

# HHSRS minefield for noise

Few councils seem to be making use of the admittedly complex legislation that enables noise issues to be tackled as a hazard to health. Lisa Russell reports.

Noise is one of 29 hazards identified in the Housing Health & Safety Rating System (HHSRS), which applies to all homes in England and Wales and can be used to enforce remedial work. Yet HHSRS rarely seems to be used to tackle noise issues.

HHSRS is a risk-based evaluation tool introduced to help local authorities identify and protect against potential risks and hazards to health and safety from any deficiencies identified in dwellings. It has been applied since 2006 and was introduced as part of the major changes to legislation brought in by the Housing Act 2004.

A chapter in a recent publication on housing looked at whether greater use could be made of the noise element of HHSRS as a toolkit for improving people's well-being and reducing the hazard to mental health. The section by Sanctum Consultants environmental health practitioner Nargis Kayani is published in *Effective strategies and interventions – environmental health and the private housing sector*, compiled by Dr Jill Stewart of the University of Greenwich for the Chartered Institute of Environmental Health (CIEH).

Kayani pointed out that all councils in England and Wales have had a duty under HHSRS to assess potential risks to the physical and mental health of occupants from exposure to noise inside a dwelling or within its curtilage. Yet inspections to identify hazards from noise remain low, as does council enforcement action. She considers that a different and more robust approach by councils could help minimise noise-related impacts to mental health and encourage well-being.

"The principle behind it is great – it is exactly what was needed," says Kayani. "I think it is a really innovative piece of legislation." But in practice, it isn't being widely used for noise. "I would say that more than 50% of environmental health professionals don't understand HHSRS and how it works," she says. Housing teams would be more familiar with it – though not necessarily with dealing with noise hazards.

The system adopts a health and safety approach, incorporating hazards that were already being taken into account in the workplace, such as the potential for falls if a staircase has no handrail.

Uses of the legislation for noise can include requiring improvements in places where poor insulation between dwellings gives rise to noise intrusion that is due to the construction of the property rather than any unreasonableness on the part of residents.

HHSRS assesses 29 categories of housing hazard and councils have the power to serve hazard awareness notices and improvement notices under the Housing Act 2004.

The system sets a statutory minimum standard for all dwellings in England and Wales regardless of who owns the property or lives there. All dwellings must comply with the requirement to be free from the most severe 'category 1' hazards. In practice, the main use tends to be in getting landlords to improve property for their tenants, and there tends to be a focus on private sector landlords.

Councils can invoke a range of enforcement options to reduce or eliminate hazards that are identified. This applies to noise just as much as the other 28 areas, which include cold, damp and mould, radiation, entry by intruders, food safety, water supply, falls, electrical hazards and structural collapse.

In her chapter in the *Effective strategies and interventions* publication, Kayani points out that as early as 2008 a study by the CIEH questioned whether HHSRS was being used effectively by councils. And a study in 2011 by Dr Stephen Battersby (Are private sector tenants being protected adequately?) noted that less than 10% of dwellings with category 1 hazards were dealt with in any year.

Kayani also cited an independent study based on Freedom of Information requests to 98 councils in London and the South East, which received responses from 89 and found that 81% did not conduct any inspections for hazards from noise. One council even responded that no inspections were conducted, as there are no hazards from noise within its area. Overall 95% did not take any enforcement action and only four notices were served.

HHSRS takes the line that noise can lead to psychological disturbance and physiological changes, resulting from annoyance and loss of sleep.

The 29 hazards are arranged into four sub-groups, with noise's psychological group also including space, security and light. In the context of HHSRS, noise covers threats to physical and mental health resulting from exposure to noise inside the dwelling or within its curtilage. Unlike some of the other hazards, such as damp or excess cold, no age group is seen as more vulnerable to noise than others. The government's operating guidance to HHSRS charts the average likelihood and health outcomes across people of all ages for noise in different ages of property. Overall, it says that there is 1 in 900

likelihood of harm, with none in the most severe class, 1% in the second most severe class, 9% in the third class and 90% in the least harmful class.

The guidance discusses the difficulties in assessing the true risks of noise. It also describes the causes of noise in the home and the differences in individual sensitivity and tolerance to different types of noise. It also talks about preventative measures, such as double or triple glazing, insulation of the roof space where aircraft noise is likely and issues relating to noise from plumbing.

Many factors are relevant to the likelihood of an occurrence and the severity of the outcomes. The guidance identifies the location of the dwelling, internal and external insulation, disrepair of windows or doors and the siting of plumbing, any noisy equipment or overly powerful door-closing mechanisms that result in banging.

While considerable attention is paid to damp and mould issues under HHSRS, this is not the case for noise, finds Kayani.

Yet HHSRS identifies both types of issue as resulting in similar classes of harm and for both the factors to take into account are similar. Equally, both are likely to arise in similar properties – a house with poor thermal insulation is likely to have poor sound insulation too. "I think that the reason why you have the discrepancy is that there has been a lot more research on damp and cold in terms of health effects," she says. Noise judgments end up being much more subjective.

The Housing Health Cost Calculator – which can be accessed via the BRE website – is a tool for calculating the health costs of hazards in homes, and the savings made where these have been mitigated or significantly reduced. The calculator was developed in partnership with RHE.

A lack of a strong evidence base for noise could perhaps make it difficult to prove health links scientifically if a case got to a tribunal, despite robust anecdotal evidence of lives blighted by the noise.

HHSRS features on both Sanctum's Noisedirect website and its sister site, HouseLet Direct. As the HouseLet Direct website points out, HHSRS is not a simple procedure and even council officers can struggle to understand the assessment process.

The Housing Act is very complex and the HHSRS process is very difficult to use, with a lot of work involved in getting to the point where a notice can be produced.

But this is no reason for ignoring it, says Kayani.

Environmental health officers dealing

with housing work may not have expertise in the technical side of acoustics; equally those in the noise team may lack confidence in using HHSRS. Some councils may choose to adopt a joint approach.

HHSRS looks at the likelihood of harm occurring and the severity of the outcome. Some age groups are deemed particularly vulnerable to certain hazards – the elderly to cold, for instance. For noise, no one group is considered more vulnerable than others. The underlying basis of the HHSRS is that any residential premises should provide a safe and healthy environment for any potential occupier or visitor. This means that a hazard to children, for instance, cannot be ignored simply because no children live there at present.

The system has detailed scoring that takes into account the age of the building and classes of harm. Essentially, a judgement has to be made about whether the property is better or worse than an average dwelling. HHSRS compares a property to the national average. This means, for instance, that consideration of noise levels under a flight path can't be dismissed as something that is to be expected.

HHSRS uses a formula to generate a numerical score. This is designed to allow the comparison of highly likely minor hazards and very unlikely major ones. Inspectors are required to make two judgments for each hazard. One is an assessment of the likelihood over the next 12 months of an occurrence that could result in harm to a member of the vulnerable group. The second is the range of potential outcomes from such an occurrence.

There are several stages in generating a

hazard score, beginning with inspection to identify defects or unacceptable conditions. Next comes the identification of which of the 29 HHSRS hazards the defect relates to, followed by how likely it is for the hazard to occur based on the severity of the conditions or defect. There are four classes of harm, from I (extreme) to IV (moderate), reflected in weightings from 10,000 to 10 that contribute to the final score.

The hazard score is then calculated, highlighting where action is needed. The higher the score, the greater the risk. HHSRS identifies 10 bands, from A to J, with hazard score ranges of 5,000+ down to 9 or less. A hazard assessed with a score of more than 1,000 comes into one of the top three bands – A, B or C – and councils have a duty to take action. There is more council discretion in dealing with the lower-scoring category 2 hazards.

One of the cases where HHSRS was applied was in dealing with a man's eight-year struggle to get respite from noisy neighbours. *Nelson's story* was published last year by the UK Noise Association (*Noise Bulletin April 2012 p8*). Sanctum undertook an HHSRS assessment relating to the psychological hazards from noise. The inspection and acoustic monitoring of conditions within the dwelling identified the existence of at least one category 1 hazard, requiring remedial action and/or statutory enforcement action.

It is hard to find much by way of specific noise-related HHSRS information from local authorities online, though there are many passing references. Bristol and Kensington & Chelsea are among the limited number of councils to have published any details about use of HHSRS in relation to noise.

It has long been made clear in Bristol City Council's private housing enforcement policy that the HHSRS under the Housing Act covers hazards from noise. The pollution control teams and private housing agreed a noise protocol between the two services for dealing with complaints about noise.

Bristol's website includes a training exercise that gives a good introduction to the kinds of things an assessment looks at. The training emphasises that HHSRS represents a shift from considering deficiencies for their own sakes to a consideration of the harm to health and safety they could cause. It takes the form of a series of rooms where you are invited to spot potential hazards, drawn from 10 of the 29. One relates to noise that could be propagated through a hole in the kitchen ceiling. The risk here is judged to be only slightly above the national average for a pre-1920 house in a typical condition even given the size of the hole and the fact there is no internal kitchen door. Any noise from this room is unlikely to be significant or of long duration and will not adversely or directly interfere with sleep, as neither of the first-floor bedrooms are vertically above the kitchen.

The government guidance also gives examples. For instance, it distinguishes between two windows a child could fall through – one on the ground floor, the other on the second. The likelihood of the child falling through is the same – but the outcomes would be greatly different, reflected in a hazard score of 7 (band J) for the ground floor and 1,016 (band C) for the other.

A presentation on HHSRS and noise by the Royal Borough of Kensington & Chelsea's Barry Ewing is available on the CIEH website. It emphasises that noise, as one of the 29 HHSRS hazards, covers both noise intrusion between dwellings and the intrusion of traffic noise, whether road, rail or air. It applies where the building is not capable of protecting the occupier against ordinary reasonable noise from neighbouring dwellings or the environment. Subjective sound insulation assessment provides information on which to base the HHSRS rating. The noise as described by the occupant can be simulated in the 'source' flat so that any intrusion to the property in question can then be assessed. Members of staff can swap roles and repeat the test, before writing it up and feeding it into the HHSRS assessment.

● Have you any experience of using HHSRS for noise? If so let us know email [jackpease@empublishing.co.uk](mailto:jackpease@empublishing.co.uk)



There are several stages in generating a hazard score (HouseLet Direct)

The UK Noise Association is hoping the EU will not require addition of artificial noise to quiet electric cars.

There are fears that at slow speeds, cars are inaudible and therefore a danger to pedestrians. Stewart points out that very few people are killed by cars travelling at slow speeds – so is unsurprisingly keen to ensure that the noise benefits of electric and hybrid vehicles are not lost by adding alerting systems.

We can understand that politicians will prioritise the needs of the blind and partially sighted road user minority above the benefits to the majority of keeping noise down. However for those of us that walk in London or other cities where there are increasing numbers of cyclists – many of them travelling fast and some ignoring road traffic regulations – relying on hearing to avoid being knocked down is increasingly unwise.

Sharps Redmore reports that sometimes solutions are relatively low tech.

It was called in to identify a nuisance noise in a newly built student block where there was a low-level but annoyingly tonal noise which was audible on and off at all

times of the day and night. Sharps Redmore investigated and found the culprit to be the water pumps.

While these were mounted on dampening springs, vibration was travelling straight through into the foundations and up to the student rooms. The consultant reports: "To check whether or not the inertia base was working, somebody was delegated to jump up and down on it. This simple action was sufficient to dislodge the debris, allowing the inertia base to move independent of the building structure and cut noise transmission.

Which just goes to show that acoustics is not always about long complicated calculations and fancy monitoring equipment.

We've already seen how keen the Government is on relaxing red tape – pubs and clubs now have far more freedom to host noisy events without needing a permit or consultation.

Time will tell whether that leads to an explosion of noise complaints – but we feel that its encouragement of free street concerts may go one step too far.

The Government is claiming credit for

promoting some 250 free concerts which will go ahead this summer. It says: "250 concerts will be both free for people to attend and for musicians to enter and will bring people from different backgrounds together to listen to a wide variety of music.

"Over 200,000 people are expected to attend the concerts in July, making the attendance even greater than that of festivals such as Glastonbury."

Accompanied by the *Pandemonium Drummers*, communities minister Don Foster launched the *Our Big Gig* series of concerts and pledged to make it Britain's biggest free festival. The drummers performed at the London 2012 Olympic opening ceremony."

Drummers? The experience of Helen Mirren neatly underlines the dangers of the unfettered spread of street music and concert noise. She was in a West End play dressed up as The Queen (no surprise there then!) and steamed out of her play onto the street to remonstrate with a bunch of noisy drummers as she couldn't be heard delivering her lines in the theatre.

She later said she liked drummers – "Just not outside a theatre". Indeed.

## NOISE EVENTS 2013

**13th May**

**IOA SPRING CONFERENCE 2013**

to be held in Nottingham website [www.ioa.org.uk](http://www.ioa.org.uk)

**22th-24th May**

**NOISE ACTION WEEK 2013**

Recently confirmed as going ahead [www.noiseactionweek.org.uk](http://www.noiseactionweek.org.uk)

**21st May**

**LAUNCH OF THE GOOD PRACTICE GUIDE ON WIND TURBINE NOISE**

to be held in Bristol, website [www.ioa.org.uk](http://www.ioa.org.uk)

**21st May**

**STATUTORY NUISANCE AND RESIDENTIAL PROPERTY**

CIEH conference to be held in London, [www.cieh.org/events](http://www.cieh.org/events)

**2nd-7th June**

**ICA 2013**

International Congress on Acoustics and a meeting of the Acoustical Society of America to be held in Montreal [www.ica2013montreal.org](http://www.ica2013montreal.org)

**25th June**

**STATUTORY NUISANCE LAW AND ENFORCEMENT**

CIEH conference to be held in Birmingham, [www.cieh.org/events](http://www.cieh.org/events)

**11th July**

**THE ISVR AT 50: MAKING A WORLD OF DIFFERENCE**

Symposium to be held in Southampton to celebrate the 50th anniversary of the Institute of Sound and Vibration Research (ISVR). [www.isvr50.soton.ac.uk](http://www.isvr50.soton.ac.uk)

**26th – 28th August 2013**

**NOISE-CON 2013**

to be held in Denver [www.inceusa.org/nc13](http://www.inceusa.org/nc13)

**28th – 30th August 2013**

**2013 INTERNATIONAL WIND TURBINE NOISE CONFERENCE**

to be held in Denver [www.inceusa.org/nc13](http://www.inceusa.org/nc13)

**11th September**

**STATUTORY NUISANCE AND RESIDENTIAL PROPERTY**

CIEH conference to be held in London, [www.cieh.org/events](http://www.cieh.org/events)

**15th-18th September**

**INTERNOISE 2013**

the 42nd International Congress and Exposition on Noise Control Engineering to be held in Innsbruck. <http://internoise2013.com>

**18th September**

## SUBSCRIPTIONS

1yr sub  
£254

2yr sub  
£455

3yr sub  
£625

 We take credit cards  
 ☎ 01737 642283

Concessions available for charities and non-consultant academics

Name ..... Position .....

Organisation .....

Address.....

.....

.....

Postcode ..... signed .....

E-mail .....

Please invoice me: order number: .....

Cheque enclosed (payable to Environmental Management Publishing)

BACS payments: see invoice/details on request

(Please include company name in payment reference) VAT no 869 8809 41

## CREDITS



**Editor: Jack Pease** tel 01737 642283

(mobile 07443 033294)

email [jackpease@empublishing.co.uk](mailto:jackpease@empublishing.co.uk)

Website: [www.noise-bulletin.co.uk](http://www.noise-bulletin.co.uk)

**Associate editors:**

Lis Stedman tel 01492 642360 email [lis.stedman@empublishing.co.uk](mailto:lis.stedman@empublishing.co.uk)

Lisa Russell tel 020 8552 7464 email [lisa.russell@empublishing.co.uk](mailto:lisa.russell@empublishing.co.uk)

Subscriptions: 01737 642283, The Garth, Rockshaw Road,

Merstham, Surrey RH1 3DB

Printed and published by Environmental Management Publishing Ltd

Copyright 2013 ISSN 1751-1518

## NEWS ABOUT CLB



NB's sister magazine *Contaminated Land Bulletin* is now published by Environment Analyst Ltd.

*Noise & Air Bulletins* are unaffected by this change and CLB readers are unlikely to notice the difference for now – however *Environment Analyst* has the online strength to take the magazine forward in what are difficult times for the development industry. The handover will be gradual and we intend to retain close links and cooperation.

*Jack Pease*