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BRE Client Report - SUMMARY

A Quantitative Health Impact Assessment: The cost of private sector housing and prospective housing interventions in Watford Borough Council

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Executive summary

- Watford Borough Council has recognised that poor housing has an important effect on health as most occupiers spend longer in their own home than anywhere else. Additional information is also required concerning private sector housing in order to inform the Joint Strategic Needs Assessment (JSNA).
- The council has commissioned BRE to produce housing stock models to help understand the condition of the private sector housing within their area (these are provided in a separate report). The housing stock model is based on data gathered from a number of sources (including the English Housing Survey (EHS)) and includes an assessment of dwelling hazards using the Housing Health and Safety Rating System (HHSRS). This data from the housing stock model has then been used as a basis for this Health Impact Assessment (HIA) to better understand the effect of private sector housing hazards and intervention strategies on the health of residents in Watford.
- A Health Impact Assessment (HIA) is a formal method of assessing the impact of a project, procedure or strategy on the health of a population. This HIA draws on evidence of the health impact of hazards identified using the Housing Health and Safety Rating System (HHSRS[1]) and a methodology developed by the BRE Trust and published in the "Real Cost of Poor Housing"[2] and in the more recent "The Full Cost of Poor Housing"[3]. The HHSRS is the method by which housing condition is now assessed in accordance with the Housing Act 2004. A dwelling with a category 1 hazard is considered to fail the minimum statutory standard for housing and is classified as "poor housing".
- This report provides a quantitative HIA for Watford Borough Council which covers:
    - The condition of private sector housing and the estimated effect on the health of occupiers
    - The cost of prospective interventions to reduce the number of hazards
    - The costs to the NHS and wider society of treating these health issues
    - The health cost benefit analysis of interventions to reduce some of these hazards
    - An analysis of Quality Adjusted Life Years (QALYs) relating to housing hazards

[1] Housing Health and Safety Rating System Operating Guidance, Housing Act 2004, Guidance about Inspections and Assessments given under Section 9, ODPM, 2006

[2] The Real Cost of Poor Housing, M Davidson *et al.*, IHS BRE Press, February 2010

[3] The Full Cost of Poor Housing, Roys M, Nicol S, Garrett H and Margoles S, IHS BRE Press, 2016

- The main results are shown in the summary table overleaf and the headline results are as follows:

HIA for Watford Borough Council, private sector stock

There are an estimated 6,670 category 1 hazards in Watford's private sector stock, of which 2,326 are within the privately rented sector. *See full results*

The estimated total cost of mitigating all these hazards is £11.6 million with £4.4 million in the private rented sector. *See full results*

It is estimated that poor housing conditions are responsible for over 319 harmful events requiring medical treatment every year. *See full results*

If these hazards are mitigated then the total annual savings to society are estimated to be £10 million, including £1.1 million of savings to the NHS. *See full results*

Poor housing in Watford is estimated to cost around 105 quality-adjusted life-years (QALYs). *See full results*

Summary of results, private sector stock (N.B. due to data availability, some hazards are excluded from the cost benefit analysis)

Housing hazard type	Numbers of hazards (total private sector stock)	Estimated number of instances requiring medical intervention	Cost of mitigating all hazards	Potential annual costs of not mitigating hazards		Potential annual savings from mitigating hazards		Cost benefit analysis			
								Cost benefit to NHS		Cost benefit to Society	
				Costs to NHS	Costs to society	Savings to NHS	Savings to society	Positive cost benefit year where 20% works are carried out	Positive cost benefit year where 50% works are carried out	Positive cost benefit year where 20% works are carried out	Positive cost benefit year where 50% works are carried out
Damp and mould growth	65	33	£497,674	£22,090	£103,448	£22,030	£103,442	6	15	2	4
Excess cold	760	4	£3,967,186	£127,750	£2,290,025	£114,970	£2,288,643	4	12	1	1
Crowding and space	28	3	£505,625	£34,840	£494,608	£34,770	£494,602	15	15	2	2
Entry by intruders	43	14	£52,529	£9,590	£44,934	£9,170	£44,880	4	5	1	1
Domestic hygiene, Pests and Refuse	3	1	£3,231	£350	£1,169	£350	£1,169	Excluded	Excluded	Excluded	Excluded
Food safety	39	6	£123,709	£7,330	£18,935	£7,320	£18,934	Excluded	Excluded	Excluded	Excluded
Personal hygiene, Sanitation and Drainage	35	6	£44,976	£6,630	£17,122	£6,620	£17,121	Excluded	Excluded	Excluded	Excluded
Falls associated with baths etc	444	25	£256,022	£89,760	£1,000,731	£89,260	£1,000,689	1	3	1	1
Falling on level surfaces etc	1,382	77	£1,458,141	£293,080	£821,769	£263,770	£820,076	2	4	1	2
Falling on stairs etc	3,411	107	£3,813,779	£580,580	£4,686,106	£539,720	£4,682,507	2	4	1	1
Falling between levels	266	27	£266,740	£29,910	£144,009	£29,750	£143,997	2	7	1	2
Electrical hazards	20	1	£36,379	£4,900	£19,235	£4,880	£19,234	Excluded	Excluded	Excluded	Excluded
Fire	97	2	£498,257	£17,760	£300,457	£17,580	£300,438	4	11	1	1
Flames, hot surfaces etc	46	8	£101,261	£6,590	£31,089	£6,400	£31,068	1	1	1	1
Collision and entrapment	33	5	£21,164	£3,350	£25,279	£3,120	£25,254	2	7	1	1
TOTAL	6,670	319	£11,646,674	£1,234,510	£9,998,917	£1,149,710	£9,992,055	n/a	n/a	n/a	n/a

N.B. there are 6,670 hazards in total spread across 5,055 dwellings as some dwellings have more than one hazard. Positive cost benefit year refers to the payback period – i.e. the number of years it would for the savings to payback the mitigation costs.

- The housing stock models estimate that there are 6,670 category 1 hazards in 5,055 dwellings across the private housing stock. This Health Impact Assessment estimates that poor housing conditions in the private sector are responsible for over 319 harmful events requiring medical intervention each year. These almost completely avoidable events range from respiratory diseases like COPD associated with cold homes, to fractures and injuries associated with homes containing fall hazards. It would cost £11.6 million to mitigate all of these serious housing hazards, but would return savings to the NHS of £1.1 million per year, with further savings to wider society of £10 million per year (which includes increased spending on benefits, loss of future earnings, demands on other services etc. as well as the estimated NHS savings). It is also estimated that 105 Quality Adjusted Life Years (QALYs) could be saved if all serious housing hazards were mitigated.

- The health cost benefit analysis of interventions to reduce some of these hazards has been developed to show the costs and savings to the NHS and to society as a whole from carrying out work in dwellings with the least expensive 20% and 50% of required works. By focussing on the less expensive works, the expected payback periods (the number of years to reach the break-even point) are shorter. The summary table on the previous page shows that the shortest payback periods are for the hazards of collision and entrapment and some of the falls hazards. The longest payback periods are associated with the more complex hazards of damp and mould, excess cold and crowding and space.

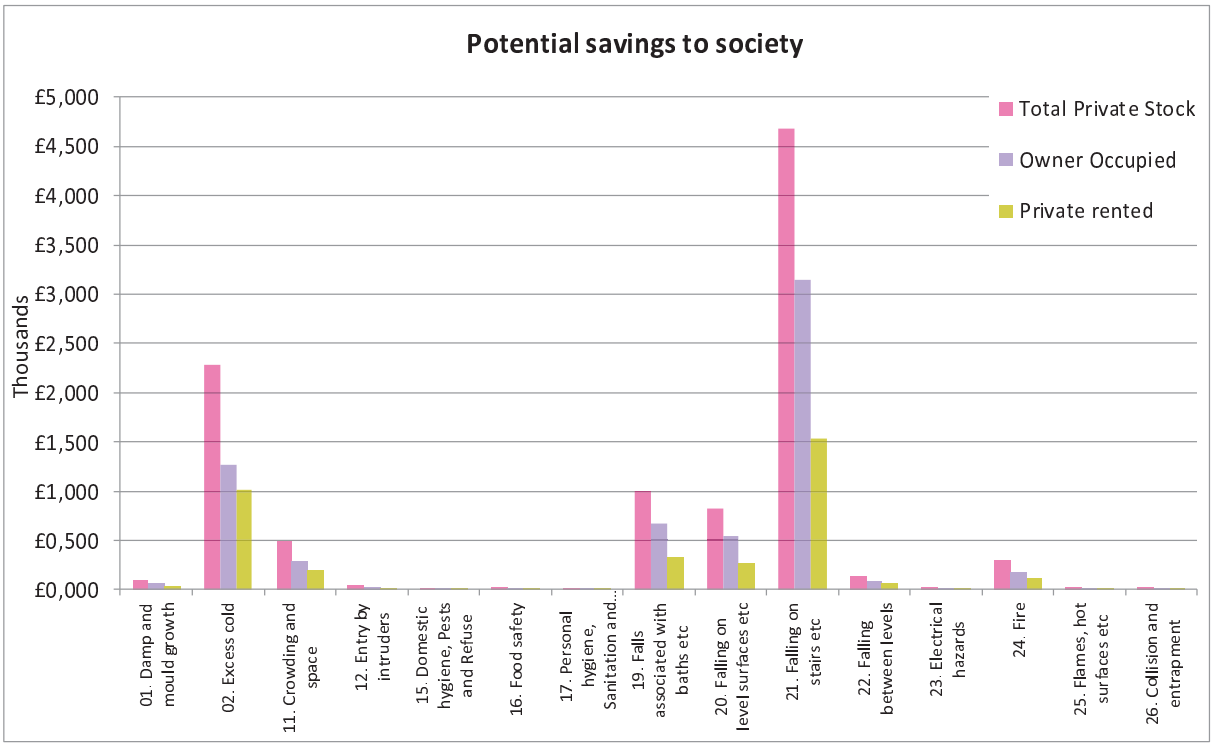
- The return on investment when all hazards are mitigated may seem rather limited and modest. However, this report considers a number of different scenarios where the mitigation of different hazards and mitigation costs are further investigated to identify more compelling scenarios. For example, mitigating all damp and mould hazards in the owner occupied stock would cost approximately £299,448. The least costly half of all these hazards could be mitigated by investing around £19,845 per year for 5 years. The return on investment, or payback period, when costs to society are considered is 4 years; therefore, 4 years after the repairs are carried out, the savings to society will be greater than the mitigation costs. For falls associated with baths, all hazards in the owner occupied sector could be mitigated for £171,877. This would save the NHS £59,920 per year thus giving a payback period of less than 3 years.

- The estimated annual savings to society of fall hazards associated with older people is estimated at £6.5 million. This indicates that repairs and improvements to stairs, floors and paths, plus additional safety arrangements for baths are likely to be the most cost effective.

- The estimated costs and savings can be shown by tenure. The largest costs and savings are within owner occupied dwellings but the estimated savings to society when all category 1 hazards in the privately rented sector are mitigated is £3.6 million as shown in the graph below.

- The quantitative information provided in this HIA on the impact of private sector housing on health, will provide an invaluable contribution to the JSNA. The results will contribute to the provision of evidence of the costs, savings and benefits of improving housing in the private sector, and the costs to health of not doing so. Some recommendations are provided which look at possible interventions in order to assist the council in making decisions concerning where resources can best be targeted to improve private sector dwellings in Watford Borough Council. Local knowledge will be key in targeting resources to gain the greatest benefit in both geographical areas and population profile. The importance of a Home Improvement Agency or a Handy Person Service to help take action is identified by this report.

Potential savings to society following mitigation work, by hazard and tenure, all private sector stock and split into tenure



Main recommendations:

- The owner occupied sector contains the greatest number of category 1 hazards requiring an estimated £7.2 million to mitigate. The most common hazards are falling on stairs etc. (2,290), falling on level surfaces etc. (927), and excess cold. (423). Therefore there should be appropriate services to assist owner occupiers in addressing these most common hazards - this may range from financial assistance to support with the specification of remedial works and finding appropriate contractors.
- This report recognises the importance of a Home Improvement Agency or a Handy Person Service to help take action. Not only will there be a need for help to be available, there should also be systems in place to identify those needing assistance; for example, setting up referral pathways between housing and health professionals so that occupational therapists or health visitors are aware and can make referrals to housing support services.
- Within the private rented sector, the annual cost to society of category 1 hazards is estimated to be £3.6 million. Work to mitigate these hazards will need to be carried out by landlords in accordance with legislation in the Housing Act 2004. To facilitate this, an active housing enforcement strategy will be necessary.
- Landlord Accreditation Schemes can help to educate landlords on the need to mitigate hazards.
- The hazard of damp and mould particularly affects children and can cause long term effects that may well be underestimated by this work (the evidence is not available to quantify the true cost over a long time period). Flames and hot surfaces and falling between levels also specifically affect children.

Education using a multi-agency approach with Health Visitors or through Children's Centres and accessing local knowledge will be crucial to reducing these hazards. Professionals working with families in the private rented sector should be made more aware of landlord duties.

- The evidence indicates that initiatives to reduce the incidence of falls at home should be one of the more cost effective strategies. The cost benefit scenarios show that the best value initiatives will be small-scale repair or improvement works to stairs, trip hazards within the home and to uneven paths. Targeting this initiative towards dwellings occupied by persons over 60 will bring the greatest benefit.
- The quantitative information provided in this HIA on the impact of private sector housing on health should be fed into the JSNA and Health and Wellbeing strategy. This will allow evidence on the costs, savings and benefits of improving housing in the private sector, and the costs to health of not doing so, to be compared with other areas and contribute to informed discussions identifying commissioning priorities.
- The scenario tables in **Appendix D** show the expected costs of work to mitigate the individual hazards over a period of 3, 5 and 10 years along with the payback period in terms of savings to the NHS and society. These tables can be used to give some financial quantification towards planning a strategy.

PLEASE NOTE THIS IS A SUMMARY OF THE DOCUMENT ONLY. THE FULL REPORT IS AVAILABLE ON REQUEST. Please contact EnvHealth@watford.gov.uk