate was adjusted to a more realistic level comparable with other similar authorities

accommodation and the (very small) proportion of such cases not on Housing Benefit (HB) (confirmed by recent national review of Supported Accommodation from Sheffield Hallam University). However, we take account of Local Authority (LA) data where relevant.

For unsuitable temporary accommodation we have two sources of comparable value which in this case give relatively similar numerical estimates, and we take the larger of the two for each local authority area. This category comprises particularly Bed and Breakfast (alias Board and Lodging in DWP categories) but also other private nightly let non-selfcontained. We also include a proportion (half) of the 'other' categories in both sources on grounds that we believe some of this (often a growth area) is really of the latter kind. In England, a very important additional element of unsuitable TA is comprised of Out of Area Placements. This does not appear on the face of it to be a significant issue in Wales or Scotland, although it is possible that some placements do in practice cross LA boundaries (but this is not recorded in the routine statistics).

Last but not least, as this is numerically the largest part of core homelessness, we have sofa surfing. The estimates for Wales are derived from three sources. Two of these are national surveys – the Labour Force Survey (LFS) and the UK Household Longitudinal Survey (UKHLS), and these both enable us to trace a time series for each UK country for around a decade or more. We suggest looking at a moving average to smooth out some annual fluctuations. Both of these surveys can be and have been recently criticised for issues around their sampling and response, including post-Covid changes in both cases and a longer standing issue of uncompensated sample attrition in UKHLS. Therefore, we also put weight on a new version of the composite modelling technique applied to the combination of Destitution in the UK and the Family Resources Survey, which can be used to generate predictions of numbers of core homelessness as a whole at local authority level<sup>5</sup>. We apply a general factor of 55% to get the typical share of core homelessness represented by sofa surfing. This produces numbers close to those derived from the LFS and UKHLS.

#### Revision of annual 'actual' series

In the main Homelessness Monitor publications we provide annual or bi-annual time series estimates for the estimated 'actual' value for each of the five main components of core homelessness from 2012 to the base year, in this case 2022. These may be simply based on the previous published estimates, at least up to the last published analysis base year (which was 2019 for Wales). However, where there has been a definitional change/extension, as in the case of sofa surfing, this needed to be applied retrospectively as a proportional adjustment to the previous figures. Where we have administrative-based numbers, as with LA returns and DWP Freedom of Information (FOI)-derived SHBE numbers, we can use these to help populate the years between the previous base and the new base year, which applies particularly to hostels etc. and unsuitable TA. There are also annual numbers from

<sup>&</sup>lt;sup>5</sup> The composite modelling technique is developed in two key papers, Bramley, G. & Fitzpatrick, S. (2023) 'Capturing the neglected extremes of UK poverty: a composite modelling approach to destitution and food bank usage', *Journal of Poverty and Social Justice*, pp1759- DOI: <u>10.1332/175982721x16649700901023</u>; and Bramley, G. & Fitzpatrick, S. (2024) 'Modelling homelessness risks and drivers across the accommodation spectrum: a composite survey approach in Great Britain.' Paper presented in European Network for Housing Research Conference, Delft, Netherlands, August 2024, WELPHASE workshop.

count/estimates of rough sleeping, although these may be affected by changing policies and recording. For unconventional accommodation and sofa surfing, we are mainly reliant on the forecasting models, which can be used to back-cast to help fill in the intervening years at LA level, although we would also in the case of sofa surfing control this to the national time series derived from LFS and UKHLS.

# **Forecasting Models**

In this section we review updates and changes to the very considerable number of separate statistical models used to predict a range of variables which constitute the Sub-Regional Housing Market Model (SRHMM) and its extensions specifically designed to make conditional forecasts of core and statutory homelessness. We first review models within the general SRHMM which aim to forecast key economic, social and demographic numbers which drive housing markets, housing needs and requirements, and then go on to review models for specific elements of homelessness (including some statutory system numbers) and of course key elements of core homelessness.

The models fall broadly into two classes:

- Aggregate models typically focused on panel datasets local authorities over annual time series (over varying length)
- Micro household survey-based models to predict particular circumstances or experiences as a function of both individual/household attributes and experiences and also of market or socio-demographic characteristics of the local area where those individuals are situated (and often the year of observation)

It should be noted that models of the first type are estimated separately for Scotland and Wales (together) from the equivalent estimation process of models for England. Allowance for policy and other differences between Wales and Scotland are generally allowed for through the use of dummy (one-zero flag variables) to highlight how different Wales is from Scotland, sometimes specific also to time periods (e.g. post 2014 or 2020 reforms). Such flag variables may also be used to flag major events, such as Covid or the Financial Crisis of 2009-10.

Where models have only changed marginally from those previously described in the 2021 Technical Report, we do not provide a full table of numbers but just highlight any noteworthy differences

#### Models of key housing market variables

#### House prices

The house price model plays an important role in driving the overall housing market including the private rental market. The model used is well established and although it has been updated there are very few significant changes in the strength of particular effects. It is fitted to quite a long panel dataset (2007-2022) for LAs in Scotland and Wales, and uses a 'partial adjustment' form whereby the lagged value of the (log of real mix-adjusted) house prices plays a strong role, alongside 13 other predictors (all bar one significant). The fit of the model is very high (Adj R-sq 0.984). One new variable which came in as significant was a dummy variable to capture the post-Covid house price bounce. An improved variable to capture the

effect of lagged private completions had the expected negative (moderating) effect. While the factor to capture the oil price effect on Aberdeen/shire dropped to a non-significant level. Other policy-related variables with significant impact included a credit availability index, Buy to Let tax measures introduced post-2016 (negative) and extent of second homes.

#### Private housebuilding completions

This is a similar long panel (2005-22) model using a variant of the partial adjustment approach (the lagged completions variable relates to the time-varying part). Given the strong current policy interest in boosting housebuilding and the role of different factors in that, it is of interest to show the whole model, as in Table A.3.

# Table A.3: Model for private completions as % of households, Scotland-Wales LAD Panel, 2005-22

| Variable description                 | Varname    | Coeffic | Std<br>Coeff | Signif  | Signif | Collinearity |
|--------------------------------------|------------|---------|--------------|---------|--------|--------------|
|                                      |            | В       | Beta         | t stat  | p      | VIF          |
| 1                                    | (Constant) | 0.466   |              | 15.763  | 0.000  |              |
| Lagged priv comps rel level          | tvppcmp_1  | 0.533   | 0.434        | 17.854  | 0.000  | 1.160        |
| Change in house price %              | pchgpric   | 0.007   | 0.136        | 5.322   | 0.000  | 1.275        |
| Lagged new plg perm's % hhd          | ppflow_1   | 0.068   | 0.201        | 8.290   | 0.000  | 1.156        |
| Log of lagged plg perm's stock % hhd | lpdopp_1   | 0.079   | 0.217        | 8.251   | 0.000  | 1.352        |
| Dummy for financial crisis           | fincrisis  | -0.079  | -0.090       | -3.552  | 0.000  | 1.260        |
| Share of small sites in plg perm's % | psmst15    | 0.215   | 0.070        | 2.742   | 0.006  | 1.265        |
| Social completions % hhd             | pscmp      | 0.291   | 0.117        | 4.588   | 0.000  | 1.271        |
| Lagged vacancy rate %                | pvac2_1    | -0.012  | -0.063       | -2.568  | 0.010  | 1.196        |
| Dummy variable for Wales=1           | Wales      | -0.178  | -0.269       | -10.150 | 0.000  | 1.376        |

a. Dependent Variable: ppcmp

b. Weighted Least Squares Regression - Weighted by hhdwgt

| in ange | Model<br>Summary |         |           |          |          |       |
|---------|------------------|---------|-----------|----------|----------|-------|
|         | -                |         | R         |          | Std Err  |       |
|         | Model            | R       | Square    | Adj R Sq | Est      |       |
|         | 1                | 0.72    | 0.519     | 0.514    | 0.21820  |       |
| ANOVA   |                  |         | v similar |          |          |       |
|         |                  |         | degr      |          |          |       |
| Model   |                  | S of Sq | Frdm      | Mn sq    | F ratio  | Sig.  |
| 1       | Regression       | 48.460  | 9         | 5.384    | 113.092  | 0.000 |
|         | Residual         | 44.945  | 944       | 0.048    |          |       |
|         | Total            | 93.404  | 953       |          |          |       |
|         |                  |         | 17.6      | years    | <b>I</b> |       |

In general, most effects are in line with expectations from general urban economic theory and previous modelling work in this area. New private completions are driven by the momentum of previous levels of output (sites in progress), changes in house prices, the flow and stock of planning permissions, with negative (dampening) effects from the financial crisis, housing vacancy rates, and being in Wales (vs Scotland). Interestingly (and in line with all comparable

modelling for England), having more social housing completions is associated with higher levels of private completions – in other words, social housing does not crowd out private development, it crowds it in. Improvement in this round's model is that with better planning data (from Emap-Glenigan) the impacts of the stock as well as the flow of new planning permissions have a clearer and stronger role, as expected. In contrast with findings in England, across Scotland and Wales having more permissions in small sites seems to be associated with higher output.

In simulations of different policy scenarios we would vary planning permissions and social housing numbers by different amounts, whether separately from or in some cases in conjunction with wider scenarios for economic growth and regional balance.

#### Private market rents

It should be clear that private market rents are likely to be significant for homelessness, as rental affordability is a critical factor both for the risk of becoming homeless and for the ability of LA prevention or relief activity to secure affordable tenancies or households presenting as homeless or in TA. Table A.4 presents the model used to predict rents, based on a combination official rent statistics and equivalent data from the Zoopla listings agency.

| Model                            |               | Coeff   | Std Coeff | t stat | Signif | Collinear |
|----------------------------------|---------------|---------|-----------|--------|--------|-----------|
| Variable description             | Varname       | В       | Beta      |        | р      | VIF       |
| 1                                | (Constant)    | 28.635  |           | 2.324  | 0.020  |           |
| Lagged real median rent 2bed £pw | rlmdmrentav_1 | 0.153   | 0.151     | 3.847  | 0.000  | 2.593     |
| Real mix adj house price £'000   | rlmaprick     | 0.418   | 0.604     | 14.365 | 0.000  | 2.969     |
| Gross all in-migration rate %    | pginmr        | 0.961   | 0.054     | 1.873  | 0.062  | 1.392     |
| Lwr quartile earnings FT & PT    | lqeft         | -0.117  | -0.168    | -5.952 | 0.000  | 1.336     |
| Lone parent families %           | plpfam        | 3.243   | 0.134     | 4.267  | 0.000  | 1.651     |
| Multi-adult households %         | pmult         | 2.500   | 0.152     | 4.509  | 0.000  | 1.904     |
| Vacancy rate                     | pvac2         |         |           |        |        |           |
| Private completions rate         | ррстр         | 8.372   | 0.072     | 2.450  | 0.015  | 1.454     |
| Aberdeen/shire oil price         | ababoil       | 54.339  | 0.314     | 10.236 | 0.000  | 1.573     |
| Rural dummy                      | rural         |         |           |        |        |           |
| Wales                            | Wales         | -15.687 | -0.228    | -6.092 | 0.000  | 2.350     |

| Table A.4: Model for private market rents, re | eal £pw @2011 prices Scotland-Wales LAD |
|---|---|
| Panel, 2012-22                                |   |

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b. Weighted Least Squares Regression - hhdwgt

Model Summary

|       | Model      | R                 | R Square  | Adjusted<br>R Square | Std. Err<br>Estimate |       |
|-------|------------|-------------------|-----------|----------------------|----------------------|-------|
|       | 1          | 0.804             | 0.646     | 0.641                | 20.55600             |       |
| Model |            | Sum of<br>Squares | Degr frdm | Mean<br>Square       | F                    | Sig.  |
| 1     | Regression | 458198.600        | 9         | 50910.960            | 120.500              | 0.000 |
|       | Residual   | 250586.400        | 593       | 422.570              |                      |       |

ī.

| <br>Total | 708785.000 | 602  |       |  |
|-----------|------------|------|-------|--|
|           |            | 11.1 | years |  |

Again, this is a partial adjustment form of model but in this case the lagged rent variable does not play such a strong role. It is clear that the strongest driver of rents is house prices. Other variables have effects in line with expectations, with the possible exception of lower quartile earnings (whose more direct effect might have been captured via house prices). Two variables used in previous iterations, the housing vacancy rate and a flag for rural areas, have ceased to be significant. Demographic factors pushing up rents include overall gross in-migration (domestic plus international), and lone parent families and multi adult households (groups more reliant on renting). The positive effect of private completions may (in this period) capture an age/type/quality factor, insofar as high levels here may mean many more modern flats in central and waterfront locations, which tend to command a higher rent (noting that the rent variable is in effect adjusted for size mix). While Aberdeen oil still pushes up rents, being in Wales is associated with lower rents, allowing for the other factors in the model.

The private rent factor may feature in homelessness related models directly, or in the form of an affordability ratio (to local incomes) or in the form of the excess or gap between rents and LHA levels

#### Private market renting share

Another companion model is used to predict changes in the level of the private renting share of all households' tenure, for the same data set (LAs in Wales and Scotland, 2010-2022). This again uses a partial adjustment form, and this time the lagged PR share is much the strongest predictor variable, unsurprisingly. Other factors which tend to significantly increase the PR share are more rapidly rising prices (the investment motive, plus affordability on the demand side), younger adult population share (25-34), Asian heritage population, areas with more hotel or B&B accommodation, and big urban centres. Negative factors reducing the share include larger share of Black ethnicity population, more private completions (weak effect), higher median earnings (affordability to buy) and the Buy-to-Let tax changes.

While the overall fit of this model looks good (R-sq 0.893), this is strongly driven by inertia.

#### Housing vacancy rate model

We do include a predictive model for housing vacancy, although in theory this should be determined mechanistically, subject to measurement error in key factors like household and dwelling numbers/changes, sharing and second homes. This model (again for 2010-22) is dominated by the lagged vacancy rate, and shows some expected effects including positive relationships with younger age population, private renting and second homes, and negative with house prices and with poverty measured by the IMD low income score (the latter being different from England). Also the relationship with the log difference (i.e. change in) the stock-household ratio appears to have a perverse negative sign, but perhaps this is capturing a self-correcting mechanism, although equally likely to reflect data inconsistencies between factors involved mentioned above.

#### Net social relet rate

The net social housing relet rate (lets to new tenants) is one of the most important variables in determining the balance between need and supply in the social housing sector at local level, and as such is likely to influence aspects of homelessness significantly. Developing satisfactory predictive models for relets has been problematic in the context of the projection modelling, on both sides of the Border(s), partly because of problems of (lack of) consistency of data across localities and/or time periods. One long-standing insight is that relets can be driven by quite distinct things, including the demographics of the existing tenant population (ageing and potential mortality, family responsibilities), the economic and market context for people to move on into home ownership or private renting, and the neighbourhood conditions, stability and reputation which may where negative increase exits, and which may be partially related to poverty.

Table A.5 shows the model used in the current iteration of the projections model for Wales, which is a significant improvement on the model previously available.

Table A.5: Net social rented relet rate model for Scotland and Wales, % of social rented households, LAD panel 2011-22

| Model                                |             | Coeffic | Std Coeff | Signif | Signic | Collinearity |
|--------------------------------------|-------------|---------|-----------|--------|--------|--------------|
|                                      |             | В       | Beta      | t stat | р      | VIF          |
| 1                                    | (Constant)  | 0.881   |           | 5.796  | 0.000  |              |
| Lagged log relet rate                | lpnetrlet_1 | 0.705   | 0.754     | 27.584 | 0.000  | 1.207        |
| Credit conditions                    | crbeccslev  | -0.002  | -0.048    | -1.775 | 0.076  | 1.168        |
| Lwr Qtl earnings full<br>& part time | lqefpt      | -0.001  | -0.112    | -4.209 | 0.000  | 1.141        |
| Prop soc renters 65+                 | psrage65ov  | 0.007   | 0.065     | 2.443  | 0.015  | 1.153        |
| Prop soc renter families             | psrlpfamdc  | -0.004  | -0.045    | -1.785 | 0.075  | 1.045        |
| On UC, % all hhd                     | pctonuc     | 0.003   | 0.064     | 2.424  | 0.016  | 1.134        |
| Scottish reg dummy                   | SFE14       | 0.181   | 0.033     | 1.296  | 0.195  | 1.022        |
| Scottish reg dummy                   | SFE15       | 0.139   | 0.038     | 1.503  | 0.133  | 1.046        |

a. Dependent Variable: Ipnetrelet

b. Weighted Least Squares Regression - Weighted by

hhdwgt

|       | Model Summary |        |           |          |         |       |
|-------|---------------|--------|-----------|----------|---------|-------|
|       | Model         | R      | R Square  | Adj R Sq | S E Est |       |
|       | 1             | 0.799  | 0.639     | 0.634    | 0.23800 |       |
| Model |               | Sum Sq | degr frdm | Mn Sq    | F ratio | Sig.  |
| 1     | Regression    | 58.865 | 8         | 7.358    | 129.035 | 0.000 |
|       | Residual      | 33.302 | 584       | 0.057    |         |       |
|       | Total         | 92.167 | 592       |          |         |       |
|       |               |        | 11.0      | years    |         |       |

Again, we are using a partial adjustment model and this seems to work well with a relatively sensible coefficient on the lagged relet rate (0.705). Two key demographic factors relating to the social renter population are included: the % of tenants over 65 and the % of lone parent family tenants, which are both significant with the expected positive and negative signs.

Higher earnings locally, have an apparently negative effect, which may reflect neighbourhood stability. Poverty, measured by the % of all households on Universal Credit, has a positive effect, reflecting the reasons suggested above. The effects of credit conditions and of earnings are not, on the face of it, as might have been expected, if these were interpreted as predictive of a greater ability to move out to buy or rent privately. However, the credit conditions, if too positive, might push market prices up and make moving more difficult. And the earnings indicator here is the lower quartile of both full and part time earnings, which might be seen as capturing conditions in the lower, more marginal end of the labour market.

### Model for Low Income Score Poverty Measure (SIMD/WIMD)

This is one of a couple of poverty measures which feature in the projections model. The poverty measure is from SIMD/WIMD<sup>6</sup> set of deprivation indicators intended mainly for small areas, and is the central measure of low income poverty derived primarily from DWP benefits data. As with most of the models just reviewed, it is fitted to data over 11 years for the Scottish and Welsh local authorities, and in the recent update the model fitted was only marginally changed from that used before – real household disposable income was substituted for lower decile earnings. The overall model fit (R-sq 0.887) was better than previously and most of the predictor variables had effects in the expected direction, with the possible exception of the unemployment rate (negative). The strongest predictor was lone parent families, followed by working age disability, aged over 65 and single person household. The Wales dummy (flag) variable had a negative sign, indicating higher poverty rates in Scotland after controlling for the factors in this model.

# Models for household formation (headship)

The SRHMM has functions which generate household headship rates – the proportion of adults in broad age groups, 15-24, 25-59, 60 & over who are household representative persons (HRPs). For this iteration of the model for Wales these functions were updated. The relevant predictive functions and control rates were based on a panel of UK Household Longitudinal Survey (UKHLS) data aggregated to Housing Market Area (HMA) levels for each year from 2010 to 2021, covering Great Britain as a whole. Fifteen variables were used altogether for these predictive functions, although not all featured in the models for each age group.

To give a feel for these models, the proportion of HRPs within the 15-24 group was positively related to the previous period value, the incidence of people getting unmarried, and the incidence of moving between LA area, while being negatively related to the proportion of males in the age group, the proportion staying in multi-adult households, those born overseas, and those who were students, and the income level of the household.

Within the age group 25-59 some of the effects were similar, but additional positive factors were Black ethnicity, being in social rented housing; while additional negative factors included being in a couple, and being (or having been in previous wave) a concealed individual household.

Within the age group over 60, an additional positive factor was being in poor health, while additional negatives included Asian ethnicity. However, some variables significant for the core

<sup>&</sup>lt;sup>6</sup> Scottish and Welsh Indices of Multiple Deprivation.

age group (25-59) were not significant for the older age group: couple family and multi-adult household, Black ethnicity, student, or previous concealed status.

#### Models of specific elements of homelessness and core homelessness

#### Statutory homeless application rate

The model used to predict homeless application rates has a long pedigree, going back to DCLG research on 'Estimating Housing Need' in 2009-10 and earlier work by Bramley in 1989 and 1993. The version shown in Table A.6 models the log of homeless applications per 100 resident household as an annual panel over the period 2014-22 across the 54 local authorities of Scotland and Wales. The model 'explains' 56% of the variance using nine variables, all individually significant. The most important positive drivers appear to be the affordability ratio, financial difficulties, Black population, and hostel places. The most important negatives (factors reducing homeless application rates) are being in Wales (as opposed to Scotland) and having a higher level of prevention activity.

| Table A.6: Homeless applications rate model for Scotland and Wales, 2014-22 (log of |
|---|
| homeless applications as % households)  |

| Variable description                 | Varname        | Coeffic | Std Coeff | T stat  | Signif | Collinearity |
|--------------------------------------|----------------|---------|-----------|---------|--------|--------------|
|                                      |                | В       | Beta      |         | Р      | VIF          |
| 1                                    | (Constant)     | -0.608  |           | -5.265  | 0.000  |              |
| Wales dummy                          | walespost14    | -0.441  | -0.641    | -12.234 | 0.000  | 2.382        |
| Hostel places % hhd                  | Phostmax       | 0.900   | 0.269     | 5.411   | 0.000  | 2.136        |
| Low income score %                   | Incscr         | 1.834   | 0.197     | 4.323   | 0.000  | 1.799        |
| Black population %                   | Pblack         | 0.155   | 0.354     | 6.967   | 0.000  | 2.239        |
| Net social lets % hhd                | Pslets         | 0.121   | 0.216     | 4.945   | 0.000  | 1.654        |
| Differential share of lets to h'less | Diffshrsletshl | -0.003  | -0.095    | -2.510  | 0.013  | 1.245        |
| Affordability ratio                  | Affrat         | 1.347   | 0.103     | 2.292   | 0.022  | 1.763        |
| Financial difficult                  | Findiffus      | 0.740   | 0.074     | 1.991   | 0.047  | 1.192        |
| Prevention propn all applics         | Propprevapp    | -0.102  | -0.280    | -6.467  | 0.000  | 1.620        |
|                                      |                |         | 1         | 1       |        |              |

a. Dependent Variable: lphlapp2x

b. Weighted Least Squares Regression - Weighted by hhdwgt

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|       | Model<br>Summary |        |          |          |             |       |
|-------|------------------|--------|----------|----------|-------------|-------|
|       | Model            | R      | R Square | Adj R Sq | Std Err Est |       |
|       | 1                | 0.755  | 0.570    | 0.559    | 0.22010     |       |
|       |                  |        | Degr     |          |             |       |
| Model |                  | SoS    | Frdm     | Mn Sq    | F ratio     | Sig F |
| 1     | Regression       | 23.949 | 9        | 2.661    | 54.898      | 0.000 |
|       |                  |        |          |          | i i         |       |
|       | Residual         | 18.080 | 373      | 0.048    |             |       |

The model is guite similar to the previous one used from 2021, with slight differences due to certain variables no longer being available, the more recent time period, and so forth. It is noteworthy that the dummy variable for Wales has a large negative effect, and this becomes important when we consider certain policy options under active consideration in Wales,

particular the proposed phasing out of the priority need distinction. The abolition of priority need is probably the key difference between Scotland and Wales (or England) and it is very plausible to argue that doing that would increase the overall level of applications. This is one of the policy options assessed in the main Homelessness Monitor report for Wales 2025, where it is argued that at least a substantial part of the difference between Wales and England, as measured by the coefficient on the Wales dummy in this model, is attributable to this factor.

#### Total temporary accommodation (TA) rate

This model has been updated but is relatively similar to the previous 2021 version. Again, it is a partial adjustment model in logs with a high R-squared (0.897) and a high coefficient on the previous year's value. Other positive factors are the flow of new applications, rent levels, and hostel numbers, with negative effects from social rented lettings, a high emphasis on prevention, and being in Wales.

# Unsuitable temporary accommodation (TA) rate

Again, this is a model which has been updated but is very similar to the previous 2021 version, although slightly better in terms of fit and strength of key relationships. Unsuitable TA is mainly driven by the previous year's level and by the positive change in overall TA, while also being influenced positively by the excess of market rent over Local Housing Allowance (LHA) and negatively by the level of social rented lettings. A measure of the proportion of prevention which was unsuccessful has a positive effect, but this is not statistically significant. The Wales dummy variable shifts from being significantly negative to non-significant positive, which is indicative of the deteriorating situation in Wales in terms of TA, including unsuitable, TA during the base period.

#### Rough sleeping spot rates

This is one of three models used to help predict rough sleeping in the model for Wales. It is based on the administrative recording of rough sleeping expressed as a point in time estimate, as a percentage of resident households, and an equivalent for Scotland derived from our interpretation of the HL1 data on people applying as homeless in the previous 3 months, but translated back to a spot figure based on assumptions about durations of homeless episodes.

The new model is quite different from the previous one, partly because of the introduction of a factor to capture the progressive policy transition in terms of priority need for rough sleepers, and partly because of the relatively short data run and changing circumstances post-Covid. The new model highlights destitute migrants, second homes (as a proxy for more touristic places) as well as large cities, while still indicating lower rates in rural areas. It also features a variable capturing a higher emphasis on prevention reducing rough sleeping.

The other two formulae used to predict rough sleeping are the same as in the 2021 technical report, one based on the Public Voice survey and the other based on composite of UKHLS and DUKS surveys for 2019, as described on pp.78-81 of the 2021 Technical Report for Scotland and Wales.

#### Sofa Surfing – New composite model

For half of the prediction of sofa surfing we use two existing models described in the previous technical report, one based on the Public Voice survey of 2020 and the other based on the earlier composite model for 2019 based on a combination of UKHLS 2019 and DUKS 2019.

For the other half we take 55% of the predicted level of core homelessness from a new composite model based on a combination of the Family Resources Survey for 2022/3 and the DUKS Survey for autumn 2022. This model is a logistic regression model to predict core homelessness as a whole from a common set of predictor variables derived from the two surveys, including a limited number of regional variables. As can be seen in Table A.7 below, 19 individual/household level variables were included and five regional level variables (below the line). It is estimated that on average 55% of core homeless households are sofa surfers.

Table A.7: Logistic regression model to predict core homelessness derived from a composite dataset of common variables from the Family Resources Survey and Destitution in the UK Surveys (2022-23), with selected regional variables attached.

| Variable description         | Varname                             | В      |     | Wald       | Sig.  | Exp(B)       |
|------------------------------|-------------------------------------|--------|-----|------------|-------|--------------|
| Female respondent            | female                              | -0.    | 679 | 40.543     | 0.000 | 0.507        |
| Aged 16-24                   | ageu25                              | 1.3    | 263 | 93.344     | 0.000 | 3.535        |
| Aged over 60                 | age60ov                             | -0.9   | 905 | 24.844     | 0.000 | 0.405        |
| Born overseas                | bornos                              | 0.     | 723 | 45.486     | 0.000 | 2.061        |
| Couple household             | cpl                                 | -2.4   | 488 | 54.965     | 0.000 | 0.083        |
| Lone parent family           | lpf                                 | -1.    | 738 | 39.353     | 0.000 | 0.176        |
| Couple family                | cpfam                               |        | 757 | 57.005     | 0.000 | 0.173        |
| Number of children           | nkids                               |        | 011 | 0.030      | 0.863 | 1.011        |
| Respondent working           | works                               | -0.1   | 152 | 1.505      | 0.220 | 0.859        |
| Lost job recently            | lostjob                             | -0.2   | 281 | 3.442      | 0.064 | 0.755        |
| Disability                   | disab1                              | 0.2    | 200 | 3.710      | 0.054 | 1.222        |
| Receives Universal Credit    | ucd                                 | 0.9    | 932 | 77.903     | 0.000 | 2.541        |
| Owner Occupier               | own                                 | -0.    | 682 | 13.218     | 0.000 | 0.506        |
| Social Renter                | socr                                | -0.    | 658 | 33.367     | 0.000 | 0.518        |
| Evicted from private rental  | evictpr                             | 2.0    | 013 | 174.085    | 0.000 | 7.487        |
| Relationship breakdown       | relbd                               | 0.     | 578 | 13.449     | 0.000 | 1.783        |
| Financial difficulties       | findiff3                            | -0.4   | 489 | 16.788     | 0.000 | 0.613        |
| Log equiv income AHC         | leqincahc22                         | -0.3   | 380 | 84.420     | 0.000 | 0.684        |
| Log estimated savings        | lestsavgb2                          | -0.4   | 414 | 72.937     | 0.000 | 0.661        |
| Real mix adj house price £m  | rlmapricm                           | -0.0   | 076 | 5.836      | 0.016 | 0.927        |
| Afford'y ratio (rent:income) | affrat2                             | 5.     | 721 | 7.828      | 0.005 | 305.073      |
| Unemployment rate            | punem                               | 0.4    | 492 | 45.607     | 0.000 | 1.635        |
| Hostel residents % hhd       | phostelnew                          | -0.4   | 478 | 1.989      | 0.158 | 0.620        |
| Destitute w complex need     | pdestsmd                            | -6.0   | 004 | 7.987      | 0.005 | 0.002        |
| Constant = 1                 | Constant                            | 0.2    | 253 | 0.364      | 0.546 | 1.288        |
|                              | Omnibus Tests of Model Coefficients |        |     |            |       |              |
|                              |                                     |        |     | Chi-       |       |              |
|                              |                                     |        |     | square     | df    | Sig.         |
|                              | Step 1                              | Step   |     | 2415       | 24    | 0.000        |
|                              |                                     | Block  |     | 2415       | 24    | 0.000        |
|                              |                                     | Model  |     | 2415       | 24    | 0.000        |
| Model Summary                |                                     |        | _   |            | _     |              |
| <b>C</b> 1                   | -2 Log Cox & Snell R                |        |     | Nagelkerke |       |              |
| Step                         | likelihood                          | Square |     | Square     |       |              |
| 1                            | 3323.87                             | 0.     | 106 | 0.453      |       |              |
| Classification Table         |                                     |        |     |            |       |              |
|                              | Observed                            |        |     | Predicted  |       |              |
|                              |                                     |        |     | corehless  |       | %<br>Correct |
|                              |                                     |        |     | 2012111233 |       | Correct      |

|        |                    |   | 0     | 1              |      |
|--------|--------------------|---|-------|----------------|------|
| Step 1 | corehless          | 0 | 20806 | 75             | 99.6 |
|        |                    | 1 | 507   | 1<br>75<br>130 | 20.5 |
|        | Overall Percentage |   |       |                | 97.3 |