

Noise Forum Conference 20 May 2002

CIEH, Chadwick Court,
15 Hatfields, London SE1 8DJ

The UK National Noise Attitude Survey 1999/2000

**C.J. Grimwood, C.J. Skinner & G.J. Raw,
BRE,
Watford,
WD25 9XX**



The UK National Noise Attitude Survey 1999/2000

C.J. Grimwood, C.J. Skinner, G.J. Raw, BRE, Watford, WD25 9XX

Summary

A survey of community response to environmental noise involving over 5,000 respondents has recently been completed and has established a year 2000 benchmark for community response to noise in the UK. This paper presents some of the key findings. The survey was undertaken for the Department for Environment, Food and Rural Affairs and the Devolved Administrations. The survey design involved two parallel population samples and two different noise attitude questionnaires. One of the questionnaires had been used previously in England and Wales during 1991, allowing us to investigate changes in attitudes to noise over the last 10 years.

The key findings from this research should be considered in the following context:

- 69% of respondents reported general satisfaction with their noise environment.
- 57% of respondents reported that noise did not at all spoil their home life.
- noise was ranked 9th in a list of 12 environmental problems.

Nevertheless:

- 21% of respondents reported that noise spoilt their home life to some extent, with 8% reporting that their home life was spoilt either '*quite a lot*' or '*totally*'.
- 84% of respondents heard road traffic noise and 40% were bothered, annoyed or disturbed to some extent.
- 28% of respondents reported that road traffic noise at their homes had got worse in the last five years; this should be considered alongside the trends in noise level and noise exposure found in the National Noise Incidence Study 00/01.
- 81% of respondents heard noise from neighbours and/or other people nearby and 37% were bothered, annoyed or disturbed to some extent.
- the proportion of respondents who reported being adversely affected by noise from neighbours has increased over the last 10 years, whilst for all other categories of environmental noise the proportion adversely affected has remained unchanged.
- only a small proportion of respondents who were bothered by noise from neighbours complained to the environmental health department of the local authority, which means that noise complaint statistics will greatly underestimate the extent of community dissatisfaction.

1 Introduction

The Department for Environment, Food and Rural Affairs commissioned BRE to carry out a research project with the following main objectives:

- to track changes in community attitude to environmental noise in England & Wales between 1991¹ and 1999.
- to obtain the best possible estimate of attitudes to environmental noise in the UK for 1999/2000.

- to investigate the importance of questionnaire design in noise attitude surveys.

Between November 1999 and February 2000, two sample groups, each approximately equivalent in size to that used in 1991, were interviewed in England and Wales; the first with the 1991 questionnaire, and the second with a new modular questionnaire. During October and November 2000, the survey using the new modular questionnaire was extended to include Scotland and Northern Ireland in order to estimate UK attitudes to environmental noise.

The sample used was a multi-stage clustered sample generated with probability of selection proportional to population at each stage, in order to obtain a sample representative of the national population. All respondents were adult householders, pre-selected from the electoral role, and all interviews were conducted face to face in their homes.

This paper presents some interesting findings from the National Noise Attitude Survey (NAS). Section 2 gives examples of the UK results using the new questionnaire. Section 3 gives examples of trends in community attitude to noise for England and Wales between 1991 and 2000. Further information on the studies is available in the full project reports, which are being made available on the web^{2,3,4,5,6}.

Throughout this paper, NAS91 refers to the 1991 questionnaire as used in 1991; NAS91_99 refers to the 1991 questionnaire being used in 1999 and NAS99 refers to use of the new 1999 modular questionnaire. Where appropriate, the survey results given in Annex A and B are shown with 95% confidence intervals.

2 Community attitude to noise in the UK

A new questionnaire, NAS99, was designed for the UK wide survey with a modular structure that is intended to allow the six supplementary sections dealing with various categories of environmental noise to be used independently of each other in the future. Numerous specific sources of environmental noise are embraced in the design through the use of showcards. Filter and ranking techniques are used to manage the overall length of interview and the size of subsamples. Supplementary sections on road traffic noise and neighbour noise were made mandatory for all respondents. A total of 2876 interviews were achieved, with an overall response rate of 63%. Some key findings from the UK survey are listed below.

- 18% of respondents reported noise as one of the top five from a list of environmental problems that personally affected them. Overall, noise was ranked ninth in this list of 12 environmental problems.
- 69% of respondents reported general satisfaction with their noise environment (i.e. liking the amount (or absence) of noise around them at home to some extent).
- 21% of respondents reported that noise spoilt their home life to some extent, with 8% reporting that their home life was spoilt either '*quite a lot*' or '*totally*'.
- 84% of respondents heard road traffic noise; 40% were bothered, annoyed or disturbed to some extent; 28% said it had got worse and 10% that it had got better over the past five years.

- 81% of respondents heard noise from neighbours and/or other people nearby; 37% were bothered, annoyed or disturbed to some extent; 14% said it had got worse and 15% that it had got better over the past five years.
- 71% of respondents heard noise from aircraft; 20% were bothered, annoyed or disturbed to some extent.
- 49% of respondents heard noise from building, construction, demolition, renovation or road works; 15% were bothered, annoyed or disturbed to some extent.
- the most commonly selected word (from a list of 21) used to describe the effects of noise was *irritated*; 30% of respondents selected this for road traffic noise and 25% for noise from neighbours.
- the evening (1900 – 2300) and night-time (2300 – 0700) periods are the times when the greatest proportion of respondents reported being particularly bothered, annoyed or disturbed by most types of noise from neighbours and/or other people nearby.
- only a small proportion of respondents who were bothered by the various specific sources of noise from neighbours complained to the environmental health department of the local authority. The most common action taken was to complain directly to the person responsible. In general, only a small proportion (usually less than 10%, although this depends on source) of respondents who were bothered contacted any department of the local authority. For all sources of noise from neighbours a greater proportion of respondents complained to the police rather than the environmental health department.

More details of these findings are illustrated in Annex A of this paper. The full reports should be consulted if further information, or a more detailed understanding, is required.

3 Trends in attitude to noise in England & Wales

The survey using the NAS91_99 questionnaire was designed to be as similar as possible to the survey first undertaken in England and Wales during 1991, hence enabling a direct assessment of changes in attitude to be made. The questionnaire used in 1999/2000 was identical to that previously used in 1991; the first part of the questionnaire gathered information on the noises heard whilst a second part asked further questions on up to 49 specific sources of environmental noise. The questionnaire design was intended to increase the likelihood of accurate response data for each specific noise source but has disadvantages in terms of the length of interview and the creation of small subsamples for certain noise sources. A total of 2534 interviews were achieved, with a response rate of 64%. Examples of the trends found for the most commonly heard sources of environmental noise are presented in the subsections below. Unless otherwise stated all trends are statistically significant at the 95% confidence level.

Respondents were asked if they heard a number of general categories and specific sources of environmental noise whilst at home. The main findings are:

- An increase in the proportion of respondents reporting hearing road traffic (from 48 to 54%).
- An increase in the number of respondents reporting hearing the following specific road traffic noise sources: *private cars/vans* (24 to 32%), *residential/estate roads* (10 to 14%), *police/other sirens* (10 to 14%), *vehicles starting/stopping/ticking over* (5 to 7%), *motorways* (1 to 6%).

- An increase in the proportions of respondents reporting hearing *neighbours* (19 to 25%) and *other people nearby* (15 to 21%).
- An increase in the number of respondents reporting hearing the following specific neighbour noise sources: *people's voices* (11 to 17%), *children* (9 to 16%), *radio/TV/hi-fi* (9 to 12%), *cars or motorcycles starting up/leaving/repairs* (6 to 10%), *doors banging* (5 to 7%) and *lawnmowers* (5 to 10%).
- No statistically significant change in the proportion of people reporting hearing aircraft (41 to 43%).
- An increase in the proportion of people reporting hearing the following specific aircraft noise source: *private / commercial helicopters* (10 to 16%).

Respondents were asked a number of questions about the various effects of noise. In this paper the term 'adversely affected' means that the respondent reported one or more effects from the list of six adverse effects in the question reproduced below.

Q13 NAS91 & NAS91_99 Section A

I would now like you to think about the noise that you hear from.... Please answer yes or no to the following:

- Do you personally object to this noise?
- Does the noise irritate you?
- Does the noise sometimes disturb you?
- Are you personally concerned about the noise?
- Do you find the noise annoys or upsets you at times?
- Do you consider the noise a nuisance to you personally?

The main findings are:

- No statistically significant change in the proportion of people reporting being adversely affected by noise from road traffic (29 to 30%).
- An increase in the proportion of people reporting being adversely affected by the following specific road traffic noise sources: *private cars/vans* (11 to 13%), *motorways* (1 to 3%).
- An increase in the proportion of people reporting being adversely affected by noise from neighbours and/or other people nearby (21 to 26%).
- An increase in the proportion of people reporting being adversely affected by the following specific sources of noise from neighbours and/or other people nearby: *people's voices* (7 to 11%), *children* (5 to 8%), *radio/TV/hi-fi* (6 to 9%), *lawnmowers* (1 to 3%).
- An increase in the proportion of people reporting the following activities being disturbed by noise from neighbours and/or other people nearby: *sleeping or resting* (12 to 16%), *listening to TV/radio/music* (11 to 14%), *reading or writing* (7 to 10%), *can't open windows* (6 to 8%), *telephone conversations* (5 to 9%), *use of garden* (4 to 6%).
- An increase in the proportion of people reporting the following reactions to noise from neighbours and/or other people nearby: *annoys me* (12 to 16%), *resent loss of peace and quiet* (11 to 14%), *makes me fed up* (6 to 8%), *makes me stressed* (3 to 5%), *makes me tired* (3 to 5%), *makes me depressed* (2 to 7%).
- No statistically significant change in the proportion of people reporting being adversely affected by noise from aircraft (17 to 17%).
- An increase in the proportion of people reporting being adversely affected by the following specific aircraft noise sources: *private/commercial helicopters* (3 to 7%), *microlight aircraft/powered gliders* (0 to 1%).

More details of these findings are illustrated in Annex B of this paper. The full reports should be consulted if further information, or a more detailed understanding, is required.

4 The importance of questionnaire design

The sampling basis of the two studies was essentially identical and no statistically significant differences were found between the demographics of the two separate survey samples for England and Wales. Therefore this project affords a unique opportunity to compare the results obtained from two different noise attitude questionnaires (NAS91_99 and NAS99) applied to a similar population at a similar time. For the purpose of this paper we have simply chosen a question dealing with the general adverse effects of environmental noise and presented the corresponding results from the two questionnaires in Figures 1 and 2. The two questions being compared in Figures 1 and 2 are shown below.

Q13 NAS91_99 Section A

I would now like you to think about the noise that you hear from.... Please answer yes or no to the following:

- A. Do you personally object to this noise?
- B. Does the noise irritate you?
- C. Does the noise sometimes disturb you?
- D. Are you personally concerned about the noise?
- E. Do you find the noise annoys or upsets you at times?
- F. Do you consider the noise a nuisance to you personally?

NAS99 Main / NAS99 Road Traffic Noise / NAS99 Noise from Neighbours & Other People Nearby

When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from...?

Not at all – A little – Moderately – Very – Extremely – (Don't Hear)

Figure 1 shows the relationship between these two questions when using general categories of noise such as road traffic noise, aircraft noise, noise from neighbours and/or other people nearby. Figure 2 shows the relationship when using specific source descriptors of road traffic noise such as heavy lorries, motorbikes, motorways, and specific source descriptors of neighbour noise such as banging doors, footsteps, radio/TV/music.

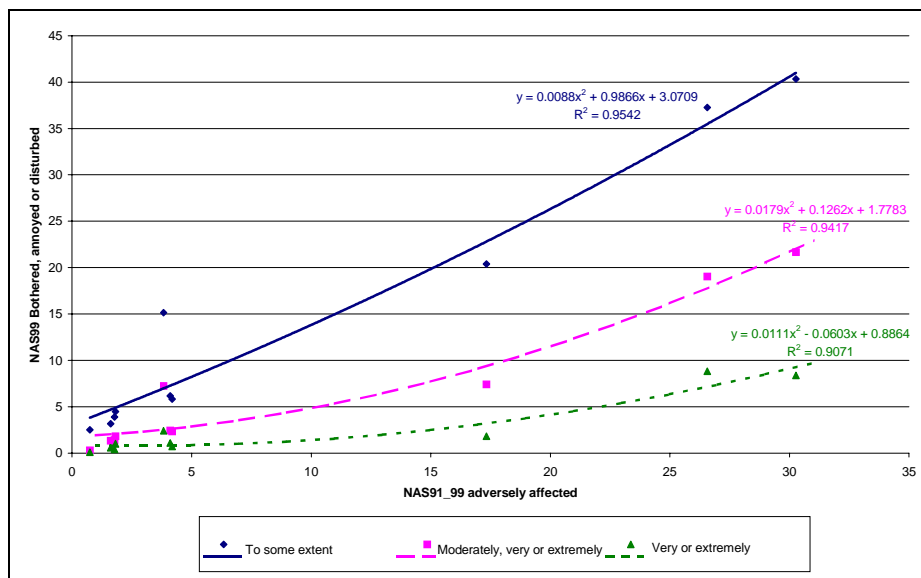


Figure 1. Proportion reporting annoyance from general categories of noise sources – relationship between two questionnaires

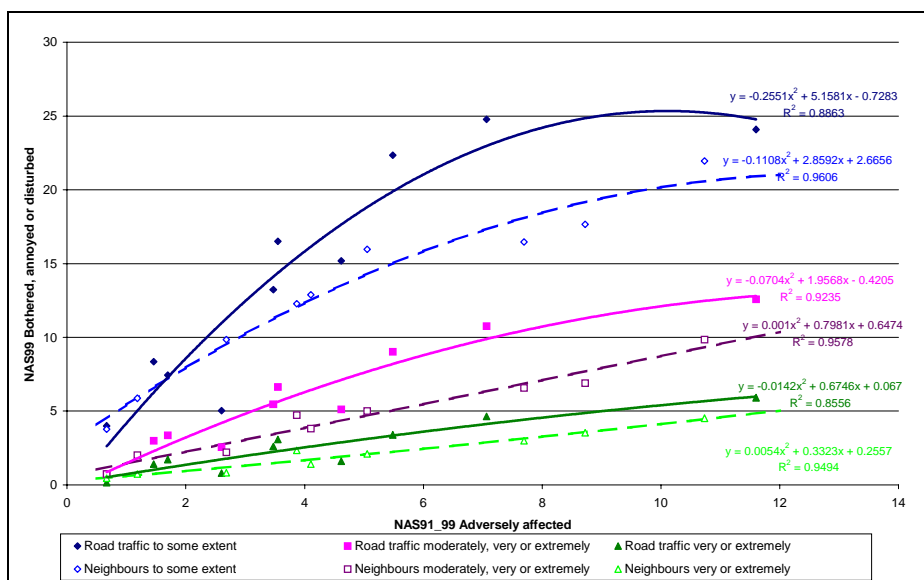


Figure 2. Proportion reporting annoyance from specific sources of road traffic noise and neighbour noise – relationship between two questionnaires

This is one example of a number of similar findings from the study⁶ which demonstrate that great care must be taken when making comparisons between different noise attitude surveys using different questionnaires. Indeed, even where it appears that two questions are identical, the responses obtained may differ significantly owing to a variety of other factors within the questionnaire and its administration. A number of differences between the results obtained from the two questionnaire designs have been found in the study which can be attributed to a number of factors, including the following: (i) routing within the questionnaires and the use of filter questions, (ii) question wording and the options given for responses, (iii) interviewer coding instructions, (iv) use of showcards, (v) focus of questions on specific noise sources or general categories of noise, (vi) interviewers themselves, (vii) questionnaire structure and the order of questions within the questionnaires.

The direction of the effect of each of these factors may be relatively easily predicted but the overall result of the combination of several factors, and determining which will dominate in a given situation, is much less predictable and contributes to the observed lack of correspondence between the results obtained from the two different questionnaires.

However, as shown above in Figures 1 and 2, we have found that whilst there may be a lack of *correspondence* there is nevertheless a strong *correlation* between the results from the two questionnaires. This between-questionnaire correlation is particularly strong for the questions dealing with the adverse effects from general categories of noise. This, in turn, suggests that it may be possible to estimate the response to certain questions using the responses from another questionnaire but it seems to us that this relationship would need to be determined empirically for the particular studies under consideration. This finding has implications for those involved in the combined analysis of results from several different studies and for those making noise policy decisions on the basis of the results of social surveys.

5 Acknowledgements

This study was funded by the UK Department for Environment, Food and Rural Affairs (DEFRA), on behalf of DEFRA and the Devolved Administrations for Wales, Scotland and Northern Ireland. All interviews were carried out on behalf of BRE by Beaufort Research and PAS (now part of the NFO Group).

6 References

1. C. J. Grimwood, Effects of environmental noise on people at home, *BRE Information Paper IP22/93*, 1993.
2. M.K. Ling, C.J. Skinner, C.J. Grimwood, G.J. Raw, The 1999/2000 National Survey Of Attitudes to Environmental Noise: Volume 1 Methodology, *BRE Client Report No: 205215f*, 2002.
3. M.K. Ling, C.J. Skinner, C.J. Grimwood, G.J. Raw, The 1999/2000 National Survey Of Attitudes to Environmental Noise: Volume 2 Trends in England and Wales, *BRE Client Report No: 205216f*, 2002.
4. C.J. Skinner, M.K. Ling, C.J. Grimwood, G.J. Raw, The 1999/2000 National Survey Of Attitudes to Environmental Noise: Volume 3 United Kingdom results, *BRE Client Report No: 205217f*, 2002.
5. M.K. Ling, C.J. Skinner, C.J. Grimwood, G.J. Raw, The 1999/2000 National Survey Of Attitudes to Environmental Noise: Volume 4 Questionnaires, *BRE Client Report No: 205218f*, 2002.
6. C.J. Skinner, C.J. Grimwood, G.J. Raw, The 1999/2000 National Survey Of Attitudes to Environmental Noise: Volume 5 Questionnaire comparison and review, *BRE Client Report No: 205219f*, 2002.

Annex A – United Kingdom results (NAS99 questionnaire)

Environmental problems

Q21 NAS99 Main

Please look at this list of environmental problems. Which FIVE would you say you are personally most affected by?

- Chemicals put into the rivers and/or seas
- Sewage on beaches or in bathing water
- Loss of plant life and/or animal life
- Quality of drinking water
- Use of insecticides and/or fertilisers
- Losing green belt land
- Litter & rubbish
- Traffic exhaust fumes & urban smog
- Fouling by dogs
- Using up of natural resources
- Not enough recycling
- Noise

Environmental problems affecting respondents	Proportion ranking problem in top five (%) (n=2876)
Fouling by dogs	50 ± 3
Litter and rubbish	48 ± 3
Traffic exhaust fumes & urban smog	31 ± 4
Losing green belt land	27 ± 4
Quality of drinking water	26 ± 3
Chemicals put into the sea and/or rivers	24 ± 3
Sewage on beaches or in bathing water	24 ± 4
Not enough recycling	20 ± 3
Noise	18 ± 3
Use of insecticides and/or fertilisers	18 ± 3
Loss of plant life and/or animal life	16 ± 2
Using up of natural resources	9 ± 1

Attitudes to noise environment

Q22 NAS99 Main

In general, how do you feel about the amount of noise (or the absence of noise) around here?

	Proportion (%) (n=2876)
1 – Definitely like	32 ± 3
2	22 ± 2
3	15 ± 2
4	13 ± 1
5	7 ± 1
6	4 ± 1
7 – Definitely don't like	5 ± 1
Don't know	1 ± 0

Extent bothered, annoyed or disturbed by categories of environmental noise and specific sources of noise from neighbours and/or other people nearby

Q24 NAS99 Main

When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from ...?

Not at all – A little – Moderately – Very – Extremely

Noise Category (n=2876)	Hear (%)	Bothered, annoyed or disturbed (%)		
		To some extent	Moderately, very or extremely	Very or extremely
Road traffic	84 ± 3	40 ± 3	22 ± 2	8 ± 1
Neighbours (inside their homes)	58 ± 4	18 ± 2	9 ± 1	4 ± 1
Neighbours (outside their homes)	71 ± 4	22 ± 2	10 ± 1	4 ± 1
Other people nearby	68 ± 4	20 ± 3	8 ± 1	3 ± 1
<i>Neighbours and/or other people nearby (combined category)</i>	<i>81 ± 3</i>	<i>37 ± 3</i>	<i>19 ± 2</i>	<i>9 ± 1</i>
Aircraft/airports/airfields	71 ± 4	20 ± 4	7 ± 2	2 ± 1
Building, construction, demolition, renovation or road works	49 ± 5	15 ± 2	7 ± 2	2 ± 1
Trains or railway stations	36 ± 4	6 ± 1	2 ± 1	1 ± 0
Sports events	34 ± 4	4 ± 1	1 ± 0	0 ± 0
Other entertainment or leisure	31 ± 4	6 ± 1	2 ± 1	1 ± 0
Community buildings	30 ± 3	4 ± 1	1 ± 0	0 ± 0
Forestry, farming or agriculture	26 ± 4	3 ± 1	0 ± 0	0 ± 0
Factories or works	23 ± 3	4 ± 1	2 ± 0	1 ± 0
Other commercial premises	23 ± 4	3 ± 1	1 ± 0	1 ± 0
Sea, river or canal traffic	16 ± 3	0 ± 0	0 ± 0	0 ± 0
Any other noise ^a	15 ± 3	4 ± 1	3 ± 1	1 ± 0

^a The additional specific sources of noise given by respondents under the category *any other noise* included: birds / pigeons, church bells, crackling of overhead power lines, electric substations, military establishments

NN1 NAS99 Neighbour Noise

When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from ...?

Not at all – A little – Moderately – Very – Extremely

Specific source of noise from neighbours and/or other people nearby (n=2782)	Hear (%)	Bothered, annoyed or disturbed (%)		
		To some extent	Moderately, very or extremely	Very or extremely
Teenagers' or adults' voices	70 ± 4	22 ± 3	10 ± 2	5 ± 1
Radio, TV, music	55 ± 4	18 ± 2	7 ± 1	4 ± 1
Dogs	65 ± 4	17 ± 2	7 ± 1	3 ± 1
Children	67 ± 4	16 ± 2	7 ± 1	3 ± 1
Cars/motorcycles starting up/leaving, repairs etc.	67 ± 4	15 ± 2	5 ± 1	2 ± 1
Burglar alarms	53 ± 4	15 ± 2	5 ± 1	2 ± 1
DIY (hammering, drilling, etc.)	62 ± 4	13 ± 2	4 ± 1	1 ± 0
Doors banging	46 ± 4	12 ± 2	5 ± 1	2 ± 1
Lawnmowers or other garden equipment	74 ± 4	10 ± 2	2 ± 1	1 ± 0
Parties (when held outdoors)	50 ± 4	8 ± 1	3 ± 1	1 ± 0
Parties (when held indoors)	44 ± 4	7 ± 1	3 ± 1	1 ± 0
Footsteps	41 ± 4	6 ± 1	2 ± 1	1 ± 0
Domestic equipment	36 ± 4	4 ± 1	1 ± 0	0 ± 0
Other animals	31 ± 4	3 ± 1	1 ± 1	1 ± 0
Electric Switches	20 ± 4	1 ± 0	0 ± 0	0 ± 0
Any other kind of noise ^b	24 ± 4	5 ± 1	3 ± 1	2 ± 0

^b The additional specific sources of noise from neighbours given by respondents under the category *any other kind of noise* included: mobile phones, telephones, fireworks, toilets flushing and plumbing noises

Times when bothered by noise from neighbours and/or other people nearby

DNN1 NAS99 Detailed Neighbour Noise

Does the noise from ... particularly bother, annoy or disturb you, at each of the times listed on the card...

- a) during the week (Monday to Friday)?
b) during the weekend (Saturday and Sunday)?

- Day (0700-1900)
- Evening (1900-2300)
- Night(2300-0700)

Specific source of noise from neighbours and/or other people nearby	n	Weekdays (%)			Weekends (%)		
		Day	Evening	Night	Day	Evening	Night
Other animals	28	32	25	61	32	25	64
Footsteps	55	27	51	55	36	45	53
Parties (when held indoors)	81	1	35	54	6	57	79
Doors banging	141	33	55	46	41	49	45
Burglar alarms	150	19	27	35	19	23	36
Cars, motorcycles starting up/leaving, repairs etc.	137	41	42	34	45	41	33
Radio, TV, music	201	26	54	34	41	54	40
Teenagers' or adults' voices	295	24	64	33	34	62	43
Dogs	201	43	35	32	44	32	29
Parties (when held outdoors)	74	9	34	30	20	65	59
Electric switches	6	0	33	17	33	50	17
DIY (hammering, drilling etc)	110	32	50	15	65	47	17
Children	189	45	63	12	62	59	14
Domestic equipment (vacuum cleaners etc)	27	22	37	7	48	41	4
Lawnmowers and other garden equipment	64	44	20	2	73	23	2
Other noises	75	35	53	44	37	55	47

View on whether noise from road traffic and noise from neighbours is getting worse

NAS99 Road Traffic Noise RT7

Would you say the road traffic noise here, at your home, has been getting better or worse over the past five years?

	Proportion (%)				
	England (n=2356)	Wales (n=147)	Scotland (n=247)	Northern Ireland (n=99)	UK (n=2849)
1 - Definitely better	4	3	5	0	4
2	5	4	14	8	6
3	42	48	40	57	43
4	13	10	15	16	13
5 - Definitely worse	16	16	6	13	15
Have not lived here for 5 years	13	8	16	3	13

NAS99 Noise from Neighbours & Other People Nearby NN8

Would you say that the noise from neighbours and/or other people around here, at your home, has been getting better or worse over the past five years?

	Proportion (%)				
	England (n=2296)	Wales (n=140)	Scotland (n=247)	Northern Ireland (n=99)	UK (n=2782)
1- Definitely better	7	12	7	3	7
2	7	5	15	10	8
3	51	53	43	62	50
4	7	7	9	10	7
5 - Definitely worse	8	4	4	11	7
Have not lived here 5 years	16	9	17	3	15

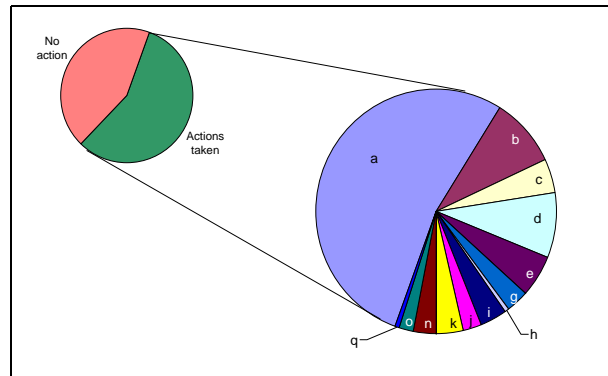
Actions taken in response to noise from neighbours and/or other people nearby

DNN5a NAS99 Detailed Neighbour Noise

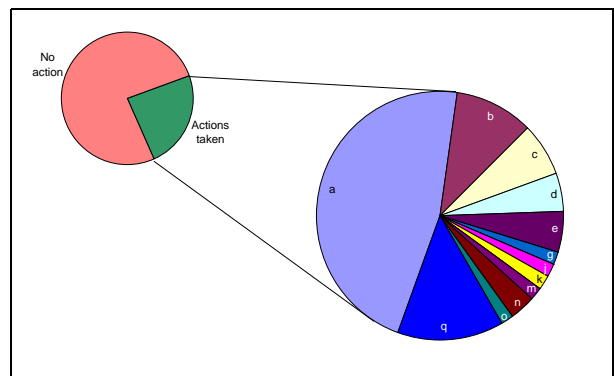
Have you ever done any of the things listed on the card to try to deal with the noise from ... that you hear?

- a) Complained to the person / people / organisation that is making the noise
- b) Complained to the police
- c) Complained to the Environmental Health Department
- d) Complained to another Local Authority (Council) Department
- e) Complained to the Landlord / Housing Department / Housing Association / Other landlord
- f) Complained to a Government Department
- g) Complained to an MP or councillor
- h) Started / signed / joined a campaign or petition
- i) Installed double glazing
- j) Did something else to keep the noise out
- k) Did something to help you sleep (e.g. earplugs, sleeping pills)
- l) Talked to the Citizens Advice Bureau
- m) Took legal advice / action
- n) Did something else
- o) Asked someone else to do one of the above
- p) No action taken
- q) Same action as for another neighbour noise type

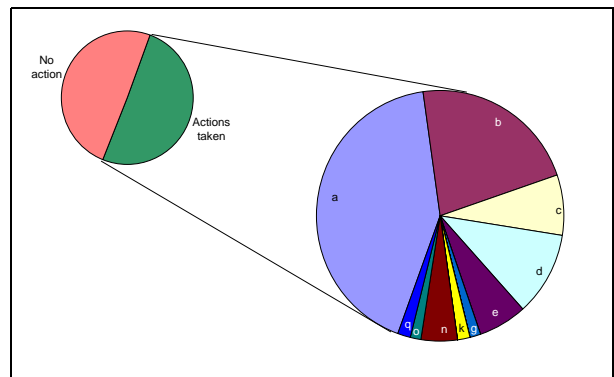
The results from this question are presented in the pie charts opposite for several specific types of noise from neighbours and/or other people nearby. The results are presented as proportions of the subsample that completed a Detailed Neighbour Noise (DNN) questionnaire for that noise type. It should be noted that the DNN questionnaire was only completed by respondents who reported being *moderately*, *very* or *extremely* bothered, annoyed or disturbed by noise from that source.



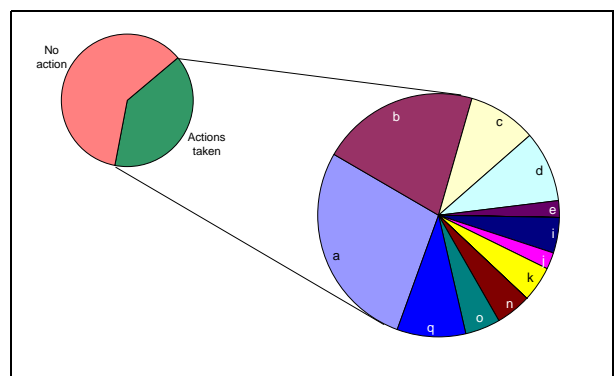
Actions taken for noise from radio, TV, music (n=201)



Actions taken for noise from dogs (n=162)



Actions taken for noise from parties (when held indoors) (n=81)



Actions taken for noise from parties (when held outdoors) (n=74)

Annex B – England & Wales – changes from 1991 to 1999

Noise sources heard

Q6 Main NAS91 & NAS91_99

When you are at home do you, personally, hear any of the following noises? You may mention as many or as few as you like.

Category of environmental noise	1991 (%) (n=2373)	1999 (%) (n=2534)	Significant changes (95% confidence level)
Road traffic	48	54	Increase
Aircraft	41	43	-
Neighbours	19	25	Increase
Other people nearby	15	21	Increase
<i>Neighbours and/or other people nearby (combined category)</i>	28	38	Increase
Trains or railways	13	17	-
Building construction or road works	6	7	-
Sports events	6	7	-
Entertainment or leisure	5	6	-
Farming or agriculture	4	5	-
Factories or works	2	4	-
Commercial premises	2	3	-
None of these	22	17	Decrease

Q10 Main NAS91 & NAS91_99

Which of these kinds of road traffic noise do you hear while you are at home?

Specific noise source	1991 (%) (n=2373)	1999 (%) (n=2534)	Significant changes (95% confidence level)
Private cars/vans	24	32	Increase
Heavy lorries	20	20	-
Other main roads	19	22	-
Smaller lorries/buses	16	16	-
Motor bikes/scooters	13	13	-
Minor roads	12	12	-
Residential/estate roads	10	14	Increase
Police/other sirens	10	14	Increase
Brake squeal	7	6	-
Vehicles starting/stopping/ticking over (at traffic lights, crossings etc.)	5	7	Increase
Air brakes	3	3	-
Noise caused by irregularities in road surface	3	3	-
Milk floats	3	2	-
Motorways	1	6	Increase
None of these other special noise types	29	24	Decrease
None of these road types	12	6	Decrease
None of these vehicle types	9	7	-

Q11 Main NAS91 & NAS91_99

Which of these kinds of noise do you hear from neighbours or from other people nearby?

Specific noise source heard	1991 (%) (n=2373)	1999 (%) (n=2534)	Significant changes (95% confidence level)
People's voices	11	17	Increase
Children	9	16	Increase
Radio/TV/hi-fi	9	12	Increase
Barking dogs or other animals	9	12	-
Cars, motorcycles starting up/leaving, repairs etc.	6	10	Increase
DIY – drilling, hammering etc.	5	7	-
Doors banging	5	7	Increase
Lawnmowers	5	10	Increase
Vacuum cleaners, washing machines etc.	2	3	-
Footsteps	3	4	-
Other neighbour noises	1	2	-

Proportion adversely affected

The proportions of the whole sample who reported hearing and being adversely affected are presented for general categories of environmental noise and specific sources of noise from neighbours and/or other people nearby in the tables below.

A separate Section A supplementary questionnaire was completed for each specific noise source that respondents reported hearing in the Main Questionnaire. Question 13 from Section A has been used to assess the proportion of respondents who reported being adversely affected by each specific noise source.

Environmental noise categories

Category of environmental noise	Proportion adversely affected		Significant changes (95% confidence level)
	1991 (%) (n=2373)	1999 (%) (n=2534)	
Road Traffic (one or more specific sources)	29	30	-
<i>Neighbours and/or other people nearby (one or more specific sources)</i>	<i>21</i>	<i>26</i>	<i>Increase</i>
Aircraft (one or more specific sources)	17	17	-
Trains or railways (one or more specific sources)	4	4	-
Building construction or road works	3	4	-
Entertainment or leisure	3	4	-
Factories or works	2	2	-
Commercial premises	1	2	-
Sports events	1	2	-
Farming of agriculture	1	1	-

Specific sources of noise from neighbours and/or other people nearby

Specific source of noise from neighbours and/or other people nearby	Proportion adversely affected		Significant changes (95% confidence level)
	1991 (%) (n=2373)	1999 (%) (n=2534)	
<i>People's voices</i>	<i>7</i>	<i>11</i>	<i>Increase</i>
<i>Children</i>	<i>5</i>	<i>8</i>	<i>Increase</i>
<i>Radio/TV/hi-fi</i>	<i>6</i>	<i>9</i>	<i>Increase</i>
Barking dogs or other animals	6	7	-
Cars, motorcycles starting up/leaving, repairs etc.	4	5	-
DIY – drilling, hammering etc.	3	4	-
Doors banging	4	4	-
<i>Lawnmowers</i>	<i>1</i>	<i>3</i>	<i>Increase</i>
Footsteps	1	1	-
Vacuum cleaners, washing machines etc.	1	1	-