

Indicator name			Version
BB16: Building Condition and Disrepair			May 2018
Indicator type:	Risk/opportunity	Impact	Action
	X		
SCCAP Theme	SCCAP Objective	CCRA risk/opportunity	
Buildings and Infrastructure Networks	<p>B1: Understand the effects of climate change and their impacts on buildings and infrastructure networks</p> <p>B3: Increase the resilience of buildings and infrastructure networks to sustain and enhance the benefits and services provided</p>	<p>BE13 Rainwater penetration</p> <p>BE31 Increase in damp, mould and insect pests in buildings</p>	

At a glance

- Good repair status is a key factor in the resilience of buildings to adverse and extreme weather events.
- Climate change will increase the frequency and severity of weather challenges, including storms and intense rainfall, wind-driven rain, and periods of extreme heat or cold.
- The proportion of housing with disrepair has declined. Levels of disrepair vary according to the degree of maintenance, and disrepair levels are generally higher in older buildings.
- Disrepair to 'critical elements' that is judged to be urgent affects 21% of the housing stock.
- Requirements under the Scottish Housing Quality Standard are likely to keep property in a good state of repair in the social housing sector.

Latest Figure	Trend
<p>2016</p> <p>Dwellings with no disrepair: 32%</p> <p>Dwellings with critical element disrepair: 48%</p> <p>Dwellings with extensive disrepair: 6%</p> <p>(SHCS, 2017)</p>	<p>Levels of disrepair have declined over the last ten years. Whilst disrepair levels increased between 2009-2011, steady declines have been observed in all categories since 2011.</p>

Why is this indicator important?

Disrepair increases the likelihood that adverse and extreme weather will have deleterious effects on both the building and occupant safety and well-being. For example it increases the likelihood of wind-driven rain leading to penetrating damp, and of structural damage following storms or intense rainfall. The costs of repair are likely to be greater if maintenance has been neglected. In addition, internal dampness may lead to the presence of algal moulds, pests and a range of impacts on the health of occupants.

Repair status can thus be seen as one of the factors in overall building resilience. When a building is in good repair it has the best chance of withstanding the pressures of a changing climate and extreme weather.

Related Indicators

BB17/ 18 Dampness; Condensation in housing stock

CRS58 Number of households/ people falling below the SHQS & Tolerable Standard

What is happening now?

In the Scottish House Condition Survey (SHCS), disrepair is recorded under four different, overlapping categories, as listed below. Full definitions of disrepair categories are given in the SHCS Key Findings Report (Scottish Government, 2017).

- Any (or Basic) disrepair (any damage requiring repair beyond routine maintenance)
- Extensive disrepair (where the damage affects 20% or more of the building element area)
- Urgent disrepair (requires immediate attention to prevent further damage or safety issues)
- Critical element disrepair (disrepair to building elements central to weather-tightness, structural stability and preventing deterioration of the property)

The latest rates of disrepair are shown in Table 1, and the overlap between the four categories is shown in Figure 1.

Table 1: Rates of disrepair by category for 2015 and 2016

Year	Any (Basic) disrepair		Critical element disrepair	Urgent disrepair	Extensive disrepair
	No disrepair	Some disrepair			
2016	32%	68%	48%	28%	6%
2015	27%	73%	52%	33%	8%

Source: Scottish Government, 2017

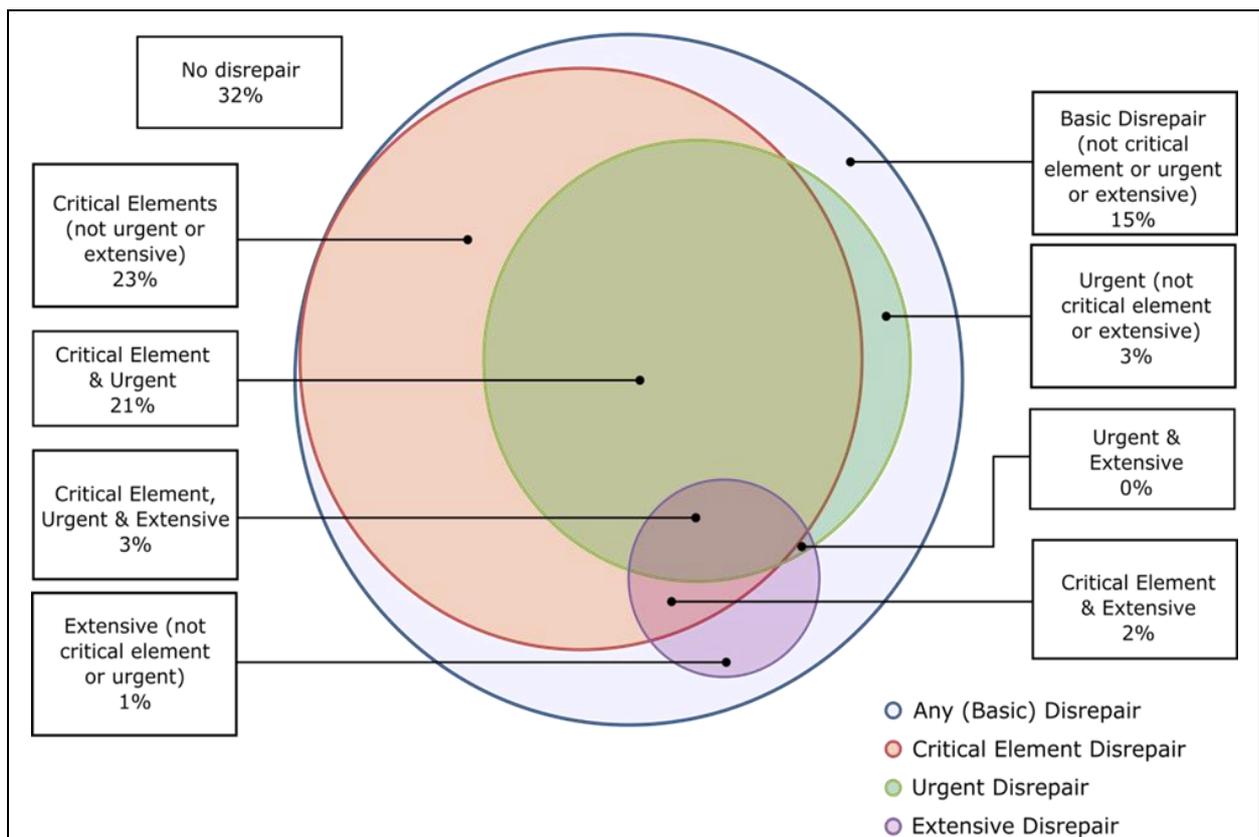


Figure 1. The overlap between the various categories of disrepair.

Source Scottish Government, 2017.

The condition of ‘critical elements’ is central to a dwelling being wind and weather proof, structurally stable and safeguarded against further rapid deterioration. Note that disrepair to these critical elements is recorded even when the disrepair issue is small. The list of critical elements is as follows:

Roof covering; Roof structure; Chimney stacks; Flashings; Roof gutters and downpipes; External walls - finish; External walls - structure; Access decks and balustrades (common areas - flats only); Foundations; Damp-proof course; External doors and windows (dwelling only); Doors, screens, windows and roof lights (common areas - flats only); Internal walls/partitions¹; Floor structure; Floor finish; Dry rot/wet rot (Scottish Government, 2017).

In 2016 the proportion of dwellings which had some disrepair to a critical element(s) was 48% (approximately a four percentage point drop from 2015). The categories of greatest concern, however, are those where the disrepair to critical elements is also urgent and/or extensive (Figure 1). Twenty one percent of the overall stock were recorded as having critical and urgent disrepair. This represents a significant proportion of Scottish housing stock, but it is a three percentage point drop compared to 2015. Three percent of building stock had disrepair to a critical element which was both urgent and extensive (a two percentage point drop compared to 2015).

What has happened in the past?

¹ This element has been incorrectly described in all previous SHCS reports as ‘party walls’

There has been a significant drop in the proportion of properties with some, critical and urgent disrepair over the last ten years of records (Figure 2). There was, however, an increase in disrepair levels between 2009-2011 but since then the disrepair levels have steadily decreased.

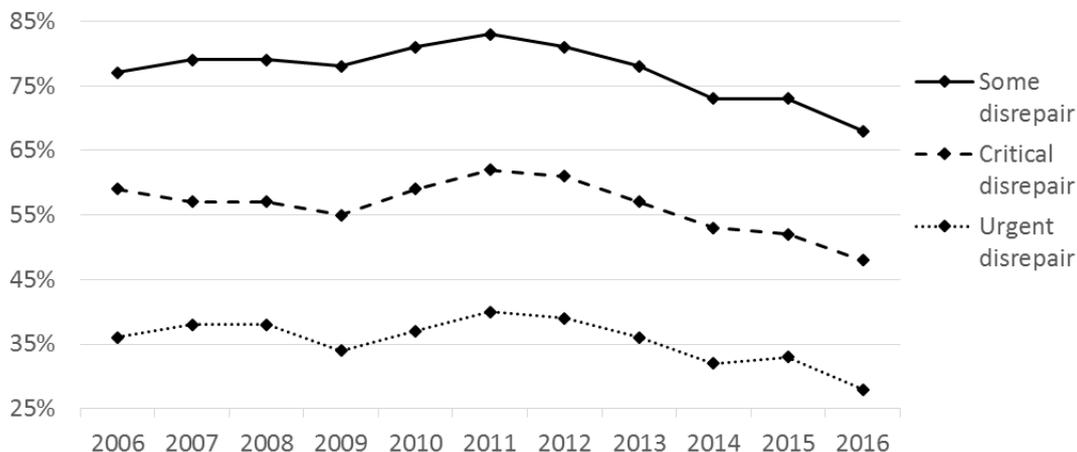


Figure 2. Change in levels of disrepair 2006 – 2016 (Source: SHCS 2013 & 2017)

What is projected to happen in the future?

The Scottish Housing Quality Standard (SHQS), was introduced in 2004 and is Scottish Government's measure of housing quality. The SHQS is a set of five broad housing criteria which must all be met if the property is to pass the SHQS. Criteria B is 'Must be free from Serious Disrepair'. This specifies that a primary element fails if more than 20% requires repair or replacement. A single element failure results in outright failure (SHQS, 2013b). From April 2015 all Social Housing Landlords (local authority landlords and Registered Social Landlords) must ensure that all their dwellings pass the SHQS. This will continue to act as a driver to keep levels of disrepair at low levels in this sector (note private owners and private landlords do not currently have this obligation).

Patterns of change

Disrepair is affected by the rate of building deterioration (affected by building design, type, age and environmental exposure), maintenance regime (affected by occupant awareness, willingness to pay against other spending priorities²), legislation and market conditions.

Table 2 shows disrepair rates for buildings of different ages and locations. In general, older buildings have more disrepair than new ones. Those built after 1982 show the lowest rates of disrepair of all categories analysed.

Levels of disrepair are comparable in urban and rural locations.

Table 2. Disrepair by Age and Location of Dwelling, 2015 & 2016

² Some suggest that intensive marketing of interior upgrades (eg for kitchens and bathrooms) has drawn funds away from fundamental maintenance and into interior work (Roger Curtis, Historic Scotland, pers. comm).

	Age of dwelling					Location		Scotland
	pre-1919	1919-1944	1945-1964	1965-1982	post 1982	Urban	Rural	
Dwellings with any Critical Disrepair								
2016	67%	58%	60%	48%	20%	48%	49%	48%
2015	68%	67%	60%	49%	26%	52%	51%	52%
Dwellings with Critical and Urgent disrepair								
2016	37%	27%	30%	22%	9%	24%	25%	24%
2015	39%	40%	35%	25%	10%	28%	27%	28%
Dwellings with Critical, Urgent & Extensive disrepair								
2016	5%	3%	5%	2%	1%	3%	2%	3%
2015	8%	7%	6%	3%	1%	5%	4%	5%

Source: SHCS 2016 (Scottish Government, 2017)

Critical disrepair levels are similar for private and social housing sectors as a whole (see Table 3). However, there is variation within the sectors- housing association properties have the lowest levels of disrepair, whilst Local Authority and privately rented properties have the highest levels of disrepair (Scottish Government, 2017).

Table 3. Disrepair by tenure group, 2015 & 2016

	Owner occupied	LA/Other Public	HA/Co-op	Private rented	Private Sector	Social Sector	Scotland
Dwellings with any Critical Disrepair							
2016	46%	57%	37%	60%	48%	49%	48%
2015	49%	62%	40%	61%	51%	53%	52%
Dwellings with Critical and Urgent disrepair							
2016	22%	30%	16%	31%	24%	24%	24%
2015	25%	37%	20%	37%	28%	30%	28%
Dwellings with Critical, Urgent & Extensive disrepair							
2016	2%	5%	3%	3%	3%	4%	3%
2015	5%	6%	2%	4%	5%	4%	5%

Source: SHCS 2016 (2017)

The biggest change (between 2015-2016) was the reduction of Local Authority properties in the critical and urgent disrepair category (from 37% to 30%) (Scottish Government, 2017).

Interpretation of indicator trends

Levels of disrepair vary according to type of tenure and dwelling age (see section above). A range of other factors will affect disrepair levels, including economic factors, owner and occupier awareness, and the perceived costs vs benefits of maintenance and repair.

Limitations

Robust data is only available for dwellings and does not cover trends in disrepair in the workplace and other commercial buildings. Employers have a legal duty under the Health and Safety at Work Act 1974 to ensure a safe working environment, and disrepair issues that lead to dampness should be addressed by this.

References

Scottish Government (2017) *Scottish House Condition Survey: 2016 Key Findings*. Directorate for Housing and Social Justice Communities Analysis Division, Scottish Government. Available at <http://www.gov.scot/Topics/Statistics/SHCS/Downloads> (accessed April 2018)

Scottish House Condition Survey (2013). Mueller, G., Robertson, J., Guagnin, M, McMenemy, M and Cairns, P. (2013) *Scottish House Conditions Survey 2012, Key Findings*. Directorate for Housing, Regeneration and Welfare, Scottish Government. Available at: <http://www.gov.scot/Publications/2013/12/3017/0> (accessed April 2018)

Scottish Housing Quality Standard (2013a). *Progress Report 2012/2013*. Available at: <http://www.scottishhousingregulator.gov.uk/scottish-housing-quality-standard-shqs> (accessed April 2018)

Scottish Housing Quality Standard (2013b). *Appendix B*. Available at: <http://www.scotland.gov.uk/Topics/Built-Environment/Housing/16342/shqs/AppendixB> (accessed April 2018)

Further information

Scottish House Condition Survey - <http://www.scotland.gov.uk/Topics/Statistics/SHCS>

Reports from SHCS - <http://www.scotland.gov.uk/Topics/Statistics/SHCS/Downloads>

Scottish Housing Quality Standard – <http://www.scotland.gov.uk/Topics/Built-Environment/Housing/16342/shqs/guidance>

National reports on the Scottish Social Housing Charter - <https://www.scottishhousingregulator.gov.uk/our-national-reports-scottish-social-housing-charter>

Scottish Building Standards Technical Handbooks: <http://www.scotland.gov.uk/Topics/Built-Environment/Building/Building-standards/techbooks/techhandbooks>

Acknowledgements

Author of 2016 indicator version: Katherine Beckmann (Heriot-Watt University)

Appendix One: Indicator metadata and methodology

Table 1: Indicator metadata

	Metadata
Title of the indicator	BB16 Building Condition and Disrepair
Indicator contact: Organisation or individual/s responsible for the indicator	Anna Moss (University of Dundee/ ClimateXChange)
Indicator data source	Scottish House Condition Survey
Data link: URL for retrieving the indicator primary indicator data.	http://www.gov.scot/Topics/Statistics/SHCS/Downloads

Table 2: Indicator data

	Indicator data
Temporal coverage: Start and end dates, identifying any significant data gaps.	Data collected in 1991 and 1996, then annual data from 2002
Frequency of updates: Planned or potential updates	Annual updates from 2002
Spatial coverage: Maximum area for which data is available	Scotland
Uncertainties: Uncertainty issues arising from e.g. data collection, aggregation of data, data gaps	
Spatial resolution: Scale/unit for which data is collected	Data for individual dwellings is not available. The data has been extrapolated for a national picture of housing. Spatial data is not available, but requests can be made for data corresponding to Local Authority areas
Categorical resolution: Potential for disaggregation of data into categories	Access to the dataset is not possible except through requests directly to the SHCS department. Published data available for age of dwelling and type of tenure.
Data accessibility: Restrictions on usage, relevant terms & conditions	At a national level, data is free and publicly accessible. Reports are available free on the Scottish Government website under the Open Government License (pdf). Ad Hoc data requests can be made

	free of charge for bespoke data sets (Excel).
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Table 3 Contributing data sources

<p>Contributing data sources</p> <p>Data sets used to create the indicator data, the organisation responsible for them and any URLs which provide access to the data.</p> <p>Scottish House Condition Survey - http://www.scotland.gov.uk/Topics/Statistics/SHCS</p>

Table 4 Indicator methodology

<p>Indicator methodology</p> <p>The methodology used to create the indicator data</p> <p>Data was generated by physical surveys carried out under the SHCS, which undertakes an annual survey of 15,000 homes in Scotland, concerning physical condition and experiences of the occupants. Data collected includes dwelling age, type, condition, tenure, urban/rural split, fuel use, EPC rating, CO2 emissions, household income, insulation measures, fuel poverty metrics, Scottish Housing Quality Standard and condition of the dwelling (damp, condensation, disrepair).</p> <p>Data is also compared to previous years to identify trends.</p> <p>This indicator is based on data collected by SHCS surveyors who inspected dwellings for signs of disrepair of various types (each recorded separately).</p> <p>The sample size is small in comparison to the overall stock, although it is published as a National Statistics report, and is therefore robust.</p>
