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PEDESTRIAN AMENITY:

ON STREET SURVEY DESIGN

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1. INTRODUCTION

1.1 Study Objectives

1.1.1   Any new road, road improvement or traffic management scheme could affect pedestrian journeys in its locality or elsewhere.   Some journeys may be affected directly, with severance caused where the new road or road improvement cuts across a pedestrian route, others may be affected indirectly with a new road causing changes in traffic levels elsewhere.   To enable effects on pedestrians to be given proper weight when decisions are taken, techniques are required that forecast the effects of the scheme on the number and quality of pedestrian journeys.   This is particularly true in urban areas, since effects on pedestrians may be one of the main benefits or disbenefits of measures to relieve urban traffic.

1.1.2   As a first stage of research in this area, TRRL placed a contract with the Institute for Transport Studies at the University of Leeds.   The terms of reference were:

  i) to review literature for currently available techniques and possible approaches and for any useful and general background information on:

  a)   estimating number of pedestrian journeys
  b)   assessing changes in pedestrian amenity;

 ii) to make recommendations as to the best (if any) currently available techniques for (a) and (b) above, taking into account the availability of any data required as inputs to the techniques;

iii) if the literature review reveals that further work is necessary in these areas, either in the development or testing of existing methods, or in the development of new methods, to make detailed proposals to carry out the necessary research.

As well as the literature review (May et al 1985) that study produced recommendations for further research (May, 1985).   In 1986 TRRL commissioned the Institute for Transport Studies to conduct a research project based on those recommendations, whose detailed elements were designed to:-

  1)   develop sampling procedures/expansion factors for pedestrian counts;
  2)   identify proportions of pedestrians by type;
  3)   test existing models to predict pedestrian numbers and develop others if necessary;
  4)   develop dose-response relationships for overall nuisance and individual environmental effects;
  5)   explore evidence among residents of trip suppression and diversion in response to environmental conditions.

1.1.3   This report deals with the survey design to meet (4) and the selection of sites for the study as a whole.   Details of the count studies are included in a companion report (Turvey et al 1987).

1.2 Study Method

1.2.1   On-street interviews were carried out over a period of 6
months in 15 different centres, over at least 3 days in each
site.   Sketch plans of each location are included in Appendix 1.
Data from 15 sites was collected concurrently, but prior to
analysis 10 were selected to develop assessment methods and 5 set
aside for validation purposes.   These studies were designed to
measure the responses of pedestrians to environmental conditions
in a street which were related to traffic, pedestrian facilities
and built form.   From this it was proposed to establish the
relationship between an individual's subjective response to
different environmental factors and overall nuisance.

1.2.2 This involves, for each location, comparing response data
from one street to traffic and pedestrian flow conditions in that
street.   This approach produces a cross-sectional dose-response
model.   This would enable a knowledge of the pedestrian and
traffic conditions in a given street to be used to estimate the
likely response of different pedestrian types to those
conditions.

The study programme involved the following fieldwork:

    1)   manual counts of pedestrians (classified);
    2)   video data collection (for pedestrian and vehicle
          data);
    3)   on-street pedestrian interviews;
    4)   noise and pollution monitoring;
    5)   observation of site characteristics.
    6)   household interviews;

1.2.3 One of the major difficulties with an on-street based
approach is that pedestrians who already avoid a street because
of its existing environmental conditions would not be identified
in the study.   Accordingly an exploratory study involving
household interviews was included in the fieldwork listed above
to identify the extent of behavioural responses such as trip
suppression or avoidance resulting from the perceived and
environmental aspects in an urban centre.   These interviews were
carried out in two of the worst centres as identified from the
traffic and pedestrian levels measured during the on-street
interviews.   The results from this study are dealt with in a
separate report (Hopkinson et al 1987).

1.3 Report Outline

In developing the method for measuring subjective response to
traffic-related and other environmental conditions, use was made
of previous literature and earlier work by the Institute in
Manchester (Hopkinson 1987).   The approach adopted and the
detailed questionnaire design are described in Sections 2 and 3
respectively.   Section 4 describes the criteria used for the
selection of survey locations and sites.   Section 5 describes the
sampling strategy for the on-street interviews.   The final
section discusses the perfomance and returns from the on-street
interviews.

2.   METHODS OF ASSESSMENT

2.1 Basic Considerations

2.1.1   For both the on-street and household interview work a number of approaches based on different attitudinal models could be taken.   The term attitudinal model is itself a vague   term having many definitions and comprising affective, cognitive and behavioural elements.   For this reason it was proposed that any technique developed for assessing pedestrian amenity should not be an arbitary process but should be designed in the context of psychometric theory and should relate to an established theory of mental structure and process.   Personal construct theory and its associated operational form, the repertory grid, were suggested as useful both for measuring and understanding pedestrian amenity.

2.2 Repertory Grid Technique

2.2.1   The repertory grid method helps to discover   the concepts that people employ in thinking about a given situation and to explain their preferences amongst a number of   choice options.   The elicitation of concepts often involves comparisons of triads.   Suppose we wish to study different types of street scenes.   The streets are grouped in threes and the participant is asked in the study in what way any two streets are similar to, or different from the third.   A participant may say street one is quiet while street two and three are noisy.   The participant has used a concept pair (construct):   noisy/quiet.   The types of constructs elicited will be dependent to a large extent on the particular streets included in the triad.   The investigation does not prejudge the concepts whose polar opposition creates a scale; the participant draws on them for a particular purpose.   The process can be repeated by taking more streets (or underlined elements in the language of the repertory grid method) for yet another concept pair or asking other respondents for other concepts in the same triad.   These pairs form a grid, a repertoire of devices for understanding the way people think about and act in a given street environment (Harre, De Carlo, Martin 1985).   In this study a list of 12 standard constructs elicited during extensive pilot studies was supplied to all respondents in each location.   These were rated against three elements (streets) in each location. The list of constructs is described in para 3.2.1 and a more detailed account justifying this particular approach is given in Hopkinson (1987).

2.2.2   The second stage of the grid method involves asking the participant to state the preferred pole of each construct.   This pole indicates the individuals preference for a particular quality in a given street.   In the given example the stated preference is for a street that has plenty of room on the pavement, attractive buildings, not much traffic and interesting shops.   Next the individual is asked to rank or rate all of the elements (streets) in relation to this preferred pole.   In the end one has a detailed conceptual representation of the ordering of different street scenes against the preferred dimensions of a construct.   Figure 1 presents an example for three streets which have been rated against four constructs whose preferred poles are

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indicated.   Rating has the advantage over ranking of providing
data which is ordinal and can therefore be more fully analysed.

Figure 1

Showing the Structure of a Simple Repertory Grid

```
PAVEMENTS      :    : X1 : X2 :      :     : X3 : PLENTY OF ROOM
CROWDED IN     ---------------------------------- ON PAVEMENT
THIS STREET                                       (P)


(P) ATTRACTIVE :    : X1 : X3 :      : X2 :     : UNATTRACTIVE
    BUILDINGS      ---------------------------------- BUILDINGS


(P) NOT MUCH   :    : X3 : X2 :      : X1 :     : HEAVILY
    TRAFFIC        ---------------------------------- TRAFFICKED


(P) SHOPS      : X1 :    : X2 :      : X3 :     : SHOPS UN-
    INTERESTING    ---------------------------------- INTERESTING
```

(P) = Preferred pole of construct
X   = Position of 3 elements (streets) in relation to preferred
        construct dimension

2.3 Advantages of a grid technique

2.3.1 There are three distinct advantages from using a repertory
grid approach in this study.   The first is to identify the
relationship between attributes. Stated responses to one feature
of a street such as noise are likely to vary not only with
respect to the level of that feature but also to the levels of
other features.   This is particularly the case where the focus
is   traffic and pedestrian conditions.   Given a   positive
correlation, a low rating for one feature of a street will tend
to produce a low rating for other features. Typically survey
instruments treat features of a street as if they are discrete
stimuli and can be analysed as such.

2.3.2 Personal construct theory holds that constructs are not
discrete, separate units of measurement but are arranged in a
hierarchical manner, with some being subordinate to others (Kelly
1955). Each person's construct system as measured by a repertory
grid is then conceived as being made up of ordinal relationships
between constructs.   From this the importance of a construct is
assumed to be implied by the strength of its association to every
other component within the repertory grid. The analysis of the
repertory grid data proceeds by quantifying these relationships
and extracting the constructs which have the most in common with
each of the other constructs.   These related constructs are
discovered using the techniques of correlation and principal
component analysis (Bannister and Franzella, 1977).

2.3.3 The second advantage of the repertory grid is its ability
to represent an individual's comparative assessment of a number
of streets.   Standard methods of assessment obtain individuals'

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ratings of individual streets and involve making comparisons
across respondents with different characteristics such as journey
purpose or age. The repertory grid obtains an individual's
assesment of each street of interest and therefore avoids the
assumptions that individuals' assessments of these different
streets are consistent with respect to different personal and
journey characteristics. Accordingly the method permits
aggregation of results across individuals with shared
characteristics more easily than other methods.

2.3.4 The third advantage of the repertory grid technique, which
it holds in common with other methods, is that for a set of
results the mean scores for different attributes can be plotted
against the measured physical levels of the different attributes
to indicate the difference in the subjective response for
different conditions. Including streets with markedly different
environmental conditions as elements provides an opportunity to
test firstly whether streets with high, medium or low traffic
flows are perceived as different (and hence what effect changing
traffic flows on these individual streets might have). Secondly
including streets with markedly different land-use or other
environmental characteristics will enable the extent to which
those attributes, rather than traffic, influence assessment.

3. QUESTIONNAIRE DESIGN

3.1 Introduction

3.1.1   The questionnaire design for the on-street interviews involved two major considerations, firstly the design of the repertory grid and secondly obtaining information about the individual which might explain variations in response to traffic and environmental conditions. The design of the repertory grid involved specifying the constructs and elements to form the grid structure and deciding how to measure the constructs.

3.2 Construct Elicitation

3.2.1   A list of constructs was identified from extensive exploratory studies as major dimensions which people used to compare and evaluate streets (Hopkinson, 1987). Although there were many other constructs which people used to evaluate street environment it was decided to use 12 standard constructs in the on-street interviews for two reasons. Firstly this represented the maximum number of items to which a person would respond before he became confused, or impatient. Secondly this number allowed the inclusion of the main traffic and pedestrian related attributes which other studies had identified as important in describing amenity (May et al, 1985). Although preselection of constructs reduces the sensitivity of the grid to individual variability it is less time consuming in an on-street interview and permits rapid comparison of grouped data. Table 1 lists the constructs employed.

3.2.2   Ideally the wording of each construct would have been tested for each location to minimise possible regional variations in terminology or participants' language. In practice these could not be achieved although great care was taken to avoid using words which might have ambiguous or different meanings.

In terms of their relationship to environmental attributes, the constructs used in the study fall into three broad groups:

        a)   traffic-related
        b)   pavement/road crossing related
        c)   amenity related

3.2.3   Traffic Related

Noise: Rather than a concept pair noisy/quiet which produced difficulties when related to traffic (what is "quiet traffic"?), the pairing noisy/not noisy was found to be a more meaningful and satisfactory combination.

Table 1

Constructs Used in the Repertory Grid

Shops and buildings attractive	(7)	- Shops and buildings unattractive (1)
Pavements crowded for pedestrians	(1)	- Plenty of room on pavements for pedestrians (7)
Traffic noisy in this street	(1)	- Traffic not noisy in this street (7)
Safe crossing this street	(7)	- Not safe crossing this street (1)
Traffic fumes a problem	(1)	- Traffic fumes not a problem (7)
Pavements in good condition	(7)	- Pavements in poor condition (1)
Easy street to cross	(7)	- Difficult street to cross (1)
Feel safe from traffic when on pavement	(7)	- Don't feel safe from traffic when on pavement (1)
Parked vehicles cause obstructions	(1)	- Parked vehicles no problem (7)
Amount of traffic too much	(1)	- Amount of traffic about right (7)
Shops interesting	(7)	- Shops uninteresting (1)
Street I like to visit	(7)	- Street I don't like to visit (1)

Note: 7 = Most favourable reaction 1 = least favourable action

Fumes: For the attribute fumes the key evaluative dimension identified from the pilot studies referred to whether the traffic fumes were a problem for an individual. The opposite pairing of this was not a problem.

Parked Vehicles: For the attribute of parked vehicles the major evaluative dimension related to whether the presence of parked vehicles caused obstructions to pedestrians either walking along a pavement or crossing a street. It was intended to include this dimension as a general indication of disturbance caused by parked vehicles.

Traffic: In relation to the actual presence of traffic in a street it was found that an unfavourable evaluation referred to there being too much traffic. Rather than having a contrast pole as "too little" which again would be an odd evaluation, the favourable pole of the construct was set as 'amount of traffic is about right'.

3.2.4   Pedestrian Facilities

Pavements: The concept pair good condition/poor condition was relatively straightforward for this attribute.

<u>Safety Crossing</u>: Two different pairings safe/not safe and safe/dangerous were found to be equally popular from the pilot study. A decision to use the former pairing was made.

<u>Ease of Crossing</u>: From the pilot study it was found that some people refer to a street as difficult to cross even where they find traffic conditions in that street to be safe. Difficulty crossing a street may refer to features other than traffic. For this reason a pairing easy/difficult was included in the grid.

<u>Safety on Pavements</u>: A pairing safe/not safe was identified as the major dimension which people formed to refer to the 'fear' or 'anxiety' they experienced due to the speed or proximity of traffic whilst walking along a pavement.

3.2.5 <u>Social-Amenity</u>

<u>Shops</u>: Two pairings attractive/unattractive and interesting/uninteresting were found to have different meanings for those people interviewed in the pilot study. The former pairing refers to the external appearance of a building whereas the latter refers to the type of shop and goods sold and displayed. Both were included in this study.

<u>Like to Visit</u>: In many instances pedestrians refer to a street they like to visit/don't like to visit even where their evaluations of that street on other attributes have been unfavourable/favourable. This construct was therefore seen as a direct preference statement, indicating an individual's overall assessment of a street in terms of whether taking everything into account they actually like the street in question.

3.3 <u>Selection of Elements</u>

3.3.1 For each location three streets were selected as elements (see Section 5). Although this produced a relatively small 12 x 3 grid (in other applications up to 30 elements may be used) it was felt that increasing the number of elements would lead to a sacrifice in the number of constructs thereby removing a number of possible important relationships. These streets were selected to represent a range of environmental conditions. To ensure the success of the grid these streets had to be familiar to the respondent and to share similar land-use characteristics. In this sense pedestrians would compare streets which they were likely to use for similar purposes and thereby reduce the number of factors which might affect the comparative assessment of environmental conditions.

3.4 <u>Scoring of Elements</u>

3.4.1 For each construct the position of an element with regard to the preferred pole of the scale was assumed to measure the extent to which that street was judged to achieve that pole. Although the scale positions have no absolute meaning it was important for relating response to measured levels of the attribute to consider the form of scale used in the grid. Two types of scale were considered; a numeric scale and a graphic scale with markers:

```
                           -----------------------------
   Numeric Scale    : 1 : 2 : 3 : 4 : 5 : 6 : 7 :
                           -----------------------------


   Graphic Scale    :___:___:___:___:___:___:___:
```

3.4.2   In the former the respondent is asked to select a number
to locate an element with respect to the scale pole.   The
advantage of this technique is that in practice it is quicker to
administer.   People are generally familiar with numbered scales
and find it relatively easy to relate a number to a favourable or
unfavourable scale dimension.   The disadvantage is that the
numbers themselves may introduce bias into the measurement if
people select a number without regard to the scale dimensions or
become attracted to a number as they complete the grid.   It is
relatively easy to repeat a number whilst appearing to be giving
due consideration to each scale in turn.

3.4.3   The graphic scale on the other hand avoids any problems
created by numbers but requires individuals to mark or point to
the position on the scale which relates to their judgement.   In
practice this is more time-consuming than a numbered scale.

3.4.4   One further consideration is that without the markers the
scale   would   represent a truly continuous scale where the
respondent is free to select any position on the scale to
indicate a judgement.   In the numeric and graphic scales on the
other hand the measurement is strictly ordinal although in
practice the statistical properties of the different scales have
been shown to be not significantly different (Grigg, 1981).

3.4.5   In this study a numeric scale was adopted on the grounds
of ease of operation during the interview.   A seven point scale
was adopted in line with studies of environmental issues by TRRL.
The central position of the   scale was taken to indicate
neutrality as between the poles specified for the street the
respondent was being asked to consider.

3.5 Personal and Journey Details

The   second consideration in the design of the questionnaire was
the questions relating to personal and journey characteristics.
From our previous review of the literature the respondents' age,
walking ability and journey purpose were identified as factors
likely to affect an individual's evaluation of street conditions
(May et al, 1985). Three broad groups of classification data were
obtained:

     1)   Current Journey

           - journey purpose
           - origin of walk journey
           - method of travel to centre
           - duration of walk journey

     2)   Journey Familiarity

           - usual time of visit to three streets

- usual frequency of visits to three streets
- number of years coming to centre

3)   <u>Personal Details</u>

- age
- sex
- walking ability
- walking situation.

Whilst the literature provides generally weak explanations of why different combinations of these factors might affect an individual's evaluation of a street environment (is a person on a shopping trip for example more or less likely to be bothered by noise than a person on his way to work?) it was proposed to disaggregate the sample by different classification data and compare dose-response relationships.

3.6 <u>Piloting</u>

The final form of the questionnaire using show cards was tested in a pilot study in Leeds City Centre. These interviews were timed at between 8 and 14 minutes depending upon the respondents' familiarity with the streets they were being asked to compare, their loquacity and general ability to handle the show cards.

4.   SELECTION OF SURVEY LOCATIONS

4.1   Criteria for selection

4.1.1 The TRRL research brief required the selection of 15 sites. Those sites were identified against a number of criteria and practical considerations including availability of land use data, range of traffic and environmental conditions and range of types of pedestrians and pedestrian activity.   For the purpose of testing and validation it was proposed to set aside data from 5 sites.   To achieve this it was decided to select three representatives of each of five types of location.   In this way one of each type could be set aside for validation.

4.1.2 A number of criteria including population size, economic and tourist activity and geographical location were suggested as factors which might be important in explaining differences in the number and type of pedestrian journeys. The initial sample frame proposed a list of criteria from which 3 sites representing a combination of characteristics could be selected; these were:

Criteria		Classification
Geographic Location	:	North/South
Size	:	Large/Small
Economic Status	:	Active/Depressed
Development Type	:	Market/New/Historic

4.2   Practical considerations

4.2.1   As well as these characteristics a number of practical considerations reduced the effective choice of location. The first requirement was the ability effectively to recruit, train and organise staff who would conduct the work.   In practice locations used for other studies relating to transport and the environment by the Consultancy responsible for recruiting and organising the fieldwork were given preference in the first-round selection.   Secondly it was considered worthwhile revisiting sites which had previously been used in ITS research on pedestrian amenity issues.   Whilst this data collected might not have been in the precise form required for the study it could provide a basis for comparing the results of different methods or for assessing changes in responses to environmental conditions over time.   A final consideration relating to data availability was the potential for studying locations where either local authorities or consultants had published or carried out studies of pedestrian numbers or attitudes to environmental conditions. These were identified either through the literature, from previous contacts or from replies to a project summary published in Traffic Engineering and Control, The Surveyor and The Planner.

4.2.2   For the initial pool of locations meeting the above criteria a letter was circulated to the local authority to:

    a)   establish any reasons for excluding the proposed survey
          location;
    b)   identify any alternative locations preferred by the
          authority;

c) identify any data available from the authority;
d) obtain information on major pedestrian flow attractors and land use plans for the central area.

4.2.3   From these replies two locations were rejected due to pavement resurfacing in the proposed survey area and doubt was expressed about three further locations due to the extent of pedestrianisation. Site visits as part of the final selection process revealed that a number of sites originally included were unsatisfactory due to the extent of pedestrianisation or pavement resurfacing.

4.3   Final list of locations

4.3.1   The full list of 15 locations included in the survey is shown, with population data, in Table 2 set in five groups of three. As can be seen compared to the initial sample criteria there are no locations classified as new or market towns. A distinction between large (>200,000) and small (<200,000) population centres was made. The higher population centres divided relatively easily into centres which were economically bouyant and those which were more depressed. Of the smaller centres three were clearly historic in nature, three shared no common characteristics other than being relatively small free-standing urban sites whilst the other locations were characterised as secondary shopping centres in terms of being smaller centres within a conurbation or else a small centre with a range of larger alternative centres within travelling distance.

4.3.2   The final list of locations comprised the following characteristics drawn from the initial suggested sample frame:

	North	South
Large (>200,000)	3	3
Small (<200,000)	5	4
Economically Active	5	5
Economically Depressed	3	2
Historic Centre	1	2
Total	8	7

4.4   Timing of Surveys

4.4.1   In the original research proposal the fieldwork had been planned for September/October 1986. A delay of one month by the client in clearing the contract documents meant that the survey period slipped to October/November. The delay of one month created two specific problems which affected the survey performance. The first related to the shortened daylight hours during October and November compared to September. Many people, particularly the elderly are less willing to be interviewed on-street towards the end of daylight hours. Secondly, during October and November there is an increase in on-street interviews for market research which has two effects. Firstly it creates competition for respondents and in some popular locations can lead to high refusal rates. Secondly the recruitment of survey staff is more difficult during this period due to the increase in the amount of work available. In practice the October/November

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period was also characterised by much poorer weather, with extended periods of rain and cold winds.

Table 2

Selected Survey Locations

Classification		Sample Frame	Population
1.	Large Urban (Active) (>200,000)	Aberdeen Bristol Manchester	200,000 388,000 449,000
2.	Large Urban (Depressed) (>200,000)	Sheffield Coventry Lewisham	477,000 314,000 232,000
3.	Small Historic	Guildford Winchester Lanark	57,000 30,000 10,000
4.	Small Urban (Other)	Epsom Kilmarnock Chesterfield	69,000 52,000 70,000
5.	Secondary Centres	Twickenham Hazel Grove Hebden Bridge	32,000 42,000 11,000

Note: Figures for Twickenham represent Twickenham Central, East, South, West Wards; 1981 Census Data

4.4.2   In order for the main fieldwork to be completed prior to the start of the traditional Christmas shopping period (November 24th - December 24th) a timetable was drawn up (see Table 3). The days of the week were chosen to include market days when pedestrian flows would be higher, to include Saturdays, where possible, and to avoid early closing. The timetable grouped the Northern and Southern locations separately, with one member of the research team being assigned to each group. For the first location both research team members were present to familiarise themselves with the survey procedure.

4.4.3   A further complication was the requirement to use video for the surveys of pedestrian numbers at each site for two of the three days, one of which ideally should be a Saturday. In practice, efficient use of equipment restricted filming to eight Saturdays.

Table 3

Dates of Surveys

Survey Location	Dates of Survey					

Chesterfield	18/10	(Sat)	20/10	(Mon)	21/10	(Tue)
Sheffield	24/10	(Fri)	25/10	(Sat)	27/10	(Mon)
Lanark	27/10	(Mon)	28/10	(Tue)	29/10	(Wed)
Hebden Bridge	29/10	(Wed)	30/10	(Thu)	31/10	(Fri)
Kilmarnock	30/10	(Thu)	31/10	(Fri)	1/11	(Sat)
Aberdeen	1/11	(Sat)	3/11	(Mon)	5/11	(Wed)
Lewisham	6/11	(Thu)	7/11	(Fri)	8/11	(Sat)
Epsom	8/11	(Sat)	10/11	(Mon)	11/11	(Tue)
Winchester	12/11	(Wed)	13/11	(Thu)	14/11	(Fri)
Guildford	14/11	(Fri)	15/11	(Sat)	17/11	(Mon)
Twickenham	17/11	(Mon)	18/11	(Tue)	19/11	(Wed)
Bristol	19/11	(Wed)	20/11	(Thu)	21/11	(Fri)
Manchester	20/11	(Thu)	21/11	(Fri)	22/11	(Sat)
Coventry	24/11	(Mon)	25/11	(Tue)	26/11	(Wed)
Hazel Grove	27/11	(Thu)	28/11	(Fri)	29/11	(Sat)

4.4.4   To minimise any effects of the Christmas period the final survey location selected was Hazel Grove, which was considered unlikely to attract people making special trips. Overall the timetable provided the following breakdown by days of week:

Day of Week	Interview Data	Video Recordings
Mon	5	6
Tue	5	3
Wed	6	3
Thu	8	7
Fri	8	6
Sat	9	5

4.5   Criteria for Street Selection

4.5.1   For each location the second stage of the survey design required selecting three different streets; one for the on-street interviews and video recording and two others for respondents to compare against the interview street (see Section 3.3). In selecting these two streets there were a number of practical considerations including:

a)   the need for the three streets to be similar in land-use characteristics (e.g. shopping) but sufficiently different to allow individuals to compare and contrast different traffic and pedestrian conditions;

b)   the need for each of the streets to be familiar to the respondent;

c)   the requirement within the interview street for a suitable location for a video camera;

d)   the absence of any recent large scale construction or traffic management activities.

4.5.2   For the video-recording of pedestrian movements a suitable location had to meet the following criteria:

  a)   pedestrian flows could be observed along at least one pavement;
  b)   pedestrian flows across a signalised or non-signalised crossing could be observed;
  c)   the field of view was not likely to be obstructed by vehicles;
  d)   access to the camera for changing video packs between 0900-1700, and for certain sites on Saturday, was possible.

In compiling a list of three streets for each location from a pool of suitable sites a number of definitional issues had to be confronted.

4.5.3   Street boundaries

Within an urban location the classical image of a shopping street is of a road carriageway flanked by pavements and shop frontages, defined in length by junctions with other major streets. Whilst this image is still a dominant form in many urban centres increasingly the effect of pedestrianisation, traffic management and shopping centre construction means that pedestrians are exposed to many types of traffic and shopping conditions. Even the single street may comprise a number of sections each with different pedestrian and traffic characteristics. This is particularly the case in larger urban centres when the length of a street may be several hundred metres. Indeed it might be questioned whether the street itself is an appropriate unit for determining individuals' perceptions of environmental quality or whether a larger definition (e.g. shopping area) or smaller definition (parades, arcade, precincts) might be the unit on which people judge the environmental quality.

4.5.4   In spite of this the street was set as the basic unit for evaluating pedestrian amenity in each of the 15 locations. Where a street was characterised by a number of distinct sections, or merged into another street or area without any clear demarcation it was necessary to set boundaries to define the section which it was intended that each respondent should consider in the questionnaire. For Hazel Grove the main shopping area only involved one road. It was considered that this was of sufficient length and varied in its shopping characteristics to be perceived as different sectors by people who used that centre. However, experience showed that pedestrians using that centre failed to discriminate between different sections. For this location therefore no comparison of streets based on the repertory grid could be made.

4.5.5   As well as the issue of specifying a section of street for the respondent to evaluate it was important for the later analysis to indicate the character of a street in terms of the type and range of buildings including shops. From a previous study (Hopkinson, 1987) it was evident that people label streets in a variety of ways which reflect the perceived quality and type of shops in a street. Whilst such labels as "classy" or "cheap" are difficult to quantify it was felt important during

15

initial site visits and later field work to obtain details on the major shopping and building characteristics of a street.

4.5.6   Whilst it would have been possible to list every shop by size and type in practice this would have required more time than was available. As an alternative the member of staff responsible for each survey location made a subjective assessment at the time of a field visit of the major shopping characteristics of a number of the streets in a location as well as obtaining information on major pedestrian flows, pavement widths, pedestrian crossing facilities and road traffic characteristics. Shopping characteristics were coded as follows:

Coding	Type of Shop
Convenience	Food stores such as Supermarkets, Bakers, Butchers, Greengrocers, and other daily needs
Comparison	Clothes, household goods, furniture
Durables	Departmental Stores, Variety Stores, Retail Warehouses
Services	Restaurants, Pubs, Newsagents
Market	Open-Air Market held on street
Shopping Centre	Providing access to a shopping centre, or enclosed market, or shopping centre front onto street

4.5.7   In the final selection of streets shopping streets comprising a combination of these characteristics were used as elements within the reportory grid. A list of the main interview street and the two other streets (except Hazel Grove) for each site is shown in Table 4.

4.6   Sample Frame of Street Types

4.6.1   Maps and a summary table of the three streets for each location showing details of the position of parking facilities, bus stops, major supermarkets and pedestrian crossing facilities are included in Appendix 1.

4.6.2   The final sample frame provided a list of 15 interview streets and 28 comparison streets representing a range of traffic and pedestrian characteristics (Table 5).

Table 4

Survey Streets and Video Locations

Site	Video/ Interview Street	Video Location	Comparison Street 1	Comparison Street 2
Chesterfield	Knifesmith- gate	Victoria Centre	Low Pavements	Cavendish Street
Sheffield	Haymarket	Yorkshire Water	Hole in the Road	Fargate
Lanark	High Street	Semi-Chem Toiletries	Welgate	Bannatyne Street
Hebden Bridge	Market Street	Tourist Information	Crown Street	New Road
Kilmarnock	King St/ Titchfield Street	Wesleyan & General Assurance Society	Titchfield Street	King St
Aberdeen	Union Street	Grosvenor Hotel	Market Street	George Street
Lewisham	High Street	Lewisham Shopping Centre	Lee High Road	Loampit Vale
Epsom	High Street (Market Place)	Spread Eagle Pub	Middle High Street	Upper High Street
Winchester	St Georges Street	Lane, Fox & Partners Estate Agents	High Street	Jewry Street
Guildford	Lower North Street	Furniture Store	Upper North Street	High Street
Twickenham	York Road	Wine Bar/ Halifax B.S.	King Street	Church Stree
Bristol	The Horsefair	Athena	Broadmead	Union Street
Manchester	Cross Street	Royal Exchange	Deansgate	Market Street
Coventry	Coronation Street	Coventry Evening Telegraph	Lower Precinct	Trinity Street (Top)
Hazel Grove	London Road	Powder Box		

Table 5

Characteristics of Interview and Comparison Streets

Streets Represented by Factor	:	Interview Streets	Comparison Streets
Pavement width < 2m	:	3	8
2m – 4m	:	4	7
> 4m	:	8	13
	:		
Road width < 20m	:	9	16
> 20m	:	6	12
	:		
Road Types 2 LC	:	6	8
1 WC	:	4	6
UC 4	:	3	5
DC 4	:	2	1
P*	:	3	8
	:		
Pedestrianisation Buses and Ser-	:		
Characteristics vice Vehicles	:		
Only	:	3	1
Service	:		
Vehicles	:	0	7
Only	:		
	:		
Pedestrian Crossing**	:		
Uncontrolled	:	3	1
Controlled	:	8	8
Refuge	:	1	3
Pedestrian	:		
Footbridge	:	0	1
None	:	3	19

2LC = two lane carriageway
1WS = one way street
UC4 = undivided carriageway - four lanes
DC4 = divided carriageway - four lanes
P   = pedestrianised (restrictions upon bus, goods or other vehicles)
*   note: pedestrianised streets also included under other headings
**   note: comparison streets may have more than one pedestrian crossing

5. SAMPLING STRATEGY FOR PEDESTRIAN INTERVIEWS

5.1 Basic Considerations

5.1.1 At each of the 15 locations, it was proposed to conduct on-street interviews over a three day period with a controlled sample to represent different traffic and pedestrian crowding levels, different types of pedestrian (young, elderly, encumbered) and different trip purposes. The research brief originally suggested 500 interviews although this was later revised to 450.

5.1.2 Ideally the sample of pedestrians interviewed should have reflected the proportion of pedestrians of different types using the street on any one day. Since this information was unknown in advance and the literature provided little practical guidance on the classification of pedestrians using different streets at different times of the day it was proposed to conduct a random sample. The method chosen was to interview the third person to cross an imaginary line drawn across the pavement after the completion of the preceding interview. If the person refused to respond their personal characteristics (age, sex) and time of refusal were recorded and then the next third person selected. This method was considered likely to produce a sufficiently random sample.

5.1.3 Initially it had been proposed to operate interviewing on a split shift basis with teams of three working between 0900-1400 and 1200-1700 respectively allowing a short efficient work day and to provide an overlap in the midday period when pedestrian numbers were likely to be at their highest. The system would also have meant that problems in obtaining interviews at sites with low pedestrian flows during the early morning and late-afternoon period would have been minimised. In response to the problems of staff recruitment which arose partly from the delay in the start date, however, the consultancy organising the survey staff preferred a five person survey team working 0900-1700.

5.2 Sample Representativeness

5.2.1 A comparison of the sample population interviewed against the total population passing the interviewer during a given time period is important in terms of the reliability and identifying possible source of bias in the results. The age and sex of each pedestrian interviewed was recorded. Manual street counts (4 x 20 minutes) of two way pedestrian flow along each pavement in the interview street, classified by age and sex were undertaken.

5.2.2 A total two way flow count for each pavement from the video recording was also produced to indicate the accuracy, firstly of the manual counts and secondly, of using short period counts to estimate flows throughout the day. This information enabled the short period classified counts to be grossed up to provide an estimate of the number of pedestrians by age and sex who used a section of the interview street during a given time period. This was then compared to the number of pedestrians by age and sex who also had been interviewed during that same time

period.   A more detailed discussion of the video data collection can be found in Turvey et at (1987).

5.3   Training, Recruitment and Organisation of Staff

5.3.1   The organisation of survey staff was based on the requirement of 450 interviews over a three day period, as well as three 20-minute classification counts during the day. A timetable for each staff member per day for each location was drawn up. This timetable was based on a survey team comprising five staff members including a supervisor who would be responsible for interviews and classified counts over the three day period in the main interview street.   On the first two days at each location a research staff member from ITS was involved in maintaining video equipment, undertaking counts in other streets, providing interview materials and on-street interviews.

5.3.2   The timetable of events shown in Table 6 was based on the requirement to begin a count at 0840 and to obtain pedestrian interview data throughout the day up to the afternoon peak (1700). A breakdown of the time survey hours required for the interviews and manual counts is shown below.

```
Total interviews required
     per location               =  450
Time estimated for
     interview                  =  13 mins
Total person hours
     required for interview     =  450 x 13 = 97.5 hrs
                                      60

Total hours required for
     3 x 20 min classified
     counts per day             =  9 hours
Manual counts in
     comparison streets
     on third day               =  1 hour
Total survey hours
     required                   =  107.5
Survey hours per staff
     member (minus breaks)      =  20 hours
Five staff members             =  20 x 5
                                =  100 hours provided

Remaining 7.5 survey
     hours provided by ITS
     staff member
(Interviews, manual counts
 in comparison streets)
```

5.3.3   Clearly this timetable and projected number of interviews was dependent upon full staff availability and ability to maintain a rate of one interview every 13 minutes throughout the three days.   It was recognised that poor weather or staff becoming ill would result in less than 450 interviews per site. As far as possible survey locations were selected which provided at least partial cover for interviews.

5.3.4   For each site a pack of information containing a specimen example of the questionnaire, notes explaining the purpose of the

interview and details about each of the questions, refusal sheets, maps of the survey locations and manual count forms were produced for each interviewer (Appendix 3). These were sent to the supervisor prior to the field work.

5.3.5   In the event supervisors and staff were trained by ITS staff members in a variety of ways and at different times prior to the interview.   These included either training and instruction, with supervisor and interviewers on a face to face basis a few days before the field work, or on the morning of the first day of the field work.   Prior to conducting any on-street interviews   each   interviewer had a dry run   through   the questionnaire to ensure they understood the questions and were framing the repertory grid questions in the specified way.   When the training of survey staff took place on the morning of the first day's fieldwork this reduced the time available for interview.   In certain locations this reduced the time available for interviews by up to 4 person hours. Across all locations it was estimated that 35 hours were lost in the training of staff members.

Table 6

Timetable of Activities for Survey Staff at Each Location

Time	Survey Staff (2) 1	2	3	4	Supervisor(1)	ITS Staff member (3)
0800						
		PC2				
0840	PC1		CC	I	I	V
0900	I	I	I	I	I	I
	I	I	I	I	I	CS
	I	I	I	I	I	CS
1000	PC1	PC2	CC	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
1100	I	I	I	I	I	I
	I	I	I	I	I	V
	I	I	I	I	I	I
1200	PC1	PC2	CC	I	I	I
	I	I	I	I	I	CS
	I	I	I	I	I	CS
1300	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
1400	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
1500	PC1	PC2	CC	I	I	CS
	I	I	I	I	I	CS
	I	I	I	I	I	I
1600	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	V
1700						

Notes:
(1) Supervisor responsible for timetabling staff breaks (80 mins/person) to ensure 2 persons interviewing at all times
(2) Same staff responsible for counts at all times
(3) On day 3 supervisor undertakes counts previously taken by ITS staff member

PC 1   Pedestrian flow count on one pavement

PC 2   Pedestrian flow count on second pavement

I   Interview periods

CC   Pedestrian crossing count at crossing or across specified street length

CS   Comparison street counts

V   Video setting of and changes

6. INTERVIEW RETURNS

6.1   The on-street counts and video recording were completed to schedule.   In five of the locations the required number of interviews (450) were obtained, and at two further sites over 400 interviews were completed within the survey programme.   In the remaining locations there was a shortfall which was rectified by further surveys in the spring of 1987.   The returns for each site and the reasons attributed for any shortfalls in the main survey period are summarised in Table 7.   The major reasons for the shortfall in interviews at eleven sites were due to:

(1)   staff availability
(2)   staff performance
(3)   technical problems
(4)   weather

6.2   The shortfall in the number of survey person hours for each location ranged from six in Chesterfield to 30 in Epsom.   Across all locations 168 fewer survey hours were supplied than had originally been timetabled.   These shortfalls arose from survey staff being absent, arriving late or leaving early.   Such problems typically resulted from illness, looking after children, and transport difficulties.

6.3   The survey staff employed were generally of a high calibre. Difficulties arose in several locations however where individuals were inexperienced in on-street interviews or were affected by the weather.   Unfortunately this problem tended to occur at locations where there were also staff absences.   The sites worst affected by these factors were Lanark, Epsom, Bristol and Lewisham.   An estimated 39 hours were effectively lost across all locations.

6.4   Technical difficulties during the first day of the Epsom surveys resulted from the video camera failing.   This could not be immediately repaired and a camera was therefore hired for the remaining surveys in the Southern locations.   This camera was battery operated and required battery changes hourly.   Over the two day survey at each location an extra 6 hours were lost giving a total of 24 hours over all sites.

6.5   The weather for the majority of survey work in October and November was dry but cold.   At a number of locations however interview time was lost due to weather conditions where protection from rain or sleet was unavailable.   Such conditions also affected the number of pedestrians using a given street. The effect of this on the number of interviews achieved is again difficult to quantify but clearly affected returns in Lanark, Hebden Bridge, Winchester and Twickenham.   A total of 45 hours of interview time were directly lost due to the weather.

6.6   Over all sites a total of 319 interview hours were lost due to factors which could be directly quantified.   This represented 1471 interviews.   Due to difficulties caused by adverse weather conditions and the timing of the surveys it was agreed with the client that 300 interviews at each site would be sufficient. Accordingly at several sites further on-street interviews to achieve this total were necessary.   These repeat surveys were

carried out during February and March of 1987. The number of interviews completed in total at each site is given in Table 7.

Table 7

Interviews Completed and Shortfall By Location

Site	Completed Returns (Main survey)	Interview hours lost by cause:					Completed Returns (Spring survey)	Final Total (Inter-views)
		Staff Avail-able	Staff Train-ing	Staff Perform-ance	Tech. Diffi-culties	Weather		
Chesterfield	441	6	2	Nil	Nil	Nil	—	441
Sheffield	470	Nil	Nil	Nil	Nil	Nil	—	470
Lanark	270	7	5	3	Nil	10	34	304
Hebden Bridge	279	19	Nil	5	Nil	8	113	392
Kilmarnock	297	14	Nil	Nil	Nil	Nil	—	297
Aberdeen	444	Nil	5	Nil	Nil	Nil	—	444
Lewisham	204	13	7	8	Nil	5	150	354
Epsom	166	30	5	6	6	Nil	201	367
Winchester	314	24	Nil	6	6	Nil	—	314
Guildford	226	Nil	6	6	Nil	8	215	441
Twickenham	184	25	Nil	5	6	8	118	302
Bristol	244	7	Nil	6	6	Nil	120	364
Manchester	450	Nil	Nil	Nil	Nil	Nil	—	450
Coventry	408	23	5	Nil	Nil	6	—	408
Hazel Grove	452	Nil	Nil	Nil	Nil	Nil	—	452
		168	35	47	24	45		

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ITS
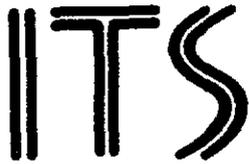
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ADM/jd

Director and Professor of Transport Economics: K. M. Gwilliam
Professor of Transport Engineering: A. D. May

17th October, 1986

TO WHOM IT MAY CONCERN

The holder is involved in a survey of conditions for pedestrians
in town centres, which is being conducted by the Institute for
Transport Studies under contract to the Transport and Road
Research Laboratory.   I should be grateful for any assistance
which he or she can be given.

A.D. May

NOTES FOR INTERVIEWERS

SUPPLIED

> INTERVIEW FORMS
> COUNT FORMS
> SHOW CARDS (5)
> MAP
> REFUSAL FORM

THE QUESTIONNAIRE

The questionnaire has been designed to be completed in 10 minutes. The more familiar you are with the questionnaire the easier it will be to go through the questionnaire quickly and smoothly.

The most important section of the questionnaire is (Q19) which requires great care and attention on the part of the interviewer. The success of the interview depends on this question being completed properly.

The following notes are for your attention and are based on extensive pilot surveys. Please read these carefully. Any queries should be raised immediately with either the survey supervisor or the member of the ITS staff who will be at the site on the first day of the surveys.

QUESTIONS TO BE COMPLETED BY INTERVIEWER

(Q1)   WHAT IS YOUR MAIN REASON FOR BEING HERE?

TO BE ASKED OF ALL RESPONDENTS.

Only one reason is required.
Circle appropriate response on the questionnaire.

The question refers to the reason for the person being in the street at the time of the interview.

CLASSIFICATION

SHOPPING: if the person has come to the street to shop and is in the Centre for shopping.

SHOPPING FROM WORK: a person who is shopping during a break from work, or is shopping after leaving work.

SHOPPING TO WORK: a person who is shopping on the way to work.

TO WORK: a person on the way to work.

1

LEAVING WORK: a person leaving work of any description to go home.

PART OF WORK: a trip that is being made as part of work.

PERSONAL
BUSINESS: a journey that is to do with someone's personal business.

TO SCHOOL/COLLEGE: a person who is on their way to attend, school, college, university.

FROM SCHOOL/
COLLEGE: a person who is returning from attending school, college, university .

CHILD TO SCHOOL/
COLLEGE: a person who is taking a child to or from school, or is going to pick up a child from school.

MEETING FRIENDS: a person who is meeting friends in the street or is on their way to meet friends.

LEISURE: a person who is walking along the street for pleasure such as window shopping.

DAY VISITOR   a person who is visiting the town as a tourist or a visitor.

OTHER: It is important that we specify any other visitors for classification purposes. These may include people who are just walking around, passing through, catching a bus. Do not accept activities which are not taking place in the street.

(Q2)   WHEREABOUTS DO YOU LIVE?

        TO BE ASKED OF ALL RESPONDENTS.

        Write in the response.
        If the person lives in the town or city ask for the postcode if they know it. If not the name of the area will be adequate. When the person is from outside the Centre ask for the town or village where they live and any indication of where that is e.g. Wetherby between Leeds and York.

(Q3)   FOR ABOUT HOW MANY YEARS HAVE YOU BEEN COMING HERE?

        TO BE ASKED OF ALL RESPONDENTS.

        Write in the response.
        About X years will be sufficient for this question. If the figure is less than one year, obtain number of months. If the person is visiting for the first time then go to (Q12).

2

(Q4) HOW DID YOU TRAVEL HERE TODAY

TO BE ASKED OF ALL RESPONDENTS.

Place a line through the appropriate box.
The question refers to how they travelled from their overnight accommodation or home to the town on that day, e.g. if they live close to the Centre they may have walked.

(Q5) WHERE DID YOU BEGIN THIS CURRENT WALK JOURNEY

TO BE ASKED OF ALL RESPONDENTS.

Write in the response.
The question refers to the journey which the respondent is on at the time of the interview. The origin may be a home address, a work place, the bus or rail station or a car park or a street where they were dropped-off. If the person refers to a major rest at a restaurant, a library or a clinic this will be taken as the origin of that journey. This period of rest i.e. sitting down must be more than 1/2 hour.

If the respondent does not know the street name then ask for details such as a land mark or a major shop.

(Q6) HOW MUCH TIME ALTOGETHER WILL YOU EXPECT TO HAVE SPENT WALKING ON THIS JOURNEY

TO BE ASKED OF ALL RESPONDENTS.

Write in response.
Obtain time in hours or if less than one hour, in minutes.

(Q7) HOW MANY DAYS IN THE PAST 2 WEEKS HAVE YOU VISITED HERE?

TO BE ASKED OF ALL RESPONDENTS.

This question refers to the number of days, and not the number of times a person has been to this street. For example if they have walked along the street to work every day then this would count as 10 days.
Place a line through the appropriate box.

(Q8) HAVE ANY OF THESE DAYS BEEN A SATURDAY?

When the interview day is a weekday we need to know if the person visited the street on a Saturday during the past 2 weeks.
Place a line through the appropriate box.

(Q9) IS THIS MORE/LESS THAN USUAL?

TO BE ASKED OF ALL RESPONDENTS. Refers to (Q7).

This question is to find out whether the previous two weeks are typical for that person. By typical we mean throughout the year. People might be coming more often or less often because of Christmas shopping season. By more or less often we mean a change of more than 1 day in any week. So if a person in the past fortnight has been to the street on 8 days, but usually only visits about 2 days a week, this would be classified as more often.
Place a line through the appropriate box.

(Q10) IF MORE OR LESS OFTEN: WHY IS THIS?

Place line through the appropriate box.
If the reply to (Q9) is more/less often we need to know why this is. The person may give a reason in answering (Q9); otherwise ask. Do not prompt on this.

(Q11) AT WHAT TIME OF DAY DO YOU MOST OFTEN WALK ALONG HERE?

TO BE ASKED OF ALL RESPONDENTS.

Place a line through appropriate box.
Here we want to know at what time they most often walk along the street when they visit it?

4

(Q12) WHAT DO YOU THINK COULD BE DONE TO IMPROVE CONDITIONS FOR PEDESTRIANS

TO BE ASKED OF ALL RESPONDENTS.

Circle appropriate box.
Do not prompt.
Respondents are allowed here to give up to 3 answers. Circle the appropriate numbers. Write in any other answers, or those which do not match the description given.

CLASSIFICATION

SAFETY RAILING: (IN)	refers to the need to provide safety railings on kerb-side to separate pedestrians and traffic.
EXTRA-CROSSINGS:	refers to the need to provide pelican crossings or zebra crossings where the interview is taking place.
REDUCE OBSTRUCTIONS:	refers to street furniture such as flower beds bollards, noticeboards, sign posts and so on.
MORE SEATS:	refers to outdoor seats for pedestrians.
IMPROVE SIGNS:	refers to signs telling pedestrians general directions to such things as toilets, bus stations and specific ammenities.
LITTER:	refers to there being litter in the street.
SAFETY RAILINGS: (OUT)	refers to the removal of safety railings along the street.
REDUCE TRAFFIC SPEED:	refers to the speed of traffic either buses, cars or lorries.
IMPROVE PAVEMENTS:	refers to the width of pavements, or the surface quality of the pavements.
TOILETS:	refers to the provision of toilet facilities near the street.
RESTRICT TRAFFIC:	refers to the restriction or reduction of traffic either totally or partially in the street.
BAN PARKED VEHICLES:	refers to the banning of parked cars or lorries on the street or on the pavement.
OTHERS:	refers to any factor not included above. Please also indicate more specific details mentioned. e.g. ....

(Q13) <u>NOW I'D LIKE TO ASK YOU TO PICK A NUMBER FROM THIS SCALE</u>

<u>TO BE ASKED OF ALL RESPONDENTS.</u>

This question involves <u>Show Card A</u>. Some of these cards are listed in a reverse order to those shown on the interview forms. Take care when you mark the reply in the box.

The question refers to the pedestrians <u>general</u> feelings about the street as a place for pedestrians. When you hand the card you will say:

"The scale is from 'Very Good/Very Bad (depending which is on the top) to 'Very Bad or Very Good'. The numbers 1 to 7 refer to these positions on the scale (indicate with pen).

Then ask them to pick a number which describes how they feel usually when they visit this street. The emphasis is on <u>generally</u> and not any one visit.

(Q14/) HAVE YOU WALKED ALONG _____ WITHIN?
Q15)

<u>TO BE ASKED OF ALL RESPONDENTS</u>

The street names you will need to refer to are shown on the maps. You should read out the list of Classification until the correct one is reached. If the answer to either (Q14) or (Q15) is never then go (Q16(1)).

(Q16) <u>NOW I'LL GIVE YOU A LIST OF THINGS THAT ARE FEATURES IN</u>
<u>ANY STREET LIKE THE SHOPS AND THE SAFETY FOR PEDESTRIANS</u>

(i) Location A refers to the street where the interview is taking place. If the reply to Q 14 or 15 is NEVER then Q 19 should be for location A only.

(ii) Where the respondent has given a response (1-4) in Q 14 and Q 15 then Q 19 should be for location A, B, C.

When the question refers to provision of seating show the person the scale on the questionnaire form. At this point give the <u>Card 1</u> to the respondent.

(Q17) <u>NOW WOULD YOU PICK A NUMBER FROM THIS FIRST SCALE</u>

(i) The first Card shows 3 scales. The respondent is asked to pick a number from these 3 scales for the street where the interview is taking place. In every cae a 7 on the scale relates to a strongly negative attitude to the description. If the respondent has difficulty reading the card then read out the scale dimensions. You can add

at the beginning of each scale "do you find ..."

The respondent is asked to consider the 3 scales for the two remaining streets in these questions. The respondent is asked to pick a number which describes how he feels about the street at the times he/she has walked along it?

CLASSIFICATION

SHOPS AND
BUILDINGS: refers to any built shops and buildings.

Where there are half built buildings in any street and these are mentioned by the pedestrian they should be asked to consider the street when the building will be completed.

PAVEMENTS AND
PEDESTRIANS: refers to the effects of crowds or business of pavements and any difficulties encountered therein.

TRAFFIC NOISE: refers to traffic noise only. This should be made clear. Refers to all types of traffic noise. Short term noises such as pneumatic drills are not truly representative and if raised as a point the respondent should be asked to ignore it as far as possible.

PAVEMENTS: refers to the quality of the paving surface including broken slabs and uneven surfaces created by service industries. These do not refer to dust and dirt, ice and snow or temporary problems.

SAFETY: refers to how safe a person feels when crossing road. In the street where the interview takes place this refers to the point where the interview is taking place and not at any other point in the street. In location A, B and C this refers to safety generally.

TRAFFIC FUMES: refers to the smell of fumes or problems of soiled clothing.

PARKED VEHICLES: refers to vehicles parked either in the road, or on the pavement or else service vehicles unloading. Cars entering car parks are not included in this category.

ROAD CROSSING: refers to crossing the road within 15 yards of the point where the interview takes place. Note, a road may be eaasy to cross but unsafe at times.

SHOPS: refers to the shops in the street within sight
                            of the interview point.

SAFETY FROM   refers to how safe or secure people feel from
TRAFFIC: traffic when they are walking along the
                            pavement.

AMOUNT OF   refers to whether the respondent feels the
TRAFFIC   amount of traffic in the street generally is
                            too much or about the right amount.

LIKE THE STREET: refers to whether overall the person actually
                            likes the street either to visit or to walk
                            along.

For any of the scales where the respondent indicates there is no
negative or positive feeling about the scale then this will be
classed as a 4. Enter all the scores in the boxes provided.

If when you are using the show cards the person begins to get
impatient ask them if they would like to continue with the
interview. Stress that all the questions need to be answered if
the questionnaire is to be valid.

If the person is in a hurry then obtain rating for each of the
scales for Location A only.

(Q18) Finally ask the pedestrians, of the 3 streets which they
       consider to be best overall for them as a pedestrian.
       Best means whatever the person wants it to mean. It might
       mean preferred to visit, where they feel most relaxed or
       most interested. If should however be their evaluation as
       a pedestrian.

CLASSIFICATION DATA

NOTE FOR EACH COMPLETED INTERVIEW

1.   **AGE**

     <u>Place a line through the appropriate box</u>

     The estimated age of the repondent. Where there is doubt which age group they might be included in, place in highest category.

2.   **WALKING SITUATION**

     <u>Place line through appropritate box</u>

     Where the respondent falls under more than one category mark with a stroke each category which that person falls under up to 2 categories.

3.   **WALKING ABILITY**

     Note whether respondent has any difficulties in walking or mentions any difficulties that are not immediately visible such as a heart condition.

4.   **INITIALS**

     Print your initials on the line.

5.   **SAMPLING**

     The sampling of respondents for this survey should be fully representative of all the types of person who use the street. The best way to achieve this is as follows.

     Once you have completed one questionnaire form and you are ready for your next interview, fix an imaginaray line across the pavement and take the THIRD person to cross as your respondent. If the person refuses, go through the same procedure again.

     If everybody follows this method of sampling both the majority and the minority groups will be proportionally represented without interviewers having to select certain types. The refusal rate may thereby be increased, but we are quite willing to accept this for the sake of strict sampling. By using the data which you observe about the people who refuse to respond (see below), we shall be able to adjust the results of the survey accordingly. If interviewers simply do not approach those people whom they think will be unco-operative, then we shall lack the required information.

     In the past, interviewers have told us that by keeping

themselves out of the way pressed against shop windows, they have tended to miss those people who are walking along without stopping at the edge of the pavement. The way to avoid this is for interviewers to move from side to side of the pavement, say 3 interviews by the window and 3 interviews at the pavement edge.

6.   REFUSALS

Each day you will be given a refusal sheet. Anyone who refuses the interview should have their age and sex entered. All refusals within any one hour should be noted in the appropriate area on the form.

PEDAM (15)
17.10.86

NOTES FOR MANUAL COUNTS

VIDEO STREET (LOCATION A)

Two types of count are required in the video/interview street

(A) PAVEMENT FLOW COUNTS

To take place on one pavement only with one person counting each direction along the pavement and classifying pedestrians by age and sex. (Total 2 people)

(B) CROSSING COUNTS

To take place on a pedestrian crossing or along a length of road one person counts each directional flow classified by age and sex. (Total 2 people)

These counts will take place on each survey day at:

              0840 hrs,
              1000 hrs,
              1200 hrs,
        and   1500 hrs.

Each pedestrian which passes the specified count point in the appropriate direction should be recorded on the form supplied by placing a '1' in the appropriate box. In this way the numbers of persons passing in any 5 minute period will be recorded

e.g.   ~~1111~~ ~~1111~~ 111 = 13

Each of the four required counts on each survey day are to be of 20 minutes duration and counts should be recorded at each of the four 5 minute intervals within this 20 minute time span.

e.g.   0840 - 0845 ⎫
            0845 - 0850 ⎪
                        ⎬ 20 minutes
            0850 - 0855. ⎪
            0855 - 0900 ⎭

For all classified counts:

        Sex is given by   'MALE' and 'FEMALE'
        Age is given by   'UNDER 18 YEARS'
                             '18 - 65 YEARS'
                             'OVER 65 YEARS'

COUNT SHEETS ARE TO BE COLLECTED BY THE SUPERVISOR AND POSTED TO MVA

ADDITIONAL STREETS (Locations B and C)

In addition to the manual counts carried out in the interview street then counts will also be collected in

1

```
Street B  at    0930 - 0940
                1230 - 1240
                1530 - 1540  ... daily

Street C  at    0945 - 0955
                1245 - 1255
                1 45 - 1540  ... daily
```

These counts will last for 10 minutes at each site and will be unclassified.

They will be of the total number of pedestrians passing a specified screen line in both directions in a 10 minute period if the screen line extends across the whole street. (Counts are to be collected in two 5 minute periods) where there are two pavements then a 5 minute count will be carried out on each pavement.

Normally these counts will be carried out by ITS staff. However on the non-video day the survey staff supervisor is to conduct this count.

Data is to be recorded on the additional count form and posted to ITS not MVA.

MANUAL COUNT DATA SHEETS

CENTRE/SURVEY NUMBER : _____

DAY   : _____

RECORD NUMBER   : _____

START TIME : ☐ ☐ ☐ ☐

COUNT TYPE :

    PAVEMENT A FLOW 1   1 ☐   – CLASSIFIED

    PAVEMENT A FLOW 2   2 ☐   – CLASSIFIED

    PAVEMENT A TOTAL FLOW 3 ☐   – CLASSIFIED

    PAVEMENT B FLOW 1   4 ☐   – CLASSIFIED

    PAVEMENT B FLOW 2   5 ☐   – CLASSIFIED

    PAVEMENT B TOTAL FLOW 6 ☐   – CLASSIFIED

    CROSSING FLOW 1   7 ☐   – CLASSIFIED

    CROSSING FLOW 2   8 ☐   – CLASSIFIED

    CROSSING; TOTAL FLOW 9 ☐   – CLASSIFIED

WEATHER : _____

CODING   COLM.

☐ ☐   (1-2)

☐   (3)

☐ ☐ ☐   (4-6)

☐ ☐ ☐ ☐   (7-10)

☐   (11)

☐   (12)

(Return to MVA)

CODING   COLM.

(A) UNDER 18   (B) 18-65   (C) OVER 65

TIME : _____ (5 MINS)

M A L E	TOTAL		TOTAL		TOTAL
F E M A L E	TOTAL		TOTAL		TOTAL

(A) ☐ ☐   (13-1
(B) ☐ ☐ ☐ (15-17
(C) ☐ ☐   (18-19

(A) ☐ ☐   (20-21
(B) ☐ ☐ ☐ (22-24
(C) ☐ ☐   (25-26

TOTAL   ☐ ☐ ☐ (27-29

TIME : _____ (5 MINS)

M A L E	TOTAL		TOTAL		TOTAL
F E M A L E	TOTAL		TOTAL		TOTAL

(A) ☐ ☐   (30-31
(B) ☐ ☐ ☐ (32-34
(C) ☐ ☐   (35-36

(A) ☐ ☐   (37-38
(B) ☐ ☐ ☐ (39-41
(C) ☐ ☐   (42-43

TOTAL   ☐ ☐ ☐ (44-46

TIME : _____ (5 MINS)

M A L E	TOTAL		TOTAL		TOTAL
F E M A L E	TOTAL		TOTAL		TOTAL

(A) ☐ ☐   (47-48
(B) ☐ ☐ ☐ (49-51
(C) ☐ ☐   (52-53

(A) ☐ ☐   (54-55
(B) ☐ ☐ ☐ (56-58
(C) ☐ ☐   (59-60)

TOTAL   ☐ ☐ ☐ (61-63)

TIME : _____ (5 MINS)

M A L E	TOTAL		TOTAL		TOTAL
F E M A L E	TOTAL		TOTAL		TOTAL

(A) ☐ ☐   (64-65
(B) ☐ ☐ ☐ (66-68)
(C) ☐ ☐   (69-70)

(A) ☐ ☐   (71-72)
(B) ☐ ☐ ☐ (73-75)
(C) ☐ ☐   (76-77)

TOTAL   ☐ ☐ ☐ (78-80)

INSTITUTE FOR TRANSPORT STUDIES

PEDESTRIAN AMENITY QUESTIONNAIRE

	CODE	COL	SKIP TO

LOCATION: _____ □□ (1-2)

RECORD NO: _____ □□□ (3-5)

CARD NUMBER: ONE . □ (6)

DATE: __/__/86 □□□□ (7-10)

TIME (24 HOUR): _____ □·□□□ (11-14)

INTRODUCTION
GOOD MORNING/GOOD AFTERNOON. WE ARE CARRYING OUT A SURVEY
OF PEOPLES' VIEWS ABOUT CONDITIONS IN ....
COULD YOU TELL ME .....

1. WHAT IS YOUR MAIN REASON FOR BEING HERE NOW? □□ (15-16)
(ONE REASON ONLY)

SHOPPING	1	PERSONAL BUSINESS	7
SHOPPING/TO WORK	2	TO SCHOOL/COLLEGE	8
SHOPPING/FROM WORK	3	FROM SCHOOL/COLLEGE	9
TO WORK	4	MEETING FRIENDS	10
LEAVING WORK	5	LEISURE	11
PART OF WORK	6	DAY VISITOR	12

OTHER (SPECIFY) ....

2. WHEREABOUTS DO YOU LIVE (PROBE FOR POSTAL CODE, □□ (17-18)

STREET NAME OR TOWN) WRITE IN ....

3. FOR ABOUT HOW MANY YEARS HAVE YOU BEING COMING TO □□ (19-22) IF 1ST
.... (NAME TOWN) VISIT
WRITE IN NUMBER OF YEARS .... (MONTHS ....) □□ GO TO
Q 12

4. HOW DID YOU TRAVEL TO .... (NAME TOWN) TODAY? (23)

CAR DRIVER	1
CAR PASSENGER	2
BUS	3
COACH	4
TRAIN/UNDERGROUND	5
TAXI	6
CYCLE	7
MOTORCYCLE	8
WALKED	9

5. WHERE DID YOU BEGIN THIS CURRENT WALK JOURNEY? □□ (24-25)

(WRITE IN STREET NAME) ....

1

6. HOW MUCH TIME ALTOGETHER WILL YOU EXPECT TO HAVE SPENT
WALKING ON THIS JOURNEY BY THE TIME IT ENDS?

.... HRS   .... MINS

☐ (26-28)
☐☐

7. ABOUT HOW MANY DAYS IN THE PAST TWO WEEKS
HAVE YOU VISITED HERE?

FIRST TIME	1	(29)
1 - 2 DAYS	2	
3 - 5 DAYS	3	
6 - 11 DAYS	4	
EVERY DAY	5	

8. QUESTION ONLY TO BE ASKED ON WEEKDAYS   (30)

WERE ANY OF THOSE DAYS A SATURDAY?   YES   1
NO   2

FROM Q 7

9. IS THIS MORE OR LESS OFTEN THAN USUAL OR   (31)
IS IT FAIRLY TYPICAL?   MORE OFTEN   1
LESS OFTEN   2
FAIRLY TYPICAL   3 ———— Q 11

10. IF MORE OR LESS OFTEN AT Q 9   (32)

WHY HAVE YOU WALKED ALONG HERE   NO REASON   1
MORE/LESS OFTEN THAN USUAL?   CHRISTMAS   2
(DO NOT PROMPT)   BEEN ILL   3
BEEN AWAY   4
HAD PEOPLE STAYING   5
WITHOUT USUAL TRANSPORT   6
NEW SHOPS OPEN   7
TO DO WITH WORK   8
OTHER (SPECIFY) ....
....

11. AT WHAT TIME OF DAY DO YOU MOST   (33)
OFTEN WALK ALONG HERE?   BEFORE 8.29 a.m.   1
8.30 - 9.29 a.m.   2
9.30 - 11.29 a.m.   3
11.30 - 1.59 p.m.   4
2.00 - 3.29 p.m.   5
3.30 - 5.00 p.m.   6
EVENING   7
VARIES   8

12. WHAT DO YOU THINK COULD BE DONE IN THIS STREET HERE TO   ☐☐ (34-39)
IMPROVE CONDITIONS FOR PEDESTRIANS?
(CIRCLE UP TO 3. DO NOT PROMPT)   ☐☐

NOTHING	1	SAFETY RAILINGS (OUT)	8	☐☐
SAFETY RAILINGS (IN)	2	REDUCE TRAFFIC SPEED	9	
EXTRA CROSSINGS	3	IMPROVE PAVEMENTS	10	
REDUCE OBSTRUCTIONS	4	TOILETS	11	
MORE SEATS	5	RESTRICT TRAFFIC	12	
IMPROVE SIGNS	6	BAN PARKED VEHICLES	13	
TIDY LITTER	7	OTHER(S)		

13. NOW I'D LIKE TO ASK YOU TO PICK A NUMBER FROM THIS SCALE (SHOW CARD A) WHICH DESCRIBES HOW YOU FEEL ABOUT CONDITIONS HERE FOR YOU AS A PEDESTRIAN

    (40)

	CODE
VERY BAD	1
BAD	2
FAIRLY BAD	3
NEITHER BAD/GOOD	4
FAIRLY GOOD	5
GOOD	6
VERY GOOD	7

14. HAVE YOU WALKED ALONG ......(B)..............
(NAME STREET OR LANDMARK) WITHIN?

    (41)

	CODE	SKIP TO
LAST WEEK	1	
LAST MONTH	2	
LAST YEAR	3	
EVER	4	
NEVER	5	Q.16 i)

5. HAVE YOU WALKED ALONG ....(C).............
(NAME STREET OR LANDMARK) WITHIN?

    (42)

	CODE	SKIP TO
LAST WEEK	1	
LAST MONTH	2	
LAST YEAR	3	
EVER	4	
NEVER	5	Q.16 i)

6.(i) IF RESPONSE TO EITHER Q 14 OR Q 15 IS NEVER THEN PART (iii) REFERS TO THE STREET WHERE THE INTERVIEW IS TAKING PLACE ONLY. OTHERWISE.....

(ii) I'D NOW LIKE YOU TO THINK ABOUT CONDITIONS FOR PEDESTRIANS IN THIS STREET AND COMPARE THEM TO CONDITIONS ....(B)... ......(NAME STREET) AND ....(C).......(NAME STREET)

(iii) NOW I'LL GIVE YOU A LIST OF THINGS THAT ARE FEATURES IN ANY STREET LIKE THE SHOPS AND THE SAFTEY FOR PEDESTRIANS. I WOULD LIKE YOU TO PICK A NUMBER FROM THESE CARDS (SHOW CARDS) WHICH DESCRIBE HOW YOU FEEL ABOUT THE CONDITIONS AT EACH OF THE THREE SITES. THIS NUMBER SHOULD REFLECT HOW STRONGLY YOU FEEL ABOUT THE PARTICULAR FEATURE IN THOSE STREETS (IF NEVER TO Q 14 OR Q 15 THEN IN PLACE OF 'AT EACH OF THE THREE SITES' READ 'IN THIS STREET'

3

17. NOW WOULD YOU PICK A NUMBER FROM THIS FIRST SCALE WHICH
DESCRIBES HOW YOU FEEL ABOUT THIS FEATURE IN THIS STREET

(i)   CODE IN GRID UNDER FIRST COLUMN (A)

AND WOULD YOU PICK A NUMBER FROM THIS FIRST SCALE WHICH
DESCRIBES HOW YOU FEEL ABOUT THIS FEATURE IN .....(B)......

(ii)   CODE IN GRID UNDER SECOND COLUMN (B)

AND WOULD YOU PICK A NUMBER FROM THIS FIRST SCALE WHICH
DESCRIBES HOW YOU FEEL ABOUT THIS FEATURE IN .....(C)......

(iii)   CODE IN GRID UNDER THIRD COLUMN (C)

(iv)   REPEAT 17 (i), (ii), (iii) FOR TWO OTHER SCALES ON CARD 1

       REPEAT 17 (i), (ii), (iii), (iv) WITH CARDS 2, 3, 4

		A	B	C	
1a	SHOPS AND BUILDINGS ARE UNATTRACTIVE/ SHOPS AND BUILDINGS ARE ATTRACTIVE	☐	☐	☐	(43-45)
1b	PAVEMENTS OVERCROWDED WITH PEDESTRIANS/ ROOM ON PAVEMENTS FOR PEDESTRIANS	☐	☐	☐	(46-48)
1c	THE TRAFFIC IS NOISY/ THE TRAFFIC IS NOT NOISY	☐	☐	☐	(49-51)
2a	PAVEMENTS IN GOOD CONDITION/ PAVEMENTS IN POOR CONDITION	☐	☐	☐	(52-54)
2b	GENERALLY NOT SAFE CROSSING HERE/ GENERALLY SAFE CROSSING HERE	☐	☐	☐	(55-57)
2c	NO PROBLEM WITH TRAFFIC FUMES/ TRAFFIC FUMES VERY BAD	☐	☐	☐	(58-60)
3a	PARKED VEHICLES ARE NO PROBLEM/ PARKED VEHICLES ARE A PROBLEM	☐	☐	☐	(61-63)
3b	CROSSING THE ROAD IS EASY/ CROSSING THE ROAD IS DIFFICULT	☐	☐	☐	(64-66)
3c	SHOPS HERE ARE INTERESTING/ SHOPS HERE ARE UNINTERESTING	☐	☐	☐	(67-69)
4a	I DON'T FEEL SAFE FROM TRAFFIC/ I DO FEEL SAFE FROM TRAFFIC	☐	☐	☐	(70-72)
4b	THERE IS TOO MUCH TRAFFIC/ AMOUNT OF TRAFFIC IS NO PROBLEM	☐	☐	☐	(73-75)
4c	OVERALL I DON'T LIKE THIS STREET/ OVERALL I LIKE THIS STREET	☐	☐	☐	(76-78)

4

LOCATION _____   ☐☐ (1-2)

RECORD NO _____ ☐☐☐ (3-5)

CARD 2   TWO   ☐ (6)

18.   FINALLY OF THE OVERALL LOCATIONS WE HAVE BEEN TALKING
      ABOUT WHICH DO YOU PREFER IN TERMS OF OVERALL QUALITY
      OF CONDITIONS FOR PEDESTRIANS

(i)   WRITE IN ....   ☐ (7)

(ii) AND WHICH NEXT ....   ☐ (8)

(iii) WRITE IN THIRD LOCATION ....   ☐ (9)

CLASSIFICATION DATA

AGE   UNDER 18   ☐1 (10)
                                 18 - 65   ☐2
                                 OVER 65   ☐3

SEX   MALE   ☐1 (11)
                                 FEMALE   ☐2

WALKING SITUATION   WITH CHILD IN PUSHCHAIR   ☐1 (12-13)
                         WITH CHILD WALKING   ☐2
                         WITH MORE THAN ONE CHILD   ☐3
                         WITH SHOPPING   ☐4
                         WITH LUGGAGE   ☐5
                         WITH BICYCLE   ☐6
                         WITH ONE ADULT   ☐7
                         WITH SEVERAL ADULTS   ☐8
                         ALONE   ☐9

WALKING ABILITY   FULLY ABLE   ☐1 (14)
                         WALKING STICK   ☐2
                         WHEELCHAIR   ☐3
                         WALKING DIFFICULTY   ☐4
                         STATED HEALTH PROBLEM ☐5

            OTHER (SPECIFY) ....

INITIALS _____   ☐☐ (15-16)

WEATHER   _____   ☐ (17)

APPENDIX 2 : SITE PLANS AND DESCRIPTIONS

01 Knifesmithgate - Chesterfield
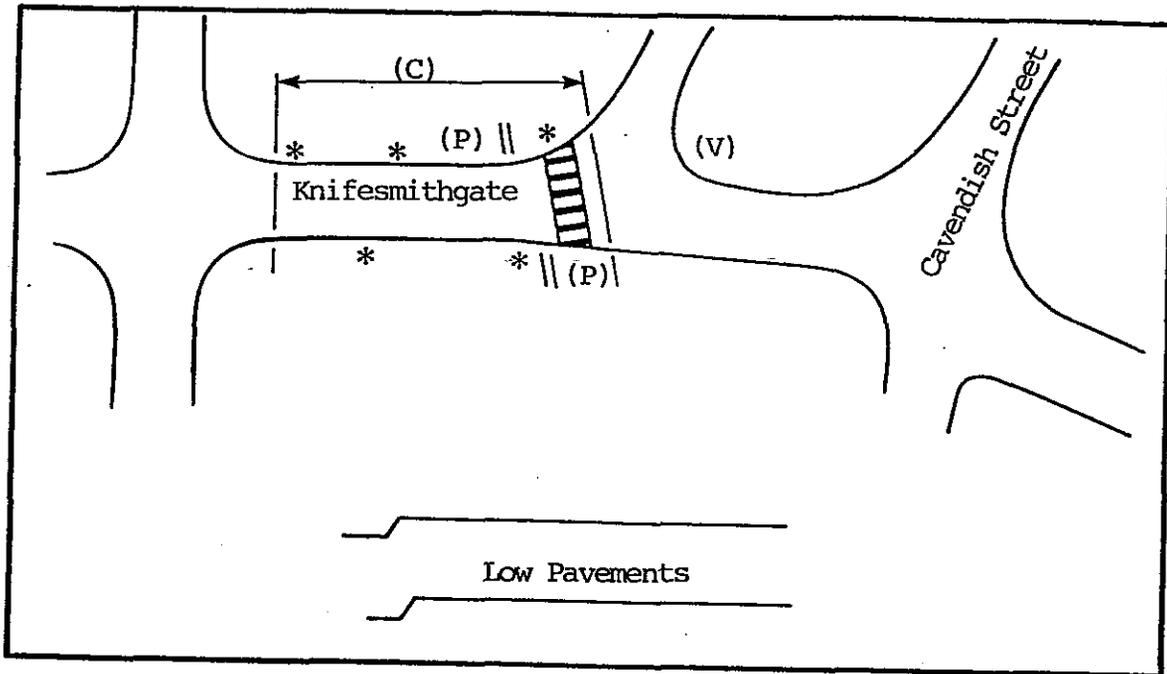
(V) Video Location   Pavement Counts │ │(P)
 *   Interview Staff   Crossing Counts │ │(C)

Road Width   7m   Analysis Pavement B
Pavement Width   3m

Traffic Conditions: Bus Priority
                  Access Only for Other Traffic

Shopping Facilities: 3 Department Stores
                  Various Small Shops

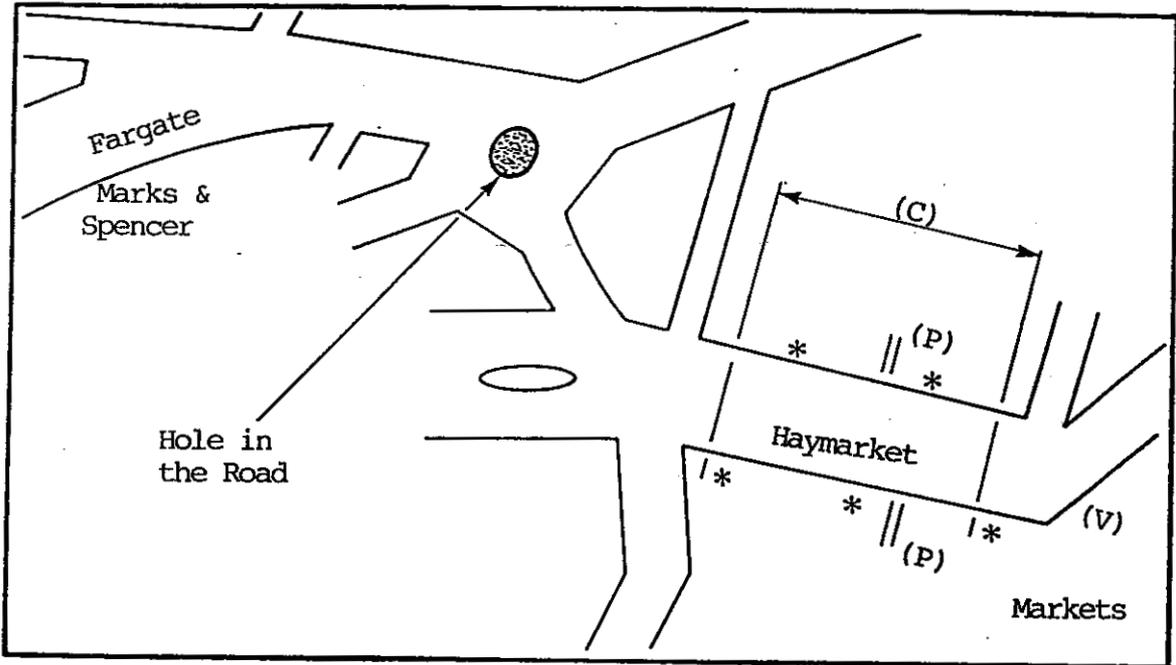Crossing Facilities: Pedestrian Crossing

Comparison Streets: (1) Low Pavements (Pedestrianised)
                  (2) Cavendish Street

Surveys: Video   ✓   )
          On Street Interviews   ✓ 21/10/86) 19, 20/10/86
          Manual Classified Counts ✓ 21/10/86)
          CO, Noise   x
          Household Interviews   x

Comment: 'Small Urban Other'

02 Haymarket - Sheffield

(V) Video Location
*   Interview Staff

Pavement Counts | |(P)
Crossing Counts | |(C)

Road Width   15m
Pavement Width   6m

Traffic Conditions: Bus Priority
                        Other Vehicles Limited Access

Shopping Facilities: Markets
                        1 Department Store
                        Various Other Stores

Crossing Facilities: Pedestrian Bridge
                        Section of Road

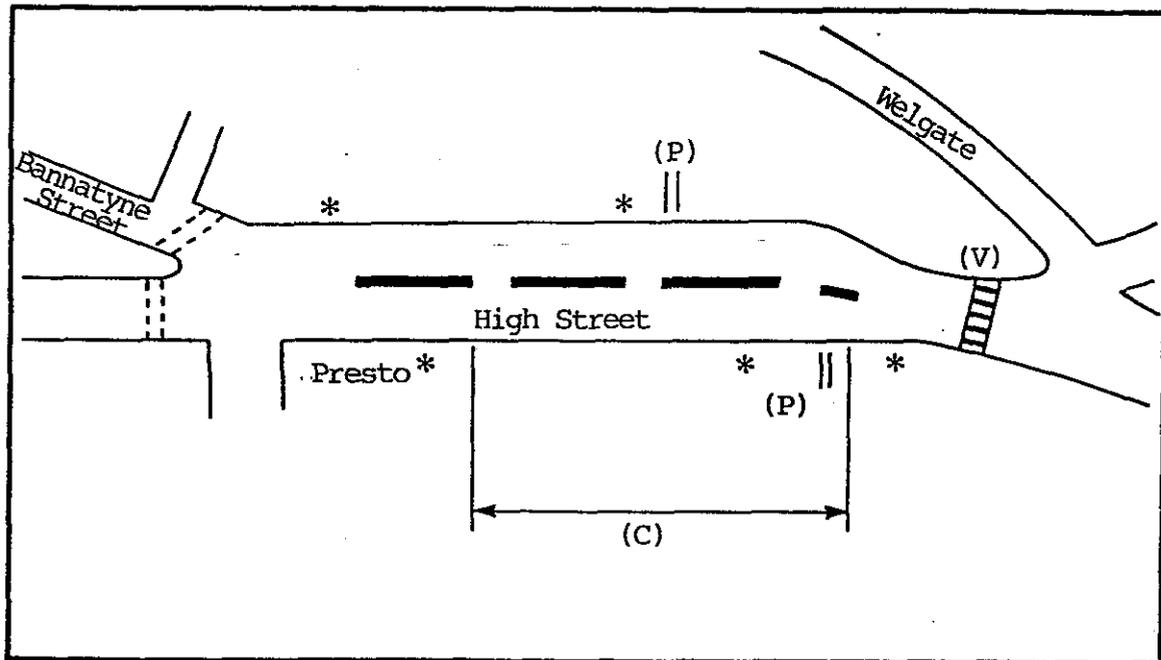Comparison Streets: (1) Fargate
                        (2) Hole in the Road (Pedestrianised)

Surveys: Video   √   )
          On Street Interviews   √ 27/10/86) 24, 25/10/86
          Manual Classified Counts   √ 27/10/86)
          CO, Noise   x
          Household Interviews   x

Comments: 'Large Urban Depressed'

03 High Street – Lanark

(V)   Video Location

*   Interview Staff

Pavement Counts | |(P)
Crossing Counts | |(C)

Road Width   15m
Pavement Width   3m

Traffic Conditions: Dual Carriageway

Shopping Facilities: Various Small Shops
No Department Stores
1 Supermarket
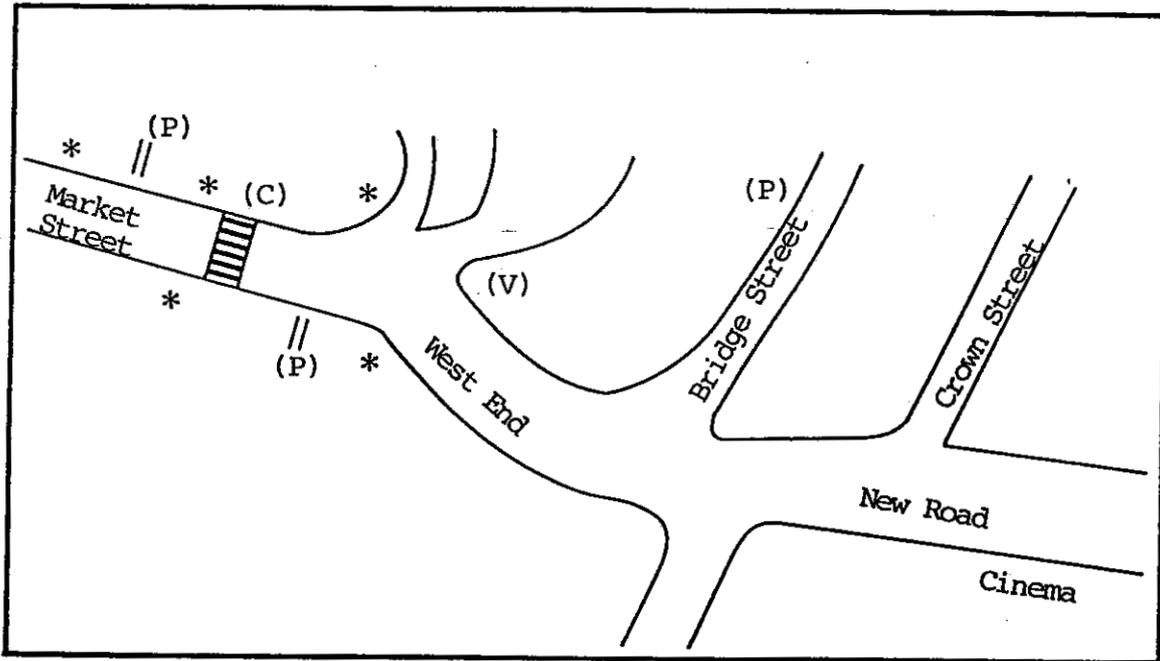
Crossing Facilities: Pelican Crossing
Section of Road

Comparison Streets: (1) Bannatyne Street
(2) Welgate

Surveys: Video   ✓   )
On Street Interviews   ✓ 29/10/86) 27, 28/10/86
Manual Classified Counts   ✓ 29/10/86)
CO, Noise   x
Household Interviews   ✓ From 2/3/87

Comments: 'Small Urban Historic'

04 Market Street – Hebden Bridge

(V) Video Location	Pavement Counts | |(P)
* Interview Staff	Crossing Counts | |(C)

Road Width   9m
Pavement Width 3m

|	
Traffic Conditions:	Two Way No Parking
Shopping Facilities:	Two Way No Parking
Shopping Facilities:	Small Shops (mainly Banks, Tourist, etc) 1 Supermarket
Crossing Facilities:	Pedestrian Crossing
Comparison Streets:	(1) Crown Street (2) New Road

Surveys: Video   ✓   )
          On Street Interviews   ✓ 29/10/86) 30, 31/10/86
          Manual Classified Counts   ✓ 29/10/86)
          CO, Noise   x
          Household Interviews   x

Comments: 'District Centre'

05 King Street - Kilmarnock
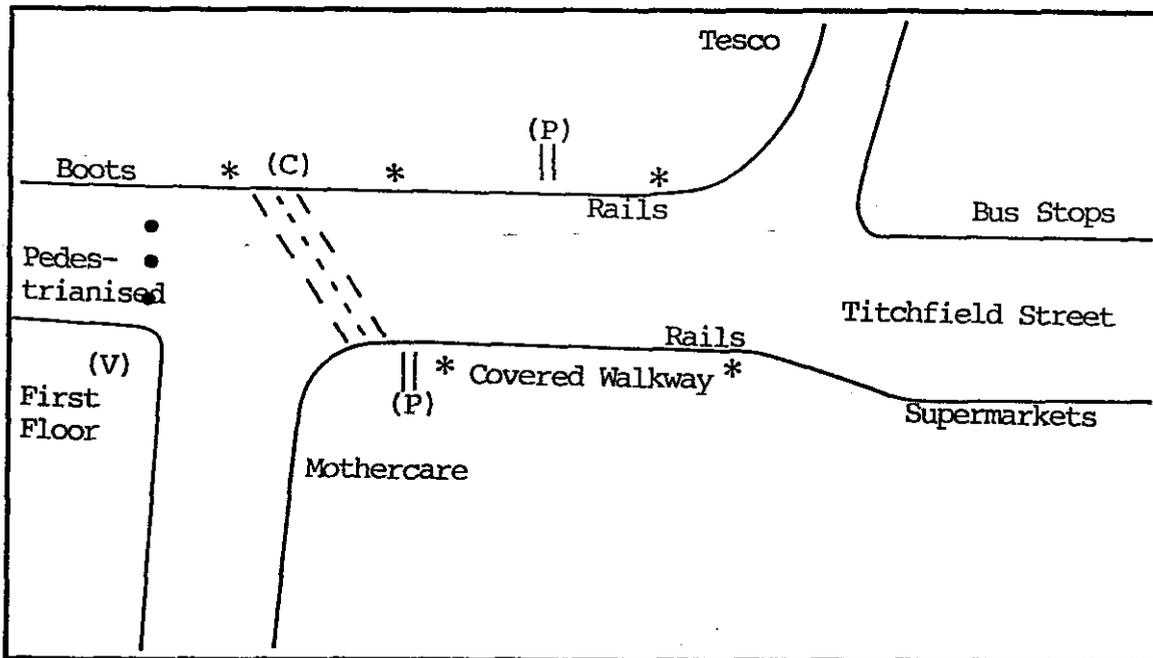
(V) Video Location   Pavement Counts | |(P)
* Interview Staff   Crossing Counts | |(C)

Road Width   11m
Pavement Width   3m

Traffic Conditions: 1 Way King Street to St Marnock Street

Shopping Facilities: New Shopping Facilities
                          Varied

Crossing Facilities: Pelican
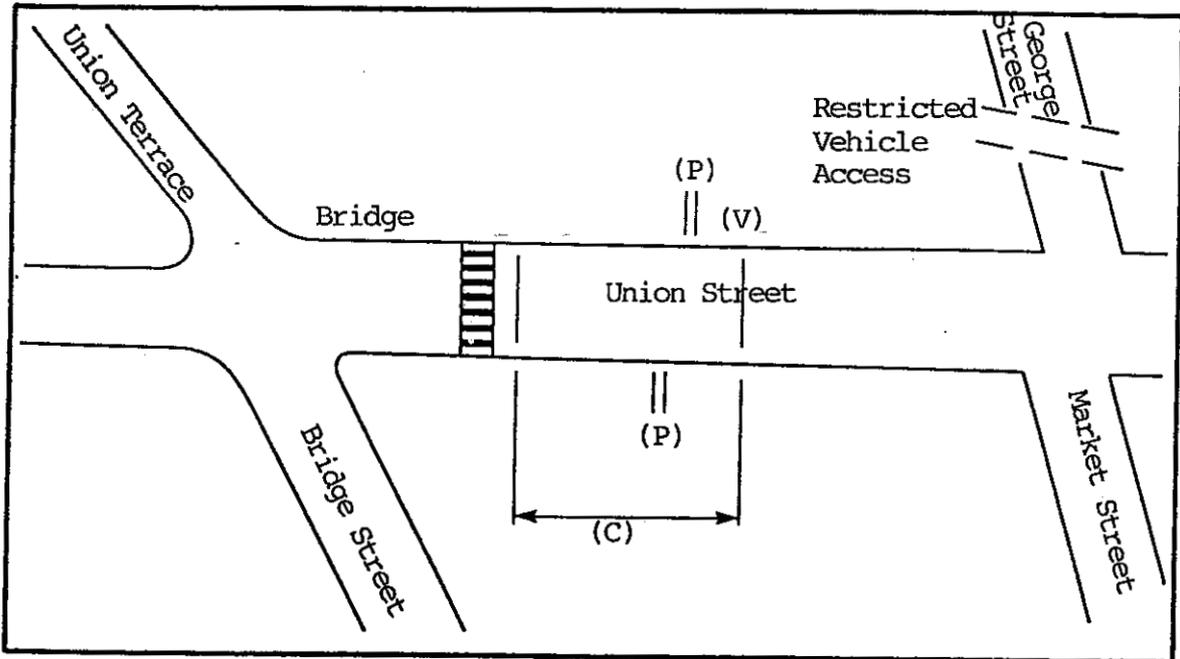
Comparison Streets: (1) King Street (Pedestrianised)
                          (2) Titchfield Street

Surveys: Video   ✓   )
           On Street Interviews   ✓ 1/11/86) 30, 31/10/86
           Manual Classified Counts   ✓ 1/11/86)
           CO, Noise   x
           Household Interviews   x

Comments: 'Small Urban Other'

06   Union Street - Aberdeen

(V)   Video Location   Pavement Counts | | (P)
 *   Interview Staff   Crossing Counts | | (C)

Road Width   15m
Pavement Width   4m

Traffic Conditions: Two Way

Shopping Facilities: Non-Food Department Stores
                            Hotels
                            Various Others

Crossing Facilities: Pelican
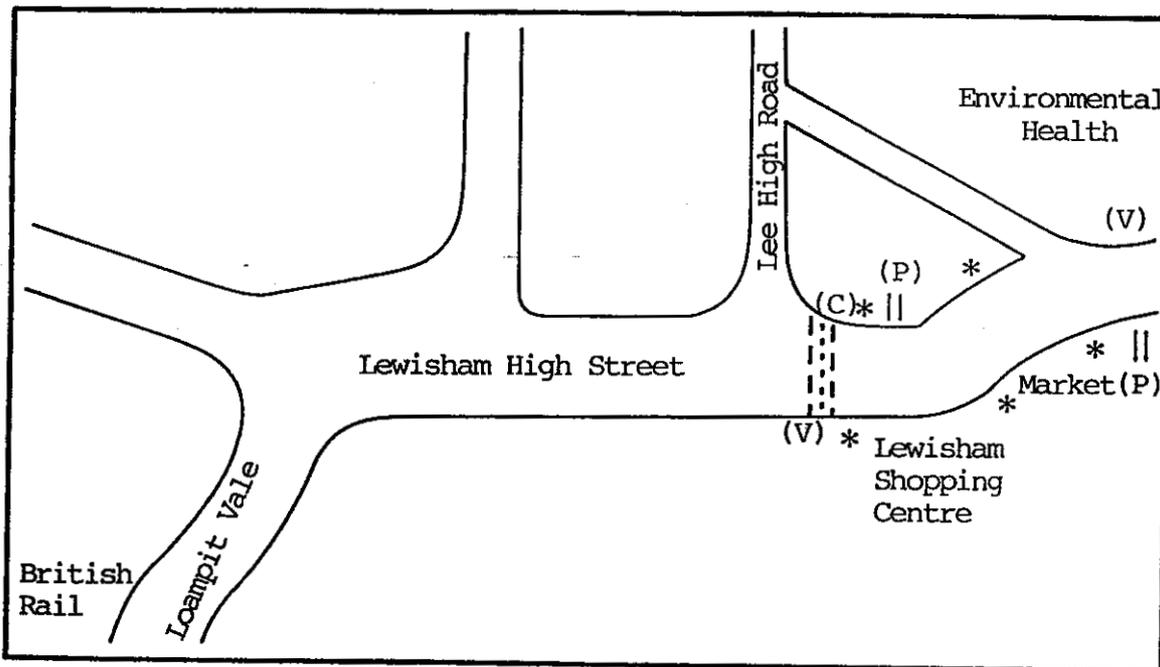   Section of Road

Comparison Streets: (1) Market Street
                            (2) George Street (Pedestrian Priority)

Surveys: Video   ✓   )
         On Street Interviews   ✓ 5/11/86) 1, 3/11/86
         Manual Classified Counts ✓ 5/11/86)
         CO, Noise   x
         Household Interviews   x

Comments: 'Large Urban Active'

07 High Street - Lewisham

(V) Video Location   Pavement Counts | | (P)
 * Interview Staff   Crossing Counts | | (C)

Road Width   15m
Pavement Width   4m

Traffic Conditions: Two Way

Shopping Facilities: Street Market
                              Major Shopping Centre
                              Various Shops

Crossing Facilities: Pelican

Comparison Streets: (1) Loampit Vale
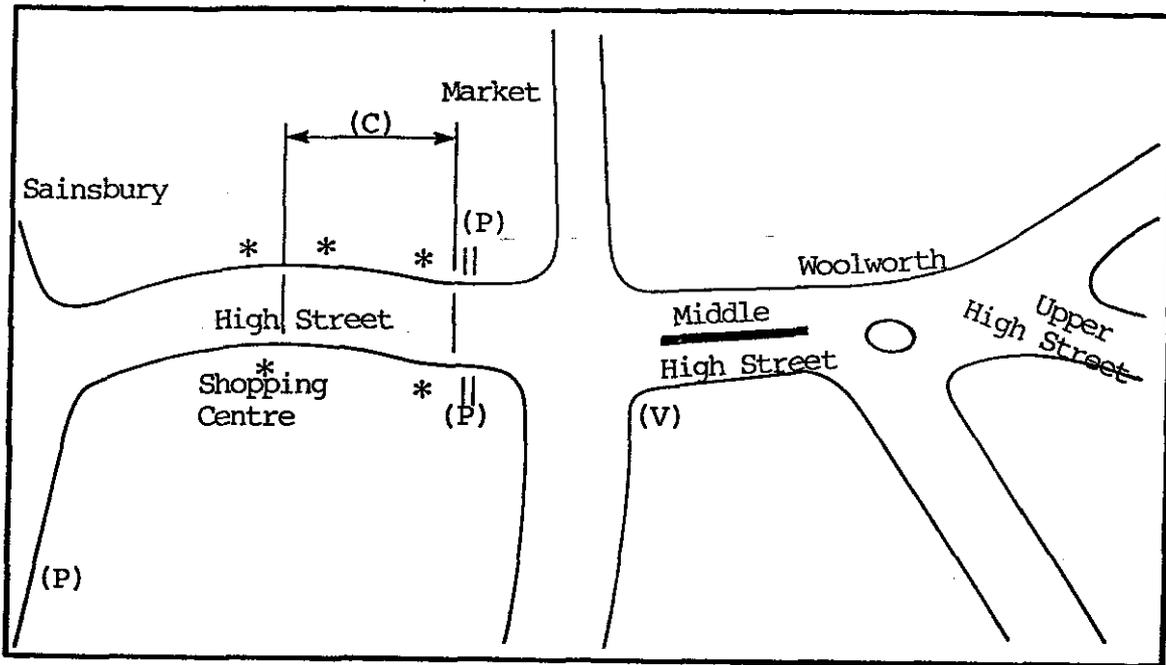   (2) Lee High Road

Surveys: Video   ✓   )
          On Street Interviews   ✓ 8/11/86) 6, 7/11/86 *
          Manual Classified Counts ✓ 8/11/86)
          CO, Noise   x 26, 27/2/87
          Household Interviews   x

          * then 26, 27/2/87

Comments: 'Large Urban Depressed'

08 Market Place - Epsom

(V)   Video Location   Pavement Counts | | (P)
 *   Interview Staff   Crossing Counts | | (C)

Road Width   10m
Pavement Width   2m

Traffic Conditions: Two Way Flow

Shopping Facilities: Supermarkets
                         Markets
                         Shopping Centre

Crossing Facilities: Section of Road

Comparison Streets: (1) Middle High Street
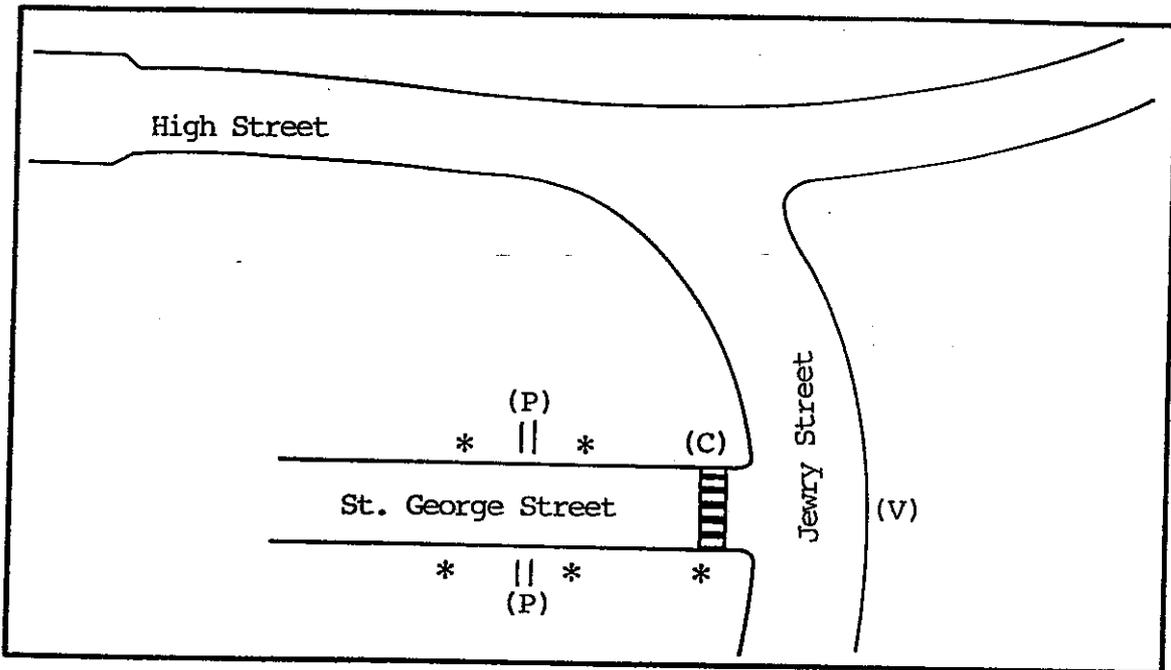   (2) Upper High Street

Surveys: Video   ✓   )
          On Street Interviews   ✓ 8/11/86) 10, 11/11/86 *
          Manual Classified Counts   ✓ 8/11/86)
          CO, Noise   ✓ 26, 27/3/86
          Household Interviews   x

          * then 18-21/2/87

Comments: 'Small Urban Other'

09 St Georges Street - Winchester

(V) Video Location
 *   Interview Staff

Pavement Counts || (P)
Crossing Counts || (C)

Road Width   10m
Pavement Width   3m

Traffic Conditions: One Way into Jewry Street

Shopping Facilities: Small Shops
                            No Supermarkets

Crossing Facilities: Pelican at Junction

Comparison Streets: (1) High Street (Pedestrianised)
                            (2) Jewry Street

Surveys: Video   ✓   )
              On Street Interviews   ✓ 14/11/86) 12, 13/11/86
              Manual Classified Counts   ✓ 14/11/86)
              CO, Noise   x
              Household Interviews   x

Comments: 'Small Urban Historic'

10 Lower North Street - Guildford

(V) Video Location
 *   Interview Staff

Pavement Counts | | (P)
Crossing Counts | | (C)

Road Width   11m
Pavement Width   4m

Traffic Conditions: One Way

Shopping Facilities: 2 Shopping Centres
                           Markets

Crossing Facilities: Section of Road

Comparison Streets: (1) Upper North Street
                           (2) High Street (Pedestrianised)

Surveys: Video   ✓   )
              On Street Interviews   ✓ 17, 18/11/86) 14, 15/11/86 *
              Manual Classified Counts   ✓   )
              CO, Noise   x
              Household Interviews   x

              * then 16-21/2/87

Comments: 'Small Urban Historic'

11 York Road - Twickenham

(V) Video Location   Pavement Counts | | (P)
 *   Interview Staff   Crossing Counts | | (C)

Road Width   10m
Pavement Width   2m

Traffic Conditions: Two Way Flow

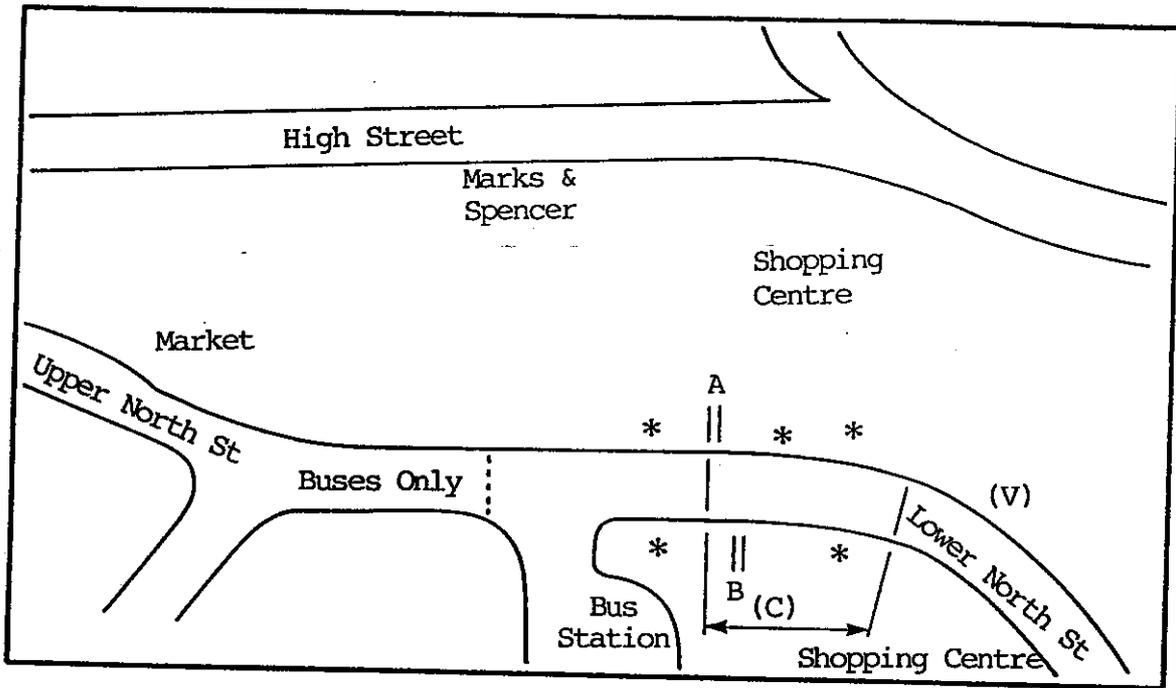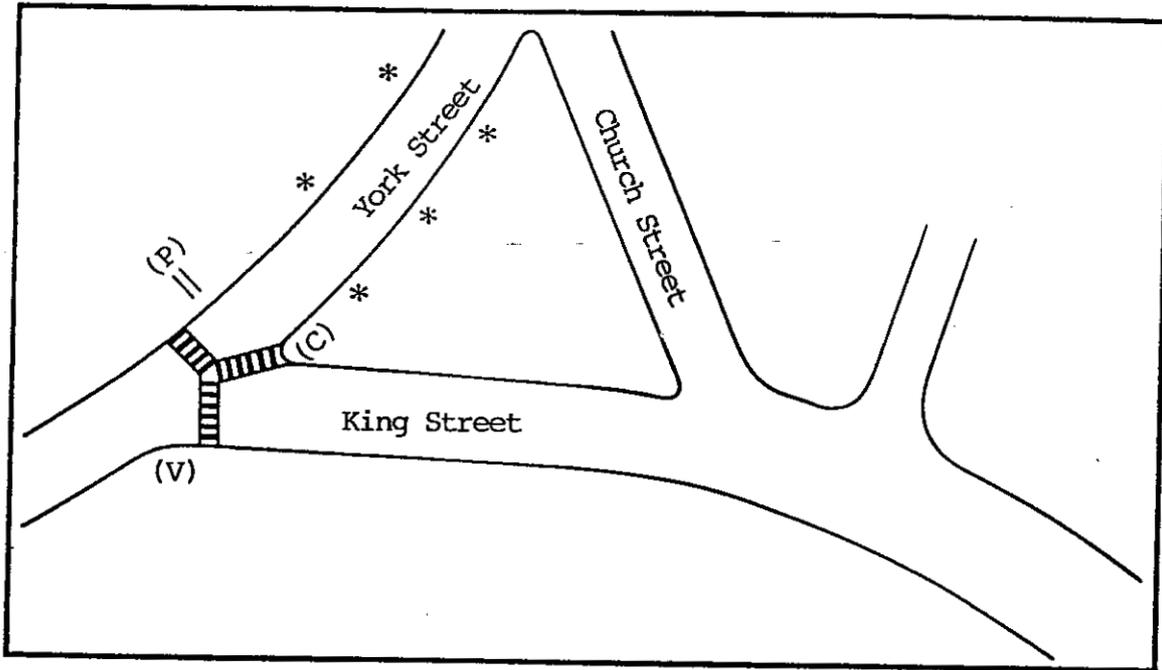Shopping Facilities: Small Shops
                          No Department Stores
                          1 Supermarket

Crossing Facilities: Pelican at Junction of York Street and
                          King Street

Comparison Streets: (1) King Street
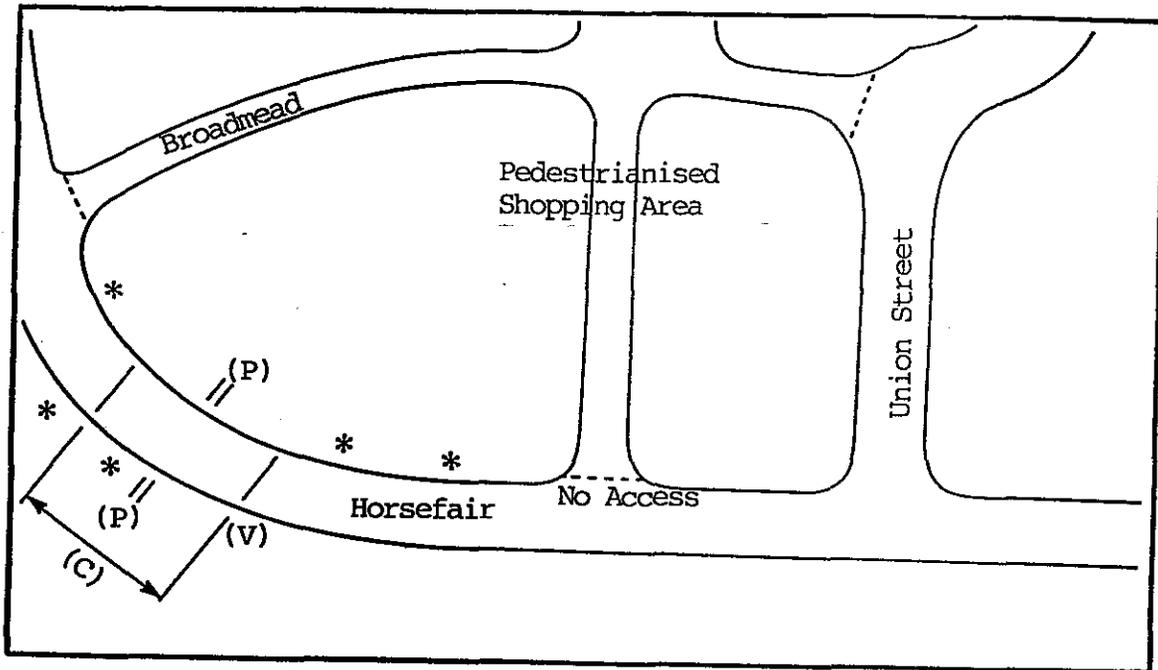   (2) Church Street

Surveys: Video   ✓   )
          On Street Interviews   ✓ 19/11/86) 17, 18/11/86 *
          Manual Classified Counts   ✓ 19/11/86)
          CO, Noise   x
          Household Interviews   x

          * then 16, 17/2/87

Comments: 'District Centre'

12   The Horsefair - Bristol

(v)   Video Location   Pavement Counts | | (P)
 *   Interview Staff   Crossing Counts | | (C)

Road Width   11m
Pavement Width   5m

Traffic Conditions: 1 Way along Horsefair

Shopping Facilities: Pedestrianised Central Area
                         Small National Chain Stores
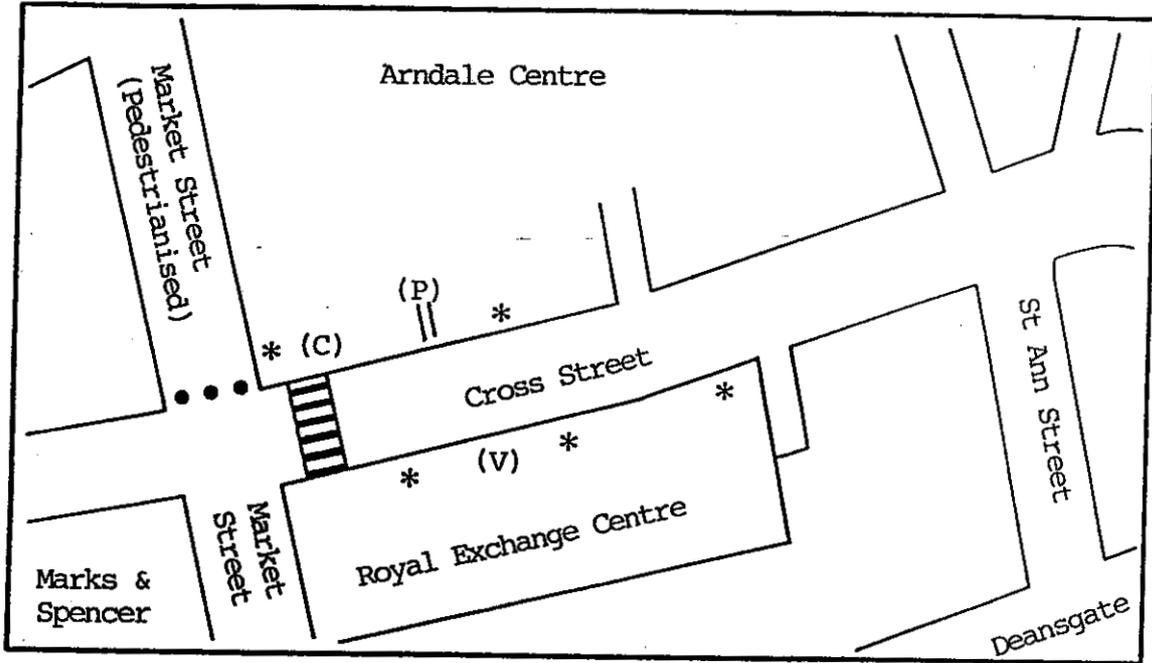   2 Department Stores
                         Supermarkets

Crossing Facilities: Section of Road

Comparison Streets: (1) Broadmead (Pedestrianised)
                         (2) Union Street

Surveys: Video   ✓)
          On Street Interviews   ✓) 19, 20, 21/11/86
          Manual Classified Counts   ✓)
          CO, Noise   x
          Household Interviews   x

Comments: 'Large Urban Active'.

13 Cross Street - Manchester

(V) Video Location   Pavement Counts || (P)
 *   Interview Staff   Crossing Counts || (C)

Road Width ──────── 10m
Pavement Width   3m

Traffic Conditions: 2 Way Flow

Shopping Facilities: Arndale Centre
                               Exchange Centre
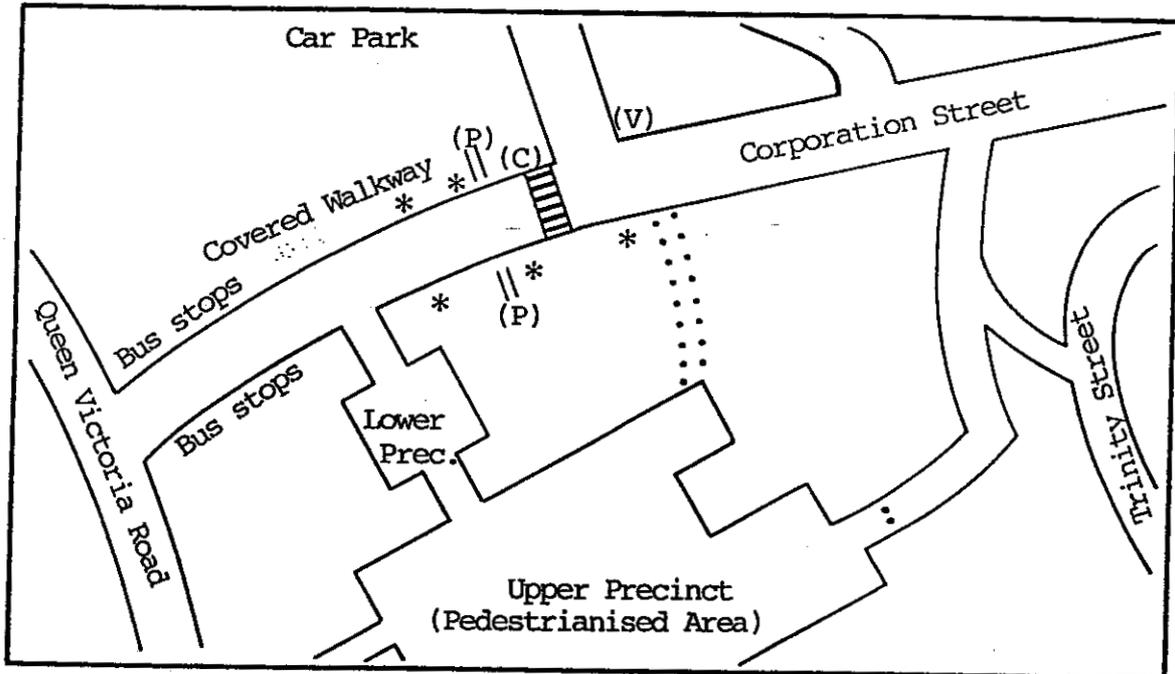   Department Stores

Crossing Facilities: Pedestrian Crossing

Comparison Streets: (1) Deansgate
                               (2) Market Street (Pedestrianised)

Surveys: Video   ✓ 14, 15/5/86)
              On Street Interviews   ✓ 22/11/86   ) 20, 21/11/86
              Manual Classified Counts ✓ 22/11/86   )
              CO, Noise   ✓ 6/3/87
              Household Interviews   x

Comments: 'Large Urban Active'

14   Corporation Street - Coventry

(V)   Video Location   Pavement Counts | | (P)
*   Interview Staff   Crossing Counts | | (C)

Road Width   15m
Pavement Width   4m

Traffic Conditions: Two Way Flow

Shopping Facilities: Small Shops
                        Access to Pedestrianised Central Area
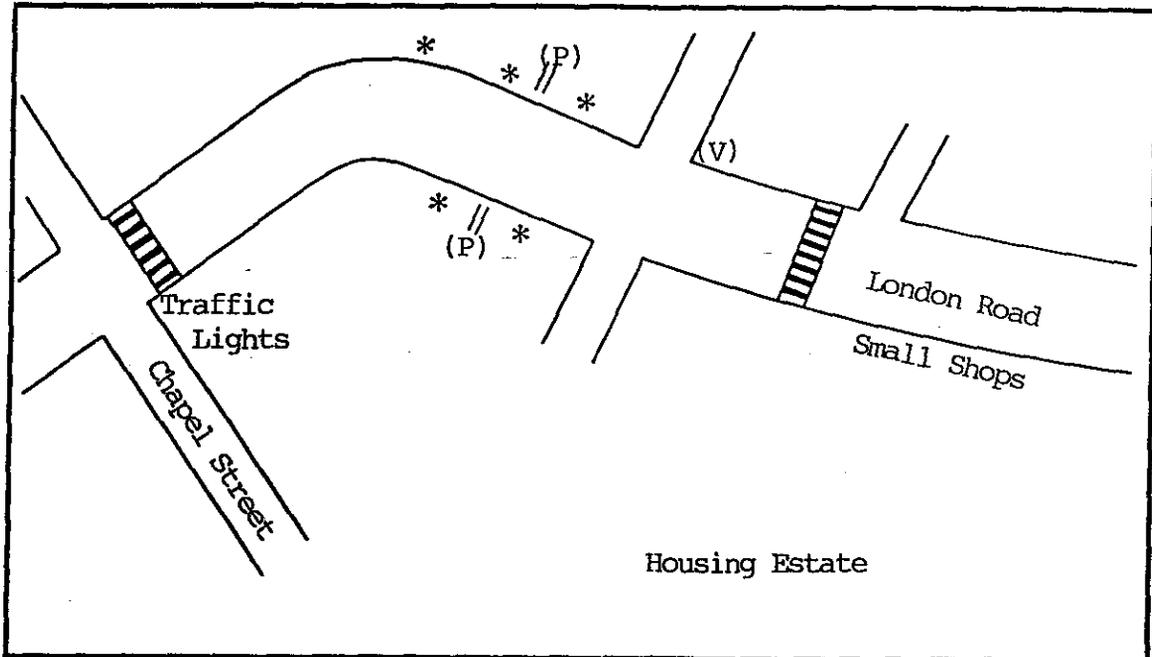
Crossing Facilities: Pedestrian Crossing

Comparison Streets: (1) Lower Precinct (Pedestrianised)
                        (2) Trinity Street

Surveys: Video   ✓   )
          On Street Interviews   ✓ 26/11/86) 24, 25/11/86
          Manual Classified Counts   ✓ 26/11/86)
          CO, Noise   x
          Household Interviews   x

Comments: 'Large Urban Depressed'

(V)   Video Location
 *   Interview Staff

Pavement Counts | | (P)
Crossing Counts | | (C)

Road Width   10m
Pavement Width   2m

Traffic Conditions: Two Way Flow

Shopping Facilities: Small Shops
                        Banks
                        Grocery

Crossing Facilities: None

Comparison Streets: (1)) Not
                        (2)) Available

Surveys: Video   ✓   )
          On Street Interviews   ✓ 29/11/86) 27, 28/11/86
          Manual Classified Counts ✓ 29/11/86)
          CO, Noise   x
          Household Interviews   / from 9/3/87

Comments: 'District Centre'