



Office of the
Deputy Prime Minister

Creating sustainable communities

Project Report

Preparation of
Housing Health and
Safety Rating System
Guidance (Version 2)

housing



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November 2004

Safe & Healthy Housing Research Unit, Warwick Law School

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CHAPTER 1

Introduction

Background

- 1.01 Following a review of the Housing Fitness Standard in 1996¹ and consultation on the development of a methodology to grade the severity of housing conditions², the Government commissioned work to develop the Housing Health and Safety Rating System (HHSRS or Rating System). The objectives of this work were to:
- Devise a logical and practical means of assessing and grading dwellings from a health and safety perspective, such means being capable of replacing the current Housing Fitness Standard.
 - Develop an electronic dwelling hazard survey program for use with hand-held computers.
 - Make recommendations for the interpretation of the results, including banding and action levels.
 - Assess the implications of a hazard based assessment system for enforcement and make suggestions for options for action.
- 1.02 In July 2000, the government released Version 1 of the HHSRS. The release included *Guidance (Version 1)*, *Report on Development*, and a Housing Survey and Scoring Program for Palm OS hand-held computers³. At this stage the System was not incorporated in any formal assessment procedures. However, the Government had announced its intention to replace the Housing Fitness Standard with the HHSRS. This release was a further stage in the development and consultation process, allowing potential users to become familiar with the System and its application.
- 1.03 To complement the *Guidance (Version 1)* and promote consistency of assessment, work was commissioned to develop illustrations of housing hazards with detailed explanations of the assessment using the HHSRS. These *Worked Examples* were published in April 2001⁴.

1 See *Controlling Minimum Standards in Existing Housing* (1998) LRI, Warwick.

2 See *Health and Safety in Housing: Replacement of the Housing Fitness Standard by the Housing Health and Safety Rating System* (2001) DETR, London.

3 *Housing Health and Safety Rating System: The Guidance (Version 1)* (2000) DETR, London; *Housing Health and Safety Rating System: Report on Development* (2000) DETR, London; and *Housing Health and Safety Rating System: Programme (Version 1)* (2000) DETR, London.

4 *Housing Health and Safety Rating System: Worked Examples* (2001) DETR, London.

1.04 In late 2000, the government commissioned three separate projects on the HHSRS:

- An evaluation of potential users' reaction to Version 1.
- A study into the application of the Rating System in houses in multiple occupation (HMOs).
- The refining and updating of the statistical evidence supporting the System.

1.05 Reports from these three projects were published in early 2003⁵.

This Project

1.06 In March 2003 the government commissioned the Safe and Healthy Housing Research Unit of Warwick Law School to develop Version 2 of the HHSRS. The tasks involved were limited to:

- Production of a revised version of the HHSRS Guidance incorporating recommendations as required by the Office of the Deputy Prime Minister (ODPM).
- Design of a paper scoring form.
- Revision and testing of electronic scoring programs (based on the Version 1 survey program) for use with two hand-held operating systems and on desktop PCs.
- Production of a desktop management program to store and handle data from the hand-held scoring programs.
- Production of a Handbook to support the scoring and management programs.
- Revision and updating of the existing Worked Examples and the production of additional Worked Examples.

1.07 A major stipulation made by ODPM was that the core principles of the HHSRS were to remain unchanged. These included:

- the two step approach of first judging the likelihood and then judging the outcomes;
- the formula used to generate the HHSRS ratings; and
- the list of hazards to be covered.

1.08 Other tasks were also suggested by the Warwick team, but not included in this project. These included additional research into the potential cocktail effect, and establishing a process for the development of a library of Worked Examples.

5 *Evaluation of Version 1 of the Housing Health and Safety Rating System – final report* (2003) ODPM, London; *The Application of the Housing Health and Safety Rating System in Houses in Multiple Occupation* (2003) ODPM, London; and *Statistical Evidence to Support the Housing Health and Safety Rating System (Volumes 1, 2 and 3)* (2003) ODPM, London.

- 1.09 This report describes the work involved in the development of Version 2 of the HHSRS. It first reports on the revision of the Guidance; second the revision and production of the Worked Examples, then the development of the software and handbook, and finally discusses the paper scoring form. The report concludes by putting forward some recommendations for future developments.
- 1.10 Although these various aspects of the development are considered separately, each, of necessity, depended and related to the others to ensure that the final results were consistent and complementary.

CHAPTER 2

Tasks in the Development

Guidance

- 2.01 The Guidance provides a brief introduction and background to the HHSRS, the principles underlying the HHSRS, advice on assessing conditions, and how to score hazards. As well as the general information, the Guidance contains profiles of the individual potential housing hazards, including the potential for harm (e.g. how each can affect health and/or safety), a summary of the statistical evidence, and the housing factors which can increase or reduce the threat to health.
- 2.02 Before commencing the revision of the Guidance, all the comments and recommendations from the three associated projects⁶, the projects team's notes of detailed problems, and the queries received by the ODPM through the website and e-mail help-line were collated, reviewed and their implications considered.
- 2.03 Revision of the Guidance fell naturally into two parts – first, the general information and guidance, and then the profiles for the individual hazards. Revision of the general information primarily involved taking account of recommendations previously made⁷. Revision of the profiles took account of the recommendations, and also included up-dating the statistical information based on the Statistical Evidence project⁸, up-dating relevant research findings, researching and up-dating the Ideal, and providing advice on the assessment for each hazard.

The General Information and Guidance

- 2.04 There were several drafts of the general information and guidance. The first was an update of the 2000 Version 1 of the Guidance, taking into account the various comments and recommendations and expanding those areas where clarification seemed necessary.⁹
- 2.05 As it was based on the Version 1 Guidance, this draft used the same terminology and included a detailed description of a suggested survey procedure as well as explaining the Rating System and the assessment procedure. The inclusions of the suggested survey procedure had been included in Version 1 Guidance as an electronic survey program had been released as an integral part of Version 1. The survey procedure took the user through the stages of that program as well as giving guidance on housing surveys generally.

6 *Evaluation of Version 1 of the Housing Health and Safety Rating System – final report* (2003) ODPM, London; *The Application of the Housing Health and Safety Rating System in Houses in Multiple Occupation* (2003) ODPM, London; and *Statistical Evidence to Support the Housing Health and Safety Rating System (Volumes 1, 2 and 3)* (2003) ODPM, London.

7 See *Evaluation of Version 1 of the Housing Health and Safety Rating System – final report* (2003); and *The Application of the Housing Health and Safety Rating System in Houses in Multiple Occupation* (2003).

8 See *Statistical Evidence to Support the Housing Health and Safety Rating System (Volumes 1, 2 and 3)* (2003).

9 See Annex A for the list of comments and recommendations and the action taken.

- 2.06 In addition to those comments and suggestions raised in the Report on Evaluation of Version 1 and the Report on the Application of the HHSRS to HMOs, several other issues were clarified. These were issues that had been noted by the project team in meetings, training sessions, or found in various publications. They included making it clear that the assessment was of the likelihood of an occurrence over the twelve months following the survey, that ‘vulnerability’ was limited to age groups, that disrepair could frequently lead to hazards, and that the HHSRS assessment was only the first factor in the process of deciding whether enforcement action was appropriate or necessary.
- 2.07 This first draft was submitted to ODPM for comment in July 2003. A second draft was prepared taking account of the various comments and suggestions received. This draft still included the suggested survey procedure, but as an Annex. It also included an extended list of examples for the four Classes of Harm. This second draft was prepared by the end of September 2003. By this time, a draft Housing Bill had been published, and this included provisions on enforcement action based on the assessment of conditions using the HHSRS.
- 2.08 In December 2003, the Housing Bill was introduced in Parliament, and to coincide with this, the Government issued a consultation paper on the proposed guidance on the enforcement procedures. To inform the Members of Parliament debating the Housing Bill and as reference material for the consultation process, a further draft of HHSRS Guidance was prepared which incorporated the Hazard Profiles. This was clearly marked as an unfinalised draft, and was made available on the ODPM website.
- 2.09 A finalised draft of the Guidance was prepared, and after a final proof-reading and check, was submitted to ODPM by the end of March 2004. The general explanation, information and advice in this final version covered the background, theory and principles underlying the HHSRS, the terminology used, a general overview of Rating Hazards, advice on assessing conditions, and supplemental advice on assessing conditions in multi-occupied buildings. Annexes provided information on responsibility for hazards, a suggested survey procedure, examples of health outcomes for the Classes of Harm, the Hazard Profiles, and selected references.
- 2.10 As the software developed for Version 2¹⁰ only covered the rating/scoring of hazards (with no provision for recording information on conditions noted during a survey), the suggested survey procedure in the final version of the Guidance was in general terms. The survey procedure Annex also included a suggested paper based Scoring Form¹¹.
- 2.11 The expected shelf-life of the Guidance is uncertain. It was therefore necessary to include reminders to users that they should ensure they keep up-to-date with current research and developments.

10 See paras 2.29 – 2.40

11 On this see paras 2.41 – 2.44.

The Hazard Profiles

2.12 The Profiles of Hazards in the 2000 Version 1 Guidance were given in rank order based on risk – i.e., from those that were most prevalent and resulted in the greatest severity of harm, to the least severe and most infrequently occurring hazards. While this arrangement was logical, the reason was not necessarily immediately apparent or user-friendly. After considering various options, the one chosen for Version 2 was to arrange the Profiles into four groups reflecting the nature of the threat to health. These groups were then sub-divided according to the nature of the hazard.

2.13 The grouping and sub-division of hazards adopted for Version 2 was as follows:

A – Physiological Requirements

Hygrothermal conditions
Pollutants (non microbial)

B – Psychological requirements

Space, security, light and noise

C – Protection against infection

Hygiene, sanitation and water supply

D – Protection against accidents

Falls
Electric shocks, Fires, Burns and scalds
Collisions, cuts and strains

2.14 As well as being consistent with the spirit of the HHSRS, this approach indicated that the Rating System covered all the significant potential threats to health and safety which may be found in housing.

2.15 Although the order was changed, the Hazards for Version 2 are the same as for Version 1, with minor amendment to the hazard titles. The format for each Profile followed a similar pattern to that in Version 1. However, the structure for the Profiles was expanded to include a description and definition of the Hazard, its potential for harm (including the statistical averages), the causes of the hazard, preventative measures and the Ideal (the current optimum to avoid or minimise the Hazard), a check-list of matters which may affect the likelihood and/or outcome, and advice on the assessment of that Hazard.

2.16 A major change from Version 1 was in the statistical information given. First, for Version 1, the base population for the average likelihoods differed for each Hazard. For example, for the Hazard of Damp and Mould Growth etc. the base was *“the population of people living in dwellings that are damp or have defective ventilation or heating”*; while the base for Entry by Intruders was *“the population of people living in dwellings with insecure doors and windows”*. This approach was criticised as confusing¹². So, for Version 2, the national averages were given using as a base the age range of the population most vulnerable to that particular hazard. This age group was specified (although for some Hazards, where no age group is more vulnerable than others, the averages relate to the total population).

¹² See in particular Recommendations Nos. 22, 23 and 24, Annex A.

- 2.17 For the December 2003 draft, detailed information was not available on the base population used in the calculations for some statistical averages, including those where the averages were unchanged from Version 1 during the Statistics project. This information was obtained from ODPM, and, in January 2004, the base recalculated to ensure consistency for all Hazards.
- 2.18 The change of the base for the statistical averages had a major consequence for the average likelihoods given. Any differences in the averages which may have resulted from up-dated and refined statistics used in the Statistics project¹³ would be relatively minor had the base population remained the same for Version 1 and Version 2. However, the change of the base resulted in a dramatic difference in the average likelihoods for several Hazards between those given in the two Versions. The recalculation in January 2004 of the remaining statistics also meant there were some differences between the December 2003 draft and the final Version 2 Guidance.
- 2.19 An additional change from Version 1 was in relation to the type and age of dwellings. For Version 1, only a limited number of averages were given. For Version 2, the statistical averages given were for up to eight different ages and types of dwellings, as well as the averages for 'all dwellings'. However, a further change from the December 2003 draft was to identify those statistical averages where, because of the small number of cases, the confidence level for the different types and ages of dwellings was low. For these, the statistical averages were given for all flats, or in some cases, all dwellings.
- 2.20 Also given in the Version 2 Profiles was the strength of the evidence for the statistical averages including an indication of where there might be over or under estimation.
- 2.21 The published research evidence for each Hazard was reviewed and updated. However, as the expected shelf-life of the Guidance is uncertain, references to current standards were kept to a minimum.

Worked Examples

- 2.22 A separate complementary project carried out after the development of Version 1 was the preparation of Worked Examples to illustrate the assessment of particular Hazards using the HHSRS¹⁴. These were particular well received¹⁵, and the ODPM wished to expand the number of Examples, as well as update the existing Examples.
- 2.23 Based on the Version 1 Examples, the format for the Version 2 Worked Examples was redesigned. Side 1 remained very much the same as the original, but including the Version number and date. References to the Fitness standard on Side 2 were unnecessary and removed leaving more space for information on the justification for the assessment if needed. Also, as the statistical evidence had been refined¹⁶, it was possible on Side 2 to show more accurately the relevant national averages for the likelihood and the outcomes. The amended layout and format for the Worked Examples, though giving more information, was designed to appear less cluttered, particularly on Side 2 (see Figure 1).

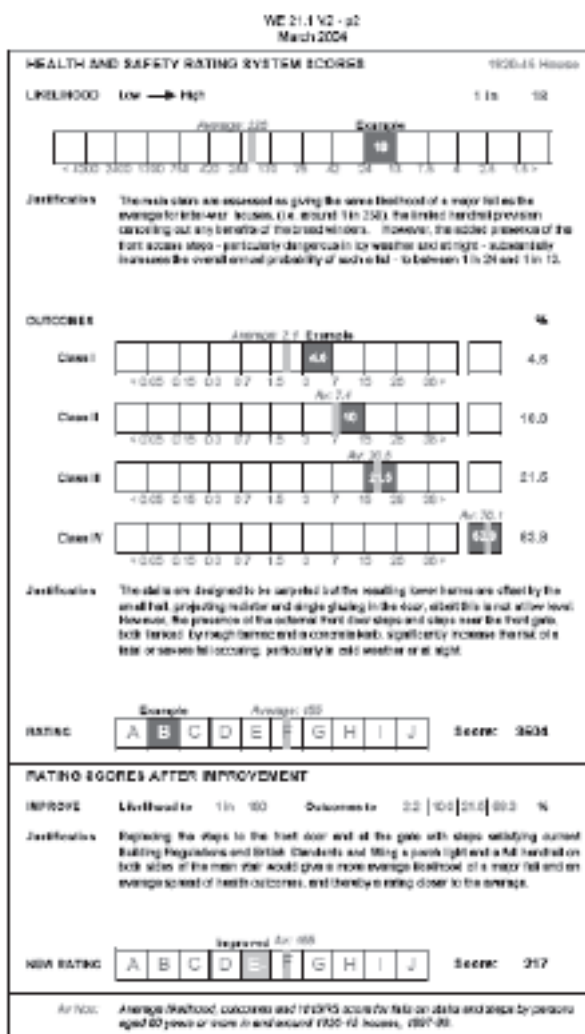
13 See *Statistical Evidence to Support the Housing Health and Safety Rating System (Volumes 1, 2 and 3)* (2003) ODPM, London.

14 *Housing Health and Safety Rating System: Worked Examples* (2001) DETR, London.

15 See for example Recommendations Nos. 10, 15 and 114, Annex A.

16 By the Statistics project – see *Statistical Evidence to Support the Housing Health and Safety Rating System (Volumes 1, 2 and 3)* (2003) ODPM, London.

Figure 1 – Side 2, Typical Version 2 Worked Example



2.24 Each Worked Example shows, on Side 2, the average likelihood and average outcomes for the relevant age group for the particular Hazard illustrated. After 48 of the original Worked Examples were put into the new layout and format, the revised and up-dated Version 2 averages were entered. The examples were then scored, reviewed, and the Worked Examples finalised.

2.25 One change to the basic HHSRS principles proposed to ODPM by the project team was a minor amendment to the Likelihood Scale. This was to insert a range of 1 in 2 and, to retain the same number of cells (16), to delete the lowest cell leaving 1 in 5600 as the least likelihood in the Scale. This change was accepted by ODPM and made throughout the HHSRS components.

2.26 The procedure for preparing the Worked Examples followed that adopted for the original project. One team member prepared the revised Worked Example and reviewed the score. This was then circulated to the other team members. It was checked and proof-read, and any ambiguity or disagreement was highlighted and reasons given. As these were revised Version 1 Examples, there was relatively little discussion necessary between the team members to reach agreement and finalise them.

- 2.27 Eighteen new Worked Examples were prepared, again following a similar procedure. As these were new Examples, there was more debate over each, and, in those cases where there was disagreement, the Example was discussed until consensus was reached and the Example could be finalised. However, in the event there was no wide variation in the scores and any discussions tended to centre around the description of the Hazard and the justification for the scoring, rather than the scores themselves.
- 2.28 The introduction and explanation of the Worked Examples were revised, and, after a final proof-reading and check, the Worked Examples were submitted to the ODPM by the end of March 2004.

Software

- 2.29 For Version 1 an electronic survey program for Palm OS hand-held computers was developed¹⁷. There was considerable criticism of this program, particularly the survey element and of the lack of any Desktop PC data handling program¹⁸.
- 2.30 In the light of the evaluation of Version 1, ODPM decided that, for Version 2, only the scoring element of the program would be developed. This scoring element was to be developed for both Palm OS and Microsoft PocketPC¹⁹ hand-held computers and for Desktop PCs. In addition, the ODPM required a Desktop PC data handling program to be developed which would handle and display the results of rating hazards at a dwelling in a user-friendly form.
- 2.31 The structure of the Scoring program was to include the address of the dwelling and information about the type of dwelling, the surveyor, and individual screens for scoring each Hazard.
- 2.32 Two major improvements were planned for the Scoring element of the program. First, the layout of, and information shown on, the scoring screens would mimic as close as possible that contained in Side 2 of the Worked Examples (see Figure 2). This would give consistency across the HHSRS components.

17 See Chapter 4, *Housing Health and Safety Rating System: Report on Development* (2000) DETR, London.

18 See Recommendations 45-94, Annex A.

19 PocketPC is the replacement name for Windows CE.

Figure 2 – Typical Scoring Screen from HHSRS Scoring Program



- 2.33 Second, a separate scoring screen would be available for each age and type of dwelling for which averages were given. These screens would be linked to the dwelling data entered at the start of the program, so that, for example, if the dwelling was a 1920-1945 house, only the scoring screens showing the appropriate averages for that age and type of dwelling would be available for scoring.
- 2.34 Since 2000, when Version 1 was released, there had been considerable developments in hand-held computers and in the operating systems used. While the structure of the scoring element of the program was to remain very similar, the new operating systems meant that the best option was to build the programs from scratch using new development tools.
- 2.35 The PocketPC version was built first. As with the original survey program, the aim was to build a satisfactory structure initially and then to finalise the content. Once one program had been built satisfactorily, the other programs – the Palm OS and the Desktop PC program – could be built to mimic it.

- 2.36 Once the PocketPC program was virtually finalised, it was tested at a workshop with four end-users who already had experience of using Version1 of the HHSRS. The users were each given hand-held computers with the new Scoring program loaded. They were asked to try it out scoring several dwellings from information they provided. To get views on the ease of operation, no instructions on the use of the program were given, other than how to switch on and start the program. They were asked to note down any problems they encountered and comments or suggestions.
- 2.37 Only very minor comments and suggestions were made by those attending the workshop, and these were easily taken into account for the final build. The final build was thoroughly checked to ensure that all the averages shown in the scoring screens were consistent – i.e. they were the same as the averages shown in the Worked Examples and in the Guidance.
- 2.38 Before building the Palm OS and Desktop scoring programs, a Desktop Data Handling program was built. The program was designed to allow instructions (addresses) to be downloaded onto handheld computers, for completed scoring reports to be uploaded on to the Desktop PC, and the reports to be reviewed and printed in a reader-friendly format. The Data Handling program was also able to name and identify individual hand-held computers.
- 2.39 Once the Data Handling program was finalised, the Scoring program for Palm OS handhelds was built. These two programs mimicked the form and structure of the PocketPC program, but again, each had to be thoroughly checked for accuracy. Once finalised, all the programs were put onto a CD.
- 2.40 A handbook was prepared giving instructions on loading the programs and on getting started, entering and saving data, and using the Data Handling program.

Paper Scoring Form

- 2.41 As well as testing the survey program, the workshop was used to trial proposals for a paper scoring form.
- 2.42 There is no standardised form to record dwelling inspection details, and it seemed neither necessary nor useful to attempt to design a standard HHSRS survey form. Also, in the light of the poor reception of the survey element of the Version 1 Survey program, it is unlikely that any such form would be well received. However, for those preferring to use a paper system rather than an electronic method of recording assessments, a HHSRS Scoring Form could be used in association with any existing form or a note-book.
- 2.43 Various designs and layouts of a Scoring Form were prepared and discussed within the team. The aim was to mimic, so far as possible, the layout and structure of the Worked Examples and the Survey Program scoring screens. It also seemed useful to include space to record notes to support the judgments made. Versions of the form were prepared for trial at the workshop, and those attending were asked to try them and give their preference.

CHAPTER 3

Recommendations

3.01 Several recommendations for future development have been made in the three post Version 1 reports²⁰ – see Annex A, Recommendations 98 – 131. The additional recommendations summarised here, although not strictly part of the project, are made for the immediate and long term future of the HHSRS.

General

3.02 The HHSRS was originally proposed and developed as a non-specific means of assessing housing conditions. Its development for ODPM has been geared towards enforcement purposes to be associated with housing legislation. We believe that there is considerable potential for the principles of the HHSRS to be developed for much wider use. For example, it could be adopted in the assessment of housing for grant-aided works, the assessment of the immediate housing environment, and the assessment of proposed new buildings, as well as in promoting health and safety awareness for occupants.

3.03 The development of the Rating System has included reviewing and analysing statistical evidence to provide information and support for those applying it. The review of reported research shows that there are several areas where additional research, as well as the updating of existing statistics, could usefully strengthen the HHSRS and inform the work on the relationship between housing and health generally.

3.04 One issue which is raised on a recurring basis is whether the Hazard Scores at a dwelling can be totalled to give a single score. Superficial investigation of this during the development of Version 1 indicated that it was not possible to provide a simple and practical way of generating a meaningful single score. Adding probabilities (likelihoods) is a complex issue in itself, and there are additional complications involved in adding Hazard Scores. However, the issue continues to be raised and it would be useful to explore possible practical methods of totalling individual hazard scores to confirm or not whether this would give meaningful results.

3.05 A similar and related issue is the potential cocktail effect of Hazards, that is whether a certain combination of hazards at a dwelling would increase the overall threat. For example, are the threats from Fall hazards increased in a dwelling which also suffers from the Hazard of Excess Cold? Although this issue has not been widely raised, it appears likely and should be investigated further.

²⁰ *Evaluation of Version 1 of the Housing Health and Safety Rating System – final report* (2003); *The Application of the Housing Health and Safety Rating System in Houses in Multiple Occupation* (2003); and *Statistical Evidence to Support the Housing Health and Safety Rating System (Volumes 1, 2 and 3)* (2003).

3.06 Worked Examples have been very well received²¹. Although 66 have been prepared, more Examples would be useful, particularly ones demonstrating the national averages for each Hazard and ones illustrating borderline cases. One option would be to invite local authorities and others to submit Examples in a standard format to be scored by an approved panel. This would produce a much wider range of Examples and would involve end-users in the process. This approach would be on-going, and would lead to a comprehensive library of Worked Examples.

Public Release of Version 2

3.07 There continues to be much debate about the HHSRS, particularly since it became clear that the Housing Bill introducing the associated enforcement regime was before Parliament. As well as the original Version 1 Guidance and survey program (which were supplied to every local authority) there are currently²² at least seven HHSRS publications available on the ODPM website, including Version 1 Worked Examples and the December 2003 draft of the Version 2 Guidance. The presence of both Version 1 and Version 2 documents makes for confusion and misunderstandings.

3.08 We believe and recommend that the finalised Version 2 Guidance, the Version 2 Worked Examples and the Scoring and Data Handling programs should be made available as soon as possible, regardless of the progress of the Housing Bill in Parliament. As well as enabling authorities to familiarise themselves with Version 2, this would help those authorities who have already used the HHSRS as a key element within their private sector housing policies required by the Regulatory Reform Order, and for deciding priorities for assistance. It would also provide an opportunity for individual local authorities to resolve any local difficulties associated with their IT systems.

3.09 We also believe and recommend that it would be useful for this Project Report and the Report on the Development of Version 1²³ to be similarly made available. The latter Report helps to explain what was considered in the original development and why certain options were discarded and others chosen; the former helps to explain the changes between Version 1 and 2.

3.10 With these documents available, any debate should be centred around Version 2, rather than a confusion between the two Versions. (Although Version 2 has been developed as a means of assessment associated with a proposed enforcement regime, the HHSRS itself is not referred to in the Housing Bill, and therefore its release before the completion of the Parliament procedure should not be seen as prejudging Parliament.)

3.11 As well as releasing all of Version 2 components generally, the HHSRS Scoring program and the source code should be released to software developers servicing local authorities. This would allow developers to incorporate the program(s) into their systems, so that reports from the data handling program can be imported into existing programs. It would also allow developers to build survey programs if they considered this to be appropriate.

21 See for example Recommendations Nos. 10, 15 and 114, Annex A.

22 That is at April 2004.

23 *Housing Health and Safety Rating System: Report on Development* (2000), DETR, London.

- 3.12 So far as the hard copy of the guidance is concerned, it would assist in its day-to-day use and for quick reference, if each of the Hazard Profiles (in Annex D of the Guidance Version 2) could be easily identified by the reader. This could be done by 'thumb-marking' each Profile, by using different coloured paper for each Profile, and/or by different headers and footers for each Profile.
- 3.13 For Version 1 of the HHSRS, the Worked Examples were made available on the ODPM website and on CD. The Version 1 HHSRS Survey program was released on a diskette at the same time as the Guidance Version 1. For Version 2 it is recommended that all components are made available on a single CD and on a dedicated HHSRS website. As well as the Guidance Version 2, the Worked Examples, the HHSRS Scoring Program, and the Paper Scoring Form, this site and the CD could include the HHSRS Version 2 Guidance for Landlords.
- 3.14 Although a straight-forward and non-technical Guidance for Landlords has been prepared, we also recommend that leaflets of two or three sides should be published. These could provide a very simple outline of the basic principles of the HHSRS and where to obtain further information.

Training

- 3.15 A key concern for local authorities is the training of their staff in the use of the HHSRS to assess housing conditions. This is particularly so in relation to enforcement, when decisions made may be subject to challenge. This is an issue which has been raised by the Chartered Institute of Environmental Health. Also the Committee on the Office of the Deputy Prime Minister during its pre-legislative scrutiny of the draft Housing Bill, stressed the importance of training for local authority staff, and ODPM has recognised that funding for such training should be made available.
- 3.16 It is estimated that around 2,500 – 3,000 local authority staff will need training. To meet this need, a training model should be developed which would deliver effective training within a limited timescale and which meets normal value for money criteria. In addition to local authority staff training in the use of the HHSRS will be necessary for lecturers at colleges providing degrees in environmental health and commercial training provider.
- 3.17 As the HHSRS is intended to be the national prescribed method for assessing housing conditions, it is suggested that ODPM should decide, as a matter of urgency, the content and format of such training. This approach would help promote consistency of application.
- 3.18 We also suggest that ODPM should consider the most appropriate training strategy. This could be by providing training for potential trainers, or providing a system to accredit trainers and courses.

ANNEX

Revisions Suggested for HHSRS Version 2

The following schedule gives in the first column, a summary drawn-up by the ODPM of the recommendations and suggestions made by:

- *Evaluation of Version 1 of the Housing Health and Safety Rating System – final report* (2003);
- *The Application of the Housing Health and Safety Rating System in Houses in Multiple Occupation* (2003); and
- *Statistical Evidence to Support the Housing Health and Safety Rating System (Volumes 1, 2 and 3)* (2003).

The second column gives ODPM's response to the recommendations and suggestions, the third the project team's comments, and the fourth column gives details of the action taken.

Recommendations, ODPM Responses, Project Team Comments and Action Taken

Guidance Version 2				
	Recommendations	ODPM Response	Project Team Comment	Action Taken
1	Problem – Difficulty of quantifying risks derived from a number of different hazards in different locations. Recommendation – more guidance needed. (HMO 1.2)	We will improve guidance and provide Worked Examples to show how to deal with this issue.	Recommendation adopted.	See para 3.16, Box 4 p16, para 3.22, Box 6 p18, and para 4.08. (Version 2) See also Worked Examples 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 3.1, 4.1, 5.1, 7.1, 8.1, 8.2, 8.3, 10.1, 12.1, 13.2, 15.1, 15.2, 20.1, 20.2, 20.3, 21.1, 22.1, 22.2, 22.3, 23.1, 24.1, 24.2, 24.3, 25.2, 26.1, 26.2, and 29.2.
2	Guidance should make clear how they should combine the effects of faults in various locations into likelihood. It should be made clear whether they are looking at the combined likelihood or the worst case only. (HMO 1.3.2)	We will improve guidance and provide Worked Examples to show how to deal with this issue.	As 1.	As 1.
3	Hazards that occur at more than one point in a House: We find the Worked Examples not entirely clear on this point – the guidance should show clearly how to aggregate them, or they should be recorded separately. Our preference would be to record hazards separately. (Eval 7.47)	We will improve guidance and provide Worked Examples to show how to deal with this issue.	As 1. Note – Preference for recording hazards in separate locations separately is not appropriate as it goes against the principle of the HHSRS of assessing the dwelling as a whole and scoring a hazard for the whole dwelling.	As 1.
4	Surveyors do not have the information needed (the dose – response relationship) to assign a specific probability to a hazard. (Eval 4.26)	A range of information is available to aid surveyors. There is a clear need to have improved guidance and a more detailed training pack to support surveyors and explain how to apply the information that is available.	There never has been any requirement that a dose – response relationship is relevant to the HHSRS assessment. The HHSRS is not a predictive system but is based on assessing potential threats arising from deficiencies (see para 3.14). There is sufficient evidence, summarised in the Guidance, to assess risk. Specific probability (and outcomes) are not required – only a range. This is now explained.	See Profiles in Annex D. See also Note following para 1.4, and 2nd para page 45. See paras 2.24-2.27, para 3.15, Box 3 page 15, para 3.20, Box 5 page 17, Figure 3 page 24, Figure 4 page 25, and Scoring programs.

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5	<p>The precision of the outputs of the system appears somewhat arbitrary and spurious to many users, who are aware that in decision making in the field, they are making a professional judgement about how a particular situation might differ from the average, as for most hazards, there is no data which would allow one to state the actual risk of an occurrence associated with the particular set of features which they observe in the field. (Eval 7.8)</p>	<p>We note that the system can be seen as 'arbitrary' and that we need to address this perception. We propose revising the guidance to emphasis more the Hazard Bands and the ranges of likelihood and harm outcome and less emphasis on the specific values selected.</p>	<p>Specific probability (and outcomes) are not required – the figures used only represent a range. This is now explained.</p>	<p>See paras 3.25-3.27, para 4.19, and para 4.28. (See also Enforcement Guidance and legislation.)</p>
6	<p>The system demands that users make a series of judgements about the seriousness of a wide range of hazards, and their potential outcomes, taking into account other secondary hazards. The principal difficulty identified by users to date is that they feel they lack the information they would need to assign the probability and the spread of harms to the very specific numeric values which the system demands they choose. (Eval 7.5)</p>	<p>A range of information is available to aid surveyors. There is a clear need to have improved guidance and a more detailed training pack to support surveyors and explain how to apply the information that is available.</p>	<p>As 5. HHSRS uses numbers to represent the surveyor's judgments.</p>	<p>As 5. See para 3.04.</p>
7	<p>We believe that users are right to believe that they lack the evidence or guidance to allow them to make highly specific numeric assessments of risk – indeed paragraph 7.17 of the HHSRS V1 Guidance confirms that there is limited evidence linking individual features of buildings to injuries or health outcomes. We believe that the concerns of potential users about legal challenge on the numeric precision of the outputs of the system have some foundation. (Eval 7.6)</p>	<p>A range of information is available to aid surveyors. There is a clear need to have improved guidance and a more detailed training pack to support surveyors and explain how to apply the information that is available.</p>	<p>As 5. Detailed inspection should provide sufficient evidence to support surveyor's judgment. Rating is only one factor to be taken into account in determining action.</p>	<p>As 5. See para 3.27.</p>

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8	Although an enforcement situation where the officer struggles to 'prove' a 1,000+ score is unlikely to fail if enforcement legislation incorporates discretionary powers, local authorities would undoubtedly feel more comfortable with a system which allowed them to say that the probability of an occurrence was in a specified range, rather than a single number. We would also wish to see the range of options to be considered in relation to the probability and spread of harms reduced in number.	We propose revising the guidance to emphasise more the Hazard Bands and the ranges of likelihood and harm outcome and emphasise less the specific values selected.	As 5.	As 5.
9	More intensive training using a wider range of worked examples would enable more accurate selection of a scale point for each hazard. (Eval 4.26)	We propose to improve the guidance and worked examples to improve benchmarking and calibration.	More Worked Examples have been produced. A training strategy has been recommended.	All Version 1 Worked Examples have been revised and updated. 18 new Worked Examples produced.
10	The HHSRS V1 Guidance is markedly less user-friendly than the later-issued Worked Examples, but it does contain much useful, and indeed essential material – it sets out the underlying basis for the system. We suggest that the illustrated material in the Worked Examples are essential in assisting new users to grasp the principles of the system, but there is material in the Guidance which is needed to supplement the Worked Examples. In our view the two documents should be integrated. A revised Guidance Manual for users should be based on the successful format and layout of the Worked Examples, but should incorporate for each hazard the material on the ideal, relevant features and matters to be taken into account. (Eval 7.17)	Version 2 research will cover consideration of structure of guidance and how best to package it to include testing of its 'user friendliness'. Worked examples will be updated or added to where necessary.	Options discussed.	To be decided by ODPM.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
11	The HHSRS V1 guidance manual requires clarifying to remove the ambiguity of categorisation of faults into hazards. It may be that there are too many overlapping categories. (Eval 4.26)	We will revise HHSRS guidance to clarify this point.	Recommendation adopted, although it is not accepted that there are too many overlapping categories.	See paras 4.06 and 4.07
12	In presentational terms, it would be preferable if the scoring methodology were to be simplified and rationalised so that it no longer demands that EHOs quantify risk with a degree of precision which cannot be justified by the evidence, and the use of a range, rather than a single score would meet that objective. (Eval 7.10)	We acknowledge this view. However, such an approach is not a rating system and would therefore not be consistent with government policy and earlier consultation. We propose revising the guidance to emphasise more the Hazard Bands and the ranges of likelihood and harm outcome and emphasise less on the specific values selected.	Scale points replaced with ranges on the likelihood and output scales. As 5 above. See also options considered during development of V1 (see paras 5.61-5.74 of Report on Development (2000)).	As 5.
13	Alternatively, users would find acceptable a system which used a five point non numeric scale similar to those used in many house condition surveys. (Eval 7.9)	We acknowledge this view. However the consequence of this action is that a single move up a band in the likelihood scale for example will result in a Hazard Band jump to 2 or 3 bands.	This option was considered and rejected during the development of V1 (see paras 5.61-5.74 of Report on Development (2000)).	No action.
14	It may be desirable to reduce the number of scale points to reduce the potential for variance. (Eval 4.26)	We acknowledge this view. However the consequence of this action is that a single move up a band in the likelihood scale for example will result in a Hazard Band jump to 2 or 3 bands.	As 12 and 13.	No action.

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15	<p>A series of worked examples be related to key points on the scale and these should include several examples for the average hazard and the first Band C hazard. Worked examples have been one of the successes in explaining the system. While some worked examples could be produced from the case study material these will be insufficient for the numbers envisaged. The production of the worked examples should be a separate commission. (HMO 1.3.2)</p>	<p>We propose to improve the guidance and worked examples to improve benchmarking and calibration.</p>	<p>More Worked Examples have been produced.</p>	<p>All Version 1 Worked Examples have been revised and updated. 18 new Worked Examples produced.</p>
16	<p>In the absence of specified physical standards, worked examples should be provided to cover items of concern. (HMO 1.3.2)</p>	<p>We propose to improve the guidance and worked examples to improve benchmarking and calibration. We do not propose the retention of specified physical standards.</p>	<p>As 15.</p>	<p>As 15.</p>
17	<p>Interviewees were concerned that amenity provision in HMOs would be more difficult to justify as only likelihood of 1 in 1 resulted in Band A-C hazards for those hazards dealing with basic amenities. This is an issue that is potentially easily settled by provision of worked examples which justify such likelihood. It may be that these would have to depend on issues of stress and mental health rather than physical harms as it is very unlikely that major physical harms would arise from inadequate ratios of bathrooms etc. Recommendation – Worked examples should be provided to cover hazards exacerbated by sharing by multiple households and these should include Fire, Hot surfaces, Crowding and space, Personal Hygiene, Sanitation. (HMO 6.2.4)</p>	<p>We propose to improve the guidance and worked examples to improve benchmarking and calibration. We do not propose the retention of specified physical standards.</p>	<p>As 15.</p>	<p>As 15. Of the 65 Worked Examples, 4 deal with Fire, 2 of which are in multi-occupied buildings; 3 deal with Hot surfaces, 1 of which is in multi-occupied building; 2 deal with Crowding and Space; and 3 deal with Personal Hygiene, 2 of which are in multi-occupied buildings.</p>

	Recommendations	ODPM Response	Project Team Comment	Action Taken
18	HHSRS seen as more time-consuming and puts greater strain on resources than current fitness standard. Recommendation – Guidance to clarify if full assessment required in all cases to determine action. (HMO 1.2)	We will revise HHSRS guidance to clarify this point.	Recommendation adopted.	See Chapter 5 and Annex B paras B11-B20.
19	Some of the statistics felt to be weak. Recommendation – Comprehensive reference work on the statistics would increase acceptance of system (HMO 1.2)	We will publish detailed statistical evidence base based on research currently being undertaken by University of Warwick.	Recommendation adopted, and Statistics research published.	Also, Guidance contains main references – see Annex E.
20	Access to Up to Date Source Data for Risk Statistics: Statistical data for the various hazards will need to be updated from time to time. Authorities who are preparing their enforcement cases will want to have easy access to the most up to date information, which makes clear the date, source and method of capture of the data. (Eval 7.43)	We will publish detailed statistical evidence base based on research currently being undertaken by University of Warwick.	As 19.	As 19.
21	A comprehensive reference work on the statistics underpinning the system should be produced. (HMO 1.3.3)	We will publish detailed statistical evidence base based on research currently being undertaken by University of Warwick.	As 19.	As 19.
22	Statistics based on sub-groups should be normalised for the whole population. (HMO 1.3.3)	The revised statistics for Version 2 will be normalised for the dwelling population.	Recommendation adopted. For all hazards it is the national averages for a specified age group of the population (if any) living in all dwellings of a stated age group.	See 1st para page 46, and the ‘Potential for Harm’ section for each Profile in Annex D.
23	Populations on which averages based vary and are not explicit. Recommendation – Normalise statistics (HMO 1.2)	The revised statistics for Version 2 will be normalised for the dwelling population.	As 22.	As 22.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
24	The main issue raised was the need for separate HMO statistics which have been provided. Some interviewees were critical of the small sample that was used in the research which is the basis of the fire safety statistics. A further criticism was that some of the statistics were not applicable to HMOs as they were drawn from other dwelling types although the only case quoted was the hazard for asbestos. Recommendation – Further research be considered with regard to fire safety in HMOs. (HMO 6.2.5)	We will publish detailed statistical evidence base based on research currently being undertaken by University of Warwick. This will include evidence where available for HMOs	As 22. The Statistics Research project produced, where sample size permitted, averages for 4 age groups of houses and 4 of flats/HMOs.	See 3rd para page 46, and the ‘Potential for Harm’ section for each Profile in Annex D.
25	There was particular concern from some interviewees on how they should assess likelihood and spreads for fire safety in HMOs. Recommendation – Worked examples should make as explicit as possible how likelihood and spreads are built up from consideration of the faults present. (HMO 6.2.2)	We will review and provide additional worked examples where necessary.	Recommendation adopted.	See Annex B paras B11-B20, and Annex D paras 24.21, 24.30 and 24.36-24.38. Of the 65 Worked Examples, 4 deal with Fire, 2 of which are in multi-occupied buildings.
26	Interviewees felt there was little or no guidance on how to take account of occupancy in HMOs, there is the added dimension of multiple households. Recommendation – Worked examples should be produced to support the process described in the previous section for HMOs. (HMO 6.2.1)	We will revise HHSRS guidance to clarify this point.	Guidance clarified in relation to multi-occupied buildings generally, and fire, crowding and sharing of amenities.	See Chapter 5, Annex B paras B10 and B18, and Annex D Profiles for Crowding and Space, Noise, Domestic Hygiene, Food Safety, Personal Hygiene, and Fire. See also Worked Examples 17.1, 17.2, 24.1, and 24.2.
27	Defining vulnerable groups by age ignores groupings based on health. (HMO 1.1)	We will revise HHSRS guidance to clarify this point.	Not accepted. One of the main principles of HHSRS was that vulnerability would be by age alone. To make this clear the term ‘vulnerable age group’ has been adopted.	See paras 2.30 and 2.31.

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28	<p>Vulnerable Groups: There are confusing references in the Guidance and Consultation Document about vulnerable groups – and in particular the importance of visitors. It is inconsistent to argue that the possibility of visitors should be taken into account, but that enforcement may be deferred if no member of the Vulnerable Group is resident. A number of potential users of the system appear to have become confused by the suggestion that enforcement might be deferred if no member of the vulnerable group is resident in the house, and have drifted towards rating houses in relation to the present occupants. (Eval 7.49)</p>	<p>We will revise HHSRS guidance to clarify this point.</p>	<p>As 27. Enforcement issues not relevant to HHSRS Guidance.</p>	<p>As 27.</p>
29	<p>Worked examples should be produced to illustrate this process and should be based on dwellings occupied by non-aged based vulnerable groups in multiple occupation e.g. hostel for alcoholics. (HMO 7.1)</p>	<p>It would be practically impossible to providing additional data for such a minority group. However, we will revise the HHSRS guidance to provide information on what action to take in this type of situation.</p>	<p>As 27.</p>	<p>As 27.</p>

	Recommendations	ODPM Response	Project Team Comment	Action Taken
30	<p>The guidance should be amended to make explicit the process by which non-aged based vulnerable groups and occupancy by more than one household can be considered. This may be best achieved by amending Chart 5 P31 and sections 7.09-7.17 (To Score a Hazard and Spread of Outcomes) and inserting an additional flowchart to describe the scoring process. An alternative would be to leave the existing Guidance unchanged but provide supplementary guidance on HMOs. This would mean that the issue of non-age based vulnerable groups would not be dealt with. A third alternative is therefore to amend sections 7.09-7.17 to deal with vulnerable groups but leave the issue of occupancy to supplementary guidance. (HMO 7.1)</p>	<p>We will revise HHSRS guidance to clarify this point.</p>	<p>As 27. See also 26. Those using HHSRS should use their informed professional judgment to assess implications of conditions for those vulnerable other than by age.</p>	<p>As 26 and 27</p>
31	<p>The additional worked examples should be produced to illustrate:</p> <ul style="list-style-type: none"> – how hazards can be scored when they arise from multiple faults scattered throughout the HMOs; – how hazards which are particularly associated with HMOs should be scored in a variety of different types and sizes of HMO; and – how hazards which are exacerbated by buildings being shared by multiple households should be scored (HMO 7.2). 	<p>We will review and provide additional worked examples where necessary.</p>	<p>Clarification given – it is the dwelling which is assessed, not the building (house) containing the dwelling. Effect of sharing amenities etc clarified.</p>	<p>See 1 and 26.</p>

	Recommendations	ODPM Response	Project Team Comment	Action Taken
32	Need for more guidance on what is meant by 'average' hazard. Recommendation – training. (HMO 1.1)	The revised statistics for Version 2 will be normalised for the dwelling population and additional worked examples would be considered.	Recommendation adopted. Training strategy proposed.	See para 4.14 and Note page 23, and Profiles in Annex D.
33	A separate guidance note should be produced covering the application of HHSRS to HMOs. This will draw on the original guidance, plus the amendments, clarifications and additions identified during this research. The guidance should be illustrated with examples, and the most up-to-date statistics. The HMO guidance should suggest how the HHSRS might be used to inform an authority's HMO strategy. (HMO 7.2)	HMO guidance will be provided as part of the Version 2 guidance. The contractors will need to decide on whether the HMO guidance is separate from Version 2 or integrated and present argument for this. Enforcement guidance is seen as the best place to tackle guidance on and LAs strategy for HMOs.	Recommendation adopted. Options for publication / presentation proposed.	See Chapter 5 and Annex B paras B11-B20. Where relevant guidance is given in the Profiles in Annex D (see for example, para 2.22).
34	Guidance should be written on survey procedure advising that hostels and purpose built HMOs with shared amenities are best dealt with by grouping units into clusters around shared amenities. While this results in several records per HMO it is a practical method of making large HMOs more manageable to survey. (HMO 6.2.3)	We agree with this in principle but a detailed survey is needed for enforcement purposes. Clustering and sampling will be covered in the revised in guidance as will the development of a paper version.	Recommendation adopted. This approach not accepted as it is against the HHSRS principle of assessing a dwelling or dwelling unit. However, re-surveying/assessing shared rooms/areas is dealt with.	See Chapter 5 and Annex B paras B11-B20. See para 5.07 and Note in Annex B page 39.
35	There is no guide to HMO survey procedure and it is unclear how users should enter information on an HMO. (HMO 6.2.3)	We will revise HHSRS and HMO/HHSRS specific guidance to clarify this point.	Recommendation adopted. (In part a software issue.)	See Chapter 5 and Annex B paras B11-B20
36	Users were not clear on whether to enter one record per accommodation unit. Those that adopted this procedure became confused about where to enter information relating to shared facilities. (HMO 6.2.3)	We will revise HHSRS and HMO/HHSRS specific guidance to clarify this point.	As 35.	As 35.

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37	Such a system could work for houses divided into bedsits, shared houses, houses let in lodgings. For large purpose built HMOs with shared facilities and hostels it might be more manageable to group units which share common facilities into single records. (HMO 6.2.3)	We will revise HHSRS and HMO/HHSRS specific guidance to clarify this point.	As 35.	As 35.
38	Purpose Built Flats: There would appear to be the need for a section of the Guidance to deal with the surveying of purpose built flats and common areas of flats, particularly with regard to fire safety, which has to be looked at for the building as a whole. This could be dealt with in HMO guidance, provided that it is made clear that purpose built flats are included in that guidance. (Eval 7.39)	We will revise HHSRS and HMO/HHSRS specific guidance to clarify this point.	As 35.	As 35.
39	In self contained converted flats it seems logical to score each flat as a record. It would then be necessary to use one of the records to store information on the shared parts and the external survey. (HMO 6.2.3)	We will revise HHSRS and HMO/HHSRS specific guidance to clarify this point.	As 35.	As 35
40	Instrumental Readings: The Guidance should give a clearer indication of the role of instrumental readings for those hazards where this is appropriate. (Eval 7.48)	We will revise HHSRS guidance to clarify this point.	This is only relevant to Radon. For all other hazards, the need for, and use of, instrumental readings as supporting evidence is a matter for professional judgment.	See Annex D, Table page 78.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
41	A worked example should be provided to cover the use of asbestos insulation boarding in HMOs. It should consider the greater risk of disturbance brought about by heavy wear and tear associated with HMOs as well as potential for damage arising from aberrant behaviour. (HMO 6.2.5)	We will review and provide additional worked examples where necessary.	Additional Worked Examples have been produced. This suggestion was considered.	See Worked Example 4.2.
42	Excessive Cold: Some case study authorities felt that landlords needed to be given greater clarity about what heating provision was needed or about minimum SAP ratings – the phrase <i>'means of economically heating the whole of the dwelling'</i> in the Guidance was felt to be insufficiently clear. The subsequent description of the type of heating system required in para 1.17 of the Guidance appeared to suggest that some form of central heating system was required, but without explicitly stating so. (Eval 7.37)	We will revise HHSRS guidance to clarify this point.	Clarification given. However, need for additional expert advice is a matter for professional judgment.	See Annex D, paras 2.25 and 2.26.
43	A number of authorities pointed out situations where worked examples were thought to need improvement/addition, for example in relation to structural stability, asbestos, contaminated water etc. One authority pointed out that some of the examples – for example in relation to refuse storage and electrical wiring – are very extreme, and they believed the answer for the overcrowding example to be wrong. (Eval 7.40)	We will review and provide additional worked examples where necessary.	Additional Worked Examples have been produced and V1 Worked Examples revised and updated. (See Project Report for explanation of how Examples were scored.)	Additional Worked Examples produced on Asbestos, Water Supply, Electrical, Refuse, and Structural Collapse.

Recommendations	ODPM Response	Project Team Comment	Action Taken
44 Some of the statistics were found to be very surprising – for example, the fact that carbon monoxide had a 0% probability of a Class 1 outcome, when ergonomics had a 0.1 % risk of a Class 1 outcome. These figures may be a result of the nature of the statistical sources used, but they are difficult to reconcile with the average person's perception of the nature of the risk of carbon monoxide poisoning. (Eval 7.41)	We will revise HHSRS guidance to clarify this point.	The examples quoted occurred because the base population varied for each hazard. The base population is now the same for every hazard.	For all hazards in V2 it is the national averages for a specified age group of the population (if any) living in all dwellings of a stated age group. (See also Annex D para 6-1.04.)
Program, Hardware, Format and Paper based Version			
45 Because users quickly became discouraged by the difficulties with the handheld computers and the absence of a usable output, the system has not in fact had substantial testing in use. However, those who have used it have drawn our attention to a number of minor errors and omissions – generally omissions of a category in the pull down menus. These will be reported separately to the Office. (Eval 7.34)	We will improve guidance and provide Worked Examples to show how to deal with this issue.	Survey element of program eliminated. Issue no longer arises.	Data handling program developed and revised and much reduced scoring programs have been developed.
46 The guidance be amended to make clearer that the core information that needs to be collected is for the user to decide and not all fields are compulsory. (HMO 1.3)	We will revise HHSRS guidance to clarify this point.	Handbook produced and programs totally revised.	Handbook advises what very limited information required.
47 An improvement in the software installation procedure and the quality of the accompanying documentation would also give significant benefits. (Eval 5.102)	We will consider the need for this type of guidance as part of Version 2.	Recommendation adopted.	Installation, upload and download and data handling programs developed. Handbook produced.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
48	Users were discouraged and demotivated by the way in which the system was released to users. The Guidance and software were released together, but the Guidance did not offer an adequate introduction to the software, which was, in effect, released without an instruction manual or user guide. If continued use is to be made of the software it will need a manual, which deals with installation, uploading and presentation. The installation of the software could easily be automated to a much higher degree. (Eval 7.16)	We will consider the need for this type of guidance as part of Version 2.	As 47.	As 47.
49	A comprehensive program manual should be provided covering installation and use. (HMO 1.3)	We will consider the need for this type of guidance as part of Version 2.	As 47.	As 47.
50	In many authorities, time which was needed to secure understanding of the system as a whole has been taken up with trying to master the use of the handheld computer, with difficulties exacerbated by the lack of computer program guidance manual, and in many cases, an unsuitable machine. If time and money are at a premium, it is more important for users to devote it to mastering the principles of system rather than the handheld. (Eval 7.21)	In hindsight we agree that this could have been handled more effectively. As part of Version 2 there will be an improved dissemination and marketing strategy focusing on HHSRS principles and not form of delivery.	Policy matter – options proposed for training and dissemination. A paper based scoring form has also been devised, so the use handheld technology is not essential	ODPM decision.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
51	With the benefit of hindsight, one can question the wisdom of combining a new system with a new technology, thus sharply raising the investment in time needed to master the system or to train others – the combined difficulties undoubtedly heightened perceptions that the system was unworkable. There are real doubts as to whether a hand held computer system is the most effective way of recording the type of information which local authorities need for enforcement purposes in relation to fitness. (eval 7.26)	In hindsight we agree that this could have been handled more effectively. As part of Version 2 there will be an improved dissemination and marketing strategy focusing on HHSRS principles and not form of delivery.	As 50.	As 50.
52	The computer system was the single biggest objection to the use of the system in HMOs but most of the objections are against the use of the Palm computer and program rather than the system itself.	As part of Version 2 there will be an improved dissemination and marketing strategy focusing on HHSRS principles and not form of delivery. In addition, we will providing Palm, Windows CE and paper versions of the HHSRS.	As 50	As 50
53	HMOs are difficult to survey using paper methods and the Palm is an added complication. (HMO 6.2.3)	As part of Version 2 there will be an improved dissemination and marketing strategy focusing on HHSRS principles and not form of delivery. In addition, we will be providing Palm, Windows CE and paper versions of the HHSRS.	As 50.	As 50.
54	On the subject of data analysis, there seems little point in issuing the handheld system without an accompanying comprehensive database to receive and report on the data in both standard and user-definable formats. This should be commissioned alongside the modifications to the handheld program. (Eval 5.105)	We will seek as part of Version 2 to produce standardised output reports.	Recommendation adopted.	Data handling program developed.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
55	The program was issued without a 'front end', as it was argued that each local authority might wish to customise the output for their own systems. However, authorities have been very reluctant to devote resources to developing their own individual 'front ends' for a system which has not yet been formally introduced in legislation. Our case study work suggested that most authorities need to use the data for the same purposes, and there was overwhelming support for a stand report format. (Eval 7.12)	We will seek as part of Version 2 to produce standardised output reports.	As 54.	As 54.
56	The consequence of the absence of a user friendly reporting format was that the EHOs who had been asked to run the system in parallel with existing fitness assessments became discouraged by the nature of output currently produced by the system and did not continue to use it. The introduction of Version 2 with a 'front end' which will allow authorities to utilise the data they have collected, will in our view make a significant difference to the acceptability of the system. (Eval 7.13)	We will seek as part of Version 2 to produce standardised output reports.	As 54.	As 54.
57	No usable output records from the package, other than for authorities who prepared their own front end – a tiny minority. (Eval 7.24)	We will seek as part of Version 2 to produce standardised output reports.	As 54.	As 54.
58	Problem – Impossible to transfer key information from Palm to PC. Format of data not user friendly. No reporting facilities on PC software. Recommendation – Amendments to software. (HMO 1.2)	We will seek as part of Version 2 to produce standardised output reports.	As 54.	As 54.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
59	A user-friendly PC interface using an MS Access database or Excel spreadsheet should be provided. This should be capable of amendment by the user to suit their needs. (HMO 1.3)	We will seek as part of Version 2 to produce standardised output reports.	As 54.	As 54.
60	Either faults should be linked to drop down lists of remedies (to form basis of specification of remedial work) or a similar facility should be provided in the PC Software. (HMO 1.3)	Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the HHSRS programme.	This is not a practical option. The appropriate remedy will depend on the form of construction, not the fault contributing to the hazard. Determining the appropriate remedy is part of the role of professional judgment of the person who surveyed the dwelling.	No action.
61	There is a need to improve the consistency of data entry and the form views of the data as it is being logged, so that the user gets a greater sense of the flow of information and has a clear mental view of the whole picture and the part of it that they are currently addressing. (Eval 5.100)	Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the HHSRS programme.	Survey element of program eliminated. Issue no longer arises.	No action.
62	The program is reasonably well designed, but it is not, as shall be shown, not wholly user friendly in its present form. It would be helpful if it linked faults with hazards more directly. Certain hazards which must be considered at a whole house level, not room by room, such as excessive cold and the risk of fire, appear to be difficult to record. (Eval 7.11)	Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the HHSRS programme.	Survey element of program eliminated. As no faults recorded in program, issue no longer arises.	No action.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
63	Software Issues: If the handheld computer system is to be used, consideration should be given to making entry of basic data for each house – which users find frustrating – optional. (Eval 7.50)	This recommendation will be addressed as part of the Version 2 development.	No longer relevant (because of revised and shortened program).	No action.
64	It would be helpful if the software prompted user to consider the ‘matters to be taken into account’ for the various hazards when a fault is recorded. (Eval 7.51)	This recommendation will be addressed as part of the Version 2 development.	As 63.	As 63.
65	It may also be beneficial to remind the user of any key items which have not been entered before leaving the property. This would help to ensure that a balanced and usable set of data has been collected without the need for time consuming and expensive revisits. (Eval 5.101)	Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the HHSRS programme.	As 63.	As 63.
66	Palm screen difficult to read in some conditions, H&S implications. (HMO 1.1)		Not a HHSRS issue. However, developments in hand-helds have dramatically improved screen visibility.	No action.
67	If scoring and banding is to be retained, a mixed paper/computer system would be most appropriate for most users, who would record the faults observed in the dwelling using notebooks, specially designed forms, sketch plans and photographs as appropriate, and then use a handheld or a PC back in the office to do the scoring. A minority may prefer to continue entirely with the handheld computer software. (Eval 7.31)	A palm, Windows CE and paper version and focus on HHSRS principles and not form of delivery will be delivered as part of the overall version 2 guidance.	Recommendation adopted.	Paper Scoring form devised – see Annex B pages 41 and 42.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
68	The complexities of HMOs are such that they are best surveyed using paper methods. A survey procedure using a paper form should be devised. The form should be fairly simple (relying on freehand notes to deal with the complexities) but should include a hazard list as an aide memoire to prompt surveyors to record faults relating to all hazards. The form should not attempt to emulate the Palm program and should not include a scoring sheet. Scoring would be done using the Palm or on a PC using a spreadsheet or the Palm emulator. The form could be developed from a local authority's current practice. (HMO 6.2.3)	A Palm, Windows CE and paper version will be delivered as part of the Version 2.	As 67.	As 67.
69	It is recommended that the revised guidance includes a HMO survey procedure using a paper form, although scoring should continue to be undertaken using electronic methods (using Palm, Palm emulator or spreadsheet). (HMO 7.2)	A Palm, Windows CE and paper version will be delivered as part of the Version 2.	As 67.	As 67.
70	Handheld computers can generate economies and efficiencies when they are used for surveys where bulk data processing is likely to be needed – they are for example very appropriate for sample house condition surveys. It would appear that this is seldom likely to be the case with HHSRS, where it is the accuracy and degree of detail in the individual survey which is important. EHOs are happy to write up their notes afterwards in the office – it gives them greater ownership and confidence in their reports and evidence. (Eval 7.22)	A Palm, Windows CE and paper version will be delivered as part of the Version 2.	As 67.	As 67.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
71	A paper based system which uses a handheld computer or a PC for scoring is the preferred solution, with the option of handheld computers for the minority who prefer to use them. If a handheld system is to be offered, there may be advantages in moving to a Windows CE system – advantages which could not have been foreseen at the time the system was developed. However, these advantages would have to be set against the investment which authorities have made in Palm machines. (Eval 7.23)	A Palm, Windows CE and paper version will be delivered as part of the Version 2.	Recommendation adopted.	Scoring programs developed for Palm OS, Pocket PC and Desktop PCs. Also paper Scoring form designed – see Annex B pages 41 and 42.
72	Many authorities prefer a Microsoft platform. (HMO 1.1)	A Palm, Windows CE and paper version will be delivered as part of the Version 2.	Recommendation adopted. (NB – PocketPC is now the Microsoft platform.)	Scoring program for Pocket PC developed.
73	Looking to the future, it is generally felt that although the program with the suggested modifications will do an adequate job, its overall quality and ease of use could be considerably improved by rewriting to run under Windows CE. (Eval 5.104)	A Palm, Windows CE and paper version will be delivered as part of the Version 2.	As 72.	As 72.
74	It is further recommended that the program be split into the hazard scoring module, which could not be altered, and the survey and administration module which should be freely available to amend according to the wishes of the user. It is suggested that the Office encourage user groups probably based around those authorities with common software providers to further develop these modules. This may well be the most realistic way of adding a scheduling facility to the software (likely to be a major task). (HMO 1.3)	A Palm, Windows CE and paper version will be delivered as part of the Version 2. This is likely to result in a hazard scoring module as proposed.	Recommendation adopted. Only scoring module to be developed.	Scoring programs developed for Palm OS, Pocket PC and Desktop PCs.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
75	<p>One of the most basic issues to address with regard to survey procedure is how to enter information on rooms/circulation space which are shared. Rooms used by the bedsit are currently entered with the bedsit. This leads to potential for duplication and confusion as information is scattered over several records. It would be more logical to name each unit, enter occupancy details, and then keep all this information in a single record. This would however require amendments within each room page to allow units using the room to be recorded. It would also require the score sheet to be amended to allow hazards to be assigned to one unit, a selection of units or all units. (HMO 6.2.3)</p>	<p>Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the HHSRS programme.</p>	<p>Survey element of program eliminated as not seen as helpful. Surveys can be undertaken and recorded in largely the same way as currently. Issue no longer arises.</p>	<p>No action.</p>
76	<p>In bedsits, shared houses and houses let in lodgings, information should be entered on a single record. An additional page or pages should be added for occupancy information to be entered against each dwelling. A page should also be added for each room to allow lettings using each room to be recorded. The score sheet should be amended to allow hazards to be recorded against one unit, a selection of unit or all units. (HMO 6.2.3)</p>	<p>Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the HHSRS programme.</p>	<p>As 75.</p>	<p>As 75.</p>

	Recommendations	ODPM Response	Project Team Comment	Action Taken
77	If the Office wishes to allow for authorities to use the full Palm system for HMOs, it is recommended that a number of amendments to the program are made to allow information on more than one unit to be recorded within a single record (see Section 7). Additional guidance would be required on how this information should be recorded. (HMO 7.2)	This recommendation will be addressed as part of the Version 2 development.	As 75.	As 75.
78	If the department is serious about very large HMOs being inspected using the Palm some form of cloning information is likely to be necessary. (HMO 6.2.3)	Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the programme.	As 75.	As 75.
79	It is also recommended that a facility to clone records be included in the system. By adopting the above procedure of clustering units it should also be possible to clone groups of records. This could be used to speed up surveys of large HMOs where there are repeating layouts as is (sometimes found in hostels). (HMO 6.2.3)	Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the programme.	As 75. Also, Desktop PC scoring program makes cloning possible.	As 75.
80	A sketch plan facility should be incorporated into the program. (HMO 6.2.3, HMO 1.3)	This will be investigated as part of the Version 2 development.	As 75.	As 75.
81	Following on from this, whether or not a sketch plan facility is incorporated into the program, we would see one as essential for applying the system to HMOs. Guidance on and when to use the facility would be required. (HMO 7.2)	This will be investigated as part of the Version 2 development.	As 75.	As 75.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
82	Environmental Health Officers need highly accurate and detailed evidence about the houses which they survey. They need to be able to create a record which may include plans and sketches, photographs, and very detailed notes. It will be difficult for them to assess many houses for excessive cold – the most significant hazard – without preparing a SAP rating. It follows then that they need a supporting module – or a system which can accommodate all of these matters. (Eval 7.14)	Feasibility of this shall be considered as part of the Version 2 guidance development and implemented where possible and changes made to the programme.	As 75. Also, for all other hazards, the need for, and use of, instrumental readings as supporting evidence, or the need to take additional expert advice, is a matter for professional judgment.	As 75.
83	Limited advice on equipment selection so that many authorities were working with computers which were not the most appropriate for the purpose. (Eval 7.24)	The ODPM does not have the capacity to test different machines as this might leave us liable to complaints of endorsement.	Recommendation adopted.	Included in Software Handbook.
84	Practitioners found it difficult to delete original score when they wished to make a correction. Recommendation – training. (HMO 1.1)	This recommendation will be addressed as part of the Version 2 development including amended guidance.	Recommendation adopted.	Programs developed allowing scores to be deleted and/or reviewed.
85	The program should be amended (or guidance should be given) to allow deletion of hazard bands and recall of likelihoods and spreads. (HMO 1.3)	This recommendation will be addressed as part of the Version 2 development.	As 84.	As 84.
86	Problem – Number of minor problems with size of fields etc. Recommendation – Amendments to software. (HMO 1.2)	This recommendation will be addressed as part of the Version 2 development.	Survey element of program eliminated. Issue no longer arises.	No action.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
87	One interviewee felt that seeing the display change as likelihoods and spreads are changed influences decisions. Recommendation – Consider providing option to switch off display. (HMO 1.2)	This recommendation will be addressed as part of the Version 2 development.	Option considered, but not adopted.	No action.
88	Address and UPRN fields should be made larger and provision should be made to transfer these from PC software. (HMO 1.3)	This recommendation will be addressed as part of the Version 2 development.	Recommendation adopted.	Data handling and scoring programs developed, allowing addresses and basic information to be transferred to hand-helds.
89	Treatment of Insulation and other Excessive Cold Issues in Software: Several authorities found it difficult to identify how the software recorded insulation – there appeared to be no provision for recording attic spaces which is where the principal insulation for the house is installed. (Eval 7.38)	This recommendation will be addressed as part of the Version 2 development.	Survey element of program eliminated. Issue no longer arises.	No action.
90	Specific amendments should be made to include frequently occurring items in the drop down menus. (HMO 1.3)	This recommendation will be addressed as part of the Version 2 development.	Survey element of program eliminated. Issue no longer arises.	No action.
91	Graffiti system too slow for extensive note-taking. Recommendation – Use of short-cut facility (HMO 1.2)	This recommendation will be addressed as part of the Version 2 development.	Survey element of program eliminated. Issue less of a problem, if at all.	No action.
92	Facilities for note taking should be made more widely available throughout the program. (HMO 1.3)	This recommendation will be addressed as part of the Version 2 development.	Recommendation adopted.	Scoring programs developed to allow for notes anywhere within the program.
93	The use of 'shortcuts' be promoted. (HMO 1.3)	This recommendation will be addressed as part of the Version 2 development.	Survey element of program eliminated. Issue less of a problem, if at all.	No action.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
94	It is further recommended that the source code for the program be made available to developers wishing to develop a program to be used on Microsoft Handheld platforms. (HMO 1.3)	The source code has been made available to users wishing to use it with certain conditions attached. This will continue to be the case.	Not part of research project.	ODPM decision.

Marketing and Dissemination

95	Users have been asked to master a new technology at the same time that they have been asked to grasp a conceptually difficult new system which needs considerable training to make users competent and confident in assessing all the hazards. The limited surveyor variability analysis carried out suggested that there is a need for detailed training, benchmarking and calibration for the full range of hazards. (Eval 7.20)	In hindsight we agree that this could have been handled more effectively with greater consistency in timing of the relevant parts of the guidance. A marketing and dissemination plan for all elements for Version 2 of guidance and more worked examples to improve benchmarking and calibration have been built into the specification. Additional training support will be considered through the process of Version 2 to ensure consistency with the revised guidance and HHSRS.	Options proposed.	ODPM decision.
96	The presentation of the system to the lay public is one of the areas which should be addressed in Version 2. It is believed that it is possible to explain the results in a straightforward every day language, provided that no attempt is made to explain the complex calculations which underlie the score given to the property. (Eval 7.4)	This is something that we will look at in relation to the dissemination and marketing strategy for Version 2. One possible approach to this is for the publication of a leaflet explaining the basic principles of the HHSRS that can be given to householders.	ODPM commissioned development and preparation of Guidance for Landlords.	Guidance produced.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
97	Landlords will have difficulty getting to grips with the system. Recommendation – Training needed for landlords, particularly smaller landlords. (HMO 1.2)	As above we consider the production of a leaflet for landlords explaining the basic principles of the HHSRS and their duties in relation to them to be a good way forward.	As 96.	As 96.
Future Development				
98	A feasibility study to determine ways of making the statistical evidence more directly relevant to housing conditions. (Stat 7.21)	Although this is not something that will be included into Version 2 of the guidance, a small scale research project to look at specific hazards could be an option. Further discussions will be required to identify hazards to target.	Not part of V2 project.	ODPM decision.
99	It is believed that users are right to believe that they lack the evidence or guidance to allow them to make highly specific numeric assessments of risk – indeed paragraph 7.17 of the Guidance confirms that there is limited evidence linking individual features of buildings to injuries or health outcomes. It is believed that the concerns of potential users about legal challenge on the numeric precision of the outputs of the system have some foundation. (Eval 7.6)	There is a clear need to have improved guidance and more detailed training pack to support surveyors and explain how to apply the information that is available. This will be considered in Version 2 of the guidance. Improvements to the training package currently provided will need to be considered to ensure consistency with any changes made in the revised guidance.	Specific probability (and outcomes) are not required – only a range. This is now explained. Detailed inspection should provide sufficient evidence to support surveyor's judgment. Rating is only one factor to be taken into account in determining action.	See paras 3.25-3.27, para 4.19, and para 4.28. (See also Enforcement Guidance and legislation.) See para 3.27.
100	Court cases would be bogged down by appeals as HHSRS too subjective. Recommendation – training. (HMO 1.1)	It is difficult to predict what will happen with the legal process in relation to the rating system until it is live and has had appeals against it. What we must ensure is that we continue to provide robust evidence on areas such as variations of result to reduce the chance of appeals occurring. We are considering carrying out additional research on the sources of the variation in surveyor assessments in 2003.	Point not accepted, there is no evidence nor indication that this system will be subject to more appeals than the current system associated with the fitness standard. Training strategy proposed.	No action. ODPM decision.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
101	Appeals – the ‘subjectivity’ of the system which results in such specific scores was expected to lead to a large number of appeals. (HMO 1.3.4)	See above (item 100).	As 100.	As 100.
102	Users would also like support with developing appropriate specifications for remedying the types of faults identified by HHSRS. The nature of many of the faults identified is different from those identified under the Fitness Standard. The training of EHOs may need review to ensure that officers feel competent to draw up appropriate specifications for this wider range of hazards. This will require a review of the content of full and part time professional courses and there may be a need for CPD seminars on this issue. The CIEH will have an important role to play here. (Eval 7.15)	We agree that changes to the training regime will be required to take account of Version 2 guidance. However in terms of the HHSRS a suggested remedy for the hazard is a separate issue from the principles of providing a judgement based on the hazard itself. We will liaise with training providers and professional bodies such as CIEH on matters such as these to ensure that they are aware of the issues and can adjust or recommend changes to training they already provide.	Determining the appropriate remedy is part of the role of professional judgment of the person who surveyed the dwelling, and will depend on the form of construction. This is a matter for colleges/universities responsible for training for EHPs and for the EH Education Board.	No action.
103	The accuracy of the HHSRS statistics relies on having accurate population estimates at postcode level. The publication for the 2001 Census of enumeration district data, including a breakdown of population by age, should substantially increase the reliability of any postcode population estimates for two main reasons. Firstly, the 2001 Census will provide up-to-date primary information on the age distribution of the population in the whole of England and Wales. In contrast, all currently available information is either well over 10 years out of date being reliant on the 1991 Census, incomplete being based on sample surveys, and/or heavily reliant on modelling techniques, these being largely undisclosed in the case of commercially available data. (Stat 7.05)	The development of the HHSRS is seen as a continuous process taking account more robust data as it becomes available. The data that is being recommended for use is not yet available. As soon as this data is available, we will consider carrying out this recommendation.	Not relevant to V2 project.	ODPM decision.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
103 (cont)	<p>Secondly, because of their significantly smaller size, enumeration district populations can be related to postcodes much more accurately than ward or postcode sector based populations. Compared with an average of some 2,330 dwellings in a local authority ward and 2,730 dwellings in a postcode sector, an average enumeration district contains only some 130 dwellings. The average postcode in the HASS catchment areas comprises just over 18 dwellings. This is slightly larger than the national average of 14 dwellings, but postcodes of between 30 and 60 dwellings are common in urban areas. (Stat 7.05)</p> <p>For the above reasons, we would strongly recommend that the HHSRS statistics be recalculated on the basis of the 2001 Census enumeration district population data, once this data becomes available. (Stat 7.06)</p>		Not relevant to V2 project.	ODPM decision.
104	<p>A repeat of the safety statistics using population estimates from the 2001 Census and HASS data for the 5 years, 1997 to 2001, once these are available. (Stat 7.21)</p>	See item 103.	As 103.	As 103.

24 It is understood from the Census Customer Services Department in Fareham that such data will not be officially published for the whole of England and Wales until “the end of 2003”, but it is possible that the required data will be available to Government Departments before then.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
105	System is too subjective and there is too much variability in its application. Recommendation – training. (HMO 1.1)	Additional research will be commissioned later in the year to identify sources of surveyor variability and provide recommendations that will feed into Version 2.	The HHSRS (like housing standards before it) relies on professional judgments, primarily qualitative, and so will be, to some extent, subjective. Consistency will develop and Worked Examples will assist in this. Training strategy proposed.	No action.
106	Surveyors do not feel confident with their estimates. Recommendation – training. (HMO 1.1)	Additional research will be commissioned later in the year to identify sources of surveyor variability and provide recommendations that will feed into Version 2.	No part of V2 project.	No action.
107	There were a number of issues raised which were judged to be perceived problems caused by lack of familiarity with the system and misunderstandings or misinterpretations. In general therefore they would be addressed through training and experience.	Amendments made to Version 2 of the guidance will provide a greater understanding of the processes involved. In addition a greater focus on targeted dissemination and marketing will ensure users are aware of the relevant information at their disposal.	Training strategy and dissemination options proposed.	Guidance clarified generally. ODPM decision.
108	Surveyors should have additional training to ensure better consistency in identifying hazards. (Eval 4.26)	We are considering carrying out additional research on the sources of the variation in surveyor assessments in 2003.	Training strategy proposed.	ODPM decision.
109	Improving Training: Training should focus on benchmarking, to achieve greater consistency between surveyors – this is essentially a kind of calibration exercise, where a more consistent approach is developed to agreeing the numeric probability to be assigned to certain common situations. (Eval 7.44)	Issues of training will be passed on to the relevant professional and training bodies for consideration in line with Version 2 guidance. We are considering carrying out additional research on the sources of the variation in surveyor assessments in 2003.	As 108.	As 108.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
110	Training will also need to cover the approach to the less frequently occurring hazards, where there is little depth of experience of using the system. (Eval 7.45)	We agree that training on surveys for enforcement purposes should cover all hazards as identified in the guidance. Information on all hazards is available and should be considered. We will pass this information on to the relevant professional training bodies.	As 108.	As 108.
111	As well as guidance, it is recommended that separate training on the application of the HHSRS to HMOs is promoted by the Department. (HMO 7.2)	Issues of training will be passed on to the relevant professional and training bodies for consideration in line with Version 2 guidance.	As 108.	As 108.
112	Training for other Property Professionals and Landlords: There is likely to be a need/demand for training for other property professionals and landlords. (Eval 7.46)	Issues of training will be passed on to the relevant professional and training bodies for consideration in line with Version 2 guidance.	As 108.	As 108.
113	A consistent way of recording the severity of injuries and illnesses is required, which would enable classes of harm to be readily determined. Such a standard classification system, possibly based on the ICD system but providing more information on the severity of the condition, could then be used in all Government funded surveys in which information on injuries and illnesses is collected. Future research. (Stat 7.20)	This can be considered for future development in conjunction with discussion with DTI and others with a professional interest in this area.	Not part of V2 project.	No action.
114	Worked Examples Library: A number of authorities suggested that a library of worked examples, which would be added to over time would be very helpful – a web based version would be particularly appropriate. Some authorities had already started to collect examples. (Eval 7.42)	We agree that this would provide additional benefits to the overall package. The successful contractor for Version 2 guidance will be asked to review this approach and present options for its implementation.	Options proposed, and although a positive suggestion it was not otherwise, part of V2 project.	No action.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
115	<p>The analysis of the Home Accident Surveillance System (HASS) was based on data for the three years 1997 to 1999, these being the years with the best post coded data currently available. However, despite averaging the statistics from a number of years, for less frequent hazards such as falls between levels and electrical hazards, the sample sizes are still generally too small to be accurately broken down by both age group and type and age of dwelling. In future, it is recommended that the safety statistics be repeated using at least five years of fully validated HASS data²⁵. (Stat 7.07)</p>	<p>The development of the HHSRS is seen as a continuous process taking account more robust data as it becomes available. The data that is being recommended for use is not yet available. As soon as this data is available, we will consider carrying out this recommendation.</p>	<p>Not relevant to V2 project and the matter of updating data used in the guidance is a policy issue for the ODPM.</p>	<p>No action.</p>
116	<p>The HASS accident records contain a particularly large proportion of unspecified or only partially specified data. It is recognised that there are inherent difficulties encountered in collecting accident data in the Accident and Emergency Units. Obviously, the first priority of the victim will be in getting early treatment, and that of the hospital staff will be in diagnosing and administering the appropriate treatment. Asking and answering details about the circumstances of the accident will rarely be seen as a major priority by either side. However, in the interests of reducing the number of future accidents in the home, we believe efforts are required to improve the amount and quality of the HASS data. How this might best be done could be the subject of a small research project in its own right. However, the validation and analysis of the 1997, 1998 and 1999 HASS samples carried out for this project has provided a number of pointers. (Stat 7.08)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.</p>	<p>As 115.</p>	<p>As 115.</p>

²⁵ In 2003, the HASS was terminated and no further accident data collected. Archive data is now held by the Royal Society for the Prevention of Accidents.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
117	<p>HASS clerks should be reminded of the importance of the data for housing policy and preventative medicine. This project has shown that while there is a generally good response rate for the basic information on the age of the victim and the medical details of the injury and body-part affected, insufficient attention seems to be given to collecting the ancillary, non-medical information on the circumstances of the accident, such as on the room location, the dwelling type and person's activity at the time. (Stat 7.09)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.</p>	As 115.	As 115.
118	<p>Missing data on inpatient days also suggests that the HASS data is generally collected at the time of admission to the A & E Unit or soon afterwards and is not necessarily revised when the full details of the injuries are known. Checking and finalising the HASS forms just before the person is discharged, when the accident victim may be more receptive to answering detailed questions on the circumstances of the accident, might help to improve the quality of the information collected, particularly that concerned with hospital outcomes and in-patient days. (Stat 7.10)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.</p>	As 115.	As 115.

Recommendations	ODPM Response	Project Team Comment	Action Taken
<p>119 Although this approach requires more development, further surveys of this kind may be needed to cover other frequent hazards. However, it might be possible to achieve the same results, more economically, by extending the HASS questions on the physical aspects of the accident and by including comparable questions in the EHCS to determine the incidence of particular physical conditions in the housing stock. At the very least, a feasibility study is required to determine how this issue might best be addressed. (Stat 7.17)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.</p>	<p>As 115.</p>	<p>As 115.</p>
<p>120 A study of the potential improvements in the collection and validation of HASS data. (Stat 7.21)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.</p>	<p>As 115.</p>	<p>As 115.</p>
<p>121 As well as due to missing data, the HASS figures also significantly underestimate the number of non-fatal accidents in the HASS catchment areas due to the loss of cases to neighbouring A & E units. The definitive solution to the determination of the true accident rates in the HASS catchment areas would be to use the national hospital episode statistics to determine all the accidents from the postcodes in the catchment areas that were treated at other non-HASS hospitals in the same period as covered by the HASS data. This is a large piece of work involving a larger accident sample and was outside the scope of this project. However, this might be one way of increasing the reliability of the HHSRS statistics in future. Generally, such an analysis could also confirm the accuracy of DTI's national accident estimates. (Stat 7.11)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.</p>	<p>As 115.</p>	<p>As 115.</p>

	Recommendations	ODPM Response	Project Team Comment	Action Taken
122	The determination of HASS catchment areas and the loss of cases to other A&E units using hospital episode data. (Stat 7.21)	We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.	As 115.	As 115.
123	Depending on the year, up to a fifth of all HASS postcodes were found to be mis-punched or mis-formatted and these had to be corrected to maximise the sample that could be matched to other data. The quality of the HASS postcode data could probably be improved substantially by using an experienced punching agency and adopting the common commercial procedure of double punching when transferring the HASS records to a data file. It is understood from DTI that casual student labour is currently used for this task. (Stat 7.12)	We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.	As 115.	As 115.
124	To improve the HHSRS safety statistics, the mortality data needs to be made more compatible with the HASS data. While it may not be feasible to extend the record of all fatal accidents, extending the record in line with the HASS data, at least, for all deaths occurring in the HASS catchment areas is recommended. With respect to fatal accidents, the DTI's current review of the Home Accident Deaths Database (HADD) is welcomed. (Stat 7.15)	We will continue to liaise with DTI and seek improvements in the usability of HASS and HADD data in the context of the HHSRS.	As 115.	As 115.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
125	<p>Defining the Hazards: Relating the HASS categories for the accident mechanism, article involved, the activity and location of the accident to specific hazards in the home, as covered by the HHSRS, has proved tenuous in many cases. That said, it is still possible with the HASS data to distinguish certain critical attributes of a hazard, for example, to distinguish falls on inside stairs from falls on outside stairs and steps. Such an analysis shows that there is a far stronger link between non-fatal accidents and housing type and age in the case of inside stairs than for outside stairs and steps, where such factors as the topography of the site may be more important. (Stat 7.13)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS and HADD data in the context of the HHSRS.</p>	As 115.	As 115.
126	<p>Determining Classes of Harm: For the specific purposes of the Housing Health and Safety Rating System, the categorisation of other HASS questions could also be improved. For example, none of the questions on the health outcomes, the type of injury, body part affected, hospital outcome and inpatient days give a particularly good idea of the true severity or class of health outcomes. (Stat 7.18)</p>	<p>We will continue to liaise with DTI and seek improvements in the usability of HASS data in the context of the HHSRS.</p>	As 115.	As 115.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
127	In the final statistics distinctions in the harm outcome are lost due to the need to also consider fatal accidents, as provided by the mortality data held by National Statistics (ONS). These data are categorised according to the external causes codes of the International Classification of Diseases (ICD) and provide significantly less detail of hazards than is possible from the HASS data. (Stat 7.14)	We will liaise with ONS and seek improvements in the usability of Mortality data in the context of the HHSRS.	As 115.	As 115.
128	Data relevant to non-fatal classes of harm varies substantially between different databases – e.g., for the HASS data, classes of harm have been determined from variables giving the type of injury, the body part affected, the nature of treatment and the number of in-patient days. However, for the Fire Brigade data, the most relevant information concerned a different categorisation of type of injury, the circumstances of the injury and the number of people killed or injured. Moreover, none of the variables or their combination was wholly compatible with the BRE's classification of injuries into classes of harm ²⁶ . (Stat 7.19)	We will continue to liaise with DTI, Fire Directorate and others and seek improvements in the usability of various datasets in the context of the HHSRS.	As 115.	As 115.
129	There is a particular need to improve the statistical evidence for houses in multiple occupation (HMOs). The HASS, general mortality and Fire Brigade data should all distinguish accidents and fires in HMOs, using standard common definitions of multiple occupation, possibly based on those used in the EHCS. (Stat 7.04)	We will continue to liaise with DTI, Fire Directorate and others and seek improvements in the usability of various datasets in the context of the HHSRS.	As 115.	As 115.

26 Raw, G., et al., *A risk assessment procedure for health and safety in buildings*. 1999, BRE: Watford.

	Recommendations	ODPM Response	Project Team Comment	Action Taken
130	<p>A major advantage of the HHSRS is that it provides a clear focus for further work in this field and an important part of this project has been to identify and recommend improvements in the statistical evidence that can be made in future years. It is likely that in future, the health and safety statistics will be further updated and that there will be other projects relating health statistics to other data sources. Consequently, it would be helpful if standard protocols for recording the information could be adopted. While commercial companies may not follow such protocols, it would seem appropriate for these to be followed by the various central, regional and local government departments. (Stat 7.02)</p>	<p>We will continue to liaise with DTI, Fire Directorate and others and seek improvements in the usability of various datasets in the context of the HHSRS.</p>	As 115.	As 115.
130	<p>While it may be unrealistic to expect the variables in commercial surveys to be standardised, Residata, for example, would have been of even greater use in producing the HHSRS statistics had it distinguished converted from purpose built flats and provided dwelling age bands exactly comparable with those used in the ODPM's national housing surveys, particularly the EHCS. (Stat 7.03)</p>	<p>Realistically, our priority is focusing on datasets within central and local government as a starting point.</p>	As 115.	As 115.

The Housing Health and Safety Rating System is a means of identifying faults in dwellings and of evaluating the potential effect of any faults on the health and safety of the occupants or visitors. This report highlights and describes the changes in the development of Version 2 guidance and its associated elements.