

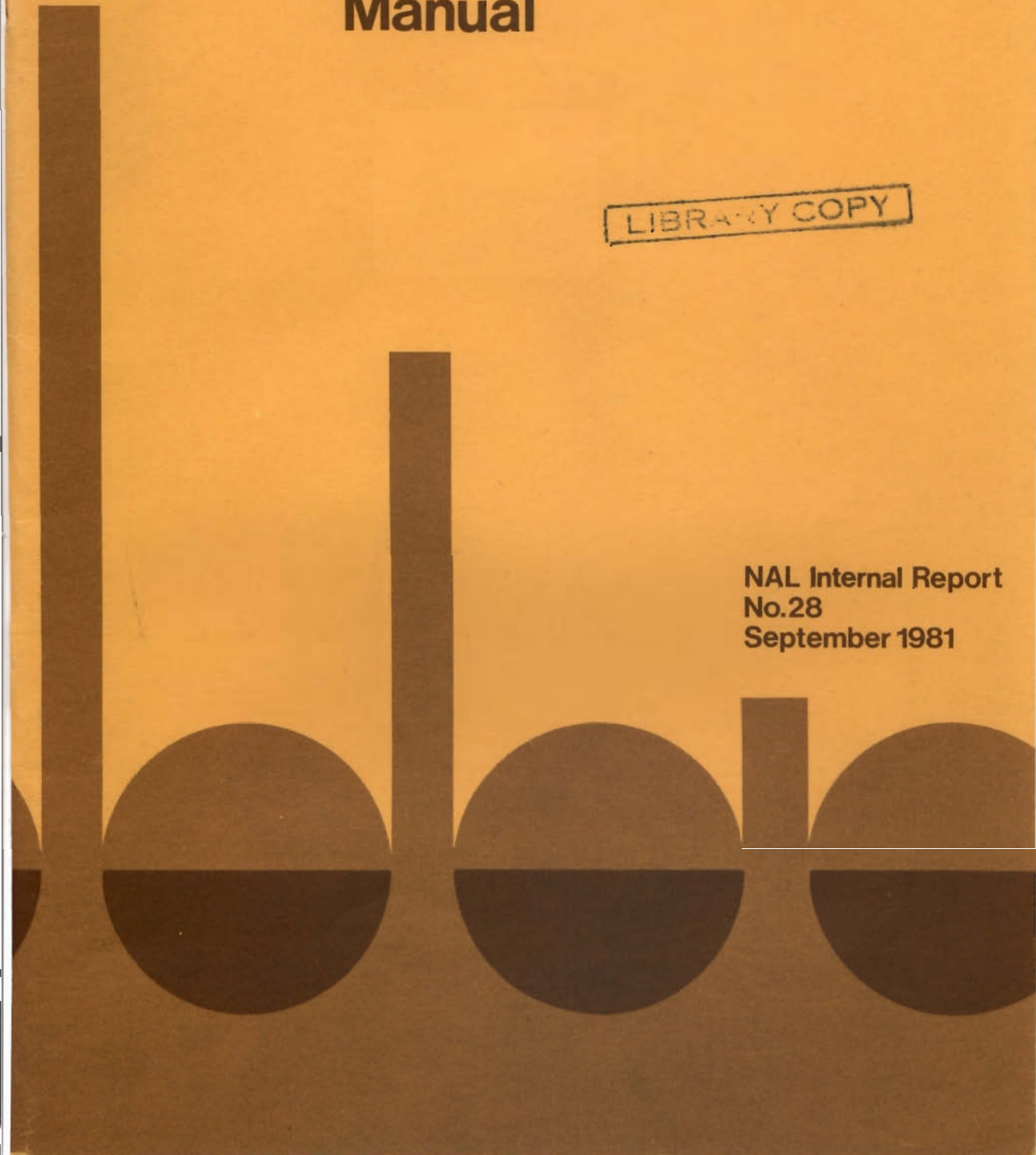


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Community reaction to military range noise: Holsworthy Survey Manual

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INTERNAL REPORT NO.28
SEPTEMBER 1981

COMMUNITY REACTION TO MILITARY RANGE NOISE:
HOLSWORTHY SURVEY MANUAL

A.J. HEDE AND R.B. BULLEN

SOCIO-ACOUSTIC RESEARCH SECTION

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SECTION 1 INTRODUCTION

This survey is designed to assess community reaction to the noise from Holsworthy Field Firing Range. The survey is being carried out by the Socio-Acoustic Research sub-section of the National Acoustic Laboratories on behalf of the Department of Defence. In addition to the social survey of a representative sample of the residential community, the study entails an extensive noise measurement program to measure noise exposure in the residential areas around the Range. This investigation will provide guidance to the Department of Defence on ways to reduce noise disturbance to residents while still meeting Army training requirements.

Holsworthy Field Firing Range has been used for military exercises since 1903. The weapons currently used on the Range include heavy artillery, anti-armoured weapons, various types of small arms and demolition explosives. The Range is located on the south-western outskirts of Sydney. It covers an area of some 19,000 hectares within the boundaries of the Georges River (West), Holsworthy Army Base (North), Heathcote Road (East) and the Water Board catchment (South) (See Figure 1). The areas surrounding the range on all except the southern side have seen considerable residential development over the years.

Indeed, the population density in many of the surrounding suburbs has increased quite markedly in recent years, and is expected to continue to increase in the future.

This survey forms part of a more general study, the Defence Impulsive Noise Study (DINS) which has the overall aim of developing procedures for assessing the impact on residential communities of noise which is of an impulsive nature (e.g., gunfire, explosions etc.). These procedures will be used in deriving noise standards and land-use guidelines designed to help reduce environmental noise pollution not only from military establishments and shooting ranges, but also from industrial sources of impulsive noise. As part of this overall program a survey has already been conducted around Hornsby Rifle Range near Sydney. Other surveys are being planned to follow on from the present study around Holsworthy.

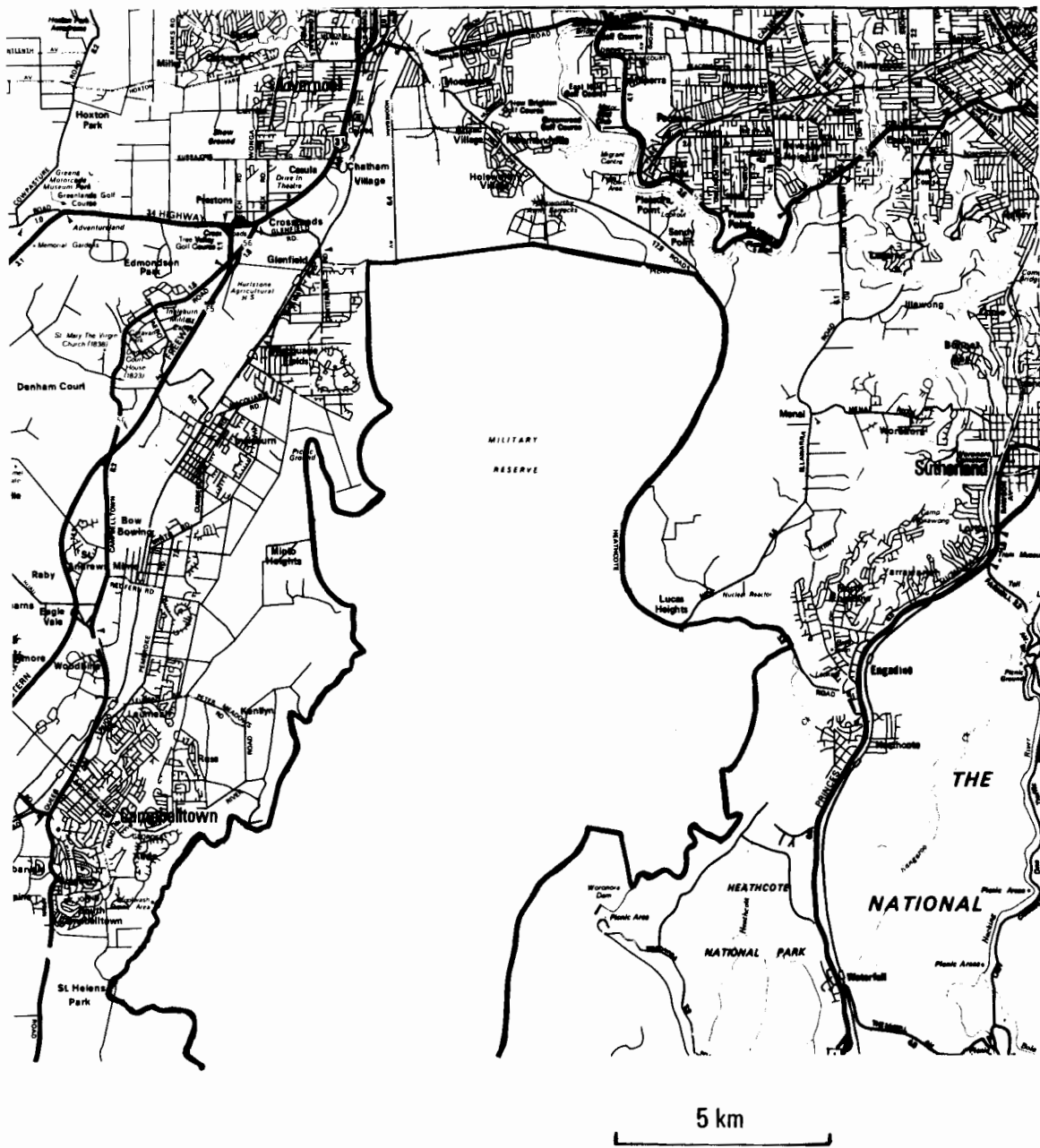


Figure 1. Holsworthy Field Firing Range and environs.

SECTION 2 NOISE EXPOSURE AND SUBJECTIVE REACTION

2.1 Subjective Reaction to Noise

Noise is simply defined as unwanted sound. A sound is unwanted if people are in some way adversely affected by it. The noise may disturb some activity such as watching TV or sleeping, or the sound itself may be simply irritating and annoying. The subjective nature of noise is summed up by the saying "What is music to your ears may be noise to your neighbour's".

The extent to which a person is affected by a noise is determined by many factors, the most obvious of which is the amount of noise heard - this is called the 'NOISE DOSE'. A suitable measure of noise dose is the one which best explains the variation in people's reaction. Most noises consist of different amounts of sound energy spread over a wide range of frequencies. However, human hearing is not equally sensitive across all frequencies. For example, very low pitched sounds do not appear as loud as higher sounds even when they are at the same intensity level. This and other aspects of human perception are taken into account by some systems of noise measurement.

There has been considerable socio-acoustic research in various countries over the past 30 years, most of it aimed at assessing community reaction to transportation noise. These studies have provided guidance to those responsible for setting noise standards for aircraft and motor vehicles, and for regulating noise levels affecting residential areas. However, there have been very few studies on reaction to impulsive noise such as gunfire or explosions from military ranges, shooting clubs, quarries, mines, industrial drop forges etc. Unlike transportation noise, impulsive noise is very sudden in onset and lasts only a short time. An earlier NAL study around a suburban rifle range showed that rifle noise was more disturbing than transportation noises at the same levels. It is likely that a different measure of noise dose is needed in the case of impulsive noise in order to predict the reaction of a community.

However, human noise reaction is determined not only by the type and amount of noise, but also by a complex of psychological factors. One such factor is noise sensitivity - some people just happen to be much more sensitive about noise than other people. A major determinant of subjective reaction is the "meaning" the noise has for the particular person. The sound of an aircraft overhead has a different meaning for an airline pilot as compared with someone who has never travelled by plane. The way a person is affected by a noise is influenced to a large extent by his/her attitudes towards and beliefs about the noise, the people making the noise, the authorities responsible for regulating the noise and so on. In the case of the noise from Holsworthy range, for example, it is expected that a person who believes the noise is made by "those brave boys practising to protect our country" will be much less disturbed than someone who feels the Army is unnecessarily wasting the taxpayer's money.

Noise affects people in a variety of ways. At very high levels it can cause permanent damage to hearing. Even though residential communities do not experience such levels, the moderate noise levels they experience can cause serious disruption to everyday life. The primary component of this disruption is the annoyance reaction which can range from mild displeasure to extreme anger. But human reaction to noise can include feelings other than annoyance.

In particular, noise can cause fear as happens when a person is startled, or noise can produce symptomatic reactions such as headaches.

In a social survey psychological scaling procedures are used in assessing an individual's reaction to noise. In the present study the measure of subjective reaction is a composite score of 'GENERAL REACTION' (GR). This is made up of several scales based on 0-10 ratings and other responses given in a number of questions. The main measures are ratings of "How much AFFECTED" (Q.11) and "How much DISSATISFIED" (Q.28) the respondent feels because of the Army Range noise. In addition, GR includes three different ratings of annoyance (Q.5iii, Q.9v, Q.14), as well as scores based on the number of disturbances (Q-12) and symptoms (Q.16) reported, and the number of complaint actions the respondent feels like taking (Q.21).

The interview schedule (See Appendix) also includes questions designed to measure noise sensitivity (Q.5) and the person's attitudes towards the Army (Q.27). In the data analysis it will be possible to examine the role these psychological factors play in mediating general reaction. These factors can be controlled for in subsequent analysis aimed at determining which exposure measure provides the most useful predictor of community reaction.

2.2 Noise Measurement Procedures

Interviews are to be conducted in sixty areas around the range (see Section 3) and in each of these, noise measurements will be made. Measurement positions in each area were chosen so as to be representative of the area. In some areas where, for example, a large hill may make a significant difference to noise exposure between houses in the same area, extra measurements will be made. These basic measures will then be analysed to find the effects of distance from the firing position, topography, wind, temperature, and other factors on the sound level.

Once the influence of these variables is known, the sound level on any day at any position (not just noise measurement positions) can be estimated, and so the total noise at each residence can be computed. For this purpose, the position of each residence will be located accurately from a large-scale map. A number of properties of the sound will be calculated in this way - for instance, the amount of variation between different shots, and the amount of very low-frequency sound energy, which causes the shaking and rattling effects sometimes associated with this type of noise.

It is planned to take measurements at each of the sixty sites on up to four days, with about ten shots being recorded at each site on each day. It has been found that ten shots give a sufficiently accurate measure of the sound level at one time, but measurements at different times can give very different results, even if the firing position is the same, depending largely on meteorological conditions. This is the reason that so many shots must be measured to understand the causes of this variation - the measurement program involves taking recordings of shots on every day on which firing takes place between June 1980 and February 1981, and even this may not be enough. Measurements of shots fired in the evening will also be necessary, since levels in the evening can differ from those in the daytime, again due to meteorological conditions.

The equipment used for measurements has been designed and built at NAL specifically for this study. It involves an FM modulator/demodulator which allows tape recordings of the shots to be made over a frequency range of 1 Hz to 17,000 (+ 3 dB), with signal-to-noise ratio 54 dB (linear), and with the possibility of recording shots automatically. To our knowledge, no commercially-available measurement equipment meets these specifications. Analysis of the tapes will be performed under computer control, and about 20 numbers representing different properties of each shot will be stored for later analysis.

One of the ultimate aims of this study is to investigate which properties of artillery noise should be measured to give the best indication of human reaction to it. This can then be translated into an index of noise exposure which can, for instance, predict the likely noise impact of new ways of firing, and point to the best ways to alleviate existing noise problems. For this reason, it is vital that all the properties of the noise which are present at any residence are measured accurately.

SECTION 3 SAMPLING PROCEDURES

3.1 Sample Size and Structure

The survey area was defined roughly as that bounded by the railway lines to the east and west of Holsworthy Field Firing Range, and by the Georges River to the north. There are no residential areas to the south of the range. The total number of dwellings in the survey area was estimated to be 36,780. This was calculated using Australian Bureau of Statistics data from the 1976 Census and the revised population counts used in the 1981 Census.

Since the primary aim of the present study is to determine the dose-response relationship for artillery noise, it is important that the survey covers a range of noise exposure levels. To ensure an adequate distribution across noise exposure zones the survey area was stratified. This was done by dividing the area into 10 sampling sectors on the basis of a compromise between distance from the range, geographical area and population density. Figure 2 shows the location of the 10 sectors. The boundaries of the sectors were chosen to correspond with Census District (CD) boundaries used by the Bureau of Statistics.

3.2 Sample Selection

Within each survey sector six CD's were selected using population counts to make the probability of selection proportional to the number of dwellings. Field agents then listed the address of each of the 15,460 dwellings in the 60 CD's so selected.

Thirty dwellings were then randomly selected in each CD using the following procedure. In listing the addresses by field observation each CD was divided into 'strings' - sets of dwellings in a street block or part thereof. Strings were ordered according to geographical proximity. One string was then randomly selected with probability proportional to string size, and a starting point randomly chosen in the selected string. From this point every third dwelling was designated as being in the sample. Then the next string was selected and sample dwellings chosen as above until the required list of dwellings had been selected. The above procedure overcomes problems of bias which result from the use of grids for random selection. Additional dwellings were also selected for the pilot survey.

In summary, the sample for the main survey consists of 1,800 dwellings (30 in each of 60 CD's), randomly selected across 10 sectors in an area with an estimated total of 36,780 dwellings (sampling fraction $\approx 0.5\%$).

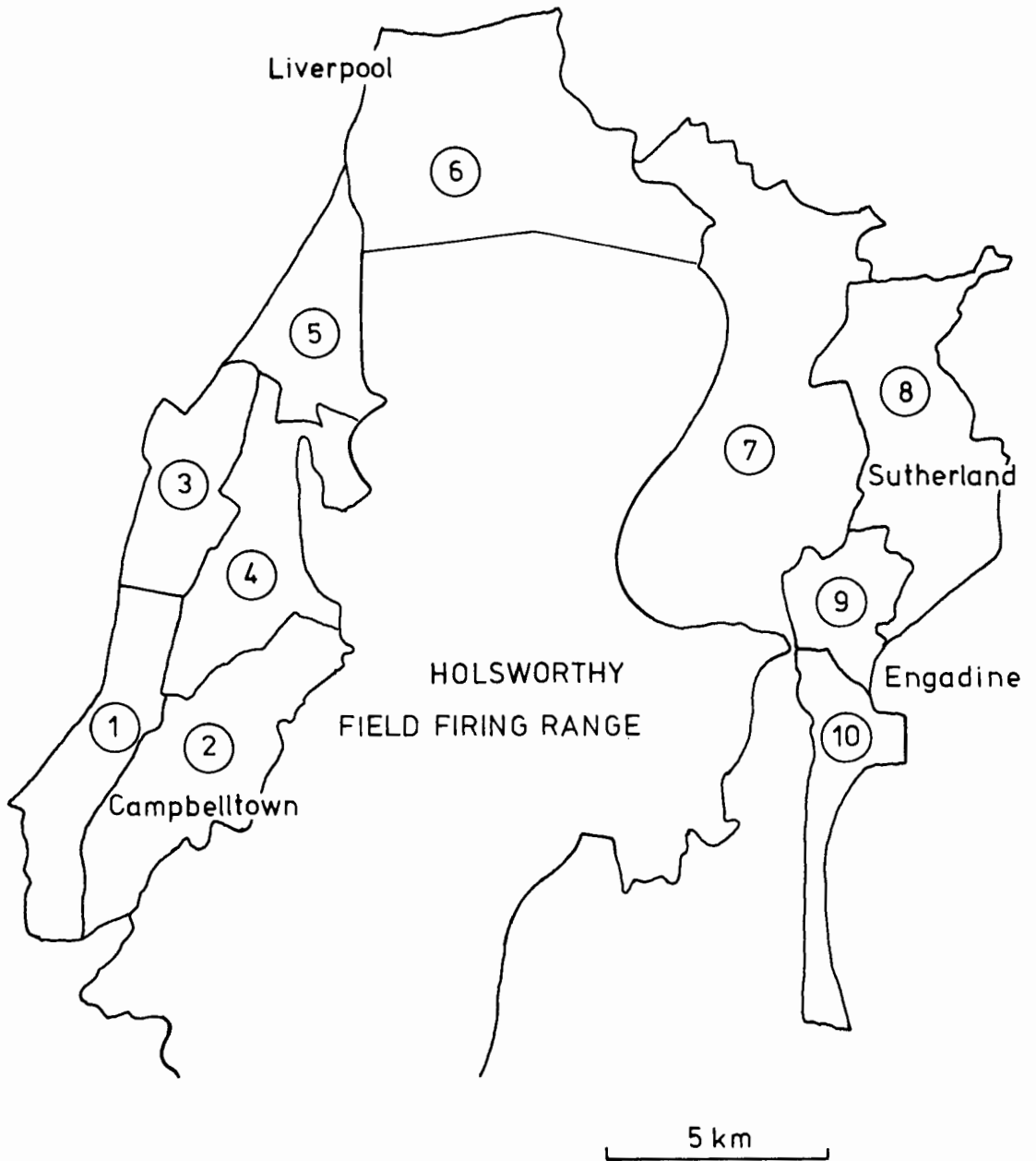


Figure 2. Outline of survey area around Holsworthy Field Firing Range showing boundaries of the 10 sampling sectors.

SECTION 4 INTERVIEWING PROCEDURES

4.1 General Considerations

A major difficulty with this survey of community reaction to noise is that many of the respondents will be aware of noise as an environmentalist issue. This introduces the problem of response bias insofar as people who are not really affected themselves may tend to exaggerate their responses if they have strong feelings about the issue.

To minimize the effects of such bias a neutral/prompted question strategy is used. The survey purports to be concerned with neighbourhood living conditions. The interview schedule (See Appendix) is structured so as to allow respondents to spontaneously mention and rate the noise from the range before being asked the main noise questions. Thus, the early questions are either open (e.g. Q4) or are neutral with respect to noise (e.g. Q8). Note that it is not until Q11 that the questions focus specifically on noise from Holsworthy.

Interviewers have to be careful not to react in anything but a neutral way to the references to army range noise given in response to the early questions (See Section 4.4). The interview is presented as dealing with how people feel about neighbourhood living conditions. Strictly speaking this is not untrue: after all noise is a neighbourhood condition (note the wording used in Q7).

Even after the interview, it is important that respondents do not feel that they were misled and that the survey is really only about noise from Holsworthy. It is best for interviewers and respondents alike to view the study as part of the 'Australian Government Community Survey' which is a long-term project investigating living conditions in various neighbourhoods throughout Australia. Should anyone complain of being misled it may be useful to point out that people are asked the questions about the army range noise only if they report it as a neighbourhood condition they are dissatisfied with.

4.2 Rating Scales/Opinion Thermometer

Many of the questions require the respondent to give a rating. In some cases a simple rating scale is used (e.g. Q2: very good, fairly good, average, etc.). In these cases the interviewer shows the respondent a flash card listing the response categories one of which is to be endorsed. Interviewers have to elicit a response corresponding with one of the listed rating categories. If a respondent simply says 'good', for example, the interviewer would say "Which one would you say from the card?"

In other questions it is important that a larger number of response alternatives is available. To assist both the interviewer and the respondent an 'opinion thermometer' is used in these cases (See Figure 3). This consists of a flash card picturing a thermometer marked '0-10' with five verbal descriptions ('none' to 'very much'). The respondent is instructed to give a number estimate of the rating and the interviewer records this number (e.g. Q5). Respondents may need some encouragement to give a precise number to represent their rating. Some respondents may initially give a verbal label (e.g. 'very much') in which case a neutral probe is used (e.g. "which number

OPINION THERMOMETER

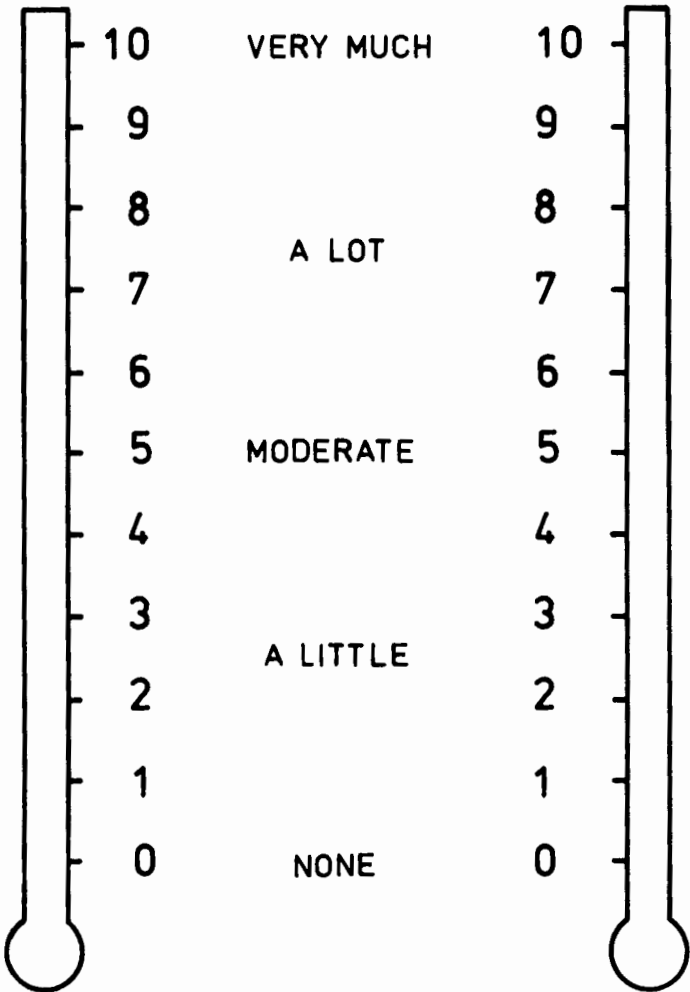


Figure 3. The Opinion thermometer used for ratings.

is that?"). Or if the respondent says '2 or 3' the interviewer would probe "Which number should I write down?". However, the opinion thermometer has proved successful in previous surveys, and respondents will quickly adapt to using it properly.

4.3 Recording Responses

The interview schedule employs three methods for recording responses:

- i) Pre-coded boxes The most often used method entails the interviewer recording a response by ticking the box alongside the appropriate response category (e.g., Qs 1 & 2). The numbers beside the Boxes are used for card punching as are the numbers in brackets in the right side margin.
- ii) Dashed lines A second recording method is used for open questions where a dashed line indicates that the interviewer is to record the response verbatim (e.g., Qs 3 & 4). It is important that interviewers record exactly what the respondent says without paraphrasing or correcting grammar, etc. Alongside most questions where there are dashed lines are boxes headed by the word 'Office' - such items will be coded in the office and the boxes should be left blank.
- iii) Coding boxes The third method of recording applies for estimates where the interviewer has to write a number in the box (e.g., Q5). The instruction (Record: ...) tells what and how to record in such cases. For example, in questions using the opinion thermometer interviewers are to write down the number estimate the respondent gives as a rating. Note that in this case the range of responses is 0-10 and a double box is provided for recording, so single digit responses are to be prefixed with '0' (e.g., the rating '6' is recorded as '06').

The 'Don't Know' (DK) response category is provided for almost every question, but this should rarely have to be used. Some respondents will say "I don't know" immediately in response to a difficult question. Encourage respondents to 'have a go', patiently reassuring them where necessary. Remind them that there are no correct answers and that you are interested in what they think and feel. Use neutral probes to elicit a response (e.g., "Even if you don't know for sure, what do you feel about it?"). Accept DK responses only if the respondent is still reluctant after attempts at gentle persuasion.

4.4 Interviewing Technique

As well as ensuring that the questions are asked exactly as they are written it is of paramount importance that interviewers guard against influencing the respondent via non-verbal cues. These include inflexions, pauses and emphasis in saying the words, facial expressions, postural changes etc., all of which can suggest to the respondent that a certain response is wanted. Remember that a nod or an apparent eagerness to record a response will be a cue. Also, if you say 'Hrm' in what you intend to be a completely neutral way, it may still serve to reinforce the response just given. Finally, keep your pen away from the page when waiting for a response lest you inadvertently point to one of the alternatives.

An interviewer's only concern should be to elicit ANY clear, complete and relevant response. This is comparatively simple for pre-coded questions where the response categories are listed on the interview schedule. But with open questions you may have to probe to get a definite response. Keep in mind that all relevant responses are equally acceptable so long as they are unambiguous. Use neutral probes, e.g., "Could you be more specific?" or "Which one is that on the card?"

Try to get the respondent to talk freely in response to open questions, rather than accepting one-word answers. If the respondent gets side-tracked record the response but ask the question again. For example, in Q3 about neighbourhood features that are liked, some respondents may immediately say what they dislike. Record these responses but probe what is linked, and still ask Q4 about features disliked. Avoid suggesting possible answers when probing.

If the respondent says he/she doesn't understand the question note this fact in the margin, and repeat the question encouraging the respondent to give an answer. Always put your own comments in brackets to distinguish them from the respondents'. If you are asked to define a term (e.g., 'annoyance') throw it back to the respondent by saying "Whatever you consider 'annoyance' to mean".

For pre-coded questions make sure that the answer corresponds with one of the listed response categories (e.g., Q2). Probe if you are at all uncertain which category applies. With open questions record everything the respondent says exactly as it is said. If you have trouble keeping up ask the respondent to go more slowly or to repeat - this can be done in such a way that the respondent perceives it as genuine interest on your part.

While it should be made clear that you are reading from a printed schedule do not let the respondent read the items or read what you record. When a flash card is used be sure to take the card back at the end of the relevant question.

From the outset assure respondents that you are in no way judging or assessing them, that there are no right or wrong answers, that their own opinions and ratings are all you want. Strive to establish rapport by presenting a professionally friendly manner and by adopting a conversational rather than an analytical style of questioning. But always avoid being drawn into conversation about your own opinions.

A good interviewer is able to guide the respondent in a one-sided conversation without appearing too artificial. In normal conversation people monitor both the verbal and non-verbal reactions they get to their ideas, and modify their expressions of ideas, accordingly. The interviewer must avoid any possible bias by reacting in a consistently neutral manner to whatever ideas the respondent expresses.

SECTION 5 THE INTERVIEW SCHEDULE

5.1 Questionnaire Development

The questionnaire is not just a sequence of factual questions about the noise from the Army range. Rather, it is a scientifically designed instrument for assessing the complex array of perceptions, feelings, attitudes and behaviours that comprise an individual's subjective reaction to the noise. Although interviewers may have extensive experience in other types of survey, they will need to be thoroughly trained in administering the present schedule in accordance with rigorous procedures.

In designing the questionnaire the authors have drawn on the lessons learnt in previous surveys on aircraft noise and rifle noise. Earlier versions of the schedule were tested in preliminary interviews with 39 residents and in a subsequent pilot survey of 110 residents spread over the ten survey zones around Holsworthy Army Range. The schedule was revised in the light of the pilot survey results and of feedback provided by the interviewers.* Careful consideration has been given to every word in each question to ensure that it is simple and unambiguous. Only essential questions have been retained. The schedule takes about 20 minutes to administer and should not be too taxing for either the interviewer or the respondent.

5.2 Conceptual Summary

The questionnaire was designed so that the questions follow a natural sequence from general questions on the neighbourhood to specific questions on noise, with classification information covered at the end of the schedule. It must be pointed out, however, that there were some restrictions on question order necessitated by the use of a neutral/prompted strategy (See Section 4.1).

The conceptual structure of the interview schedule can be seen from the following summary:

<u>Questions</u>	<u>Topic</u>
1 - 4	Satisfaction with neighbourhood.
5	Noise annoyance sensitivity scale.
6	Perception of survey purpose.
7 - 10	General questions on noise.
11 - 18, 28	Army Range noise: perception and reaction.
19 - 27, 29	Army Range noise: behaviour and attitudes.
30 - 34	Classification information.

* The valuable assistance of H. Ley, J. McGarry and E. Taylor is acknowledged.

5.3 Notes on the Questions

Introduction This section outlines the purpose of each question and provides information on how the questions are to be administered in the interview. Specific notes are given on procedures for recording responses.

Question 1 This question is a straightforward 'ice-breaker'. It asks simply how long respondent (R) has lived at the address. Even if R takes a little time working out precisely how many years do not suggest a "rough estimate" as this may be a cue to guessing throughout the interview. Rather, let the respondent give an estimate and tick the appropriate category. If the estimate seems to equal R's age and R does not volunteer "all my life", probe whether "all of life" is appropriate. (Note that Q.22 is omitted if the response here is "all of life".)

Question 2 This is a neutral question on satisfaction with the neighbourhood. It is important not only because it elicits an opinion unbiased by any specific reference to noise, but also because it introduces the respondent to the procedure for making a simple rating. Interviewers are to show the flash card but are still to read out the response categories listed in the schedule. Make sure R chooses one of the categories from the card. If, for example, R says "good" probe with "Would you please select one of the categories from the card".

Question 3 This question asks which features are liked about the area. Interviewers are to record everything that is said. When the respondent has finished his/her answer, the second part of the question is asked to ensure a complete answer. If R lists things disliked these are to be recorded in the space for the next question but that question is still to be asked.

Question 4 This is a crucial question which allows R to spontaneously mention Army Range noise as a feature disliked about the neighbourhood. Interviewers will have to be very careful not to react. Probe for a complete answer with the second part of the question, but be sure not to imply that something has been omitted if R does not mention Army Range noise. If R simply says "Noise" probe with "Could you be more specific?" but avoid appearing particularly interested in noise.

Question 5 This question is designed to assess respondents' sensitivity to noise annoyance. The opinion thermometer is introduced here. As the preamble is read interviewers are to point to the relevant parts of the opinion thermometer - respondents will quickly understand its use. The opinion thermometer will be used frequently in later questions, and it is important that respondents become proficient in using it in this question. Note that the numbers '0-9' are recorded as '00-09'. The code '12' is used if R reports never having been in the situation - in this case the following probe should be used: "Do you mean you have never experienced that situation?" The code '11' is used for 'Don't Know' responses.

Question 6 In case word has spread around the neighbourhood this question is needed to check on prior knowledge of the survey, which is a potential source of response bias. Interviewers are to ask the first part offhandedly and if a positive response is given, to follow-up immediately with the second part without seeming to be reading from the schedule. In

other words, do not tick the 'yes' box until after you have asked "What had you heard?".

Question 7 This question aims to introduce the topic of noise without implying that the respondent has been previously misled (See Section 4.1). In this open question R is invited to specify the noises heard in the neighbourhood and is given the opportunity to nominate Army Range noise. Interviewers must make sure they are neutral in their reactions to the responses given, and when probing they must not imply that something has been omitted.

Question 8 The respondent is asked to say whether or not various noises are ever heard. Some respondents can be expected to say "No" and then add something to the effect that they hear the noise but that it's not a problem. In such cases interviewers are to probe with "Do you ever hear noise from...around here?". If in doubt tick 'yes' - this question is essentially a lead-in for the next question.

Question 9 This question asks for an annoyance rating for the various neighbourhood noises. Ask about those noises for which the 'yes' box was ticked in the previous question. Avoid giving any emphasis to any of the items. For item ix) read out the first of any 'other' noises specified in the previous question. Respondents should have no difficulty using the opinion thermometer to give their ratings.

Question 10 This question is designed to determine which noise R finds most bothersome. It is an important question which is neutral with respect to the Army noise but allows people the chance to nominate it as the most serious noise problem. Again, of course, interviewers have to guard against any possibility of bias through prompting. Encourage R to select one of the noises and record the item number from the flash card (note the number when you take the card back). Simply record the number without any comment or reaction.

Question 11 This is the first of the questions directly on Army Range noise and is asked of all respondents. They are required to give a rating of how much they are affected overall - this covers a more general reaction than annoyance. Those respondents who report being 'not at all affected' (i.e., give a zero rating) are not asked the next fifteen questions.

NOTE Interviewers are to complete the item on page 4. If a zero rating was given in Q.11 tick 'skip' and go to Q27. If a non-zero rating was given tick 'continue' and proceed with the next question (Q.12).

Question 12 This question asks respondents whether or not various activity disturbances are experienced as a result of the Army Range noise. If R digresses on any item repeat the operative part of the question, viz., "Do you find that the Army Range noise disturbs or interferes with...(next item)?"

NOTE If R answers 'No' to all disturbances in the previous question then there is no point asking the next two questions. In such cases skip to Q15.

Question 13 This question is designed to find out which activity disturbance is most important to the respondent. Interviewers are to encourage R to select one activity from the flash card. If R insists on

nominating more than one item, note them down, but enter in the coding box the first one mentioned.

Question 14 The rating in this question concerns the annoyance felt overall because of activity disturbances. Although previous noise surveys have typically asked for ratings of annoyance from each activity disturbance, it is argued that the present general rating provides a more valid index of subjective reaction. In the analysis this rating will be combined with other ratings to form an annoyance scale (See Section 2.2).

Question 15 This question simply asks whether or not artillery explosions cause the respondents' house to shake, a phenomenon many people find disturbing. Those who answer 'yes' are asked to give a rating using the opinion thermometer.

Question 16 Some people feel they experience health symptoms as a result of exposure to noise. This question asks whether the respondent is affected in a variety of ways because of the noise from the Army Range.

Question 17 This and the next two questions relate to times that people are affected by the noise. This question deals with seasons, type of weather and days of the week. Interviewers must be careful with the response 'I don't know' for it may really indicate that R finds there's no difference, i.e., that 'Equal' rather than 'DK' should be coded. If there is any uncertainty the question should be repeated using the extended form of i) for overcast/fine and weekdays/weekends.

Question 18 An important issue for the development of a suitable index of noise exposure concerns whether noise at night or in the evening should be weighted relative to that during the day. This question addresses this issue and asks respondents to rate how much they are affected at various times. Note that R is not being asked to rate how much he/she is affected when or if the noise is heard at the various times. Rather, the wording has been chosen to ensure that Rs' rate on the basis of their actual reaction to the noise (if any) they do hear. It is important that interviewers ask the question exactly as given.

Question 19 This is a very important question for it will provide valuable information about how the range can be operated to minimize community disturbance. Respondents are first asked whether they think firing times should be restricted. Those who answer 'yes' are asked about starting and finishing times. Interviewers are to write down the actual time R says (e.g. 5.30 p.m.). The boxes are to be left blank for coding in the office.

Question 20 In this question respondents are asked whether they have ever complained about the noise from the range. Those who have are casually asked to state what they did. Responses are recorded as given and will be coded in the office.

Question 21 Another question on complaint. Respondents are asked whether they feel they would like to take any of a number of actions by way of complaint. They are not here being asked whether they have actually done or plan to do the things listed, although some respondents may interpret the question that way. In such a case interviewers are to repeat the operative part of the question (viz., "Do you feel you would like to...?").

NOTE Before asking the next question, interviewers are to quickly check the response given in Q1. If the response was 'all of life' then the next question (Q22) is omitted.

Question 22 A simple question which asks whether the respondent knew about the noise before moving in to the area. Some people feel particularly upset if they discover a disadvantage in an area only after they have moved in.

Question 23 This is a straightforward question on adaptation, inquiring whether the respondent has become used to the noise. Interviewers are not to give any indication as to whether or not respondents are expected to have adapted to the noise.

Question 24 In this question on change in the amount of Army Range noise, respondents are being asked to make a subjective judgment not a categorical statement of fact. Note that the substitute phrase "since you moved here" is used if R has lived there for less than five years, as indicated in response to Q1.

Question 25 Many people think about moving house as a sort of vague wish for 'greener pastures'. This question asks whether R has seriously considered moving. With young respondents a 'Don't Know' response may be appropriate - such people are not to report what their parents might do.

Question 26 This is a very important question on subjective rating of annoyance. It is crucial for the accurate interpretation of the opinion thermometer ratings. Respondents are asked to select which category describes their general feelings about the Army Range noise. Interviewers must not give any feedback about the ratings R gave in previous questions.

NOTE In those cases where the noise questions have been skipped, the interview resumes with the next question.

Question 27 The extent to which an individual is affected by noise from the range will depend in no small part on his/her attitudes towards the Army. This question consists of 12 statements for which the respondent is required to indicate agreement or disagreement. Positive and negative attitude statements are mixed, but interviewers must take care to read each one in a neutral manner, with no hint as to their own opinions and no reaction to the responses given. If R simply says "yes" or "no" or uses any words other than those on the flash card, then interviewers are to probe by asking "Which one would you say from the card?". Some respondents may digress by trying to elaborate on the statements. In such cases, interviewers are not to discuss the matter but are to record any comments in the margin. Press on with the question by saying "The next statement is...". Before accepting a 'Don't Know' response probe with "Do you mean you have no opinion?"

Question 28 This is the final rating item. It is designed to assess the general reaction of dissatisfaction with the noise from the range.

Question 29 This is an open question inviting respondents to make any other comments about the Army Range and about neighbourhood living conditions. Although it is not as important a question as some of the others,

it may prove useful in providing insights into the variability of people's reactions to the environmental conditions in various neighbourhoods.

Question 30 The last five questions are needed to gather 'classification' information. Most people will not object to supplying the 'personal' information sought, but some may need to be reminded that the information is confidential and that names are not being recorded. The first question in this section asks R to indicate his/her age category from a flash card. If R refuses, do not insist on a response but simply record the refusal by ticking box 7.

Question 31 In this question on occupation interviewers are to make sure that an accurate description is given. Probe if a one-word response is given: "What sort of...?" (clerk, salesman, engineer, manager etc.). Probe further if the response is ambiguous (there is a story of a man who called himself a 'bank director'. His job was to usher customers in a bank!). Ensure there is enough information for the office to decide on the coding category: professional/managerial, white collar, blue collar, home duties.

Question 32 Interviewers must be careful not to omit this item. Tick whether the respondent is male or female.

Question 33 This question asks about education level. The 'refuse' category is given here, but most people will not hesitate to answer from the flash card. If R is not sure of the category (e.g., overseas education) interviewers are to note the details and to leave the coding boxes blank. The probe about name of the institution is used if R says 'tertiary' (categories 5 or 6).

Question 34 This is a simple question on home ownership. If the category 'other' is appropriate, interviewers are to note the details in the margin.

NOTE Interviewers are to complete the interview by thanking the respondent for his/her co-operation and pointing out that the information will be of great value in planning future community improvements. It is important that respondents feel that their time and effort has been worthwhile and is appreciated. Where necessary, interviewers should re-assure respondents about the confidentiality of the information.

SECTION 6 FIELD PROCEDURES

6.1 Address Lists

Each interviewer will be given a number of work loads comprising 30 dwellings selected randomly as described in Section 3. The address of each of the 30 sample dwellings is given on the ADDRESS LIST for the particular work load. An interview is to be conducted at all 30 dwellings on the list. Each work load is assigned a two-digit WORK LOAD NUMBER and each dwelling has a number between 01 and 30 which is its ADDRESS CODE.

The address lists were compiled on the basis of information gained by field observation. In most cases the house number was actually sighted by those conducting the sample listing. Where no number is displayed on a dwelling the address is assumed by counting (in 2's) from the nearest dwelling which has a number. In these cases an asterisk (*) appears next to the house number given on the address list. There are a few cases where more detailed directions are given on the address list to ensure that the interviewer can find the correct dwelling. Complete listing records are retained in the office should interviewers require further clarification of addresses.

Results for each dwelling are to be recorded on the address lists using the code provided. It is important for subsequent processing that the results for each work load are fully and accurately summarized on the address lists.

6.2 Contact Procedures

Up to five effective calls are to be made at each listed dwelling in order to establish contact with the occupants. Calls are to be made at different times including up to three calls in the evening (5 - 8 p.m.). Calls may be made on Saturdays not on Sundays.

The details of each call are to be noted on the CONTACT RECORD which forms the back cover of the interview schedule. If no contact has been made after five attempts, the dwelling is recorded as "Non Contact". However, if the dwelling is definitely uninhabited it is recorded as "Vacant Dwelling", and relevant evidence is noted on the contact record. Note that there is no substitution in cases of Non Contact or Vacant Dwelling. While it is important to obtain as many interviews as possible, these must come only from those dwellings which were selected in the survey sample, that is, those on the address lists.

6.3 Respondent Selection

The first person contacted at a dwelling is referred to as the INFORMANT. This can be any person who is able to supply reliable information about the household membership. After the initial introduction the interviewer asks the informant how many occupants there are and how many of them are aged 18 years or over. These numbers are recorded on the Contact Record. The interviewer then asks who the household members are and notes them down in the order stated by the informant. In most cases it will be sufficient to identify members by their relationship to the informant (e.g., husband, wife, cousin etc.). Where several members have the same relationship (e.g., 3 sons) additional details will be needed such as their respective ages or their initials. Avoid using names - this will guarantee anonymity and confidential-

ity. If the informant is eligible but happens not to say 'self' in listing the household members, record 'self' as the last person on the list.

The person to be interviewed is termed the RESPONDENT. Note that the informant is not necessarily the respondent. To select the respondent the interviewer consults the RESPONDENT SELECTION TABLE (See Figure 4), which is a table of random numbers compiled by computer separately for each work load. To use the table one needs to know the 'Address Code' of the particular dwelling and the 'Number of Eligible Household Members' (the latter being the number of persons that have been listed on the Contact Record). The interviewer reads down the column headed 'Address Code' and then across to the appropriate column under 'Number of Eligible Household Members' and circles the number in that box. The corresponding 'Person Number' on the Contact Record is then circled. This person is the respondent.

Proper use of the above procedure ensures that the respondent will be selected randomly. The crucial requirement is that the list of household members be made without reference to the Respondent Selection Table. If the list is compiled in the order given by the informant before the interviewer has any idea of which numbers are on the Table for the particular address there can be no bias. Interviewers must follow the procedure outlined in order to avoid any possibility that the selection be influenced, albeit unintentionally, by personal preferences.

Once the respondent has been selected up to three more calls are to be made in order to obtain an interview with that person. The person at the door, the informant, is not to be interviewed unless he/she happens to be selected. The survey analysis will include examination of selection probabilities to assess any bias that may undermine the validity of the survey.

To help clarify the above contact procedures consider the following example. You first call at a listed address at 9.15 am and find no-one at home. Note the time on the contact record sheet. When you call back at 6.30 pm a woman answers the door. You have made contact at the dwelling and the woman is the informant. In reply to your introductory question she says there are five household members over 18, namely, her husband, her two sons (note ages: 19 and 22 years), her mother and herself. These people are listed on the contact record in the order the informant gave them. Then you consult the respondent selection table using the address code (say 04) and the number of eligible household members (in this case 5) to find the appropriate box which happens to contain the number 3. You circle this number on the table and then circle 'Person Number' 3 on the contact record sheet. This happens to be the 22 year old son. You ask to see the son only to be told that he is at a late class at university. You resist the temptation to save trouble and bias the survey by interviewing the woman at the door, and arrange to call back at a time when the son will be at home. When you call back as arranged you find the son on his way out. You then make an appointment for a mutually suitable time and note the details of your call on the contact record. You obtain the interview when you call back for the appointment.

After an interview has been completed, interviewers are to fill-in the front of the schedule (viz., work load no., address code, respondent's address, date, time interview started and finished, and interviewers's name).

INTERVIEWER	WORKLOAD NO.						
*****	*****						
* ADDRESS * NUMBER OF ELIGIBLE HOUSEHOLD MEMBERS *	* 1 *	* 2 *	* 3 *	* 4 *	* 5 *	* 6 *	* 7+ *
*****	*****						
* 01 * 1 * 2 * 3 * 4 * 2 * 5 * 7 *							
* 02 * 1 * 2 * 3 * 2 * 1 * 4 * 3 *							
* 03 * 1 * 1 * 1 * 2 * 1 * 4 * 7 *							
* 04 * 1 * 2 * 3 * 3 * 2 * 2 * 5 *							
* 05 * 1 * 2 * 2 * 2 * 2 * 4 * 3 *							
* 06 * 1 * 2 * 3 * 4 * 5 * 4 * 6 *							
* 07 * 1 * 2 * 2 * 3 * 3 * 4 * 4 *							
* 08 * 1 * 1 * 2 * 1 * 1 * 5 * 7 *							
* 09 * 1 * 2 * 2 * 4 * 1 * 6 * 7 *							
* 10 * 1 * 2 * 3 * 3 * 1 * 5 * 4 *							
* 11 * 1 * 2 * 3 * 2 * 1 * 5 * 3 *							
* 12 * 1 * 2 * 2 * 2 * 3 * 2 * 7 *							
* 13 * 1 * 2 * 3 * 4 * 3 * 5 * 5 *							
* 14 * 1 * 1 * 2 * 4 * 2 * 5 * 2 *							
* 15 * 1 * 1 * 3 * 1 * 3 * 2 * 5 *							
* 16 * 1 * 1 * 1 * 4 * 2 * 3 * 6 *							
* 17 * 1 * 2 * 3 * 4 * 3 * 6 * 2 *							
* 18 * 1 * 1 * 2 * 1 * 1 * 2 * 5 *							
* 19 * 1 * 1 * 3 * 2 * 1 * 5 * 4 *							
* 20 * 1 * 2 * 3 * 3 * 1 * 2 * 1 *							
* 21 * 1 * 2 * 3 * 3 * 4 * 3 * 1 *							
* 22 * 1 * 2 * 2 * 3 * 5 * 2 * 2 *							
* 23 * 1 * 1 * 1 * 4 * 4 * 2 * 1 *							
* 24 * 1 * 1 * 1 * 2 * 1 * 5 * 5 *							
* 25 * 1 * 1 * 1 * 3 * 2 * 5 * 6 *							
* 26 * 1 * 1 * 2 * 1 * 5 * 1 * 1 *							
* 27 * 1 * 1 * 2 * 2 * 3 * 5 * 7 *							
* 28 * 1 * 2 * 2 * 3 * 2 * 1 * 7 *							
* 29 * 1 * 2 * 1 * 4 * 2 * 4 * 5 *							
* 30 * 1 * 2 * 2 * 2 * 1 * 2 * 7 *							

Figure 4. Respondent Selection Table

6.4 Scope and Refusal

No interview is conducted in cases where the household is out of the scope of the survey. A household is out of scope if any of the following apply.

- i) There is no informant who can speak English.
- ii) All the household members are non-Australians and are either diplomats or service personnel.
- iii) All the household members are not usual residents at the address.

If the selected respondent proves to be out of scope then a new respondent is selected using the respondent selection table. This is done by crossing the out-of-scope person off the list on the contact record and re-numbering the others on the list. Then the table is consulted as usual with the 'Number of Eligible Members' reduced by 1. If the person on the list on the contact record corresponding with the selected number is in scope, then that person is the respondent and should be interviewed. A selected respondent is deemed to be out of scope if he/she:

- i) Is not aged 18 years or over at date of approach.
- ii) Does not have an adequate command of English.
- iii) Is a non-Australian and either a diplomat or a serviceperson.
- iv) Is not a usual resident at the address.
- v) Is too infirm to be interviewed.
- vi) Is non-contactable (i.e., will not be home at all during the survey period: 14th September - 31st October)

If either the household or the selected respondent proves to be out of scope then interviewers are to record the details on the contact record sheet.

A REFUSAL occurs in cases where the person at the door (the informant) refuses to co-operate in respondent selection, or where the selected respondent refuses to be interviewed. Details of the refusal are to be noted on the contact record sheet (viz., sex and approximate age of person refusing, tone of the refusal). Interviewers are to notify the office if they feel that a follow-up might be worthwhile on a refusal. Note that there is no re-selection in cases where the respondent refuses to be interviewed.

6.5 Note on Adherence to Scientific Procedures

The success of a survey depends on the accuracy and reliability of the data collected, and this depends on rigorous adherence to scientifically established principles. It is necessary to assume that the information collected in the survey is truly representative of the attitudes, opinions and feelings of all the residents in the community. For such an assumption to be justified the survey procedures outlined above have to be followed to the letter by every interviewer. Variations which may seem insignificant can result in massive inaccuracies in the data and thereby render the survey invalid. Please seek clarification if you are at all unsure of any aspect of these procedures.

6.6 Validation Study

As is standard practice in social surveys a validation check will be conducted after the main survey around Holsworthy. This will entail verification interviews being conducted with 10% of the respondents approached by each of the interviewers. It is not so much a matter of not trusting the interviewers but rather of being able to demonstrate that the respondent selection and other survey procedures have been followed throughout the study, and that the questionnaire has been administered accurately.

1. THE FIRST QUESTION IS:

HOW MANY YEARS HAVE YOU BEEN LIVING AT THIS ADDRESS?

- Less than 1 year 1
- 1 - 2 years 2
- 2 - 5 years 3
- 5 - 10 years 4
- More than 10 years 5
- All of life 6
- Don't know 0

(8)

CARD A

2. HOW WOULD YOU RATE THIS NEIGHBOURHOOD OVERALL AS A PLACE TO LIVE?

IS IT VERY GOOD, FAIRLY GOOD, AVERAGE, FAIRLY BAD OR VERY BAD?

- Very good 1
- Fairly good 2
- Average 3
- Fairly bad 4
- Very bad 5
- Don't know 0

(9)

3. WHAT ARE SOME OF THE THINGS YOU LIKE ABOUT LIVING IN THIS NEIGHBOURHOOD?

IS THERE ANYTHING ELSE YOU WOULD CONSIDER AN ADVANTAGE OF LIVING AROUND HERE?

Office

- Q 1
- OR 2
- DK 0

(10)

4. WHAT ARE SOME OF THE THINGS YOU DISLIKE ABOUT LIVING IN THIS NEIGHBOURHOOD?

IS THERE ANYTHING ELSE YOU WOULD CONSIDER A DISADVANTAGE OF LIVING AROUND HERE?

Office

- ARN 1
- ON 2
- OR 3
- DK 0

(11)

5. THE NEXT QUESTION DEALS WITH EVERYDAY THINGS THAT MANY PEOPLE FIND ANNOYING, THINGS THAT GET ON THEIR NERVES. FOR EACH OF THE SITUATIONS I READ OUT WOULD YOU PLEASE USE THIS OPINION THERMOMETER TO GIVE A RATING BETWEEN 0 AND 10 OF HOW MUCH ANNOYANCE YOU FEEL (Show OT).

FOR EXAMPLE, IF YOU FIND THE SITUATION VERY MUCH ANNOYING GIVE IT A HIGH RATING (SAY 9 OR 10), IF YOU FEEL MODERATE ANNOYANCE GIVE IT A RATING AROUND 5, AND IF YOU FEEL LITTLE OR NO ANNOYANCE GIVE IT A LOW RATING AROUND 0. PLEASE BASE YOUR RATING ON YOUR OWN PERSONAL EXPERIENCE AND DISREGARD HOW OTHERS MIGHT FEEL.

FIRSTLY, HOW MUCH ANNOYANCE DO YOU FEEL ...?

(Record: 00-10 = Rating; 11 = Don't Know; 12 = Never Experienced)

- i) WHEN A PNEUMATIC DRILL OR JACKHAMMER IS OPERATING NEARBY (12)
- ii) WHEN YOU ARE WOKEN UP BY A DOG BARKING
- iii) WHEN YOU HEAR MILITARY GUNFIRE OR EXPLOSIONS
- iv) WHEN PEOPLE ARE TALKING WHILE YOU ARE WATCHING TV
- v) WHEN SOMEONE RUSTLES PAPER AT THE MOVIES
- vi) WHEN YOU ARE TRYING TO CONCENTRATE IN NOISY SURROUNDINGS

HOW MUCH ANNOYANCE DO YOU FEEL?

- vii) WHEN SOMEONE USES A MOWER WHILE YOU ARE RESTING (24)
- viii) WHEN YOU HEAR A JET PLANE PASSING OVERHEAD
- ix) WHEN YOUR CONVERSATION IS INTERRUPTED BY TRAFFIC NOISE
- x) WHEN YOU HEAR THE SOUND OF A DOOR SLAMMING
- xi) WHEN A NEIGHBOUR'S RADIO OR TV IS PLAYING LOUDLY
- xii) WHEN YOU HEAR SOMEONE USING ELECTRIC POWER TOOLS

(Probe: Do you mean you have never experienced that situation?)

- 6. HAD YOU HEARD ABOUT THIS SURVEY BEFORE? Yes 1
- No 2 (36)
- DK 0

If yes: WHAT HAD YOU HEARD?

7. THIS SURVEY IS GENERALLY INTERESTED IN ALL NEIGHBOURHOOD CONDITIONS, BUT IN PARTICULAR WE ARE INTERESTED IN THE VARIOUS KINDS OF NOISE PEOPLE HEAR IN DIFFERENT AREAS OF AUSTRALIA.

WHAT ARE THE KINDS OF NOISE YOU HEAR IN THIS NEIGHBOURHOOD?

Office

ARN		1
ON		2
DK		0

(38)

ARE THERE ANY OTHER KINDS OF NOISE YOU HEAR IN THIS AREA?

8. I HAVE A LIST OF NOISES HERE. WOULD YOU PLEASE TELL ME WHETHER OR NOT YOU EVER HEAR THE FOLLOWING NOISES IN THIS NEIGHBOURHOOD?

	<u>Yes</u>	<u>No</u>	<u>DK</u>			
i) TRAFFIC	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	(39)	<input type="checkbox"/>	<input type="checkbox"/>
ii) LAWN MOWERS	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0		<input type="checkbox"/>	<input type="checkbox"/>
iii) AIRCRAFT	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0		<input type="checkbox"/>	<input type="checkbox"/>
iv) DOGS OR CATS	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0		<input type="checkbox"/>	<input type="checkbox"/>
v) MILITARY GUNFIRE OR EXPLOSIONS	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0		<input type="checkbox"/>	<input type="checkbox"/>
vi) TRAINS	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0		<input type="checkbox"/>	<input type="checkbox"/>
vii) NEIGHBOURS' TV OR RADIO	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0		<input type="checkbox"/>	<input type="checkbox"/>
viii) GARBAGE COLLECTION	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0		<input type="checkbox"/>	<input type="checkbox"/>
ix) ANY OTHER NOISES?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	(47)	<input type="checkbox"/>	<input type="checkbox"/>

(48)

(56)

(64)

(Specify) -----

9. I WILL READ THROUGH THE LIST AGAIN. THIS TIME USE THE OPINION THERMOMETER TO RATE HOW MUCH ANNOYANCE YOU FEEL ABOUT THESE NOISES IN THIS NEIGHBOURHOOD. PLEASE BASE YOUR RATING ON YOUR OWN PERSONAL EXPERIENCE.

FIRSTLY, HOW MUCH ANNOYANCE DO YOU FEEL ABOUT NOISE FROM ...?

(Read only the items that received a 'yes' response in Q.8 and record as previously)

CARD B

10. SUPPOSE YOU COULD GET RID OF ONE OF THESE NOISES FROM THE NEIGHBOURHOOD, (Show Card B) WHICH ONE WOULD YOU MOST LIKE TO GET RID OF?

(Record: 1 - 9 = Item number; 0 = DK or 'None')

(66)

11. THIS SURVEY IS PARTICULARLY INTERESTED IN HOW PEOPLE IN RESIDENTIAL AREAS ARE AFFECTED BY THE NOISE FROM THE HOLSWORTHY ARMY RANGE.

WOULD YOU PLEASE USE THE OPINION THERMOMETER TO ESTIMATE HOW MUCH YOU PERSONALLY, ARE AFFECTED OVERALL BY THE NOISE FROM THE ARMY RANGE.

(Record: 00 - 10 = Rating; 11 = DK)

(67)

NOTE: Interviewers to complete

If a zero rating was given in the previous question

Skip 0

Continue 1

skip to Q.27. Otherwise continue with next question.

(69)

12. PLEASE TELL ME WHETHER OR NOT YOU FIND THAT THE FOLLOWING ACTIVITIES ARE DISTURBED BY NOISE FROM THE ARMY RANGE.

FIRSTLY, DO YOU FIND THAT THE ARMY RANGE NOISE IN THIS NEIGHBOURHOOD DISTURBS OR INTERFERES WITH TALKING ON THE TELEPHONE?

WHAT ABOUT?

	<u>Yes</u>	<u>No</u>	<u>DK</u>	
i) TALKING ON THE TELEPHONE	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	(70)
ii) CONVERSATION	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
iii) WATCHING TELEVISION	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
iv) LISTENING TO RADIO OR MUSIC	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
v) SLEEPING	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
vi) RELAXING INDOORS	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
vii) RELAXING OUTDOORS	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
viii) READING OR STUDYING	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
ix) ENTERTAINING	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	
x) ANY OTHER ACTIVITY DISTURBED?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 0	(79)

(Specify) _____

If 'No' to all of the above skip to Q. 15

CARD C

13. SUPPOSE YOU COULD ELIMINATE THE DISTURBANCE THE ARMY RANGE NOISE CAUSES TO ONE OF THESE ACTIVITIES (Show Card C), WHICH ONE WOULD YOU MOST LIKE TO HAVE FREE FROM DISTURBANCE?

(Record: 01 - 10 = Item number; 0 = DK or 'None')

(8)

14. HOW MUCH ANNOYANCE DO YOU FEEL OVERALL BECAUSE OF THESE ACTIVITY DISTURBANCES CAUSED BY THE ARMY RANGE NOISE?

PLEASE USE THE OPINION THERMOMETER TO GIVE A RATING OF YOUR ANNOYANCE.

(Record: 00 - 10 = Rating; 11 = Don't Know)

(10)

15. DO YOU FIND THAT EXPLOSIONS AT HOLSWORTHY ARMY RANGE MAKE THIS HOUSE* VIBRATE OR SHAKE?

Yes

1

No

2

DK

0

(12)

(* Substitute "UNIT" if appropriate)

If yes: USING THE OPINION THERMOMETER WOULD YOU ESTIMATE HOW MUCH YOU ARE AFFECTED BY THE VIBRATION OR SHAKING CAUSED BY THE EXPLOSIONS.

(Record: 00 - 10 = Rating; 11 = Don't Know)

(13)

16. PLEASE SAY WHETHER OR NOT THE ARMY RANGE NOISE AFFECTS YOU IN ANY OF THE FOLLOWING WAYS. DOES IT EVER?

Yes No DK

i) STARTLE YOU OR MAKE YOU JUMP

1 2 0

(15)

ii) FRIGHTEN YOU

1 2 0

iii) CAUSE YOU TO FEEL IRRITABLE OR EDGY

1 2 0

iv) GIVE YOU HEADACHES

1 2 0

v) MAKE YOU BECOME TENSE OR NERVOUS

1 2 0

17. FOR THIS STUDY WE ALSO NEED TO KNOW WHEN PEOPLE ARE MOST AFFECTED BY NOISE FROM THE ARMY RANGE.

i) FIRSTLY, ARE YOU MORE AFFECTED IN SUMMER OR WINTER, OR DO YOU FIND THERE IS NO DIFFERENCE?

Summer	<input type="checkbox"/>	1
Winter	<input type="checkbox"/>	2
Equal	<input type="checkbox"/>	3
DK	<input type="checkbox"/>	0

(20)

ii) WHAT ABOUT OVERCAST OR FINE WEATHER?

Overcast	<input type="checkbox"/>	1
Fine	<input type="checkbox"/>	2
Equal	<input type="checkbox"/>	3
DK	<input type="checkbox"/>	0

(21)

iii) WHAT ABOUT WEEKDAYS OR WEEKENDS?

Weekdays	<input type="checkbox"/>	1
Weekends	<input type="checkbox"/>	2
Equal	<input type="checkbox"/>	3
DK	<input type="checkbox"/>	0

(22)

18. USING THE OPINION THERMOMETER PLEASE RATE HOW MUCH THE ARMY RANGE NOISE AFFECTS YOU IN THE FOLLOWING PERIODS.

i) FIRSTLY, HOW MUCH ARE YOU AFFECTED BY THE RANGE NOISE YOU HEAR DURING THE DAYTIME, SAY, 6 a.m. TO 6 p.m.

(23)

ii) HOW MUCH ARE YOU AFFECTED BY THE RANGE NOISE YOU HEAR DURING THE EVENING: 6 p.m. TO 10 p.m.?

iii) HOW MUCH ARE YOU AFFECTED BY THE RANGE NOISE YOU HEAR DURING THE NIGHT: 10 p.m. TO 6 a.m.?

(27)

(Record: 00 - 10 = Rating; 11 = Don't Know; 12 = Never experienced)

19. DO YOU THINK THERE SHOULD BE ANY RESTRICTIONS ON FIRING TIMES AT HOLSWORTHY ARMY RANGE?	Yes	<input type="checkbox"/>	1	(29)				
	No	<input type="checkbox"/>	2					
	DK	<input type="checkbox"/>	0					
<u>If yes:</u>								
i) WHAT IS THE EARLIEST <u>STARTING</u> TIME YOU THINK WOULD BE REASONABLE ON WEEKDAYS?	-----	<input type="text"/>	(30)					
ii) WHAT ABOUT ON WEEKENDS?	-----	<input type="text"/>						
iii) WHAT IS THE LATEST <u>FINISHING</u> TIME YOU THINK WOULD BE REASONABLE ON WEEKDAYS?	-----	<input type="text"/>						
iv) WHAT ABOUT ON WEEKENDS?	-----	<input type="text"/>	(36)					
20. HAVE YOU EVER REGISTERED A COMPLAINT OR PROTEST ABOUT THE ARMY RANGE NOISE?								
	Yes	<input type="checkbox"/>	1	(38)				
	No	<input type="checkbox"/>	2					
	DK	<input type="checkbox"/>	0					
<u>If yes:</u> WHAT DID YOU DO?								
	-----	<input type="checkbox"/>	(39)					
21. I HAVE A LIST OF SOME OF THE THINGS PEOPLE DO TO HAVE CONDITIONS IMPROVED IN THEIR NEIGHBOURHOODS. PLEASE SAY WHETHER OR NOT YOU FEEL LIKE DOING ANY OF THESE THINGS IN RELATION TO THE ARMY RANGE NOISE.								
FIRSTLY, DO YOU FEEL YOU WOULD LIKE TO <u>SIGN A PETITION</u> ?								
WHAT ABOUT? ...								
i) SIGN A PETITION	<u>Yes</u>	<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	(40)
ii) COMPLAIN TO LOCAL OFFICIALS		<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	
iii) COMPLAIN TO YOUR MEMBER OF PARLIAMENT		<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	
iv) WRITE A LETTER TO A NEWSPAPER		<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	
v) ATTEND A MEETING OF NEIGHBOURS		<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	
vi) ATTEND A PROTEST RALLY		<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	
vii) BECOME A MEMBER OF A PROTEST GROUP		<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	
viii) TAKE SOME KIND OF LEGAL ACTION		<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	0	(47)

NOTE: Omit next question (Q.22) if response to Q. 1 was "all of life".

22. DID YOU KNOW ABOUT THE ARMY RANGE NOISE IN THIS NEIGHBOURHOOD BEFORE YOU MOVED HERE?

- Yes 1
- No 2
- DK 0

(48)

23. DO YOU THINK YOU HAVE BECOME USED TO THE NOISE FROM THE ARMY RANGE IN TIME YOU HAVE BEEN LIVING IN THIS NEIGHBOURHOOD?

- Yes 1
- No 2
- DK 0

(49)

CARD D

24. HAS THE AMOUNT OF ARMY RANGE NOISE IN THIS NEIGHBOURHOOD CHANGED OVER THE PAST FIVE YEARS?* (Show Card D). IS IT MUCH MORE, A BIT MORE, ABOUT THE SAME, A BIT LESS OR MUCH LESS THAN IT WAS BEFORE?

- Much more 1
- A bit more 2
- About the same 3
- A bit less 4
- Much less 5
- DK 0

(50)

*(If less than 5 years say: SINCE YOU MOVED HERE)

25. HAVE YOU EVER SERIOUSLY CONSIDERED MOVING FROM THIS NEIGHBOURHOOD BECAUSE OF THE NOISE FROM HOLSWORTHY ARMY RANGE?

- Yes 1
- No 2
- DK 0

(51)

CARD E

26. HOW WOULD YOU DESCRIBE YOUR GENERAL FEELINGS ABOUT THE ARMY RANGE NOISE IN THIS NEIGHBOURHOOD? REFERRING TO THIS CARD (Show Card E) WOULD YOU SAY YOU ARE:

- HIGHLY ANNOYED 1
- CONSIDERABLY ANNOYED 2
- MODERATELY ANNOYED 3
- SLIGHTLY ANNOYED 4
- NOT AT ALL ANNOYED 5
- (DK) 0

(52)

NOTE: In case of 'skip' resume interview with next question (Q. 27)

CARD F

27. THE NEXT QUESTION DEALS WITH ATTITUDES AND OPINIONS CONCERNING THE ARMY. I WILL READ OUT A NUMBER OF STATEMENTS, AND FOR EACH OF THEM, WOULD YOU PLEASE USE THIS (Show Card F) TO INDICATE WHETHER YOU: STRONGLY AGREE, AGREE, DISAGREE, STRONGLY DISAGREE OR HAVE NO OPINION.

THERE ARE NO RIGHT OR WRONG ANSWERS, SO PLEASE FEEL FREE TO EXPRESS YOUR OWN OPINION.

THE FIRST STATEMENT IS:

SA A NO D SD DK

i) AUSTRALIA DOES NOT REALLY NEED AN ARMY IN PEACETIME.

5 4 3 2 1 0

(53)

ii) NOISE FROM THE RANGE IS UNAVOIDABLE IF SOLDIERS ARE TO BE PROPERLY TRAINED.

5 4 3 2 1 0

iii) THE ARMY IS NOT CONSIDERATE TOWARDS CIVILIANS.

5 4 3 2 1 0

iv) THE ARMY IS ACTIVELY CONCERNED ABOUT THE ENVIRONMENT.

5 4 3 2 1 0

v) IT IS IMPORTANT FOR AUSTRALIA TO HAVE A STRONG, WELL-TRAINED ARMY.

5 4 3 2 1 0

(57)

vi) TOO MUCH OF THE TAXPAYERS' MONEY IS WASTED ON DEFENCE EXERCISES.

5 4 3 2 1 0

vii) THE GOVERNMENT IS NOT DOING ENOUGH TO STOP NOISE POLLUTION.

5 4 3 2 1 0

viii) ARMY OFFICIALS DO THEIR BEST TO REDUCE ANY NOISE DISTURBANCE TO RESIDENTS.

5 4 3 2 1 0

ix) HOLSWORTHY ARMY RANGE POSES A THREAT TO SAFETY IN THIS NEIGHBOURHOOD.

5 4 3 2 1 0

	<u>SA</u>	<u>A</u>	<u>NO</u>	<u>D</u>	<u>SD</u>	<u>DK</u>							
x) ALL AUSTRALIANS CAN FEEL PROUD OF THE TRADITION OF THE ARMED FORCES.	<input type="checkbox"/>	5	<input type="checkbox"/>	4	<input type="checkbox"/>	3	<input type="checkbox"/>	2	<input type="checkbox"/>	1	<input type="checkbox"/>	0	(62)
xi) RESIDENTS SHOULD NOT COMPLAIN ABOUT THE RANGE BECAUSE THE ARMY WAS THERE FIRST.	<input type="checkbox"/>	5	<input type="checkbox"/>	4	<input type="checkbox"/>	3	<input type="checkbox"/>	2	<input type="checkbox"/>	1	<input type="checkbox"/>	0	
xii) HOLSWORTHY RANGE SHOULD BE CLOSED DOWN WHATEVER THE INCONVENIENCE TO THE ARMY.	<input type="checkbox"/>	5	<input type="checkbox"/>	4	<input type="checkbox"/>	3	<input type="checkbox"/>	2	<input type="checkbox"/>	1	<input type="checkbox"/>	0	

28. HOW DISSATISFIED ARE YOU WITH THE ARMY RANGE NOISE IN THIS NEIGHBOURHOOD? PLEASE USE THE OPINION THERMOMETER TO ESTIMATE HOW MUCH DISSATISFACTION YOU FEEL OVERALL.

(Record: 00 - 10 = Rating; 11 = DK)

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(65)

29. ARE THERE ANY COMMENTS OR SUGGESTIONS YOU WOULD LIKE TO MAKE ABOUT HOLSWORTHY ARMY RANGE OR ABOUT HOW CONDITIONS IN THIS NEIGHBOURHOOD MIGHT BE IMPROVED.

CARD G

30. FINALLY, I NEED TO GET SOME BACKGROUND INFORMATION FOR STATISTICAL PURPOSES.

WOULD YOU PLEASE INDICATE YOUR AGE GROUP FROM THE CATEGORIES ON THIS CARD (Show Card G)

18-29 yrs	<input type="checkbox"/>		1
30-39 yrs	<input type="checkbox"/>		2
40-49 yrs	<input type="checkbox"/>		3
50-59 yrs	<input type="checkbox"/>		4
60-69 yrs	<input type="checkbox"/>		5
Over 70 yrs	<input type="checkbox"/>		6
Refuse	<input type="checkbox"/>		7

(67)

31. WHAT IS YOUR OCCUPATION?

	<u>Office</u>		
	HD	<input type="checkbox"/>	1
	P/M	<input type="checkbox"/>	2
	WC	<input type="checkbox"/>	3
	BC	<input type="checkbox"/>	4

(68)

32. Interviewers to complete

	<u>Sex of Respondent</u>		
	Male	<input type="checkbox"/>	1
	Female	<input type="checkbox"/>	2

(69)

CARD H

33. FROM THIS CARD (Show Card H) PLEASE TELL ME WHAT IS THE HIGHEST LEVEL OF EDUCATION YOU HAVE COMPLETED?

	1 - 3 yrs Primary	<input type="checkbox"/>	1
	4 - 6 yrs Primary	<input type="checkbox"/>	2
	1 - 4 yrs Secondary	<input type="checkbox"/>	3
	5 - 6 yrs Secondary	<input type="checkbox"/>	4
<u>If Tertiary:</u>	1 - 2 yrs Tertiary	<input type="checkbox"/>	5
WHAT IS THE NAME OF	3 + yrs Tertiary	<input type="checkbox"/>	6
THE TERTIARY INSTITUTION YOU ATTENDED?	Refuse	<input type="checkbox"/>	7
-----	DK	<input type="checkbox"/>	0

(70)

34. DO YOU OR YOUR FAMILY OWN THIS HOUSE*, ARE YOU PAYING IT OFF OR DO YOU RENT IT?

	Own	<input type="checkbox"/>	1
	Paying Off	<input type="checkbox"/>	2
	Renting	<input type="checkbox"/>	3
	DK or other	<input type="checkbox"/>	0

(71)

(* Substitute "UNIT" if appropriate)

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CONTACT RECORD

ADDRESS:	Code	<table border="1" style="display: inline-table;"><tr><td> </td><td> </td></tr></table>									
	HOUSEHOLD					RESPONDENT					
Call No.	1st Call	2nd Call	3rd Call	4th Call	5th Call	1st Call	2nd Call	3rd Call			
Date											
Time											
Contact (✓/x)											
Successful?	If no: Non Contact <input type="checkbox"/>		Refusal <input type="checkbox"/>		Beyond Scope <input type="checkbox"/>						
Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>Explain:</u>										

GOOD MORNING/AFTERNOON/EVENING, I'M ... (HERE'S MY IDENTIFICATION).

THIS ADDRESS HAS BEEN SELECTED IN AN OFFICIAL SURVEY THE AUSTRALIAN GOVERNMENT IS CONDUCTING ON NEIGHBOURHOOD LIVING CONDITIONS.

THE INFORMATION IS QUITE CONFIDENTIAL, AND WILL BE USED FOR PLANNING FUTURE COMMUNITY IMPROVEMENTS.

I NEED TO INTERVIEW ONLY ONE PERSON FROM THIS HOUSEHOLD, BUT THE PERSON TO BE INTERVIEWED HAS TO BE SELECTED RANDOMLY.

YOU CAN HELP FIRST TELLING ME HOW MANY PEOPLE LIVE IN THIS HOUSEHOLD?

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 (72)

NOW I NEED TO KNOW HOW MANY OF THEM ARE AGED 18 OR OVER.

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 (74)

COULD YOU PLEASE TELL ME WHO THEY ARE?

Person Number	Relationship to informant
1	
2	
3	
4	
5	
6	
7	

(Consult Respondent Selection Table, circle person number above and seek interview with that person)