Cost to make dwellings fit in Northern Ireland 2016

bre

Table of Contents

This report is based on data from the House Condition Survey 2016. The main report for the survey is published on the Housing Executive's website:

[Click here to view the report](#)

For further information about the 'Cost to make dwellings fit in Northern Ireland', or the House Condition Survey contact:

The Research Unit
Northern Ireland Housing Executive
2 Adelaide Street Belfast
BT2 8PB

Karly Greene (Lead Statistical Official)
Email: karly.greene@nihe.gov.uk

Tel: (028) 9598 2540

or

Jahnet Brown
Email: jahnet.brown@nihe.gov.uk

Tel: (028) 9598 2548

bre

Introduction & Executive Summary

This report was produced by the [Building Research Establishment (BRE)](#) on behalf of the Northern Ireland Housing Executive. It is based on data collected through the [2016 Northern Ireland House Condition Survey (NIHCS)](#) and estimates the cost to bring unfit dwellings out of unfitness. This is known as the costs to make fit.

House condition surveys have assessed dwelling conditions against the statutory fitness standard[1] since 1974, documenting the substantial progress made in improving housing conditions.

In summary, in order to be classified as unfit a dwelling must fail on one or more of the 11 individual criteria set out in the nine point fitness standard (See Appendix 1).

NIHCS surveyors complete a fitness assessment to determine which criterion requires action to be taken and then use information collected elsewhere on the form to determine what actions are required to bring the home out of unfitness for that particular element.

In some cases the remedies will be localised and have a relatively low cost, for example providing a wash-hand basin. In other cases, such as disrepair, there are likely to be significant works required that will probably have considerably higher costs. If a dwelling is unfit on more than one criterion then the costs can multiply.

It should be noted that the NIHCS 2016 estimated that only 2.1% of dwellings (16,400) dwellings were assessed as unfit[2] in Northern Ireland in 2016. This equates to 45 raw cases within the survey. As a result, some of the further analysis in this report deals with small numbers. Where this is the case the issue is highlighted and caution advised.

The relative importance of the fitness standard has declined due to the very low proportion of the stock in Northern Ireland failing on this quality measure. In England the fitness standard was replaced by the Housing Health and Safety Rating system[3] in 2006. In Northern Ireland the fitness standard is under review; however it continues to be measured through the HCS.

Key findings:

- Most unfit dwellings were vacant in 2016 (24 cases);

- Average **median** cost to make all dwellings fit was £12,606. The median excludes the very high cost outliers such as long term vacants deemed derelict or undergoing major refurbishment works;

- The **mean** cost to make occupied dwellings fit (7,800[4] dwellings) was £10,697 and the **median** was just £2,844. The sum cost to make occupied dwellings fit was estimated to be approximately **£83,900,000.**

More than one quarter of all unfit homes were either being made fit or were undergoing short term refurbishment at the time of the survey. For a further 12%[5] the surveyor recommended that the dwelling be demolished (or replaced).

---

[1] The current fitness standard is set out in schedule 5 of the Housing (Northern Ireland) Order 19924.
[2] For further information see Chapter 5 of the [main 2016 NIHCS report](#)

[3] The NIHCS also measures the Housing Health and Safety Rating system and estimates costs to make safe.
[4] Please use this estimate with caution as the numbers were small.

bre

Cost to make dwellings fit in Northern Ireland - method

The surveyors provide all of the information required to establish whether a dwelling is unfit. The remedies to take that dwelling out of unfitness are determined through a combination of information provided by the surveyor (where actions are collected on the form) and assumed corrective actions that would be taken where they are not collected directly.

Each of the 11 criteria are considered in turn by the 'cost to make fit' model. The first step is to create a flag based on the surveyor's assessment that indicates whether the dwelling is unfit. The model then uses the information given by the surveyor to specify the actions required to remove the dwelling from unfitness. Additional information from the form is used to determine the scale of the required actions; for example the dimensions of the dwelling will be used to determine the area or length of the element in question that will need treatment. Information on the nature of the element in question (such as type of material is also used to specify an appropriate action). At this point the model checks with all previously addressed criteria to identify any double counting of works and if identified, removes them from the overall cost. For each criterion, any actions that are not covered by the survey form are specified at this stage. Once each of the criteria have been processed, the model has a list of actions required to return every unfit dwelling on the survey to fitness.

The next stage is to produce the costs to make fit. The surveyors do not specify anything related to the costs of the works identified. The repair costs model is used as a basis for the costs to make fit to ensure a consistent approach. This takes unit prices for different types of job from the 1996 National Schedule of Rates (NSR), adjusted for inflation using the Building Cost Information Service (BCIS) national price index to 2016 prices. Costs vary by tenure on the assumption that the contract size for private tenures will be one dwelling (the survey dwelling) and for social tenures will be the number of dwellings on the estate.

The actions specified in this work are not designed to resolve all issues in the dwelling. They merely address the faults that have led to the unfitness assessment and bring the dwelling into fitness for those elements. Costs include access costs and uplifts (economies of scale) but do not include VAT, profit or professional fees.

'Urgent repairs' means all repair work that needs doing in order to remove threats to health, safety, security and comfort to the occupants and to forestall further deterioration. Urgent repairs have been used because it is assumed that these would be sufficient to bring the property out of unfitness. They include repairs to interior walls, floors and ceilings, repairs to amenities (bathrooms and kitchens), services (electrical system and heating system for example) and any external repairs that the surveyor has judged to be urgent.

Total urgent costs are built up of all these elements plus access and other costs. The relevant elements of these external costs have been used in this work to address each element of unfitness. Where the dwelling is unfit because of disrepair, all urgent costs have been applied because this indicates a general level of disrepair inside and outside the dwelling that is significant enough in total to make the dwelling unfit.

---

[5] Please use this estimate with caution as the numbers were small.

bre

Cost to make dwellings fit in Northern Ireland - results

Key findings:

- 16,400[6] dwellings judged to be unfit in 2016;

- Most[7] unfit dwellings were vacant;

- Average **median** cost to make all dwellings fit was £12,606. The median excludes very high cost outliers such as long term vacants deemed derelict or undergoing major refurbishment works;

- The **mean** cost to make occupied dwellings fit (7,800[8] dwellings) was £10,697 and the **median** cost was only £2,844. The sum cost to make occupied dwellings fit was estimated to be approximately **£83,900,000.**

All unfit properties

In 2016 16,400 (2.1%) dwellings were assessed as unfit. This equates to 45 raw cases within the survey.

More than one quarter of these unfit homes were either being made fit or were undergoing short term refurbishment at the time of the survey. For 12%[9] of these homes the surveyor recommended that the dwelling be demolished or replaced.

The estimated total notional costs required to raise these unfit dwellings out of unfitness is around £379,400,000.

This equates to an average (mean) of £23,174 per unfit dwelling.

The median cost per unfit dwelling is £12,606, indicating that the dataset is highly positively skewed. This is due to the presence in the sample of a small number of dwellings which have multiple repair and maintenance issues resulting in a significant cost to make fit. The majority of these (with the exception of one) were long term vacant dwellings that could be deemed derelict or were undergoing major refurbishment works.

Occupied unfit properties

It is useful to exclude vacant dwellings from the sample and to look at the costs to make fit for occupied dwellings. These are perhaps the more important cases to look at. The 2016 NIHCS estimated that there were 7,800[10] households occupying unfit dwellings. The sum cost to make fit is estimated to be £83,900,000.

The mean cost is £10,697 and the median is only £2,844. This shows that the costs to make fit for the majority of occupied dwellings is a lot lower than for all dwellings which include the vacant properties.

---

[6] This equates to 45 unweighted cases.
[7] Care is taken here as numbers were small (24 unweighted cases).
[8] Please use this estimate with caution as the numbers were small.
[9] Please use this estimate with caution as the numbers were small.
[10] Please use this estimate with caution as the numbers were small (21 unweighted cases).

bre

However, even in this sub-group there is one occupied dwelling with very high costs to make fit which skews the mean for the sample.

There were seven dwellings in the sample that the surveyor has recommended should be demolished. These dwellings have a disproportionate effect on average values as their repair costs will be high. However, the cost of repairs may still not reflect the actual cost of demolishing the current dwelling and replacing it. Analysis could consider different approaches for these dwellings in the reporting, for example, excluding them from analysis or overriding the cost to make fit with a 'demolish and rebuild' cost.

If the dwellings that the surveyor indicated should be demolished were removed from the sample the sum cost to make fit is £268,400,000, with a mean cost of £18,623 and a median cost of £9,545.

The table below summarises these costs.

Table 1: Costs to make fit

	Sample size (weighted)	Sum cost to make fit	**Mean** cost to make fit per unfit dwelling	**Median** cost to make fit per unfit dwelling
All unfit	16,400	£379,400,000	£23,174	£12,606
Occupied unfit	7,800	£83,900,000	£10,697	£2,844
Unfit excluding identified properties for demolition	14,400	£268,400,000	£18,623	£9,545

bre

Appendix 1: Method

The Fitness Standard sets out what each home should comprise in order to be considered fit to live in. A home should meet each of the following to be considered fit.

- it is structurally stable

- it is free from serious disrepair

- it is free from dampness prejudicial to the health of the occupants (if any)

- it has adequate provision for lighting, heating and ventilation

- it has an adequate piped supply of wholesome water

- there are satisfactory facilities in the house for the preparation and cooking of food, including a sink with a satisfactory supply of hot and cold water

- it has a suitably located water-closet for the exclusive use of the occupants (if any)

- it has, for the exclusive use of the occupants (if any), a suitably located fixed bath or shower and wash-hand basin each of which is provided with a satisfactory supply of hot and cold water; and

- it has an effective system for the draining of foul, waste and surface water

This report uses the fitness assessment made by surveyors as part of the 2016 NIHCS to determine which of the above criterion require action to be taken and then use information collected elsewhere on the form to determine what actions are required to bring the home out of unfitness for that particular element. In some cases the remedies will be localised and have a relatively low cost, for example, providing a wash-hand basin. In other cases, such as disrepair, there are likely to be significant works required that have considerably higher costs. If a dwelling is unfit on more than one criterion then the costs can multiply, however the model ensures that there is no double counting of actions when considering more than one criterion.

Note: The confidence intervals in Appendix Table 1 are based on the assumption that the sample is a simple random sample. The confidence intervals do not account for all potential sources of error, e.g. surveyor variability.

Appendix Table 1: Costs (£) to mitigate unfitness, 2016. Base: all dwellings assessed as unfit

	Mean	Unweighted base	Standard Error	95% confidence interval	
				lower	upper
All unfit	23,174	45	4,595	14,167	32,181
Occupied unfit	10,697	21	3,856	3,140	18,254
Unfit excluding identified properties for demolition	£18,623	38	4,013	10,757	26,489

bre

Appendix 2: User guide

Quality information

The quality assurance of this modelling work focused on ensuring that the translation of data inputs to produce costs to make dwellings in Northern Ireland fit was carried out robustly and appropriately. The process of development, quality assurance and creation of results followed an internal procedure so the work undertaken could be reviewed and assessed by project managers.

Examples of the quality assurance undertaken to validate the costs to make dwellings fit in Northern Ireland included:

- Checking of transformations undertaken and mathematical formulae.

- Internal checks of data inputs to assure translation was completed correctly.

- Checks of correct units for calculations.

- Check correct and latest external data sources were used.

- Sense check of results.

- Internal review of results and reporting.

Surveyors working on the 2016 NIHCS received training and support to help ensure their collection of data was accurate. Supervisors checked the data for consistency and robustness.

Strengths and weaknesses

Strengths

- The 'Cost to make dwellings fit in Northern Ireland' uses data from the Northern Ireland House Condition Survey which has a number of processes in place to ensure the quality of the data. Quality assurance checks are carried out at various stages of data collection by surveyors, supervisors, staff in the Research Unit and the Building Research Establishment (BRE). Also, quality assurance checks are conducted by the producers/suppliers of the administrative data which is used within the HCS.

- A document setting out the quality assurance processes and how the survey meets the European Statistical System's five dimensions of quality is available on the Housing Executive's website:

  Click here to view the quality information

- Dwellings in need of some repair work may or may not be classified as unfit. In each case the surveyor, using his or her professional expertise, assessed the nature of any faults together with their severity and extent or scale. The risks associated with these faults were also assessed to determine whether or not a particular dwelling should be classified as unfit for human habitation. An important element of the House Condition Survey training programme was to maximise the consistency of surveyors' judgements.

bre

- The cost to make fit modelling process builds upon the NIHCS dimensions and repair costs models. This ensures consistency with other outputs from the HCS programme and consistency with previous iterations of the survey.

- The size of the sample for the NI House Condition Survey 2016 was 3,000 addresses. A weighting and grossing process translated the information gathered into figures that reflected the real world.[11] This provided robust data at Northern Ireland level.

Weaknesses

- All surveys have limitations which can be caused by a number of factors such as budget. The sample size of 3,000 provides robust data at Northern Ireland level. However, where numbers are small a note of caution has been included in the report.

- The costs of the various items of works specified in the cost to make fit model are inflated from prices that were first specified in 1996. Whilst the methodology is robust, the length of time that has passed since the prices were last baselined could lead to some drift in the pricing of works.

---

[11] Further information on the sampling, and weighting and grossing processes for the Northern Ireland House Condition Survey 2016 is available in the report