

# Measuring housing quality

Potential ways to improve data collection on  
housing quality in New Zealand



#### **Crown copyright ©**

This work is licensed under the Creative Commons Attribution 3.0 New Zealand licence. You are free to copy, distribute, and adapt the work, as long as you attribute the work to Statistics NZ and abide by the other licence terms. Please note you may not use any departmental or governmental emblem, logo, or coat of arms in any way that infringes any provision of the Flags, Emblems, and Names Protection Act 1981. Use the wording 'Statistics New Zealand' in your attribution, not the Statistics NZ logo.

#### **Liability statement**

While all care and diligence has been used in processing, analysing, and extracting data and information in this publication, Statistics NZ gives no warranty it is error free and will not be liable for any loss or damage suffered by the use directly, or indirectly, of the information in this publication.

#### **Citation**

Statistics New Zealand (2015). *Measuring housing quality: Potential ways to improve data collection on housing quality in New Zealand* Available from [www.stats.govt.nz](http://www.stats.govt.nz).

ISBN 978-0-478-42945-9 (online)

#### **Published in January 2015 by**

Statistics New Zealand  
Tatauranga Aotearoa  
Wellington, New Zealand

#### **Contact**

Statistics New Zealand Information Centre: [info@stats.govt.nz](mailto:info@stats.govt.nz)  
Phone toll-free 0508 525 525  
Phone international +64 4 931 4610  
[www.stats.govt.nz](http://www.stats.govt.nz)

For more information on the statistics in this paper, please contact Rosemary Goodyear ([rosemary.goodyear@stats.govt.nz](mailto:rosemary.goodyear@stats.govt.nz))



# Contents

<b>Tables and figures</b> .....	<b>4</b>
<b>1 Purpose and summary</b> .....	<b>5</b>
Purpose.....	5
Summary.....	5
<b>2 Introduction to housing quality and measuring it</b> .....	<b>7</b>
Defining housing quality .....	7
Why measure housing quality? .....	8
Reviews of housing quality in New Zealand.....	10
Recent initiatives on housing quality in New Zealand.....	11
<b>3 Aspects of housing quality to measure</b> .....	<b>13</b>
OECD’s recommendations for housing quality measurement .....	13
Scotland’s rating systems for housing.....	14
<b>4 Measuring housing quality in New Zealand</b> .....	<b>16</b>
Housing Improvement Regulations 1947 .....	16
New Zealand definition of homelessness.....	16
The Healthy Housing Index .....	17
Suggested key aspects of housing quality information from 2009 Review of Housing Statistics.....	18
<b>5 How housing quality is measured worldwide</b> .....	<b>19</b>
Differences between self-reporting and expert assessment.....	19
Countries with self-reported housing quality .....	21
Examples of expert assessment of housing condition combined with survey data.....	21
<b>6 How housing quality is measured in New Zealand</b> .....	<b>22</b>
Census pre-1980 .....	22
Data collected or funded by public sector agencies.....	23
Data collected by Statistics NZ.....	26
<b>7 Potential ways to improve New Zealand’s housing quality statistics</b> .....	<b>28</b>
Criteria for choosing options.....	28
Options to consider.....	28
<b>8 Conclusion</b> .....	<b>34</b>
Questions for data-collection agencies to consider.....	34
<b>References and further reading</b> .....	<b>35</b>

References.....	35
Further reading .....	37
<b>Appendix 1: Excerpt from New Zealand’s Housing Improvement Regulations 1947 .....</b>	<b>39</b>
<b>Appendix 2: About international housing surveys.....</b>	<b>40</b>
American Housing Survey .....	40
Australian Survey of Income and Housing .....	41
English Housing Survey .....	43
Scottish Household Survey / Scottish House Condition Survey .....	44

## Tables and figures

### Table

1 International approaches to measuring housing quality.....	20
--	----

### List of figures

1 Components of housing quality .....	7
2 Example of black mould in wall linings .....	9
3. Excerpt from the safety module in the Healthy Housing Index assessment.....	17
4. Example of a Healthy Housing Index ‘approved’ sticker.....	18
5. Scottish Housing Quality Standard 2004/5–2010 (%s).....	45



---

# 1 Purpose and summary

## Purpose

*Measuring housing quality: Potential ways to improve data collection on housing quality in New Zealand* discusses what is meant by housing quality and presents potential measures of housing quality and possible ways to improve the collection of housing quality statistics. The paper includes a discussion of current sources of information on housing quality and looks at information available overseas. Our intention is to stimulate discussion on the definition of housing quality and what should be measured.

## Summary

Housing quality is a key gap in New Zealand's Official Statistics System, as identified by the latest review of Tier 1 Statistics. This paper helps to advance the recommendations of the *Review of housing statistics report 2009* (Statistics NZ, 2009b) and the 2012 Review of Tier 1 statistics (Statistics NZ, 2012).

*Measuring housing quality* recommends that the housing community agree on the definition of housing quality and the purpose of data collection about housing quality before a plan of action can be established. We expect this report to form a base for discussion in the wider housing sector, with the aim of agreeing on housing quality measures and data collection.

The paper also includes some background about measuring housing quality, and describes how national statistical offices overseas collect housing quality statistics.

## Questions for agencies to consider

To help stimulate discussion, here are questions agencies involved with providing housing, determining housing policy, and collecting housing data could consider.

What definition of housing quality should be used in New Zealand?

What should information about housing quality be used for? For example, to:

- measure the quality of housing stock in order to develop effective housing policy?
- set targets for the improvement of the nation's housing stock and be able to evaluate progress?
- measure the success of government interventions such as the insulation subsidy?
- target interventions to particular areas and population groups?
- analyse the effect of housing quality on health and other outcomes?

What approach do you think would be most effective in order to achieve these aims?

Are there other possible approaches to measuring housing quality that have not been included here?

If so, what are these approaches?

## Key points about housing quality statistics and options

- The OECD (2011) regards the production of better and more consistent measures of housing quality internationally as an important area for statistical development.

- While New Zealand has some statistics on housing quality, these have tended to be intermittent and limited in scope so it would be beneficial for New Zealand to develop housing quality statistics that would be internationally comparable and consistent over time.
- It is important that there is clear agreement about what constitutes housing quality and what should be measured before a programme of work can be put into place.

This paper suggests a number of potential options for improving statistics on housing quality including:

- An expanded household survey (such as the General Social Survey) with questions on housing quality combined with an objective measurement – combining with housing condition inspection in partnership with Building Research Association of New Zealand (BRANZ).
- A housing survey based upon an overseas model such as the Scottish Housing Condition Survey.
- An expanded BRANZ survey.
- An expanded section on housing quality in General Social Survey or a module added to Household Economic Survey.
- Incorporating data collection in the Warm up New Zealand Healthy Homes programme run by Energy Efficiency and Conservation Authority (EECA).
- Incorporating data collection in the proposed warrant of fitness for rental housing.

## 2 Introduction to housing quality and measuring it

This chapter presents background information on housing quality:

- [Defining housing quality](#)
- [Why measure housing quality?](#)
- [Reviews of housing quality in New Zealand](#)
- [Recent initiatives around housing quality](#)

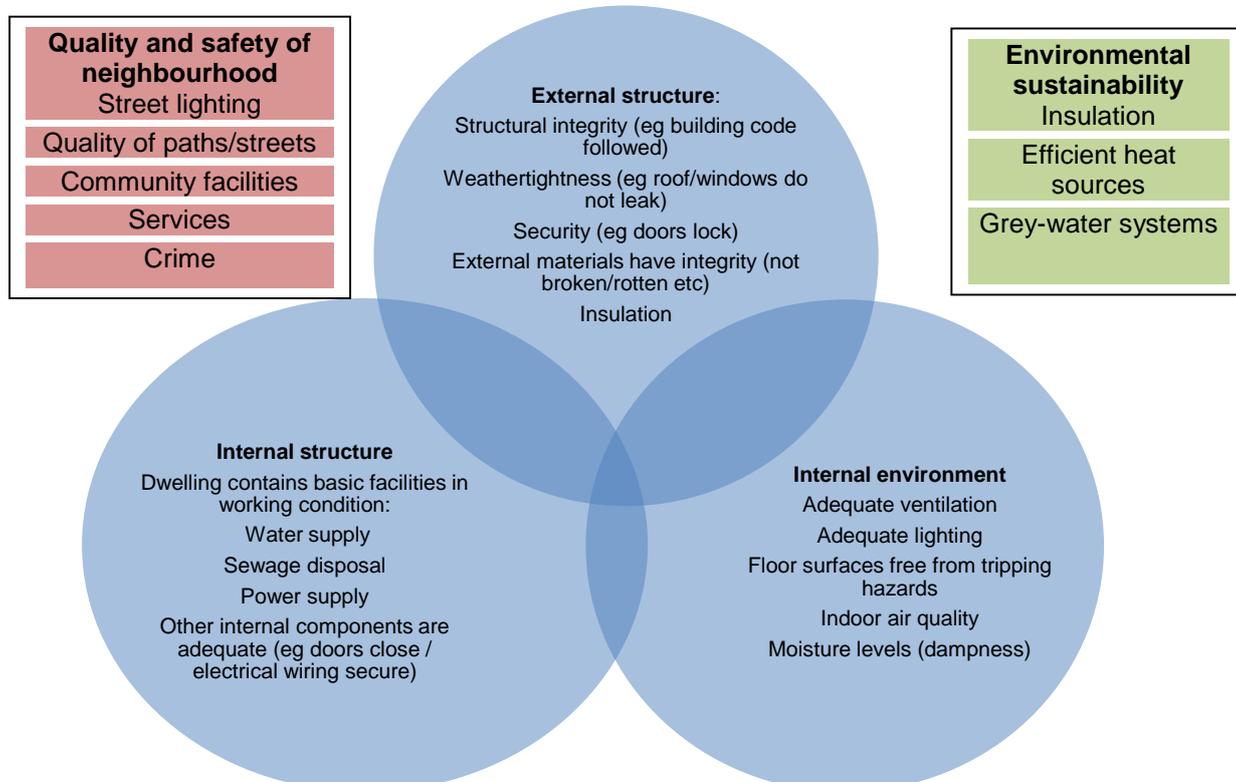
### Defining housing quality

Housing quality has many elements, and can be defined in many ways. A targeted definition of housing quality concerns simply the quality of the internal and external structure of a dwelling and aspects of the internal environment. A wider definition may include features of the neighbourhood and concepts such as environmental sustainability. Housing quality is also referred to as housing condition or housing habitability.

Figure 1 shows some of the major components of housing quality, and some of the elements that can be included in each component.

**Figure 1**

#### Components of housing quality



Clark (2009) defined adequate housing as “protection from the cold, damp, heat, rain, wind, structural hazards, disease vectors, and other threats to health”.

However, the quality of the internal environment is also important. A definition of housing quality should ideally include a standard of adequacy relating to the quality of the external and internal structures, and the internal environment.

A challenge for everyone concerned about measuring housing quality is to first agree on a definition for housing quality. An agreed measure is essential to enable consistent collection of information. It is also important that agencies consider their priorities for data collection.

## Why measure housing quality?

### **Housing quality became a government concern in the early 20th century**

Concern about housing quality in New Zealand is not new. Infectious disease epidemics such as the great Spanish Flu epidemic in 1918/19 highlighted the importance of housing in relation to health. The New Zealand Government, concerned for the health of the population, authorised a housing survey in 1935 that focused on housing quality and crowding. Local authorities carried out this survey on behalf of central government. The Government and health authorities (Bierre, Howden-Chapman, Signal, Cunningham, 2007) were concerned over the presence of urban 'slum' areas.

By March 1939, housing surveys had been carried out in 115 of the 119 local areas. The results covered 225,363 dwellings, where 901,353 people lived (Taylor, 1986). Of buildings used as dwellings, 31,663 were classed as unsatisfactory but repairable; 6,827 were totally unsatisfactory. There were 9,835 overcrowded dwellings with 14,761 surplus persons in them. These surveys remain the only comprehensive housing surveys ever carried out in New Zealand.

After World War II, the New Zealand Government introduced regulations about housing quality, based on this housing survey. The Housing Improvement Regulations 1947 (amended 1975) established the minimum standards for housing in for bathroom facilities, light and ventilation, and room size. It also included a measure of crowding, and designated the minimum provision of facilities (a household should have one bathroom and toilet for every seven people). The regulations have some clear directions about housing quality including the provision of sewerage, freedom from dampness, and maintenance to an acceptable standard (see appendix 1).

Although no comprehensive housing surveys have been carried out since the 1930s, a number of studies have highlighted the issue of poor housing quality in New Zealand. These studies have shown that New Zealand houses tend to be too cold. The Household Energy End-Use project showed that one-third of households in the South Island had an average winter temperature in the living room of below 16<sup>o</sup> Celsius (Stoecklein et al, 2002). The World Health Organisation recommends a minimum indoor temperature of 18<sup>o</sup> Celsius, with a warmer minimum temperature for the elderly and very young.

### **Links between housing and health lead to a greater focus on housing quality**

A considerable body of New Zealand and international literature links poor housing quality with poor physical and mental health. The strong link between damp housing conditions and poor respiratory health is evidenced in numerous New Zealand and international studies.

Poor health results in increased hospital admissions and more absences from school and work, with implications for the economy. A recent evaluation of the Warm up New Zealand: Heat Smart programme (Grimes et al, 2012) showed a 5:1 cost benefit ratio for insulation. A study of 58,000 children in various countries showed "indoor mould exposure was consistently associated with adverse respiratory health outcomes in children" (Antova et al, 2008).

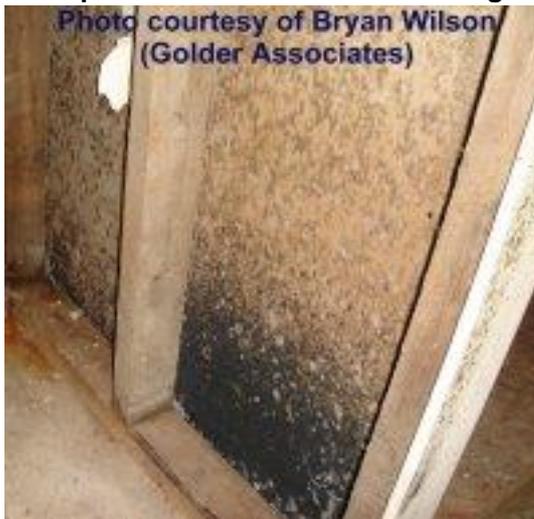
Antova et al (2008) also demonstrated a relationship between crowded living conditions and asthma. In New Zealand, Keall et al (2012) estimated that, using their Respiratory

Hazard Index, for each increase in the hazard index there was a corresponding rise in the experience of wheezing or asthma. Research shows New Zealand has higher hospitalisation and mortality rates in the winter, which is likely to relate to poor housing quality (Barnard, 2009, quoted in Canterbury District Health Board, 2012).

Clark (2009) notes that damp housing affects physical health because it has the potential to increase dust mites and moulds, both of which are allergenic. Figure 2 shows the presence of black mould in wall linings. Hidden housing issues such as mould can adversely affect people's health.

**Figure 2**

**Example of black mould in wall linings**



Piatt et al (1989, quoted in Clark, 2009) shows people living in damp and mouldy dwellings are more likely to report nausea, vomiting, constipation, blocked nasal passages, breathlessness, backache, aching joints, and fainting than people living in drier dwellings. The OECD (2011) emphasises the importance of measuring housing quality because "it is a major driver of health status with effects for both mental and physical health".

The strong body of evidence showing the association between housing quality and health has promoted a growing interest in housing quality. Researchers in New Zealand have identified rental housing and rural properties in low socio-economic areas as particularly associated with low-quality housing. The He Kainga Oranga Housing and Health research programme has shown that intervention (insulation, ventilation, heating, and crowding reduction) has resulted in improvements in health (Howden-Chapman, Baker, Bierre, 2013). Their work was published as the leaky homes issue was revealed in New Zealand.

Poor housing quality has economic as well as health impacts. The 'leaky homes crisis' (where a relaxation of building standards resulted in a number of houses being built that were not weathertight) has had a significant impact on the economy. The New Zealand Productivity Commission (2011) noted the "leaky homes crisis has been estimated at costing \$11.3 billion cost (2008 dollars)". Housing is affected by the structure and maintenance of the building (eg leaking roofs) and by the way people live in a dwelling. Dampness and mould will be exacerbated if, for example, inhabitants dry clothes inside, do not ventilate the dwelling, or use unflued gas heaters. Energy efficiency is considered an important indicator of housing quality as uninsulated dwellings are difficult and expensive to heat, and contribute to dampness and cold within a home.

Housing quality has been identified as a major information gap in the official statistical system, first in the 2009 Review of Housing Statistics (Statistics NZ, 2009b) and then in

the revised list of Tier 1 Statistics 2012 (Statistics NZ, 2012). Housing quality is seen as a major issue in New Zealand, partly because of concern over 'leaky building syndrome', following the revised building codes of the 1990s, and the consequent cost to the economy, but also because of the public-health issues associated with poor housing quality.

The strong link between damp housing conditions and poor respiratory health is clear in many New Zealand and international studies. Poor health results in increased hospital admissions and more absences from school and work, with implications for the economy. A recent evaluation of the Warm Up New Zealand: Heat Smart programme (Grimes, et al, 2012) showed a 5:1 cost benefit ratio for home insulation.

## Reviews of housing quality in New Zealand

Several major reviews and initiatives across government in recent years have identified the importance of housing quality statistics.

### The 2009 review of housing statistics

*Review of housing statistics report 2009* (Statistics NZ, 2009b) presented the results of extensive consultation with both government and non-government organisations with an interest in housing. Among other recommendations, the review identified housing habitability as a key topic and recommended that:

The Department of Building and Housing, the Building Research Association of New Zealand (BRANZ), and Statistics NZ should work together to investigate improvements to existing data sources (survey or administrative) on the physical quality of the national housing stock.

The review also noted that:

The physical quality of housing is of public policy interest because of its links with individual and family well-being. Investing in good quality housing can result in improvements in health outcomes among groups that are living in badly constructed and older homes. Homes that need repair can increase the risk of injury for occupants; these homes are associated with cold and damp living conditions and are a threat to health. Poor health outcomes can have a flow-on effect to outcomes in other areas, such as education, paid work, and economic standard of living. Research shows that housing conditions and the neighbourhood in which a child is raised affect that child's well-being...a major British cohort study shows that the effects of poor housing conditions are cumulative over life.

The review also suggested different aspects of housing quality that could be collected, including the physical attributes of dwelling stock and the characteristics of inhabitants (see [Suggested key aspects of housing quality information to be collected – 2009 Review of Housing](#)).

The importance of the review's recommendation was highlighted when housing quality was also included in the revised list of [Tier 1 statistics in 2012](#) (Statistics NZ, 2012).

### Progress since the 2009 Review of Housing Statistics

The Department of Building and Housing (now part of the Ministry for Business, Innovation and Employment) agreed to develop measurement of housing quality in conjunction with the Building Research Association of New Zealand (BRANZ) and Statistics NZ. In 2010, the Department of Building and Housing funded an increased sample for the BRANZ house condition survey, which included some rental housing for the first time. This survey has provided some information about housing quality in New Zealand, but has a very small sample.

[See New Zealand House Condition Survey \(BRANZ\)](#) for further information.

## 2012 Review of Tier 1 statistics

Tier 1 statistics are the most important statistics, essential for understanding how well New Zealand is performing. Tier 1 statistics:

- are essential to critical decision-making
- are of high public interest
- meet expectations of impartiality and statistical quality, in accordance with the [Principles and Protocols for Producers of Tier 1 Statistics](#)
- require long-term data continuity
- allow international comparability
- meet international statistical obligations.

In August 2012, Cabinet approved the new 2012 Tier 1 list. The list was broadened and balanced, compared with the previous list of Tier 1 statistics, to better reflect a wider range of government and public concerns, and to address statistical gaps identified by producers and users.

The revised list is more aspirational than the previous list. The revised list includes statistics that do not currently exist or are not considered of sufficient quality, scope, or coverage to be regarded as Tier 1, but are considered essential to develop. These new 'development' statistics will be introduced over the next few years as research and development is conducted to identify appropriate statistical measures and ensure they are produced to the required standards.

## Recent initiatives on housing quality in New Zealand

The Children's Commissioner, and the Expert Advisory Group on Solutions to Children's Poverty (2012) recommended that a housing quality standard for rental properties be developed:

Recommendation 20: We recommend that the government ensure all rental housing (both social and private sector) meets minimum health and safety standards, according to an agreed Warrant of Fitness, such as the Healthy Housing Index. These standards should be monitored periodically and effectively enforced, and gradually increased over time.

Dr Russell Wills, the Children's commissioner (quoted in National Business Review, 2013, 3 November) noted:

The patients that I see typically have cold, damp houses, they can't afford to go to the GP, they often can't afford to do the basics that our kids would take for granted, like to go on school trips and have stationery and a uniform, shoes that fit. You know, their houses really are in a shocking state. Most kids who are living in poverty live in private rentals, not state rentals but private rentals, and those houses are in appalling state. So having a warrant of fitness again is one of those very practical recommendations that the Expert Advisory Group recommended. We're going to see that in state housing first, and then we need to see it in private rentals too. We know that will make a big difference.

In the May 2013 budget, the Government announced they would develop a housing warrant of fitness. They plan to apply this warrant of fitness to Housing New Zealand properties in the first stage, and may extend it later to all rental housing. A forum involving a range of organisations including BRANZ, Otago University, central and local government, and a range of other groups has been established to help develop the Housing Warrant of Fitness.

Both international and national studies show links between housing quality, crowding, and health as shown in the section: Links between housing and health lead to a greater focus on housing quality. For example, research by Grimes et al (2012) has shown strong health benefits for insulation. The cross-agency reference group on rheumatic fever (made up of the Ministries of Social Development, Education, and Health, Statistics NZ, the Police, and the Social Sector Forum) has also indicated an interest in housing quality measures. The group's aim is to assist "government agencies in working towards the Better Public Services goal of reducing rheumatic fever by two thirds to 1.4 cases per 100,000 per year by 2017" (Better Public service: Rheumatic Fever Prevention Programme, 2012). Among other initiatives, the group is looking at measures to improve housing quality and reduce household crowding.

## 3 Aspects of housing quality to measure

This chapter examines international recommendations around the aspects of housing quality that should be measured, and cites the Scottish Housing Condition Survey as an example of good practice:

- [OECD's recommendations on what aspects to measure](#)
- [Scotland's rating systems for housing](#).

### OECD's recommendations for housing quality measurement

The OECD (2011) regards producing better and more-consistent measures of housing quality internationally as an important area for statistical agencies to develop. It recommends that, where possible, physical measurement of the quality of dwellings (such as building inspections) should complement survey information. Housing quality indicators should measure the physical characteristics of the dwelling and the broader environmental characteristics of the area.

The OECD has identified the following areas as crucial to understanding housing quality internationally:

- number of bedrooms (as they provide a better measure than the number of rooms and a better indication of personal living space)
- provision of electricity, water supply, indoor toilets, cooking facilities
- quality of construction materials and the extent to which they have been maintained
- indoor air quality
- thermal insulation (energy efficiency)
- dampness and mould (associated with asthma)
- exposure to noise
- indoor air quality.

### Additional recommendations

In addition to the basic recommendations, the OECD recommends that the following information would be useful to collect:

- residential setting of dwellings and the neighbourhood – access to green spaces, outdoor lighting
- breaking down indicators by tenure and geography
- better information about housing costs and financial stress due to unaffordability.

Housing quality can also be related to other aspects of housing such as suitability, and other domains such as environmental sustainability.

Measures of housing quality can also include aspects of housing that contribute to environmental sustainability, but do not immediately affect the well-being of occupants. For example, the Energy Efficiency and Conservation Authority's (EECA) home rating system includes measures of environmental sustainability, such as the presence of composting and grey-water systems. Pest infestations can also be an indicator of housing quality, as the presence of pests such as cockroaches and rodents can increase allergens or directly contaminate food, as well as cause psychological distress.

Additional information needs may relate to housing design and whether a dwelling is suitable for its inhabitants. Examples include whether housing is suitable for disabled and older people and to accommodate different cultural practices. Housing New Zealand (2004) developed design guidelines for Māori, which provide appropriate design standards for the following situations: urban individual whānau housing, urban papakāinga housing (individual private dwellings centred around communal facilities), rural whānau houses (multiple buildings designed to cater for large rural whānau), and rural papakāinga housing. Facilities in these dwellings should be located appropriately; for example, bathrooms and toilets kept separate from kitchens. Housing New Zealand (2002) has also developed a similar set of design standards for Pacific peoples.

## Scotland's rating systems for housing

One example of good practice is Scotland's Tolerable Housing Standard and Scottish Housing Quality Standard, which are used to rate houses. The Housing (Scotland) Act 2006 allows for intervention if homes fall below the Tolerable Standard (a condemnatory standard). The Act notes the Tolerable Standard focuses only on the building itself, and does not extend to internal decoration, heating systems, or other utilities in the house. The Tolerable Standard applies to houses of all tenures.

The Scottish Government (2009) states that a house meets the Tolerable Standard if it:

- is structurally stable
- is substantially free from rising or penetrating damp
- has satisfactory provision for natural and artificial lighting, ventilation, and heating
- has satisfactory thermal insulation
- has an adequate piped supply of wholesome water available within the house
- has a sink provided with a satisfactory supply of both hot and cold water within the house
- has a water closet or waterless closet available for the exclusive use of the occupants of the house and suitably located within the house
- has a fixed bath or shower and a wash-hand basin, each provided with a satisfactory supply of both hot and cold water and suitably located within the house
- has an effective system for the drainage and disposal of foul and surface water
- in the case of a house having a supply of electricity, complies with the relevant requirements in relation to the electrical installations for the purposes of that supply
  - 'the electrical installation' is the electrical wiring and associated components and fittings, but excludes equipment and appliances
  - 'the relevant requirements' are that the electrical installation is adequate and safe to use
- has satisfactory facilities for the cooking of food within the house
- has satisfactory access to all external doors and outbuildings.

The Scottish Government notes that in order to meet the Tolerable Standard, a house must comply with all the criteria. Failing to meet just one criterion gives a 'fail' grade and the dwelling is designated as 'Below Tolerable Standard'. All social rental dwellings must pass this standard by 2015.

The Scottish Government also applies the Scottish Housing Quality Standard, which sits above the Tolerable Housing Standard. This higher standard includes five higher-level criteria that provide a single pass or fail classification for all dwellings. The Scottish Government (2009) says the five higher-level criteria are that the dwelling must be:

- above the statutory Tolerable Standard
- free from serious disrepair
- energy efficient
- with modern facilities and services
- healthy, safe, and secure.

### **The Scottish Housing Condition Survey**

The Scottish Housing Condition survey monitors both the Tolerable Standard and the Scottish Housing Quality Standard for the Scottish Government. The survey measures 60 separate housing components, which are aggregated under the five Housing Quality Standard criteria, and reported upon. From 2012 onwards, this survey was combined with the Scottish Household Survey. The combined survey selected a subsample of people and dwellings to answer the housing condition component.

## 4 Measuring housing quality in New Zealand

This chapter describes how New Zealand currently measures housing quality and homelessness, and outlines six aspects of housing quality that could be measured:

- [Housing Improvement Regulations 1947](#)
- [New Zealand definition of homelessness](#)
- [The Healthy Housing Index](#)
- [2009 Review of Housing Statistics](#).

### Housing Improvement Regulations 1947

The only legislative measures of housing quality in New Zealand derive from the Housing Improvement Regulations 1947. These regulations include stipulations around provision of sewerage, freedom from dampness, and minimum sanitary facilities for the number of inhabitants.

[See appendix 1](#) for an extract from these regulations.

### New Zealand definition of homelessness

Statistics NZ, in conjunction with other agencies, recently developed a definition of homelessness that included a section on dwelling quality (Statistics NZ, 2009a). The definition included 'living in an **uninhabitable** dwelling' and 'living in an **improvised** dwelling' as being forms of homelessness.

The **uninhabitable housing** category covers dilapidated dwellings that have inadequate or absent utility services. However, dwellings that are cold, damp, leaky, or not insulated, and not dilapidated are excluded from the uninhabitable housing category.

**Dilapidated buildings** are buildings that are in an advanced state of deterioration, to the point of being uninhabitable by current social norms. Indicators may include: surroundings unkempt or overgrown, extensive exterior deterioration, roof is not weatherproof, doors and windows broken or not secure, essential services have been cut, interior is bare and deteriorating, and evidence of vandalism. Dilapidated buildings are included in the [Statistical standard for dwelling occupancy status](#) (Statistics NZ, nd).

**Improvised dwellings** are dwellings or shelters not necessarily erected for human habitation, but which are occupied. The structure will support a roof of some kind, no matter how roughly fashioned or makeshift. It will lack some or all of the usual household amenities such as electric lighting, piped water, bathroom, toilet, and kitchen/cooking facilities. Examples include shacks, garages, and private vehicles other than those designed as, or converted into, dwellings. Improvised dwellings are included in the [Statistical standard for occupied dwelling type](#) (Statistics NZ, nd).

The type of dwellings described above would definitely be considered to be below a standard of adequacy; however, no official statistics currently measure uninhabitable or dilapidated housing.

[See New Zealand definition of homelessness](#) for more information about this definition (Statistics NZ, 2009a).

## The Healthy Housing Index

The most comprehensive recent New Zealand work on housing quality comes from [He Kainga Oranga Housing and Health Research Programme](#) (Healthy Housing Index, nd, a). The programme has carried out a number of housing studies that have evaluated the outcomes of housing interventions, such as the provision of insulation.

It has also developed the [Healthy Housing Index](#) (Healthy Housing, nd, b), which rates housing based on a number of categories. He Kainga Oranga trialled this index to evaluate housing against a standard and to provide a basis for a national standard definition of housing quality as recommended by the 2009 Review of Housing Statistics.

The Healthy Housing Index is based on He Kainga Oranga's previous intervention studies and is divided into three modules: Injury Index, Respiratory Index, and Energy Index, and is a well-researched measure of housing quality (Gillespie-Bennett, Keall, Baker, Howden-Chapmen, 2013). Trained observers or building inspectors carry out inspections. They assign a score to each module, which contributes to the overall dwelling rating.

Figure 3 shows a sample from the safety module in the Healthy Housing assessment. Figure 4 shows a sample of the home assessment summary rating.

**Figure 3**

### Excerpt from the safety module in the Healthy Housing Index assessment

11.8 Assess each window that can be opened

11.8.1 Window 1

Catch broken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Catch lockable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sill height from floor				mm
Sill height from ground outside				metres
Is ground outside yielding (grass, dirt, foliage)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

11.8.2 Window 2

Catch broken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Catch lockable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sill height from floor				mm
Sill height from ground outside				metres
Is ground outside yielding (grass, dirt, foliage)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Figure 4**

**Example of a Healthy Housing Index ‘approved’ sticker**



Source: J Gillespie-, presentation to Health Statistics Users Group meeting, 2013

## Suggested key aspects of housing quality information from 2009 Review of Housing Statistics

The 2009 Review of Housing Statistics identified some key aspects of housing quality that could be collected in New Zealand, but are not currently measured (Statistics NZ, 2009b). These key areas are the:

- physical attributes of the housing stock: including facilities such as baths and toilets, and materials of roof/floor/walls
- physical defects (quality): the prevalence, type, and repair costs of physical defects that affect habitability, including weather-tightness issues (eg houses affected by ‘leaky-building syndrome’), structural soundness, means of escape from fire, or natural-disaster effects
- physical characteristics related to health and sustainability: the existence and use of insulation/heating/ventilation
- characteristics of the dwelling’s inhabitants: the number/type of occupants and their needs, their tenure status, and how they use the house (eg heating and ventilation choices, proactive or deferred maintenance)
- information about the physical state of the neighbourhood: noise, vibration, traffic fumes, crime, graffiti etc can affect the physical and mental health of inhabitants
- international comparability: how do New Zealand houses compare internationally?

These information need to align with OECD guidelines (OECD, 2011) for collecting information about housing quality.



---

## 5 How housing quality is measured worldwide

This chapter describes various approaches to measuring housing quality:

- [Differences between self-reporting and expert assessment](#)
- [Countries with self-reported housing quality](#)
- [Examples of expert assessment of housing condition combined with survey data.](#)

### Differences between self-reporting and expert assessment

International measurement on housing quality is collected either through self-reporting of housing problems and/or expert assessment of housing condition, usually obtained through household surveys. Some surveys include physical measurement of housing quality combined with self-reporting (eg Scotland and the United States), while others depend on self-reported housing quality.

Evidence from self-reporting of housing problems shows that tenants and home owners tend to underestimate or be unaware of housing problems. So, some physical measurement would be beneficial. For example, in New Zealand's 2010 House Condition Survey (Buckett, Jones, & Marston, 2012), both renters and owners thought the condition of their house significantly better than BRANZ assessors. Eighty percent of the occupiers of rental properties considered their property in good condition, but a BRANZ assessment considered only 22 percent in good condition.

However, physical inspection of housing is costly. Some surveys focus exclusively on housing quality (such as the Scottish Housing Condition Survey) but a more general approach is to include some housing quality questions as a supplement to an existing survey. The United Kingdom and the United States have detailed housing surveys, which combine an assessment of housing quality with information about the inhabitants of the housing.

Table 1 presents brief examples of different housing quality collection approaches.

[See appendix 2, About international housing surveys.](#)

Expert assessment of housing condition, combined with survey data such as information about the inhabitants and self-assessed housing quality, gives the most comprehensive information on housing quality.

**Table 1**

<b>International approaches to measuring housing quality</b>		
<b>Housing quality indicators</b>	<b>Indicators measured using a self-reported housing condition survey</b>	<b>Indicators measured using a comprehensive housing condition assessment combined with a household survey</b>
Assessment of physical structure / defects of the dwelling	Australia European Union	England and Wales, Scotland United States
Need for repairs	Australia Canada	England and Wales, Scotland United States
Dampness	New Zealand	England and Wales, Scotland United States
Lighting	European Union	England and Wales, Scotland United States
Access to basic facilities	Australia (indigenous households only) Some OECD countries	England and Wales, Scotland United States
Number of rooms/bedrooms per person	OECD New Zealand (NZGSS has number of bedrooms)	..
Indoor air quality	..	England and Wales, Scotland United States
Energy efficiency – warmth / heating insulation	Australia New Zealand	England and Wales, Scotland United States
Quality of neighbourhood	European Union New Zealand	England and Wales, Scotland United States
Indoor air quality	..	England and Wales, Scotland United States
Characteristics of dwelling inhabitants	Australia European Union New Zealand	England and Wales, Scotland United States
<b>Symbol:</b> .. not applicable		

## Countries with self-reported housing quality

The examples included here come from the European Union and Australia, and provide information about basic amenities and the quality of key components of housing.

### European Union

European Union member states use self-reported housing condition surveys to measure housing quality. These surveys ask respondents about four aspects of housing quality:

- leaking roof, damp walls/floors/foundation, or rot in window frames
- accommodation being too dark
- no bath/shower available
- no indoor flushing toilet available for the sole use of the household.

### Australia

The Australian Bureau of Statistics (ABS) collects housing quality data from many sources. The Survey of Income and Housing (ABS, nd) has a housing quality component, which is administered every six years. The last survey that included housing condition was in 2007/8 (ABS, 2009.) The housing quality component asks the respondent whether their house needs repairs or maintenance, whether there are major structural problems, and if there are smoke alarms.

[See Australian Survey of Income and Housing](#) in appendix 2 for a list of housing quality questions from the 2007/8 survey.

In addition to housing quality, the ABS conducted a Household Energy Consumption Survey in 2012 (ABS, 2013), which includes some information about insulation.

## Examples of expert assessment of housing condition combined with survey data

### England

In April 2008, the English House Condition Survey integrated with the Survey of English Housing to form the English Housing Survey (EHS). The EHS collects information on tenure and tenure preferences (whether people aspire to rent or own, for example), affordability, crowding, and housing condition.

In 2010, a sample of 16,670 occupied or vacant dwellings was inspected. In 16,047 cases an interview with the household was also secured. The questionnaire used self-reported views of neighbourhood quality and functioning, combined with the expert physical inspection of housing quality, including: condition of internal and external structures, presence of dampness and/or mould, energy efficiency, and type and age of the dwelling.

How the survey is carried out is of interest for potential application in New Zealand. The survey was carried out as a partnership between different agencies. The UK Office for National Statistics (ONS) managed the EHS on behalf of the Department of Communities and Local Government, and undertook the household interviews and data validation, and derived analytical measures. ONS also had responsibility for the sampling and weighting of the datasets. A private company, Miller Mitchell Burley Lane, undertook the visual inspection of the properties working in partnership with ONS. The Building Research Establishment helped develop the physical survey questionnaire and surveyor training materials.

[See English Housing Survey](#) in appendix 2 for more information about the survey questions and other housing surveys.

## 6 How housing quality is measured in New Zealand

No existing data sources comprehensively cover all the key aspects of housing quality; however, some information is available. Currently, the five yearly BRANZ house condition survey is the best source of objective housing quality measures, while the New Zealand General Social Survey is the only survey that collects self-reported housing quality at a national level.

This chapter presents information about the available data sources for housing quality in New Zealand:

- [Census pre-1980](#)
- [Data collected or funded by public sector agencies:](#)
  - [EECA database](#)
  - [Growing up in New Zealand](#)
  - [Household Energy End-Use Project \(BRANZ\)](#)
  - [Household Sustainability Benchmark Survey \(Ministry for the Environment\)](#)
  - [Housing, Crowding and Health Study \(HNNZC and Wellington School of Medicine\)](#)
  - [Housing NZ Corporation – formerly Rental database](#)
  - [New Zealand House Condition Survey \(BRANZ\)](#)
  - [New Zealand InfoBase sales record data \(Quotable Value\)](#)
  - [New Zealand Living Standards Survey \(Ministry of Social Development\)](#)
  - [New Zealand Property Investors Federation](#)
- [Data collected by Statistics NZ:](#)
  - [Census of Population and Dwellings](#)
  - [Household Economic Survey](#)
  - [New Zealand General Social Survey](#)
  - [New Zealand Household Disability Survey](#)
  - [Survey of Family, Income and Employment](#)

### Census pre-1980

Before the 1980s, the Census of Population and Dwellings collected information on housing quality, including material of outer walls and roof, source of water supply, and provision of amenities such as flushing toilets and electricity. The 1981 Census was the last to collect this information. Currently, the census collects the following information about housing: dwelling type, number of storeys, number of rooms and bedrooms, and fuels used to heat the dwelling.

[See C2013 Census definitions and forms](#) to read the questionnaire forms.

## Data collected or funded by public sector agencies

This section presents nine data sources for housing quality information currently collected or funded by New Zealand public sector agencies. The content mostly comes from the 2009 Review of Housing Statistics (Statistics NZ, 2009b), but we have updated some information to account for known changes since 2009.

### **EECA database**

**Sample size / coverage:** Administrative data.

**Frequency:** Ongoing, since 2009.

**Geographic coverage:** Subnational.

#### **Key housing variables (relating to housing)**

Database of dwellings insulated under the Warm up New Zealand: Heat Smart policy initiative (around 230,000 houses). Further funding was allocated in 2013 to improve 41,500 low-income households under the Warm Up New Zealand: Healthy Homes initiative.

[See EECA – Energy Efficiency and Conservation Authority](#) for more information.

### **Growing up in New Zealand (funded by multiple government departments)**

**Sample size / coverage:** Approximately 7,000 children born in the Auckland and Waikato regions and their families who were born between April 2009 and March 2010.

**Frequency:** Longitudinal (as long as funded).

**Geographic coverage:** Originally Auckland- and Waikato-based, but follows families anywhere in New Zealand if they move.

#### **Key housing quality indicators measured**

[See About Growing Up in New Zealand](#) for more information about this data source.

### **Household Energy End-Use Project (BRANZ)**

**Sample size / coverage:** One-off survey of 400 dwellings over five years.

**Frequency:** Pilot run in 1995, full survey completed in 2005. Each house was monitored over 11 months.

**Geographic coverage:** National.

#### **Key housing quality indicators measured**

Dwelling type, dwelling age, tenure, dwelling construction materials, number of rooms, floor area, amount of insulation, fuels used, room temperatures, climate factors, shading, characteristics of appliances and consumption of energy, duration and patterns of energy use, attitudes to energy use, and awareness of energy issues.

[See Household Energy End-Use Project](#) for more information about this data source.

## **Household Sustainability Benchmark Survey (Ministry for the Environment)**

**Sample size / coverage:** 1,000 people.

**Frequency:** Survey run in 2007 and 2008.

**Geographic coverage:** National.

### **Key housing quality indicators measured**

Includes actions, attitudes, and barriers to energy/heating and water use, and building and renovating.

[See Household sustainability survey 2008](#) (PDF, 89 pages, 2.4mb) for more information about this data source.

## **Housing, Crowding and Health Study (HNZC and Wellington School of Medicine)**

**Sample size / coverage:** Survey of all HNZC tenants applicants.

**Frequency:** One-off survey carried out over five years from 2003.

**Geographic coverage:** National.

### **Key housing quality indicators measured**

Characteristics of HNZC applicants and tenants; household-crowding levels; and rates of hospitalisation for diseases such as meningococcal disease, pneumonia, and skin infections related to the housing environment. Explores factors such as crowding levels and tobacco smoke exposure in the home.

[See How does housing affect your health?](#) (PDF, 2 pages, 1.5mb) for more information about this data source.

## **Housing New Zealand Corporation (HNZC) – formerly Rental database**

**Sample size / coverage:** Administrative data – HNZC properties, income-related rent applicants.

**Frequency:** Ongoing since 1993.

**Geographic coverage:** National – down to area unit

### **Key housing quality indicators measured**

Housing career (including reason for moving), dwelling type, dwelling age, floor area, number of storeys, number of rooms and bedrooms, rent amount, length of tenure, maintenance/repairs, land size, site type, and geographic location.

Contact Housing New Zealand for more information about this data source.

## **New Zealand House Condition Survey (BRANZ)**

**Sample size / coverage:** 491 dwellings in 2010.

**Frequency:** 4–5-yearly, since 1993/4 **Geographic coverage:** National and subnational.

### **Key housing quality indicators measured**

Number of storeys, number of rooms, floor area, house layout, building materials, air tightness, insulation, moisture problems, heating, maintenance costs, security measures,

tenure, household income, number of bedrooms, number of usual residents, age, and household type.

[See BRANZ 2010 house condition survey – condition comparison by tenure](#) (PDF, 37 pages, 1.4mb) for more information about this data source.

### **New Zealand InfoBase sales record data (Quotable Value)**

**Sample size / coverage:** Administrative.

**Frequency:** Ongoing, data goes back to the 1970s.

**Geographic coverage:** National.

#### **Key housing quality indicators measured**

Dwelling type, capital valuation, sales history, land area, floor area, age of property, wall construction, value and nature of improvements, sale date, sale price, location, and physical characteristics including building condition (but physical characteristics largely out of date).

[See www.qv.co.nz](http://www.qv.co.nz) for more information about this data source.

### **New Zealand Living Standards Survey (Ministry of Social Development)**

**Sample size / coverage:** Between 3,000 and 5,000 people in each survey.

**Frequency:** Surveys carried out in 2000, 2004, and 2008.

**Geographic coverage:** National.

#### **Key housing quality indicators measured**

Length of tenure, number of changes of address in last five years, tenure type sector of landlord, government valuation of property, total debt owed on house/flat, amount paid for accommodation, housing problems, and suitability of accommodation for family's needs.

[See Living Standards Research](#) for more information about this data source.

### **New Zealand Property Investment Survey**

**Sample size / coverage:** 852 responses to survey in 2012. New Zealand Property Investors Federation in conjunction with other partners (currently ANZ Bank).

**Frequency:** Annual. However, questions may vary from survey to survey. 2012 survey asked landlords about insulation

**Geographic coverage:** National.

#### **Key housing quality indicators measured**

Insulation and form of heating supplied. Note: Information must be treated with caution because of low response rates and self-selected sample.

[See Survey shows that rental properties are well insulated](#) for more information about this data source.

## Data collected by Statistics NZ

### Census of Population and Dwellings

**Sample size / coverage:** Total population of people and dwellings.

**Frequency:** Five-yearly, since 1851. Except for 1931, 1941, and 2011. The 2011 Census was cancelled because of the earthquakes of 22 February 2011. A census was consequently held in 2013 (a seven-year gap).

**Geographic coverage:** National and subnational to all levels.

#### Key housing quality indicators measured

The census historically contained information about material of walls and roofs – but not since 1981.

The census also historically contained information about amenities (electricity, bathrooms, appliances etc) before the 1970s. Some information remains about dwelling characteristics. Information on amenity variables is limited, but includes main means of heating.

[See Information about the census](#) for more information about this data source.

### Household Economic Survey

**Sample size / coverage:** Around 3,000 households (achieved sample).

**Frequency:** Survey began in 1974. Housing costs and income available annually from 2006/07.

**Geographic coverage:** National.

#### Key housing quality indicators measured

Expenditure (three-yearly) on a range of housing-related items such as heating and maintenance. Annual data on mortgage details, type of dwelling, number of rooms, tenure, landlord, rent payments, value of property, and ownership of amenities.

[See Household Economic Survey](#) for more information about this data source.

### New Zealand General Social Survey

**Sample size / coverage:** 8,000 people.

**Frequency:** Two-yearly from 2008.

**Geographic coverage:** National (limited regional breakdown).

#### Key housing quality indicators measured

Dwelling tenure, sector of landlord, number of bedrooms, satisfaction with housing, and problems with housing.

[See New Zealand General Social Survey](#) for more information about this data source.

### New Zealand Household Disability Survey

**Sample size / coverage:** 23,000 adults/children answered the Household Disability Survey, and 1,000 answered the Residential Facilities survey.

**Frequency:** Post-censal survey (ie every five years) since 1996.

**Geographic coverage:** National – some regional breakdown.

**Key housing quality indicators measured**

Unmet need for repairs/maintenance to home, reasons for unmet need, receipt of financial assistance towards accommodation costs, use of special features to enter/leave/move about home, unmet need for special features to enter/leave/move about home, and reasons for unmet need.

[See Disability Survey](#) for more information about this data source.

**Survey of Family, Income, and Employment**

**Sample size / coverage:** 10,000 households (approximately 20,000 people).

**Frequency:** Annual, 2003–2010, longitudinal survey eight ‘waves’ of interviews.

**Geographic coverage:** national but some limited geographic disaggregation may be possible.

**Key housing quality indicators measured**

Tenure of dwelling, mortgage outgoings, rent payments, rates payments, whether dwelling is part of a multi-dwelling block, body corporate payments, number of bedrooms, and presence in dwelling of amenities (eg dishwasher, clothes dryer, automatic washing machine).

[See Survey of Family, Income, and Employment](#) for more information about this data source.

## 7 Potential ways to improve New Zealand's housing quality statistics

This chapter discusses potential ways of improving data collection of housing quality information in New Zealand. See:

- [Criteria for choosing options](#)
- [Options to consider](#).

### Criteria for choosing options

Any expansion of housing quality statistics will require some investment. Any solution must focus on the most cost-effective and useful ways to improve the collection of housing quality data.

The criteria for choosing options includes likely quality of information, but also how feasible it is to collect the data.

An understanding of the user requirements for housing quality data is also vital before any programme for collecting housing quality is established, as this will shape the way the programme develops:

- Is the purpose of collecting housing quality information merely to inform?
- Or is the purpose to provide a basis for quality improvement within New Zealand's housing stock? For example, housing quality information overseas (such as in Scotland) is used to improve the quality of housing, and the survey has tracked a gradual improvement in Scotland's housing stock.

### Options to consider

Here are eight options New Zealand could adopt to expand information on housing quality. We established these by looking at information collected nationally and internationally.

We ranked these options by the likely quality and usefulness of the information gathered, where five stars are highest and one star is lowest Purpose-built survey based on an overseas model such as the Scottish or English housing condition surveys. See:

- [Purpose-built survey based on an overseas model such as the Scottish or English housing condition surveys](#)
- [Expanded BRANZ survey linked to a household survey](#)
- [Expanded BRANZ survey with larger sample size and greater range of demographic and socio-economic questions](#)
- [EECA: including a housing inspection/questionnaire with applications for the subsidised insulation scheme \(Warm Up New Zealand: Healthy Homes\)](#)
- [Rental warrant of fitness](#)
- [Expand housing information asked in a household survey](#)
- [Household survey information with links to other data sources](#)
- [EECA Homestar rating system](#)

## **Purpose-built survey based on an overseas model such as the Scottish or English housing condition surveys**

**Rating:** \* \* \* \* \*

**Type of data source:** Survey

### **Pros**

- Would be the most flexible option as it could be designed to fit the purposes of collection.
- Would provide high-quality information.
- Could use some of the existing infrastructure, such as BRANZ.

### **Cons**

- Likely to be the most expensive option.
- English and Scottish survey models are based on legislation and aim to improve the quality of housing stock. We would require a similar legislative mandate in New Zealand.

### **Rationale for this option**

A purpose-built survey would allow the most flexibility and scope for collecting housing quality information. The potential for including information on a wider range of housing, including uninhabitable housing, is high. This option is likely to be more expensive, but would provide the highest-quality information.

## **Expanded BRANZ survey linked to a household survey**

**Rating:** \* \* \* \* \*

**Type:** Survey

### **Pros**

- Would utilise existing surveys with established methodologies.
- Would link physical/objective data with demographic characteristics and self-reported housing quality.
- Would be able to compare housing quality for different ethnic groups and household types.
- Evidence shows that homeowners/renters overestimate housing quality and therefore self-reported housing quality data is not as reliable.
- BRANZ survey has time series so it can compare housing quality over time.

### **Cons**

- Important to include renters in sample but BRANZ found this difficult in their previous survey.
- Would require funding – housing inspections are expensive.

### **Rationale for this option**

This option links physical/objective data with demographic characteristics and self-reported housing condition. This would be a preferred option as it would generate high-quality information.

Every five years BRANZ carries out a housing condition survey. Before 2010, this survey focused on Auckland, Wellington, and Christchurch and was confined to owner occupiers. The Centre for Research, Evaluation and Social Assessment and the Department of

Building and Housing funded a nationwide survey in 2010, which also included a sample of rental housing. The sample for the entire survey was fairly small, totalling 491 houses. Given the disparity between self-reported housing quality and objective assessments, linking the BRANZ data with a household survey would be very valuable.

### **Expanded BRANZ survey with larger sample size and greater range of demographic and socio-economic questions**

**Rating:** \* \* \* \*

**Type:** Survey

#### **Pros**

- Would provide better subnational coverage.
- Existing methodologies.

#### **Cons**

- Unlikely to be a large enough sample to compete with the depth of information from a household survey.
- Could be a costly option depending on to what extent the sample was extended.

#### **Rationale for this option**

An expanded BRANZ survey with a larger sample size and a greater range of demographic and socio-economic questions is another potential source of housing quality data.

### **EECA: including a housing inspection/questionnaire with applications for the subsidised insulation scheme (Warm Up New Zealand: Healthy Homes)**

**Rating:** \* \* \*

**Type:** Survey/administrative

#### **Pros**

- Would provide more information about housing for low-income people.
- Link with existing insulation programme would be cost efficient.
- Questionnaire would be cheaper but quality might not meet user needs.

#### **Cons**

- Would not be a representative sample of dwellings.
- Building inspection would provide the best results, but could be expensive unless the inspector uses a minimum checklist.
- Would require consistency of application in order to get reliable results.

#### **Rationale for this option**

Warm Up New Zealand: Healthy Homes is a three-year government insulation programme focused on low-income households, beginning in 2013. It will deliver about 46,000 warmer, drier, and healthier homes. The programme will be targeted at households (including renters) that have a Community Services Card and are at high health risk (EECA, nd, a).

## Rental warrant of fitness

**Rating:** \* \* \*

**Type:** Administrative data.

### Pros

- This scheme is currently being developed by Housing New Zealand in conjunction with other agencies.
- Would be cost effective to use existing data collection.
- Will be applied to Housing New Zealand properties first, but has the potential to be expanded to all rental properties.
- Rental properties are acknowledged to be of poorer quality, so this scheme would provide valuable insights into this market segment.
- Would be most useful if it could be linked to a household survey / census, in order to look at characteristics of inhabitants.

### Cons

- As the scheme has not yet been established there are a number of unknowns.
- It will not cover owner-occupied properties.

### Rationale for this option

One proposal to improve the quality of rental housing in New Zealand is to introduce a compulsory warrant of fitness for housing. The Government is currently looking at the feasibility of imposing a warrant of fitness on rental housing, as proposed in December 2013 by an expert group appointed by Children's Commissioner Dr Russell Wills. If this proposal was to go ahead it should include an element of data collection for statistical purposes to:

- enable assessment of effectiveness of the scheme for improving housing quality
- improve the collection of housing quality data.

## Expand housing information asked in a household survey

Most likely the New Zealand General Social Survey (NZGSS) or Household Economic Survey (HES). The Household Labour Force Survey is an unlikely option, but would provide the best subnational coverage.)

**Rating:** \* \* \*

**Type:** Survey

### Pros

- Would use existing surveys.
- NZGSS already includes a housing quality section.
- HES has information on housing costs and maintenance.
- A cheaper option because it would use self-reported housing quality.
- Would generate national and limited subnational statistics, and enable disaggregation by different groups.

### Cons

- Self-reported housing quality has been shown to be less reliable and significantly under-reports housing issues.

- Limited subnational disaggregation, but potential for data pooling to be used to generate better subnational statistics.

### **Rationale for this option**

Expanding the housing information in household surveys would be the simplest option as the vehicles for collection already exist and two household surveys already collect some housing information. This option would allow the topics identified by the OECD and the 2009 Review of Housing Statistics to be covered. Three household surveys have potential for data collection on housing quality. However, since the Household Labour Force Survey is an unlikely option we have not discussed it here.

#### *New Zealand General Social Survey (NZGSS)*

Statistics NZ carries out the NZGSS every two years, and already collects some information on housing quality. Through the NZGSS, housing quality information can be evaluated in relation to mental and physical health, as well as housing satisfaction. It would also be useful to investigate the option of harmonising some questions with Australia in order to compare self-reported housing quality in the two countries.

The NZGSS sample size in 2010 was 8,550 people. The NZGSS can be broken down by region as well as by age, ethnicity, and deprivation. It would be useful, however, to also include some housing affordability information.

#### *Household Economic Survey (HES)*

Statistics NZ carries out this survey every three years, but in the two years between the three-yearly HES, a shortened version of the survey (HES (Income)) is conducted to collect information on income and housing expenditure. Since HES already collects information about housing, an added supplement on housing quality to HES (Income) would also prove feasible. However, HES is the longest and most complex survey to answer, so it would only be possible to include a limited range of questions. This survey has the added benefit of housing affordability information (housing costs and income). HES has a fairly small sample size of 4,700 households and can therefore only provide limited regional or ethnic breakdowns.

### **Household survey information with links to other data sources**

**Rating:** \* \*

**Type:** Survey/administrative

#### **Pros**

- Would utilise existing data sources, so it would be cheaper than physical inspection of properties, depending on the cost of QV data.

#### **Cons**

- QV housing quality data is considered old and unreliable (housing quality is now no longer assessed). The BRANZ survey shows very poor linkage between QV ratings and physical inspection data.
- We do not recommend this option, although there is potential to expand other types of housing information from QV data (such as material of dwellings, floor area).

### **Rationale for this option**

Self-reported housing quality data would be more valuable if there was a way to link this information with other data sources. Currently, however, there is limited administrative information available. QV provides some information, but the housing quality information is very limited and considered out of date and unreliable.

### **Limitations of QV data on housing quality**

QV New Zealand maintains a large dwelling information database, which includes some information about the physical characteristics of the dwelling, including age and materials used for walls and roof. Two fields in the database relate to housing quality: building condition and weather tightness risk, although these fields must be used with some caution. For example, in most cases these assessments of risk for weather-tightness issues are modelled based on information about materials and construction.

Buckett, Marston, Saville-Smith, Jowett, & Jones (2011) compared the inspections of BRANZ assessors with QV assessments (which are mostly exterior) and found a considerable difference in the assessment of quality. BRANZ assessors found that 44 percent of rental properties were in poor condition in 2010, compared with QV, which assessed only 5 percent of rental properties as poor. The most useful fields from QV are therefore likely to be the age of dwelling and materials used for walls and roof.

### **EECA Homestar rating system**

**Rating:** \*

**Type:** Self-selected sample

#### **Pros**

- Existing information that is gathered at little cost.
- Would require further investigation to find out feasibility of generating statistics.

#### **Cons**

- Respondents are self-selected.
- Self-reported housing quality under-reports issues.
- Most New Zealand houses receive a rating of between two and three stars (out of a possible 10), so rating system is unlikely to include the granularity needed for comparison purposes.

#### **Rationale for this option**

This is a voluntary rating system questionnaire where householders answer a range of questions relating to the energy efficiency and sustainability of their home. After the questionnaire is completed the home receives a star rating and suggestions for improvement (see [Homestar website](#)). This data source could be investigated to see whether it could be used to generate statistics on housing quality.

#### **Limitations**

The data currently has a number of limitations. Currently, all respondents are self-selected and the database notes that most New Zealand houses receive a rating of between two and three stars (out of a possible 10). Therefore, it is unlikely to include the granularity needed for comparison purposes.



## 8 Conclusion

---

While some housing quality information is available in New Zealand, it is very limited in coverage and detail. Before any further steps are taken to improve the collection of information about housing quality there should be agreement as to how housing quality should be defined and what measurement is needed, and clarification of the purpose of data collection.

An understanding of the user requirements for housing quality data is vital before any programme for collecting housing quality is established, as this will shape the way the programme develops.

We have included questions for agencies to consider re their data needs around housing quality and outlined possibilities for improved data collection.

We recommend that the next step is a robust discussion as to which approach should be followed and some agreement on the eventual use of the data on housing quality.

An agreed and coordinated plan would be the most efficient way to develop information on housing quality in New Zealand. This may include an evaluation and adoption of one approach (such as linking a BRANZ survey with a household survey) or of a combination of approaches (a separate survey, as well as using administrative data).

### Questions for data-collection agencies to consider

What definition of housing quality should New Zealand use?

What should we use information about housing quality for? Examples include to:

- measure the quality of housing stock in order to develop effective housing policy
- set targets for improving New Zealand's housing stock and to evaluate progress
- measure the success of government interventions such as the insulation subsidy
- target interventions to particular areas and population groups
- analyse how housing quality affects health and other outcomes.

What approach do you think would be most effective in order to achieve these aims?

Are there other possible approaches to measuring housing quality that have not been included here? If so, what are these approaches?

# References and further reading

## References

- ABS (nd). Survey of Income and Housing. Available from [www.abs.gov.au](http://www.abs.gov.au).
- ABS (2002). Housing Stock: Housing condition and maintenance. *Australian Social Trends*. Available from [www.abs.gov.au](http://www.abs.gov.au).
- ABS (2009). [Housing Mobility and Conditions, 2007–08](#). Available from [www.abs.gov.au](http://www.abs.gov.au)
- ABS (2013). [Household Energy Consumption Survey, Australia: Summary of results, 2012](#). Available from [www.abs.gov.au](http://www.abs.gov.au)
- Antova, T, Pattenden, S, Brunekreef, B, Heinrich, J, Rudnai, P, Forastiere, F... Fletcher T (2008). Exposure to indoor mould and children's respiratory health in the PATY study. *Journal of Epidemiological Community Health*. 2008 Aug;62(8):708-14. doi: 10.1136/jech.2007.065896. Environmental Health Unit, NCPHP, Sofia, Bulgaria.
- Bennett, J, Keall, M, Baker, M, & Howden-Chapman, P (2013). *Measuring housing quality: The healthy housing index*. Presentation to Housing Statistics User Group, Wellington.
- Better Public Service Rheumatic Fever Reduction Programme Government Reference Group (2012). [Terms of reference](#) (PDF, 472kb, 28pp). Available from [www.ssc.govt.nz](http://www.ssc.govt.nz).
- Bierre S, Howden-Chapman P, Early L (Eds). (2013). *Home people can afford: how to improve housing in New Zealand*. Steele Roberts, Wellington, New Zealand.
- Bierre S, Howden-Chapman P, Signal, L, & Cunningham, C (2007). Institutional challenges in addressing healthy low-cost housing for all: Learning from past policy. *Social Policy Journal of New Zealand*, 30.
- Buckett, NR, Jones, MS, & Marston NJ (2012). [Study report 264 BRANZ 2010 House Condition Survey – Condition comparison by tenure](#). Accessed April 2013, from [www.branz.co.nz](http://www.branz.co.nz).
- Buckett, NR, Marston, NJ, Saville-Smith, K, Jowett, JH, & Jones, MS (2011). *Preliminary BRANZ 2010 House Condition Survey – Second edition*. BRANZ Study Report 240. BRANZ Ltd: Judgeford, New Zealand.
- Canterbury District Health Board (2012). [Housing, home heating and air quality: A public health perspective](#). (PDF, 600kb, 39pp) (Briefing paper for the Canterbury District Health Board). Available from [www.cph.co.nz](http://www.cph.co.nz).
- Clark, EJ (2009). *The Housing Quality Questionnaire: A new self-report measure for public health assessment*. ProQuest Dissertations and Theses, Dissertation, Available from <http://gradworks.umi.com/> (accessed December 2014).
- Department for Communities and Local Government (2006). [A Decent Home: Definition and guidance for implementation](#). Available from [www.gov.uk](http://www.gov.uk).
- Department for Communities and Local Government (2012, a). English Housing Survey: HOMES Annual report on England's housing stock, 2010.
- Department for Communities and Local Government (2012, b). English Housing Survey Households report 2010–11, London.
- EECA (nd,a). Warm Up New Zealand: Healthy Homes. Available from [www.eeca.govt.nz](http://www.eeca.govt.nz)

Expert Advisory Group on Solutions to Child Poverty (2012). *Solutions to Child Poverty in New Zealand: Evidence for Action*. Office of Children's Commission.

Gillespie-Bennett, J, Keall, M, Howden-Chapman, P, & Baker M (2013). [Improving health, safety and energy efficiency in New Zealand through measuring and applying basic housing standards](#). *New Zealand Medical Journal*. 126(1379). Available from [www.nzma.org.nz/journal](http://www.nzma.org.nz/journal).

Grimes, A, Denne, T, Howden-Chapman, P, Arnold, R, Telfar-Barnard, L, Preval, N, & Young, C (2012). *Cost benefit analysis of the Warm Up New Zealand: Heat Smart Programme* (revised). Available from <http://www.healthyhousing.org.nz/publications/>

Healthy Housing (nd, a). [He Kainga Oranga Housing and Health Research Programme](#). Available from [www.healthyhousing.org.nz](http://www.healthyhousing.org.nz).

Healthy Housing (nd, b). [Healthy Housing Index](#). Available from [www.healthyhousing.org.nz](http://www.healthyhousing.org.nz).

Housing New Zealand (2002). Pacific housing design guide – the beginning. Available from [www.hnzc.govt.nz](http://www.hnzc.govt.nz)

Housing New Zealand (2002). Ki te hau kainga – new perspectives on Māori housing solutions. Available from [www.hnzc.co.nz](http://www.hnzc.co.nz) (accessed November 2011).

Housing Improvement Regulations 1947. Available from <http://www.legislation.govt.nz>.

Howden-Chapman, P, Baker, M, & Bierre, S (2013). The houses children live in: Policies to improve housing quality. *Policy Quarterly*, 9(2), 35–39.

Keall, M, Crane, J, Baker, M, Wickens, K, Howden-Chapman, P, & Cunningham M (2012). A measure for quantifying the impact of housing quality on respiratory health: a cross-sectional study. *Journal of Environmental Health*. 11: 33. Published online 2012 May 14. doi: [10.1186/1476-069X-11-33](https://doi.org/10.1186/1476-069X-11-33).

National Business Review (2013, 3 November). Bennett: 'I'm an advocate' for Warrant of Fitness on private rental housing.

New Zealand Productivity Commission (2011). [Housing affordability: Draft report](#). Available from [www.productivity.govt.nz](http://www.productivity.govt.nz).

OECD (2011). *How's Life? Measuring Well-being*. Available from [www.oecd-ilibrary.org](http://www.oecd-ilibrary.org)

Scottish Government (2009). Implementing the Housing (Scotland) Act 2006, Parts 1 and 2: Advisory and Statutory Guidance for Local Authorities: Volume 4 Tolerable Standard Available from [www.scotland.gov.uk](http://www.scotland.gov.uk)

Statistics New Zealand (nd). [Statistical Standard for Dwelling Occupancy Status](#). Available from [www.stats.govt.nz](http://www.stats.govt.nz).

Statistics New Zealand (2009a). [New Zealand definition of homelessness](#). Available from [www.stats.govt.nz](http://www.stats.govt.nz).

Statistics New Zealand (2009b). [Review of housing statistics report 2009](#). Available from [www.stats.govt.nz](http://www.stats.govt.nz).

Statistics New Zealand (2012). [Tier 1 statistics 2012](#). Available as PDF from [www.statisphere.govt.nz](http://www.statisphere.govt.nz).

Stoecklein, A, Pollard, A, Camilleri, M, Amitrano, L, Clark, S, & Isaacs, N (2002, January). *Findings from the Household Energy End-use Project (HEEP)*. Paper presented at International Symposium on Highly Efficient Use of Energy and Reduction of its Environmental Impact, Osaka. Available from [www.branz.co.nz](http://www.branz.co.nz)

Taylor, NM (1986). *The home front: Vol 2*. Part of: The Official History of New Zealand in the Second World War 1939–1945. Historical Publications Branch: Wellington.

## Further reading

ABS (1999). Australian Housing Survey – Housing Characteristics, Costs and Conditions. Available from [www.abs.gov.au](http://www.abs.gov.au)

APHA (1945). An Appraisal Method for Measuring the Quality of Housing: A Yardstick for Health Officers, Housing Officials and Planners. Part I. Nature and Uses of the Method- By the Committee on the Hygiene of Housing, A.P.H.A. New York.

Brown D (2012). 'New Zealand General Social Survey: improving the survey's relevance and usefulness', Draft paper, Statistics NZ.

Canterbury District Health Board (2012). Housing home heating and air quality: a public health perspective.

EECA (nd). [Free insulation](http://www.energywise.govt.nz). Available from [www.energywise.govt.nz](http://www.energywise.govt.nz).

Eggers, FJ, Moumen, F (2013). American Housing Survey: A measure of (poor) housing quality. Econometrica, Inc. for U.S. Department of Housing and Urban Development.

English Housing Survey. Available from [www.communities.gov.uk](http://www.communities.gov.uk)

Eurostat *Housing conditions*. Available from <http://epp.eurostat.ec.europa.eu>

Family and Community services, NSW, Addressing Affordable housing, Available from [www.housing.nsw.gov.au](http://www.housing.nsw.gov.au).

Isaacs, N (Ed), Camilleri, M, Burrough, L, Pollard, A, Saville-Smith, K, Fraser, R, Rossouw, P, & Jowett, J (2010). Energy use in New Zealand households: Final report on the Household Energy End-use Project (HEEP). *BRANZ Study Report 221*, BRANZ Ltd, Judgeford, New Zealand.

Kain, JF, & Quigley, JM (1970). Measuring the value of housing quality. *Journal of the American Statistical Association*, 65(330), 532–548.

Keall MD, Baker M, Howden-Chapman, P, & Cunningham M (2008, May). Association between the number of home injury hazards and home injury. *Accident analysis and prevention* 40(3), 887–93.

Keall, M, Baker, M, Howden-Chapman, P, Cunningham, M, & Ormandy, D (2010). Assessing housing quality and its impact on health, safety and sustainability. *Journal of Epidemiology and Community Health* 64, 765–771.

McChesney (2013). Child poverty: The 'fuel poverty' dimension. *Policy Quarterly*, 9(2), 40–46.

New Zealand Productivity Commission (2012). [Housing affordability inquiry](http://www.productivity.govt.nz). Available from [www.productivity.govt.nz](http://www.productivity.govt.nz)

Page, I, & Ryan, V (2010). [It takes all types – A typology of New Zealand housing stock](http://www.beaconpathway.co.nz). EN6570/10, BRANZ Ltd. Available from [www.beaconpathway.co.nz](http://www.beaconpathway.co.nz).

Phibbs, P, & Thompson, S (2011). *The health impacts of housing: toward a policy-relevant research agenda*, AHURI Final Report No.173. Melbourne: Australian Housing and Urban Research Institute.

Scottish Government (2010). [Scottish House Condition Survey: Key findings 2009](http://www.scotland.gov.uk). Available from [www.scotland.gov.uk](http://www.scotland.gov.uk)

Scottish Government (2011). [Scottish House Condition Survey: Key findings 2010](#). Available from [www.scotland.gov.uk](http://www.scotland.gov.uk)

Taylor Baines & Associates, Smith, N, McChesney, I, & Butcher, G (2005). [Warm homes technical report: Social drivers: Phase 1: Interim progress report](#). Available from [www.mfe.govt.nz](http://www.mfe.govt.nz).

U.S. Census Bureau (2009). [Current housing reports](#), Series H150/09, American Housing Survey for the United States, U.S. Government Printing Office, Washington, DC, 20401. Available from [www.census.gov](http://www.census.gov).

Williamson, IJ, Martin, CJ, McGill, G, Monie, RD, & Fennerty, AG (1997, March). [Damp housing and asthma: A case-control study](#). *Thorax*, 52(3), 229–34. Available from [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov).

Wilton, E (2004). [Warm homes technical report: Home heating methods and fuels in New Zealand](#). Ministry for the Environment. Available from [www.mfe.govt.nz](http://www.mfe.govt.nz).

Yust, BL, Hadjiyanni, T, & Ponce, LB (1997). Exploring housing quality measures in a rural area of the Philippines. *Housing and Society*, 24(1), 60.



---

## Appendix 1: Excerpt from New Zealand's Housing Improvement Regulations 1947

**14** (1) The site of every house shall, to such extent as the local authority deems necessary, be provided with efficient drainage for the removal of storm water, surface water, and ground water. No house shall be occupied which is built on land which is not adequately drained or which is subject to periodic flooding in times of normal rain.

(2) Every house shall be provided with gutters, downpipes, and drains for the removal of roof water to the satisfaction of the local authority.

(3) Under every part of every house where the floor is of timber construction there shall be adequate space and vents to ensure proper ventilation for the protection of the floor from damp and decay.

**15** Every house shall be free from dampness.

**16** (1) In cases where there is a sewerage system available, every water closet, urinal, bath, lavatory basin, sink, and other sanitary appliance shall be connected to the sewerage system by impervious pipes in accordance with the bylaws or regulations in force in the district.

(2) In cases where no sewerage system is available the waste matter from every sanitary appliance shall be discharged by waste pipe or soil pipe, as the case may require, into an adequate drainage system connected to an adequate sewage tank or other adequate means of disposal.

**17** (1) The materials of which each house is constructed shall be sound, durable, and, where subject to the effects of the weather, weatherproof, and shall be maintained in such a condition.

(2) The walls and ceilings of every habitable room, bathroom, kitchen, kitchenette, hall, and stairway shall be sheathed, plastered, rendered, or otherwise treated, and shall be maintained to the satisfaction of the local authority.

(3) Every room in every house shall be adequately floored so as to have a washable and durable surface, and every floor shall be kept in a good state of repair free from crevices, holes, and depressions.

**18** (1) Every house and all the appurtenances and appliances of every house shall at all times be kept in a state of good repair.

[See Housing Improvement Regulations 1947](#) for the full text.



---

## Appendix 2: About international housing surveys

Here are details about several international housing surveys:

- [American Housing Survey](#)
- [Australian Survey of Income and Housing](#)
- [English Housing Survey](#)
- [Scottish Household Survey / Scottish House Condition Survey](#)

### American Housing Survey

The American Housing Survey (AHS) began in 1973 as the Annual Housing Survey. Since 1981, the U.S. Census Bureau has conducted the national survey every odd-numbered year. In 1984, it was renamed the American Housing Survey. The survey asks about age of dwelling, structure, type of foundations, materials, heating and cooking equipment used, plumbing facilities, quality of outside structure, and internal deficiencies. The 2011 AHS includes topical supplements on potential health and safety hazards in the home and housing modifications made to assist occupants living with disabilities. Over 60 items of housing quality are combined to form a single housing quality score.

The AHS is sponsored by the Department of Housing and Urban Development and conducted by the U.S. Census Bureau. The survey is the most comprehensive national housing survey in the United States. The AHS provides current information on a wide range of housing subjects, including size and composition of the nation's housing inventory, vacancies, fuel usage, physical condition of housing units, characteristics of occupants, equipment breakdowns, home improvements, mortgages and other housing costs, persons eligible for and beneficiaries of assisted housing, home values, and characteristics of recent movers.

The AHS uses a summary measure of housing quality, which has been criticised by users since it is orientated to a measure of housing adequacy and lacks the wider range of outcomes.

[See American Housing Survey: A measure of \(poor\) housing quality housing.](#)

Questions on housing quality include:

**Age of structure**

**Number of storeys**

**Number of units in structure**

**Dwelling type** (eg mobile home)

**Foundations**

**Size**

**Neighbourhood** (includes description of area within 300 feet – height of buildings; presence of body of water; age of other dwellings; vandalism; condition of streets within 300 feet; trash, litter, or junk on streets or any properties within 300 feet)

**External building conditions, for example:**

Sagging roof

Missing roofing material

Hole in roof

Missing bricks, siding, or other outside wall material

Sloping outside walls

Boarded-up windows

Broken windows

Bars on windows

Foundation crumbling

### **Heating equipment and cooking equipment**

#### **Plumbing**

Source and safety of water, sewerage disposal

#### **Internal deficiencies**

Holes in floors, open cracks  
Broken plaster or peeling paint  
No electrical wiring  
Exposed wiring  
Rooms without electric outlets

## **Australian Survey of Income and Housing**

ABS runs the [Australian Survey of Income and Housing](#) every two years, which reports on housing condition.

Questions for all households, include:

Need for repair to dwelling

0. Not applicable
1. No need
2. Desirable but low need
3. Moderate need
4. Essential need
5. Essential and urgent need

Types of major structural problems

01. Rising damp
02. Major cracks in walls/floors
03. Sinking/moving foundations
04. Sagging floors
05. Walls/windows out of plumb
06. Wood rot / termite damage
07. Major electrical problems
08. Major plumbing problems
09. Major roof defect
10. Other structural problems
11. Don't know
12. No structural problems
99. Not applicable

Types of repairs or maintenance made to the dwelling in the last 12 months

1. Painting
2. Roof repair/maintenance
3. Tile repair/maintenance
4. Electrical work
5. Plumbing
6. Other types of repairs/maintenance
7. Don't know
9. Not applicable

Sources of water for dwelling

01. Mains / town water
02. Rainwater tank
03. Purchased bottled drinking water
04. Bore/well
05. Spring
06. River/creek/dam
07. Water delivered in a tanker
08. Rainwater collected using a bucket, bin etc
09. Grey water
10. Other

Sources of energy used in dwelling

1. Electricity
2. Mains gas
3. LPG / bottled gas
4. Wood
5. Solar
6. Oil
7. Other

Connected to accredited green power electricity

0. Not applicable
1. Connected to green power electricity
2. Not connected to green power electricity
3. Don't know

Smoke alarm fitted

1. Smoke alarm fitted
2. Smoke alarm not fitted
3. Don't know

Source of power for smoke alarm

0. Not applicable
1. Mains
2. Battery
3. Both
4. Don't know

Frequency that smoke alarm is checked

0. Not applicable
1. Weekly
2. Fortnightly
3. Monthly
4. Twice a year
5. Once a year
6. Less than once a year
7. Never
8. Other
9. Don't know

## English Housing Survey

The Department for Communities and Local Government (2006, 2012a, 2012b) runs the English Housing Survey as a continuous survey. It collects information on tenure, tenure preferences, affordability, crowding, and housing condition.

Topics covered include:

**Basic repair cost:** Basic repairs include urgent work required in the short term to tackle problems presenting a risk to health, safety, security, or further significant deterioration plus any additional work that will become necessary within the next five years.

Damp and mould: Damp and mould falls into three main categories:

1. **rising damp:** where the surveyor has noted the presence of rising damp in at least one of the rooms surveyed during the physical survey. Rising damp occurs when water from the ground rises up into the walls or floors because damp-proof courses in walls or damp-proof membranes in floors are either not present or faulty.
2. **penetrating damp:** where the surveyor has noted the presence of penetrating damp in at least one of the rooms surveyed during the physical survey. Penetrating damp is caused by leaks from faulty components of the external fabric; for example, roof covering, gutters, or leaks from internal plumbing; for example, water pipes, radiators.
3. **condensation or mould:** where water vapour generated by activities like cooking and bathing condenses on cold surfaces like windows and walls. Virtually all homes have some level of condensation occurring. Serious levels of condensation or mould are considered as a problem in this report.

The Decent home standard According to the [Housing Health and Safety Rating System](#), under the survey to be a [decent home](#), a home must meet **all** of the following four criteria:

1. It meets the current statutory minimum standard for housing. From April 2006, the fitness standard was replaced by the Housing Health and Safety Rating System (HHSRS). Dwellings posing a Category 1 hazard are non-decent for this criterion, based on an assessment of 15 hazards – see [HHSRS definition](#) for more detail.
2. It is in a reasonable state of repair (related to the age and condition of a range of building components including walls, roof, windows, doors, chimneys, electrics, and heating systems).
3. It has reasonably modern facilities and services (assessed according to the age, size, and layout/location of the kitchen, bathroom, and toilet and any common areas for blocks of flats).
4. It provides a reasonable degree of thermal comfort (related to insulation and heating efficiency).

Department for Communities and Local Government (2006) has detailed definitions for each of these criteria.

Estimates from the English Housing Survey are based solely on whether a home meets the four stated requirements set out in the updated definition of a decent home, and is an assessment of the property as observed by surveyors, and subject to any limitations of the information they collect.

### **Housing is also rated for energy efficiency**

**Standard Assessment Procedure:** The energy cost rating as determined by the Government's Standard Assessment Procedure is used to monitor the energy efficiency of homes. The index is based on calculated annual space and water heating costs for a standard heating regime, and is expressed on a scale of 1 (highly inefficient) to 100 (highly efficient, with 100 representing zero energy cost).

## Scottish Household Survey / Scottish House Condition Survey

The Scottish House Condition Survey (SHCS) has been administered since 1991 (15,000 interviews and inspections), although the format was modified in 2003 to become an annual survey with a 4,000-household sample (3,000 households also had a physical inspection of their dwelling), which equates to a sample of 15,000 over five years). From 2012, this survey was incorporated into the Scottish Household Survey.

The redesigned survey includes some self-reported housing information, including:

- Housing Aspirations, Repairs, Satisfaction, Water supply
- Heating and Energy
- Room types, Heating controls, Regimes, Costs, Suitability, Resilience in emergencies, Types, Smoke alarms
- Condensation and Damp Problems
- Housing and Health Adaptations, Services.

The survey format also includes physical data recorded by professional, trained surveyors to be combined with the social data from the household, covering a range of topics such as household characteristics, tenure, neighbourhood satisfaction, dwelling satisfaction, health status, and income. The physical characteristics include:

- dwelling type and age
- energy efficiency: the energy efficiency of the housing stock including presence and level of insulation, energy ratings, and mean and total CO2 emissions
- fuel poverty: an analysis of the number and characteristics of households in fuel poverty and extreme fuel poverty
- housing quality: estimates of the number of dwellings passing and failing the Tolerable Standard and the Scottish Housing Quality Standard. It also covers dampness, condensation, and disrepair.

The Scottish Government sets two quality standards and monitors them through the Scottish Household Survey. The first is the Tolerable Standard, which is a 'condemnatory' standard. In other words, it is not reasonable to expect people to continue to live in a house that falls below it. The Tolerable Standard was redefined in the Housing (Scotland) Act 2006 and applies to all houses in Scotland. Local authorities have a statutory duty and specific powers to deal with houses that fall below the Tolerable Standard.

The second quality standard is the Scottish Housing Quality Standard (SHQS), which was announced by the Minister for Communities in February 2004. The agreed target was that all landlords providing social housing must ensure that all their dwellings pass this standard by 2015. Private owners and landlords are currently under no obligation to bring their properties up to the standard. However, the Scottish Household Survey collects and reports on the same data for all dwellings to allow comparison across the housing stock.

The SHQS is an aggregation of the results from about 60 different programme modules into five higher-level classifications, which in turn provide a single pass or fail classification for all dwellings. The five higher-level criteria are that the dwelling must be:

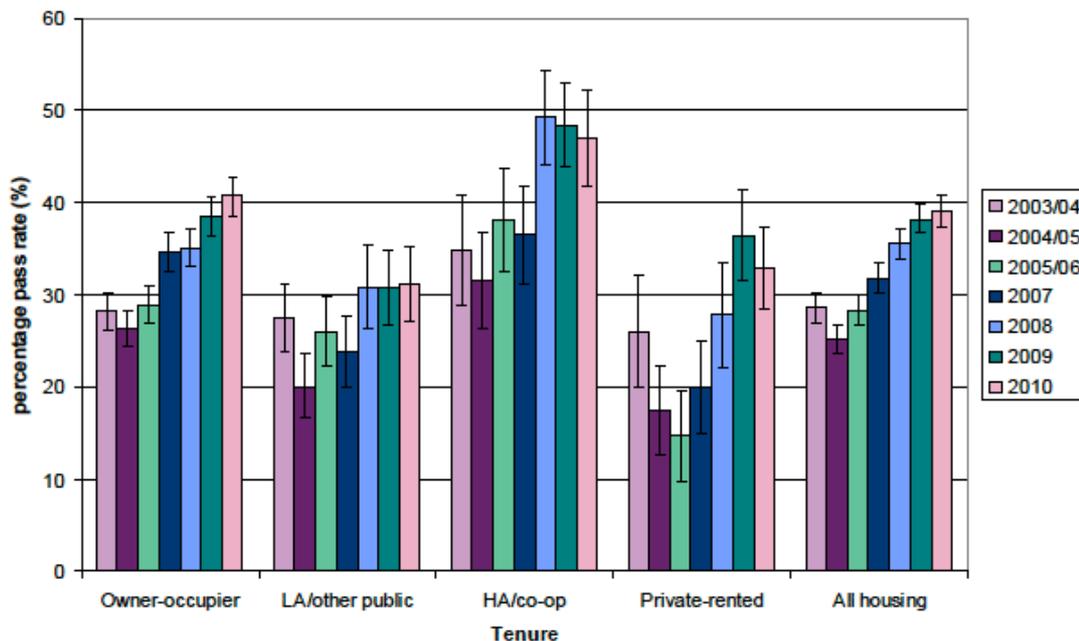
- above the statutory Tolerable Standard
- free from serious disrepair
- energy efficient
- with modern facilities and services

- healthy, safe, and secure.

The Tolerable Standard definition was amended by the Housing (Scotland) Act 2006 to include additional criteria, covering thermal performance and electrical safety. About 1.4 million, or 61 percent, of dwellings in Scotland failed the SHQS in 2010. This estimate is lower than the failure rates for 2004/5 (75 percent), 2005/6 (72 percent), 2007 (68 percent), 2008 (64 percent), and 2009 (62 percent), and is a statistically significant decrease over the 2004/5, 2005/6, and 2007 figures (figure 5)

**Figure 5**

**Scottish Housing Quality Standard 2004/5–2010 (%s)**



Source: Scottish government (2010). Scottish House Condition Survey: Key Findings 2010