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Aviation Night Noise Effects

Pilot study report

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Date: 16 September 2022

Prepared for: The Department for Transport

Version: 3

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1 Introduction

1.1 About the study

NatCen Social Research (NatCen) was commissioned by the Department for Transport (DfT) to deliver a pilot as part of the study of Aviation Night Noise Effects (ANNE). The mainstage of the study will comprise two elements. The first will be a cross-sectional survey of residents living near eight UK airports to assess associations of aircraft noise exposure at night and subjective sleep disturbance and annoyance. The cross-sectional survey will then be used to recruit a sub-sample to an objective sleep disturbance study, where physiological assessments of sleep disturbance will be linked to aircraft noise exposure at the participant's home.

This report details key findings from the pilot of the cross-sectional survey.

1.2 Ethical approval

The cross-sectional survey (both pilot and mainstage) was given ethical approval by the NatCen Research Ethics Committee in June 2022.

1.3 Aims of the pilot

The overall aims of the pilot study were to test the survey procedures and questions. These aims were achieved by examining:

- the response rate of the online and paper survey;
- the completion time of the online survey;
- the response to questions, including comparing some questions for which there were two versions for testing;
- responses to the feedback questions;
- consent for the second phase of the study.

1.4 Sources of information

This report draws on a number of information sources:

- paradata¹ from the survey administration process:
 - information on survey response;
 - information on interview length and other paradata from the questionnaire program;
- feedback from participants provided at the end of the questionnaire.

Information from different sources is combined to provide an overall picture, with the information sources for each section clearly signposted throughout the report.

¹ Paradata is the term given to data that are administrative data about the survey e.g. information about how long the questionnaire has taken, information about the device that the questionnaire was completed on or at what point a participant left the questionnaire.

1.5 Structure of the report

Sections 2 to 7 of this report provide the methodology and findings for different aspects of the pilot study. Section 8 summarises key conclusions from the pilot and outlines recommendations for the mainstage.

A marked-up version of the mainstage questionnaire, containing proposed changes, is also included as an attachment to this report.

2 Methodology

2.1 Sample design

The pilot was designed to reflect the mainstage sample design as much as possible. The pilot study covered 4 airports from across the UK which operate flights during the night-time period and shoulder hours: East Midlands, Glasgow, Heathrow and Manchester. These 4 airports were chosen because they were considered the 'largest' of the 8 selected airports that will be included in the mainstage study, in terms of estimated addresses exposed to night-time aviation noise. Addresses sampled for the pilot study will not be sampled again for the mainstage study and so the larger airports were chosen in order to ensure sufficient sample will still be available for the mainstage. 2,200 addresses were sampled for the pilot, with 550 addresses from across the target population around each airport.

Addresses were linked to their night-time noise exposure (L_{night}) by Noise Consultants Limited. High noise strata were defined by $L_{\text{night}} > 54$ decibels (dB) and low noise strata were defined by $L_{\text{night}} \leq 54$ dB. The lowest night-time noise exposure included in the sample was 45dB. The night-time noise exposure data came directly from the 2016 Department for Environment, Food and Rural Affairs (Defra) annual average L_{night} reported results. These data were not adjusted by the Civil Aviation Authority (CAA). For the mainstage sampling, adjusted night-time noise estimates will be used.

The pilot used 2 different sample designs:

- 1) addresses in high noise areas were oversampled in Heathrow and Manchester. In Heathrow and Manchester, 110 addresses were selected from high noise strata, and 440 addresses were selected from low noise strata.
- 2) in Glasgow and East Midlands, 550 addresses were selected from across the target population around each airport.

The pilot used 2 different sample designs so that response rates of addresses in different noise strata could be tested and oversampling of addresses in high noise areas could be used to inform the mainstage study sampling strategy. Glasgow and East Midlands both had a lower number of postcodes where $L_{\text{night}} > 54$ dB and so it was advised to oversample addresses from high noise strata in Heathrow and Manchester only. For the purposes of the pilot study these 2 different sample designs were suitable.

The pilot sample assumptions were as follows:

| | N | % |
|---|-------|----|
| Issued for fieldwork | 2,200 | |
| Assumed eligible (residential addresses) | 2,002 | 91 |
| Responding addresses (out of eligible sample) | 450 | 22 |
| Number of achieved interviews ¹ | 630 | |

| | |
|---|-----|
| Number of achieved interviews excluding falsifications ² | 598 |
| ¹ It is assumed that 1.4 adults per responding household will be productive. This measure appears to be stable across surveys. ² It is assumed that 5% of productive cases will be excluded once falsification checks (survey completed very quickly, 'straight-lining' of responses, duplicate responses) are complete. | |

2.2 Fieldwork

The online questionnaire was live for 6 weeks; it opened on 27th June 2022 and closed on 7th August 2022.

The following participant engagement strategy was employed, with each of the items sent to the 2,200 selected addresses in the post:

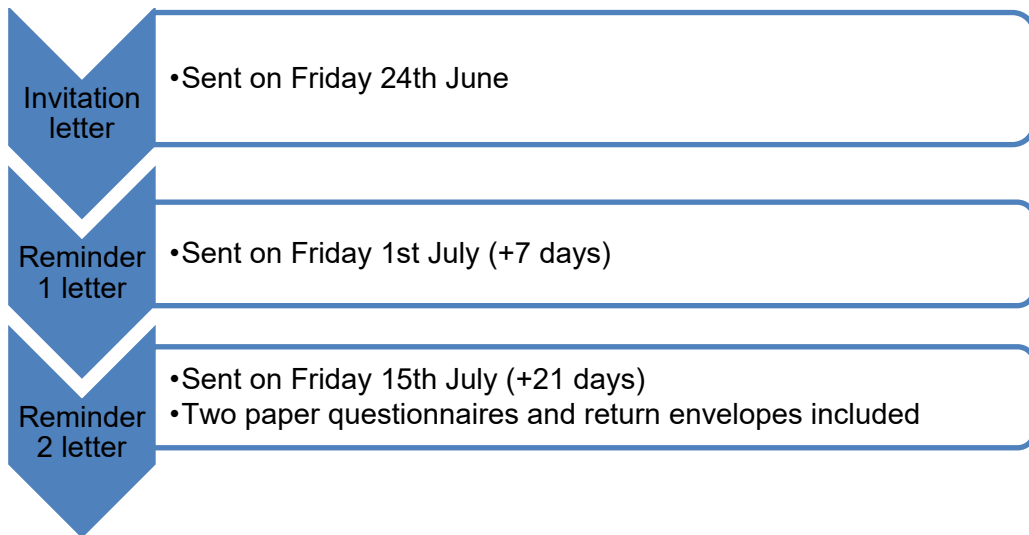
- invitation letter with the URL and 2 sets of unique login details needed to access the survey online (sent on 24th June 2022);
- first reminder letter; sent a week later;
- second reminder letter with 2 paper questionnaires and pre-paid return envelopes; sent 3 weeks after the invitation letter.

The initial survey invitation letters sent out to the selected addresses invited 2 adults aged 18 and older in the household to complete a 20-minute online questionnaire. Participants were able to self-select which 2 household members took part. The first reminder letter contained similar information to the invitation letter and encouraged non-responders to take part. The second reminder letter contained up to 2 paper questionnaires and pre-paid return envelopes to enable less technologically literate people and/or those without internet access to respond.

The invitation letter and reminder letters - provided in Appendix A, B and C - were carefully designed following the latest best practice and following the participant engagement guidance for push-to-web surveys published by the Office for National Statistics (ONS), drawing on their extensive testing in this area.² Invitation and reminder letters kept the subject of the study vague, referring to 'issues within your local environment and neighbourhood'. This was in order to reduce non-response bias and encourage people with a range of attitudes to aviation noise to take part.

Experience shows that most people complete a survey within a few days of receiving the request. The time between each mailing was therefore kept as short as possible, to ensure that the request was fresh in people's mind. Letters were sent as second class and should have been received by participants 2-3 days after they were sent. This design is based on other web-paper surveys such as the Health Survey for England Feasibility study. It gives participants enough time to answer online, which is the preferred mode, whilst also allowing enough time for participants to complete and return the paper questionnaire within the fieldwork period if they would prefer.

² Participant engagement for push-to-web social surveys – GSS (civilservice.gov.uk).



A study website, freephone number and dedicated email address were set up for participants to contact with any issues or queries. A log of participant contact was kept and 30 points of contact were recorded – these were a handful of participants who called to say that they could not take part online but would wait for the paper questionnaire, a handful of letters that were returned back to the office and mostly queries to do with receipt of the incentive.

A £10 incentive (conditional upon completion) per individual was offered in the form of a Love2Shop voucher. Participants were offered the choice of either an online e-voucher code or a physical Love2Shop voucher.

3 Response to the survey

This section looks at the response of households in the sample, and at response of eligible individuals within those households. Individual response rates for adults are then examined within responding households. Response rates presented in this section are based on unweighted data.

3.1 Address-level response rates

Table 3.1 summarises the address-level response rates. In total, 2,200 addresses were issued. In remote surveys, no information is known about the reason for non-response in individual addresses. However, it was assumed that around 9% of addresses in the sample (198) were not residential and were therefore ineligible to complete the survey.³ A total of 445 eligible addresses participated in the survey, this is where the questionnaire was fully completed by at least one adult aged 18 and older in the household. The adjusted address-level response rate, i.e. the proportion of eligible addresses where the questionnaire was fully completed by at least 1 adult aged 18 and older, was 22%.

| Table 3.1: Summary of address-level response | | | |
|--|------------|------------|--------------|
| <i>Issued addresses</i> | | | |
| | Number (n) | Issued (%) | Eligible (%) |
| Address level response | | | |
| Issued addresses | 2,200 | 100 | |
| Assumed ineligible addresses ¹ | 198 | 9 | |
| Assumed eligible (residential addresses) | 2,002 | 91 | 100 |
| Responding addresses ² | 445 | | 22 |
| 2 fully productive individual participants | 192 | | 10 |
| 1 fully productive individual participant | 253 | | 13 |
| <i>in single-adult addresses³</i> | 109 | | 5 |
| <i>in multi-adult addresses³</i> | 333 | | 17 |
| Refusal ⁴ | 3 | | 0 |
| No response | 1,554 | | 78 |

¹ It was assumed that 9% of addresses in the sample (198) were not residential and were therefore ineligible to take part in the survey.

² Responding addresses are defined as those households where at least 1 person has fully completed the survey. 12 partial households, defined as only receiving partial completes, were excluded.

³ 3 households did not provide an answer for the number of adults in the household.

⁴ Refusal includes refusal by telephone or email.

Of the 445 addresses responding to the survey, 192 households yielded 2 fully productive participants and 253 yielded 1 fully productive participant. Of the 445

³ When estimating the proportion of ineligible addresses on a push-to-web survey, it is best practice to assume the same ineligibility rate as a recent face-to-face survey which uses the same sample frame and sampling approach and for which detailed outcomes are known for the entire issued sample. Ineligibility rates in postcode address file (PAF) face-to-face surveys tend to fall between 8% and 10% and 9% is the rate recorded in the most recent face-to-face British Social Attitudes Survey (2019) and has been used as an appropriate default for this pilot survey.

households, 109 were single occupancy households and 333 contained 2 or more adults.

3.1.1 Address-level response by sampled airport

In terms of sampled airports, the highest address-level response rates were achieved in the East Midlands (29%) followed by Manchester (25%). Lower proportions of households living near Glasgow airport completed the survey (16%). (Table 3.2).

Table 3.2: Address-level response by sampled airport

| <i>Issued addresses</i> | | | | |
|-------------------------|-------------------------|---|---|--|
| | Issued addresses | Assumed eligible addresses¹ | Productive addresses² | Household response rate³ |
| Airport | n | n | n | % |
| Glasgow | 550 | 501 | 81 | 16 |
| Manchester | 550 | 501 | 123 | 25 |
| East Midlands | 550 | 501 | 144 | 29 |
| Heathrow | 550 | 501 | 97 | 19 |
| Base | 2,200 | 2,002 | 445 | |

¹ It was assumed that 9% of addresses in the sample (198) were not residential and were therefore ineligible to take part in the survey. This assumption has been applied to all issued addresses. Numbers have been rounded and therefore do not sum to the total assumed eligible addresses.
² Productive addresses are defined as those households where at least 1 person has fully completed the survey.
³ Household response rate is the proportion of productive addresses of assumed eligible addresses.

3.1.2 Address-level response by noise exposure band

Table 3.3 shows the breakdown of the issued sample and household response rates achieved in each sampled noise exposure band. Overall, there was some variation across the noise exposure bands with the highest response rates achieved in the 54.0 to 56.9 decibels (dB) noise band (28%) and lowest response rates achieved in the lowest noise exposure band of 45.0 to 47.9 dB (19%) and in the highest noise exposure band of 60.0 to 62.9 dB (19%). No households in areas where noise is above 63 dB took part.

Table 3.3: Address-level response by noise exposure band

| <i>Issued addresses</i> | | | | |
|---|-------------------------|---|---|--|
| | Issued addresses | Assumed eligible addresses¹ | Productive addresses² | Household response rate³ |
| Noise exposure band (decibels, dB) | n | n | n | % |
| 45.0 – 47.9 | 1,028 | 935 | 179 | 19 |
| 48.0 – 50.9 | 649 | 591 | 150 | 25 |
| 51.0 – 53.9 | 255 | 232 | 54 | 23 |
| 54.0 – 56.9 | 167 | 152 | 43 | 28 |
| 57.0 – 59.9 | 62 | 56 | 13 | 23 |
| 60.0 – 62.9 | 34 | 31 | 6 | 19 |
| ≥ 63 | 5 | 5 | 0 | 0 |
| Base | 2,200 | 2,002 | 445 | |

¹ It was assumed that 9% of addresses in the sample (198) were not residential and were therefore ineligible to take part in the survey. This assumption has been applied to all issued addresses.

² Productive addresses are defined as those households where at least 1 person has fully completed the survey.

³ Household response rate is the proportion of productive addresses of assumed eligible addresses.

3.2 Individual-level response rates

In total, 637 individuals fully completed the survey: 421 online questionnaires and 216 paper questionnaires (Table 3.4). Assuming an average household size of 1.89 adults, this represents an unadjusted individual response rate of 17%.

637 individuals gives an average of 1.4 productive adults per household (637/445) which is what was assumed.

As stated in Section 2, each household was provided with 2 log-in codes for completing the online survey and up to 2 paper questionnaires were included with the second reminder mailing. This could cause duplicate responses, where either a single participant completed the survey a second time, or where more than 2 people in a household completed the survey (for example, 2 completing the survey online and 2 different people completing the paper questionnaires). Cases were flagged for review if the following applied within any given household:

- both age and sex were duplicated (this includes duplication of missing values) – if so, and either of the following criteria also applied, then a secondary flag was raised:
 - email address was duplicated
 - both first name and surname were duplicated (if this was provided).

These checks led to 8 cases being removed. A further 3 online cases were removed from the analysis dataset due to concerns that the participant had completed the online questionnaire too quickly to have properly engaged with the questions. These 11 cases have not been included in the analysis presented in this report.

A further 15 individuals partially completed the questionnaire, meaning they stopped completing somewhere between the end of the sleep disturbance questions and the end of the questionnaire. Unless explicitly stated these cases have not been included in the analysis presented in this report.

Table 3.4: Summary of individual-level response

| <i>Individuals</i> | | |
|--|-----------------------|------------------------|
| | Number (n) | Percent (%) |
| Assumed eligible adults in eligible addresses ¹ | 3,784 | |
| Responding adults ² | 637 | 17 |
| <i>Proportion of online completes</i> | 421 | 66 |
| <i>Proportion of paper completes</i> | 216 | 34 |
| Partially complete questionnaires | 15 | <0.5 |
| Refusal ³ | 3 | <0.5 |

¹ The average of 1.89 adults per household is a national average based on the 2011 Census and is used for indicative purposes. The total assumed eligible adults is based on eligible addresses (n=2,002).

² Responding adults are defined as those who fully completed the survey or those who completed up to but not including the feedback questions. 15 partially complete questionnaires were removed from the analysis.

³ 1 participant refused at the introductory consent screen and 2 participants phoned the Freephone number to refuse.

3.2.1 Age and sex profile of responding sample

Table 3.5 presents the proportion of the responding sample by age and sex and provides a comparison against the mid-year population estimates.⁴ 44% of the responding sample were men and 56% were women. Compared to the mid-year population estimates, the pilot sample under-represented men by 5 percentage points and over-represented women by 5 percentage points.

The largest responding group were those aged 55 to 74 (36%). The age group with the lowest proportion of responders were those aged 75 years and older (15%). Compared with the mid-year population estimates, participants aged 18 to 34 were under-represented and participants aged 55 and older were over-represented. This difference was most marked for men aged 18 to 34 and men aged 55 to 74.

Table 3.5: Individual response by sex and age

| Productive individuals | | | | | | |
|------------------------|--------------------|--------------------------|--------------------|--------------------------|--------------------|--------------------------|
| Age group (years) | Men | | Women | | Total | |
| | Pilot Participants | Great Britain population | Pilot Participants | Great Britain population | Pilot Participants | Great Britain population |
| | % | % | % | % | % | % |
| 18-34 | 15 | 29 | 18 | 27 | 17 | 28 |
| 35-54 | 27 | 33 | 35 | 33 | 31 | 33 |
| 55-74 | 41 | 28 | 33 | 29 | 36 | 29 |
| 75+ | 18 | 10 | 13 | 12 | 15 | 11 |
| All | 44 | 49 | 56 | 51 | | |
| Base ¹ | 274 | | 356 | | 630 | |

¹ 7 individuals did not answer either the sex question or the age group question and were therefore excluded from the analysis.

3.2.2 Socio-demographic characteristics⁵ of the responding sample of adults

Ethnicity

The pilot responding sample were predominantly from white ethnic groups (89%) with 8% Asian, 2% Black, 1% from mixed or multiple ethnic groups and 1% from other backgrounds. This is broadly similar to the latest England and Wales 2011 Census data⁶ (86% White, 8% Asian, 3% Black, 2% mixed or multiple ethnic groups and 1% other ethnic groups).

Table 3.6: Individual response by ethnic group

⁴ Based on 2020 mid-year population estimates for Great Britain:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>

⁵ Comparisons between the pilot data and Census 2011 data should be viewed with caution as the characteristics of populations living around airports may be different to the population of England and Wales.

⁶ Based on Census 2011 data for England and Wales only: <https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/national-and-regional-populations/population-of-england-and-wales/latest#by-ethnicity>

| <i>Productive individuals</i> | | | |
|------------------------------------|-------------------------------------|----|------------------------------|
| | Total productive individuals | | Census 2011 estimates |
| Ethnic group | n | % | % |
| White | 565 | 89 | 86 |
| Asian | 48 | 8 | 8 |
| Black | 11 | 2 | 3 |
| Mixed / multiple ethnic background | 6 | 1 | 2 |
| Any other background | 4 | 1 | 1 |
| <i>Base</i> ¹ | 634 | | |

¹ Three individuals did not answer the ethnicity question and were therefore excluded from the analysis.

Socio-economic status

There was some variation in the socio-economic profile of the responding sample. The largest responding group were those in managerial, administrative and professional occupations (56%). There was some variation in the socio-economic profile of the pilot sample and the Census 2011 data.⁶ The pilot sample contained a higher proportion in managerial, administrative and professional occupations (56% compared with 37% in the Census data) and lower proportions in other socio-economic groups. For example, the proportion responding in semi-routine and routine occupations was lower in the pilot sample: 13% compared with 26% in the Census 2011 data.⁶

| Table 3.7: Individual response by socio-economic status¹ | | | |
|--|-------------------------------------|----|------------------------------|
| <i>Productive individuals</i> | | | |
| | Total productive individuals | | Census 2011 estimates |
| Socio-economic status | n | % | % |
| Managerial, administrative and professional occupations | 344 | 56 | 37 |
| Intermediate occupations | 79 | 13 | 11 |
| Small employers and own account workers | 39 | 6 | 13 |
| Lower supervisory and technical occupations | 37 | 6 | 9 |
| Semi-routine and routine occupations | 78 | 13 | 26 |
| Never worked/Long-term unemployed | 35 | 6 | 4 |
| <i>Base</i> ² | 612 | | |

¹ The questions and derivation of NS-SEC were taken from the guidance published by the ONS: <https://www.ons.gov.uk/methodology/classificationsandstandards/otherclassifications/thenationalstatisticsocioeconomicclassificationnssecbasedonsoc2010>

² 25 cases did not answer the employment questions used to derive NS-SEC and were therefore excluded from the analysis.

3.2.3 Response by interview mode

Table 3.8 presents individual response rates by mode of completion. Of the 637 adults completing the survey, 66% (421) did so online and 34% (216) completed a paper questionnaire. There was no overall difference between men and women in the mode of completion. The oldest age group (those aged 75 years and older) were more likely to complete on paper than online (70% and 30% respectively).

Table 3.8: Individual response by mode of completion

| <i>Productive individuals</i> | | | | | | |
|---|--------------------|-----------|-------------------|-----------|-----------------------------|------------|
| Demographic | Online completions | | Paper completions | | Total productive interviews | |
| | n | % | n | % | n | % |
| Sex | | | | | | |
| Male | 184 | 67 | 91 | 33 | 275 | 44 |
| Female | 237 | 66 | 120 | 34 | 357 | 56 |
| | | | | | | |
| Age group (years) | | | | | | |
| 18-34 | 88 | 82 | 19 | 18 | 107 | 17 |
| 35-54 | 162 | 81 | 38 | 19 | 200 | 32 |
| 55-74 | 142 | 62 | 87 | 38 | 229 | 36 |
| 75+ | 29 | 30 | 69 | 70 | 98 | 15 |
| | | | | | | |
| Ethnic group | | | | | | |
| White | 378 | 67 | 187 | 33 | 565 | 89 |
| Asian | 29 | 60 | 19 | 40 | 48 | 8 |
| Black | 7 | 64 | 4 | 36 | 11 | 2 |
| Mixed / multiple ethnic background | 4 | 67 | 2 | 33 | 6 | 1 |
| Any other background | 2 | 50 | 2 | 50 | 4 | 1 |
| | | | | | | |
| Socio-economic status | | | | | | |
| Managerial, administrative and professional occupations | 254 | 74 | 90 | 26 | 344 | 56 |
| Intermediate occupations | 43 | 54 | 36 | 46 | 79 | 13 |
| Small employers and own account workers | 26 | 67 | 13 | 33 | 39 | 6 |
| Lower supervisory and technical occupations | 17 | 46 | 20 | 54 | 37 | 6 |
| Semi-routine and routine occupations | 53 | 68 | 25 | 32 | 78 | 13 |
| Never worked/Long-term unemployed | 27 | 77 | 8 | 23 | 35 | 6 |
| | | | | | | |
| Total¹ | 421 | 66 | 216 | 34 | 637 | 100 |

¹The total of each demographic group may not sum to 637 individuals due to missing data at different questions.

4 Survey length

Information on the overall completion time and module timings were collected for the online questionnaire. It was not possible to collect this data for the paper questionnaire so the results in this section refer to the online questionnaire only.

| Mean | Median | Min | Max |
|------|--------|-----|-----|
| 19 | 16 | 5 | 93 |

¹Timestamp data is based on the 421 legitimate online cases.

The target mean survey time was 20 minutes to minimise participant burden. Analysis of the timestamp data shows that the online survey took on average 19 minutes to complete. Therefore, no major cuts of content are needed. The maximum survey length was 93 minutes, which indicates that some participants may have completed the survey in separate sessions.

| Section | Mean | Median | Min | Max |
|----------------------|------|--------|-----|------|
| Introduction | 0.3 | 0.2 | 0.0 | 5.4 |
| Annoyance | 2.6 | 1.9 | 0.5 | 67.2 |
| Sleep disturbance | 3.4 | 2.9 | 1.0 | 36.1 |
| Health | 1.0 | 0.8 | 0.2 | 8.5 |
| Non-acoustic factors | 2.6 | 2.2 | 0.4 | 12.0 |
| Demographics | 4.6 | 3.7 | 1.2 | 44.6 |
| Recontact | 2.5 | 2.0 | 0.3 | 48.8 |
| Feedback | 1.7 | 1.1 | 0.0 | 39.2 |

¹Timestamp data is based on the 421 legitimate online cases.

The longest module in the online questionnaire was the demographic questions, which took an average of 4.6 minutes to complete, followed by the sleep disturbance questions which took an average of 3.4 minutes. The shortest modules were the introduction, which took an average of 0.3 minutes to complete, and the health questions which took an average of 1 minute.

5 Feedback

5.1 Participant feedback

At the end of the survey participants were asked 3 feedback questions. Answers of those who responded (roughly 80% of participants) are collated below.

5.1.1 Thoughts on topic of the survey after reading invitation letter

The invitation letter (Appendix A) and reminder letters (Appendix B and C) invited 2 adults aged 18 and older to take part in the study. The letters described the survey as being about 'issues within your local environment and neighbourhood, and the impact they have on your life', in order to avoid non-response bias from people who did not feel affected by aviation noise. At the end of the survey, participants were asked for feedback on what they initially thought the survey was about after reading the invitation letter. The most common answers were **transport**, the **environment** and **airports/aircraft**.

The answers that mentioned transport included public transport, traffic, roads, traffic noise or future transport policies. Some participants said they thought this was the topic because the letter mentioned the Department for Transport.

Answers that mentioned the **environment** suggested topics like the effect of the environment on your life, local green spaces, air quality, litter, antisocial behaviour, local services and wildlife.

For the airport/aircraft answers, participants mentioned airport expansion, aircraft pollution and other effects of living near the airport. Some participants specifically mentioned **noise** and even **the effect of aircraft noise on sleep**. It is possible these participants misinterpreted the question to be asking about the actual survey topic, rather than their idea of the survey topic after reading the letter. For example, 1 participant answered 'It was about how airplanes noise affects people's life'.

A minority of participants said they were **not sure** what the survey was about after reading the letter, and 1 said it should be clearer what it was asking about.

5.1.2 Why did you decide to take part in this survey?

Participants were asked to indicate why they decided to take part in the survey. The majority of participants reported the **incentive** as their main motivation for taking part. Some mentioned the **genuine interest** in the survey and helping to inform decisions. Others reported that they wanted to **help their local neighbourhood** and environment by taking part in the survey. A small minority reported an interest in local transport issues and aircraft noise annoyance. Participants who completed the paper questionnaire gave similar reasons for taking part although some mentioned they were encouraged to take part after seeing the questions in the paper copy and others mentioned they took part because they received 2 reminders and were given the option to complete on paper.

5.1.3 Other feedback

As a final question, participants were asked if they had any other feedback, for example on ways to improve the questions.

General survey feedback

Some participants said the survey was easy to understand, clear, simple and self-explanatory. There was also feedback that the survey had a nice layout, was well formatted and user friendly. One participant suggested that there should be a progress bar showing how far you are through the survey.

Content of survey

Some participants commented that the topic was relevant but not intrusive. Others mentioned there were other relevant topics they were affected by that the survey missed, including traffic noise, helicopters and aircraft noise in the day.

Feedback from 2 participants stated that the survey was biased or encouraged people to overstate how much they were bothered by aircraft noise.

Specific questions

There was a small amount of specific feedback relating to 2 questions; these are listed in Section 6.2.

Incentives

Some participants gave feedback that the incentive was fair and encouraged people to get involved. It was also mentioned that the voucher should be clearer.

5.2 Recommendations

- Consider making the voucher clearer and more predominant on the invitation and reminder letters.
- Recommend not to add a progress bar. Progress bars are not as effective when a survey has questions that are routed. A progress bar can also have the adverse effect of demotivating a participant.

6 Pilot questionnaire

6.1 Questionnaire content

The pilot questionnaire comprised of the sections listed in Table 6.1.

| Section | Content |
|----------------------|--|
| Annoyance | <ul style="list-style-type: none"> Sources of noise annoyance Annoyance from road traffic noise Annoyance from aircraft, airports or airfields - 2 versions tested in pilot: <i>Version A</i> – asked about hourly intervals from 9pm-10pm to 7am-8am <i>Version B</i> – asked about different grouped intervals from 9pm-11pm to 7am-8am |
| Sleep disturbance | <ul style="list-style-type: none"> General health Pittsburgh Sleep Quality Index (PSQI): sleep quality; time taken to fall asleep; sleep duration Prescribed medications to help sleep; diagnosed sleep disorder; diagnosed health conditions; caring responsibility Sleeping with windows open/closed, type of windows Disturbance from aircraft, airports or airfields on sleep; times sleep disturbed – 2 versions tested in pilot: <i>Version A</i> – asked about hourly intervals from 9pm-10pm to 7am-8am <i>Version B</i> – asked about different grouped intervals from 9pm-11pm to 7am-8am Interference to sleeping patterns and sleeping with windows open |
| Health | Short Warwick Edinburgh Mental Wellbeing 7-item Scale (WEMWBS) |
| Non-acoustic factors | <ul style="list-style-type: none"> Attitudes towards noise from aircraft, airports When last flew from UK airport Coping with noise from aircraft Whether complained, and how, about noise from aircraft Whether ever had changes to home due to noise insulation scheme |
| Demographics | <ul style="list-style-type: none"> Age band, sex, gender identity, ethnicity, tenure Number of adults and children in household Self-reported height and weight Hearing sensitivity to noise |

| | |
|-----------------------|--|
| | <ul style="list-style-type: none"> • Economic status, employment status, occupation, shift work, working for airport/airline • Dwelling type |
| Consent | <ul style="list-style-type: none"> • Recontact for objective sleep study • Recontact for future studies |
| Feedback (pilot only) | Participant feedback on why they chose to take part and what they thought the survey was about |

6.2 Questionnaire issues

A small number of questionnaire issues were identified. Below is a list of questions where issues were identified either by participants or by the research team. Action points have been made to highlight key issues that need to be resolved by the team.

- **FLYING:** this question asked participants to indicate when they last flew from a UK airport. Response options '3 to 4 years' and '4 to 10 years' are overlapping categories.
Action: Update response options so these do not overlap.
- **HOMELONG:** participants were asked to indicate how long they had lived in their home. Responses options are overlapping.
Action: Update response options so these do not overlap.
- **WAKE:** this item was taken from the PSQI sleep scale and asked participants to record how often they woke up during the night over the past month. The question was considered as ambiguous as it could be interpreted in different ways e.g. how many nights over the month, how many times on a single night on average or how many times over the month on average.
Action: Make clearer what information the question is asking for.
- **COPING:** this question asked participants if they have done any of the listed options about the noise from aircraft, airfields and airports during the night-time. One participant mentioned there was not an option for "closing windows".
Action: Consider adding the response option "closing windows".
- **General:** it was mentioned that there should be an option for "not applicable" or "indifferent" for some questions.
Action: Consider if some questions need an option for "not applicable" and how to make this clearer.

6.3 Item non-response

Item non-response is where a participant fails to answer a question, either in full or in part (i.e. skipping questions or answering 'don't know'/'prefer not to answer').

The mechanism that enabled participants to not answer questions was implemented in different ways at different points in the questionnaire.

Participant indirect access. In the online questionnaire, the non-response options were accessed by clicking the 'Next' button without providing an answer to the

question. Additional response options of 'don't know' and 'prefer not to answer' were then displayed.

Participant direct access. There are some questions that are deemed sufficiently sensitive that a refusal code (labelled 'prefer not to answer') is included as an answer option from the start. This was used at the height and weight questions.

There were also some questions where 'don't know' is a legitimate response and was not considered item non-response (e.g. "In what year was your home originally built?").

As to be expected, the level of missing data was greater in the paper questionnaires than in the online questionnaires. No questions were skipped or missed in the online questionnaire due to the embedded routing and instructions. Table 6.2 lists the individual questions in the paper questionnaire that were skipped the most.

| Table 6.2 Skipped questions in the paper questionnaire | |
|--|-------------|
| Item | Skipped (n) |
| WorkedAir Did your work, before you retired, ever include any of these kinds of employment? | 35 |
| HomeBuilt In what year was your home originally built? | 24 |
| WorkAirHH Does anyone in the household have work that includes any of these kinds of employment? | 16 |

Action: Due to a higher number of missing responses in the paper questionnaire, consider streamlining the 3 'worked at airport' questions.

Table 6.3 summarises the item non-response for individual questions in the online questionnaire.

| Table 6.3 Questions where item non-response options were used in the online questionnaire | | | |
|---|---|----------------|-------------|
| Type | Item | Don't know (n) | Refusal (n) |
| Participant indirect access. | Ethnicity What is your ethnic group? | - | 1 |
| Participant indirect access. | Occupation Which of the following best describes the sort of work you do in your current job? If you are not working now, please select which best described what you did in your last job. | - | 1 |

| | | | |
|------------------------------|---|---|---|
| Participant indirect access. | WorkAirHH Does anyone in the household have work that includes any of these kinds of employment? | 1 | - |
| Participant indirect access. | Slpdisorder Have you ever been diagnosed by a health professional with any of the following sleep disorders? | - | 1 |
| Participant indirect access. | Conditions Have you ever been diagnosed by a health professional with any of the following conditions? | - | 1 |
| Participant indirect access. | AnnoyTimeSummerA Thinking about the past three months, when you were here at home, how much does noise from aircraft, airports or airfields bother, disturb or annoy you during these times? One participant selected 'don't know' to all the hourly time intervals. | 1 | - |

In summary, item non-response was infrequent during the pilot and was not a concern for either mode of completion.

6.4 Open questions

At various questions participants had the opportunity to write in other responses.

Both questionnaire modes contained the same questions with an “other, please describe” answer option. The percentage of participants selecting the “other, please describe” option is shown for all participants responding to the survey questions (Table 6.4). For the pilot, other responses were not back coded into the pre-existing response categories as these were reviewed in order to make a judgement on whether new categories were warranted for the mainstage.

- **SOURCE:** 7% of participants selected ‘other’ sources of noise which bother, disturb or annoy them. Participants cited dogs barking and passers-by as the most common other sources of annoyance.
- **ETHNICITY:** 5% of participants considered themselves as of an ‘other’ ethnic group.
- **SLPDISORDER:** 2% of participants reported being diagnosed with another sleep disorder. The question specifically refers to clinically diagnosed sleep disorders but some participants reported reasons for not sleeping such as nights sweats and the menopause. One participant cited ‘wake/sleep transitional disorder’ which could be back coded into category 5 ‘insomnia.’
- **COMPLAINED:** around 1% of participants cited that they had complained to an ‘other’ source about the noise from aircraft, airfields and airports. Participants mentioned complaining to their neighbours or friends as an ‘other’ source.

| Question | Number of participants selecting ‘other’ answer option | % selecting ‘other’ option |
|--|--|----------------------------|
| Other sources of noise that bother, disturb or annoy | 46 | 7 |
| Ethnicity | 31 | 5 |
| Diagnosed sleep disorder | 15 | 2 |
| Complained to other source about noise from aircraft | 9 | 1 |
| Gender identity | 8 | 1 |
| <i>Base</i> | 637 | |

In summary, it is not recommended to add any additional response options to these questions. For the mainstage, other responses would be reviewed as part of the coding and editing process and back coded into the existing code frame where possible.

6.5 Attitudes to noise, airports and aeroplanes

Responses to the attitude questions about noise, airports and aeroplanes are presented in Table 6.5, alongside responses to the equivalent questions that were also asked in the Survey of Noise Attitudes (SoNA) 2014.⁷ Similar proportions of participants agreed or disagreed that noise from aeroplanes is bad for their own health or the health of their household (37% respectively), is bad for children’s education (31% agreeing and 33% disagreeing); and makes their home less valuable (32% respectively). This indicates a range of attitudes from the pilot participants.

For most of the attitude statements, the proportions agreeing or disagreeing are similar to what was found in SoNA 2014. The largest difference was seen in the response to the statement: “air travel harms the environment”. The proportion strongly agreeing / agreeing to this increased by 12 percentage points from 60% in SoNA 2014 to 72% in the pilot study.

| Question item | Pilot participants | | SoNA14 ¹ participants | |
|--|------------------------|------------------------------|----------------------------------|------------------------------|
| | Strongly agree / agree | Strongly disagree / disagree | Strongly agree / agree | Strongly disagree / disagree |
| | % ² | % ² | % ² | % ² |
| Noise from aeroplanes is bad for the health of myself or my household | 37 | 37 | 33 | 43 |
| Noise from aeroplanes is bad for children’s education at the local schools | 31 | 33 | 35 | 31 |

⁷ <https://publicapps.caa.co.uk/docs/33/CAP1506%20Second%20Edition.pdf>

| | | | | |
|---|----|----|-----|-----|
| Having an airport in the area is good for the local economy | 76 | 7 | 73 | 9 |
| I worry about plane crashes around here | 18 | 70 | 22 | 66 |
| Noise from aeroplanes makes my home less valuable | 32 | 32 | 32 | 32 |
| Having an airport in the area makes my home less valuable | 17 | 44 | n/a | n/a |
| Having an airport in the area makes my home more valuable | 27 | 23 | 26 | 31 |
| It is convenient to have an airport in the area | 77 | 9 | 71 | 14 |
| Air travel harms the environment | 72 | 9 | 60 | 14 |
| I like flying | 64 | 20 | 64 | 22 |
| I worry about more land being taken over by the airport | 34 | 38 | 36 | 45 |
| I like watching the aeroplanes | 49 | 32 | 38 | 44 |
| ¹ Based on the published Survey of Noise Attitudes (SoNA) 2014 data: https://www.caa.co.uk/media/3kad1b5a/cap1506b-sona-2014-data-files.xlsx ² Proportions do not sum to 100% because the “neither agree nor disagree” category has not been presented in the table. | | | | |

6.6 Comparison of annoyance and sleep disturbance questions

Two versions of the annoyance and sleep disturbance questions were tested in the pilot questionnaire. Half of the sample were randomly selected to see Version A of the questions and half were selected to see Version B. The questions were the same, but the response options contained different grouped time intervals throughout the night. The 2 versions are presented below.

Version A:

Thinking about the **past three months**, when you were here at home, how much does noise from aircraft, airports or airfields [bother, disturb or annoy you] / [disturb your sleep] during these times?

1. 9pm-10pm
2. 10pm-11pm
3. 11pm-12am
4. 12am-1am
5. 1am-2am
6. 2am-3am
7. 3am-4am
8. 4am-5am
9. 5am-6am
10. 6am-7am
11. 7am-8am

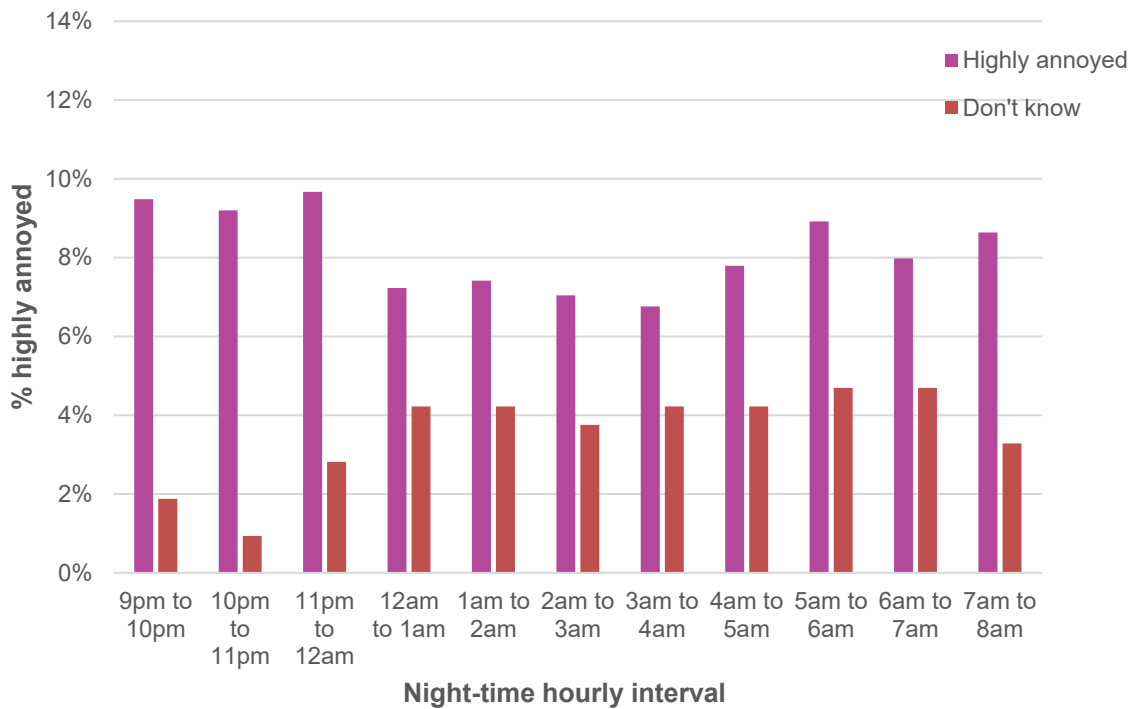
Version B:

Thinking about the **past three months**, when you were here at home, how much does noise from aircraft, airports or airfields [bother, disturb or annoy you] / [disturb your sleep] during these times?

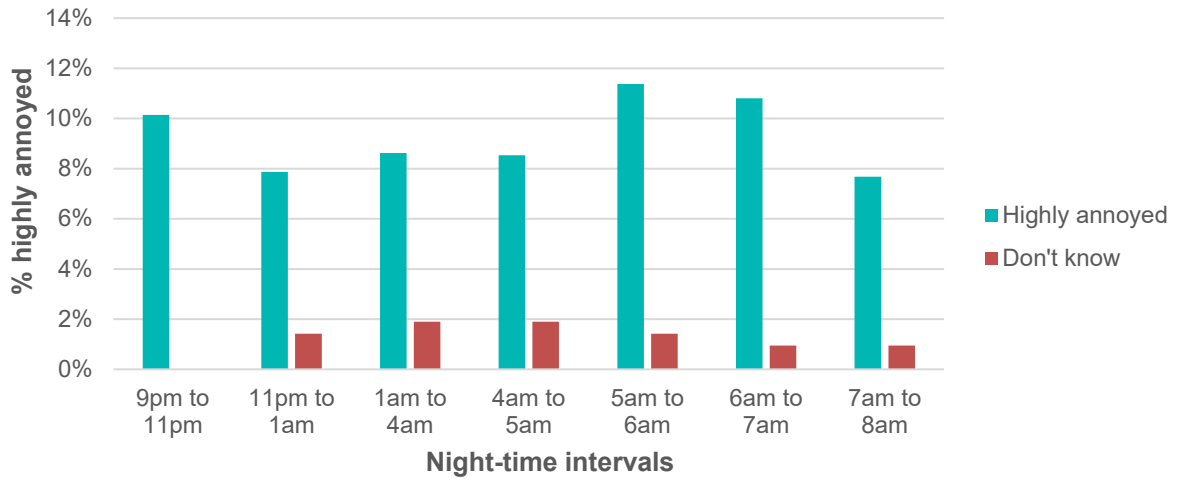
- 1. 9pm-11pm
- 2. 11pm-1am
- 3. 1am-4am
- 4. 4am-5am
- 5. 5am-6am
- 6. 6am-7am
- 7. 7am-8am

The proportion highly annoyed and proportion highly sleep disturbed at each night-time interval have been calculated using the same formula used in SoNA 2014: the 'extremely' response plus 40% of the total for the 'very' response. These distributions, plus the proportion of 'don't know' responses per time interval, are presented for each version of the annoyance questions below.

Version A: Distribution of highly annoyed response by intervals

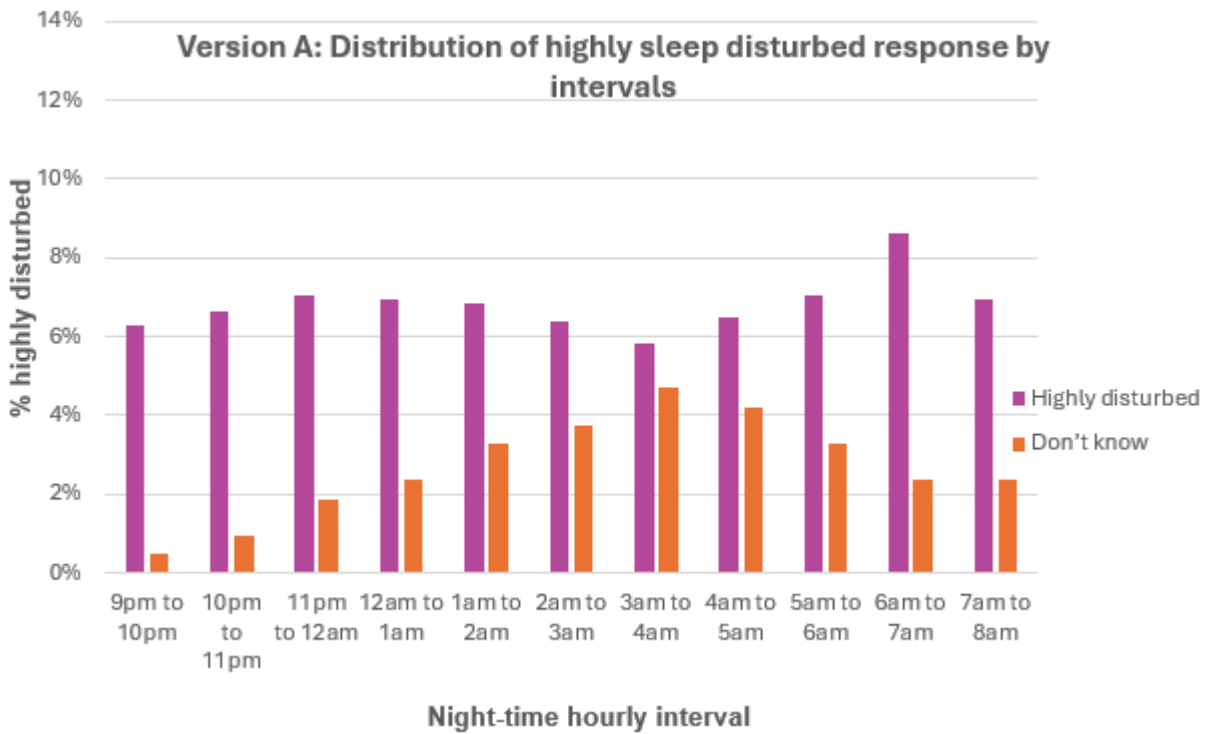


Version B: Distribution of highly annoyed response by intervals

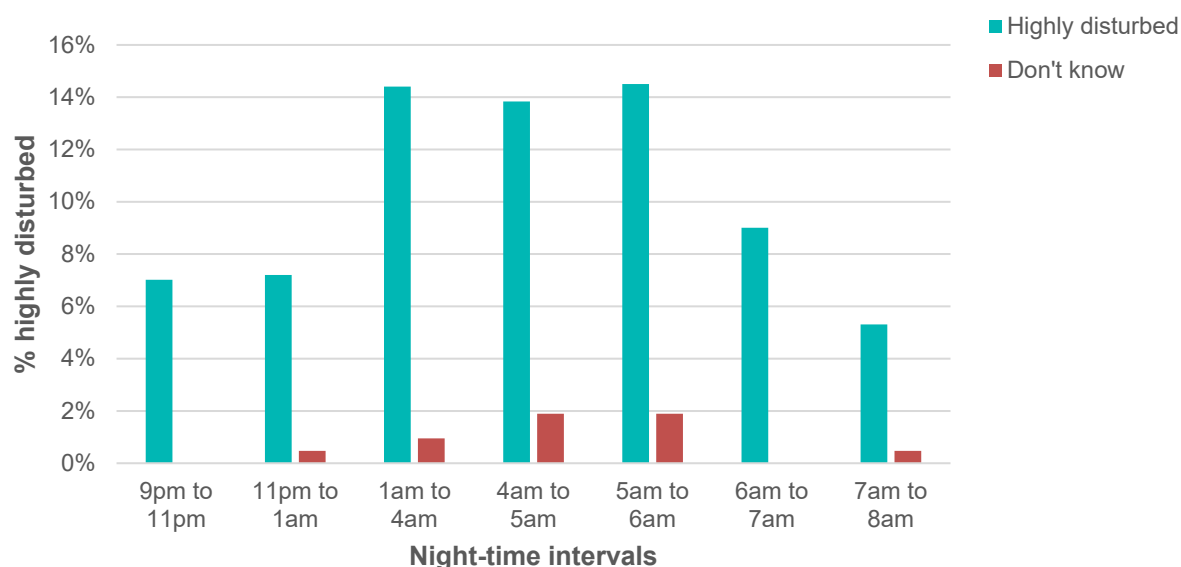


The distributions are presented for each version of the sleep disturbance questions below.

Version A: Distribution of highly sleep disturbed response by intervals



Version B: Distribution of highly sleep disturbed response by intervals



Although the proportion responding 'don't know' was higher in Version A of the questions, it does not reach a concerning level of missing data or non-response. The majority of participants responding to Version A of the questions have provided a response on the scale of "not at all" to "extremely" for all hourly night-time intervals. Although there will be some natural variation amongst the responding samples, the distribution of the percentage of participants highly annoyed / highly sleep disturbed is relatively consistent for both questions. Therefore, in order to obtain more detailed information on annoyance and sleep disturbance throughout the night, it is recommended to keep Version A of the questions for mainstage.

6.7 Data quality

There are various indicators of satisficing by online participants; questionnaire completion time (see Section 4), use of 'don't know' or 'prefer not to answer' answer options, skipping questions and speeding. With this in mind post-fieldwork validation of the data was examined.

6.7.1 Pattern of responses

Speeders

Three online cases were removed from the data due to concerns that the participant had completed the questionnaire in an unrealistic amount of time (they all completed in less than 5 minutes).

Cases were removed according to the following process and criteria:

- for each page of the online survey, the median time that people took to answer it was calculated;
- for each participant, their estimated total time to answer the questionnaire was calculated by adding the median times from all the questions that they answered;

- then the ratio of their actual time to their estimated time was calculated;
- statistical outliers were identified using the ratio of actual-to-estimated time. This removes any subjective judgements about whether people have completed their questions too quickly.

Break-offs

A break-off occurs when a participant enters the online questionnaire but does not fully complete it. Software allows this abandoned survey data to be captured. These figures, and at what point they left the questionnaire, are presented in Table 6.6 below. Nine participants opened the questionnaire link but did not proceed beyond the welcome screen. A further 8 started the questionnaire but did not continue to the point where the questionnaire would have been considered a partial. An additional 15 participants reached the partial point (which was set at the end of the sleep section) but did not reach the end of the questionnaire.

It is possible to quantify an overall break-off rate by dividing the number who abandoned the questionnaire by the number who started the questionnaire.

A total of 32 participants entered the online questionnaire but did not complete it. This is a break-off rate of 7% (based on the online questionnaire).

Table 6.6 Online questionnaire break-off points

| <i>Participants who started the online questionnaire but did not finish it</i> | | |
|--|-------------------------------|---|
| Question screen when ended questionnaire | Number of participants | % of those who started questionnaire |
| Unproductive participants¹ | 17 | 4 |
| Opened questionnaire link but did not continue | 9 | |
| Started the questionnaire but didn't reach the partial point | 8 | |
| <i>Annoyance section</i> | 5 | |
| <i>Diagnosed with any health conditions</i> | 1 | |
| <i>Sleep disturbance</i> | 2 | |
| Partially productive participants² | 15 | 3 |
| <i>Sleep disturbance</i> | 1 | |
| <i>Health status</i> | 1 | |
| <i>Non-acoustic factors</i> | 3 | |
| <i>Socio-demographics</i> | 5 | |
| <i>Consent</i> | 2 | |
| <i>Voucher dispatch</i> | 3 | |
| ¹ Unproductive participants were defined as those who stopped the survey before reaching the point for when a survey would be considered as a partial. ² An interview was considered as partially productive where all the annoyance and sleep disturbance questions were answered. | | |

6.8 Recommendations

- Research team to review the question-specific actions listed in Section 6.2.
- Due to a higher number of missing responses in the paper questionnaire, consider streamlining the 3 'worked at airport' questions.
- Keep Version A of the noise annoyance and sleep disturbance questions; remove Version B.

7 Consent

The pilot data will not be used to sample the objective sleep study; however, the pilot did ask for consent to be re-contacted about the sleep study in order to provide an estimate of the rate of consent for the mainstage.

At the end of the pilot survey, participants were given a brief background of the objective sleep study. Participants were asked if they would be willing to be contacted by St George's, University of London, to explain the study in more detail and see if they wanted to take part. It was highlighted that giving consent to be contacted did not mean they had to take part in further research, and they were free to refuse if they did not want to take part.

Participants were also asked for consent to be re-contacted by DfT about any future research on aviation noise.

7.1.1 Consent to re-contact for the objective sleep study

| Table 7.1 Consent to objective study by mode, sex, age group and ethnic group | | | | |
|---|-----------|----|-------|-----|
| | Consented | | Total | |
| | n | % | n | % |
| Mode | | | | |
| Online | 300 | 71 | 421 | 67 |
| Paper | 106 | 50 | 210 | 33 |
| | | | | |
| Sex | | | | |
| Male | 174 | 64 | 273 | 44 |
| Female | 232 | 66 | 354 | 56 |
| | | | | |
| Age group (years) | | | | |
| 18-34 | 66 | 62 | 107 | 17 |
| 35-54 | 153 | 77 | 199 | 32 |
| 55-74 | 153 | 67 | 228 | 36 |
| 75+ | 32 | 34 | 95 | 15 |
| | | | | |
| Ethnic group | | | | |
| White | 367 | 66 | 559 | 89 |
| Mixed | 3 | 50 | 6 | 1 |
| Asian | 27 | 56 | 48 | 8 |
| Black | 5 | 45 | 11 | 2 |
| Other | 3 | 75 | 4 | 1 |
| | | | | |
| Total¹ | 406 | 64 | 631 | 100 |

¹6 participants did not answer the sleep study consent question and have been excluded from the analysis. The total of each demographic group may not sum to 631 individuals due to missing data at different questions.

Overall, 64% of participants consented to be re-contacted about taking part in the objective sleep study. Participants who completed the online questionnaire were more likely to consent (71%) than those who completed the paper questionnaire (50%). The proportion who consented was similar for men and women (64% and 66% respectively).

Participants aged 35 to 54 were most likely to consent (77%), followed by those aged 55 to 74 (67%). The oldest age group (those aged 75 years and older) were least likely to consent to be re-contacted about the sleep study (34%).

The sample sizes for the ethnic groups are too small to comment on differences according to ethnicity.

Reasons for not consenting to be re-contacted about the objective sleep study

Participants who did not consent to be re-contacted about the objective sleep study (36%) were asked what their reason was for not wanting to take part. The most common answer was because they were not interested. Other common answers were being too busy, privacy reasons and thinking they were not suitable e.g. for health reasons or because they had a baby. Less common answers included that the incentive was not big enough, that it may be at an inconvenient time or they were unsure about certain aspects of the study for example thinking the equipment would make it difficult to sleep. Three participants gave reasons that did not actually apply to the study, saying they did not want to travel or go into hospital or to have anyone in their home.

7.1.2 Consent to re-contact for future research

Table 7.2 Consent to future research by mode, sex, age group and ethnic group

| | Consented | | Total | |
|--------------------------|-----------|----|-------|----|
| | n | % | n | % |
| Mode | | | | |
| Online | 328 | 78 | 421 | 67 |
| Paper | 130 | 63 | 206 | 33 |
| | | | | |
| Sex | | | | |
| Male | 195 | 71 | 273 | 44 |
| Female | 261 | 75 | 349 | 56 |
| | | | | |
| Age group (years) | | | | |
| 18-34 | 62 | 58 | 106 | 17 |
| 35-54 | 161 | 81 | 199 | 32 |
| 55-74 | 182 | 81 | 225 | 36 |

| | | | | |
|---|------------|-----------|------------|------------|
| 75+ | 52 | 55 | 94 | 15 |
| | | | | |
| Ethnicity | | | | |
| White | 411 | 74 | 557 | 89 |
| Mixed | 5 | 83 | 6 | 1 |
| Asian | 32 | 70 | 46 | 7 |
| Black | 6 | 55 | 11 | 2 |
| Other | 3 | 75 | 4 | 1 |
| | | | | |
| Total¹ | 458 | 73 | 627 | 100 |
| ¹ 10 participants did not answer the consent question and have been excluded from the analysis. The total of each demographic group may not sum to 627 individuals due to missing data at different questions. | | | | |

Overall, 73% of participants consented to being re-contacted by DfT for future research, which was higher than the proportion who consented to being re-contacted about the objective sleep study (64%).

Women were more likely to consent to be re-contacted about future research than men, with 75% and 71% consenting respectively. Similarly to the objective sleep study, those aged 35 to 54 and 55 to 74 were the most likely to consent to being re-contacted about future research, with 81% of both groups consenting, followed by those aged 18 to 34 (58%) and 75 years and older (55%).

The sample sizes for the ethnic groups are too small to comment on differences according to ethnicity.

7.2 Recommendations

- Consider changing the wording of the objective sleep study consent question to ensure it is clear the study will require no travel and no one visiting the home.

8 Conclusion

This section presents a brief summary of the pilot findings and recommendations.

Response to the survey was in line with expectations for a push-to-web methodology and both the target of 22% responding households and assumption of 1.4 productive adults per households were met. The mailing strategy, to maximise response, appeared to work well and the incentive was cited as a major factor in promoting response. We therefore recommend keeping the calculated issued numbers and mailing strategy the same for the mainstage.

The online questionnaire completion time was on target and the questionnaire content appeared to be received well overall, with a number of small revisions to make for the mainstage (refer to the marked-up questionnaire provided for suggested revisions).

Responding participants in the pilot study tended to be from white backgrounds and from higher occupational rankings. The profile of responding participants was compared with the 2020 mid-year population estimates⁸ and 2011 Census data⁹ from England and Wales. However, these comparisons need to be treated with caution as the characteristics of populations living around airports may be different to the population of England and Wales as a whole. This also does not include comparison data for participants from Scotland. Response findings from the pilot will be incorporated into the sampling design for the mainstage survey where possible.

Recommendations for the mainstage survey are:



- Consider making the voucher clearer and more predominant on the invitation and reminder letters.
- Recommend not to add a progress bar. Progress bars are not as effective when a survey has questions that are routed. A progress bar can also have the adverse effect of demotivating a participant.
- Review the question-specific actions listed in Section 6.2.
- Due to a higher number of missing responses in the paper questionnaire, consider streamlining the 3 'worked at airport' questions.
- Keep Version A of the noise annoyance and sleep disturbance questions; remove Version B.
- Consider changing the wording of the objective sleep study consent question to ensure it is clear the study will require no travel and no one visiting the home.

⁸ Based on 2020 mid-year population estimates for Great Britain:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>

⁹ Based on Census 2011 data for England and Wales only: <https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/national-and-regional-populations/population-of-england-and-wales/latest#by-ethnicity>

Appendix A. Invitation letter



The Resident
<Address1>
<Address2>
<Address3>
<Address4>
<Address5>
<postcode>

Ref: P17127/<SerialH><CHK><Date>

Help us understand issues in your local environment and receive a £10 voucher

Dear Resident,

Understanding the issues within our local environment and neighbourhood, and the impact they have on our lives, is important to us all. We would like to invite up to two adults in your household, aged 18 or older, to complete a short **online questionnaire** for this national study. Each person will receive a £10 voucher as a thank you for taking part.

The study is funded by the Department for Transport and your response will contribute to informing key policy decisions related to issues in your local environment.

It's easy to take part

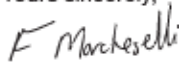
Taking part is voluntary and will only take around 20 minutes of your time. Here's how you can take part:


| | | |
|--|---|---|
| <p>1 VISIT</p> <p>Go to: survey.natcen.ac.uk/ANSurvey</p> <p>Type the address exactly as shown in the address bar of your web browser</p> | <p>2 ENTER</p> <p>Enter one of the unique access codes below (please note each access code can only be used once):</p> <ul style="list-style-type: none">Person 1 <AccessCode1>Person 2 <AccessCode2> | <p>3 THANK YOU</p> <p>Complete the study and you'll each receive a £10 Love2Shop voucher as a thank you for taking part</p> |
|--|---|---|

Further information

You can find out more about the study on the back of this letter. If you have any further questions, please visit natcen.ac.uk/ANSurvey, email ANSurvey@natcen.ac.uk or call the Freephone number 0800 652 4570.

We value your opinions and help with this important national study.

Yours sincerely,

Franziska Marcheselli
Research Director
NatCen Social Research



Frequently Asked Questions

How did you choose my address?

Your address was chosen at random from the Postcode Address File. This file is held by the Post Office and is available to the public.

Who should take part?

We are inviting up to two people aged 18 and over from each selected household to take part in this study. If there are more than two people in your household, you may choose which two take part.

Participation in the study is voluntary, although the success of the study depends on the goodwill and co-operation of those invited to take part.

What is the survey about?

The survey covers a range of questions about your views on your local environment, any issues you have and how these can impact your life. There will also be some questions on your household and your health. The survey will take approximately 20 minutes to complete. Full instructions on how to access the online questionnaire can be found on the front of this letter. You don't have to complete the whole survey in one go – any progress you make will be saved and you can start where you left off when you next log in.

Is the survey confidential?

Yes. We take great care to protect the confidentiality of the information people give us and we take careful steps to ensure the information is secure at all times.

What will happen to any information I give?

Your data will be handled in accordance with the UK General Data Protection Regulations (GDPR). The survey findings are anonymised and nothing we publish will identify you or anyone in your household. The results collected will be used for research and statistical purposes only and will be put together with the answers from hundreds of other people across Great Britain. The survey findings will be published in a report for the Department for Transport who will use the results to inform key policy decisions relating to issues in your local environment. All identifiable information will be stored securely. You can request at any time for your identifiable data to be deleted. To do this, please get in touch with NatCen using the contact details provided on the front of this letter.

For more information about how the information you provide will be used, please see the privacy notice at: natcen.ac.uk/ANSurvey/privacy.

Is the information I provide safe online?

Yes. We take our responsibility to keep personal information secure very seriously. To make sure your information is protected we use a secure website (HTTPS). This is the same type of website that you would generally see when shopping online. As part of our commitment to the security of your information, NatCen Social Research has regular internal and external audits of its information security, and is accredited to the ISO 27001:2013, the international standard for information security.

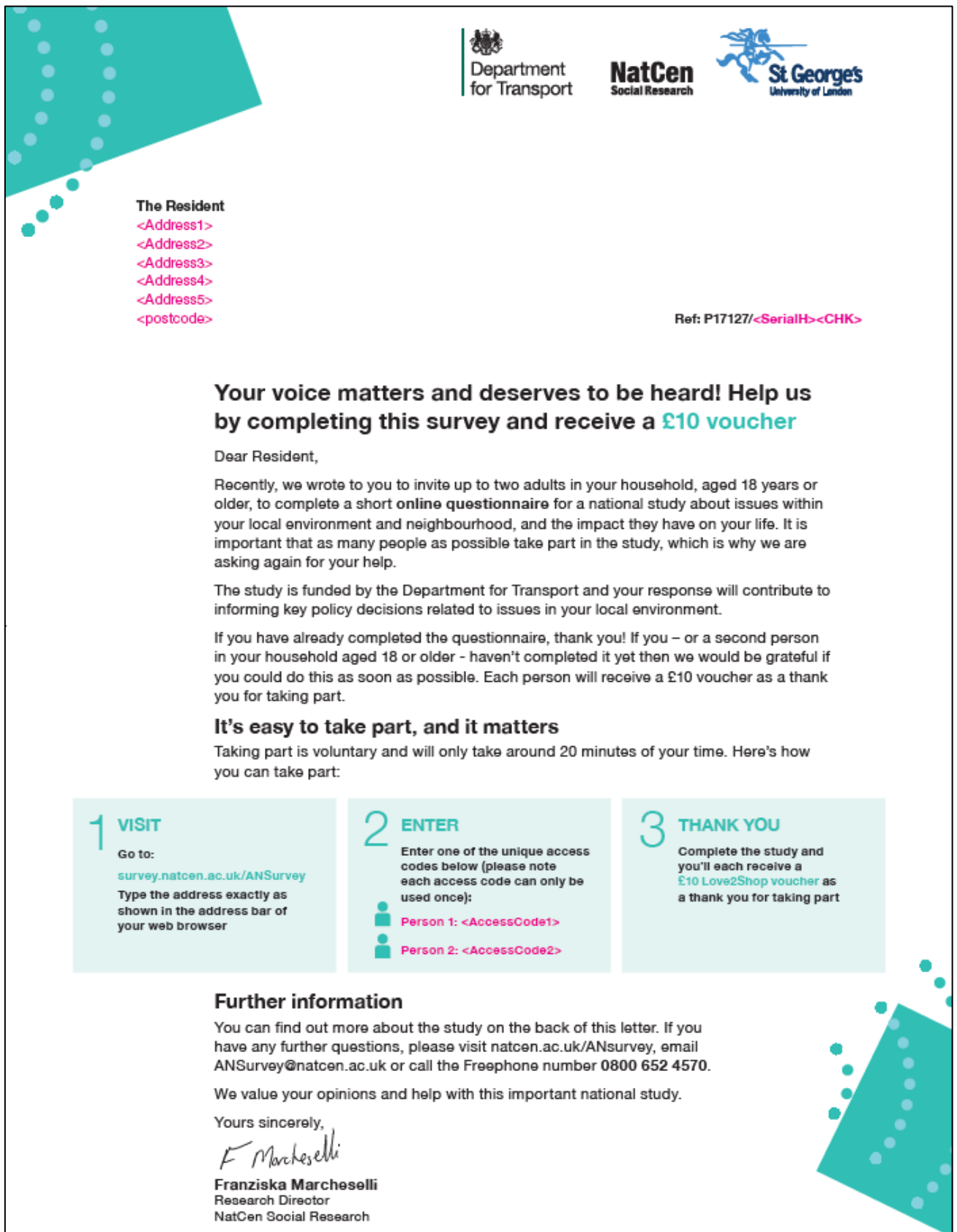
Who is carrying out the study?




The Department for Transport is funding the project and has asked NatCen Social Research, an independent research agency, St George's, University of London, Noise Consultants Limited, and the University of Pennsylvania to design, carry out and analyse the survey data. This study has been given a favourable ethical opinion by the NatCen Research Committee.

NatCen
Social Research

NatCen Social Research, Kings House, 101-135 Kings Road, Brentwood, Essex CM14 4LX Tel. 0800 526 397. Company limited by guarantee. Reg No. 4392418. A Charity registered in England and Wales (1091768) and in Scotland (SC038454).

Appendix B. Reminder letter 1



The Resident
<Address1>
<Address2>
<Address3>
<Address4>
<Address5>
<postcode>

Ref: P17127/<SerialH><CHK>

Your voice matters and deserves to be heard! Help us by completing this survey and receive a £10 voucher

Dear Resident,



Recently, we wrote to you to invite up to two adults in your household, aged 18 years or older, to complete a short **online questionnaire** for a national study about issues within your local environment and neighbourhood, and the impact they have on your life. It is important that as many people as possible take part in the study, which is why we are asking again for your help.

The study is funded by the Department for Transport and your response will contribute to informing key policy decisions related to issues in your local environment.

If you have already completed the questionnaire, thank you! If you – or a second person in your household aged 18 or older – haven't completed it yet then we would be grateful if you could do this as soon as possible. Each person will receive a £10 voucher as a thank you for taking part.

It's easy to take part, and it matters


Taking part is voluntary and will only take around 20 minutes of your time. Here's how you can take part:

- 1 VISIT**
Go to:
survey.natcen.ac.uk/ANSurvey
Type the address exactly as shown in the address bar of your web browser
- 2 ENTER**
Enter one of the unique access codes below (please note each access code can only be used once):
 **Person 1: <AccessCode1>**
 **Person 2: <AccessCode2>**
- 3 THANK YOU**
Complete the study and you'll each receive a **£10 Love2Shop voucher** as a thank you for taking part

Further information

You can find out more about the study on the back of this letter. If you have any further questions, please visit natcen.ac.uk/ANSurvey, email ANSurvey@natcen.ac.uk or call the Freephone number 0800 652 4570.

We value your opinions and help with this important national study.

Yours sincerely,

Franziska Marcheselli
Research Director
NatCen Social Research

Frequently Asked Questions

How did you choose my address?

Your address was chosen at random from the Postcode Address File. This file is held by the Post Office and is available to the public.

Who should take part?

We are inviting up to two people aged 18 and over from each selected household to take part in this study. If there are more than two people in your household, you may choose which two take part.

Participation in the study is voluntary, although the success of the study depends on the goodwill and co-operation of those invited to take part.

What is the survey about?

The survey covers a range of questions about your views on your local environment, any issues you have and how these can impact your life. There will also be some questions on your household and your health. The survey will take approximately 20 minutes to complete. Full instructions on how to access the online questionnaire can be found on the front of this letter. You don't have to complete the whole survey in one go – any progress you make will be saved and you can start where you left off when you next log in.

Is the survey confidential?

Yes. We take great care to protect the confidentiality of the information people give us and we take careful steps to ensure the information is secure at all times.

What will happen to any information I give?

Your data will be handled in accordance with the UK General Data Protection Regulations (GDPR). The survey findings are anonymised and nothing we publish will identify you or anyone in your household. The results collected will be used for research and statistical purposes only and will be put together with the answers from hundreds of other people across Great Britain. The survey findings will be published in a report for the Department for Transport who will use the results to inform key policy decisions relating to issues in your local environment. All identifiable information will be stored securely. You can request at any time for your identifiable data to be deleted. To do this, please get in touch with NatCen using the contact details provided on the front of this letter.

For more information about how the information you provide will be used, please see the privacy notice at: natcen.ac.uk/ANSurvey/privacy.

Is the information I provide safe online?

Yes. We take our responsibility to keep personal information secure very seriously. To make sure your information is protected we use a secure website (HTTPS). This is the same type of website that you would generally see when shopping online. As part of our commitment to the security of your information, NatCen Social Research has regular internal and external audits of its information security, and is accredited to the ISO 27001:2013, the international standard for information security.

Who is carrying out the study?

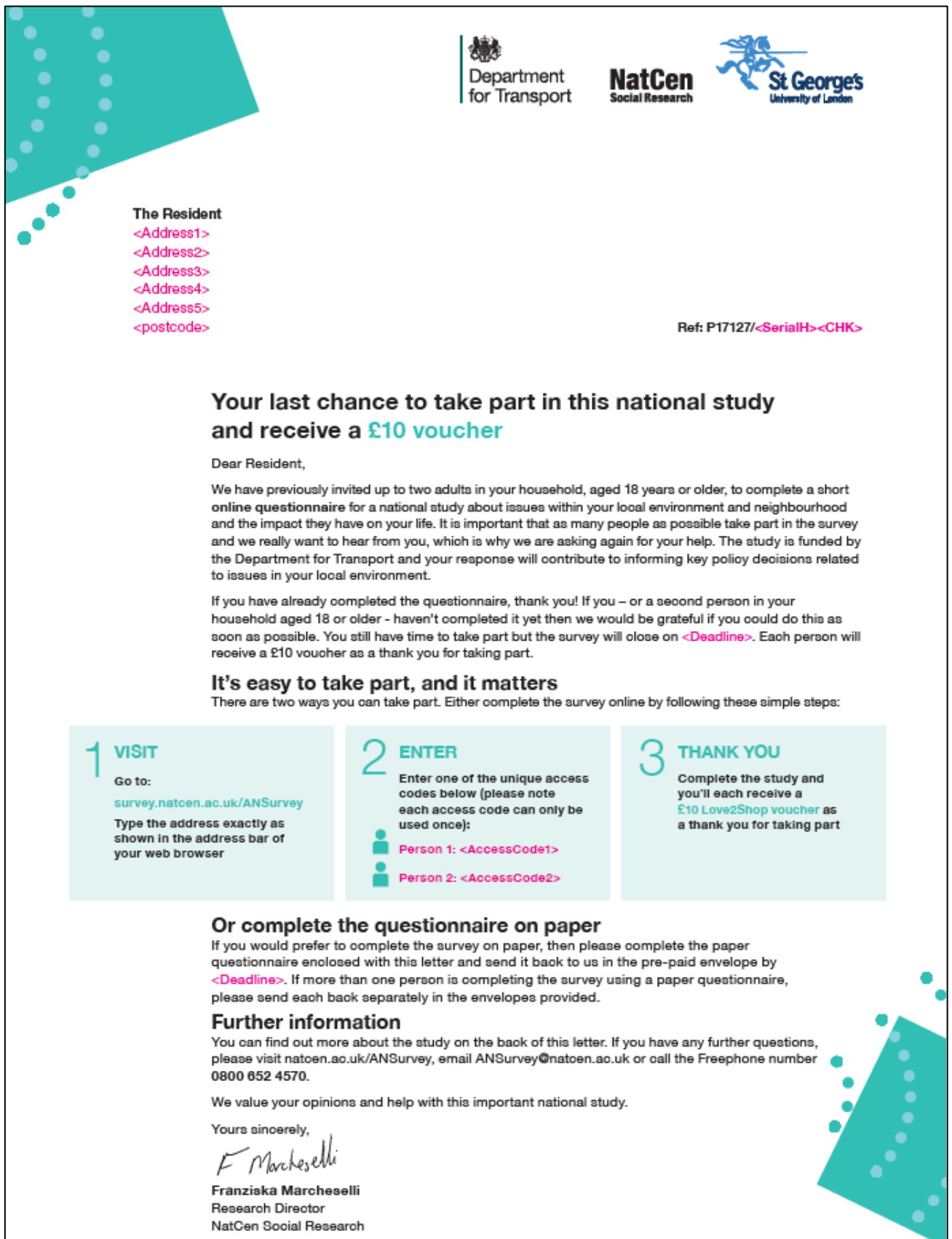
The Department for Transport is funding the project and has asked NatCen Social Research, an independent research agency, St George's, University of London, Noise Consultants Limited, and the University of Pennsylvania to design, carry out and analyse the survey data. This study has been given a favourable ethical opinion by the NatCen Research Committee.




NatCen
Social Research


NatCen Social Research, Kings House, 101-135 Kings Road, Brentwood, Essex CM14 4LX. Tel. 0800 526 397. Company limited by guarantee. Reg No. 4392418. A Charity registered in England and Wales (1091768) and in Scotland (SC038454).

Appendix C. Reminder letter 2






Department
for Transport



NatCen
Social Research



St George's
University of London

The Resident

<Address1>
<Address2>
<Address3>
<Address4>
<Address5>
<postcode>

Ref: P17127/<SerialH><CHK>

Your last chance to take part in this national study and receive a £10 voucher



Dear Resident,

We have previously invited up to two adults in your household, aged 18 years or older, to complete a short online questionnaire for a national study about issues within your local environment and neighbourhood and the impact they have on your life. It is important that as many people as possible take part in the survey and we really want to hear from you, which is why we are asking again for your help. The study is funded by the Department for Transport and your response will contribute to informing key policy decisions related to issues in your local environment.

If you have already completed the questionnaire, thank you! If you – or a second person in your household aged 18 or older - haven't completed it yet then we would be grateful if you could do this as soon as possible. You still have time to take part but the survey will close on <Deadline>. Each person will receive a £10 voucher as a thank you for taking part.

It's easy to take part, and it matters

There are two ways you can take part. Either complete the survey online by following these simple steps:

| | | |
|--|---|--|
| <p>1 VISIT</p> <p>Go to: survey.natcen.ac.uk/ANSurvey</p> <p>Type the address exactly as shown in the address bar of your web browser</p> | <p>2 ENTER</p> <p>Enter one of the unique access codes below (please note each access code can only be used once):</p> <p> Person 1: <AccessCode1></p> <p> Person 2: <AccessCode2></p> | <p>3 THANK YOU</p> <p>Complete the study and you'll each receive a £10 Love2Shop voucher as a thank you for taking part</p> |
|--|---|--|

Or complete the questionnaire on paper


If you would prefer to complete the survey on paper, then please complete the paper questionnaire enclosed with this letter and send it back to us in the pre-paid envelope by <Deadline>. If more than one person is completing the survey using a paper questionnaire, please send each back separately in the envelopes provided.

Further information

You can find out more about the study on the back of this letter. If you have any further questions, please visit natcen.ac.uk/ANSurvey, email ANSurvey@natcen.ac.uk or call the Freephone number 0800 652 4570.

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Yours sincerely,



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How do I send my postal questionnaire?

If you are unable to complete the questionnaire online, we have provided you with a paper version of the questionnaire. Once you have filled in the questionnaire, please place the questionnaire in the envelope you were provided with alongside this letter. The envelope is pre-paid and has the return address already provided. If more than one person in your household has completed a paper questionnaire, please send them back to us in their own separate envelopes.

Is the survey confidential?

Yes. We take great care to protect the confidentiality of the information people give us and we take careful steps to ensure the information is secure at all times.

What will happen to any information I give?

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Social Research

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