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National Noise Attitude Survey 2012 (NNAS2012)

Volume 5 – Dwelling, Sociodemographic and Geographic Factors Associated with Responses to Noise

December 2014



Llywodraeth Cymru
Welsh Government



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Any enquiries regarding this document/publication should be sent to us at:

Noise and Nuisance Technical and Evidence Team
DEFRA
Area 2C
Nobel House
17 Smith Square
London
SW1P 3JR

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V5.1 Introduction

Very little is known about which groups within the population are most and least likely to have negative response to noise, or what characteristics would define such groups. Identifying groups most at risk of a negative impact from noise would help to inform the formulation of noise policy and the interpretation of data from any non-representative surveys.

Dwelling, sociodemographic, and geographical factors associated with negative responses to noise were statistically examined to the extent that the data allow in cross-sectional data, to determine whether they were associated with a range of negative responses to noise outcomes.

V5.2 Method

The following section describes the method undertaken to carry out this investigation into variables potentially associated with a negative response to noise outcome.

The relevant numbers from the questionnaire are included where appropriate throughout this document and the full phrasing of the question can be found in Volume V1.A5.

V5.2.1 Key Variables

Negative Responses to Noise Outcomes

Negative responses to noise outcomes for the following questions were examined (question numbers are shown in parentheses):

- In general, how do you feel about the amount of noise around here? (A7);
- When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from ... ? (A9);
 - Road traffic;
 - Neighbours (based on three questions combined, covering neighbours (indoors or outdoors) and/or other people nearby); and
 - Aircraft, airfields and airports;
- Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (O1a/b);
- Does road traffic noise interfere with ... sleeping? (RTN4);
- Does noise from neighbours or other people nearby interfere with ... sleeping? (NN4); and
- How often do you visit an outdoor place in order to find peace and quiet? (O17)

O17 was simply dichotomised as those who didn't visit outdoor places for peace and quiet and those who did visit such places (regardless of frequency).

Noise Building, Construction, Demolition, Renovation and Road Works could have been considered here, but was excluded due to its more transient nature than the included sources. Other sources of noise covered by question A9 were not included in the analysis because of the relatively small proportion of the population reporting being exposed to noise from those sources, leading to small power in the analysis. Variables from within the specific noise source modules could also have been included but they were not available for all respondents due to the filtering employed in the questionnaire design and thus led to low power.

Dwelling Factors

The following dwelling factors were examined:

- Double glazing (H01);
- Year of home construction (H04/05);
- Length of residence (A11);
- Dwelling type (e.g. flat/semi-detached) (A13);
- Access to garden or other private outdoor space (A12); and
- Interviewer record of local noise sources (I02).

Use of data from question I02 was restricted to records of noise from road traffic, neighbours and other people nearby, and aircraft, airports and airfields. Noise from trains and railway stations was also considered, but is not reported as it was underpowered due to the sample size.

Sociodemographic Factors

The following sociodemographic factors were examined:

- Age of respondent (H12);
- Gender of respondent (H13);
- Tenure (H06);
- Children in the household (H14);
- Employment status (H15);
- Work from home (H15a) (data restricted to working population only);
- Shift working (H16) (data restricted to working population only);
- Social class of head of household (H17); and
- Respondent has difficulty hearing (I01).

The variable 'Work from home' could also have taken into account responses to H15b (frequency of working from home) but there were too few in total working from home for frequency to be included.

Geographic factors

The following geographical factors were examined:

- Region (England, Wales, Scotland, Northern Ireland);
- Urban versus rural location (I04); and
- Urban, rural, semi-rural from Local Authority rating (data available for the England population only).

V5.2.2 Statistical Analysis

Distribution of the Negative Response to Noise Variables

Initially, descriptive analyses assessed skew and kurtosis to determine whether the continuous negative responses to noise outcome variables were normally distributed. [Table V5.1](#) summarises the descriptive statistics for the continuous negative response to noise variables.

Negative Response to Noise Variables	N	Mean (SD)	Skew (SE of Skew)	Kurtosis (SE of Kurtosis)	Normal Distribution?*
In general, how do you feel about the amount of noise around here?	2747	2.61 (1.61)	0.87 (0.04)	-0.04 (0.09)	No - skew
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from road traffic?	2747	1.89 (1.02)	1.04 (0.04)	0.46 (0.09)	No – skew & kurtosis
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby?	2747	1.93 (1.09)	1.09 (0.04)	0.42 (0.09)	No – skew & kurtosis
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airports or airfields?	2747	1.48 (0.83)	1.78 (0.04)	2.74 (0.09)	No – skew & kurtosis
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from railways or trains?	2747	1.09 (0.39)	5.15 (0.04)	33.05 (0.09)	No – skew & kurtosis
Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? Version O1a	1352	4.39 (0.80)	-1.37 (0.06)	1.78 (0.13)	No – skew & kurtosis
Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? Version O1b	1395	4.16 (0.97)	-0.87 (0.06)	-0.27 (0.13)	No – skew & kurtosis

* Skew and kurtosis should ideally be 0 for true normality; skew and kurtosis each should fall within twice (\pm) the SE value of skew and kurtosis respectively to be considered a normal distribution.

Table V5.1 – Descriptive Data for the Negative Response to Noise Variables

None of the negative response to noise outcome variables was normally distributed, so all the variables were therefore recoded into categorical variables for further analysis using logistic regression techniques.

Categorisation Process

The negative response to noise outcome variables were dichotomised (reduced to two categories) so that in each case 0 indicated the less negative response to noise and 1 indicated the more negative response. [Table V5.2](#) details how the negative response to noise outcome variables were dichotomised. [Table V5.3](#) shows the descriptive statistics (n, %) for each dichotomised variables.

Negative Response to Noise Variables	Dichotomised Variable
In general, how do you feel about the amount of noise around here? (A7)	Categorised into a dichotomous variable 0 = score of 1 to 4 (positive or neutral) 1 = score of 5 to 7 (negative)
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from road traffic? (A9)	Categorised into a dichotomous variable 0=not at all/a little 1=moderately, very, extremely
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby? (A9)	Categorised into a dichotomous variable 0=not at all/a little 1=moderately, very, extremely
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airport or airfields? (A9)	Categorised into a dichotomous variable 0=not at all/a little 1=moderately, very, extremely
Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (O1a – available for half the sample)	Categorised into a dichotomous variable 0=Not at all 1=A little/a fair amount/a great deal/completely
Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (O1b – available for half the sample)	Categorised into a dichotomous variable 0=Not at all/not very much 1=A little, quite a lot, completely

Table V5.2 - How Continuous Negative Response to Noise Variables were Categorised for Further Analysis

Negative Response to Noise Variables (n=2747)	N	%
In general, how do you feel about the amount of noise around here?		
Positive or neutral (1-4)	2338	85.1
Negative (5-7)	401	14.6
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from road traffic?		
Not at all/a little	2065	75.2
Moderately, very, extremely	682	24.8
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby?		
Not at all/a little	2046	74.5
Moderately, very, extremely	701	25.5
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airport or airfields?		
Not at all/a little	2379	86.6
Moderately, very, extremely	368	13.4

Negative Response to Noise Variables (n=2747)	N	%
Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? Version O1a		
Not at all	743	55.1*
A little/a fair amount/a great deal/completely	605	44.9*
Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? Version O1b		
Not at all/not very much	1047	75.2*
A little/quite a lot/totally	346	24.8*

* These % figures are given for those respondents who completed Version O1a or Version O1b.

Table V5.3 - Description of the Categorical Negative Response to Noise Variables

Regression Models

For each individual variable assessing a dwelling, sociodemographic or geographic factor, univariable regression models were run, assessing the strength of the association between the variable and each of the negative response to noise outcomes.

Dwelling, sociodemographic or geographic variables that showed a significant association with a negative response to noise outcome ($p \leq 0.05$) in the univariable analyses, were then included in a logistic regression model for each outcome variable. The models examine which variables remain associated with the negative response to noise outcome after taking the other significant dwelling, sociodemographic and geographic factors into account.

For two variables ('working from home' and 'shift work') data were available only for the working subsample of the population. Similarly, 'urbanicity' data were available only for the England subsample. To maximise the power of the logistic analyses, these variables were not included in the models.

Interpreting the Regression Models

The following sections present the results for each of the logistic regression analyses. These show odds ratios (which show the odds for having a negative response to noise for each category of the dwelling, sociodemographic or geographic variable compared to a reference group). The reference group is indicated in the tables by having an odds ratio of 1.00 and no confidence interval. As comparisons are made against the reference group, the choice of reference group determines what conclusions are possible. Accordingly, the reference group is chosen either a priori, driven by theory, or by being the largest individual category of the dwelling, sociodemographic or geographic variable.

An odds ratio greater than 1.00, which has a 95% confidence interval that does not cross the value of 1.00 (i.e. lower value is >1.00) shows increased odds of having a negative response to noise for that response category of the dwelling, sociodemographic or geographic variable.

An odds ratio below 1.00, which has a 95% confidence interval that does not include the value of 1.00 (i.e. upper value is <1.00) shows decreased odds of having a negative response for that response category of the dwelling, sociodemographic or geographic variable.

The statistical significance of differences between categories of dwelling, sociodemographic or geographic variable is indicated in the tables (* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$).

V5.3 Feelings About ‘the Amount of Noise Around Here’

For findings from the univariable analysis, see [Appendix V5.A1.1](#).

In the logistic model, the variables that remained statistically significantly associated with feeling negatively about ‘the amount of noise around here’ were:

- Interviewer records of:
 - Road traffic noise; and
 - Aircraft, airport or airfield noise;
- Age;
- Employment status;
- Interviewer’s assessment of hearing problems; and
- Dwelling location.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were double glazing, age of home, length of residency, dwelling type, whether the interviewer recorded noticeable noise from aircraft, airports or airfields, tenure, the presence of children and region.

Respondents living in a home where the interviewer recorded noticeable noise from road traffic were four times as likely to report feeling negatively about the amount of noise around here, after taking the other dwelling, sociodemographic and geographic factors into account (OR=4.27, 95%CI 3.35, 5.46).

Respondents living in a home where the interviewer recorded noticeable noise from aircraft, airports or airfields were nearly twice as likely to report feeling negatively about the amount of noise around here, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.82, 95%CI 1.14, 2.90).

Respondents aged 25-34 were significantly less likely to report feeling negatively about the amount of noise around here compared with respondents aged 45-54 after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.48, 95%CI 0.30, 0.76).

Retired respondents were significantly less likely to report feeling negatively about the amount of noise around here compared with respondents in full-time employment after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.57, 95%CI 0.35, 0.93).

The interviewer's assessment of whether the respondent had a problem with hearing was associated with significantly lower odds of feeling negatively about the amount of noise around here after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.37, 95%CI 0.18, 0.75).

Respondents who lived in the suburbs/outskirts of a large town, or in a large town or small city had increased odds of feeling negatively about the amount of noise around here compared with respondents who lived in a country village or small town (OR=1.50, 95%CI 1.10, 2.04, OR=1.45, 95%CI 1.04, 2.03, respectively).

A7 NNAS2012 In general, how do you feel about the amount of noise around here? (n=2747)			
	N	Odds ratio	95% CI
DWELLING FACTORS			
Double glazing in the home (H01)			
All	2288	1.00	
Some	289	1.29	0.90, 1.85
None	170	1.53	0.98, 2.37
Age of home (H04 + H05)			
Before 1919	478	1.30	0.89, 1.90
1919-1940	547	0.89	0.62, 1.29
1941-1960	443	0.95	0.65, 1.40
1961-1990	875	1.00	
1991-2000	199	0.85	0.50, 1.43
2001-2012	174	0.54	0.30, 1.00
Don't know	31	0.63	0.21, 1.90
How long have you lived in this home? (A11)			
Less than 6 months	133	1.03	0.58, 1.83
6 months but less than 1 year	151	1.02	0.59, 1.77
1 year but less than 2 years	174	1.51	0.90, 2.56
2 years but less than 5 years	357	1.13	0.77, 1.67
5 years but less than 10 years	474	1.29	0.93, 1.80
10 years or more	1458	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	170	1.40	0.83, 2.37
Conversion flat/maisonette	57	0.65	0.28, 1.50
Semi-detached/end of terrace house	1082	0.79	0.57, 1.09
Mid terrace house	430	1.27	0.87, 1.85
Detached house	761	1.00	
Bungalow	229	0.78	0.44, 1.38
Other	18	1.17	0.23, 5.96
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			

A7 NNAS2012 In general, how do you feel about the amount of noise around here? (n=2747)				
	N	Odds ratio	95% CI	
road traffic				
No	2159	1.00		
Yes	588	4.27***	3.35, 5.46	
neighbours or other people nearby				
No	2678	1.00		
Yes	69	1.48	0.77, 2.82	
aircraft, airports or airfields				
No	2629	1.00		
Yes	118	1.82*	1.14, 2.90	
SOCIODEMOGRAPHIC FACTORS				
Age (H12)				
16-19	116	1.05	0.47, 2.33	
20-24	181	1.02	0.58, 1.78	
25-34	312	0.48**	0.30, 0.76	
35-44	430	0.92	0.63, 1.34	
45-54	519	1.00		
55-64	500	0.99	0.65, 1.50	
65-74	416	1.22	0.69, 2.18	
75+	272	0.70	0.33, 1.48	
Tenure (H6)				
Being bought on a mortgage	997	1.06	0.75, 1.49	
Owned outright by household	1052	1.00		
Rented from local authority or from housing association	307	1.11	0.70, 1.77	
Rented from private landlord	347	1.27	0.78, 2.06	
Other	37	1.65	0.69, 3.92	
Any children aged 0-17 (H14)				
No	1859	1.00		
Yes	888	1.14	0.84, 1.53	
Employment status (H15)				
Working Full Time	1057	1.00		
Working Part Time	380	0.75	0.51, 1.09	
Unemployed	93	1.26	0.70, 2.26	
Retired	799	0.57*	0.35, 0.93	
Full Time Education	181	0.56	0.28, 1.10	
Home maker	157	0.85	0.52, 1.39	
Other	76	0.70	0.32, 1.54	
Interviewer's assessment of respondent having hearing problem (I01)				
No	2580	1.00		
Yes – quite a lot or only a bit	163	0.37**	0.18, 0.75	
GEOGRAPHIC FACTORS				
Region				
England	2337	1.00		
Wales	137	0.62	0.33, 1.16	
Scotland	212	0.77	0.46, 1.28	
Northern Ireland	61	0.58	0.24, 1.41	
Is the dwelling located in ... ? (I04)				
The centre of a large city	73	1.35	0.67, 2.69	
Suburbs/outskirts of a large city	846	1.50**	1.10, 2.04	
A large town or small city	519	1.45*	1.04, 2.03	

A7 NNAS2012 In general, how do you feel about the amount of noise around here? (n=2747)			
	N	Odds ratio	95% CI
In a country village or small town	1147	1.00	
In the countryside	159	0.49*	0.24, 0.99

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.4 - Logistic Odds Ratios Showing Odds for Reporting Feeling Negatively About 'the Amount of Noise Around Here' for Dwelling, Sociodemographic, and Geographical Factors

V5.4 Being Bothered, Annoyed or Disturbed by Road Traffic Noise

For findings from the univariable analysis, see [Appendix V5.A1.2](#).

In the logistic model, the variables that remained statistically significantly associated with reporting being bothered, annoyed or disturbed by noise from road traffic, after taking the other dwelling, sociodemographic and geographic factors into account, were:

- Age of home;
- Interviewer records of road traffic noise;
- Respondent's age;
- Employment status;
- Region; and
- Dwelling location.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were double glazing, length of residency, dwelling type, tenure, shift work, having a hearing problem and the urbanicity of the local authority.

Respondents living in homes built before 1919 and in homes built between 1919-1940 had increased in odds of being bothered, annoyed or disturbed by noise from road traffic compared with respondents living in homes built 1961-1990, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.59, 95%CI 1.16, 2.18, OR=1.36, 95%CI 1.02, 1.81, respectively).

Respondents living in a home where the interviewer recorded noticeable noise from road traffic were nearly four times as likely to report being bothered, annoyed or disturbed by noise from road traffic, after taking the other dwelling, sociodemographic and geographic factors into account (OR=3.92, 95%CI 3.18, 4.84).

Respondents aged 75 years or over were significantly less likely to report being bothered, annoyed or disturbed by noise from road traffic than respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.40, 95%CI 0.22, 0.73).

Unemployed respondents were significantly less likely to report being bothered, annoyed or disturbed by noise from road traffic than respondents who were employed full-time, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.52, 95%CI 0.29, 0.93).

Respondents living in Wales were significantly less likely to report being bothered, annoyed or disturbed by noise from road traffic than respondents living in England, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.42, 95%CI 0.25, 0.71).

Respondents who lived in the countryside had decreased odds of feeling negatively about the amount of noise around here compared with respondents who lived in a country village or small town (OR=0.50, 95%CI 0.30, 0.83).

A9 NNAS2012 When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from...ROAD TRAFFIC (n=2747)			
	N	Odds ratio	95% CI
DWELLING FACTORS			
Double glazing in the home (H01)			
All	2288	1.00	
Some	289	0.99	0.72, 1.34
None	170	0.94	0.63, 1.41
Age of home (H04 + H05)			
Before 1919	478	1.59**	1.16, 2.18
1919-1940	547	1.36*	1.02, 1.81
1941-1960	443	0.94	0.69, 1.28
1961-1990	875	1.00	
1991-2000	199	0.82	0.54, 1.26
2001-2012	174	0.70	0.45, 1.11
Don't know	31	0.36	0.11, 1.18
How long have you lived in this home? (A11)			
Less than 6 months	133	0.70	0.42, 1.18
6 months but less than 1 year	151	0.77	0.48, 1.22
1 year but less than 2 years	174	1.04	0.66, 1.61
2 years but less than 5 years	357	1.05	0.76, 1.43
5 years but less than 10 years	474	1.17	0.89, 1.53
10 years or more	1458	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	170	1.51	0.96, 2.37
Conversion flat/maisonette	57	0.85	0.42, 1.73
Semi-detached/end of terrace house	1082	0.95	0.73, 1.23
Mid terrace house	430	1.27	0.92, 1.75
Detached house	761	1.00	
Bungalow	229	1.36	0.91, 2.03
Other	18	1.20	0.33, 4.33
While you were in the home or immediately outside it, was there noticeable noise from outside the home from road traffic? (I02)			
No	2159	1.00	
Yes	588	3.92***	3.18, 4.84

A9 NNAS2012 When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from...ROAD TRAFFIC (n=2747)			
	N	Odds ratio	95% CI
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			
16-19	116	0.61	0.30, 1.25
20-24	181	0.95	0.58, 1.57
25-34	312	0.93	0.64, 1.34
35-44	430	1.20	0.88, 1.64
45-54	519	1.00	
55-64	500	1.11	0.79, 1.54
65-74	416	1.03	0.66, 1.61
75+	272	0.40**	0.22, 0.73
Tenure (H6)			
Being bought on a mortgage	997	0.87	0.66, 1.14
Owned outright by household	1052	1.00	
Rented from local authority or from housing association	307	0.85	0.58, 1.24
Rented from private landlord	347	1.06	0.71, 1.60
Other	37	1.35	0.65, 2.81
Employment status (H15)			
Working FT	1057	1.00	
Working PT	380	0.88	0.65, 1.18
Unemployed	93	0.52*	0.29, 0.93
Retired	799	0.73	0.50, 1.07
FT Education	181	1.10	0.62, 1.98
Home maker	157	0.76	0.59, 1.15
Other	76	1.01	0.56, 1.81
Interviewer's assessment of respondent having hearing problem (I01)			
No	2580	1.00	
Yes – quite a lot or only a bit	163	0.74	0.46, 1.17
DWELLING FACTORS			
Region			
England	2337	1.00	
Wales	137	0.42***	0.25, 0.71
Scotland	212	0.91	0.60, 1.37
Northern Ireland	61	0.90	0.49, 1.66
Is the dwelling located in ... ? (I04)			
The centre of a large city	73	0.74	0.39, 1.40
Suburbs/outskirts of a large city	846	1.06	0.83, 1.35
A large town or small city	519	1.13	0.86, 1.48
In a country village or small town	1147	1.00	
In the countryside	159	0.50**	0.30, 0.83

*p<0.05, **p<0.01, ***p<0.001

Table V5.5 - Multivariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Road Traffic for Dwelling, Sociodemographic, and Geographical Factors

V5.5 Being Bothered, Annoyed or Disturbed by Noise from Neighbours or Other People Nearby

For findings from the univariable analysis, see [Appendix V5.A1.3](#).

In the logistic model, variables remaining statistically significantly associated with reporting being bothered, annoyed or disturbed by noise from neighbours or other people nearby, after taking the other dwelling, sociodemographic and geographic factors into account, were:

- Length of residence;
- Dwelling type;
- Interviewer records of neighbour noise;
- Respondent's age;
- Gender;
- Tenure; and
- Region.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were double glazing, having children, employment status, interviewer's assessment of whether respondent had hearing problems and dwelling location.

Respondents who had lived in their house for less than 6 months were significantly less likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby than those who had lived in their house for ten years or more, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.52, 95%CI 0.31, 0.87).

Respondents living in a purpose-built flat/maisonette or a mid-terrace house were more likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents living in a detached house after taking other dwelling, sociodemographic and geographic factors into account (OR=2.01, 95%CI 1.32, 3.06 , OR=1.58, 95%CI 1.17, 2.11, respectively). Respondents living in a bungalow were less likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents living in a detached house after taking other dwelling, sociodemographic and geographic factors into account (OR=0.54, 95%CI 0.34, 0.87).

Respondents living in a home where the interviewer recorded noticeable noise from neighbours or other people nearby were nearly three times as likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby, after taking the other dwelling, sociodemographic and geographic factors into account (OR=2.94, 95%CI 1.74, 4.94).

Respondents aged 75 years or over were significantly less likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.36, 95%CI 0.20, 0.66).

Female respondents were significantly more likely to report being bothered, annoyed or disturbed by noise from road traffic than male respondents, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.26, 95%CI 1.05, 1.53).

Respondents who were renting from a local authority or from a housing association were more likely to report being bothered, annoyed or disturbed compared with home owners, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.62, 95%CI 1.16, 2.27).

Respondents who lived in Northern Ireland had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents who lived in England, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.45, 95%CI 0.22, 0.89).

A9 NNAS2012 When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby (n=2747)			
	N	Odds ratio	95% CI
DWELLING FACTORS			
Double glazing in the home (H01)			
All	2288	1.00	
Some	289	0.98	0.73, 1.32
None	170	1.14	0.79, 1.65
How long have you lived in this home? (A11)			
Less than 6 months	133	0.52*	0.31, 0.87
6 months but less than 1 year	151	0.72	0.46, 1.12
1 year but less than 2 years	174	0.95	0.63, 1.44
2 years but less than 5 years	357	1.02	0.76, 1.38
5 years but less than 10 years	474	1.06	0.82, 1.36
10 years or more	1458	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	170	2.01***	1.32, 3.06
Conversion flat/maisonette	57	1.37	0.71, 2.63
Semi-detached/end of terrace house	1082	1.17	0.92, 1.49
Mid terrace house	430	1.58**	1.17, 2.11
Detached house	761	1.00	
Bungalow	229	0.54*	0.34, 0.87
Other	18	0.63	0.16, 2.53
While you were in the home or immediately outside it, was there noticeable noise from outside the home from neighbours or other people nearby? (I02)			
No	2678	1.00	
Yes	69	2.94***	1.74, 4.94
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			
16-19	116	0.88	0.48, 1.63

A9 NNAS2012 When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby (n=2747)			
	N	Odds ratio	95% CI
20-24	181	1.00	0.63, 1.58
25-34	312	1.20	0.86, 1.68
35-44	430	1.09	0.80, 1.48
45-54	519	1.00	
55-64	500	0.90	0.64, 1.25
65-74	416	0.95	0.60, 1.50
75+	272	0.36***	0.20, 0.66
Gender (H13)			
Male	1362	1.00	
Female	1385	1.26*	1.05, 1.53
Tenure (H6)			
Being bought on a mortgage	997	1.07	0.82, 1.40
Owned outright by household	1052	1.00	
Rented from local authority or from housing association	307	1.62**	1.16, 2.27
Rented from private landlord	347	1.14	0.77, 1.69
Other	37	1.01	0.47, 2.17
Any children aged 0-17 (H14)			
No	1859	1.00	
Yes	888	0.90	0.71, 1.14
Employment status (H15)			
Working FT	1057	1.00	
Working PT	380	0.92	0.69, 1.23
Unemployed	93	0.58	0.33, 1.00
Retired	799	0.81	0.56, 1.19
FT Education	181	1.54	0.92, 2.59
Home maker	157	0.72	0.48, 1.10
Other	76	1.04	0.60, 1.80
Interviewer's assessment of respondent having hearing problem (I01)			
No	2580	1.00	
Yes – quite a lot or only a bit	163	0.81	0.50, 1.29
GEOGRAPHIC FACTORS			
Region			
England	2337	1.00	
Wales	137	0.89	0.60, 1.32
Scotland	212	0.70	0.47, 1.06
Northern Ireland	61	0.45*	0.22, 0.89
Is the dwelling located in ... ? (I04)			
The centre of a large city	73	0.75	0.42, 1.34
Suburbs/outskirts of a large city	846	1.17	0.93, 1.47
A large town or small city	519	1.08	0.83, 1.40
In a country village or small town	1147	1.00	
In the countryside	159	0.67	0.41, 1.09

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.6 - Multivariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Neighbours or Other People Nearby for Dwelling, Sociodemographic and Geographic Factors

V5.6 Being Bothered, Annoyed or Disturbed by Noise from Aircraft, Airports or Airfields

For findings from the univariable analysis, see [Appendix V5.A1.4](#).

In the logistic model, the variables remaining statistically significantly associated with reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields, after taking the other dwelling, sociodemographic and geographic factors into account, were:

- Interviewer records of aircraft, airport or airfield noise;
- Respondent's age;
- Social group of the head of household;
- Region; and
- Dwelling location.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were dwelling type, access to a garden/outdoor space, tenure, employment status, working at home and the urbanicity of the local authority.

Respondents living in a home where the interviewer recorded noticeable noise from aircraft, airports or airfields were four times more likely to report being bothered, annoyed or disturbed by noise from aircraft, airports or airfields, after taking the other dwelling, sociodemographic and geographic factors into account (OR=4.40, 95%CI 2.87, 6.74).

Respondents aged 25-34 years were 50% less likely to report being bothered, annoyed or disturbed by noise from aircraft, airports or airfields than respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.50, 95%CI 0.31, 0.81).

Respondents where the head of household was in social group C2 or D, had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields compared with respondents where the head of household was in social group A, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.44, 95% 0.26, 0.74, OR=0.43, 95%CI 0.24, 0.79, respectively).

Respondents who lived in Wales or Scotland had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports, or airfields than respondents who lived in England, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.37, 95%CI 0.19, 0.72, OR=0.25, 95%CI 0.10, 0.59, respectively).

Respondents who lived in the centre of a large city or in the countryside had increased odds of being bothered, annoyed or disturbed by noise from aircraft, airport or airfields compared with respondents who lived in a country village or small town, after taking the

other dwelling, sociodemographic and geographic factors into account (OR=2.52, 95%CI1.29, 4.93, OR=1.67, 95%CI 1.05, 2.66, respectively).

A9 NNAS2012 When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airports or airfields (n=2747)			
	N	Odds ratio	95% CI
DWELLING FACTORS			
Dwelling type (A13)			
Purpose-built flat/maisonette	170	0.91	0.45, 1.82
Conversion flat/maisonette	57	0.65	0.19, 2.21
Semi-detached/end of terrace house	1082	0.80	0.60, 1.07
Mid terrace house	430	1.06	0.73, 1.55
Detached house	761	1.00	
Bungalow	229	0.78	0.46, 1.32
Other	18	-	-
Access to garden or other private outdoor space (A12)			
No	118	0.78	0.46, 1.32
Yes	2629	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from aircraft, airports or airfields? (I02)			
No	2629	1.00	
Yes	118	4.40***	2.87, 6.74
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			
16-19	116	0.46	0.18, 1.20
20-24	181	0.59	0.30, 1.16
25-34	312	0.50**	0.31, 0.81
35-44	430	0.80	0.55, 1.16
45-54	519	1.00	
55-64	500	1.11	0.76, 1.63
65-74	416	0.65	0.37, 1.13
75+	272	0.74	0.39, 1.39
Tenure (H6)			
Being bought on a mortgage	997	1.21	0.88, 1.67
Owned outright by household	1052	1.00	
Rented from local authority or from housing association	307	0.69	0.39, 1.24
Rented from private landlord	347	0.79	0.47, 1.31
Other	37	0.83	0.29, 2.30
Employment status (H15)			
Working FT	1057	1.00	
Working PT	380	1.03	0.72, 1.47
Unemployed	93	1.79	0.94, 3.42
Retired	799	0.87	0.55, 1.38
FT Education	181	0.97	0.42, 2.20
Home maker	157	1.42	0.87, 2.31
Other	76	0.07*	0.01, 0.74
Social group of head of household (H17)			
A	166	1.00	
B	714	0.91	0.58, 1.42
C1	824	0.69	0.44, 1.09
C2	492	0.44**	0.26, 0.74
D	299	0.43**	0.24, 0.79

A9 NNAS2012 When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airports or airfields (n=2747)			
	N	Odds ratio	95% CI
E	252	0.50	0.24, 1.03
GEOGRAPHIC FACTORS			
Region			
England	2337	1.00	
Wales	137	0.37**	0.19, 0.72
Scotland	212	0.25**	0.10, 0.59
Northern Ireland	61	0.53	0.21, 1.36
Is the dwelling located in ... ? (I04)			
The centre of a large city	73	2.52**	1.29, 4.93
Suburbs/outskirts of a large city	846	1.14	0.85, 1.54
A large town or small city	519	1.07	0.76, 1.51
In a country village or small town	1147	1.00	
In the countryside	159	1.67*	1.05, 2.66

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.7 - Multivariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Aircraft, Airports or Airfields for Dwelling, Sociodemographic and Geographic Factors

V5.7 Whether Noise Spoils Home Life

Two sets of analyses are presented for whether noise spoils home life, as half of the sample answered Question O1a and the other half answered Question O1b. Results are presented separately for Version O1a and Version O1b. The first section presents the logistic regressions for Question O1a and the second section presents the logistic regressions for Question O1b.

For further information on the two questions and the purpose of presenting 50% of the respondents with a different question to the other 50%, please see the relevant section in Volume V1.A4.4 (Section O).

V5.7.1 Version O1a

For findings from the univariable analysis, see [Appendix V5.A1.5](#).

In the logistic model, the variables remaining statistically significantly associated with reporting noise spoils home life, after taking the other dwelling, sociodemographic and geographic factors into account, were:

- Glazing type;
- Dwelling type;
- Interviewer records of road traffic noise; and
- Respondent's age.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were age of home, length of residency, access to a garden/outdoor space, interviewer records of neighbours or other people nearby and aircraft, airports or airfields, tenure, employment status, social group of the head of household, having a hearing problem and dwelling location.

Respondents whose home had no double glazing were nearly twice as likely to report that noise spoils home life than respondents whose home had all windows double glazed, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.81, 95%CI 1.06, 3.11).

Respondents living in a semi-detached/end of terrace house or a bungalow were significantly less likely to report that noise spoils home life than respondents living in detached homes, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.70, 95%CI 0.50, 0.98, OR=0.42, 95%CI 0.24, 0.73, respectively).

Respondents aged 20-24 years, 65-74 years, and 75 years or over were significantly less likely to report that noise spoils home life than respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.50, 95%CI 0.26, 0.95, OR=0.43, 95%CI 0.24, 0.78, OR=0.27, 95%CI 0.13, 0.56, respectively).

O1a NNAS2012 Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all versus a little, a fair amount, a great deal, completely) (n=1352)

	N	Odds ratio	95% CI
DWELLING FACTORS			
Double glazing in the home (H01)			
All	1150	1.00	
Some	120	1.24	0.80, 1.91
None	82	1.81*	1.06, 3.11
Age of home (H04 + H05)			
Before 1919	239	1.14	0.76, 1.71
1919-1940	283	0.78	0.54, 1.13
1941-1960	197	1.10	0.75, 1.62
1961-1990	416	1.00	
1991-2000	99	1.29	0.78, 2.12
2001-2012	98	1.45	0.88, 2.39
Don't know	7	1.33	0.47, 3.77
How long have you lived in this home? (A11)			
Less than 6 months	57	0.71	0.36, 1.39
6 months but less than 1 year	76	0.60	0.33, 1.09
1 year but less than 2 years	86	0.82	0.46, 1.44
2 years but less than 5 years	170	0.70	0.47, 1.05
5 years but less than 10 years	243	1.11	0.79, 1.56
10 years or more	716	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	87	0.87	0.46, 1.63

O1a NNAS2012 Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all versus a little, a fair amount, a great deal, completely) (n=1352)

	N	Odds ratio	95% CI
Conversion flat/maisonette	31	1.11	0.41, 2.97
Semi-detached/end of terrace house	565	0.70*	0.50, 0.98
Mid terrace house	216	0.79	0.51, 1.21
Detached house	337	1.00	
Bungalow	110	0.42**	0.24, 0.73
Other	5	-	-
Access to garden or other private outdoor space (A12)			
No	61	0.78	0.38, 1.66
Yes	1292	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			
road traffic			
No	1061	1.00	
Yes	291	2.07***	1.53, 2.78
neighbours or other people nearby			
No	1317	1.00	
Yes	36	2.14	0.97, 4.68
aircraft, airports or airfields			
No	1291	1.00	
Yes	62	1.44	0.80, 2.57
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			
16-19	63	0.54	0.24, 1.19
20-24	93	0.50*	0.26, 0.95
25-34	146	0.76	0.47, 1.23
35-44	205	0.95	0.64, 1.40
45-54	269	1.00	
55-64	236	1.19	0.78, 1.80
65-74	204	0.43**	0.24, 0.78
75+	135	0.27***	0.13, 0.56
Tenure (H6)			
Being bought on a mortgage	520	1.13	0.80, 1.59
Owned outright by household	506	1.00	
Rented from local authority or from housing association	145	1.32	0.80, 2.18
Rented from private landlord	158	0.85	0.50, 1.45
Other	23	0.49	0.17, 1.38
Employment status (H15)			
Working FT	559	1.00	
Working PT	172	1.15	0.78, 1.69
Unemployed	32	0.67	0.28, 1.61
Retired	376	1.30	0.79, 2.14
FT Education	98	1.78	0.88, 3.59
Home maker	79	1.23	0.73, 2.08
Other	36	1.19	0.54, 2.63
Social group of head of household (H17)			
A	84	1.00	
B	377	0.86	0.51, 1.45
C1	408	0.67	0.40, 1.13

O1a NNAS2012 Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all versus a little, a fair amount, a great deal, completely) (n=1352)

	N	Odds ratio	95% CI
C2	243	0.80	0.46, 1.40
D	128	1.04	0.55, 1.94
E	112	0.63	0.30, 1.30
Interviewer's assessment of respondent having hearing problem (I01)			
No	1263	1.00	
Yes – quite a lot or only a bit	86	0.65	0.36, 1.17
GEOGRAPHIC FACTORS			
Is the dwelling located in ... ? (I04)			
The centre of a large city	34	1.18	0.51, 2.73
Suburbs/outskirts of a large city	398	1.29	0.94, 1.76
A large town or small city	273	0.85	0.61, 1.20
In a country village or small town	559	1.00	
In the countryside	86	0.64	0.38, 1.09

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.8 - Multivariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1a) for Dwelling, Sociodemographic and Geographic Factors

V5.7.2 Version O1b

For findings from the univariable analysis, see [Appendix V5.A1.6](#).

In the logistic model, the variables remaining statistically significantly associated with reporting noise spoils home life, after taking the other dwelling, sociodemographic and geographic factors into account were:

- Dwelling type;
- Interviewer records of:
 - Road traffic noise; and
 - Noise from neighbours or other people nearby;
- Employment status; and
- Region.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were double glazing, age of home, interviewer record of noticeable noise from aircraft, airport or airfields, age of respondent, tenure, having children in the household and the urbanicity of the local authority.

Respondents living in a mid terrace house were significantly more likely to report that noise spoils home life than respondents living in detached homes, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.56, 95%CI 1.00, 2.41).

Respondents living in a home where the interviewer recorded noticeable noise from road traffic or neighbour noise were two to three times more likely to report noise spoils home life, after taking the other dwelling, sociodemographic and geographic factors into account (OR=2.31, 95%CI 1.69, 3.14, OR=2.92, 95%CI 1.36, 6.27, respectively).

Respondents who were unemployed or retired were significantly less likely to report that noise spoils home life than respondents who worked full-time, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.39, 95%CI 0.18, 0.82, OR=0.55, 95%CI 0.32, 0.96).

Respondents who lived in Scotland or Northern Ireland had significantly lower odds of reporting that noise spoils home life than respondents who lived in England, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.49, 95%CI 0.26, 0.93, OR=0.22, 95%CI 0.06, 0.77, respectively).

O1b NNAS2012 Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all/a little versus a fair amount, a great deal, completely) (N=1352)

	N	Odds ratio	95% CI
DWELLING FACTORS			
Double glazing in the home (H01)			
All	1138	1.00	
Some	169	1.25	0.83, 1.90
None	88	1.02	0.60, 1.74
Age of home (H04 + H05)			
Before 1919	239	0.95	0.61, 1.48
1919-1940	264	0.68	0.44, 1.04
1941-1960	246	1.07	0.71, 1.59
1961-1990	459	1.00	
1991-2000	100	1.01	0.58, 1.75
2001-2012	75	0.85	0.44, 1.65
Don't know	11	1.09	0.28, 4.21
Dwelling type (A13)			
Purpose-built flat/maisonette	83	1.68	0.90, 3.14
Conversion flat/maisonette	26	2.06	0.76, 5.58
Semi-detached/end of terrace house	517	1.17	0.82, 1.67
Mid terrace house	214	1.56*	1.00, 2.41
Detached house	423	1.00	
Bungalow	119	0.76	0.41, 1.40
Other	13	1.11	0.25, 4.86
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			
road traffic			
No	1099	1.00	
Yes	296	2.31***	1.69, 3.14
neighbours or other people nearby			
No	1362	1.00	
Yes	33	2.92**	1.36, 6.27
aircraft, airports or airfields			
No	1338	1.00	
Yes	56	1.77	0.96, 3.27

O1b NNAS2012 Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all/a little versus a fair amount, a great deal, completely) (N=1352)			
	N	Odds ratio	95% CI
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			
16-19	51	1.15	0.44, 3.01
20-24	89	1.10	0.56, 2.14
25-34	166	1.15	0.71, 1.87
35-44	224	1.04	0.67, 1.63
45-54	250	1.00	
55-64	264	0.95	0.59, 1.53
65-74	211	1.75	0.92, 3.32
75+	137	0.44	0.19, 1.04
Tenure (H6)			
Being bought on a mortgage	490	0.91	0.62, 1.34
Owned outright by household	532	1.00	
Rented from local authority or from housing association	162	1.15	0.70, 1.89
Rented from private landlord	189	0.77	0.45, 1.31
Other	22	1.47	0.53, 4.09
Any children aged 0-17 (H14)			
No	962	1.00	
Yes	432	1.10	0.78, 1.55
Employment status (H15)			
Working FT	498	1.00	
Working PT	208	0.91	0.61, 1.37
Unemployed	61	0.39*	0.18, 0.82
Retired	423	0.55*	0.32, 0.96
FT Education	83	0.69	0.30, 1.55
Home maker	78	1.17	0.67, 2.04
Other	42	1.05	0.46, 2.24
GEOGRAPHIC FACTORS			
Region			
England	1171	1.00	
Wales	99	0.85	0.47, 1.53
Scotland	81	0.49*	0.26, 0.93
Northern Ireland	44	0.22*	0.06, 0.77
Is the dwelling located in ... ? (I04)			
The centre of a large city	587	1.23	0.56, 2.70
Suburbs/outskirts of a large city	39	1.33	0.95, 1.87
A large town or small city	449	1.33	0.91, 1.95
In a country village or small town	246	1.00	
In the countryside	73	0.50	0.22, 1.14

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.9 - Multivariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1b) for Dwelling, Sociodemographic and Geographic Factors

V5.7.3 Comparison of Logistic Analyses for Version O1a and Version O1b

[Table V5.10](#) below summarises the variables remaining statistically significantly associated with reporting that noise spoils home life in the logistic model, after taking the other dwelling, sociodemographic and geographic factors into account, for both versions of the question.

Variables Remaining Statistically Significant	Version O1a (n=1352)	Version O1b (n=)
Glazing type	√	
Dwelling type	√	√
Interviewer records of road traffic noise	√	√
Interviewer records of noise from neighbours and other people nearby		√
Respondent's age	√	
Employment status		√
Region		√

Table V5.10 – Comparison of Variables Remaining Statistically Significantly Associated with Reporting Noise Spoils Home Life (Version O1a and **B**VersionO1b) After Taking the Other Dwelling, Sociodemographic and Geographic Factors into Account

Dwelling type and interviewer records of road traffic noise were consistently associated with reports of noise spoiling home life across the different versions of the question. The other factors were not consistently associated with reports of noise spoiling home life, across the two sets of analyses. The different categorisation of the O1a and O1b variables have resulted in a different prevalence for those reporting noise spoils home life to some extent (45% versus 51%), which could explain these differences. It also has to be borne in mind, that each set of analysis has reduced power, as it is conducted on only half of the sample, compared to the other analyses reported in this volume. The lack of associations and different associations across the two versions observed for some of the dwelling, sociodemographic and geographic factors may be a result of low power to detect significant differences.

V5.8 Sleep Disturbance due to Road Traffic Noise

For findings from the univariable analysis, see [Appendix V5.A1.7](#).

In the logistic model the variables remaining statistically significantly associated with reporting road traffic noise interfering with sleeping, after taking the other dwelling, sociodemographic and geographic factors into account, were:

- Age of home;
- Length of residence;
- Dwelling type;
- Interviewer record of road traffic noise;

- Respondent's age;
- Employment status; and
- Social group of the head of household.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were tenure, having children in the household, shift work, having a hearing problem, region, dwelling location and the urbanicity of the local authority. Hence, no geographical factors were significant in the univariable analyses for this outcome.

Respondents living in homes built before 1919, between 1941-1960, and between 1991-2000 had increased odds of reporting road traffic noise interfering with sleeping than respondents living in homes built 1961-1990, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.51 95%CI 1.09, 2.09; OR=1.72 95%CI 1.22, 2.42; OR=2.53 95%CI 1.65, 3.87, respectively).

Respondents who had lived in their homes for less than 6 months had decreased odds of reporting road traffic noise interfering with sleeping than respondents who had lived in their homes for 10 years or more, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.29 95%CI 0.15, 0.55).

Respondents who lived in a conversion flat/maisonette had decreased odds of reporting road traffic noise interfering with sleeping than respondents who lived in a detached house, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.30 95%CI 0.11, 0.83).

Interviewer record of noticeable noise from road traffic was associated with increased odds of reporting road traffic noise interfering with sleeping, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.59 95%CI 1.25, 2.02).

Respondents aged 20-24 had twice the odds of reporting road traffic noise interfering with sleeping compared with respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=2.00 95%CI 1.17, 3.41). Respondents aged 75 years and above had significantly decreased odds of reporting road traffic noise interfering with sleeping compared with respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.23 95%CI 0.09, 0.54).

Respondents who were retired had decreased odds of reporting road traffic noise interfering with sleeping compared with respondents who worked full-time, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.49 95%CI 0.31, 0.77).

Respondents where the head of household was in social group C1 or C2 had decreased odds of reporting road traffic noise interfering with sleeping compared with respondents where the head of household was in social group A, after taking the other dwelling,

sociodemographic and geographic factors into account (OR=0.60 95%CI 0.38, 0.95, OR=0.47, 95%CI 0.29, 0.77, respectively).

RTN4 NNAS2012 Road traffic noise interferes with sleeping (n=1967)			
	N	Odds ratio	95% CI
DWELLING FACTORS			
Age of home (H04 + H05)			
Before 1919	385	1.51*	1.09, 2.09
1919-1940	418	1.32	0.96, 1.82
1941-1960	286	1.72**	1.22, 2.42
1961-1990	604	1.00	
1991-2000	132	2.53***	1.65, 3.87
2001-2012	118	1.15	0.71, 1.86
Don't know	23	2.04	0.83, 5.01
How long have you lived in this home? (A11)			
Less than 6 months	90	0.29***	0.15, 0.55
6 months but less than 1 year	108	0.74	0.44, 1.23
1 year but less than 2 years	118	0.85	0.52, 1.40
2 years but less than 5 years	268	0.78	0.55, 1.10
5 years but less than 10 years	349	0.97	0.72, 1.30
10 years or more	1034	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	116	0.91	0.54, 1.52
Conversion flat/maisonette	38	0.30*	0.11, 0.83
Semi-detached/end of terrace house	773	1.01	0.76, 1.34
Mid terrace house	343	1.18	0.84, 1.66
Detached house	549	1.00	
Bungalow	138	0.88	0.50, 1.53
Other	10	-	-
While you were in the home or immediately outside it, was there noticeable noise from outside the home from road traffic? (I02)			
No	1460	1.00	
Yes	507	1.59***	1.25, 2.02
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			
16-19	84	1.29	0.64, 2.64
20-24	136	2.00*	1.17, 3.41
25-34	228	1.10	0.74, 1.63
35-44	333	1.22	0.87, 1.71
45-54	393	1.00	
55-64	368	1.04	0.72, 1.51
65-74	272	0.80	0.46, 1.39
75+	150	0.23***	0.09, 0.54
Tenure (H6)			
Being bought on a mortgage	763	0.85	0.63, 1.14
Owned outright by household	708	1.00	
Rented from local authority or from housing association	204	0.87	0.55, 1.38
Rented from private landlord	256	0.87	0.55, 1.39
Other	35	1.32	0.58, 2.98
Any children aged 0-17 (H14)			

RTN4 NNAS2012 Road traffic noise interferes with sleeping (n=1967)			
	N	Odds ratio	95% CI
No	1305	1.00	
Yes	662	1.22	0.93, 1.60
Employment status (H15)			
Working FT	778	1.00	
Working PT	274	1.09	0.80, 1.50
Unemployed	67	0.66	0.36, 1.23
Retired	526	0.49**	0.31, 0.77
FT Education	145	1.05	0.58, 1.92
Home maker	126	0.74	0.47, 1.15
Other	50	0.73	0.35, 1.51
Social group of head of household (H17)			
A	125	1.00	
B	542	0.66	0.42, 1.04
C1	588	0.60*	0.38, 0.95
C2	350	0.47**	0.29, 0.77
D	210	0.82	0.48, 1.38
E	152	0.87	0.46, 1.65
Interviewer's assessment of respondent having hearing problem (I01)			
No	1867	1.00	
Yes – quite a lot or only a bit	96	0.85	0.47, 1.52

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.11 - Multivariable Odds Ratios Showing Odds for Reporting that Road Traffic Noise Interferes with Sleeping for Dwelling, Sociodemographic and Geographic¹ Factors

V5.9 Sleep Disturbance due to Neighbour Noise

For findings from the univariable analysis, see [Appendix V5.A1.8](#).

In the logistic model, variables remaining statistically significantly associated with reporting neighbour noise interfering with sleeping, after taking the other dwelling, sociodemographic and geographic factors into account, were:

- Dwelling type;
- Respondent's age;
- Gender; and
- Dwelling location.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were double glazing, age of home, tenure, children in the household; employment status; social group of the head of household, having a hearing problem, region and the urbanicity of the local authority.

¹ No geographical factors were significant in the univariable analyses for this outcome.

Respondents who lived in a semi-detached/end of terrace house or a mid-terrace house had increased odds of reporting neighbour noise interfering with sleeping than respondents who lived in a detached house, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.75 95%CI 1.30, 2.37, OR=1.47, 95%CI 1.02, 2.12, respectively). Respondents who lived in a bungalow had decreased odds of reporting neighbour noise interfering with sleeping than respondents who lived in a detached house, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.48 95%CI 0.23, 0.98).

Respondents aged 55-64, 65-74, and 75 years and above had significantly decreased odds of reporting neighbour noise interfering with sleeping compared with respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.64 95%CI 0.43, 0.94; OR=0.45, 95%CI 0.26, 0.78; OR=0.12 95%CI 0.05, 0.31, respectively).

Female respondents had 28% higher odds of reporting neighbour noise interfering with sleeping compared with male respondents, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.28, 95%CI 1.02, 1.60).

Respondents who lived in the suburbs/outskirts of a large city had increased odds of reports of neighbour noise interfering with sleeping compared with respondents who lived in a country village or small town, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.32, 95%CI 1.01, 1.73).

NN04 NNAS2012 Neighbour noise interferes with sleeping (n=1891)			
	N	Odds ratio	95% CI
DWELLING FACTORS			
Double glazing in the home (H01)			
All	1571	1.00	
Some	195	1.06	0.74, 1.53
None	125	1.42	0.91, 2.21
Age of home (H04 + H05)			
Before 1919	346	1.17	0.82, 1.67
1919-1940	378	0.84	0.60, 1.17
1941-1960	313	1.06	0.76, 1.49
1961-1990	580	1.00	
1991-2000	131	1.52	0.98, 2.36
2001-2012	119	0.96	0.60, 1.54
Don't know	23	0.66	0.24, 1.79
Dwelling type (A13)			
Purpose-built flat/maisonette	131	1.27	0.77, 2.11
Conversion flat/maisonette	44	0.42	0.17, 1.07
Semi-detached/end of terrace house	753	1.75***	1.30, 2.37
Mid terrace house	353	1.47*	1.02, 2.12
Detached house	493	1.00	
Bungalow	106	0.48*	0.23, 0.98
Other	10	0.67	0.11, 4.03
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			

NN04 NNAS2012 Neighbour noise interferes with sleeping (n=1891)			
	N	Odds ratio	95% CI
16-19	89	1.12	0.57, 2.20
20-24	142	1.20	0.72, 1.98
25-34	226	1.00	0.69, 1.45
35-44	310	0.77	0.55, 1.09
45-54	372	1.00	
55-64	359	0.64*	0.43, 0.94
65-74	271	0.45**	0.26, 0.78
75+	121	0.12***	0.05, 0.31
Gender (H13)			
Male	917	1.00	
Female	973	1.28*	1.02, 1.60
Tenure (H6)			
Being bought on a mortgage	740	0.76	0.56, 1.03
Owned outright by household	664	1.00	
Rented from local authority or from housing association	216	0.88	0.56, 1.38
Rented from private landlord	241	0.74	0.48, 1.14
Other	30	1.39	0.62, 3.11
Any children aged 0-17 (H14)			
No	1264	1.00	
Yes	627	1.23	0.94, 1.61
Employment status (H15)			
Working FT	768	1.00	
Working PT	282	1.03	0.74, 1.42
Unemployed	58	0.51	0.26, 1.00
Retired	476	0.78	0.49, 1.22
FT Education	148	0.95	0.53, 1.67
Home maker	113	0.64	0.39, 1.05
Other	44	2.16	1.04, 4.46
Social group of head of household (H17)			
A	113	1.00	
B	514	1.33	0.80, 2.22
C1	577	1.21	0.73, 2.01
C2	344	0.75	0.43, 1.29
D	197	1.03	0.57, 1.87
E	146	1.34	0.67, 2.69
Interviewer's assessment of respondent having hearing problem (I01)			
No	1801	1.00	
Yes – quite a lot or only a bit	86	1.17	0.64, 2.13
GEOGRAPHICAL FACTORS			
Is the dwelling located in ... ? (I04)			
The centre of a large city	59	0.76	0.37, 1.53
Suburbs/outskirts of a large city	643	1.32*	1.01, 1.73
A large town or small city	354	1.05	0.77, 1.43
In a country village or small town	760	1.00	
In the countryside	72	0.71	0.37, 1.36

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.12 - Multivariable Odds Ratios Showing Odds for Reporting that Neighbour Noise Interferes with Sleeping for Dwelling, Sociodemographic and Geographic Factors

V5.10 Differences in Use of Quiet Areas

For findings from the univariable analysis, see [Appendix V5.A1.9](#).

In the logistic model, the variables remaining statistically significantly associated with the use of quiet areas, after taking the other dwelling, sociodemographic and geographic factors into account, were:

- Age of home;
- Dwelling type;
- Interviewer record of noticeable road traffic noise;
- Respondent's age;
- Children;
- Employment status;
- Social group of head of household;
- Region; and
- Dwelling location.

Variables that had significant effects in the univariable analysis, but were no longer significant when other variables were taken into account were tenure, working from home, shift work, having a hearing problem and the urbanicity of the local authority.

Respondents living in homes built before 1919 had increased odds of reporting use of quiet areas than respondents living in homes built 1961-1990, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.39, 95%CI 1.05, 1.84). Respondents living in homes built 1941-1960 and 2001-2012 had decreased odds of reporting use of quiet areas than respondents living in homes built 1961-1990, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.69, 95%CI 0.52, 0.91; OR=0.62, 95%CI 0.41, 0.95, respectively).

Respondents who lived in a purpose-built flat/maisonette or a mid-terrace house had increased odds of reporting use of quiet areas than respondents who lived in a detached house, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.84, 95%CI 1.21, 2.79; OR=1.35, 95%CI 1.00, 1.82, respectively).

Interviewer record of noticeable noise from road traffic was associated with increased odds of reporting use of quiet areas, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.42, 95%CI 1.15, 1.75).

Respondents aged 20-24, and 75 years and above had significantly decreased odds of reporting use of quiet areas compared with respondents aged 45-54, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.55, 95%CI 0.34, 0.88; OR=0.35, 95%CI 0.20, 0.60; respectively).

Respondents with children in the household had increased odds of reporting use of quiet areas compared with respondents without children in the household, after taking the other

dwelling, sociodemographic and geographic factors into account (OR=1.36, 95%CI 1.08, 1.70).

Respondents who were unemployed had 50% lower odds of reporting use of quiet areas compared with respondents who worked full-time, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.50, 95%CI 0.29, 0.87).

Respondents where the head of household was in social group B, C1, or D had increased odds of reporting use of quiet areas compared with respondents where the head of household was in social group A, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.67, 95%CI 0.46, 0.97; OR=0.59, 95%CI 0.41, 0.86; OR=0.57, 95%CI 0.36, 0.88, respectively).

Respondents living in Scotland or Northern Ireland had decreased odds of reporting use of quiet areas compared with respondents living in England, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.48, 95%CI 0.31, 0.73; OR=0.39, 95%CI 0.18, 0.82, respectively).

Respondents who lived in the suburbs/outskirts of a large city or in a large town or small city had increased odds of reporting use of quiet areas compared with respondents who lived in a country village or small town, after taking the other dwelling, sociodemographic and geographic factors into account (OR=1.43, 95%CI 1.14, 1.79; OR=1.74, 95%CI 1.36, 2.22, respectively). Respondents living in the countryside reported decreased odds of use of quiet areas compared with respondents who lived in a country village or small town, after taking the other dwelling, sociodemographic and geographic factors into account (OR=0.40, 95%CI 0.24, 0.66).

O16 NNAS2012 Do you ever visit outdoor places in order to find somewhere peaceful or quiet? (n=2747)			
	N	Odds ratio	95% CI
DWELLING FACTORS			
Age of home (H04 + H05)			
Before 1919	478	1.39*	1.05, 1.84
1919-1940	547	0.99	0.76, 1.29
1941-1960	443	0.69*	0.52, 0.91
1961-1990	875	1.00	
1991-2000	199	1.10	0.77, 1.56
2001-2012	174	0.62*	0.41, 0.95
Don't know	31	1.43	0.65, 3.12
Dwelling type (A13)			
Purpose-built flat/maisonette	170	1.84**	1.21, 2.79
Conversion flat/maisonette	57	1.34	0.70, 2.53
Semi-detached/end of terrace house	1082	1.10	0.87, 1.40
Mid terrace house	430	1.35*	1.00, 1.82
Detached house	761	1.00	
Bungalow	229	0.79	0.52, 1.18
Other	18	1.09	0.30, 3.98

O16 NNAS2012 Do you ever visit outdoor places in order to find somewhere peaceful or quiet? (n=2747)			
	N	Odds ratio	95% CI
While you were in the home or immediately outside it, was there noticeable noise from outside the home from road traffic? (I02)			
No	2159	1.00	
Yes	588	1.42***	1.15, 1.75
SOCIODEMOGRAPHIC FACTORS			
Age (H12)			
16-19	116	0.52	0.27, 1.00
20-24	181	0.55*	0.34, 0.88
25-34	312	0.83	0.60, 1.14
35-44	430	0.96	0.73, 1.28
45-54	519	1.00	
55-64	500	0.87	0.64, 1.19
65-74	416	0.77	0.50, 1.19
75+	272	0.35***	0.20, 0.60
Tenure (H6)			
Being bought on a mortgage	997	0.80	0.62, 1.02
Owned outright by household	1052	1.00	
Rented from local authority or from housing association	307	0.72	0.50, 1.05
Rented from private landlord	347	0.88	0.62, 1.24
Other	37	0.50	0.22, 1.12
Any children aged 0-17 (H14)			
No	1859	1.00	
Yes	888	1.36**	1.08, 1.70
Employment status (H15)			
Working FT	1057	1.00	
Working PT	380	0.90	0.68, 1.17
Unemployed	93	0.50*	0.29, 0.87
Retired	799	0.75	0.52, 1.07
FT Education	181	0.90	0.52, 1.55
Home maker	157	0.93	0.63, 1.35
Other	76	1.06	0.61, 1.85
Social group of head of household (H17)			
A	166	1.00	
B	714	0.67*	0.46, 0.97
C1	824	0.59**	0.41, 0.86
C2	492	0.74	0.49, 1.10
D	299	0.57*	0.36, 0.88
E	252	0.62	0.37, 1.03
Interviewer's assessment of respondent having hearing problem (I01)			
No	2580	1.00	
Yes – quite a lot or only a bit	163	0.91	0.60, 1.39
GEOGRAPHIC FACTORS			
Region			
England	2337	1.00	
Wales	137	0.85	0.58, 1.24
Scotland	212	0.48***	0.31, 0.73
Northern Ireland	61	0.39*	0.18, 0.82
Is the dwelling located in ... ? (I04)			
The centre of a large city	73	1.09	0.63, 1.89

O16 NNAS2012 Do you ever visit outdoor places in order to find somewhere peaceful or quiet? (n=2747)			
	N	Odds ratio	95% CI
Suburbs/outskirts of a large city	846	1.43**	1.14, 1.79
A large town or small city	519	1.74***	1.36, 2.22
In a country village or small town	1147	1.00	
In the countryside	159	0.40***	0.24, 0.66

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.13 - Multivariable Odds Ratios Showing Odds for Use of Quiet Areas (O17=1, 2 or 3) for Dwelling, Sociodemographic and Geographic Factors

V5.11 Summary

V5.11.1 Introduction

The cross-sectional analyses reported here aim to identify groups within the population who are most and least likely to have a negative response to noise. The analyses are, however, limited by the cross-sectional nature of the data, which allows dwelling, sociodemographic and geographic factors that are *associated with* negative responses to noise to be identified; these factors are not necessarily *causal predictors* of future negative responses to noise.

Where an association is seen, various explanations can be suggested and it is generally not possible to decide between them, from the evidence available or the analysis conducted. For example, differences in response may arise because of differences in noise environment (e.g. whether there is a main road nearby), noise exposure (e.g. because of variation in how much time someone spends at home), response to the same exposure (e.g. because of age), or choices made on the basis of the importance placed on noise (e.g. choice of where to live).

Strengths of the survey analyses include the use of a representative dataset; the use of a range of negative noise outcomes measures, assessing a range of different noise sources; and adjustment for a wide range of dwelling, sociodemographic, and geographic factors. It is also important to be aware of the limitations of the analysis. The analysis included multiple statistical testing, which increases the likelihood of type 1 errors (i.e. finding significant associations by chance). It is therefore unwise to place great weight on any individual finding. Also, there were no objective noise measurements at the respondents' homes and the analysis therefore depends entirely on self-report data and limited interviewer observations.

[Table V5.14](#) summarises the factors associated with each of the negative response outcomes, *from the logistic models* (the univariable analysis is, in effect, superseded by

the logistic analysis). Several factors stand out as being associated with a range of the negative response to noise outcomes and these are discussed below.

V5.11.2 Interviewer Records of Noise Sources

Whilst NNAS2012 did not measure noise levels *per se* at the respondents' homes, the interviewers recorded whether they noticed noise at the respondent's home (inside or immediately outside), other than any noise the respondent household was making.

- Interviewer records of noticeable noise from road traffic were significantly associated with feeling negatively about the amount of noise around here; being bothered, annoyed or disturbed by road traffic noise; and reports of noise spoiling home life (both Version O1a & Version O1b);
- Interviewer records of noticeable noise from aircraft, airports or airfields were significantly associated with feeling negatively about the amount of noise around here and being bothered, annoyed or disturbed by noise from aircraft, airports or airfields; and
- Interviewer records of noticeable noise from neighbours or other people nearby were significantly associated with being bothered, annoyed or disturbed by noise from neighbours or other people nearby; noise spoiling home life (Version O1b), and the use of quiet areas.

One advantage of the interviewer records is that they provide a quick and simple indicator of noise exposure. In the case of neighbour noise, such an indicator may be particularly useful, given the problems with obtaining a useful objective measure of noise exposure. These results are therefore suggestive that negative responses to noise are highly associated with noise levels, confirming previous studies which show strong associations between actual noise levels and negative responses to noise such as annoyance (Miedema & Oudshoorn, 2001; Babisch et al, 2009).

Outcome variable	Dwelling Factors	Sociodemographic Factors	Geographic Factors
Feeling negatively about the amount of noise around here (A7)	<ul style="list-style-type: none"> • Interviewer record of road traffic noise (-) • Interviewer record of aircraft, airport, or airfield noise (-) 	<ul style="list-style-type: none"> • Age of respondent (+ 25-34) • Employment (+ retired) • Hearing problems (+) 	<ul style="list-style-type: none"> • Location of dwelling (- suburbs/outskirts large city; - large town or small city; + countryside)
Bothered, annoyed, or disturbed, by road traffic noise (A9)	<ul style="list-style-type: none"> • Age of home (- before 1919; - 1919-1940) • Interviewer record of road traffic noise (-) 	<ul style="list-style-type: none"> • Age of respondent (+ 75 years or over) • Employment (+ unemployed) 	<ul style="list-style-type: none"> • Region (+ Wales) • Location of dwelling (+ countryside)
Bothered, annoyed, or disturbed, by noise from neighbours or other people nearby (A9)	<ul style="list-style-type: none"> • Length of residence, (+ less than 6 months) • Dwelling type (- purpose-built flat / maisonette; - mid-terrace house; + bungalow) • Interviewer record of noise from neighbours or other people nearby (-) 	<ul style="list-style-type: none"> • Age of respondent (+ 75 years or over) • Gender (- female) • Tenure (- rented from LA/housing association) 	<ul style="list-style-type: none"> • Region (+ Northern Ireland)
Bothered, annoyed, or disturbed, by aircraft, airport or airfield noise (A9)	<ul style="list-style-type: none"> • Interviewer record of aircraft, airport, or airfield noise (-) 	<ul style="list-style-type: none"> • Age of respondent (+ 25-34) • Social group (+ D; + E) 	<ul style="list-style-type: none"> • Region (+ Wales; + Scotland) • Location of dwelling (- centre of a large city; - countryside)
Whether noise spoils home life (Version O1a)	<ul style="list-style-type: none"> • Double glazing (- none) • Dwelling type (+ semi-detached/end of terrace; + bungalow) • Interviewer record of road traffic noise (-) 	<ul style="list-style-type: none"> • Age of respondent (+ 20-24; + 65-74; + 75 years or over) 	
Whether noise spoils home life (Version O1b)	<ul style="list-style-type: none"> • Dwelling type (- mid terrace house) • Interviewer record of road traffic noise (-) • Interviewer record of noise from neighbours or other people nearby (-) 	<ul style="list-style-type: none"> • Employment (+ unemployed; + retired) 	<ul style="list-style-type: none"> • Region (+ Northern Ireland; + Scotland)

Outcome variable	Dwelling Factors	Sociodemographic Factors	Geographic Factors
Sleep disturbance by road traffic noise (RTN04)	<ul style="list-style-type: none"> • Age of home (- before 1919; - 1941-1960; - 1991-2000) • Length of residence (+ less than 6 months) • Dwelling type (+ conversion flat / maisonette) • Interviewer record of road traffic noise (-) 	<ul style="list-style-type: none"> • Age of respondent (- 20-24; + 75 years or over) • Employment (+ retired) • Social group (+ C1; + C2) 	
Sleep disturbance by neighbour noise (NN04)	<ul style="list-style-type: none"> • Dwelling type (- semi-detached/end of terrace; - mid-terrace; + bungalow) 	<ul style="list-style-type: none"> • Age of respondent (+ 55-64; + 65-74; + 75 years or over) • Gender (- female) 	<ul style="list-style-type: none"> • Location of dwelling (- suburbs/outskirts large city)
Use of quiet areas (O17)	<ul style="list-style-type: none"> • Age of home (- before 1919; + 1941-1960; + 2001-2012) • Dwelling type (- purpose-built flat / maisonette; - mid-terrace house) • Interviewer record of road traffic noise (-) 	<ul style="list-style-type: none"> • Age of respondent (+ 20-24; + 75 years or over) • Children (-) • Employment (+ unemployed) • Social group (+ B; + C1; + D) 	<ul style="list-style-type: none"> • Region (+ Scotland, + Northern Ireland) • Location of dwelling (- suburbs / outskirts large city; - large town or small city; + countryside)

Table V5.14 - Summary of the Logistic Models for each of the Noise Outcome Variables

² Key: + A more positive outcome. - A more negative outcome.

The findings should, nevertheless, be treated with some caution because interviewers may have been influenced by what respondents said during interviews. For example, the interviewer might have listened more intently for a particular noise type if the respondent had mentioned it. This uncertainty could be mitigated in future surveys by having the interviewer record noises noticed at each location before commencing an interview there. In practical terms, this would be more difficult for noise from neighbours, particularly noise from neighbours inside their homes, because the interviewer would only have a relatively brief time inside the respondent's home before commencing the interview.

V5.11.3 Age of the Home

Respondents living in older homes tended to report more negative responses, particularly in relation to road traffic noise, compared with the reference group of homes built 1961-1990. This effect was significant for:

- Homes built before 1919 (for being bothered, annoyed, or disturbed by road traffic noise; sleep disturbance by road traffic noise; and use of quiet areas); and
- Homes built 1919-1940 (for being bothered, annoyed or disturbed by road traffic noise; and sleep disturbance by road traffic noise).

These differences may be explained by building quality or insulation associated with housing of this age, or by the location of homes built before 1919 in relation to road networks. Some of this data is available in the NNAS2012 dataset, although unfortunately, NNAS2012 was not able to collect complete details about all these aspects of the respondents' homes³ and some of these associations may be further explored in future analysis and certainly considered for other studies.

Other effects of age of home were less consistent. Respondents living in homes built 1991-2000 had increased odds of reporting road traffic noise interfering with sleep than respondents living in homes built 1961-1990. Respondents living in homes built 1941-1960 or 2001-2012 had decreased odds of reporting use of quiet areas than respondents living in homes built 1961-1990.

V5.11.4 Dwelling Type

The findings show that dwelling type is an important factor, associated with negative response to noise, which should be taken into account when assessing the influence of noise exposure on noise attitudes and behaviour. The response variables significantly associated with dwelling type were:

- Interviewer records of noise from neighbours or other people nearby;
- Ratings of noise spoiling home life (both Version O1a and Version O1b);

³ Due to constraints on interview length, etc. See Volume V1.1 for further details on the design priorities for the study.

- Sleep disturbance by:
 - Road traffic noise; or
 - Neighbour noise; and
- Use of quiet areas.

The rank order of dwelling types is not completely consistent across the measures of negative response to noise, but there are some common trends in the significant effects and these same trends are often seen in the non-significant effects.

Where there is a significant effect, bungalows are associated with less negative response than detached houses; this applies to being bothered, annoyed or disturbed by noise from neighbours or other people nearby; noise spoiling home life (Version O1a); and sleep disturbance by neighbour noise. The key factor appears to be neighbour noise; and whilst the reasons for this are unclear, it may be related to the spacing between bungalows or the fact that bungalows tend to be occupied by older people (hence possibly less noise made by neighbours).

In most other cases where there is a significant effect, people in detached homes have a less negative response to noise than people in the other dwelling types. This applies to the comparisons of detached homes with:

- Purpose-built flats/maisonettes (for being bothered, annoyed, or disturbed by noise from neighbours or other people nearby; and use of quiet areas);
- Mid-terrace houses (for being bothered, annoyed, or disturbed by noise from neighbours or other people nearby; sleep disturbance by neighbour noise; the O1b version of home life being spoilt by noise; and use of quiet areas); and
- Semi-detached and end-terrace houses (for sleep disturbance by neighbour noise).

The exceptions, where the effect is more negative in detached houses, are in comparisons with conversion flats/maisonettes (for sleep disturbance by road traffic noise) and with semi-detached and end-terrace houses (for the O1a version of home life being spoilt by noise, the trend being in the opposite direction for the O1b version).

Again, the key factor appears to be less effect of neighbour noise in detached houses and this is entirely consistent with detached houses being more separated from neighbours.

It is likewise intuitive that respondents living in flats would be more likely to hear noise from neighbours and other people nearby. However, this shows only in the findings for purpose-built flats, the trend being generally in the opposite direction for conversion flats/maisonettes. Purpose-built flats/maisonettes would typically be expected to have better sound insulation, but there may be differences in location that have not been controlled for in the analysis. A clue to an alternative explanation is to be seen in the details of the figures: the general trend for response to be more negative in purpose-built than in conversion flats/maisonettes is reversed for both versions of the rating of home life being spoilt. This would be explicable if people in purpose-built flats/maisonettes actually have lower noise exposure but have higher expectations, while people in conversion

flats/maisonettes play down the specific effects of noise, but nevertheless find that noise spoils their home life. This is speculative, but may merit further research.

The findings on use of quiet areas (more likely for respondents in purpose-built flats/maisonettes and mid-terrace houses) also merit some comment. Whilst this can be interpreted as residents in these types of dwelling needing to seek out peace and quiet, it is also possible that the smaller size of these properties is a factor in seeking out peace and quiet in outdoor spaces.

V5.11.5 Age of the Respondent

There were significant age differences in negative responses to noise; in all but one instance, the comparison group (whether older or younger) had a more negative response than the reference group (which was age 45-54).

On all measures, respondents aged 75 years or older were less likely to report a negative response and this effect was significant for being bothered, annoyed, or disturbed by road traffic noise or noise from neighbours or other people nearby; noise spoiling their home life (Version O1a); sleep disturbance by road traffic or neighbour noise; and use of quiet areas. Respondents aged 55-64 or 65-74 also tended to have less negative responses, but this was significant only in the cases of sleep disturbance from neighbour noise (for both age groups) and noise spoiling their home life (Version O1a) for those aged 65-74.

Respondents who were retired were also significantly less likely to have negative responses to noise, even after taking age into account. This applies to ratings of 'the amount of noise around here', noise spoiling their home life (Version O1b) and sleep disturbance by road traffic.

Younger age groups also generally had less negative responses to noise than the reference group and this was significant in the cases of:

- Respondents aged 25-34 (for 'the amount of noise around here'; and being bothered, annoyed or disturbed by noise from aircraft, airports and airfields); and
- Respondents aged 20-24 (for noise spoiling their home life (Version O1a) and use of quiet areas).

In contrast, the 20-24 age group were more likely to report sleep being disturbed by road traffic noise.

These findings support those of a large study of over 62,000 people which found that levels of road traffic and aircraft noise annoyance were lowest in the youngest and oldest groups within the population, and highest for those in middle age (Gerven et al, 2009).

V5.11.6 Gender

In most cases, there was no effect of gender, with two exceptions both relating to neighbour noise. Females were more likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby, and sleep disturbance by neighbour noise. Previous studies have also not indicated strong gender differences in response to noise, although some have suggested that there may be differences in the health effects of environmental noise such as cardiovascular disease (Jarup et al, 2008; Eriksson et al 2010; Davies & van Kamp, 2012).

V5.11.7 Social group

There were few social group differences in negative responses to noise. Respondents where the head of the household was in social group D and E had lower odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields compared with respondents where the head of the household was in social group A. Respondents where the head of the household was in social group B, C1 or D were also less likely to use quiet areas compared with respondents where the head of the household was in social group A. Overall, the findings suggest little social gradient in negative responses to noise. This is understandable, given that the kind of factors that could cause an effect of social group are controlled for (e.g. dwelling type, age and location, age of respondent and the presence of local noise sources).

On the assumption that respondents in group A are better able to live in quiet locations if they wish to do so, the excess negative response in this group to noise from aircraft, airports or airfields may arise from higher expectations or from the inability to escape from this particular noise by choice of location. The higher likelihood of using quiet areas in group A could plausibly arise from greater resources to travel rather than greater need to escape noise.

V5.11.8 Location

Negative responses to noise varied significantly with the urban/rural location of the dwelling, with respondents in the countryside having significantly lower reports of feeling negatively about 'the amount of noise around here'; being bothered, annoyed or disturbed by road traffic noise; and using quiet areas compared with respondents living in a country village or small town. It is to be expected that respondents living in the countryside have greater opportunities for peace and quiet, as well as lower background noise levels, and therefore will have lower odds for the negative aspects of noise outcomes.

However, respondents in the countryside also reported being more bothered, annoyed, or disturbed by noise from aircraft, airports or airfields. This could be explained by the greater expectation for quiet from respondents living in the countryside, as well as by the lower background noise levels, which may make aircraft noise more intrusive. There could

also be particular kinds of aircraft movement that are more common over country areas (e.g. military training). Respondents living in the centre of a large city also had higher reports of being bothered, annoyed or disturbed by noise from aircraft, airports or airfields compared with respondents living in a country village or small town, suggesting that aircraft noise has negative responses in both countryside and city locations.

Respondents living in the suburbs/outskirts of a large city were more likely to rate 'the amount of noise around here', and sleep being disturbed by road traffic or neighbours, negatively compared with those living in a country village or small town, as were those living in large towns/small cities. It has sometimes been suggested that people living in larger, busier cities and towns are more tolerant, and perhaps attracted to, noise. If this is true then it has only a mitigating effect and does not eliminate negative response.

There were some differences between the regions in terms of negative responses to noise, with some evidence that noise responses were more negative in England compared with Wales, Scotland and Northern Ireland. However, the survey is representative of the UK as a whole and is not powered to assess differences between the regions adequately, so these differences should be considered indicative but not definitive.

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Appendix V5.A1 Univariable Analysis Results

The results of the univariable analysis can be seen below. These were used to determine what, if any, multivariable analysis was undertaken. They are reported here to separate them from the multivariable analysis results to reduce confusion for readers.

V5.A1.1 Feelings About “the Amount of Noise Around Here”

[Tables V5.A1.1](#) – V5.A1.3 show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of feeling negatively about “the amount of noise around here”. The tables show the odds ratios and the 95% confidence intervals for the odds ratios.

Dwelling Factors

(N=2747)		In general, how do you feel about the amount of noise around here?		
	N	Odds ratio	95% CI	
Double glazing in the home (H01)				
All	2288	1.00		
Some	289	1.75***	1.28, 2.39	
None	170	2.02***	1.39, 2.95	
Age of home (H04 + H05)				
Before 1919	478	2.14***	1.59, 2.89	
1919-1940	547	1.47*	1.08, 2.00	
1941-1960	443	1.09	0.77, 1.54	
1961-1990	875	1.00		
1991-2000	199	1.01	0.62, 1.62	
2001-2012	174	0.82	0.47, 1.40	
Don't know	31	1.52	0.57, 4.01	
How long have you lived in this home? (A11)				
Less than 6 months	133	1.90**	1.21, 2.96	
6 months but less than 1 year	151	1.42	0.90, 2.23	
1 year but less than 2 years	174	1.69*	1.12, 2.53	
2 years but less than 5 years	357	1.37	0.99, 1.89	
5 years but less than 10 years	474	1.31	0.98, 1.76	
10 years or more	1458	1.00		
Dwelling type (A13)				
Purpose-built flat/maisonette	170	1.78**	1.17, 2.72	
Conversion flat/maisonette	57	1.62	0.82, 3.21	
Semi-detached/end of terrace house	1082	0.89	0.67, 1.17	
Mid terrace house	430	1.92***	1.41, 2.62	

(N=2747) In general, how do you feel about the amount of noise around here?			
	N	Odds ratio	95% CI
Detached house	761	1.00	
Bungalow	229	0.57*	0.34, 0.96
Other	18	0.99	0.25, 3.94
Access to garden or other private outdoor space (A12)			
No	118	1.52	0.96, 2.42
Yes	2629	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			
road traffic			
No	2159	1.00	
Yes	588	4.55***	3.63, 5.69
neighbours or other people nearby			
No	2678	1.00	
Yes	69	2.03*	1.17, 3.54
aircraft, airports or airfields			
No	2629	1.00	
Yes	118	2.42***	1.59, 3.66
trains or railway stations			
No	2717	1.00	
Yes	30	1.00	0.36, 2.78

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.1 - Univariable Odds Ratios for Ratios Showing Odds for Reporting Feeling Negatively About the Amount of Noise Around Here for Dwelling Factors

Significant effects were seen for seven dwelling factors:

- Double glazing;
- Age of home;
- Length of residence;
- Dwelling type; and
- Interviewer reporting noticeable noise from:
 - Road traffic;
 - Neighbours and other people nearby; and
 - Aircraft, airports and airfields.

Two dwelling factors did not have a significant effect: access to a garden or other private outdoor space and the interviewer reporting noticeable noise from trains or railway stations.

Having some double glazed windows or no double glazed windows was associated with increased odds for feeling negatively about the amount of noise around here compared with participants who had all their windows double glazed (OR=1.75, 95%CI 1.28, 2.39, OR=2.02, 95%CI 1.39, 2.95, respectively).

Respondents living in homes built before 1919 were twice as likely to report feeling negatively about the amount of noise around here compared with respondents living in

homes built 1961-1990, (OR=2.14, 95%CI 1.59, 2.89). Respondents living in homes built 1919-1940 had a 47% increase in odds of feeling negatively about the amount of noise around here compared with respondents living in homes built 1961-1990 (OR=1.47, 95%CI 1.08, 2.00).

Respondents who had lived in their home for less than 6 months were nearly twice as likely to report feeling negatively about the amount of noise around here compared with respondents who had lived in their home for 10 years or more (OR=1.90, 95%CI 1.21, 2.96). Respondents who had lived in their home for 1-2 years had increased odds of reporting feeling negatively about the amount of noise around here compared with respondents who had lived in their home for 10 years or more (OR=1.69, 95%CI 1.12, 2.53).

Respondents living in a purpose-built flat/maisonette or a mid-terrace house had higher odds of feeling negatively about the amount of noise around here compared with respondents living in a detached house (OR=1.78, 95%CI 1.17, 2.72, OR=1.92, 95%CI 1.41, 2.62, respectively). Respondents living in bungalows had lower odds of feeling negatively about the amount of noise around here compared with respondents living in detached houses (OR=0.57, 95%CI 0.34, 0.96).

Respondents living in a home where the interviewer recorded noticeable noise from road traffic were four times more likely to report feeling negatively about the amount of noise around here (OR=4.55, 95%CI 3.63, 5.69).

Respondents living in a home where the interviewer recorded noticeable noise from neighbours or other people nearby were twice as likely to report feeling negatively about the amount of noise around here (OR=2.03, 95%CI 1.17, 3.54).

Respondents living in a home where the interviewer recorded noticeable noise from aircraft, airports or airfields were over twice as likely to report feeling negatively about the amount of noise around here (OR=2.42, 95%CI 1.59, 3.66).

Sociodemographic Factors

Univariable analyses showed that:

- Age of respondent;
- Tenure;
- Having children in the household;
- Employment status; and
- Having a hearing problem

were associated with feeling negatively about the amount of noise around here.

Gender, working at home, shift work, and the social group of the head of household were not associated with feeling negatively about the amount of noise around here.

Respondents aged 25-34, 55-64, 65-74 or over 75 years were significantly less likely to report feeling negatively about the amount of noise around here compared with respondents aged 45-54 (OR=0.65, 95%CI 0.43, 0.97, OR=0.66, 95%CI 0.47, 0.94, OR=0.58, 95%CI 0.39, 0.84, OR=0.28, 95%CI 0.16, 0.49, respectively).

Respondents buying their home with a mortgage, renting from the local authority or from a housing association, renting from a private landlord, or with 'other' tenure had significantly higher odds of feeling negatively about the amount of noise around here compared with respondents who owned their home outright (OR=1.55, 95%CI 1.20, 2.00, OR=1.46, 95%CI 1.01, 2.12, OR=2.14, 95%CI 1.54, 2.96, OR=2.25, 95%CI 1.07, 4.74, respectively).

Respondents with any children aged 0 to 17 in the household had 36% higher odds of feeling negatively about the amount of noise around here compared with respondents with no children in the household (OR=1.36, 95%CI 1.09, 1.69).

Respondents who worked part-time or who were retired had significantly lower odds of feeling negatively about the amount of noise around here compared with respondents who worked full-time (OR=0.70, 95%CI 0.50, 0.98, OR=0.48, 95%CI 0.36, 0.63).

The interviewer's assessment of whether the respondent had a problem with hearing was associated with significantly lower odds of feeling negatively about the amount of noise around here (OR=0.38, 95%CI 0.20, 0.72).

(N=2747)		In general, how do you feel about the amount of noise around here?		
		N	Odds ratio	95% CI
Age (H12)				
	16-19	116	0.81	0.46, 1.40
	20-24	181	1.28	0.85, 1.94
	25-34	312	0.65*	0.43, 0.97
	35-44	430	0.95	0.68, 1.32
	45-54	519	1.00	
	55-64	500	0.66*	0.47, 0.94
	65-74	416	0.58**	0.39, 0.84
	75+	272	0.28***	0.16, 0.49
Gender (H13)				
	Male	1362	1.00	
	Female	1385	1.07	0.87, 1.33
Tenure (H6)				
	Being bought on a mortgage	997	1.55***	1.20, 2.00
	Owned outright by household	1052	1.00	
	Rented from local authority or from housing association	307	1.46*	1.01, 2.12
	Rented from private landlord	347	2.14***	1.54, 2.96
	Other	37	2.25*	1.07, 4.74
Any children aged 0-17 (H14)				
	No	1859	1.00	
	Yes	888	1.36**	1.09, 1.69
Employment status (H15)				
	Working FT	1057	1.00	
	Working PT	380	0.70*	0.50, 0.98

(N=2747)		In general, how do you feel about the amount of noise around here?		
	N	Odds ratio	95% CI	
Unemployed	93	1.38	0.82, 2.30	
Retired	799	0.48***	0.36, 0.63	
FT Education	181	0.97	0.64, 1.47	
Home maker	157	1.05	0.68, 1.63	
Other	76	0.64	0.31, 1.30	
Work at home (H15a)				
No	968	1.00		
Sometimes work at home	470	1.13	0.84, 1.52	
Shift work (H16)				
No	1181	1.00		
Yes	257	1.17	0.82, 1.66	
Social group of head of household (H17)				
A	166	1.00		
B	714	1.05	0.66, 1.67	
C1	824	0.76	0.48, 1.22	
C2	492	0.68	0.41, 1.12	
D	299	1.13	0.68, 1.90	
E	252	1.05	0.62, 1.80	
Interviewer's assessment of respondent having hearing problem (I01)				
No	2580	1.00		
Yes – quite a lot or only a bit	163	0.38**	0.20, 0.72	

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.2 - Univariable Odds Ratios Showing Odds for Reporting Feeling Negatively About the Amount of Noise Around Here for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that:

- Region;
- Urban/rural location of the dwelling; and
- Urbanicity of the local authority

were significantly associated with feeling negatively about the amount of noise around here.

Respondents who lived in Wales had significantly lower odds of feeling negatively about the amount of noise around here than respondents who lived in England (OR=0.41, 95%CI 0.23, 0.74).

Respondents who lived in the centre of a large city, in the suburbs/outskirts of a large town, or in a large town or small city had increased odds of feeling negatively about the amount of noise around here compared with respondents who lived in a country village or small town (OR=2.26, 95%CI 1.25, 4.06, OR=1.87, 95%CI 1.45, 2.41, OR=1.73, 95%CI 1.29, 2.32, respectively).

Similarly, respondents who lived in urban local authorities had increased odds of feeling negatively about the amount of noise around here compared with respondents living in rural local authorities (OR=1.45, 95%CI 1.12, 1.88).

(N=2747)		In general, how do you feel about the amount of noise around here?		
Region				
England	2337	1.00		
Wales	137	0.41**		0.23, 0.74
Scotland	212	0.92		0.58, 1.47
Northern Ireland	61	0.53		0.24, 1.18
Is the dwelling located in ... ? (I04)				
The centre of a large city	73	2.26**		1.25, 4.06
Suburbs/outskirts of a large city	846	1.87***		1.45, 2.41
A large town or small city	519	1.73***		1.29, 2.32
In a country village or small town	1147	1.00		
In the countryside	159	0.56		0.29, 1.09
Urbanicity (LA Rating)⁴				
Rural	798	1.00		
Semi-rural	274	1.27		0.86, 1.88
Urban	1247	1.45**		1.12, 1.88

*p≤0.05, **p≤0.01, ***p≤0.001 †

Table V5.A1.3 - Univariable Odds Ratios Showing Odds for Reporting Feeling Negatively About the Amount of Noise Around Here for Geographic Factors

V5.A1.2 Being Bothered, Annoyed or Disturbed by Road Traffic Noise

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of being bothered, annoyed or disturbed by road traffic noise. The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

Dwelling Factors

Univariable analyses showed that:

- Double glazing;
- Age of home;
- Length of residence;
- Dwelling type; and
- Noticeable noise from road traffic

⁴ Urbanicity data only available for participants from England

were significantly associated with being bothered, annoyed or disturbed by road traffic noise.

Access to a garden was not significantly associated with being bothered, annoyed or disturbed by road traffic noise.

Having some double glazed windows was associated with increased odds for reporting being bothered, annoyed or disturbed by road traffic noise compared with participants who had all their windows double glazed (OR=1.36, 95%CI 1.04,1.78).

Respondents living in homes built before 1919 were nearly twice as likely to report being bothered, annoyed or disturbed by road traffic noise compared with respondents living in homes built 1961-1990, (OR=1.93, 95%CI 1.50, 2.48). Respondents living in homes built between 1919-1940 had a 72% increase in odds of being bothered, annoyed or disturbed compared with respondents living in homes built 1961-1990 (OR=1.72, 95%CI 1.35, 2.20).

Respondents who had lived in their home for 2-5 years had 30% increased odds of reporting being bothered, annoyed or disturbed by road traffic noise compared with respondents who had lived in their home for over 10 years (OR=1.30, 95%CI 1.00, 1.68).

Respondents living in a purpose-built flat/maisonette or a mid-terrace house had higher odds of being bothered, annoyed or disturbed by road traffic noise compared with respondents living in detached houses (OR=1.47, 95%CI 1.02, 2.13, OR=1.63, 95%CI 1.25, 2.12, respectively).

Respondents living in a home where the interviewer recorded noticeable noise from road traffic were four times more likely to report being bothered, annoyed, or disturbed by noise from road traffic (OR=4.01, 95%CI 3.30, 4.88).

(N=2747) When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from...ROAD TRAFFIC			
	N	Odds ratio	95% CI
Double glazing in the home (H01)			
All	2288	1.00	
Some	289	1.36*	1.04, 1.78
None	170	1.20	0.85, 1.71
Age of home (H04 + H05)			
Before 1919	478	1.93***	1.50, 2.48
1919-1940	547	1.72***	1.35, 2.20
1941-1960	443	0.95	0.71, 1.25
1961-1990	875	1.00	
1991-2000	199	0.82	0.55, 1.22
2001-2012	174	0.94	0.63, 1.42
Don't know	31	0.50	0.16, 1.51
How long have you lived in this home? (A11)			
Less than 6 months	133	1.18	0.78, 1.77
6 months but less than 1 year	151	1.07	0.72, 1.59
1 year but less than 2 years	174	1.32	0.93, 1.88
2 years but less than 5 years	357	1.30*	1.00, 1.68

5 years but less than 10 years	474	1.26	0.99, 1.59
10 years or more	1458	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	170	1.47*	1.02, 2.13
Conversion flat/maisonette	57	1.47	0.81, 2.66
Semi-detached/end of terrace house	1082	1.03	0.83, 1.29
Mid terrace house	430	1.63***	1.25, 2.12
Detached house	761	1.00	
Bungalow	229	1.02	0.72, 1.46
Other	18	0.86	0.26, 2.79
Access to garden or other private outdoor space (A12)			
No	118	1.19	0.78, 1.79
Yes	2629	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from road traffic? (I02)			
No	2159	1.00	
Yes	588	4.01***	3.30, 4.88

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.4 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Road Traffic for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age of respondent;
- Tenure;
- Employment status;
- Shift work; and
- Having a hearing problem

were associated with being bothered, annoyed or disturbed by road traffic noise.

Working at home and social group of head of household were not associated with being bothered, annoyed or disturbed by road traffic noise.

Respondents aged over 75 years were significantly less likely to report being bothered, annoyed or disturbed by road traffic noise compared with respondents aged 45-54 (OR=0.33, 95%CI 0.21, 0.50).

Similarly, respondents who were retired were significantly less likely to report being annoyed or disturbed by noise from road traffic compared with respondents who worked full-time (OR=0.62, 95%CI 0.50, 0.77).

Respondents who rented their home from a private landlord were significantly more likely to report being bothered, annoyed or disturbed by road traffic noise compared with home owners (OR=1.45, 95%CI 1.10, 1.90).

Respondents who undertook shift work were more likely to report being bothered, annoyed or disturbed by road traffic noise compared with respondents who did not work shifts (OR=1.35, 95%CI 1.01, 1.81).

The interviewer's assessment of whether the respondent had a problem with hearing was associated with significantly lower odds of reporting being bothered, annoyed or disturbed by road traffic noise (OR=0.63, 95%CI 0.41, 0.95).

(N=2747)		When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from ROAD TRAFFIC		
		N	Odds ratio	95% CI
Age (H12)				
	16-19	116	0.65	0.40, 1.08
	20-24	181	1.20	0.83, 1.74
	25-34	312	0.90	0.66, 1.25
	35-44	430	1.10	0.82, 1.46
	45-54	519	1.00	
	55-64	500	0.95	0.72, 1.25
	65-74	416	0.83	0.61, 1.12
	75+	272	0.33***	0.21, 0.50
Gender (H13)				
	Male	1362	1.00	
	Female	1385	0.98	0.82, 1.16
Tenure (H6)				
	Being bought on a mortgage	997	1.21	0.99, 1.48
	Owned outright by household	1052	1.00	
	Rented from local authority or from housing association	307	0.91	0.67, 1.24
	Rented from private landlord	347	1.45**	1.10, 1.90
	Other	37	1.61	0.84, 3.08
Any children aged 0-17 (H14)				
	No	1859	1.00	
	Yes	888	1.09	0.90, 1.31
Employment status (H15)				
	Working FT	1057	1.00	
	Working PT	380	0.83	0.63, 1.08
	Unemployed	93	0.60	0.35, 1.02
	Retired	799	0.62***	0.50, 0.77
	FT Education	181	0.99	0.70, 1.41
	Home maker	157	0.91	0.62, 1.34
	Other	76	0.94	0.55, 1.58
Work at home (H15a)				
	No	968	1.00	
	Sometimes work at home	470	0.97	0.76, 1.25
Shift work (H16)				
	No	1181	1.00	
	Yes	257	1.35*	1.01, 1.81
Social group of head of household (H17)				
	A	166	1.00	
	B	714	1.15	0.77, 1.71
	C1	824	1.15	0.77, 1.70
	C2	492	0.95	0.62, 1.44
	D	299	1.15	0.74, 1.79

(N=2747) When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from ROAD TRAFFIC			
	N	Odds ratio	95% CI
E	252	0.85	0.53, 1.35
Interviewer's assessment of respondent having hearing problem (I01)			
No	2580	1.00	
Yes – quite a lot or only a bit	163	0.63*	0.41, 0.95

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.5 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Road Traffic for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that:

- Region;
- Urban/rural location of the dwelling; and
- Urbanicity of the local authority

were significantly associated with reports of being bothered, annoyed or disturbed by road traffic noise.

Respondents who lived in Wales had significantly lower odds of reporting being bothered, annoyed or disturbed by road traffic noise than respondents who lived in England (OR=0.36, 95%CI 0.22, 0.58).

Respondents who lived in the suburbs/outskirts of a large city, or in a large town or small city had increased odds of being bothered, annoyed or disturbed by road traffic noise compared with respondents who lived in a country village or small town (OR=1.44, 95%CI 1.18, 1.77, OR=1.37, 95%CI 1.08, 1.74, respectively). Respondents who lived in the countryside were 40% less likely to report being bothered, annoyed or disturbed by road traffic noise compared with respondents who lived in a country village or small town (OR=0.60, 95%CI 0.37, 0.95).

Respondents who lived in semi-rural local authorities had increased odds of being bothered, annoyed or disturbed by road traffic noise compared with respondents living in rural local authorities (OR=1.37, 95%CI 1.01, 1.86). There was no significant difference in reports of being bothered, annoyed or disturbed by road traffic noise between respondents in urban local authorities and rural local authorities.

(N=2747)		When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from ROAD TRAFFIC		
	N	Odds ratio	95% CI	
Region				
England	2337	1.00		
Wales	137	0.36***	0.22, 0.58	
Scotland	212	1.03	0.71, 1.48	
Northern Ireland	61	0.75	0.43, 1.32	
Is the dwelling located in ... ? (I04)				
The centre of a large city	73	1.12	0.64, 1.95	
Suburbs/outskirts of a large city	846	1.44***	1.18, 1.77	
A large town or small city	519	1.37**	1.08, 1.74	
In a country village or small town	1147	1.00		
In the countryside	159	0.60*	0.37, 0.95	
Urbanicity (LA Rating)⁵				
Rural	798	1.00		
Semi-rural	274	1.37*	1.01, 1.86	
Urban	1247	1.12	0.91, 1.37	

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.6 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Road Traffic for Geographic Factors

V5.A1.3 Being Bothered, Annoyed or Disturbed by Noise from Neighbours or Other People Nearby

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of being bothered, annoyed or disturbed by noise from neighbours or other people nearby. The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

Dwelling Factors

Univariable analyses showed that:

- Double glazing
- Length of residence;
- Dwelling type;
- Interviewer record of noticeable noise from neighbours or other people nearby

⁵ Urbanicity data only available for participants from England

were associated with being bothered, annoyed or disturbed by noise from neighbours or other people nearby.

Age of home and access to a garden were not associated with being bothered, annoyed or disturbed by noise from neighbours or other people nearby.

Having no windows double glazed was associated with increased odds for reporting being bothered, annoyed or disturbed by noise from neighbours or other people nearby compared with participants who had all their windows double glazed (OR= 1.42, 95%CI 1.01, 1.99).

Respondents who had lived in their homes for 2-5 years or 5-10 years had increased odds for being bothered, annoyed or disturbed by noise from neighbours or other people nearby compared with participants who had lived in their home for over 10 years (OR= 1.47, 95%CI 1.14, 1.91, OR= 1.33, 95%CI 1.05, 1.68, respectively).

Respondents living in a purpose-built flat/maisonette, a conversion flat/maisonette, or a mid-terrace house were twice as likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents living in a detached house (OR=2.68, 95%CI 1.88, 3.82, OR=1.92, 95%CI 1.07, 3.44, OR=2.02, 95%CI 1.54, 2.64, respectively). Respondents living in a semi-detached/end of terrace house were also more likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents living in a detached house (OR=1.43, 95%CI 1.15, 1.79). Respondents living in bungalows were half as likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents living in a detached house (OR=0.50, 95%CI 0.32, 0.79).

Respondents living in a home where the interviewer recorded noticeable noise from neighbours or other people nearby were three times more likely to report being bothered, annoyed, or disturbed by noise from neighbours or other people nearby (OR=3.36, 95%CI 2.07, 5.44).

(N=2747) When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby			
	N	Odds ratio	95% CI
Double glazing in the home (H01)			
All	2288	1.00	
Some	289	1.01	0.76, 1.34
None	170	1.42*	1.01, 1.99
Age of home (H04 + H05)			
Before 1919	478	1.13	0.87, 1.46
1919-1940	547	0.96	0.75, 1.24
1941-1960	443	1.28	0.99, 1.65
1961-1990	875	1.00	
1991-2000	199	0.92	0.63, 1.32
2001-2012	174	1.33	0.93, 1.91
Don't know	31	1.60	0.74, 3.45
How long have you lived in this home? (A11)			
Less than 6 months	133	0.89	0.58, 1.38

(N=2747) When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby			
	N	Odds ratio	95% CI
6 months but less than 1 year	151	1.25	0.85, 1.83
1 year but less than 2 years	174	1.35	0.95, 1.92
2 years but less than 5 years	357	1.47**	1.14, 1.91
5 years but less than 10 years	474	1.33*	1.05, 1.68
10 years or more	1458	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	170	2.68***	1.88, 3.82
Conversion flat/maisonette	57	1.92*	1.07, 3.44
Semi-detached/end of terrace house	1082	1.43**	1.15, 1.79
Mid terrace house	430	2.02***	1.54, 2.64
Detached house	761	1.00	
Bungalow	229	0.50**	0.32, 0.79
Other	18	0.73	0.20, 2.66
Access to garden or other private outdoor space (A12)			
No	118	1.37	0.92, 2.05
Yes	2629	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from neighbours or other people nearby? (I02)			
No	2678	1.00	
Yes	69	3.36***	2.07, 5.44

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.7 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Neighbours or Other People Nearby for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age of respondent;
- Gender;
- Tenure;
- Having children;
- Employment status; and
- Interviewer's assessment of hearing problems

were associated with being bothered, annoyed or disturbed by noise from neighbours or other people nearby.

Working at home, shift work and the social group of the head of household were not associated with being bothered, annoyed or disturbed by noise from neighbours or other people nearby.

Respondents aged over 75 years or 65-74 had significantly lower odds of being bothered, annoyed or disturbed by noise from neighbours or other people nearby compared with

respondents aged 45-54 (OR=0.27, 95%CI 0.17, 0.43, OR=0.73, 95%CI 0.54, 0.99, respectively).

Females had significantly higher odds of being bothered, annoyed or disturbed by noise from neighbours or people nearby compared with males (OR=1.29, 95%CI 1.08, 1.53).

Respondents who were buying their home with a mortgage, who were renting from a local authority or from a housing association, who rented their home from a private landlord, or had 'other' tenure had significantly higher odds of reporting being bothered, annoyed or disturbed by noise from neighbours or people nearby compared with home owners.

Respondents who were renting from a local authority or from a housing association were twice as likely to report being bothered, annoyed or disturbed compared with home owners (OR=2.23, 95%CI 1.69, 2.96). Respondents who were buying their home with a mortgage or who rented from a private landlord were 70-80% more likely to report being bothered, annoyed, or disturbed by noise from neighbours or people nearby compared with home owners (OR=1.67, 95%CI 1.36, 2.06, OR=1.82, 95%CI 1.38, 2.40, respectively).

Respondents with children in the household had 23% higher odds of reporting being bothered, annoyed or disturbed by noise from neighbours or people nearby than respondents without children in the household (OR=1.23, 95%CI 1.03, 1.48).

Respondents who were retired were half as likely to report being bothered, annoyed or disturbed by noise from neighbours or people nearby compared with respondents who worked full-time (OR=0.53, 95%CI 0.42, 0.66).

The interviewer assessment of whether the respondent had a problem with hearing was associated with significantly lower odds of reporting being bothered, annoyed or disturbed by noise from neighbours or other people nearby compared with respondents with no hearing problem (OR=0.54, 95%CI 0.35, 0.83).

(N=2747)				
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours of other people nearby				
		N	Odds ratio	95% CI
Age (H12)				
	16-19	116	1.21	0.78, 1.88
	20-24	181	1.31	0.91, 1.88
	25-34	312	1.26	0.93, 1.72
	35-44	430	1.04	0.78, 1.39
	45-54	519	1.00	
	55-64	500	0.81	0.61, 1.07
	65-74	416	0.73*	0.54, 0.99
	75+	272	0.27***	0.17, 0.43
Gender (H13)				
	Male	1362	1.00	
	Female	1385	1.29*	1.08, 1.53
Tenure (H6)				
	Being bought on a mortgage	997	1.67***	1.36, 2.06
	Owned outright by household	1052	1.00	
	Rented from local authority	307	2.23***	1.69, 2.96

or from housing association			
Rented from private landlord	347	1.82***	1.38, 2.40
Other	37	1.35***	0.67, 2.74
Any children aged 0-17 (H14)			
No	1859	1.00	
Yes	888	1.23*	1.03, 1.48
Employment status (H15)			
Working FT	1057	1.00	
Working PT	380	0.91	0.70, 1.19
Unemployed	93	0.68	0.41, 1.14
Retired	799	0.53***	0.42, 0.66
FT Education	181	1.36	0.97, 1.90
Home maker	157	0.91	0.62, 1.33
Other	76	1.03	0.62, 1.72
Work at home (H15a)			
No	968	1.00	
Sometimes work at home	470	1.14	0.89, 1.45
Shift work (H16)			
No	1181	1.00	
Yes	257	0.87	0.64, 1.19
Social group of head of household (H17)			
A	166	1.00	
B	714	1.07	0.72, 1.59
C1	824	1.09	0.74, 1.61
C2	492	0.94	0.62, 1.42
D	299	1.40	0.90, 2.16
E	252	1.11	0.71, 1.76
Interviewer's assessment of respondent having hearing problem (I01)			
No	2580	1.00	
Yes – quite a lot or only a bit	163	0.54**	0.35, 0.83

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.8 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Neighbours or Other People Nearby for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that:

- Region; and
- Urban/rural location of the dwelling

were significantly associated with reports of being bothered, annoyed or disturbed by neighbours or other people nearby.

The urbanicity of the local authority in which the respondent lived was not significantly associated with reports of being bothered, annoyed or disturbed by neighbours or other people nearby.

Respondents who lived in Northern Ireland had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from neighbours or other people nearby than respondents who lived in England (OR=0.46, 95%CI 0.24, 0.88).

Respondents who lived in the suburbs/outskirts of a large city or in a large town or small city had increased odds of being bothered, annoyed or disturbed by noise from neighbours or other people nearby compared with respondents who lived in a country village or small town (OR=1.37, 95%CI 1.12, 1.68, OR=1.34, 95%CI 1.06, 1.70, respectively).

Respondents who lived in the countryside were 45% less likely to report being bothered, annoyed or disturbed by noise from neighbours or other people nearby compared with respondents who lived in a country village or small town (OR=0.55, 95%CI 0.35, 0.89).

(N=2747)			
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from neighbours or other people nearby			
	N	Odds ratio	95% CI
Region			
England	2337	1.00	
Wales	137	0.78	0.54, 1.13
Scotland	212	0.90	0.62, 1.32
Northern Ireland	61	0.46*	0.24, 0.88
Is the dwelling located in? (104)			
The centre of a large city	73	1.40	0.83, 2.36
Suburbs/outskirts of a large city	846	1.37**	1.12, 1.68
A large town or small city	519	1.34*	1.06, 1.70
In a country village or small town	1147	1.00	
In the countryside	159	0.55*	0.25, 0.89
Urbanicity (LA Rating)⁶			
Rural	798	1.00	
Semi-rural	274	1.04	0.76, 1.43
Urban	1247	1.06	0.87, 1.30

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.9 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Neighbours or Other People Nearby for Geographic Factors

V5.A1.4 Being Bothered, Annoyed or Disturbed by Noise from Aircraft, Airports or Airfields

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of being bothered, annoyed or disturbed by noise from aircraft, airports, or airfields. The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

⁶ Urbanicity data only available for participants from England

Dwelling Factors

Univariable analyses showed that:

- Dwelling type;
- Access to a garden/outdoor space; and
- Interviewer record of noticeable noise from aircraft, airports, or airfields

were significantly associated with being bothered, annoyed or disturbed by noise from aircraft, airports or airfields.

Double glazing, length of residence, and age of home were not significantly associated with being bothered, annoyed or disturbed by noise from aircraft, airports or airfields.

Respondents living in a purpose-built flat/maisonette, semi-detached/end of terrace house, or a bungalow had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields than respondents living in a detached house (OR=0.45, 95%CI 0.25, 0.82, OR=0.74, 95%CI 0.57, 0.97, OR=0.52, 95%CI 0.32, 0.85, respectively).

Respondents without access to a garden/outdoor space had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields than respondents with access to a garden/outdoor space (OR=0.33, 95%CI 0.14, 0.74).

Respondents whose homes were where the interviewer recorded noticeable noise from aircraft, airports, or airfields were four times more likely to reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields than respondents without noticeable noise from aircraft, airports or airfields (OR=4.31, 95%CI 2.90, 6.37).

(N=2747) When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airports or airfields			
	N	Odds ratio	95% CI
Double glazing in the home (H01)			
All	2288	1.00	
Some	289	0.84	0.57, 1.23
None	170	1.45	0.97, 2.18
Age of home (H04 + H05)			
Before 1919	478	1.32	0.97, 1.81
1919-1940	547	1.27	0.94, 1.72
1941-1960	443	0.71	0.48, 1.03
1961-1990	875	1.00	
1991-2000	199	0.81	0.49, 1.32
2001-2012	174	0.71	0.41, 1.22
Don't know	31	2.19	0.94, 5.11
How long have you lived in this home? (A11)			
Less than 6 months	133	0.55	0.30, 1.03
6 months but less than 1 year	151	0.80	0.48, 1.32
1 year but less than 2 years	174	0.83	0.52, 1.32
2 years but less than 5 years	357	0.70	0.49, 1.01

5 years but less than 10 years	474	0.79	0.58, 1.08
10 years or more	1458	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	170	0.45*	0.25, 0.82
Conversion flat/maisonette	57	0.34	0.11, 1.02
Semi-detached/end of terrace house	1082	0.74*	0.57, 0.97
Mid terrace house	430	0.90	0.65, 1.26
Detached house	761	1.00	
Bungalow	229	0.52**	0.32, 0.85
Other	18	1.87	0.64, 5.45
Access to garden or other private outdoor space (A12)			
No	118	0.33*	0.14, 0.76
Yes	2629	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from aircraft, airports or airfields? (I02)			
No	2629	1.00	
Yes	118	4.31***	2.90, 6.37

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.10 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Aircraft, Airports or Airfields for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age of respondent;
- Tenure;
- Employment status;
- Working at home; and
- Social group of the head of household

were significantly associated with being bothered, annoyed or disturbed by noise from aircraft, airports or airfields.

Gender, having children, shift work and hearing problems were not significantly associated with being bothered, annoyed or disturbed by noise from aircraft, airports or airfields.

Respondents aged over 75 years, 65-74, 25-34, or 20-24 years had lower odds of being bothered, annoyed or disturbed by noise from aircraft, airports or airfields compared with respondents aged 45-54 (OR=0.60, 95%CI 0.38, 0.93, OR=0.51, 95%CI 0.34, 0.76, OR=0.47, 95%CI 0.30, 0.74, OR=0.56, 95%CI 0.33, 0.94, respectively).

Respondents who were buying their home with a mortgage were 33% more likely to report being bothered, annoyed or disturbed by noise from aircraft, airports or airfields than respondents who owned their home outright (OR=1.33, 95%CI 1.04, 1.70). Respondents who were renting from a local authority or from a housing association had half the odds of

being bothered, annoyed or disturbed by noise from aircraft, airports or airfields than respondents who owned their home outright (OR=0.49, 95%CI 0.30, 0.79).

Respondents who were retired or had 'other' employment status had significantly lower odds of being bothered, annoyed or disturbed by noise from aircraft, airports or airfields compared with respondents who were employed full-time (OR=0.70, 95%CI 0.53, 0.93, OR=0.05, 95%CI 0.006, 0.53, respectively).

Respondents who sometimes worked at home had 50% higher odds of being bothered, annoyed or disturbed by noise from aircraft, airports or airfields compared with respondents who did not work at home (OR=1.49, 95%CI 1.10, 2.01).

There was a social gradient in reports of being bothered, annoyed or disturbed by noise from aircraft, airports or airfields. The odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields decreased with decreasing social group of the head of household. Respondents where the head of household was in social group C1, C2, D, and E had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports or airfields compared with respondents where the head of household was in social group A (OR=0.60, 95%CI 0.39, 0.92, OR=0.38, 95%CI 0.23, 0.62, OR=0.34, 95%CI 0.19, 0.59, OR=0.28, 95%CI 0.15, 0.53, respectively).

(N=2747)				
When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airports or airfields				
	N	Odds ratio	95% CI	
Age (H12)				
16-19	116	0.57	0.30, 1.07	
20-24	181	0.56*	0.33, 0.94	
25-34	312	0.47***	0.30, 0.74	
35-44	430	0.86	0.61, 1.22	
45-54	519	1.00		
55-64	500	0.92	0.66, 1.27	
65-74	416	0.51***	0.34, 0.76	
75+	272	0.60*	0.38, 0.93	
Gender (H13)				
Male	1362	1.00		
Female	1385	0.89	0.71, 1.11	
Tenure (H6)				
Being bought on a mortgage	997	1.33*	1.04, 1.70	
Owned outright by household	1052	1.00		
Rented from local authority or from housing association	307	0.49**	0.30, 0.79	
Rented from private landlord	347	0.70	0.47, 1.05	
Other	37	0.78	0.29, 2.06	
Any children aged 0-17 (H14)				
No	1859	1.00		
Yes	888	1.21	0.96, 1.52	
Employment status (H15)				
Working FT	1057	1.00		
Working PT	380	0.93	0.67, 1.30	
Unemployed	93	1.08	0.60, 1.92	
Retired	799	0.70*	0.53, 0.93	

FT Education	181	0.71	0.43, 1.16
Home maker	157	1.11	0.71, 1.75
Other	76	0.05*	0.01, 0.53
Work at home (H15a)			
No	968	1.00	
Sometimes work at home	470	1.49***	1.10, 2.01
Shift work (H16)			
No	1181	1.00	
Yes	257	0.84	0.57, 1.25
Social group of head of household (H17)			
A	166	1.00	
B	714	0.95	0.62, 1.44
C1	824	0.60*	0.39, 0.92
C2	492	0.38***	0.23, 0.62
D	299	0.34***	0.19, 0.59
E	252	0.28***	0.15, 0.53
Interviewer's assessment of respondent having hearing problem (I01)			
No	2580	1.00	
Yes – quite a lot or only a bit	163	0.64	0.37, 1.10

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table V5.A1.11 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Aircraft, Airports or Airfields for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that region, the urban/rural location of the dwelling, and the urbanicity of the local authority was significantly associated with reports of being bothered, annoyed or disturbed by aircraft, airport or airfield noise.

Respondents who lived in Wales and Scotland had significantly lower odds of reporting being bothered, annoyed or disturbed by noise from aircraft, airports, or airfields than respondents who lived in England (OR=0.36, 95%CI 0.19, 0.68, OR=0.22, 95%CI 0.09, 0.51, respectively).

Respondents who lived in the centre of a large city or in the countryside had increased odds of being bothered, annoyed or disturbed by noise from aircraft, airport or airfields compared with respondents who lived in a country village or small town (OR=2.02, 95%CI 1.12, 3.46, OR=1.73, 95%CI 1.11, 2.67, respectively).

Respondents who lived in local authorities rated as semi-rural or urban had significantly higher odds of reporting being bothered, annoyed, or disturbed by noise from aircraft, airports or airfields compared with respondents living in local authorities rated as rural (OR=1.83, 95%CI 1.26, 2.66; OR=1.48, 95%CI 1.14, 1.94, respectively).

(N=2747)		When you are at home, to what extent are you personally bothered, annoyed or disturbed by noise from aircraft, airports or airfields		
	N	Odds ratio	95% CI	
Region				
England	2337	1.00		
Wales	137	0.36**	0.19, 0.68	
Scotland	212	0.22***	0.09, 0.51	
Northern Ireland	61	0.41	0.16, 1.02	
Is the dwelling located in? (I04)				
The centre of a large city	73	2.02*	1.12, 3.64	
Suburbs/outskirts of a large city	846	1.25	0.96, 1.63	
A large town or small city	519	1.11	0.81, 1.52	
In a country village or small town	1147	1.00		
In the countryside	159	1.73*	1.11, 2.67	
Urbanicity (LA Rating)⁷				
Rural	798	1.00		
Semi-rural	274	1.83***	1.26, 2.66	
Urban	1247	1.48**	1.14, 1.94	

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.12 - Univariable Odds Ratios Showing Odds for Reporting being Bothered, Annoyed or Disturbed by Noise from Aircraft, Airports or Airfields for Geographic Factors

V5.A1.5 Whether Noise Spoils Home Life

Two sets of analyses are presented for whether noise spoils home life, as half of the sample answered Question O1a and the other half answered Question O1b. Results are presented separately for Version O1a and Version O1b. The first section presents the univariable regressions for Question O1a and the second section presents the univariable regressions for Question O1b.

Version O1a - Whether Noise Spoils Home Life

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of whether noise spoils home life (Version O1a). The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

Dwelling Factors

Univariable analyses showed that:

- Double glazing;
- Age of home;

⁷ Urbanicity data only available for participants from England

- Length of residence;
- Dwelling type;
- Access to a garden/outdoor space; and
- Interviewer record of noticeable noise from:
 - Road traffic
 - Neighbours or other people nearby; and
 - Aircraft, airports, or airfields

were significantly associated with reports of noise spoiling home life.

Interviewer record of noticeable noise from trains or railway stations was not significantly associated with reports of noise spoiling home life.

Respondents with no double glazing in their home had increased odds of reporting noise spoils home life compared with respondents whose home had all its windows double glazed (OR=1.61, 95%CI 1.02, 2.52).

Respondents living in a home built before 1919 were 50% more likely to report noise spoils home life compared with respondents living in a home built 1961-1990 (OR=1.50, 95%CI 1.09, 2.07).

Respondents who had lived in their home from 5-10 years were more likely to report noise spoils home life compared with respondents who had lived in their home for 10 years or more (OR=1.35, 95%CI 1.01, 1.80).

Respondents living in a semi-detached/end of terrace house, or a bungalow had significantly lower odds of reporting noise spoils home life than respondents living in a detached house (OR=0.65, 95%CI 0.49, 0.85, OR=0.29, 95%CI 0.18, 0.47, respectively).

Respondents without access to a garden/outdoor space had significantly higher odds of reporting noise spoils home life than respondents with access to a garden/outdoor space (OR=1.75, 95%CI 1.04, 2.95).

Respondents whose homes were where the interviewer recorded noticeable noise from road traffic were twice as likely to report noise spoils home life than respondents without noticeable noise from road traffic (OR=2.01, 95%CI 1.54, 2.62).

Respondents whose homes were where the interviewer recorded noticeable noise from neighbours or other people nearby were twice as likely to report noise spoils home life than respondents without noticeable noise from neighbours or other people nearby (OR=2.27, 95%CI 1.13, 4.55).

Respondents whose homes were where the interviewer recorded noticeable noise from aircraft, airports or airfields had increased odds of reporting noise spoils home life than respondents without noticeable noise from aircraft, airports or airfields (OR=1.74, 95%CI 1.03, 6.30).

(N=1352)		Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all versus a little, a fair amount, a great deal, completely)		
	N	Odds ratio	95% CI	
Double glazing in the home (H01)				
All	1150	1.00		
Some	120	1.22	0.83, 1.78	
None	82	1.61*	1.02, 2.52	
Age of home (H04 + H05)				
Before 1919	239	1.50*	1.09, 2.07	
1919-1940	283	0.96	0.71, 1.31	
1941-1960	197	0.96	0.68, 1.35	
1961-1990	416	1.00		
1991-2000	99	1.36	0.88, 2.12	
2001-2012	98	1.39	0.89, 2.16	
Don't know	7	1.69	0.67, 4.22	
How long have you lived in this home? (A11)				
Less than 6 months	57	1.03	0.60, 1.77	
6 months but less than 1 year	76	0.76	0.46, 1.23	
1 year but less than 2 years	86	0.96	0.61, 1.52	
2 years but less than 5 years	170	0.88	0.63, 1.24	
5 years but less than 10 years	243	1.35*	1.01, 1.80	
10 years or more	716	1.00		
Dwelling type (A13)				
Purpose-built flat/maisonette	87	1.02	0.63, 1.64	
Conversion flat/maisonette	31	1.68	0.78, 3.61	
Semi-detached/end of terrace house	565	0.65**	0.49, 0.85	
Mid terrace house	216	0.87	0.62, 1.23	
Detached house	337	1.00		
Bungalow	110	0.29***	0.18, 0.47	
Other	5	0.07	0.003, 1.97	
Access to garden or other private outdoor space (A12)				
No	61	1.75*	1.04, 2.95	
Yes	1292	1.00		
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... (I02)				
road traffic				
No	1061	1.00		
Yes	291	2.01***	1.54, 2.62	
neighbours or other people nearby				
No	1317	1.00		
Yes	36	2.27*	1.13, 4.55	
aircraft, airports or airfields				
No	1291	1.00		
Yes	62	1.74*	1.03, 2.92	
trains or railway stations				
No	1335	1.00		
Yes	17	2.31	0.85, 6.30	

*p<0.05, **p<0.01, ***p<0.001

Table V5.A1.13 - Univariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1a) for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age of respondent;
- Tenure;
- Employment status;
- Social group of the head of household; and
- Interviewer's assessment of hearing problems

were significantly associated with reports of noise spoils home life.

Gender, having children, working at home, and shift work were not significantly associated with reports of noise spoils home life.

Respondents aged 25-34, 65-74, and over 75 years had lower odds of reporting noise spoils home life compared with respondents aged 45-54 (OR=0.59, 95%CI 0.39, 0.88, OR=0.46, 95%CI 0.32, 0.67, OR=0.25, 95%CI 0.15, 0.40, respectively).

Respondents who were buying their home with a mortgage or who were renting from the local authority or housing association were significantly more likely to report noise spoils their home life than respondents who owned their home outright (OR=1.53, 95%CI 1.19, 1.96, OR=1.48, 95%CI 1.02, 2.14, respectively).

Respondents who were retired had significantly lower odds of reporting noise spoils their home life compared with respondents who were employed full-time (OR=0.58, 95%CI 0.44, 0.76).

Respondents where the head of household was in social group E were 50% less likely to report noise spoils home life compared with respondents where the head of household was in social group A (OR=0.52, 95%CI 0.29, 0.92).

Interviewer records of the respondent having hearing problems was associated with decreased odds of reports of noise spoils home life compared with respondents without hearing problems (OR=0.43, 95%CI 0.26, 0.70).

(N=1352)		Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all versus a little, a fair amount, a great deal, completely)		
	N	Odds ratio	95% CI	
Age (H12)				
16-19	63	0.82	0.47, 1.42	
20-24	93	0.75	0.46, 1.20	
25-34	146	0.59*	0.39, 0.88	
35-44	205	0.85	0.59, 1.23	
45-54	269	1.00		
55-64	236	1.11	0.78, 1.58	
65-74	204	0.46***	0.32, 0.67	

75+	135	0.25***	0.15, 0.40
Gender (H13)			
Male	697	1.00	
Female	655	1.06	0.86, 1.32
Tenure (H6)			
Being bought on a mortgage	520	1.53***	1.19, 1.96
Owned outright by household	506	1.00	
Rented from local authority or from housing association	145	1.48*	1.02, 2.14
Rented from private landlord	158	1.14	0.79, 1.63
Other	23	0.54	0.20, 1.40
Any children aged 0-17 (H14)			
No	896	1.00	
Yes	456	1.19	0.95, 1.50
Employment status (H15)			
Working FT	559	1.00	
Working PT	172	1.08	0.76, 1.52
Unemployed	32	0.52	0.24, 1.11
Retired	376	0.58***	0.44, 0.76
FT Education	98	1.14	0.74, 1.75
Home maker	79	1.19	0.74, 1.91
Other	36	0.98	0.50, 1.94
Work at home (H15a)			
No	482	1.00	
Sometimes work at home	250	1.35	0.98, 1.81
Shift work (H16)			
No	609	1.00	
Yes	123	1.28	0.87, 1.89
Social group of head of household (H17)			
A	84	1.00	
B	377	0.82	0.51, 1.32
C1	408	0.68	0.42, 1.10
C2	243	0.69	0.42, 1.13
D	128	0.95	0.55, 1.66
E	112	0.52*	0.29, 0.92
Interviewer's assessment of respondent having hearing problem (I01)			
No	1263	1.00	
Yes – quite a lot or only a bit	86	0.43***	0.26, 0.70

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.14 - Univariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1a) for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that the urban/rural location of the dwelling was significantly associated with reports of noise spoils home life.

Region and urbanicity were not significantly associated with reports of noise spoils home life

Respondents who lived in the suburbs/outskirts of a large city were 30% more likely to report that noise spoils home life compared with respondents who lived in a country village or small town (OR=1.30, 95%CI 1.00, 1.68).

(N=1352)		Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all versus a little, a fair amount, a great deal, completely)		
	N	Odds ratio	95% CI	
Region				
England	1162	1.00		
Wales	81	0.91	0.58, 1.44	
Scotland	77	0.67	0.41, 1.08	
Northern Ireland	32	0.62	0.29, 1.30	
Is the dwelling located in ... ? (104)				
The centre of a large city	34	1.80	0.89, 3.62	
Suburbs/outskirts of a large city	398	1.30*	1.00, 1.68	
A large town or small city	273	0.90	0.67, 1.20	
In a country village or small town	559	1.00		
In the countryside	86	0.75	0.47, 1.21	
Urbanicity (LA Rating)⁸				
Rural	398	1.00		
Semi-rural	153	0.85	0.58, 1.24	
Urban	603	0.99	0.76, 1.27	

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.15 - Univariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1a) for Geographic Factors

Version O1b – Whether Noise Spoils Home Life

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of whether noise spoils home life (Version O1b). The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

Dwelling Factors

Univariable analyses showed that:

- Double glazing;
- Age of home;
- Dwelling type; and
- Interviewer record of noticeable noise from:
 - Road traffic;
 - Neighbours or other people nearby; and

⁸ Urbanicity data only available for participants from England

- Aircraft, airports, or airfields

were significantly associated with reports of noise spoiling home life.

Length of residence and access to a garden/outdoor space were not significantly associated with reports of noise spoiling home life.

Respondents with some double glazing in their home had increased odds of reporting noise spoils home life compared with respondents whose home had all its windows double glazed (OR=1.46, 95%CI 1.02, 2.08).

Respondents living in a home built before 1919 were more likely to report noise spoils home life compared with respondents living in a home built 1961-1990 (OR=1.46, 95%CI 1.02, 2.07).

Respondents living in a purpose-built flat/maisonette, a conversion flat/maisonette, or a mid-terrace house were twice as likely to report noise spoils home life than respondents living in a detached house (OR=2.04, 95%CI 1.22, 3.40, OR=2.44, 95%CI 1.06, 5.59, OR=1.92, 95%CI 1.32, 2.78, respectively).

Respondents whose homes were where the interviewer recorded noticeable noise from road traffic were twice as likely to report noise spoils home life than respondents without noticeable noise from road traffic (OR=2.20, 95%CI 1.67, 2.90).

Respondents whose homes were where the interviewer recorded noticeable noise from neighbours or other people nearby were three times as likely to report noise spoils home life than respondents without noticeable noise from neighbours or other people nearby (OR=3.72, 95%CI 1.85, 7.47).

Respondents whose homes were where the interviewer recorded noticeable noise from aircraft, airports or airfields had increased odds of reporting noise spoils home life than respondents without noticeable noise from aircraft, airports or airfields (OR=1.85, 95%CI 1.06, 3.22).

(N=1352) Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all/a little versus a fair amount, a great deal, completely)			
	N	Odds ratio	95% CI
Double glazing in the home (H01)			
All	1138	1.00	
Some	169	1.46*	1.02, 2.08
None	88	1.41	0.88, 2.27
Age of home (H04 + H05)			
Before 1919	239	1.46*	1.02, 2.07
1919-1940	264	1.07	0.75, 1.54
1941-1960	246	1.24	0.87, 1.78
1961-1990	459	1.00	
1991-2000	100	1.00	0.60, 1.69

2001-2012	75	0.94	0.52, 1.70
Don't know	11	1.96	0.55, 6.62
How long have you lived in this home? (A11)			
Less than 6 months	75	0.60	0.31, 1.15
6 months but less than 1 year	75	1.09	0.63, 1.89
1 year but less than 2 years	89	1.52	0.94, 2.46
2 years but less than 5 years	185	1.34	0.93, 1.92
5 years but less than 10 years	231	1.28	0.91, 1.79
10 years or more	738	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	83	2.04**	1.22, 3.40
Conversion flat/maisonette	26	2.44*	1.06, 5.59
Semi-detached/end of terrace house	517	1.31	0.96, 1.79
Mid terrace house	214	1.92***	1.32, 2.78
Detached house	423	1.00	
Bungalow	119	0.69	0.39, 1.20
Other	13	1.30	0.35, 4.74
Access to garden or other private outdoor space (A12)			
No	57	1.50	0.85, 2.66
Yes	1338	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			
road traffic			
No	1099	1.00	
Yes	296	2.20***	1.67, 2.90
neighbours or other people nearby			
No	1362	1.00	
Yes	33	3.72***	1.85, 7.47
aircraft, airports or airfields			
No	1338	1.00	
Yes	56	1.85*	1.06, 3.22
trains or railway stations			
No	1382	1.00	
Yes	13	0.43	0.08, 2.27

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.16 - Univariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1b) for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age of respondent;
- Tenure;
- Having children in the household; and
- Employment status

were significantly associated with reports of noise spoils home life.

Gender, working at home, shift work, social group of head of household and hearing problems were not significantly associated with reports of noise spoils home life.

Respondents aged 75 years or over had lower odds of reporting noise spoils home life compared with respondents aged 45-54 (OR=0.25, 95%CI 0.13, 0.49).

Respondents who were buying their home with a mortgage or who were renting from a private landlord were significantly more likely to report noise spoils their home life than respondents who owned their home outright (OR=1.44, 95%CI 1.08, 1.93, OR=1.61, 95%CI 1.10, 2.36, respectively).

Respondents with children in the household were more likely to report noise spoils their home life than respondents without children in the household (OR=1.34, 95%CI 1.03, 1.73).

Respondents who were retired had significantly lower odds of reporting noise spoils their home life compared with respondents who were employed full-time (OR=0.51, 95%CI 0.37, 0.70).

(N=1352)		Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all/a little versus a fair amount, a great deal, completely)		
		N	Odds ratio	95% CI
Age (H12)				
	16-19	51	0.93	0.47, 1.86
	20-24	89	1.28	0.75, 2.18
	25-34	166	1.30	0.84, 1.99
	35-44	224	1.10	0.74, 1.65
	45-54	250	1.00	
	55-64	264	0.74	0.49, 1.11
	65-74	211	0.91	0.60, 1.39
	75+	137	0.25***	0.13, 0.49
Gender (H13)				
	Male	665	1.00	
	Female	729	0.91	0.71, 1.16
Tenure (H6)				
	Being bought on a mortgage	490	1.44*	1.08, 1.93
	Owned outright by household	532	1.00	
	Rented from local authority or from housing association	162	1.62*	1.08, 2.42
	Rented from private landlord	189	1.61*	1.10, 2.36
	Other	22	2.27	0.92, 5.58
Any children aged 0-17 (H14)				
	No	962	1.00	
	Yes	432	1.34*	1.03, 1.73
Employment status (H15)				
	Working FT	498	1.00	
	Working PT	208	0.88	0.61, 1.26
	Unemployed	61	0.55	0.28, 1.09
	Retired	423	0.51***	0.37, 0.70

(N=1352)		Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all/a little versus a fair amount, a great deal, completely)		
	N	Odds ratio	95% CI	
FT Education	83	0.94	0.56, 1.59	
Home maker	78	1.40	0.84, 2.31	
Other	42	1.13	0.56, 2.27	
Work at home (H15a)				
No	486	1.00		
Sometimes work at home	220	0.72	0.50, 1.04	
Shift work (H16)				
No	573	1.00		
Yes	134	0.94	0.61, 1.43	
Social group of head of household (H17)				
A	82	1.00		
B	337	1.08	0.59, 1.97	
C1	416	1.51	0.84, 2.72	
C2	249	1.17	0.63, 2.17	
D	170	1.64	0.87, 3.10	
E	139	1.65	0.86, 3.19	
Interviewer's assessment of respondent having hearing problem (I01)				
No	1317	1.00		
Yes – quite a lot or only a bit	77	0.53	0.28, 1.01	

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.17 - Univariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1b) for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that:

- Region; and
- Urban/rural location of the dwelling

were significantly associated with reports of noise spoils home life.

Urbanicity was not significantly associated with reports of noise spoils home life.

Respondents in Northern Ireland were significantly less likely to report that noise spoils home life compared with respondents in England (OR=0.21, 95%CI 0.06, 0.67).

Respondents who lived in the centre of a large city, the suburbs/outskirts of a large city, or in a large town or small city were significantly more likely to report noise spoils home life compared with respondents who lived in a country village or small town (OR=1.99 95%CI 1.00, 3.97, OR=1.49 95%CI 1.12, 1.99, OR=1.62 95%CI 1.15, 2.27, respectively). Respondents living in the countryside were significantly less likely to report noise spoils home life compared with respondents who lived in a country village or small town (OR=0.43 95%CI 0.19, 0.94).

(N=1395)		Thinking about all the types of noise we have been talking about that you hear at home, which one best describes the extent to which noise spoils your home life? (not at all/a little versus a fair amount, a great deal, completely)		
		N	Odds ratio	95% CI
Region				
	England	1171	1.00	
	Wales	99	0.59	0.34, 1.01
	Scotland	81	0.63	0.35, 1.12
	Northern Ireland	44	0.21**	0.06, 0.67
I4 Is the dwelling located in?				
	The centre of a large city	587	1.99*	1.00, 3.97
	Suburbs/outskirts of a large city	39	1.49**	1.12, 1.99
	A large town or small city	449	1.62**	1.15, 2.27
	In a country village or small town	246	1.00	
	In the countryside	73	0.43*	0.19, 0.94
Urbanicity (LA Rating)⁹				
	Rural	397	1.00	
	Semi-rural	120	0.69	0.42, 1.13
	Urban	642	0.97	0.73, 1.28

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.18 - Univariable Odds Ratios Showing Odds for Reporting Noise Spoils Home Life (O1b) for Geographic Factors

V5.A1.6 Sleep Disturbance due to Road Traffic Noise

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of sleep disturbance by road traffic noise. The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

Dwelling Factors

Univariable analyses showed that:

- Age of home;
- Length of residence;
- Dwelling type; and
- Interviewer record of noticeable noise from road traffic

were significantly associated with reports of road traffic noise interfering with sleeping.

⁹ Urbanicity data only available for participants from England

Double glazing and noticeable noise from neighbours, aircraft, airports or airfields, and trains and railway stations were not significantly associated with reports of road traffic noise interfering with sleeping. Due to low power it was not possible to estimate the association between access to a garden or other outdoor open space and road traffic noise interference with sleeping.

Respondents living in homes built before 1919, from 1919-1940, 1941-1960, and 1991-2000 had increased odds of reporting road traffic noise interfering with sleeping than respondents living in homes built 1961-1990 (OR=1.77 95%CI 1.32, 2.35; OR=1.49 95%CI 1.12, 1.99; OR=1.73 95%CI 1.26, 2.37; OR=2.65 95%CI 1.78, 3.94, respectively).

Respondents who had lived in their homes for less than 6 months had decreased odds of reporting road traffic noise interfering with sleeping than respondents who had lived in their homes for 10 years or more (OR=0.56 95%CI 0.32, 0.98).

Respondents who lived in a terrace house had increased odds of reporting road traffic noise interfering with sleeping than respondents who lived in a detached house (OR=1.44 95%CI 1.08, 1.91). Respondents who lived in a bungalow had decreased odds of reporting road traffic noise interfering with sleeping than respondents who lived in a detached house (OR=0.40 95%CI 0.24, 0.68).

Interviewer record of noticeable noise from road traffic was associated with increased odds of reporting road traffic noise interfering with sleeping (OR=1.52 95%CI 1.23, 1.89).

(N=1967) Road traffic noise interferes with sleeping (RTN04)			
	N	Odds ratio	95% CI
Double glazing in the home (H01)			
All	1621	1.00	
Some	217	0.95	0.69, 1.31
None	128	1.40	0.96, 2.04
Age of home (H04 + H05)			
Before 1919	385	1.77***	1.32, 2.35
1919-1940	418	1.49**	1.12, 1.99
1941-1960	286	1.73***	1.26, 2.37
1961-1990	604	1.00	
1991-2000	132	2.65***	1.78, 3.94
2001-2012	118	1.41	0.90, 2.21
Don't know	23	3.47**	1.51, 7.99
How long have you lived in this home? (A11)			
Less than 6 months	90	0.56*	0.32, 0.98
6 months but less than 1 year	108	1.34	0.88, 2.04
1 year but less than 2 years	118	1.48	0.99, 2.20
2 years but less than 5 years	268	1.12	0.83, 1.51
5 years but less than 10 years	349	1.29	0.99, 1.67
10 years or more	1034	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	116	0.91	0.58, 1.42
Conversion flat/maisonette	38	0.41	0.16, 1.03
Semi-detached/end of	773	1.03	0.81, 1.31

(N=1967) Road traffic noise interferes with sleeping (RTN04)			
	N	Odds ratio	95% CI
terrace house			
Mid terrace house	343	1.44*	1.08, 1.91
Detached house	549	1.00	
Bungalow	138	0.40***	0.24, 0.68
Other	10	-	-
Access to garden or other private outdoor space (A12)			
No	78	1.00	
Yes	1889	-	-
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			
road traffic			
No	1460	1.00	
Yes	507	1.52***	1.23, 1.89
neighbours or other people nearby			
No	1911	1.00	
Yes	56	0.59	0.30, 1.14
aircraft, airports or airfields			
No	1862	1.00	
Yes	105	0.86	0.55, 1.35
trains or railway stations			
No	1948	1.00	
Yes	19	0.63	0.20, 1.92

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.19 - Univariable Odds Ratios Showing Odds for Reporting that Road Traffic Noise Interferes with Sleeping for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age;
- Tenure;
- Children in the household;
- Employment status;
- Shift work;
- Social group of head of household; and
- Interviewer's assessment of hearing problems

were significantly associated with reports of road traffic noise interfering with sleeping.

Gender and working from home were not significantly associated with reports of road traffic noise interfering with sleeping.

Respondents aged 20-24 had significantly increased odds of reporting road traffic noise interfering with sleeping compared with respondents aged 45-54 (OR=1.61 95%CI 1.08, 2.40). Respondents aged 65-74 and 75 years and above had significantly decreased odds

of reporting road traffic noise interfering with sleeping compared with respondents aged 45-54 (OR=0.48 95%CI 0.33, 0.70; OR=0.12 95%CI 0.05, 0.25, respectively).

Respondents who were buying their house with a mortgage or who rented from a private landlord had significantly increased odds of reporting road traffic noise interfering with sleeping compared with respondents who owned their own home (OR=1.57 95%CI 1.25, 1.98; OR=1.46 95%CI 1.06, 2.00, respectively).

Respondents with children in the household had increased odds of reporting road traffic noise interfering with sleeping compared with respondents without children in the household (OR=1.74 95%CI 1.42, 2.12).

Respondents in full-time education had increased odds of reporting road traffic noise interfering with sleeping compared with respondents who worked full-time (OR=1.45 95%CI 1.01, 2.08). Respondents who were retired had decreased odds of reporting road traffic noise interfering with sleeping compared with respondents who worked full-time (OR=0.36 95%CI 0.27, 0.47).

Respondents who undertook shift work had increased odds of reporting road traffic noise interfering with sleeping compared with respondents who did not undertake shift work (OR=1.46 95%CI 1.06, 2.03).

Respondents where the head of household was in social group C2 had decreased odds of reporting road traffic noise interfering with sleeping compared with respondents where the head of household was in social group A (OR=0.57 95%CI 0.36, 0.89).

Respondents with hearing problems had decreased odds of reporting road traffic noise interfering with sleeping compared with respondents without hearing problems (OR=0.54 95%CI 0.32, 0.91).

(N=1967)		Road traffic noise interferes with sleeping (RTN04)		
	N	Odds ratio	95% CI	
Age (H12)				
16-19	84	1.45	0.90, 2.36	
20-24	136	1.61*	1.08, 2.40	
25-34	228	0.89	0.62, 1.27	
35-44	333	1.18	0.82, 1.52	
45-54	393	1.00		
55-64	368	0.81	0.60, 1.11	
65-74	272	0.48***	0.33, 0.70	
75+	150	0.12***	0.05, 0.25	
Gender (H13)				
Male	968	1.00		
Female	998	1.18	0.97, 1.43	
Tenure (H6)				
Being bought on a mortgage	763	1.57***	1.25, 1.98	
Owned outright by household	708	1.00		
Rented from local authority or from housing association	204	1.36	0.96, 1.92	
Rented from private landlord	256	1.46*	1.06, 2.00	

(N=1967) Road traffic noise interferes with sleeping (RTN04)			
	N	Odds ratio	95% CI
Other	35	1.67	0.81, 3.45
Any children aged 0-17 (H14)			
No	1305	1.00	
Yes	662	1.74***	1.42, 2.12
Employment status (H15)			
Working FT	778	1.00	
Working PT	274	1.17	0.88, 1.57
Unemployed	67	0.79	0.45, 1.38
Retired	526	0.36***	0.27, 0.47
FT Education	145	1.45*	1.01, 2.08
Home maker	126	0.88	0.59, 1.33
Other	50	-	-
Work at home (H15a)			
No	693	1.00	
Sometimes work at home	359	1.16	0.89, 1.51
Shift work (H16)			
No	870	1.00	
Yes	182	1.46*	1.06, 2.03
Social group of head of household (H17)			
A	125	1.00	
B	542	0.81	0.53, 1.22
C1	588	0.80	0.53, 1.21
C2	350	0.57*	0.36, 0.89
D	210	0.99	0.62, 1.58
E	152	0.65	0.38, 1.09
Interviewer's assessment of respondent having hearing problem (I01)			
No	1867	1.00	
Yes – quite a lot or only a bit	96	0.54*	0.32, 0.91

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.20 - Univariable Odds Ratios Showing Odds for Reporting that Road Traffic Noise Interferes with Sleeping for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that:

- Region;
- Urban/rural location of the dwelling; and
- Urbanicity of the local authority

were not significantly associated with reports of road traffic noise interfering with sleeping.

(N=1967) Road traffic noise interferes with sleeping (RTN04)			
	N	Odds ratio	95% CI
Region			
England	1709	1.00	
Wales	109	0.85	0.55, 1.32
Scotland	103	1.23	0.81, 1.87
Northern Ireland	46	0.74	0.37, 1.47
Is the dwelling located in ... ? (I04)			
The centre of a large city	59	0.75	0.40, 1.41

Suburbs/outskirts of a large city	654	1.07	0.85, 1.34
A large town or small city	371	1.07	0.82, 1.40
In a country village or small town	781	1.00	
In the countryside	100	0.85	0.53, 1.37
Urbanicity (LA Rating)¹⁰			
Rural	552	1.00	
Semi-rural	210	0.85	0.60, 1.21
Urban	935	0.94	0.74, 1.18

*p≤0.05, **p≤0.01, ***p≤0.001

TableV5.A1.21 - Univariable Odds Ratios Showing Odds for Reporting that Road Traffic Noise Interferes with Sleeping for Geographic Factors

V5.A1.7 Sleep Disturbance due to Neighbour Noise

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of sleep disturbance by neighbour noise. The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

Dwelling Factors

Univariable analyses showed that:

- Double glazing;
- Age of home; and
- Dwelling type

were significantly associated with reports of neighbour noise interfering with sleeping.

Length of residence and interviewer record of noticeable noise from road traffic, neighbours or other people nearby, aircraft, airports or airfields, and trains and railway stations were not significantly associated with reports of neighbour noise interfering with sleeping. Due to low power it was not possible to estimate the association between access to a garden or other outdoor open space and neighbour noise interference with sleeping.

Respondents living in houses with no double glazing had increased odds of reporting neighbour noise interfering with sleeping than respondents living in houses where all the windows were double glazed (OR=1.49 95%CI 1.02, 2.17).

¹⁰ Urbanicity data only available for participants from England

Respondents living in homes built before 1919 had increased odds of reporting neighbour noise interfering with sleeping than respondents living in homes built 1961-1990 (OR=1.43 95%CI 1.07, 1.91).

Respondents who lived in a semi-detached/end of terrace house or a mid-terrace house had increased odds of reporting neighbour noise interfering with sleeping than respondents who lived in a detached house (OR=1.81 95%CI 1.40, 2.34, OR=1.76, 95%CI 1.30, 2.39, respectively). Respondents who lived in a bungalow had decreased odds of reporting neighbour noise interfering with sleeping than respondents who lived in a detached house (OR=0.41 95%CI 0.21, 0.78).

(N=1891) Neighbour noise interferes with sleeping (NN04)			
	N	Odds ratio	95% CI
Double glazing in the home (H01)			
All	1571	1.00	
Some	195	1.19	0.86, 1.64
None	125	1.49*	1.02, 2.17
Age of home (H04 + H05)			
Before 1919	346	1.43*	1.07, 1.91
1919-1940	378	1.14	0.85, 1.52
1941-1960	313	1.17	0.86, 1.59
1961-1990	580	1.00	
1991-2000	131	1.46	0.97, 2.19
2001-2012	119	1.11	0.71, 1.72
Don't know	23	1.16	0.46, 2.90
How long have you lived in this home? (A11)			
Less than 6 months	89	0.72	0.43, 1.21
6 months but less than 1 year	100	0.85	0.54, 1.36
1 year but less than 2 years	121	1.33	0.90, 1.98
2 years but less than 5 years	251	0.92	0.68, 1.25
5 years but less than 10 years	330	0.93	0.71, 1.23
10 years or more	1000	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	131	1.43	0.93, 2.20
Conversion flat/maisonette	44	0.70	0.31, 1.58
Semi-detached/end of terrace house	753	1.81***	1.40, 2.34
Mid terrace house	353	1.76***	1.30, 2.39
Detached house	493	1.00	
Bungalow	106	0.41**	0.21, 0.78
Other	10	0.64	0.11, 3.55
Access to garden or other private outdoor space (A12)			
No	87		
Yes	1803	-	-
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			
road traffic			
No	1451	1.00	
Yes	440	1.18	0.93, 1.48
neighbours or other people nearby			
No	1829	1.00	

(N=1891) Neighbour noise interferes with sleeping (NN04)			
	N	Odds ratio	95% CI
Yes	61	1.24	0.83, 2.41
aircraft, airports or airfields			
No	1791	1.00	
Yes	99	0.94	0.60, 1.48
trains or railway stations			
No	1868		
Yes	23	0.85	0.33, 2.18

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.22 - Univariable Odds Ratios Showing Odds for Reporting that Neighbour Noise Interferes with Sleeping for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age;
- Gender;
- Tenure;
- Children in the household;
- Employment status;
- Social group of head of household; and
- Interviewer's assessment of hearing problems

were significantly associated with reports of neighbour noise interfering with sleeping.

Working from home and shift work were not significantly associated with reports of neighbour noise interfering with sleeping.

Respondents aged 55-64, 65-74, and 75 years and above had significantly decreased odds of reporting neighbour noise interfering with sleeping compared with respondents aged 45-54 (OR=0.66 95%CI 0.43, 0.82; OR=0.35, 95%CI 0.24, 0.52; OR=0.10 95%CI 0.04, 0.23, respectively).

Female respondents had increased odds of reporting neighbour noise interfering with sleeping compared with male respondents (OR=1.31, 95%CI 1.07, 1.59).

Respondents who were buying their house with a mortgage, who rented from a local authority or housing association, or who rented from a private landlord had significantly increased odds of reporting neighbour noise interfering with sleeping compared with respondents who owned their own home (OR=1.59 95%CI 1.25, 2.01; OR=1.52 95%CI 1.08, 2.13; OR=1.69 95%CI 1.22, 2.33, respectively).

Respondents with children in the household had increased odds of reporting neighbour noise interfering with sleeping compared with respondents without children in the household (OR=1.62 95%CI 1.32, 2.00).

Respondents who were retired had decreased odds of reporting neighbour noise interfering with sleeping compared with respondents who worked full-time (OR=0.39 95%CI 0.29, 0.52).

Respondents where the head of household was in social group C1 had increased odds of reporting neighbour noise interfering with sleeping compared with respondents where the head of household was in social group A (OR=1.65 95%CI 1.02, 2.64).

Respondents with hearing problems had decreased odds of reporting neighbour noise interfering with sleeping compared with respondents without hearing problems (OR=0.56 95%CI 0.32, 0.97).

(N=1891)		Neighbour noise interferes with sleeping (NN04)		
		N	Odds ratio	95% CI
Age (H12)				
	16-19	89	1.06	0.65, 1.70
	20-24	142	1.18	0.79, 1.75
	25-34	226	0.98	0.70, 1.39
	35-44	310	0.78	0.56, 1.07
	45-54	372	1.00	
	55-64	359	0.66**	0.43, 0.82
	65-74	271	0.35***	0.24, 0.52
	75+	121	0.10***	0.04, 0.23
Gender (H13)				
	Male	917	1.00	
	Female	973	1.31**	1.07, 1.59
Tenure (H6)				
	Being bought on a mortgage	740	1.59***	1.25, 2.01
	Owned outright by household	664	1.00	
	Rented from local authority or from housing association	216	1.52*	1.08, 2.13
	Rented from private landlord	241	1.69***	1.22, 2.33
	Other	30	2.54*	1.20, 5.33
Any children aged 0-17 (H14)				
	No	1264	1.00	
	Yes	627	1.62***	1.32, 2.00
Employment status (H15)				
	Working FT	768	1.00	
	Working PT	282	0.99	0.74, 1.33
	Unemployed	58	0.66	0.36, 1.23
	Retired	476	0.39***	0.29, 0.52
	FT Education	148	1.34	0.93, 1.93
	Home maker	113	0.80	0.52, 1.24
	Other	44	1.72	0.93, 3.16
Work at home (H15a)				
	No	702	1.00	
	Sometimes work at home	348	0.98	0.75, 1.29
Shift work (H16)				
	No	864	1.00	
	Yes	186	1.30	0.93, 1.80
Social group of head of household (H17)				
	A	113	1.00	
	B	514	1.55	0.96, 2.50

(N=1891) Neighbour noise interferes with sleeping (NN04)			
	N	Odds ratio	95% CI
C1	577	1.65*	1.02, 2.64
C2	344	0.99	0.59, 1.64
D	197	1.43	0.84, 2.45
E	146	1.36	0.77, 2.41
Interviewer's assessment of respondent having hearing problem (I01)			
No	1801	1.00	
Yes – quite a lot or only a bit	86	0.56*	0.32, 0.97

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.23 - Univariable Odds Ratios Showing Odds for Reporting that Neighbour Noise Interferes with Sleeping for Sociodemographic Factors

Geographic Factors

Univariable analyses showed that the urban/rural location of dwelling was significantly associated with reports of neighbour noise interfering with sleeping.

Region and the urbanicity of the local authority were not significantly associated with reports of neighbour noise interfering with sleeping.

Respondents who lived in the suburbs/outskirts of a large city had increased odds of reports of neighbour noise interfering with sleeping compared with respondents who lived in a country village or small town (OR=1.54, 95%CI 1.22, 1.94).

(N=1891) Neighbour noise interferes with sleeping (NN04)			
	N	Odds ratio	95% CI
Region			
England	1640	1.00	
Wales	102	0.89	0.57, 1.40
Scotland	100	1.19	0.78, 1.83
Northern Ireland	48	0.85	0.44, 1.62
Is the dwelling located in ... ? (I04)			
The centre of a large city	59	0.91	0.49, 1.70
Suburbs/outskirts of a large city	643	1.54***	1.22, 1.94
A large town or small city	354	1.27	0.96, 1.68
In a country village or small town	760	1.00	
In the countryside	72	0.69	0.37, 1.27
Urbanicity (LA Rating)¹¹			
Rural	539	1.00	
Semi-rural	194	1.25	0.88, 1.77
Urban	896	0.92	0.73, 1.17

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.24 - Univariable Odds Ratios Showing Odds for Reporting that Neighbour Noise Interferes with Sleeping for Geographic Factors

¹¹ Urbanicity data only available for participants from England

V5.A1.8 Differences in Use of Quiet Areas

The tables below show the univariable associations from the regression analyses examining the association of each individual dwelling, sociodemographic and geographic variable with reports of use of quiet areas. The tables show the odds ratio and the 95% confidence intervals for the odds ratio.

Dwelling Factors

Univariable analyses showed that:

- Age of home;
- Dwelling type; and
- Interviewer record of noticeable noise from road traffic

were significantly associated with reports of use of quiet areas.

Double glazing, length of residence, access to a garden, and interviewer record of noticeable noise from neighbours or other people nearby, aircraft, airports or airfields, and trains and railway stations were not significantly associated with use of quiet areas.

Respondents living in homes built before 1919 and between 1919-1940 had increased odds of reporting use of quiet areas than respondents living in homes built 1961-1990 (OR=1.67 95%CI 1.32, 2.11; OR=1.31 95%CI 1.04, 1.64).

Respondents who lived in a purpose-built flat/maisonette, conversion flat/maisonette, or a mid-terrace house had increased odds of reporting use of quiet areas than respondents who lived in a detached house (OR=1.53 95%CI 1.08, 2.17, OR=1.80, 95%CI 1.04, 3.13, OR=1.66, 95%CI 1.29, 2.13, respectively). Respondents who lived in a bungalow had decreased odds of reporting use of quiet areas than respondents who lived in a detached house (OR=0.55 95%CI 0.38, 0.81).

Interviewer record of noticeable noise from road traffic was associated with a 50% increase in the odds of reporting use of quiet areas (OR=1.52 95%CI 1.26, 1.84).

(N=2747) Do you ever visit outdoor places in order to find somewhere peaceful or quiet?			
	N	Odds ratio	95% CI
Double glazing in the home (H01)			
All	2288	1.00	
Some	289	1.24	0.96, 1.70
None	170	1.20	0.86, 1.67
Age of home (H04 + H05)			
Before 1919	478	1.67***	1.32, 2.11
1919-1940	547	1.31*	1.04, 1.64
1941-1960	443	0.72*	0.55, 0.94
1961-1990	875	1.00	
1991-2000	199	1.14	0.82, 1.59
2001-2012	174	0.71	0.48, 1.04
Don't know	31	1.74	0.83, 3.63

(N=2747) Do you ever visit outdoor places in order to find somewhere peaceful or quiet?			
	N	Odds ratio	95% CI
How long have you lived in this home? (A11)			
Less than 6 months	133	0.87	0.59, 1.30
6 months but less than 1 year	151	0.95	0.66, 1.38
1 year but less than 2 years	174	1.31	0.94, 1.81
2 years but less than 5 years	357	1.06	0.82, 1.36
5 years but less than 10 years	474	0.90	0.71, 1.13
10 years or more	1458	1.00	
Dwelling type (A13)			
Purpose-built flat/maisonette	170	1.53*	1.08, 2.17
Conversion flat/maisonette	57	1.80*	1.04, 3.13
Semi-detached/end of terrace house	1082	1.21	0.99, 1.49
Mid terrace house	430	1.66***	1.29, 2.13
Detached house	761	1.00	
Bungalow	229	0.55**	0.38, 0.81
Other	18	0.56	0.16, 1.91
Access to garden or other private outdoor space (A12)			
No	118	1.23	0.83, 1.81
Yes	2629	1.00	
While you were in the home or immediately outside it, was there noticeable noise from outside the home from ... ? (I02)			
road traffic			
No	2159	1.00	
Yes	588	1.52***	1.26, 1.84
neighbours or other people nearby			
No	2678	1.00	
Yes	69	1.06	0.63, 1.77
aircraft, airports or airfields			
No	2629	1.00	
Yes	118	1.18	0.80, 1.74
trains or railway stations			
No	2717	1.00	
Yes	30	0.98	0.44, 2.14

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.25 - Univariable Odds Ratios Showing Odds for Reporting the Use of Quiet Areas for Dwelling Factors

Sociodemographic Factors

Univariable analyses showed that:

- Age;
- Tenure;
- Children in the household;
- Employment status;
- Working from home;
- Shift work;

- Social group of head of household; and
- Interviewer's assessment of hearing problems

were significantly associated with use of quiet areas.

Gender was not significantly associated with use of quiet areas.

Respondents aged 16-19, 20-24, 55-64, 65-74, and 75 years and above had significantly decreased odds of reporting use of quiet areas compared with respondents aged 45-54 (OR=0.54 95%CI 0.34, 0.86; OR=0.57, 95%CI 0.39, 0.83; OR=0.72 95%CI 0.56, 0.94, OR=0.57 95%CI 0.43, 0.75; OR=0.24 95%CI 0.16, 0.35; respectively).

Respondents who were buying their house with a mortgage or who rented from a private landlord had significantly increased odds of use of quiet areas compared with respondents who owned their own home (OR=1.42 95%CI 1.17, 1.71; OR=1.40 95%CI 1.08, 1.81, respectively).

Respondents with children in the household had increased odds of reporting use of quiet areas compared with respondents without children in the household (OR=1.58 95%CI 1.33, 1.87).

Respondents who were unemployed, retired or in full-time education had decreased odds of reporting use of quiet areas compared with respondents who worked full-time (OR=0.51 95%CI 0.31, 0.84, OR=0.49 95%CI 0.40, 0.60, OR=0.65 95%CI 0.46, 0.92, respectively).

Respondents who sometimes worked at home had increased odds of reporting use of quiet areas compared with respondents who didn't work at home (OR=1.47, 95%CI 1.17, 1.85).

Respondents who undertook shift work had decreased odds of reporting use of quiet areas compared with respondents who did not undertake shift work (OR=0.74, 95%CI 0.55, 0.99).

Respondents where the head of household was in social group C1, D, or E had increased odds of reporting use of quiet areas compared with respondents where the head of household was in social group A (OR=0.66, 95%CI 0.47, 0.94; OR=0.61, 95%CI 0.41, 0.92; OR=0.48, 95%CI 0.31, 0.74, respectively).

Respondents with hearing problems had decreased odds of use of quiet areas with respondents without hearing problems (OR=0.61, 95%CI 0.42, 0.89).

(N=2747)		Do you ever visit outdoor places in order to find somewhere peaceful or quiet?		
		N	Odds ratio	95% CI
Age (H12)				
	16-19	116	0.54*	0.34, 0.86
	20-24	181	0.57**	0.39, 0.83
	25-34	312	0.85	0.63, 1.14
	35-44	430	1.02	0.78, 1.33
	45-54	519	1.00	
	55-64	500	0.72*	0.56, 0.94
	65-74	416	0.57***	0.43, 0.75
	75+	272	0.24***	0.16, 0.35
Gender (H13)				
	Male	1362	1.00	
	Female	1385	0.91	0.77, 1.06
Tenure (H6)				
	Being bought on a mortgage	997	1.42***	1.17, 1.71
	Owned outright by household	1052	1.00	
	Rented from local authority or from housing association	307	0.97	0.73, 1.29
	Rented from private landlord	347	1.40*	1.08, 1.81
	Other	37	0.67	0.32, 1.41
Any children aged 0-17 (H14)				
	No	1859	1.00	
	Yes	888	1.58***	1.33, 1.87
Employment status (H15)				
	Working FT	1057	1.00	
	Working PT	380	0.83	0.64, 1.06
	Unemployed	93	0.51**	0.31, 0.84
	Retired	799	0.49***	0.40, 0.60
	FT Education	181	0.65*	0.46, 0.92
	Home maker	157	1.12	0.80, 1.59
	Other	76	0.83	0.51, 1.37
Work at home (H15a)				
	No	968	1.00	
	Sometimes work at home	470	1.47***	1.17, 1.85
Shift work (H16)				
	No	1181	1.00	
	Yes	257	0.74*	0.55, 0.99
Social group of head of household (H17)				
	A	166	1.00	
	B	714	0.75	0.53, 1.07
	C1	824	0.66*	0.47, 0.94
	C2	492	0.70	0.49, 1.02
	D	299	0.61*	0.41, 0.92
	E	252	0.48***	0.31, 0.74
Interviewer's assessment of respondent having hearing problem (I01)				
	No	2580	1.00	
	Yes – quite a lot or only a bit	163	0.61*	0.42, 0.89

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.26 - Univariable Odds Ratios Showing Odds for Reporting the Use of Quiet Areas for Sociodemographic Factors

Geographical Factors

Univariable analyses showed that:

- Region;
- Urban/rural location of dwelling; and
- Urbanicity

was significantly associated with reports of use of quiet areas.

Respondents living in Wales, Scotland, and Northern Ireland had decreased odds of reporting use of quiet areas compared with respondents living in England (OR=0.67, 95%CI 0.47, 0.95; OR=0.54, 95%CI 0.37, 0.81; OR=0.26, 95%CI 0.13, 0.53, respectively).

Respondents who lived in the suburbs/outskirts of a large city or in a large town or small city had increased odds of reports use of quiet areas compared with respondents who lived in a country village or small town (OR=1.54, 95%CI 1.27, 1.87, OR=1.90, 95%CI 1.52, 2.36, respectively). Respondents living in the countryside reported decreased odds of use of quiet areas compared with respondents who lived in a country village or small town (OR=0.42, 95%CI 0.26, 0.68).

Respondents living in urban areas had 53% higher odds for use of quiet areas compared with respondents living in rural areas (OR=1.53, 95%CI 1.26, 1.86).

(N=2747) Do you ever visit outdoor places in order to find somewhere peaceful or quiet?			
	N	Odds ratio	95% CI
Region			
England	2337	1.00	
Wales	137	0.67*	0.47, 0.95
Scotland	212	0.54**	0.37, 0.81
Northern Ireland	61	0.26***	0.13, 0.53
Is the dwelling located in ... ? (104)			
The centre of a large city	73	1.50	0.91, 2.48
Suburbs/outskirts of a large city	846	1.54***	1.27, 1.87
A large town or small city	519	1.90***	1.52, 2.36
In a country village or small town	1147	1.00	
In the countryside	159	0.42***	0.26, 0.68
Urbanicity (LA Rating)¹²			
Rural	798	1.00	
Semi-rural	274	0.94	0.69, 1.28
Urban	1247	1.53***	1.26, 1.86

*p≤0.05, **p≤0.01, ***p≤0.001

Table V5.A1.27 - Univariable Odds Ratios Showing Odds for Reporting the Use of Quiet Areas for Sociodemographic Factors

¹² Urbanicity data only available for participants from England