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Housing Data Stocktake Wellington Region

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Executive summary

Housing has become a widespread issue of concern across Aotearoa New Zealand in recent years due to what some are calling a 'housing crisis' resulting in increased homelessness, reliance on private rentals and a decrease in homeownership due to rising house prices outstripping incomes, alongside population growth. A recent press release from Kiwibank suggests that New Zealand has a shortfall of 130,000 homes.[1] Amidst this crisis, the interagency Wellington Regional Healthy Housing Response Group has been working to understand how to halt these trends across the Wellington region. Specifically, they sought to answer the question:

> ***Is there sufficient housing supply, and is it of sufficient quality, for all residents in the [Wellington] region to be living in warm, dry and safe housing by 2025?***

A scan of the available data identified seven key subject areas relevant to answering this question, which are:

- access to housing
- housing quality
- energy hardship (fuel poverty)
- healthy housing behaviours
- homelessness and crowding
- neighbourhood planning and design
- local and central government urban design and planning policy development and regulation

In addition, given the comprehensive data available in one particular repository of datasets – the Integrated Data Infrastructure (IDI) – a separate section has been devoted to this.

Key stocktake findings include the fact that there is a large amount of data that responds to issues of quantity, with fewer datasets focused on issues of quality. Those that do focus on quality tend to involve much smaller sample sizes, although they tend to offer more intensive evaluations of individual house quality. The stocktake also revealed that private data companies such as Trade Me's homes.co.nz, .IDNZ and Core Logic's QV.co.nz develop housing related-data of public relevance on topics such as the estimated sale price and estimated private rental value of housing but do not explicitly state the methodology by which this data is created. Given the implications of this data for the wider public, this lack of transparency gives cause for concern. Finally, further modelling work is needed to explore where current trends might take us by 2025, but the existing data available provides a good basis on which to undertake this modelling work.

In terms of where best to focus future efforts, we would suggest that the IDI would be worth exploring in detail. It holds a range of interconnected datasets including the Census, the New

[1] Kiwibank Press Release (18 July 2019) New Zealand's housing shortage is getting worse, not better. http://www.scoop.co.nz/stories/BU1907/S00495/new-zealands-housing-shortage-is-getting-worse-not-better.htm

Zealand General Social Survey, the Quality of Life Survey and Te Kupenga and offers the most comprehensive mechanism for answering the key question. However, the IDI is a protected tool and requires a rigorous process to gain access to data, including a clear protocol and ethical approval. Another alternative is the openly accessible Census data (which also appears in the protected format of the IDI), which offers the most comprehensive single dataset on housing tenure and availability alongside a smaller amount of data on quality but with the inclusion of some further questions on housing quality in the 2018 Census.

Specifically, we suggest the following:

- A combination of IDI, Ministry of Housing and Urban Development and .IDNZ forecast data and REINZ, QV.co.nz, homes.co.nz and Trade Me sale price data would likely be sufficient to provide a well-rounded statistical model for answering the stocktake's overarching question.
- Housing issues for Māori, those with disabilities and women are three areas of work where very little has been done in terms of quantifying and/or qualifying the issues of access to quality housing in recent years in Aotearoa as a whole or in the Wellington region despite much of the data being available by ethnicity and gender. Disability data was less available with respect to housing.
- Further analysis is needed on the ability of wider neighbourhoods to support the quality and safety of safe housing over time, adding richness to questions of housing quality given it is clear that successful housing solutions rest on more than the mere existence of housing.
- There is very little data or analyses on the ability of the construction sector to be able to deliver the numbers and quality of housing needed. Given the relatively small size of this industry in Wellington, it may be worthwhile investing in a bespoke study to support future work.

The stocktake suggests that investment in these areas of research, alongside the general modelling work needed to predict whether all residents in the Wellington region can be living in warm, dry and safe housing by 2025, seems to be the most useful foci in terms of where to invest time and resources going forward.

Introduction

This report summarises the currently available data sources in Aotearoa New Zealand to answer the question:

> ***Is there sufficient housing supply, and is it of sufficient quality, for all residents in the [Wellington] region to be living in warm, dry and safe housing by 2025?***

The work has been contracted by Regional Public Health (RPH) on behalf of the Wellington Regional Healthy Housing Response Group (RHHRG) funded by BRANZ through the Building Research Levy.

The question above cannot be answered in a straightforward way by simply extracting descriptive statistics on past and current housing supply and quality. Rather, based on available statistics, further work is needed to model and predict supply and quality by 2025. This project identifies key datasets and variables within them to assist RHHRG in answering this question.

Methods

A stocktake of available data was undertaken drawing on the datasets already identified by the steering group and a further search for any additionally relevant datasets. The stocktake focused on publicly available data sources pertaining to the Wellington region.

All of the variables below were considered with regard to each dataset:

- Ethnicity, gender, age and groups who experience difficulties accessing quality housing (e.g. those with disabilities).
- Data quality.
- Accessibility of data.
- Reporting frequency, level of data, data collection tool and level of geographic specificity.

All relevant data sources have been listed in the spreadsheet that accompanies this report. The spreadsheet offers a detailed long list of possible sources, whilst this report emphasises those sources offering the greatest likelihood of providing figures that can answer the overarching research question. Please see Appendix 3, 4 and 5 for a full description of the research protocol.

Structure of this report

This report outlines findings in sections 1 to 8:

1. Access to housing
2. Housing quality
3. Energy hardship (fuel poverty)
4. Healthy housing behaviours
5. Homelessness and crowding
6. Neighbourhood planning and design

7. Local and central government urban design and planning policy development and regulation
8. Relevant housing variables within the Integrated Data Infrastructure (IDI) – a large collection of separate but linked national datasets.

Finally, recommendations are outlined regarding the most useful datasets for further inquiry into the question above. A summary of these datasets is included in Appendix 1. In addition, examples of variables that support answering the overall question are included in Appendix 2.

Section 1: Access to housing

Data definitions

Whether all people in the Wellington region will have access to adequate housing by 2025 relates specifically to issues of:

1. supply (i.e. the physical availability of housing in the region)
2. the cost and value of housing, which in turn relates to
3. housing affordability.

Merely having a supply of housing will obviously be insufficient if the cost and value of housing stock is unaffordable. Hence, in the data sources we have identified, all three factors are emphasised.

Anticipating housing requirements in 2025 requires modelling variables such as housing supply trends alongside population and associated household size predictions. Factors such as building sector capacity, land availability and legislative and regulatory allowances will also have an impact. This section also outlines datasets that identify housing supply trends.

Housing affordability is understood as the proportion of income being spent on housing. State housing, for example, is provided to tenants on an income-related rent basis whereby 25% of the household's income is taken as the rent value. To arrive at an understanding of housing affordability, income data is needed (found in the Census) as is data on the cost of housing.

A prominent, although experimental, attempt to measure housing affordability has been attempted by the Ministry of Housing and Urban Development (HUD) using Inland Revenue Department (IRD), Ministry of Business, Innovation and Employment (MBIE) (the tenancy bond database) and Ministry of Social Development (MSD) data sources. It is broken down by region and territorial authority, and deploys three separate measures:

- The Experimental Housing Percentage Measure – this measures the number of individuals where >30% of household income is spent on housing costs.
- The Experimental Housing Affordability Measure for Renters – this identifies the proportion of renters/potential first-time buyers within a region or territorial authority whose income after rent payment falls above or below the estimated national median. It uses the Housing Affordability Measure (HAM) Rent Median and HAM Buy Median (the latter uses Core Logic data).
- The Experimental Housing Affordability Index – this scales the measures for HAM Rent Median and HAM Buy Median (potential first-time buyers) so that affordability for renters/first-time buyers at the beginning of the time period (i.e. 2003) starts at 1,000 (a presumably arbitrary baseline).

Since these measures are experimental, the advice provided by HUD is to always use current figures to track changes over time (i.e. previous releases are updated using any updated methodology).

Available data

1. Supply – the number of houses physically available in the region

The following outlines the data available that could be used to support an understanding of future housing supply in the Wellington region. A general overview is provided along with an outline of data available with respect to social housing, private rental housing and increasing housing supply.

Overall housing supply

The most valuable and comprehensive source of housing quantity data is the New Zealand Census (administered by Stats NZ). The Census provides four key housing variables discussed below: dwelling type, housing tenure, number of rooms and number of bedrooms. Census data is available from the 2006 and 2013 Censuses,[2] with the full 2018 Census data expected to be released soon.

The Census offers data on the existing housing stock by dwelling type (e.g. whether the dwelling is a separate house or a flat/unit) with breakdowns by Wellington suburb. Dwelling types for occupied dwellings are also cross-tabulated by the numbers of residents in those dwellings. (As provided below, these figures are also relevant to the issue of homelessness, with data on night shelters, roofless or rough sleepers.)

The Census also provides breakdowns of dwelling type data in occupied dwellings for residents in general electoral districts and by whether residents are of Māori descent. It should be noted, however, that whilst the Census collects a large quantity of demographic data (i.e. ethnicity, age, sex, workforce labour status, income, income split by ethnicity and iwi and income split by age and sex), in general, this is not linked/cross-tabulated with housing-related data in an easily accessible way. This is likely due to the need to ensure the anonymity of respondents, given the increased likelihood of identifying individuals, groups or families with increased data breakdowns. One exception, however, is housing tenure (i.e. whether a house is owned by its inhabitants, rented etc.), which has data available by sex and ethnic group. Also, dwelling type can be broken down by age.

With respect to the supply of housing in relation to tenure, the Census offers a relevant question about the landlord for residents in rented private occupied dwellings. Responses are:

- private person
- trust or business
- local authority or city council
- Housing New Zealand Corporation (now Kāinga Ora – Homes and Communities)
- other state-owned corporation, state-owned enterprise or government department.

This variable can indicate levels and changes in social and private rental housing provision.

[2] The 2011 Census was cancelled/delayed due to the Christchurch earthquake. The 2018 Census has also experienced difficulties. Response rates (particularly for Māori and Pacific Peoples) have been too low to rely on the Census data alone and have been augmented using government administrative data sources and other IDI data.

Other relevant housing supply data includes the numbers of rooms and, separately, the number of bedrooms in a dwelling, along with the household composition broken down by the number of bedrooms. Part of the supply and demand picture, then, relates to how well the housing stock is being populated by households (i.e. whether there are too many or too few people occupying a property).

Much of the Census data can be broken down by region (including the Wellington region), territorial authority, council area and Māori electoral districts. This ensures that relevant variables can always be targeted at the geographical area of interest. Also, there are breakdowns by ward and by mesh block for some variables (e.g. the number of rooms for occupied private dwellings and the number of bedrooms for occupied private dwellings).

Social housing supply

The recently established HUD provides summary data on state housing supply and demand, people in transitional housing and the number and by region and territorial authority.[3] In the Wellington region, 254 transitional housing places were provided in the June 2019 quarter.[4] HUD also provides the ethnicity and age of those in the Housing First programme,[5] which began operating in Wellington and the Hutt in July 2019,[6] numbers of people with special needs receiving emergency housing and figures on the planned future supply of public housing. Detailed numbers of people on the waiting list for social housing and numbers of people waiting to transfer to alternative social housing are also found in the housing register[7] and transfer register on the MSD website. Both sets of data list the reason for the application, numbers of bedrooms required and ethnicity, age and household composition of applicants. Summary data is available at HUD. For example, at the June 2019 quarter, there were 1,331 applicants on the housing register as compared to 1,252 in the previous quarter, and there were 8,445 public housing tenancies, compared with 8,429 in the previous quarter.[8]

Kāinga Ora also holds data on managed stock and vacant properties,[9] which provides information on the numbers of available or vacant state homes in the region.

[3] Ministry of Housing and Urban Development (n.d.) Follow our progress. https://www.hud.govt.nz/community-and-public-housing/follow-our-progress/
[4] Ministry of Housing and Urban Development (June 2019) Public Housing Quarterly Report. https://www.hud.govt.nz/assets/Community-and-Public-Housing/Follow-our-progress/June-2019/cae7aaceaf/Housing-Quarterly-Report-June-2019.pdf
[5] Housing First provides housing for those experiencing homelessness alongside wraparound services to support other needs a tenant may have.
[6] See footnote 4.
[7] Ministry of Social Development (n.d.) Housing Register. https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/housing/index.html
Ministry of Social Development (n.d.) Transfer Register. https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/housing/index.html
[8] See footnote 4.
[9] Kāinga Ora – Homes and Communities (November 2019) Housing statistics. https://kaingaora.cwp.govt.nz/publications/housing-statistics/

These datasets provide a good quarterly overview of numbers of households currently in severe (priority A) and serious (priority B) housing need.[10] However, those who are in housing need but do not fit the severe or serious housing need criteria set out by government agencies are not captured well in this dataset given the requirement to be classed as either category A or B. As at 30 September 2019, 112 applicants on the waiting list for housing were assessed as priority A or B in Kāpiti Coast District, 451 in Lower Hutt City, 270 in Porirua City, 154 in Upper Hutt City, 482 in Wellington City and 14 in the South Wairarapa District.[11]

Rental housing

Another key data source for housing supply specifically for rental properties is the tenancy bond database[12] administered by MBIE. This provides regional (including Wellington) and territorial authority data collected by New Zealand councils in association with another private company, IDNZ. All tenancies are required to be recorded as numbers of new bonds, active bonds and closed bonds, which are reported on a monthly and quarterly basis.

Increasing housing supply

Understanding housing supply trends can point to future supply numbers. A useful indicator of increasing housing supply may be found in territorial authority data on building consents. Stats NZ provides summary data by month, year and region.[13] Specific councils offer varying access to detailed datasets, usually at a cost. For instance, Wellington City Council provides collated data on consents, free for the first hour of their time and then $38 per hour for additional hours. These are issued for residential and non-residential properties by region and would be useful to understand housing typologies being provided in the regions, for example, whether there is growth in the number of consents for multi-unit or medium-density housing, given land scarcity.

Summary resource consent data is collected from each territorial authority by the Ministry for the Environment[14] as part of its Resource Management Act (RMA) monitoring function. However, resource consents are issued for a range of activities, one of which is residential housing developments. Another, broader, indicator may be the estimated local provisional gross domestic product calculated by Infometrics,[15] again using Stats NZ data. Trends in these sub-economies may be used to create projections for regional and territorial areas, which may in turn provide a broad backdrop for likely impacts on housing supply and household incomes.

QV.co.nz is a private data source that offers aggregated data on sales volumes and new listings broken down by region (including Wellington) and by suburb. It does not provide information on

[10] "People who are considered 'at risk' includes households with a severe and persistent housing need that must be addressed immediately. People who have a 'serious housing need' includes households with a significant and persistent need. The household is unable to access and/or sustain suitable, adequate and affordable alternative housing."" From MSD Housing Register information. https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/statistics/housing/housing-register-september-2019.xlsx

[11] See footnote **Error! Bookmark not defined.**.

[12] Ministry for Business, Innovation and Employment (January 2020) Rental bond data. https://www.mbie.govt.nz/building-and-energy/tenancy-and-housing/rental-bond-data/

[13] Stats NZ (n.d.) Building consents issued. https://www.stats.govt.nz/information-releases/?filters=Building%20consents%20issued

[14] Ministry for the Environment (n.d.) Data explorer. https://www.mfe.govt.nz/rma/national-monitoring-system/data-explorer

[15] Infometrics (2019) Wellington City economic profile. https://ecoprofile.infometrics.co.nz/Wellington+City

demographics. Similarly, homes.co.nz offers figures on the size of individual properties and numbers of bedrooms and bathrooms in properties (plus other features such as decking etc.). Homes.co.nz is able to provide aggregated data on request as the data available on its website in provided for individual properties. Both websites have a national property database, and each uses public data with calculated additional estimates on property value. Finally, the Real Estate Institute of New Zealand (REINZ) provides a house price index (HPI)[16] based on sales data at the time a price is decided, broken down by territorial authority.

2. Cost and value

The Census collects data on the median weekly rent, by regional council and territorial authority. It also collects a large quantity of demographic data including income levels and workforce labour status, which relate to the cost of housing and, indirectly, to affordability. There are explicit attempts to calculate affordability as discussed in the next section.

The tenancy bond database collects data on average rent based on the rental amount listed at the time of lodging a tenancy, not the actual rent paid at any one time.

Both homes.co.nz and QV.co.nz offer estimates of house and rental values and actual sale prices. Values are calculated estimates of the sale price s. For instance, QV.co.nz takes the sum of all sale prices (using the district valuation roll from New Zealand councils) and divides by the sum of all current capital values of these properties to calculate a price to value ratio, which is used to estimate a current total valuation for all properties there. It uses this to create a house price index. For rentals, it draws on MBIE data, presumably the tenancy bond database, although this is not explicitly stated.

Trade Me[17] is another prominent private company offering rental and property price information. For rentals, it offers aggregated data on the median rental price for the previous month and the % change from the previous year plus breakdowns by property size, number of bedrooms and dwelling type. It offers similar data for properties for sale. Unlike the tenancy bond database, Trade Me reports the asking prices for properties (both sale and rental), not the agreed price. Partly due to this, there are differences in rental data between these two sources. However, there is otherwise limited information on how expected sale prices in particular are calculated. Trade Me states it uses its own algorithm to achieve this.

REINZ offers the HPI for the sale prices of properties by territorial authority and region.

3. Affordability

The Household Economic Survey (HES), administered by Stats NZ, is a key source for data on the ability of households to afford available housing stock. This includes data on household income,

[16] "[The HPI] measures total housing market activity, it wraps up a series of metrics by looking at the sale price as it relates to a value influenced by housing attributes such as land area, floor area, number of bedrooms etc. to create a single, more accurate measure of housing activity and trends over time." https://www.reinz.co.nz/reinz-hpi

[17] Trade Me Property (n.d.) Market insights. https://property.trademe.co.nz/market-insights/?tag=Rental+price+index#8

weekly housing costs, spending on utilities/energy sources and income adequacy. The data available is more detailed than that found in the Census but the survey sample size is only 28,500 dwellings across the country with a 70% response rate typically achieved. The survey does add a booster sample to increase the number of Māori in the overall sample.[18] The HES also intermittently carries out supplements on expenditure and savings.

Future projections

Anticipating demand for housing over time and into 2025 requires data about:

- population forecasting, including births, deaths and migration
- numbers of private and non-private dwellings and vacancy rates
- capacity of the building sector to build more houses.

While the Census provides population figures, it does not provide projected population figures. .IDNZ provides population figures and forecasts for the range 2013–2043 using three models,[19] stating that the forecasts are designed to provide community groups, councils, investors, business, students and the general public with knowledge to make confident decisions about the future. These projections estimate human and housing populations. The projections are informed by estimates of the human population, numbers of private and non-private dwellings, net migration by age, births and deaths. An increase in dwellings predicts an increase in people, but they also factor in vacancy rates, i.e. the share of the housing stock not containing households. Forecasts are provided for the overall population but are also broken down by age group and household types (e.g. a two-parent family), by territorial authority (including those of the Wellington region) and by suburb. There are no other demographic breakdowns (e.g. by ethnic group). These forecasts begin at a baseline – the 2013 Census, with adjustments – and informed too by local council perspectives.

Finally, there is little data available on the capacity of the construction sector to respond to the need for additional housing. A report[20] by PrefabNZ, a construction sector group, focused on New Zealand's capacity to provide prefabricated housing specifically. It drew on Stats NZ's Business Demography Statistics that showed 333 businesses involved with prefabrication in New Zealand according to the classification code hierarchy ANZSIC.

In terms of future ability to construct housing, on 14 April 2019, the government and industry signed a Construction Accord to achieve, amongst other things, more houses and better durability. In addition, "Industry and Government will work together on a further four priorities which are to expand workforce capability and capacity, rebalance risk, improve health and safety and boost the supply of affordable and durable housing."[21] PrefabNZ undertook its own survey to understand

[18] Stats NZ (20 February 2019) Expanding the Household Economic Survey to obtain good measures of child poverty. https://www.stats.govt.nz/tereo/methods/expanding-the-household-economic-survey-to-obtain-good-measures-of-child-poverty

[19] .IDNZ (n.d.) National demographic indicators series, New Zealand. https://demographic-indicators.idnz.co.nz/?submissionGuid=044ebe19-be1b-4217-8089-34edd504fa5f

[20] PrefabNZ (2018) Capacity and capability report. http://www.prefabnz.com/Downloads/Assets/9759/1/

[21] New Zealand Government (14 April 2019) Government and industry sign Construction Sector Accord. https://www.beehive.govt.nz/release/government-and-industry-sign-construction-sector-accord

capacity with 21% of companies being located in Wellington (although prefabrication of course lends itself to being done anywhere provided that shipping opportunities are cost-effective). Their survey findings estimated that New Zealand could currently build 3,000–4,000 houses per year. No specific datasets were found that offered information on construction sector capability generally.

Data quality and gaps in the data, including for Māori

The Census data is the most comprehensive of high-quality data sources. Census data is always presented to the public in aggregate form, meaning that it is not always possible to combine data in ways that will answer specific housing questions. For example, it may not be able to answer questions about supply of housing for specific groups within the Wellington region, such as within a specific ethnic group or age group or split by income. However, the IDI with its individual-level data may be able to answer these questions.

Data provided by HUD, MSD and Kāinga Ora is comprehensive given that, for the most part, they are reporting on government-owned housing provision and state housing demand. However, a major limitation of this data is that it does not capture people who do not fit into the severe and serious housing need categories.

Resource consent and building consent data is provided at varying levels of detail. High level summary data on resource consents and building consents is routinely collected by territorial authorities. However, the detailed data collected by individual territorial authorities on consents varies widely in terms of the variables collected, how the data is accessed and how data is classified.[22] The data collected by the Ministry for the Environment has changed over time, with some years offering more relevant information than others regarding the key question of this report.

Inability to combine data in useful ways

Despite being the most comprehensive data source of all, the Census has some ongoing data quality and accessibility issues. The data is offered in aggregate form, meaning that it is not always possible to combine data in ways that will be key in answering the question of the stocktake.

2018 Census

The quality of available data varied. The most obvious concern is the 2018 Census data, which has been widely publicised as having low rates of response. Individual response rates across the Wellington region were as follows: Wellington City – 90.3%, Upper Hutt City – 89%, Porirua City – 83.5%, Lower Hutt City – 86.2% , South Wairarapa District – 87.6%, Caterton District – 88.4, Masterton District – 84.9%, and Kāpiti Coast District – 88.8.[23]

[22] Morten Gjerde and Rebecca Kiddle (2019) Understanding resource consent issues. https://www.branz.co.nz/cms_show_download.php?id=24830bb47378fe7e06d3f98be982caef2855d928
[23] Stats NZ (23 September 2019) 2018 Census dataset interim coverage and composition. https://storymaps.arcgis.com/stories/cc0ab3d9a7bb43f4b221a38c1ca42f95

Data from private companies

Private companies are not always transparent regarding how they have analysed and arrived at their data summaries. Several private companies collect data with public impacts, but it is not always obvious how the data is used in their calculations. Given the public ramifications of the data, this may not be altogether acceptable particularly in terms of understanding the quality of the data being produced.

For instance, QV.co.nz is used within other sources, including government sources, for house price values. Although Core Logic does provide information on its methodology, it does not appear to have a technical document available. Therefore, it remains unclear whether there have been underlying decisions made for its value estimates.

Homes.co.nz has a partial statement available on how it calculate its estimates,[24] and while some detail is provided, key information is missing about its "advanced algorithms". The .IDNZ models – a cohort component model, a housing unit model and a household propensity model[25] – could also benefit from further explanation. Finally, Trade Me had limited information to provide on house price estimates. In particular, there appears to be no further information on how its algorithm is used to calculate expected house sale prices.

Summary

Housing quantity (supply): The Census provides the most comprehensive figures on housing stock. In addition to data held by HUD on social housing (which the Census also indicates with regard to its landlord data), this provides a count of the private and public properties in the region. The tenancy bond database can provide data on the supply of rental properties. Further, Kāinga Ora data on vacant properties is key. Data from the private company .IDNZ could provide another major component of statistical models to predict both human and housing populations (including by housing composition), as could PrefabNZ with its building construction projections.

Housing quantity (cost/value): In addition to the REINZ HPI, the several private companies referred to previously would provide the major sources: homes.co.nz, QV.co.nz and Trade Me. The tenancy bond database would again be essential for providing median rent data and possibly would be useful to compare this with Trade Me figures or perhaps create a hybrid figure involving both)

Housing quantity (affordability): The HAM is the most obvious source, albeit experimental. The HES could provide a rich account of household wealth in the region and, if coupled with data on house prices/values, could also indicate how likely people would be first-time buyers and/or how they would continue to fare in the rental market. The IRD and MSD Working for Families dataset also provides data on those receiving housing support and accommodation supplements.

[24] https://homes.co.nz/homesestimate

[25] https://forecast.idnz.co.nz/wairarapa/forecast-modelling-process-nz

Section 2: Housing quality

Compared with housing quantity, there are relatively few sources on housing quality. However, those that exist provide a solid base for projections to 2025, and there are current movements towards increasing this data flow.[26]

Data definitions

Until very recently, there has been no official definition of statistical measures of housing quality in New Zealand. However, following completion of data source identification for this stocktake, Stats NZ released a new framework for housing quality that establishes an agreed definition of housing quality. The overarching definition is that housing quality is "the degree to which housing provides a healthy, safe, secure, sustainable, and resilient environment for individuals, families and whānau to live in and to participate within their kāinga, natural environment, and communities." As indicated in the image below, housing quality is dictated by four interconnected elements: housing habitability, environmental sustainability, housing functionality and social and cultural sustainability.

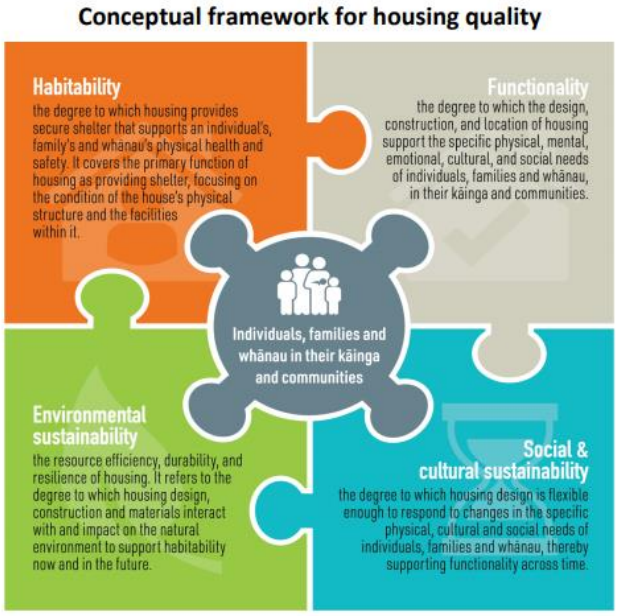

Fig. 1: Conceptual framework for housing quality. Source: Stats NZ[27]

Given this framework was released after the information gathering for the stocktake, the following outlines data available that supports a narrower definition of housing quality, focused generally around habitability and functionality.

[26] Stats NZ (2015) Measuring housing quality: Potential ways to improve data collection on housing quality in New Zealand. http://archive.stats.govt.nz/~/media/Statistics/browse-categories/people-and-communities/housing/measuring-housing-quality/measuring-housing-quality.pdf

[27] Stats NZ (2019) Framework for housing quality. https://www.stats.govt.nz/assets/Uploads/Methods/Framework-for-housing-quality/framework-for-housing-quality.pdf

Available data

The most comprehensive source of housing quality is the New Zealand General Social Survey (GSS) administered by Stats NZ. This collects data on wellbeing generally, but includes intersections with housing issues that affect wellbeing. These include direct indications of quality such as whether there is dampness or mould, whether heating sources are adequate, issues of crowding (e.g. whether more bedrooms are needed and, if so, how many) and safety (e.g. whether people feel safe being alone at night at home), alongside less direct factors such as financial shortages resulting in the inability to pay for energy sources (i.e. whether accommodation needs are covered by a respondent's income).

In 2018/19, the GSS included a supplement on housing and the physical environment to help address the information gap on housing quality. The supplement included questions around healthy housing behaviours (e.g. heating and ventilating), repair and maintenance activity and occupant perceptions of the condition of their home.

In addition to the new content in the housing and physical environment supplement, BRANZ collaborated with MBIE, HUD and Stats NZ to pilot a new approach to collecting objective data on the condition of housing stock. This involved recruiting households through the 2018 GSS to provide a sub-sample to take part in an independent housing assessment survey known as the Pilot Housing Survey (PHS) run by BRANZ. The PHS included identifying key features of a warm, dry, healthy home. Features included energy efficiency (e.g. double-glazing and insulation, heating appliances), safety features (e.g. fire alarms and structural integrity), signs of damp and mould and condition/state of repair of different components. The GSS has a sample of around 8,000, and 800 of these went on to complete the BRANZ PHS, with surveying taking place from August 2018 to May 2019. Data releases are expected from early to mid-2020. In addition, a sub-sample of around 80 of the PHS houses have been fitted with temperature and humidity sensors to monitor conditions inside the home over a 12-month period. Information is not yet available on how many of the 800 houses are based in the Wellington region.

Another key source for housing quality is the Quality of Life Survey, which is a collaboration between New Zealand councils, including Wellington City, Porirua, Hutt and Wellington Regional Council, the latter including the entire site of this study. Much like the GSS, this considers wellbeing but includes intersections with housing issues. It collects data on whether homes have mould or are damp, cold, small, safe from natural disasters or noisy, whether there is an adequate heating system and whether people can afford to use this system and whether there is good urban design in the area. The data can be broken down by household income, age, sex, ethnicity and household composition.

Given the existing buy-in by Wellington Regional Council and territorial authorities with the largest populations in the Wellington region, it would seem advantageous to further consider the survey's findings in light of the wider region and their implications for a regional approach to improving housing and associated wellbeing.

The Census, too, collects some housing quality data. This is almost exclusively focused on the fuel type used in a dwelling, broken down by regional council area and by ward and meshblock. One

response to a Census question on fuel type used can be to indicate the absence of a fuel type. No data on insulation is recorded. However, for the 2018 Census, there are new questions on damp and mould (Is this dwelling damp? Can you see mould in any part of this dwelling that, in total, is larger than an A4 sheet of paper?). National data is available now from the 2018 Census. Of 1,664,313 dwellings across Aotearoa, 44,520 (2.7%) are always damp, 274,371 (16.5%) are sometimes damp and 1,162,485 (70%) are not damp.[28] It is unclear when regional data will be available.

The BRANZ House Condition Survey has been undertaken roughly every 5 years since 1994, the most recent of which was in 2015/16. It involves a small sample size (500–600 houses nationwide) with detailed on-site assessments, telephone interviews and self-report questionnaires assessing issues such as the presence of dampness or mould and the internal and external condition of the property. This is a nationwide survey, and the most recent surveyed 49 homes in the Wellington region.

As noted above, BRANZ have recently developed a new Pilot Housing Survey (PHS) based on the House Condition Survey (HCS). BRANZ trialled some new approaches and questions from those typically used in the HCS including:

- partnering with Stats NZ to recruit households through the GSS
- using a digital data collection tool (mobile and web app)
- significantly reducing the survey content (HCS typically takes 2–3 hours, PHS is 1 hour on average)
- the inclusion of new questions attempting to collect data on draughtiness, curtains and housing typology.

The PHS offers new opportunities for data mining, with a larger sample size (~800 nationwide, 98 of which were in the Wellington region) and potential to link the data back to the GSS (both datasets should be available in the IDI from 2020). The future of BRANZ HCS/PHS is under discussion.

As noted earlier, consent data provides some indication of on-stream housing supply but may also provide an indication of improved housing stock quality, assuming newer houses are of higher quality than existing stock. This is available from 2010 and is split by territorial authority. Also, any of the sources with data on the size of a property or the number of bedrooms plus house value/cost could provide a broad brush indication of housing quality or value for money. In principle, the Census could provide this data (it holds data on income levels and median rent), although it does not appear that the immediately available access via the Stats NZ website could provide this (see section 8). The tenancy bond database can provide rental amounts by number of rooms/bedrooms, plus homes.co.nz has figures on the size of the house floor area in square metres, numbers of bedrooms, bathrooms and car park spaces and size of section/land area in relation to house values.

[28] Stats NZ (23 September 2018) 2018 Census totals by topic – national highlights. https://www.stats.govt.nz/information-releases/2018-census-totals-by-topic-national-highlights

Māori housing quality

Te Kupenga, the Māori Social Survey, undertaken in 2013[29] gathered data across multiple aspects of Māori wellbeing including wairuatanga (spirituality), tikanga (Māori customs and practices), te reo Māori (the Māori language) and whanaungatanga (social connectedness). Whilst only one survey has been undertaken to date, it is unclear whether it will be repeated. Given the recent concern over the inability of the 2018 Census to capture Māori data, the case for a further issue seems strong.[30] Summary information is available from Stats NZ but tailored data can be requested at cost. Specific variables include Māori housing issues: repair needs, household pests, whether a dwelling is too small or too damp and whether it is hard to keep warm within the property.

There has been very little research undertaken in recent years on Māori housing concerns nationally and even less locally. A notable exception is work undertaken by the Centre for Research, Evaluation and Social Assessment (CRESA) for Te Puni Kōkiri, MSD and Kāinga Ora looking at Māori housing supply and demand in Te Tai Tokerau.[31] Alongside the other datasets identified in this report that offer data by ethnicity, Te Kupenga would form a solid basis for developing a more comprehensive picture of Māori housing needs in the Wellington region into 2025.

Data quality and gaps in the data, including for Māori

Data on quality, whilst available, was generally found in datasets of smaller sample sizes but with extensive quality measures included. These studies tended to be predicated on data gathering from individual houses and comprehensive measures of the dwelling quality, hence the lower sample sizes. However, the recent Census did include additional quality questions, so this will be an important addition to answering the quality question. Other key data gaps related to data with respect to the ability of the construction sector to respond to a lack of housing supply.

As noted above, a recent development for the GSS is that, from 2018, BRANZ has been involved in identifying and accessing a sub-sample to take objective measurements from within respondents' homes, including recording temperatures and humidity and identifying double glazing, insulation, safety features (e.g. fire alarms and structural integrity) and energy efficiency.

Summary

Whether housing will be of good quality is rather more difficult to ascertain than housing quantity. However, the clear go-to sources would be the GSS, the Quality of Life Survey, Te Kupenga and the BRANZ House Condition Survey/Pilot Housing Survey. Findings on housing quality are also due to be reported through the 2018 Census data.

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[29] Stats NZ (6 May 2016.) Te Kupenga. http://archive.stats.govt.nz/tekupenga

[30] Maria Bargh and Arama Rata (22 August 2019) Bungled NZ census highlights need for multiple voting options to raise Māori participation. https://www.waikato.ac.nz/news-opinion/media/2019/bungled-nz-census-highlights-need-for-multiple-voting-options-to-raise-maori-participation

[31] CRESA (2020) Māori housing supply and demand in Te Tai Tokerau. https://cresa.co.nz/projects/maori-housing-supply-and-demand-in-te-tai-tokerau/

Section 3: Energy hardship (fuel poverty)

Data definitions

Definitions of energy hardship or fuel poverty are varied. Stats NZ draws on multiple factors to define it and recommended the use of a number of energy hardship indicators:

> Essentially, households are considered to be in fuel poverty if energy costs, to maintain minimum acceptable indoor temperatures, are excessive when compared with overall household income … Fuel poverty is complex and caused by a combination of factors including housing quality and the efficiency of heating appliances, along with low household income. It is therefore not just an issue of income poverty. Low quality, uninsulated housing costs far more to heat and maintain at a reasonable indoor temperature.[32]

A recent review of electricity prices in New Zealand recommends that government "develop a clear and generally accepted definition of energy hardship, and determine what statistics should be gathered to monitor changes in energy hardship levels."[33]

The 2018 Census provided additional information on energy hardship alongside the housing and physical environment supplement to the 2018 GSS.

Available data

Being able to maintain warm, dry and safe homes once access issues have been overcome is an important factor in achieving the RHHRG's goal. Census data includes the fuel type used in households – response options are electricity, mains gas, bottled gas, wood, coal, solar power, other fuels and no fuels. This variable does not provide information on how often a fuel is used or whether one is used more often than another but the number of fuel types used is covered. Insulation is not covered.

The data from the 2018 Census, not released at the time of writing, will cover the following questions of relevance to energy hardship:

- Which of these things are available in this dwelling? (One relevant response option is electricity supply.)
- Select as many options as you need to show which types of heating are used most often in this dwelling. (Options are heat pump, electric heater, fixed gas heater, portable gas heater, wood burner, pellet fire, coal burner, other and no form of heating).

[32] Stats NZ (2017) Investigating different measures of energy hardship in New Zealand. http://archive.stats.govt.nz/~/media/Statistics/browse-categories/people-and-communities/households/energy-hardship/Investigating-different-measures-of-energy-hardship-in-New-Zealand.pdf

[33] New Zealand Government (21 May 2019) Electricity price review: Hikohiko te uira. https://www.mbie.govt.nz/assets/electricity-price-review-final-report.pdf

Although not in the stocktake's date range, the BRANZ Household Energy End-use Project[34] was a multi-year (1999–2005) multi-discipline study that monitored all fuel types (electricity, natural gas, LPG, solid fuel, oil and solar used for water heating) and the services they provide (space temperature, hot water, cooking, lights, appliances etc.) in a national random sample of 400 houses (41 in Wellington). Extensive data was collected including on house temperatures, pensioner housing, fuel poverty and Māori households. BRANZ will be involved in undertaking an updated household energy use study, with data collection expected to commence in 2021 following an initial pilot in 2020.

The GSS includes these variables of direct relevance to the issue of energy hardship:

- In the last 12 months have you/you or your partner not paid electricity, gas, rates or water bills on time because of a shortage of money?
- How well does your/you and your partners combined total income meet your everyday needs for such things as accommodation, food, clothing and other necessities?
- In the last 12 months, to what extent have you done any of the following things to keep costs down? (includes put up with feeling cold?
- In winter, is your house or flat colder than you would like?
- How many bedrooms are there in your house or flat?

The HES also offers variables that allow estimation of energy hardship.[35]

The cost of energy has come under recent scrutiny with a government review of electricity prices being completed in May 2019, after the stocktake information-gathering period. The review was unique in that it considered whether electricity prices in New Zealand were "fair and affordable, not just efficient or competitive".[36] A key finding of the review was that, whilst electricity prices compare favourably internationally, there is a pressing energy hardship problem and children are over-represented amongst those households affected.

Data quality and gaps in the data, including for Māori

More generally, there is a lack of sufficient information about energy requirements and thermal performance of dwellings, which has hindered measurement of fuel poverty in New Zealand.[37] The recent electricity price review did not provide any region-specific data, nor did it include ethnicity-specific data or analyses considering the impact of energy hardship on these groups.

Summary

The Census provides the most useful data related to energy hardship (i.e. fuel type data) as could the updated household energy end-use study to be undertaken by BRANZ in the next 2–3 years.

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[34] https://www.branz.co.nz/heep

[35] See footnote 32.

[36] See footnote 33.

[37] See footnote 32.

Section 4: Healthy housing behaviours

Data definitions

Related to energy hardship is the ability, once in a home, for householders to have access to the knowledge to maintain it in order to sustain a warm and dry living environment.

Available data

With respect to increasing awareness and changing the culture in New Zealand regarding how we keep our homes warm and dry, there is limited available data that seeks to draw out an understanding of existing habits with regard to healthy housing. The GSS, a biennial survey of 8,000 New Zealanders, asks questions about participants' habits with respect to healthy housing practice. For example, relevant questions include "In the last seven days, how often was your bedroom aired out?" and if not, "What were the main reasons the room was not aired every day?" Similar questions focus on whether participants air the room of the youngest member in the household, the bathroom and the kitchen. Ethnicity, gender and age group data is collected for the participant, although for the most part, the data collected relates to the wider household. The data is collected by region so a snapshot of Wellington's healthy housing habits is possible.

Other potential datasets (although not currently publicly available and therefore outside the terms of reference for this stocktake) include data held by EnergyMate,[38] a service that provides support to vulnerable families to manage their energy needs, and the Sustainability Trust,[39] a social enterprise that supports sustainable living, which runs programmes and offers services such as insulation services, subsidies and finance to support energy-efficient homes and free home assessments to support healthier homes.

Data quality and gaps in the data, including for Māori

The Census provides no data on understanding household behaviours with respect to maintaining warm, dry homes so a comprehensive nationwide picture is not currently available.

Summary

The GSS provides one of the only datasets (e.g. questions on airing rooms) on healthy housing behaviours.

[38] https://www.energymate.nz/
[39] https://sustaintrust.org.nz/

Section 5: Homelessness and crowding

Data definitions

Homelessness

In New Zealand, homelessness is defined as "living situations where people with no other options to acquire safe and secure housing: are without shelter, in temporary accommodation, sharing accommodation with a household or living in uninhabitable housing".[40]

Crowding

Stats NZ uses the Canadian National Occupancy Standard (CNOS) to assess whether people are living in crowded conditions. The measure is complex but calculates crowding based on number of bedrooms needed as compared with the demographic composition of the household. Stats NZ provides this example: "a household with a couple and two boys aged under 18 would require two bedrooms to meet the CNOS. If an extra person was added to the household it would be considered crowded – requiring one extra bedroom. If one of the boys turned 18, the household would require an extra bedroom." [41]

Available data

Homelessness

There is very little available data on homelessness, given the difficulty of capturing this type of data. However, as indicated previously, the Census captures some relevant information under the dwelling type variable "other occupied private dwellings", which includes quality-related responses and homelessness. Specifically, the categories captured include dwelling in a motor camp, mobile dwelling not in a motor camp, improvised dwelling or shelter, night shelter and roofless or rough sleeper.

The data is available for the Wellington region and can be further subdivided into each area unit (e.g. Porirua Central, Porirua East) and/or can be broken down by territorial authority/area unit (i.e. Upper Hutt, Lower Hutt, Wellington City, Porirua City, Masterton District, Carterton District, South Wairarapa District, Kāpiti Coast District – all of which can be further broken down into their specific areas, e.g. Ngaio in Wellington City).

A study by Hutt City Council[42] outlines homelessness (defined as those in severe housing deprivation) in Lower Hutt in 2001, 2006 and 2013 from the Census. It also breaks down the total

[40] Stats NZ (July 2009) New Zealand definition of homelessness. http://archive.stats.govt.nz/~/media/Statistics/browse-categories/people-and-communities/housing/homelessness-definition/Homelessness-definition-July09.pdf

[41] Stats NZ (May 2018) Living in a crowded house: Exploring the ethnicity and well-being of people in crowded households. https://www.stats.govt.nz/assets/Uploads/Reports/Living-in-a-crowded-house-exploring-the-ethnicity-and-well-being-of-people-in-crowded-households/living-in-a-crowded-house-exploring-the-ethnicity-and-well-being-of-people-in-crowded-households.pdf

[42] John Pritchard and Olivia Miller (May 2018) Homelessness in Lower Hutt. http://iportal.huttcity.govt.nz/Record/ReadOnly?Tab=3&Uri=5122007

numbers by categories of severe housing deprivation (without habitable accommodation – including people living rough or in mobile dwellings; non-private accommodation – including night shelters, women's refuge accommodation, other types of temporary accommodation, hotels, motels and boarding houses; temporary resident in a severely overcrowded permanent private dwelling). Personal narratives from homeless people are also provided.

A special issue of *Parity*,[43] a Council to Homeless Persons publication, focused on responding to homelessness. It included various chapters from individuals and organisations. Overall, very limited actual data was provided although it does include a summary of the 2013 Census information on housing deprivation and categories of this.

Crowding

Data relevant to crowding measures is found in both the Census and the GSS. In 2013, 8.6% of people in the Wellington region lived in crowded houses needing one or more bedroom.[44]

Data quality and gaps in the data, including for Māori

Data quality for both homelessness and crowding is poor for a number of reasons. With respect to homelessness data, only those homeless people who interact with housing services, social service agencies or researchers are included in the data, which results typically in undercounting. In addition, there is no ability to centralise the administrative data held by different organisations. Finally, where data is combined together from different organisations, there is a danger of overcounting if data is not combined in a way that identifies individuals accessing more than one service.[45]

In relation to crowding data, data quality may be hampered by under-reporting due to respondents' fear of being penalised for housing more people than originally stated on rental agreements. In addition, Census response rates amongst Māori and Pacific people have tended to be lower than the national average and were particularly low in the 2018 Census. For example 74.3% of Māori responded in the 2018 Census as compared with 87.5% nationally. In addition, 73.5% of Pacific people responded.[46]

Summary

The Census and the HUD provide the best data available on homelessness, and the Census provides the best data available on crowding.

[43] https://chp.org.au/parity/october-2017-edition-responding-homelessness-aotearoa-new-zealand/

[44] Stats NZ (May 2018) Living in a Crowded house: Exploring the ethnicity and well-being of people in crowded households. https://www.stats.govt.nz/reports/living-in-a-crowded-house-exploring-the-ethnicity-and-well-being-of-people-in-crowded-households

[45] See footnote 40.

[46] Stats NZ (n.d.) Initial report of the 2018 Census External Data Quality Panel. https://www.stats.govt.nz/assets/Uploads/Initial-Report-of-the-2018-Census-External-Data-Quality-Panel/Initial-Report-of-the-2018-Census-External-Data-Quality-Panel.pdf

Section 6: Neighbourhood planning and design

Data definitions

Consideration of housing provision in isolation of the wider context in which that housing sits can be problematic. In order for households to benefit from a good-quality home, factors external to the physical dwelling need to be taken into account. For example, in order for housing to be adequate, it must be located so that its inhabitants have access to employment, health or educational opportunities and amenities such as a quality urban realm and retail opportunities within walking and cycling distance.

Available data

In terms of understanding the ways in which the wider neighbourhood contributes to good housing outcomes for those in the Wellington region, there are portions of different datasets that are relevant. The GSS asks a number of neighbourhood-based questions related to access of amenity. For example, it asks how easy or difficult it is from the respondent's home to access a supermarket or dairy, a doctor or medical centre and public transport. If the answer is that it is difficult, the survey then asks what makes it difficult to access these facilities and services.

The biennial Quality of Life Survey incorporates general questions on the built and natural environment and whether the local area is a great place to live compared with the previous 12 months. Participants are given options for registering reasons for a negative change, including housing-related reasons of homelessness, lack of suitable housing, lack of affordable housing, more housing developments, high-density housing, multi-storey housing, and reasons for positive change, including building developments and renovations – commercial and residential, housing affordability and housing suitability. Further reasons for positive or negative change (some added in 2016 and some in 2018) included car parking issues, too big an outdoor area, too big a home, an unsafe home (e.g. needs earthquake strengthening, hazards in home), difficulty accessing the home from the street, too small an outdoor area, the housing location suitability (e.g. unsafe roads, poor, badly maintained roads and footpaths), not safe from natural disasters (e.g. earthquakes, flooding), not a friendly area, too noisy, lacks character, inconvenient in terms of travel/public transport, not safe in terms of crime, offers a sense of pride in the local area due to good planning and zoning and the presence of good urban design (or the opposite if not reporting a sense of pride).

Data quality and gaps in the data, including for Māori

Successful housing solutions are part of wider neighbourhood settings that respond to and support employment, health, education, social and cultural aspirations of those who live in this housing. Currently, most housing analyses available focus primarily on the individual dwelling, excluding considerations of this wider setting. Further work focused specifically on these wider neighbourhood factors would bolster a focus on house-specific outcomes.

Summary

With respect to neighbourhood planning and design, the GSS and the Quality of Life Survey are the best sources of data offering variables regarding the wider neighbourhood contributions to housing success.

Section 7: Local and central government urban design and planning policy development and regulation

Data definitions

The housing and urban development policy and planning settings governed by local and central government underpin housing provision across the country. Whilst much of the data is not quantifiable, understanding trends in housing and urban development policy set at central government level and planning regulation determined at local government level and the response to those trends from developers, iwi and hapū and other third-sector agencies are an important factor in answering the overall question posed by RHHRG.

Available data

Local government policy and regulation

With regard to planning regulatory tools that govern the production of housing, the Ministry for the Environment holds a database of information, the National Monitoring System (NMS),[47] on planning and consent data at territorial authority/regional council (TA/RC) and iwi/hapū level. The data collected between 2014 and 2018 changes in nature somewhat each year but key qualitative data includes policy statement and plan reviews by TAs/RCs, planning data including preparation of policy statements and plans, changes and variations, efficiency and effectiveness monitoring, iwi/hapū planning documents, resource consents, annual summaries and enforcement. Analysis of these with respect to TAs/RCs and iwi/hapū in the Wellington region could provide some indication of development trends in the region.

Another useful part of this dataset to understand regulatory trends that could lead to increased housing development is the preparation of policy statements and plans, changes and variations and the efficiency and effectiveness monitoring. For example, in 2014/15, Wellington City undertook Plan Change 72 to the Wellington City District Plan introducing two medium-density housing areas, and Plan Change 73 Plan developed new urban design guidance and design guides. In the same period, Hutt City carried out an amendment to enable urban densification.

Consent data

Resource consent data was most consistently collected in the NMS throughout the time period and is helpful for understanding whether the quantity of housing being produced is likely to meet housing need in Wellington. The detail provided on this changes from year to year but generally includes data on the number of resource consents processed and the processing timeframes and whether there have been breaches of the RMA. In earlier years, descriptions of what the resource consent entails is included. Unfortunately, the data is inconsistent and later years do not include this detail so it is difficult to tell how many of these consents relate to house building. Relatedly, building consent data provided by Stats NZ is useful in identifying trends. For example, in the Wellington

[47] https://www.mfe.govt.nz/rma/rma-monitoring

region, there seems to be a small increase in the number of new dwellings consented in the past 3 years (2017 – 2,155, 2018 – 2,781, 2019 –2,655).[48]

Māori housing development

Data is available from Te Puni Kōkiri's Māori Housing Network site that outlines housing projects that have received funding from the Māori Housing Network Fund, which has been providing funding to iwi and mātāwaka groups since 2015. The Wellington region's projects are captured in Te Tai Hauāuru[49] and Ikaroa-Rāwhiti[50] regions.

Increasing housing and urban development design quality

With respect to increasing design quality, unlike Auckland, Hamilton, Christchurch and Nelson, none of the territorial authorities in the Wellington region administer an urban design panel for which there may be internal data available that speaks to increasing quality housing provision in an area. These panels provide pre-resource consent application advice on large, complex or locally significant development proposals and their role is to advise developers through local government in order to increase design quality on large development projects in their respective regions.

Central government policy

Overall housing and urban development policy trends have not been analysed for this report as the focus has been on available data. However, further work would benefit from analysis of this kind to provide background to the quantitative data available.

Data quality and gaps in the data, including for Māori

Key concerns with the data quality provided by the NMS is that local authorities use different methods to record information. According to the Ministry for the Environment, "this can make council to council comparisons less reliable and distort the national picture when data from all councils is combined".[51] In addition, the type of data collected is not consistent across councils, and some local authorities provide estimates for responses as opposed to actual data.

Summary

A key source of information is the NMS. In addition, Stats NZ publishes data from local councils on building consents and Te Puni Kōkiri publishes data on Māori-focused housing development by region.

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[48] Stats NZ (June 2019) Building consents issued: June 2019. https://www.stats.govt.nz/tereo/information-releases/building-consents-issued-june-2019

[49] Te Puni Kōkiri (n.d.) Māori Housing Network Te Tai Hauāuru projects. https://www.tpk.govt.nz/mi/whakamahia/maori-housing-network/te-tai-hauauru

[50] Te Puni Kōkiri (n.d.) Māori Housing Network Ikaroa-Rāwhiti projects. https://www.tpk.govt.nz/mi/whakamahia/maori-housing-network/ikaroarawhiti

[51] Ministry for the Environment (n.d.) Key caveats and disclaimer. https://www.mfe.govt.nz/rma/national-monitoring-system/key-caveats-and-disclaimer

Section 8: Integrated Data Infrastructure (IDI)

Data definitions

The IDI is worthy of its own sub-section due to the sheer enormity of the data housed within it and the opportunities it presents for individual-level data analysis. It is a centrally held database that draws together multiple data sources, including Census data, and offers more than just aggregated data. It offers microdata at the individual level.

Available data

The IDI is comprised of a spine, which has person-level identifiers, attached to which are the many nodes (i.e. the many data sources housed). These nodes are generally not linked to each other. Address information is available down to the meshblock level. The data sources it houses includes, most relevantly for the stocktake, some of the sources indicated previously (not only the Census) as well as others not mentioned so far. These include:

- tenancy bond database
- GSS
- HES;
- Kāinga Ora data (which includes waiting lists for social housing)
- Te Kupenga
- Household Labour Force Survey (relating to the ability to access affordable housing)
- IRD and MSD Working for Families dataset 2003–2013) (covers tax credits, childcare assistance, accommodation supplements and includes total net and gross income)
- Longitudinal Immigration Survey (includes data on difficulty finding housing, e.g. due to discrimination).

Not all of these sources available in the IDI have been described in the stocktake due to the apparent public unavailability of the data dictionary in some cases, which lists the variables in each source.

Many of the datasets within the IDI include ethnicity, age, sex etc. Where datasets do not have this information, it should be able to be accessed, in principle, when linked to the demographic data collected by the Census.

Data quality and gaps in the data, including for Māori

The IDI is only available via strict access procedures involving the development of a research protocol and multiple stages with guidance from Stats NZ. Access to the data only happens within a controlled setting and within a data lab. For government departments, there is no cost to access the IDI. There is some unreliability regarding the linking process (i.e. whether the respondent in survey X really is the same respondent in administrative dataset Y) and the frequent use of imputation methods for missing data.

Summary

The IDI is a tremendously powerful umbrella data source, with no rival in New Zealand and few parallels internationally. It can be used to link multiple variables across data sources to develop complex data models to answer the key question of this stocktake.

Recommendations

Regarding where energies would be best placed in terms of answering the question above, the following recommendations are made.

Most valuable datasets that could contribute to developing projections relevant to answering the overall question

A combination of IDI, HUD and .IDNZ forecast data and REINZ, QV.co.nz, homes.co.nz and Trade Me sale price data would likely be sufficient to provide a well-rounded statistical model to answer the stocktake's overarching question. Such an undertaking would need to take into account some of the access and quality issues highlighted in this report and in the accompanying spreadsheet. Despite its access issues, the IDI may be the most fruitful single source, housing many of the suggested datasets (principally the Census, GSS, HES, tenancy bond database, Te Kupenga and the IRD and MSD Working for Families dataset) and offers microdata rather than aggregated data. There is also transparency regarding its methodology. Despite the fact that the methodology of some of the private sources is opaque, there may need to be some reliance on those private sources to contribute to an overall pictures of housing supply/cost in the Wellington region.

Further work needed on Māori housing issues

Given the lack of work undertaken to date in New Zealand generally on Māori housing issues, we would suggest that Te Kupenga alongside other datasets noted here could be used to develop a comprehensive picture of Māori housing in the Wellington region.

Further work needed on gender and disability housing issues

Housing with respect to gender and disability is also an area of work where there is a dearth of analyses relevant to the Wellington region, so further work on these two foci would be particularly beneficial given the particular housing experiences of both women and those with disabilities, which is not well captured in general housing research.

Further work needed on the ability of the construction sector to respond to housing demand

The ability of the construction section to respond to housing supply issues requires further investigation also and may warrant a bespoke survey given the relatively small size of this sector. The GSS and the Quality of Life Survey both provide a good basis on which to develop further analyses around this, hence it not being included in the data gaps section above.

Appendix 1: Dataset summaries

Population and Household Forecasts (.IDNZ).

These population forecasts are for the years 2013-2043, for all areas in the Wellington region, broken down into Territorial Areas and further into suburbs for each. The projections are informed by estimates of: human population, numbers of private dwellings, net migration by age, births and deaths, and numbers of non-private dwellings.

BRANZ House Condition Survey

The House Condition Survey is completed every 5 years and has been going since 1994. It is a comprehensive survey of New Zealand's housing stock including data on physical property characteristics, how well homes are maintained and general living conditions. The most recent survey was done in 2015/16 and surveyed 560 houses throughout New Zealand.

Census

The Census is a nationwide dataset gathered every 6 years in New Zealand. It covers a wide range of topics and aims to get responses from all New Zealanders. Most recently, the Census was administered in 2018, 2013 and 2006.

Core Logic – QV.co.nz

Core Logic provides data on housing quantity (including housing sale prices, rental costs and numbers of listings for sale) and characteristics of buyers by territorial authority.

General Social Survey (GSS)

The GSS provides data on wellbeing. It includes a wide range of social and economic variables to understand the wellbeing of New Zealanders in relation to these factors. The survey takes place every 2 years, and data is available between 2008 and 2018. It targets a representative sample of the New Zealand population, and data is available by region.

In 2018, a housing and physical environment supplement was added to the GSS and included five new areas of content – housing quality and suitability, housing tenure security and housing mobility, housing costs, quality of neighbourhood, sustainable living and engagement with natural environment.

Homes.co.nz

Homes.co.nz provides individual house-level data including value estimate range, mid-range estimate, rent estimate, capital valuation, size of house floor area in square metres, numbers of bedrooms, bathrooms and car park spaces, size of section/land area and location on a map. A comparison between individual house value and suburban trends is available for 1 year previously.

Household Economic Survey

The HES collects data on household income, savings and expenditure alongside individual and household demographic information. It has three components: income (run every year), expenditure (run every 3 years) and household net worth (run every 3 years). Data is accessible from 1998–2017. The sample size varies from 500–8,000 participants across New Zealand.

Household Energy End-use Project (HEEP)

A multi-year multi-discipline BRANZ study that monitored all fuel types (electricity, natural gas, LPG, solid fuel, oil and solar used for water heating) and the services they provide (space temperature, hot water, cooking, lights, appliances etc.) in a national random sample of 400 houses (41 in Wellington). Extensive data is collected including on house temperatures, pensioner housing, fuel poverty and Māori households.

Integrated Data Infrastructure – IDI

The IDI is a large database containing data from a range of sources and surveys. The IDI contains microdata about people and households. Access is via stringent ethics protocols.

Kāinga Ora data

Kāinga Ora provides regional data on numbers of people in social housing, social housing stock available and housing stock vacant. Data is available from 2015–2019.

Ministry for the Environment – National Monitoring System

The Ministry collects data from territorial authorities around the country on a range of topics such as the number and nature of resource consents applied for, planning changes, plans and statements, iwi and hapū agreements and enforcement statistics.

Ministry of Housing and Urban Development data

The Ministry provides summary data on public housing supply, housing support, community housing providers, transitional housing and housing special needs grants. Data is available from October 2017.

Pilot Housing Survey (PHS)

The PHS recruited households through the 2018 GSS to provide a sub-sample to take part in an independent housing assessment survey run by BRANZ. The PHS identified indicators of a warm, dry, healthy home, including energy efficiency (e.g. double glazing and insulation, heating appliances), safety features (e.g. fire alarms and structural integrity), signs of dampness and mould and condition/state of repair of different components. Results are due out in 2020.

Prefab NZ

A one-off survey of construction industry prefabricated manufacturers to understand market size and capacity of the industry to meet demand for prefabricated housing in the future.

Quality of Life Survey

The survey is administered by Neilsen on behalf of eight participating councils. A steering group from four councils, including Wellington City Council, managed the project on behalf of the other councils. The survey takes place every 2 years and was last undertaken in 2018, in which 564 Wellington residents, 552 Hutt residents, 583 Porirua residents and 721 Greater Wellington Region (excluding Hutt, Porirua and Wellington City) residents were surveyed. The questions were developed by the consortium of councils.

Stats NZ building consents data

The number of building consents applied for by region and territorial authority are identified in this dataset.

Te Kupenga

A large dataset collected in 2013 across four categories of Māori wellbeing. Data on housing problems was collected as part of economic wellbeing. It is unclear if it will be repeated.

Te Puni Kōkiri – Māori Housing Network Funding Database

Data outlines housing projects that have received funding from the Māori Housing Network Fund, which has provided funding to iwi and mātāwaka groups since 2015.

Tenancy bond database – MBIE

A high-level data source that is the result of .IDNZ working with relevant councils to obtain updated information on planned and current developments. It contains figures on numbers of new bonds lodged, active bonds, closed bonds and mean weekly rents (including a geometric mean) recorded for each New Zealand region and broken down by territorial authorities within each region. All new rental bonds with private sector landlords must lodge these in accordance with the Residential Tenancies Act. The data is updated monthly and quarterly, with the latter updates containing more detailed breakdowns of figures by housing type (flat/apartment or house) and numbers of bedrooms, which are arranged by statistical area unit for matching with territorial authorities and regions.

Trade Me

Trade Me provides data on median rental prices (asking prices not agreed prices), mean expected sale prices (not actual sale price) of properties over a 3-month period and property size and make-up (e.g. number of bedrooms). The earliest data on the Trade Me website is from 2015.

Appendix 2: Examples of relevant variables

The following summary table offers examples of variables for each area of the subject areas and the source of that variable.

Subject area	Source – example variables
Section 1: Access to housing	
Supply – number of houses physically available in the region	• Census – number of houses in the region; tenure mix (private homeowners/rentals/social housing/other)
Cost and value	• Core Logic; Homes.co.nz; REINZ; Trade Me – number of house sales/prices in the region • Tenancy bond database – cost of rental
Affordability	• HUD – Housing Affordability Measure – renters, first home buyers and affordability
Future projections	• .IDNZ – population projections for the region; projected household make-up for the region • Prefab NZ – projected supply of housing in the region over the study period (next 7–10 years) and beyond • HUD – public housing demand predictions
Section 2: Housing quality	
	• Census – breakdown of housing type (age/structure/size/number of bedrooms) across the region by dep index/suburb • GSS – housing condition; cold/warmth of dwelling • House Condition Survey; Quality of Life Survey – number of homes considered to be damp and with visible mould
Māori housing quality	• Te Kupenga – housing in need of repair; pests; size of house/flat; dampness; warmth
Section 3: Energy hardship (fuel poverty)	
	• Census – type of fuel used in dwellings • GSS – payment of utility bills on time • Quality of Life Survey – ability to pay necessities • HES – extent to which households have put up with the cold
Section 4: Healthy housing behaviours	
	• WellHomes; Sustainability Trust; EnergyMate; EECA – number of households accessing housing support services; number of times rooms were aired out
Section 5: Homelessness and crowding	
Homelessness	• HUD – numbers of people on the social housing register in the region

	• Census – numbers of people homeless “without shelter”; numbers of people in transitional/emergency housing
Crowding	• Census – number of people (and their ages/gender) living in a dwelling versus number of bedrooms
Section 6: Neighbourhood planning and design	
	• Quality of Life Survey – whether the local area is a great place to live
Section 7: Local and central government urban design and planning policy development and regulation	
	• National Monitoring System – resource consent numbers and type; TA policy statements, plans and changes • Te Puni Kōkiri Housing Network – successful funding applications for housing projects • Stats NZ – building consent numbers

Appendix 3: Methodology

This section outlines the overall strategy for identifying relevant sources of data to achieve the aims of the housing stocktake.

The purpose of this protocol is to appropriately limit the scope of the stocktake, thereby ensuring efficiency and effectiveness of the process. This will provide a framework for the extraction of data information from relevant data sources.

In addition to ensuring efficiency and effectiveness, the purpose in adhering to a protocol is also to permit reproducibility of the searches undertaken. In this way, the required outputs of the stocktake (i.e. summary document, Excel spreadsheet of sources and infographic) may be used to inform related future research to be initiated by the lead organisation.

A caveat regarding the finality of the document is that there may be opportunities for widening the scope during the searching itself in the event that the findings of the search highlight potentially valuable criteria that were not covered in the agreed protocol. In permitting some degree of flexibility in this respect, the search strategy may be better informed by contact with the real-world data it seeks to access: a cyclical process of improvement.

Scope of the protocol

The protocol is consistent with the agreed subject and geographical scope as stated in the Agreement for Service document, where the project is described as:

> A housing data stocktake of regionally specific, publicly available data and research including both primary and secondary sources. The stocktake will focus on:
>
> - housing quality;
> - energy hardship;
> - healthy housing behaviours;
> - and identify groups that are adversely effected by housing related issues and why.
>
> And where these topics intersect with:
>
> - homelessness;
> - location and supply of housing;
> - behaviour change and cultural awareness;
> - urban design and planning process;
> - policy development in local and central government.

In practice, this means restricting searches to sources that are at least relevant to, if not specifically on, the Wellington region (see Figure 2), where the latter is defined as the totality of:

- Wellington
- Kāpiti Coast
- Porirua-Tawa
- Lower Hutt
- Upper Hutt
- Carterton
- Masterton (East Masterton)
- South Wairarapa.

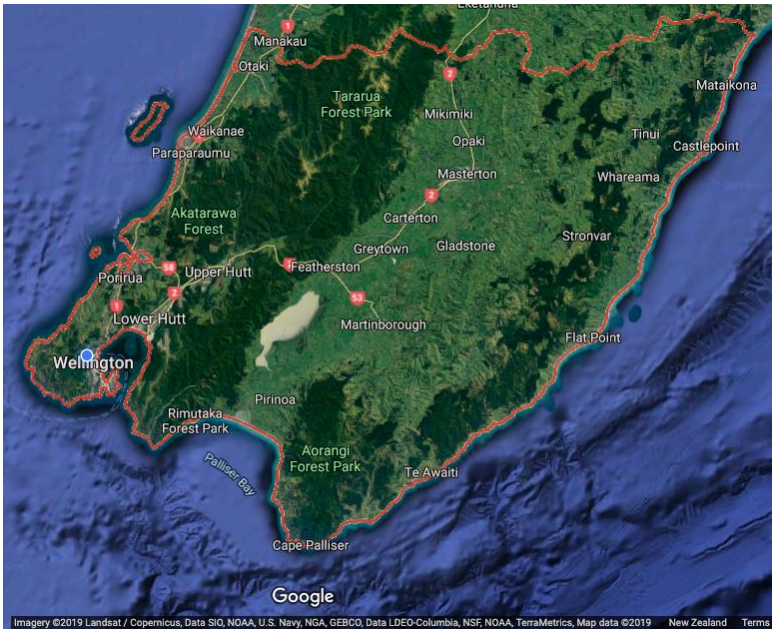

Fig. 2. Boundary of the Wellington Region: geographical scope of the stocktake.

In terms of public availability, searches will be limited to:

- readily accessible websites containing data in a raw or summarised form (e.g. in a policy document or published report), including open-access journals
- electronic datasets that are accessible upon (reasonable) request directed towards relevant institutions, groups or individuals.

In addition, given the researchers' capacity to access academic, subscription-only databases, this search will be extended to include journals (and other publications), which, whilst not open access and therefore widely available to the public, may contain references to datasets (or, in some cases, an actual dataset) that may be openly available for public use (again, perhaps upon reasonable request). (A list of academic databases are listed in Appendix 4 with a Boolean search strategy.)

The remainder of this section will address more specific criteria regarding the extraction of information about variables that may play a role in answering the key research question driving the need for this stocktake:

> ***Is there sufficient housing supply, and is it of sufficient quality, for all residents in the [Wellington] region to be living in warm, dry and safe housing by 2025?***

Relevance and quality criteria

Identified data sources. The primary relevance criterion is the scope of the data repositories themselves – a predetermined list of those to be accessed is provided in Appendix 4. This list is the combination of sources previously identified by the DHB and reported in the Wellington Region Stocktake table document "Table 1: Housing reports, strategies and statement themes" with some additional sources identified by the researchers. As indicated, however, this list may require a degree of ongoing flexibility in order to be comprehensive. A fundamental requirement of any source – as indicated previously – will be its public availability.

Once a source has been accessed, the following criteria will come into play for decisions on whether to extract variable information:

- *Subject specificity*: variables must relate to at least one of the key foci listed previously (i.e. housing quality, energy hardship etc.) including their intersections with the other named considerations (i.e. homelessness, location and supply of housing etc.).
- *Regional scope*: data must have been collected in direct relation to the Wellington region or otherwise have indirect relevance to the region. The scope will, however, always be limited to within Aotearoa New Zealand, given the potentially unlimited degree of indirect relevance of overseas cases to the Wellington region (i.e. Australia, UK, Canada, USA etc.).
- *Date range*: variables will be limited to the period 2006 to the present in order to capture housing data from two previous New Zealand Censuses and to place a limit on otherwise superfluous searches with limited applicability to the 2025 target. This may allow trajectories to be calculated in future using Census data in combination with other sources.
- *Indications of data quality*: if possible, information extraction will be limited to sources where there is a clear statement that data has been collected via robust processes (e.g. based on statements on representative samples; the statement of a clear data quality protocol).
- *Accessibility of data*: although unlikely to be an exclusion criterion, recommendations can be made at the time of extraction regarding the likely gatekeeper issues in relation to data repositories or in relation to specific variables (e.g. the IDI is known to have strict access limitations). Rather than an assessment of relevance or quality, this latter consideration pertains to the practicalities of accessing the required data within desirable or practical timescales.

The working spreadsheet used to record data information will be populated with summaries relating to each previously listed criterion, in addition to the following:

- *Detailed information on the specific variables collected in the dataset* (including where possible the wording of survey questions used to collect data). This information will reflect the emphases outlined in "Table 4: Phase 2 Emerging Questions for Investigation" of the Wellington Region Stocktake table document. (See Appendix 5 for reproduction of these questions).
- *Sample information* (i.e. demographics of sample members including where possible ethnicity, sex, age and any changes over time in sample specifications etc.).
- *Frequency of reporting* (i.e. quarterly, annually etc.).
- *Channels for reporting* (i.e. by journal, by electronic report etc.).
- *Type of data collection tool* (i.e. Census, longitudinal survey, online survey, administrative collection by government agency etc.).
- *Level of data* (i.e. population level, household panel data etc.).
- *Level of geographic specificity* (e.g. meshblock, ward or regional council level data).

The resulting spreadsheet will be available for review once this protocol has been finalised using feedback from the Steering Group.

Appendix 4: Protocol planned list of sources

- Bond data for rental properties including number of bedrooms
- Census data
- Construction sector capacity
- QV.co.nz (part of the supply and demand picture)
- GSS & BRANZ Pilot Housing Survey
- Kāinga Ora regional stats on numbers of people in Kāinga Ora homes in the region, homes available, homes being renovated, homes to be built
- Healthyhousing.org.nz
- Homes.co.nz provides value predictions and some supply and demand info
- Household Energy End-Use Project (HEEP, BRANZ) study – to be updated 2020–2023
- Housing Affordability Measure (MBIE)
- BRANZ House Condition Survey 2015
- Housing Quarterly Reports (MSD)
- Housing Register MSD quarterly
- Hutt City Council eco design database
- Hutt City Council report on homelessness in Hutt City
- HVDHB admission/discharge data
- ID Community Profile (derived from Census data)
- IDI
- MSD – public housing record
- MSD – transitional housing information
- MSD – Transfer Register
- MSD - numbers of people requesting help
- National demographic indicators series
- National Policy Statement of Urban Design Capacity
- NPSUDC Urban Capacity Dashboard
- Number of consents lodged
- Porirua Community Profile (Infometrics)
- Porirua population statistics
- Porirua Quarterly Economic Monitor House Prices
- Potential to look at DHB bed days lost
- Pre-purchase inspection data that can be anonymised
- Quality of Life Survey
- Quick Stats about a place (Census)
- RPH – Wellhomes database.
- Stats NZ data around rental properties (separate from the Census)
- WCC rental WOF
- Wellington Housing Affordability Measure
- Wellington Region Genuine Progress Index

Other sources identified (either containing data or references to possible data sources):

- A Stocktake of New Zealand's Housing (2018). https://www.beehive.govt.nz/sites/default/files/2018-02/A%20Stocktake%20Of%20New%20Zealand%27s%20Housing.pdf
- Child Poverty Action Group (CPAG) briefing paper on housing supply, affordability etc. https://www.cpag.org.nz/assets/Housing%20briefing%20paper%20-%20May15%20CPAG.pdf
- Community Housing (research on housing tenure, affordability etc.). http://www.communityhousing.org.nz/our-place/what-the-research-is-saying
- Controller and Auditor General (webpages using data on social housing). https://www.oag.govt.nz/2017/social-housing/part2.htm
- Final report of the House Prices Unit: House price increases and housing in New Zealand. Department of the Prime Minister and Cabinet. https://dpmc.govt.nz/publications/final%C2%A0report%C2%A0%C2%A0%C2%A0house%C2%A0prices-unit%C2%A0house%C2%A0-price%C2%A0increases%C2%A0and%C2%A0housing%C2%A0%C2%A0new%C2%A0zealand
- From social renting to housing independence – the social and economic impacts of housing tenure. New Zealand Housing Foundation. https://www.nzhf.org/files/Research%20Papers/HF_Research_Bulletin_April_2017_Screen_Version.pdf
- Home and Housed: A Vision for Social Housing in New Zealand April 2010. http://www.baybuzz.co.nz/wp-content/uploads/2010/08/vision-for-social-housing-nz.pdf
- Housing Markets and Migration: Evidence from New Zealand. Dept. of Labour (2008). https://www.lgnz.co.nz/assets/Housing-2030-Library-Resources/a18e59989e/housing-markets-and-immigration-evidence-from-nz_compressed.pdf
- Housing Policy Recommendations to Address Child Poverty August 2012. Expert Advisory Group on Solutions to Child Poverty. https://www.occ.org.nz/assets/Uploads/EAG/Working-papers/No-18-Housing-policy-recommendations-to-address-poverty.pdf
- Measuring the wellbeing impacts of public policy: social housing November 2018. Social Investment Agency (uses IDI data). https://sia.govt.nz/assets/Uploads/Measuring-the-wellbeing-impacts-of-public-policy-social-housing.pdf
- Motu Economic and Public Policy Research. A State Housing Database: 1993–2009. http://motu-www.motu.org.nz/wpapers/10_13.pdf
- New Zealand Planning Institute submission on how to define "housing quality". https://www.planning.org.nz/Attachment?Action=Download&Attachment_id=5079
- NZ Parliament website (potentially relevant research papers on housing issues). https://www.parliament.nz/en/pb/research-papers/document/00PlibCIP171/housing-issues
- OECD data summary of NZ (including a collection of economic indicators and public spending figures). https://data.oecd.org/new-zealand.htm#_ga=2.17016249.1445760178.1559705126-939002607.1559705126
- Quantifying the impact of land use regulation: Evidence from New Zealand 2017. https://www.superu.govt.nz/sites/default/files/Impact%20of%20land%20use%20report%20110717.pdf
- Responding to Homelessness in Aotearoa New Zealand (intersections between housing and homelessness). https://www.housingfirst.co.nz/uploads/files/Parity%20Vol30-08.pdf

- The Demand for Social Housing in New Zealand. The Salvation Army Social Policy & Parliamentary Unit August 2017. https://www.salvationarmy.org.nz/sites/default/files/uploads/20170814spputakingstockreport.pdf
- The New Zealand Rental Sector (2017 report prepared for BRANZ using IDI data).https://www.branz.co.nz/cms_show_download.php?id=606738ff7cb47451e094ad80f39cc912fa18f7a8
- The Social Housing Outcomes Worth Study. http://www.healthyhousing.org.nz/research/past-research/the-housing-crowding-and-health-study/
- Wellington City Council resource on rental costs and housing affordability. https://wellington.govt.nz/your-council/plans-policies-and-bylaws/urban-development/monitoring/housing-affordability
- Stats NZ

Optional set of database searches

- Google Scholar
- Proquest
- Sciencedirect
- Scopus
- Web of Science

Search strategy for databases

Boolean search terms (requiring three collections of terms in each search):

Level 1 (("Housing" OR "Accommodation" OR "Property" OR "Home*" OR "Rental" OR "Built" OR "Dwelling") AND

Level 2 ("Wellington" OR "New Zealand" OR "Aotearoa")) AND

Level 3 ("Quality" OR "Energy" OR "Literacy" OR "Health*" OR "Hardship" OR "Supply" OR "Affordab*" OR "Price*" OR "Value*" OR "Safe*").

Other restrictions

- Initial abstract and title search only (full text will be read only once relevance has been established).
- Spanning up to previous 13 years only (i.e. since the 2006 Census).
- English language only.
- Published article, review or book chapter only.
- Appropriate subject area restrictions (i.e. depending on database, it will be possible to limit to the social sciences, environmental sciences, energy etc.).

Appendix 5: Protocol key questions on quantity and quality of housing stock

Quantity questions to be considered around housing stock:

- Number of houses in the region and the tenure mix (private homeowners/rentals/social housing/other)?
- What is the projected supply of housing in the region over the study period (next 7–10 years) and beyond?
- Number of house sales/prices in the region and predictions?
- Number of vacant/unoccupied (including second homes) dwellings?

Quantity questions to be considered around household occupants:

- What are the population projections for the region and projected household make-up?
- How many people are on the social housing register in the region and what are the predictions until 2025?
- How many people are homeless (can we quantify the hidden homeless)? "Without shelter" population and in transitional/emergency housing?
- How many households have functional/structural overcrowding?
- How affordable is Wellington Housing – using Housing Affordability Measure to assess?
- How many people are experiencing energy hardship?
- How many households are accessing housing support services, i.e. Well Homes?

Quality questions to be considered around housing stock:

- Breakdown of housing type (age/structure/size/number of bedrooms) across the region by Dep index/suburb?
- Number of houses that have been insulated up to required HHGA standard by Dep index/suburb?
- Number of houses likely to be eligible for Warmer Kiwi Homes insulation programme?
- Average indoor temperature/humidity by Local Authority Area?
- Number of homes considered to be damp and with visible mould?
- Number of houses meeting WOF home safety standards? (safe homes, hazards, poisonings, trips and fall hazards, personal safety, etc.)
- Number of homes with fixed heating sources, mechanical ventilation?
- Number of rentals that meet HHGA standards?

Quality questions to be considered around household occupants:

- What is the community perception around housing quality, tenure and supply?