Pilot home zone schemes: evaluation of the Five Roads area, London Borough of Ealing

Prepared for Traffic Management Division, Department for Transport

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Executive Summary

Background
The Five Roads area in the London Borough of Ealing is one of nine home zone schemes in a pilot programme set up by the Department for Transport (DfT). The programme’s aim is to evaluate the potential benefits, particularly with regard to shared road space, of a wide range of home zones in different parts of England and Wales.

Situated in West Ealing, the home zone lies close to Ealing town centre and the Borough’s main shopping area. The zone comprises five roads in a grid pattern: Hastings Road, Hartington Road, Denmark Road, Broughton Road and Arden Road, and is bordered by the main railway line from London Paddington, A4020 Uxbridge Road, St Leonard’s Road and Drayton Green Road on the north, south, east and west respectively. Containing about 400 households, mostly owner-occupied, the area is predominantly late Victorian terraced and semi-detached housing with front and rear gardens. There are also two low-rise apartment blocks built during the 1930s and 1950s. The nearest schools are within 1km of the zone, and a number of businesses (including shops) are situated on the edge of the area, mainly on Uxbridge Road.

The main problem in the area of the home zone prior to scheme installation was ‘rat-running’ traffic. Vehicles were trying to avoid delays at the signalled junctions of Drayton Green Road and St Leonard’s Road with Uxbridge Road. There were also parking problems for residents, exacerbated by shopper and commuter parking, some commuters using the nearby West Ealing station. There were no play facilities for children in the area, and access to a nearby park and green involved crossing the very busy Uxbridge Road.

Partners in the project included the London Borough of Ealing, the Five Roads Forum (5RF) formed by the Residents’ Association, together with engineering consultants and landscape architects appointed by the Borough Council. During the period 1998-2001, prior to scheme installation, the following took place:

- Street meetings by residents to discuss traffic and other problems, and possible solutions including the home zone concept. These were followed by submission of ideas and petitions to the Borough Council.
- Creation of Five Roads Forum and launch of a newsletter.
- Establishment of Project Board comprising residents, council officers, councillors and officer advisors. The role was to oversee the project, to formally include the residents in the decision-making process and to appoint landscape architects.
- On-street surveys of traffic, parking and physical features of the area. A photographic survey was undertaken by the residents and landscape architects to record things they liked and disliked in the area.
- Leaflet distribution and questionnaire surveys on parking and street environment.
- An open-air exhibition (including children’s activities and barbecue) to display the results of the area surveys and possible solutions to the problems identified.
- Formal consultation on traffic calming and landscaping proposals, as well as options for parallel or echelon parking. A traffic impact assessment of these options on the home zone and surrounding road network was undertaken. The consultation included residents in the immediate area around the home zone to cover issues such as external impact on traffic and parking, and also covered a proposal for a controlled parking zone.
- Committee approval for the scheme was secured in early 2001 following majority support for the home zone (with preference for echelon parking) from residents and local businesses. This was followed by meetings with residents to review the plans for each road.
- Meetings with residents to review detailed plans for each road and 5RF workshops on cosmetic aspects of gateway design.

Scheme installation began in September 2001 followed by implementation of the controlled parking zone in April 2002. Following further consultation, a gated road closure to prevent ‘rat-running’ was installed on Hastings Road as a 6-month trial measure in January 2003, and was made permanent later in the year. Changes were also made to the controlled parking zone. The home zone, which cost £375,000, was launched in April 2004.

TRL was commissioned by the DfT to assess the effectiveness of the pilot home zone schemes in achieving the aim of home zones. Home zones should allow all road users to co-exist in a pleasant safe environment. As part of this process, TRL carried out ‘before’ and ‘after’ monitoring including interview surveys with adults and children, and collection of traffic flow, traffic speed and accident data. The ‘before’ surveys were carried out in October/November 2000 and March 2001, and ‘after’ surveys in March and May 2004.

Home zone measures
The measures included:

- Gateway features each comprising a raised table and a planter with an artist-designed mosaic incorporating the street name.
- Areas of shared surface created by raising the road surface to footway level and resurfacing in asphalt with coloured chippings.
- A gated road closure at the western end of Hastings Road to prevent ‘rat-running’.
- A Controlled Parking Zone, and parallel parking replaced with a mixture of echelon and parallel parking (with groups of bays on alternate sides of the road to slow vehicles). Parking outside the marked bays was prohibited.
• Red block paving of varying area and shape at intervals across the street.
• Additional tree planting.
• Renewal and upgrading of the street lighting.

**Residents’ support for the home zone scheme**
Of 98 adult residents interviewed by TRL after scheme installation, about three-quarters:
• Supported the home zone, compared with two-thirds in the ‘before’ survey.
• Thought that the home zone had made the appearance of the streets more attractive.
• Thought that the streets were now safer from traffic.
  About two-thirds thought that:
• There was enough consultation.
• Motorists were now more considerate towards pedestrians and cyclists.
  About half of respondents thought that:
• Motorists were now more considerate towards children playing in the street.
• Walking within the home zone was generally more pleasant than before.

**Perceived advantages of the scheme**
Residents were asked the same questions before and after scheme installation on perceived advantages of the scheme. The main ‘before’ expectations which were bettered in the ‘after’ survey concerned the amount of traffic (for 60% of respondents in the ‘after’ survey), the area’s appearance and general safety, noise and air pollution and drivers being more considerate.

**Perceived disadvantages of the scheme**
The main disadvantages perceived in both surveys were problems associated with parking (by over a quarter of respondents), e.g. non-residents parking within the home zone outside restricted times. About 10% of respondents identified new problems in the ‘after’ survey, i.e. with the shared areas (difficulty telling the road from the footway, and a false sense of security for children playing in the street), maintenance and quality of construction, and rubbish in the planters. Expected problems e.g. noisy children and originally proposed seating attracting undesirables largely did not arise.

**Impact of the home zone on traffic flows and speeds**
The gated closure of Hastings Road had the biggest impact on vehicle flows. Just before its installation there was a 10% reduction in traffic flows across the home zone. After installation, the two-way flow fell from 2400/day to 400/day on the western section of Hastings Road and from 1500/day to 400/day on Hartington Road. The flow on the eastern section of Hastings Road and on Broughton Road fell by about a quarter (to 700 and 1050 respectively) but on Denmark Road, the flow was up slightly to 800/day, possibly owing to some re-routeing of traffic within the home zone.

Ideally, home zone streets should have two-way flows of no more than 100 vehicles per hour in the afternoon peak hour, when there can be the most conflict between vehicles and people, including children playing. The hourly flow was well below this level, except on Broughton Road which was slightly over the recommended level at 105 vehicles per hour.

Mean and 85th percentile speeds fell by 6-8mph on Broughton Road and Hartington Road, and by 2-3mph on Hastings Road, but there was little change on Denmark Road where speeds were already low. Across all monitoring positions ‘after’ mean and 85th percentile speeds were 15-18mph and 19-23mph respectively.

Before scheme installation, about half the vehicles exceeded 20mph. Denmark Road was an exception where about one-tenth exceeded this speed. After scheme installation, about one-tenth exceeded 20mph on average on Broughton Road, Denmark Road and Hartington Road, with one-fifth to one-third on Hastings Road.

**Impact of the home zone on driver behaviour and perceived safety**
Considering danger from road traffic, 87% of respondents thought that it was safe for adults walking or cycling in the home zone. Those who thought it was unsafe gave the reasons as the amount/speed of traffic, less traffic allowing higher speeds, and not being able to distinguish between the road and ‘pavement’. Three-quarters thought that the home zone was safe for children walking or cycling.

About 60% to 80% of respondents perceived the speed and amount of traffic as less problematic, though a quarter thought that parking problems had actually increased. About half of respondents perceived no change, or an increase, in poor driving standards/behaviour.

Nearly two-thirds of respondents thought that drivers were considerate towards children and adults in various situations (walking, cycling, children playing in the street) following scheme implementation, against only a third in the ‘before’ survey.

**Impact of the home zone on perceived danger from crime**
Over three-quarters of respondents believed that adults and children were safe from crime when walking or cycling, against around two-thirds in the ‘before’ survey. Over one-third of respondents thought that adults and children were safer than before. In the year prior to the ‘before’ and to the ‘after’ survey, nearly 30% and 20% of respondents respectively were victims of crime, particularly car crime. About half of respondents still thought that young children were unsafe playing in the street because of ‘stranger danger’. In the ‘after’ survey, about half of the children who used a bike were not worried about their bike being stolen.

**Impact of the home zone on using the street**
About two-fifths of respondents thought that pedestrians and motorists now had equal priority in the street, which was slightly lower than in the ‘before’ survey.
Nearly half of adult respondents thought that the ease of day-to-day journeys within the home zone was unchanged. Nearly all respondents considered that the home zone had made no difference to how often they walked in the zone. Over 80% walked to the shops at least twice a week. Half of respondents thought that walking had become more pleasant, but over two-fifths perceived no difference.

Eighty per cent of adult respondents and nearly half of child respondents with a bike cycled in the home zone the same amount as before. Over half of adult respondents thought that it was more pleasant to cycle in the zone than before.

Of the two-thirds of respondents having access to a car/van, 87% drove as often as before, but nearly half changed the way they drove. Almost 60% thought driving in the zone was more pleasant than before.

**Impact of the home zone on activities in the street**

One-fifth of adult respondents when outside the house chatted to neighbours often and three-fifths occasionally chatted. One tenth gardened outside their home often and nearly half did so occasionally. The third most popular activity was washing/working on the car. Football was the most popular activity for children.

**Impact of the home zone on children**

Over three-quarters of respondents’ children played in their back garden and one-third played in someone else’s back garden. Over a quarter went to an open space. Half spent some time in the street, just over half of them outside their home. In the ‘before’ survey, a similar proportion reported playing in their back garden or in the street, but more used open spaces and other people’s back gardens. A slightly greater proportion of children, about two-thirds, reported playing in the street regularly in the ‘after’ survey than in the ‘before’. Fifty-three per cent of respondents in the ‘before’ survey were opposed to their children playing in the street for safety reasons, falling slightly to 45% in the ‘after’ survey.

Nearly all respondents thought that it was still unsafe after scheme installation for pre-school/infant school-age children to play in the street, the main reasons being the speed/amount of traffic and ‘stranger danger’. This was little changed from the ‘before’ survey. About three-quarters of respondents felt the same regarding primary school children in both surveys, the perceived dangers being the same as in the ‘before’ survey.

Child respondents said that the most popular places for playing were in the street outside their home or in the back garden. Nearly all of the children had friends close by with whom over two-thirds played near their home. The scheme had little impact on the amount of time spent outdoors. The most popular activity was football. Eighteen out of the 22 children interviewed said that the scheme had not made any difference to their school journey.

**Accidents**

Injury accident data within the home zone area were obtained from the STATS19 database for five years (1997-2001) before the start of scheme installation and for an interim period during construction (2002-03). No meaningful ‘after’ data were available at the time of writing. Seven ‘before’ accidents (one serious) were identified; four were junction accidents, two (including the serious accident) involved a pedestrian and one involved a moped only. During the interim period, one involved a car and an unlit parked vehicle and one involved a car and a pedestrian.
1 Introduction

Home zones are residential areas designed with the intention of making streets being places for people, instead of just for motor traffic. The aim is to change the way that streets are used in order to improve the quality of life in residential areas. The intended outcome is the provision of a safe environment for people who walk and cycle, and for children. Introducing a home zone can provide scope for a wider range of activities in street space that was formerly considered to be for the exclusive use of vehicles. Changes to the layout of the street should emphasise this change of use so that motorists perceive that they should give informal priority to other road users. Good and effective consultation with all sectors of the community, including young people, is important, and can help ensure that the design of individual home zones meets the needs of the local residents. The Five Roads home zone in the London Borough of Ealing is one of nine home zone schemes in a pilot programme set up by the Department for Transport (DfT). The programme’s aim is to evaluate the potential benefits, particularly with regard to shared road space, of a wide range of home zones in different parts of England and Wales.

1.1 The report structure

- Section 1 describes the development of the home zone concept in the UK and the DfT pilot home zone programme.
- Section 2 gives details of the streets forming the Five Roads home zone and the consultation and implementation timetable.
- Section 3 describes the measures used in the Five Roads home zone to create it.
- Section 4 and Appendices A and B provide details of the data collection.
- Section 5 considers the impact of home zone on residents and traffic.
- Section 6 looks at some of the issues raised in the home zone design.
- Section 7 contains the summary and conclusions.

1.2 Home zones and woonerven

Conventional traffic calming schemes and 20mph zones have shown that reducing the mean speeds of traffic in urban areas to below 20mph can have a substantial beneficial effect on road safety (Webster and Mackie, 1996; Barker and Webster, 2004). However, the traffic function of such streets may still predominate at the expense of other activities. The concept of shared road space within a safe residential area or ‘home zone’ is widespread in many parts of Europe. It originated in the Netherlands as woonerven (residential precincts) in which the residential function clearly predominates over any provision for traffic. This principle is expressed in the design and layout of the residential areas. The road space is shared between motor vehicles and other road users, with the needs of pedestrians, including children, and cyclists coming first. The regulations require drivers within a woonerf to drive at a walking pace and make allowances for the possible presence of pedestrians, including children at play (ANWB, 1980).

Home zones were originally suggested for the UK in the 1980s as a low cost measure to reduce casualties to young children in residential areas and allow them to play outdoors in safety. The idea was to introduce new legislation, such that child pedestrians should have priority and drivers who injured children should be presumed negligent. It was anticipated that this new legislation would modify driver/rider behaviour so that speeds would be reduced to a walking pace and that the need for conventional road engineering traffic calming measures would be minimal (Preston, 1992).

The concept of reclaiming residential streets as home zones was given new emphasis by the Children’s Play Council, Transport 2000 and the Child Accident Prevention Trust. They advocated a change in priority between drivers, cyclists and pedestrians, supported by new legislation and lower speed limits. The lower speeds would be enforced by a combination of traffic calming measures and other design features (Children’s Play Council, 1998).

The Government’s Transport White Paper, A New Deal for Transport: Better for Everyone (Department for the Environment, Transport and the Regions, 1998), recognised the value of home zones in improving the places where people live and play. The Government wished to work with local authorities to evaluate the effectiveness of home zones. In order to do so, nine pilot schemes were established in England and Wales.


The Transport Act (2000) makes provision for home zones in England and Wales. This came into effect in February 2001 and local authorities then had a specific power to designate home zones in their area. They can also make orders about the use of roads and about speed reduction measures in home zones, subject to regulations to be made by the Secretary of State (for England) or the National Assembly for Wales. Similar provisions exist in Scotland.

In order to accelerate the growth of the home zone concept, the Government made available £30 million for a Home Zone Challenge scheme in England to be spent within the financial years 2001/02 to 2004/05. Local authorities with traffic and/or highway functions were eligible to bid for funding, and 61 home zone schemes were selected to receive funding through the Challenge.

1.3 The DfT Home Zone Pilot Programme

TRL was commissioned by the DfT to evaluate the Department’s Home Zone Pilot Programme being implemented by nine local authorities in England and Wales. Further details can be found at the home zone website http://www.homezonenews.org.uk
The Home Zone Pilot Programme started in 1999 and the main 'before' surveys were completed in 2000. The major part of the consultation, scheme design and construction took place between spring 2000 and spring 2004. The timing of the 'after' surveys and reporting has depended on the implementation progress of the individual home zone schemes. The first home zone to be completed was The Methleyes, Leeds; the results for this scheme are reported in TRL Report TRL586 (Layfield, Chinn and Nicholls, 2003). Further home zones in Manchester, Sittingbourne, Magor and Plymouth are reported in TRL Report TRL625 (Tilly, Webster and Buttress, 2005), TRL Report TRL626 (Webster, Tilly and Buttress, 2005), TRL Report TRL633 (Layfield, Webster and Buttress, 2005) and TRL Report TRL640 (Wheeler, Tilly, Webster, Rajesparen and Buttress, 2005).

Over 30 local authorities in England and Wales put forward around 50 schemes for inclusion in the pilot programme. Many of the schemes had been initiated by residents’ associations, with the local authority acting as a catalyst. In the selection of pilot schemes, priority was given to schemes with innovative ideas, strong support from residents’ associations, transferable results and a commitment to implementation within the study timescale. During the sifting process, broad categories of scheme emerged - regeneration projects, large neighbourhood schemes, inner urban schemes and single streets or clusters of small streets. The selection panel endeavoured to incorporate a range of scheme types into the pilot programme, reflecting the variety and geographic spread of schemes submitted.

The nine pilot home zone schemes are in Ealing (London), Lambeth (London), Leeds, Manchester, Magor village (Monmouthshire, Wales), Nottingham, Peterborough, Plymouth and Sittingbourne (Kent). Although the home zone sites chosen are very different, both in scale and type, none have particularly heavy traffic flows and most have few accidents. Home zones are not principally safety schemes, but are aimed at improving the quality of life.

Extensive consultation has taken place with the local communities on problems within the areas and on the design for the schemes. This has taken many forms: leaflets, interview surveys, public meetings, exhibitions, street events and design workshops. The nine home zone schemes are being designed and funded by local authorities and the implementation timetables for the individual schemes have varied according to the progress with consultation, the size and type of scheme, the extent of the work involved and the acquisition of sufficient funds.

A working group advises the Department on the findings of the monitoring programme, including design and implementation issues. Membership of the group includes local authorities, the Association of Chief Police Officers, the Disabled Persons Transport Advisory Committee, the Children’s Play Council, Transport 2000, TRL, DfT and members of the devolved administrations.

1.4 Study objectives

The DfT’s objectives are to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones, to come to a view on the need for additional legislation, and to identify and disseminate good practice guidance.

The main success criteria for Ealing Borough Council include achievement of the following:

- Reduction of speed of traffic using the streets within the home zone.
- Provision of increased opportunities for children’s outdoor play.
- Reduction of injurious accidents among all road users.
- Increased street based activity and neighbourhood involvement.
- Improved perception of road safety for all road users.

2 The site

The Five Roads home zone is situated in West Ealing close to Ealing town centre (see Figure 2.1) and the main shopping area. The zone comprises five roads in a grid pattern: Hastings Road, Hartington Road, Denmark Road, Broughton Road and Arden Road (Figure 2.2), and contains approximately 400 households.

The area comprises predominantly late Victorian terraced and semi-detached housing, with on-street parallel parking before the home zone was installed. The houses have front and rear gardens and the streets are tree-lined. Low-rise blocks of flats were built in Hastings Road in the 1930s and in Broughton Road in the 1950s. Figures 2.3-2.8 show the area before the home zone was implemented.

Door-to-door ‘before’ interview surveys with adult residents found that just over half of households had at least one car; 36 per cent of households had children under 17 years of age; 34 per cent of residents interviewed were aged 60 or over; and the occupational group categories of respondents were managers (67 per cent), skilled manual (11 per cent) and others (21 per cent), (see Section 4.1).

A number of businesses (mainly offices and shops) are situated on the perimeter of the area, notably on Uxbridge Road (A4020). There is also a Council operated car park off Arden Road. The area is bounded to the east and west by local distributor roads (St Leonard’s Road and Drayton Green Road respectively) and to the south by the very busy Uxbridge Road, which has seven bus routes and extensive bus priority measures. The main railway line from London Paddington forms the northern boundary. West Ealing station, situated just outside the home zone on Drayton Green Road, is served by local stopping services to Slough, Ealing Broadway, Paddington and Greenford. The nearest schools are within 1km of the home zone to the west and north. The Ealing Tertiary College and Thames Valley University campuses lie to the east and south-east.

2.1 Background

Residents of the ‘Five Roads’ initiated the proposal for a home zone in the area and founded the ‘Five Roads Forum’ to co-ordinate all activities relating to the planning of the home zone. Comprising of residents from each road, the group wrote to Ealing Borough Council in October.
1998 to raise concerns and suggest solutions. Prior to this, the area had been proposed as a controlled parking zone in order to address problems caused by commuters’ and shoppers’ cars.

The residents had found that the quality of life in their neighbourhood had deteriorated in terms of noise, pollution, visual intrusion and safety because of increasing traffic in their streets. In early 1999, the Council’s Roads Committee approved preliminary design and informal consultation proposals for a traffic management/calming scheme in the ‘Five Roads’ area.

The Forum’s initial activities were to organise meetings to discuss the development of the home zone, publish a newsletter and produce an outline proposal, which included measures to reduce speeds and change the appearance of the area. A website and logo were also developed.

The residents identified several main concerns:

- Poor environment (noisy, polluted, unsafe, unattractive, badly lit) with very little public space and nowhere for children to play safely (the nearest open spaces, Walpole Park and a green, both involve crossing Uxbridge Road).
- No parking space for residents during the day because of town centre and station parking; blocked driveways.
- Rat-running through the area to avoid queues on Drayton Green Road and St Leonard’s Road at their signalled junctions with Uxbridge Road.
- Inconsiderate parking, causing poor accessibility for emergency, delivery, refuse collection and recycling vehicles.
- Damage to cars caused by heavy goods vehicles passing through the area.

### 2.2 Consultation and implementation timetable

Partners in the Five Roads project included the London Borough of Ealing, the Five Roads Forum (Residents’ Association) together with engineering consultants and landscape architects appointed by the Borough Council. The timetable for the development and implementation of the scheme was as follows:

- **Autumn 1998 to Spring 1999:** Organisation of street meetings by residents to discuss traffic and other problems, and possible solutions including the home zone concept. Creation of Five Roads Forum (5RF). Newsletter launched. Council officers and councillors were approached with ideas, letters and petitions.
- **August 1999:** Visit by transport minister Lord Whitty to announce DfT pilot Home Zone programme, including the ‘Five Roads’ scheme.
- **November 1999:** Traffic and parking surveys and parking questionnaire to all households in the home zone.
Figure 2.2 Location plan of the home zone (Courtesy of the London Borough of Ealing)
The area before scheme installation (2001):

Figure 2.3 Denmark Road, looking west towards Broughton Road

Figure 2.4 Arden Road, looking north towards Denmark Road

Figure 2.5 Hartington Road, looking south towards Uxbridge Road

Figure 2.6 Hastings Road, looking west from near junction with St Leonard’s Road

Figure 2.7 Hastings Road, looking east from junction with Broughton Road

Figure 2.8 Broughton Road, looking north

Photographs on this page: TRL Limited; others in report: Courtesy of the London Borough of Ealing / Five Roads Forum
- December 1999:
  Community meeting to discuss outline options.
- March 2000:
  Topographical survey to establish the locations of kerbs, trees, street furniture, lighting and services. A project board was established, comprising two residents, two council officers, two councillors and two officer advisors. Its role was to oversee the project and formally include the residents in the decision-making process. Distribution of leaflet (incorporating short questionnaire) to all households in the home zone.
- April 2000:
  Landscape architects appointed by the Project Board.
- May 2000:
  Indicator survey developed by the landscape architects, the Borough Council and the Residents’ Association, using a questionnaire (distributed to all households in the home zone) containing 20 statements about the current street environment – statements rated by degrees of agreement or disagreement.
- May 2000:
  Photographs taken by residents, with the landscape architects, of things they liked and disliked in the area.
- June 2000:
  Open-air exhibition in Hastings Road with Borough Council officers and councillors present, bringing together the results of the indicator survey and photographic exercise, and displaying possible solutions to the problems identified. This event included children’s activities and a barbecue.
- July 2000:
  The Ealing Area Committee wanted the consultation process to include people outside the home zone, particularly those living north of the railway in Argyle Road. This consultation would cover issues such as the external impact on traffic and parking.
- October 2000:
  Formal consultation carried out on different options (1) parallel parking with traffic calming and (2) echelon parking with traffic calming. Various landscaping features also received consultation. With both parking options, the traffic calming proposals comprised gateway features and raised tables to reduce speeds, with one area of shared surface. A traffic impact assessment of these options on the home zone and surrounding road network was carried out.
- December 2000:
  Results of consultation reported to Ealing Area Committee: 19% response rate; three-quarters of residents and businesses in favour, some with reservations. Similar results within and outside the home zone. Option 2 (echelon parking) was preferred. On-street play areas not recommended due to local opposition. The location of the shared surface not supported in its original location outside Hastings House flats.
- January 2001:
  Committee approval of scheme.
- February 2001:
  Meetings with residents to review detailed plans for each road.
- March 2001:
  Completion of detailed design. 5RF workshops on cosmetic aspects of gateway design.
- May 2001:
  Residents’ comments on detailed design addressed.
- June 2001:
  Consultation on Controlled Parking Zone (CPZ).
- September 2001:
  Scheme installation begun, starting with gateway features and street lighting improvements. Approval of CPZ by the Area Committee.
- April 2002:
  CPZ implemented. Discussions between the 5RF and the Project Board on other ways to improve the area. Funding to equip a children’s play area off Arden Road sought by 5RF.
- October 2002:
  Consultation within and just outside home zone on proposed trial road closure at the western end of Hastings Road to eliminate ‘rat-running’; the closure, strongly supported by the 5RF, was approved by the Borough Council. It was also considered that traffic through the area might increase if possible developments close to the home zone went ahead.
- December 2002:
  The Borough Council’s Transport Planning Department held an open day at which the latest plans of the home zone were presented and questions answered. Results of consultation on the Hastings Road trial road closure submitted to the council. Quotations obtained for the Arden Road play area.
- January 2003:
  Hastings Road trial road closure implemented.
- February 2003:
  Construction of final phase of the home zone starts following modifications to the plan on further suggestions by residents.
- June 2003:
  The Hastings Road road closure was made permanent following a favourable outcome of a Council survey of residents in and around the home zone on its retention. A survey was also carried out on the periods of operation of the CPZ and whether they needed to be changed.
- September/October 2003:
  Plans for a block of flats above a new store submitted, followed by publication in local newspaper and exhibition. With main access along Broughton Road, objections were submitted on the grounds that safety in the home zone could be adversely affected by increased traffic and apparent lack of parking provision associated with the development. The plan was modified and a number of meetings held but some concerns still existed.
- November 2003:
  Decision to make Hastings Road road closure permanent ratified.
- April 2004:
  Concerns about other proposed developments adjacent to the home zone.
3 Home zone measures

A plan of the measures used in the home zone is shown in Figure 3.1. They include:

Six gateway features consisting of raised table plateaux and width restrictions to mark entries to the home zone at all but two locations, where they are set back from junctions with surrounding distributor roads to ease entry to commercial premises on the edge of the area.

A 20mph zone was established, including Hastings Road, Denmark Road, Broughton Road, Hartington Road and Arden Road.

The planting included flowers in planters and additional trees. Community mosaics incorporating the road name were installed on the planters.

A point closure of Hastings Road was installed to address the rat-running problem.

Kerb-level areas of shared surface and refurbished footways in asphalt with buff chippings;

The road layout was changed to incorporate echelon parking bays, mostly marked on alternate sides to create a chicane effect to help reduce speeds. Areas of contrasting surfacing to highlight where the parking layout changes from one side of the road to the other side were also introduced.

A Controlled Parking Zone was implemented with operating hours: Mon-Fri, 9.30am-5.30pm and an annual permit cost for residents of £45 in 2005. New street lighting to supplement existing lighting was installed. A disused area of a car park in Arden Road is used informally by children for play. It is not advertised as a play area because the Council is concerned about many issues including public safety, liability and maintenance.

3.1 Gateways and home zone signing

Six gateway features were installed, four of which were set back from the junctions of Uxbridge Road and Drayton Green Road. This was to ease entry to the commercial premises. The other two gateways were at the junctions of St Leonard’s Road with Hastings Road and Denmark Road. Each consisted of a raised table together with a build-out incorporating a planter on one side. At the mouth of each junction from which the gateway was set back, a similar table without a build-out was installed.

Standard home zone entry signs were erected at the gateways, each backed with a ‘Home Zone Ends’ signs (Figure 3.2). A 20 mph zone was also introduced, the signing for which was erected at the junctions with the boundary roads.

A typical gateway is shown in Figure 3.3. The planters were originally of brick, but following repeated damage by vehicles, they were rebuilt from railway sleepers (Figures 3.4 to 3.6). Each planter featured a circular mosaic, designed by residents, incorporating the road name. An example for Broughton Road is shown in Figure 3.7.

Near the western end of Hastings Road, just west of the junction with Broughton Road, a locked gate barrier was installed at the gateway to act as a point road closure to eliminate rat-running by drivers avoiding the signalled junctions of Uxbridge Road with Drayton Green Road and St Leonard’s Road (Figure 3.8). This barrier can be opened by the emergency services who hold a key. The majority of the rat running traffic was routeing via Hastings Road and Hartington Road, and to a lesser extent, Broughton Road. Figure 3.9 shows an example of traffic congestion before the gate was installed. After a six month trial, the point road closure was made permanent in June 2003. As indicated above, access to commercial premises at the western end of Hastings Road was unrestricted.

3.2 Traffic calming measures within the home zone

Extensive areas of shared surface were installed along Hartington Road, Broughton Road, Arden Road and the eastern halves of Hastings Road and Denmark Road (Figure 3.10). The original surface was raised to kerb level and finished in asphalt with red chippings. The kerbstones were retained. The footways along these sections were refurbished and finished in asphalt with buff chippings (seen more clearly in Figure 3.11), replacing concrete paving slabs in some areas.

Echelon parking bays were installed on alternate sides of the road on Hartington Road, Broughton Road and the eastern/western sections of Hastings Road (see Figure 3.11). The parking bays, separated by red block paving laid across the road imparted a chicane effect to reduce speeds. The block paving itself was also intended to contribute towards reducing speeds. Block paving was also installed at the junctions between Hastings Road and Hartington Road (extending to the barrier as seen in Figure 3.8) and between Denmark Road and Arden Road (Figures 3.12 and 3.13).

Additional street lighting was installed, doubling the previous provision. At the same time the original lamp columns were replaced. These were saved for possible reuse in a conservation area. Additional trees were also planted.

A build-out was installed on the on the easterly of the two bends on Hastings Road. Its function was to protect the parallel parking bays added between the two bends and to the east on the south side of the road (Figure 3.14).
Figure 3.1 Plan of home zone measures used in Ealing (Courtesy of the London Borough of Ealing)
**Figure 3.2** Home zone signs

**Figure 3.3** Gateway, east end of Hastings Road (flat top hump as in Figure 3.5 out of picture to right)

**Figure 3.4** Original planter, east end of Hastings Road. Circular feature to accommodate mosaic

**Figure 3.5** Gateway, Arden Road, showing vehicle damage to planter. To right is children’s play area

**Figure 3.6** Replacement for planter shown above; all planters were reconstructed as shown here
Figure 3.7 Typical mosaic

Figure 3.8 Barrier, Hastings Road, looking towards junction with Drayton Green Road

Figure 3.9 Traffic congestion in Hastings Road prior to introduction of point road closure

Figure 3.10 Shared surface, Denmark Road

Figure 3.11 Block paving as shown has been used to separate groups of echelon parking bays on alternate sides of the road or parallel and echelon bays. These examples are on Hastings Road
3.3 Parking

The area became a Controlled Parking Zone in April 2002, two years before the launch of the home zone. The regulations and desired effect of the CPZ were that:

- Residents would have priority to park in the road with easier parking for their visitors.
- Free all-day parking would no longer be available to commuters who did not live in the home zone.
- Shoppers would be able to park in special ‘Shop and Stop’ bays with time limits designed specifically for shoppers, thus freeing residents’ spaces and helping local businesses.
- Fewer people would drive through the home zone in search of a space.

The majority of the new parking bays were angled at 60° to the kerb line (see Figure 3.11) and a few were reserved for disabled users. Some parallel parking was retained in between the angled bays, and on Arden Road, the narrowest of the five roads, parallel bays were provided on one side only. Elsewhere, parking was not permitted at any time, though there were only a few short sections where this applied. A few bays for shoppers were retained at the Uxbridge Road ends of Hartington Road, Broughton Road and Arden Road.

4 Data collection

TRL’s monitoring programme at Ealing comprised:

- Attitudinal surveys of adults and children living within the home zone, the results of which form the main basis for determining whether the aim of the home zone was achieved.
- Collection of traffic flow and speed data.
- Analysis of accident data (but it was expected that low accident numbers were unlikely to give a statistically significant result).

‘Before’ surveys were carried out by TRL in October 2000 and March 2001, and ‘after’ surveys were carried out in March and May 2004. This report contains the results of the ‘before’ and ‘after’ interview surveys (Section 4.1) and the results of the ‘before’ and ‘after’ traffic speed and flow measurements (Section 4.2).

4.1 Interview surveys

Door-to-door interview surveys took place during March 2001 (‘before’) and March 2004 (‘after’) and were aimed at adult residents and their children living within the home zone. Following scheme implementation, the same respondents, where possible, were interviewed. The children, aged 7-16, were interviewed using a modified questionnaire focusing more on on-street activities and behaviour within the home zone.

In both ‘before’ and ‘after’ surveys, adult respondents were asked about:

- The characteristics of their household.
- Perceived traffic speed, flow, noise and/or pollution within the home zone.

Figure 3.12 Contrastig surface treatment at the junction of Hastings Road (looking east) and Hartington Road

Figure 3.13 Contrastig surface treatment at the junction of Denmark Road and Arden Road

Figure 3.14 Build-out on bend, sheltering new parking bays each side of build-out, Hastings Road (looking east)
Pedal cycle ownership, and motor vehicle ownership/access and where parked.

Frequency of journeys on foot, by cycle and car, and journey purpose.

Safety on the roads from traffic and personal safety from crime.

Involvement in accidents or near misses.

How their children travel to school and whether accompanied by adults.

Where their children play in the home zone, e.g. in gardens and on-street.

Types of play activity their children take part in within the home zone.

The degree of priority given by drivers to children, pedestrians and cyclists.

In the ‘after’ surveys, respondents were also asked about:

Their perceptions of changes in vehicle speeds, traffic flow, noise, pollution, mode of travel, parking provision, safety, playing and other activities within the street.

The visual appearance of the home zone.

The measures used to control traffic.

The effect on accessibility to their home by different modes.

The need for further measures.

A target of 100 adults and 50 child interviews was set, the child interviewees being selected from households where an adult had completed an interview. Quotas were set for each street to ensure that the interviews were spread fairly evenly across the home zone area. Every selected house received a minimum of three calls at varying times of the day and week (including weekends) before being abandoned as a ‘non-contact’.

Only one child and adult were selected for interview from any one household. Adults were specified as 17 years or over, and only those living at the address for at least 6 months prior to the interview were eligible. When selecting adults for interview, the head of household was the first choice, followed by their partner. When selecting children, if there were more than one qualifying child in the household then the child whose birthday was next in the calendar year was interviewed. In each household, the child interview was always conducted after the adult’s interview, and an adult member of the household was always present during this interview. The child questionnaire topics included attitudes towards the street, travel modes, outdoor activities and play within the street, and attitudes towards the home zone itself.

4.1.1 Characteristics of the adult survey sample

The ‘before’ interviews were carried out in March 2001 with 98 adult residents. The ‘after’ interviews took place during March 2004, again with 98 residents living in the same streets (Table 4.1), 44 of whom had been interviewed before the introduction of the home zone.

Table 4.2 gives details of the age, gender, occupational group, length of time at address, car ownership and ages of

| Table 4.1 Adults interviewed in streets within the home zone |
|---------------------------------|----------------|----------------|
| Street name          | ‘Before’ (%) | ‘After’ (%) |
| Hartington Road      | 10           | 6             |
| Hastings Road        | 29           | 22            |
| Denmark Road         | 20           | 31            |
| Broughton Road       | 12           | 34            |
| Broughton Court      | 24           | 3             |
| Arden Road           | 5            | 4             |
| Total               | 100          | 100           |

| Table 4.2 Characteristics of those completing adult questionnaire |
|---------------------------------|----------------|----------------|
| % of respondents | ‘Before’ survey | ‘After’ survey |
| Age of respondent | | | |
| 17-21 years old | 1 | 1 |
| 22-39 years old | 11 | 3 |
| 30-44 years old | 38 | 40 |
| 45-59 years old | 16 | 27 |
| 60+ years old | 34 | 30 |
| Gender of respondent | | | |
| Male | 42 | 40 |
| Female | 58 | 60 |
| Occupational group | | | |
| AB Senior or middle managers | 37 | 35 |
| C1 Junior managers | 31 | 32 |
| C2 Skilled manual | 11 | 10 |
| DE Other inc. state dependent | 21 | 23 |
| Length of time at this address | | | |
| Under 5 years | 35 | 20 |
| 6-10 years | 18 | 26 |
| 10-20 years | 20 | 22 |
| Over 20 years | 27 | 32 |
| Total number of respondents | 98 | 98 |

| % of interviewed households | ‘Before’ survey | ‘After’ survey |
| Age of members of household | | | |
| Any children under 17 years old | 36 | 39 |
| Any 17-21 years old | 7 | 10 |
| Any 22-25 years old | 67 | 5 |
| Any 26 years old and over | 99 | 98 |
| Households owning one or more cars | 58 | 73 |
| Respondents with members of their household suffering from: | | | |
| Breathing problems | 26 | 16 |
| Heart problems | 4 | 9 |
| Sight problems | 8 | 0 |
| Hearing problems | 4 | 2 |
| Learning difficulties | 3 | 1 |
| Other problems affecting mobility outside the house | 7 | 13 |
| Total number of households | 98 | 98 |
household members. Although some data are not available, those which are indicate that the average length of stay in the area increased, which in turn indicates that residents are not leaving the area. Other variables such as age and occupation remained broadly similar.

4.1.2 Health effects
Encouragingly the frequency of breathing problems being reported appeared to decrease. This might be linked to a reduction in traffic and subsequent reduction in vehicle exhaust fumes, although this could be a random effect.

4.1.3 Characteristics of the child survey sample
The characteristics of the sample of children interviewed are given in Table 4.3. In the ‘before’ and ‘after’ surveys respectively, 15 and 22 children were interviewed. Of the latter, six had been interviewed previously.

<table>
<thead>
<tr>
<th>Characteristics of children</th>
<th>Number and per cent of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>'Before' (B) survey 'After' (A) survey (A – B)</td>
</tr>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>7-9 years old</td>
<td>6</td>
</tr>
<tr>
<td>10-12 years old</td>
<td>4</td>
</tr>
<tr>
<td>13-16 years old</td>
<td>5</td>
</tr>
<tr>
<td>Adult 17-19 (note1)</td>
<td>0</td>
</tr>
<tr>
<td>All children</td>
<td>15</td>
</tr>
</tbody>
</table>

Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number and per cent of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>6</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
</tr>
</tbody>
</table>

1 One adult in the ‘after’ survey was counted as a child because they had been interviewed as a child in the ‘before’ study.

4.2 Traffic flows and speeds
TRL commissioned the collection of traffic flow and speed data during school term-time, using automatic traffic counters (ATCs) with tube detectors. ‘Before’ and ‘after’ data were collected over three weeks in October 2000 and May 2004 respectively at the following locations (shown in Figure 4.1):

- Broughton Road.
- Denmark Road.
- Hartington Road.
- Hastings Road (east and west of the junction with Broughton Road).

The ATCs stored speed information by allocating speeds within given ranges known as ‘bins’ (e.g. 0-5, 6-10, 11-15mph, etc). For this study, the ‘bins’ were set to provide adequate detail on lower speeds (below 20mph) as well as higher speeds. The measured changes in daily traffic flows and vehicle speeds are given in Sections 5.3.1 and 5.3.2. Appendix A contains bar charts of mean hourly flows.

4.3 Traffic accidents
Information about reported road traffic injury accidents recorded by the police, known as STATS19 (DfT, 2004) within the home zone area was obtained from the database held by TRL for the five years prior to the start of scheme installation (1997-2001) and for an interim period during the construction phase (2002-03). There were insufficient data available for the period following the completion of the scheme. However, the number of injurious accidents is likely to have been small. Any changes in accident frequency were unlikely to be statistically significant because of the small numbers involved. Details of the injurious accidents are given in Appendix B and accident frequencies are summarised in Section 5.6.

Further information about injurious accidents, damage-only accidents, and near misses before and after scheme installation, was obtained from the interview surveys. Respondents were asked in the ‘before’ and ‘after’ surveys whether, as a pedestrian, cyclist or car user, they had been involved in any accidents or near misses within the area of the home zone. Details were obtained from those giving positive responses.

Because of problems with exact perceptions of accidents/near misses and uneven recollection, this information was unlikely to provide a reliable indicator of changes in the number of accidents, or of accident frequency. However, it can help in the understanding of the types of accidents/near misses that may occur before and after installation of a home zone and highlight any problems associated with the operation of the scheme. The data can also provide support for information collected about changes in perceived safety.

5 Impact of the home zone
The home zone had many positive effects. The most prominent was the reduction of accidents and near misses that were mentioned by respondents.

In the ‘after’ survey, 75% of respondents were in favour of the home zone with just 10% against; the rest were undecided. A similar proportion believed that it had made a difference to the street and made it more attractive.

Fifty-seven per cent of respondents stated that there was less traffic now, about a quarter of whom mentioned easier or improved parking, which might be due to the new parking controls deterring non-resident parking. Twenty-three respondents said that they could now park outside their own house compared to eleven in the ‘before’ survey.

5.1 Residents’ support for the home zone, consultation and changes to the street

5.1.1 Adults
Over half of the respondents thought that:
- The appearance of the streets was more attractive (76%).
- The home zone has made a lot of difference to the street (76%).
- The home zone was a good idea (75%).
- It was safer from traffic danger for children (74%).
Figure 4.1 Location of monitoring sites
• It was safer from traffic danger for adults (73%).
• Motorists were considerate towards adults walking/crossing their street (69%).
• There was enough consultation with residents (68%).
• Motorists were considerate towards adults cycling along their street (65%).
• Motorists were considerate towards children walking/crossing their street (63%).
• Motorists were considerate towards children cycling along the street (61%).

About half of respondents thought that:
• Motorists were considerate towards children playing on or near the street (51%).
• The views of residents were taken into account during consultation (50%).
• Walking within the home zone was generally more pleasant than before (49%).

Only 29% of respondents considered that they had changed the way they drove within the home zone since it was introduced.

5.1.2 Children
The child respondents thought that the home zone had the biggest impact on:
• The number of cars in the home zone (less 86%, worse 5%, don’t know 9%).
• The speed of cars (slower 90%, not slower 5%, don’t know 5%).
• The appearance of the streets (better 83%, worse 11%, don’t know 6%).

They were also asked whether anything was worse now that it was a home zone - 81%, said ‘no’, 14% said ‘yes’ and 5% were unsure.

It was thought that the home zone brought good or slight improvements as follows:
• More things to do now it is a home zone - yes 40%, no 13%, don’t know 47%.
• Friendliness of people - better 42%, same 58%.
• How enjoyable it is to ride their bike now - more 36%, less 7%, same 57%.
• Quality of journey to school - better 18%, same 82%.
• Whether drivers have changed the way they drive in the home zone – yes 68%, no 18%, don’t know 14%.

In the view of children, the home zone appeared to have had a positive impact upon appearance and safety. Comments regarding safety related to the number of cars and speed of traffic in the area. However, a smaller change was found in factors which affected these children’s daily lives, such as their journey to school, play opportunities, and social contact with local residents.

5.1.3 Perceived advantages of the scheme
In both ‘before’ and ‘after’ surveys, residents were asked the same questions about the perceived advantages of the scheme (Figure 5.1) in order to identify where their expectations were fulfilled.

Expectations were met or exceeded concerning:
• The amount of traffic.
• The appearance of the area.
• General safety of the area.
• Traffic noise and traffic pollution.
• The attitude of drivers towards other road users.

Expectations were not met concerning:
• Parking.
• The speed of traffic.
• Safety of children, older people and the disabled / children playing in the street.
• The ease of chatting to neighbours / bringing community together.
• The level of crime.
• Street lighting.
• Tidiness of area.
• Ease of crossing the road.

Interestingly, the perception of accidents was unchanged despite the fact that fewer respondents were themselves involved in accidents/near misses (see Section 5.3.3).

5.1.4 Perceived disadvantages of the scheme
The parking problems (Figure 5.2) expected by the respondents before scheme installation fairly matched the actual problems they faced, with comments relating to non-residents parking at night and at weekends, and garage areas blocked by parked cars not occupying charged-for shoppers’ bays (close to Uxbridge Road).

Several new problems were identified in the ‘after’ survey, primarily that it was difficult to distinguish between the footway and the road. Some respondents thought that this arrangement had safety implications with drivers encroaching on the pedestrian area and pedestrians mistaking the road for a pedestrian area. Others thought that children were being encouraged to play on the road which was thought to be dangerous. Other new problems related to the quality of the scheme, in terms of construction and maintenance.

Problems involving noise from children, an increase in traffic at night, and from undesirable characters frequenting once-proposed seating proved to be less than expected. No respondents answered ‘don’t know’ indicating that all had formed and held an opinion of the scheme.

5.1.5 People benefiting from the scheme
The number of those expecting to benefit from the home zone in the ‘before’ survey did not differ substantially

1 The Council commented that parking capacity before and after was effectively the same.
2 The Council commented that the street lighting was sub-standard, but it was all replaced as part of the home zone and it now meets the required European standard.
Less supervision of children needed
House price increase
Easier to cross the road
Fewer accidents
Safer for older/disabled
Improve street lighting
Less parked cars
Drivers more considerate

Figure 5.1 Perceived advantages of the scheme

Figure 5.2 Perceived disadvantages of the scheme
(Note: In the event, benches were not installed)
from the number in the ‘after’ survey (Figure 5.3) except with regard to children. More respondents thought in the ‘before’ survey that children would benefit from the scheme than thought actually benefited in the ‘after’ survey. Seven people thought in the ‘after’ survey that the authorities, such as ‘the Council’ and ‘parking wardens’, benefited from the scheme.

![Figure 5.3 People benefiting from the scheme](image)

### 5.2 Environment

#### 5.2.1 Appearance of the street

**Adults**

In the ‘after’ survey, 76% of the adult respondents thought that the home zone made the area look more attractive, but 11% thought the opposite. The remainder felt that there was no change or were undecided. This would suggest that the home zone was largely successful on aesthetic grounds. The visual appearance of open space, the planters, echelon parking, and block paving attracted plenty of positive comments. Despite the fact that many stated that the area was now more attractive there was concern about ‘weeds and rubbish’ in the planters. The planters were provided on the undertaking that the local community would maintain them.

**Children**

Eighty-three per cent of the child respondents stated that the home zone was now ‘better’ than before, but 11% stated that it was ‘worse’, and the remainder ‘the same’. The range of opinions of the appearance of the area was similar. The surfacing of the shared surfaces, asphalt with coloured chippings, was liked for its visual effect, but some thought that walkers could trip on the coloured chippings. Some stated that the area was now cleaner and others ‘liked the flowers’ in the planters.

#### 5.2.2 Friendliness of the street

Respondents were asked in the ‘before’ and ‘after’ surveys how many people they knew by name within the home zone. In the ‘after’ survey, respondents, on the whole, knew more people by name than they did before (Figure 5.4). This might have arisen from the number of street parties held, which were made possible by the home zone.

### 5.1.6 What children liked about living in their street

All child respondents gave several responses to what they liked about living in the area in both ‘before’ and ‘after’ surveys. Surprisingly, there were fewer mentions in the ‘after’ survey of the closeness of schools, shops and facilities, the friendliness of the area and its quietness. Mentioned for the first time in the ‘after’ survey were the area being ‘nice’ and that it had ‘no pollution’ (Table 5.1).

#### Table 5.1 What children liked about living in their street

<table>
<thead>
<tr>
<th>Children liked</th>
<th>‘Before’</th>
<th>‘After’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close to school/ships/facilities</td>
<td>60%</td>
<td>41%</td>
</tr>
<tr>
<td>Friendliness of the area</td>
<td>73%</td>
<td>50%</td>
</tr>
<tr>
<td>Can play</td>
<td>7%</td>
<td>14%</td>
</tr>
<tr>
<td>No pollution</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td>Nice house/area</td>
<td>0%</td>
<td>23%</td>
</tr>
<tr>
<td>Quiet</td>
<td>33%</td>
<td>14%</td>
</tr>
<tr>
<td>Safe</td>
<td>0%</td>
<td>5%</td>
</tr>
</tbody>
</table>

*More than one response was possible.*

### 5.1.7 What children disliked about living in their street

The reduction in traffic, the controlled parking zone, and the visual enhancement of the area resulted in fewer negative comments from child respondents on traffic, parking and appearance/cleanliness of the area than in the ‘before’ survey. Respondents also appeared more positive about living accommodation. The lack of play area was a concern for a few respondents, as was a new flat development, which they felt would not enhance the area and would necessitate the removal of some local facilities (i.e. shops) (Table 5.2).

#### Table 5.2 What children disliked about living in their street

<table>
<thead>
<tr>
<th>Children disliked</th>
<th>‘Before’</th>
<th>‘After’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too many kids/gangs/bad/violent behaviour</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>Vandalism</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Looks horrible/dirty/glass/needles</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Traffic/lorries/crossing roads</td>
<td>27%</td>
<td>10%</td>
</tr>
<tr>
<td>Nothing to do/boring</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Bullies</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Noise</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Parked cars</td>
<td>13%</td>
<td>0%</td>
</tr>
<tr>
<td>Drugs/drink</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>People</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>Accommodation</td>
<td>13%</td>
<td>0%</td>
</tr>
<tr>
<td>Nothing</td>
<td>0%</td>
<td>15%</td>
</tr>
<tr>
<td>Other</td>
<td>27%</td>
<td>0%</td>
</tr>
<tr>
<td>New flat development</td>
<td>–</td>
<td>10%</td>
</tr>
<tr>
<td>Lack of play area</td>
<td>–</td>
<td>10%</td>
</tr>
</tbody>
</table>

*More than one response was possible.*

**5.2.2 Friendliness of the street**

Respondents were asked in the ‘before’ and ‘after’ surveys how many people they knew by name within the home zone. In the ‘after’ survey, respondents, on the whole, knew more people by name than they did before (Figure 5.4). This might have arisen from the number of street parties held, which were made possible by the home zone.

In the ‘after’ survey, 42% of respondents thought that people in their street were more friendly, but 58% thought that there had been no change in the friendliness.
5.2.3 What people liked about living in their street

The main things respondents liked about living in their street/area (Figure 5.5), with some strengthening of opinion in the ‘after’ survey, were:

- It was a quiet/peaceful/nice area (almost half of respondents in the ‘after’ survey).
- It was close to public transport (nearly one third of respondents).
- It was close to the shops and amenities, or just ‘conveniently located’ (about one quarter each).
- There were good neighbours (nearly one third of respondents).

One-tenth of respondents in the ‘after’ survey (down from one-fifth in the ‘before’ survey) thought that access to shops/local amenities was easy, possibly owing to the combination of traffic calming features and the changes in traffic management already described. The opinion that the properties were ‘nice’ was also mentioned less in the ‘after’ survey.

5.3 Traffic, driver behaviour and safety

5.3.1 Measured changes in traffic flows

Mean daily (24-hour) two-way vehicle flows on a sample of roads in the home zone were measured before (October 2000) and after (May 2004) scheme installation; they are summarised in Table 5.3 for the five monitoring positions. Average hourly vehicle flows on weekdays, Saturdays and Sundays at each location are presented in Appendix A.

Some minor problems were encountered with the data collection, (e.g. gaps in the flow record due to vehicles parked on the detector tubes) during both ‘before’ and ‘after’ monitoring. It was therefore necessary to edit the raw data and use only data that appeared to be unaffected. Some small scale errors may have been undetected though these would have been so small and as to affect the overall results.

The ‘before’ 2-way flows on Hastings Road, east and west of Broughton Road, were about 900 and 2400 vehicles per day respectively. Flows averaged about 1500 vehicles per day on Broughton Road and Hartington Road, and about 700 vehicles per day on Denmark Road.

The closure of the western section of Hastings Road, just to the west of the junction with Hartington Road, had a substantial impact on vehicle flows. The mean daily 2-way flow on this section fell by 82% from almost 2400 to just 400 vehicles per day.

Figure 5.5 What people liked about living in their street
Table 5.3 Summary of ‘Before’ and ‘After’ traffic flows

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean daily flow</th>
<th>Flow change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before’October</td>
<td>‘After’May</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>2004</td>
</tr>
<tr>
<td>Broughton Road (treated street)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound</td>
<td>709</td>
<td>614</td>
</tr>
<tr>
<td>Southbound</td>
<td>823</td>
<td>435</td>
</tr>
<tr>
<td>Two-way</td>
<td>1532</td>
<td>1049</td>
</tr>
<tr>
<td>Denmark Road (treated street)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound</td>
<td>185</td>
<td>283</td>
</tr>
<tr>
<td>Westbound</td>
<td>471</td>
<td>519</td>
</tr>
<tr>
<td>Two-way</td>
<td>656</td>
<td>802</td>
</tr>
<tr>
<td>Hartington Road (treated street)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound</td>
<td>969</td>
<td>180</td>
</tr>
<tr>
<td>Southbound</td>
<td>567</td>
<td>201</td>
</tr>
<tr>
<td>Two-way</td>
<td>1536</td>
<td>381</td>
</tr>
<tr>
<td>Hastings Road (east of Broughton Road) (treated street)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound</td>
<td>505</td>
<td>329</td>
</tr>
<tr>
<td>Westbound</td>
<td>397</td>
<td>345</td>
</tr>
<tr>
<td>Two-way</td>
<td>902</td>
<td>674</td>
</tr>
<tr>
<td>Hastings Road (west of Broughton Road) (treated street)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound</td>
<td>1096</td>
<td>218</td>
</tr>
<tr>
<td>Westbound</td>
<td>1281</td>
<td>217</td>
</tr>
<tr>
<td>Two-way</td>
<td>2377</td>
<td>435</td>
</tr>
</tbody>
</table>

5.3.2 Measured changes in traffic speeds

The changes in mean and 85th percentile speeds at the five monitoring positions before and after the introduction of the home zone are shown in Table 5.4. The 85th percentile speed is the speed below which 85% of vehicles travel.

Table 5.4 Summary of ‘Before’ and ‘After’ traffic speeds

| Location                                | Vehicle speed | Speed change |
|                                        | Mean 85%ile  | ‘After’ 85%ile | ‘After’–’Before’ 85%ile |
|                                        | Mean 85%ile | Mean 85%ile | (mph)             |
|                                        | Mean 85%ile | Mean 85%ile | Mean 85%ile | (mph) |
| Broughton Road (treated street)         |              |             |               |
| Northbound                              | 20.1         | 15.3        | 7.8 (-40%)    |
| Southbound                              | 20.6         | 14.0        | 6.6 (-43%)    |
| Two-way                                 | 20.4         | 14.3        | 6.1 (-38%)    |
| Denmark Road (treated street)           |              |             |               |
| Eastbound                               | 14.2         | 14.0        | 0.2 (+1%)     |
| Westbound                               | 15.1         | 15.3        | 0.2 (+1%)     |
| Two-way                                 | 14.8         | 14.8        | 0.0 (0%)      |
| Hartington Road (treated street)        |              |             |               |
| Northbound                              | 20.3         | 13.5        | 6.8 (-34%)    |
| Southbound                              | 21.7         | 20.7        | 1.0 (-5%)     |
| Two-way                                 | 20.8         | 14.5        | 6.3 (-38%)    |
| Hastings Road (east of Broughton Road) (treated street) | | | |
| Eastbound                               | 20.0         | 18.6        | 1.4 (-7%)     |
| Westbound                               | 20.3         | 18.0        | 2.3 (-12%)    |
| Two-way                                 | 20.1         | 18.3        | 1.8 (-9%)     |
| Hastings Road (west of Broughton Road) (treated street) | | | |
| Eastbound                               | 20.1         | 15.9        | 4.2 (-21%)    |
| Westbound                               | 18.7         | 16.1        | 2.6 (-14%)    |
| Two-way                                 | 19.5         | 16.0        | 3.5 (-19%)    |

The largest reductions in mean and 85th percentile speeds were achieved on Broughton Road and Hartington Road. On Broughton Road, the mean speed decreased by 6.1 mph to 14.3 mph and the 85th percentile speed was reduced by 7.9 mph to 18.6 mph. Similarly, in Hartington Road the mean speed decreased by 6.3 mph to 14.5 mph and the 85th percentile speed was reduced by 7.7 mph to 19.5 mph.

On Hastings Road, reductions were smaller: east of Broughton Road the mean speed was reduced by 1.8 mph to 18.3 mph and the 85th percentile speed was reduced by 2.2 mph to 23.4 mph. West of Broughton Road, the mean speed was reduced by 3.5 mph to 16.0 mph and the 85th percentile speed was reduced by 3.0 mph to 21.1 mph.

There was little change in mean and 85th percentile speeds on Denmark Road after completion of the home zone. It is noted however that at the chosen monitoring position in Denmark Road, the ‘before’ mean and 85th percentile speeds of 14.8 and 19.1 mph respectively were already low.

Table 5.5 shows, before and after scheme installation, the proportion of vehicles exceeding a given speed on Broughton Road, Denmark Road, Hartington Road and Hastings Road:

- On Broughton Road, the percentages of vehicles exceeding 10 mph, 15 mph and 20 mph were reduced from 94%, 77% and 47% respectively to 80%, 32% and 8%.
involved a driver not giving way. While in a car, three involved parking and the other respondents said they had been involved in near misses involved in an accident during the previous year, but four respondents reported being involved in an accident while in a car, five while walking and two while cycling. Twelve said that they were involved in near misses, five in an accident while walking, and four involved in a near miss while walking.

5.3.3 Accidents and near misses mentioned in interview surveys

In the 'before' survey, nine respondents mentioned that they had been involved in accidents during the previous year, eight in a car and one while walking (Table 5.6). Twelve said that they were involved in near misses, five in a car, five while walking and two while cycling. Respondents mentioned 18 accidents during this period, two-thirds being reported as being owing to speeding cars.

In the 'after' survey, no-one said that they had been involved in an accident during the previous year, but four respondents said they had been involved in near misses while in a car. Three involved parking and the other involved a driver not giving way.

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage of vehicles exceeding:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Period</td>
</tr>
<tr>
<td>Broughton Road (treated street)</td>
<td>Before</td>
</tr>
<tr>
<td></td>
<td>After</td>
</tr>
<tr>
<td>Denmark Road (treated street)</td>
<td>Before</td>
</tr>
<tr>
<td></td>
<td>After</td>
</tr>
<tr>
<td>Hartington Road (treated street)</td>
<td>Before</td>
</tr>
<tr>
<td></td>
<td>After</td>
</tr>
<tr>
<td>Hastings Road (east of Broughton Road) (treated street)</td>
<td>Before</td>
</tr>
<tr>
<td></td>
<td>After</td>
</tr>
<tr>
<td>Hastings Road (west of Broughton Road) (treated street)</td>
<td>Before</td>
</tr>
<tr>
<td></td>
<td>After</td>
</tr>
</tbody>
</table>

These results must be treated with caution as they are based on one year of respondents’ experience prior to the ‘before’ and ‘after’ surveys. Therefore, there is a chance of probability error and differences due to the comparatively rare occurrence of collisions. These incidents mentioned by respondents should also be weighed against STATS19 data in which ‘damage-only’ accidents are not recorded.

5.3.4 Residents’ perceptions of changes in traffic, driver behaviour and safety

When considering danger from road traffic, 87% of respondents thought that it was ‘very safe’ or ‘quite safe’ for adults walking or cycling in the home zone. Twelve per cent thought it was ‘not very safe’ or ‘not at all safe’ because of the amount and speed of traffic, less traffic enabling higher speeds, and difficulty distinguishing between ‘road and pavement’ in shared surface areas. For children walking or cycling, 76% of respondents thought it was at least ‘quite safe’, and 21% thought it was unsafe. The main reasons for the latter were stated as being unable to distinguish between ‘road and pavement’ and the amount/speed of traffic.

In the ‘before’ survey, 79% and 42% of respondents thought it was ‘very’ or ‘fairly’ safe for adults walking and cycling respectively. The corresponding figures for children walking and cycling were 42% and 20%. The main danger for children and adults was thought to be the speed of traffic, although parked cars and bad parking were also significant problems.

Respondents were asked how much they were bothered by various traffic problems in their own street since the home zone was introduced, and whether those problems had increased or decreased as a result of the home zone. The traffic problems asked about were the speed and amount of traffic; danger to children from traffic; cyclists; the effects of traffic on noise and air quality; lorries; parking problems; and poor driving standards/behaviour. Respondents were bothered particularly by parking problems (37%), danger to children from traffic (25%) and the speed of traffic (23%).

Since the home zone was introduced, about three-quarters of respondents thought that the speed and amount of traffic had decreased (Table 5.7) and over two-thirds thought that there had been a decrease in both noise and air pollution from traffic. About 60% thought that there were fewer parking problems and less danger to children from traffic.
Respondents were asked how considerate motorists in the home zone were towards children and adults in various situations (Table 5.8) including children walking or crossing the road, children cycling, children playing near the street, adults walking or crossing the road, and adults cycling. In all cases more respondents thought drivers were more, rather than less, considerate.

### Table 5.8 Perception of the consideration of motorists towards child and adult road users

<table>
<thead>
<tr>
<th>Activity or category</th>
<th>'Very considerate' and 'Fairly considerate' combined (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road user activity</td>
<td>'Before' (B)</td>
</tr>
<tr>
<td>Children walking or crossing the road</td>
<td>30</td>
</tr>
<tr>
<td>Children cycling</td>
<td>20</td>
</tr>
<tr>
<td>Children playing on or near the street</td>
<td>18</td>
</tr>
<tr>
<td>Adults walking or crossing the road</td>
<td>45</td>
</tr>
<tr>
<td>Adults cycling</td>
<td>35</td>
</tr>
<tr>
<td>Average</td>
<td>30</td>
</tr>
</tbody>
</table>

5.4 Perceived danger from crime

#### Adults' views

With regard to danger from crime, 70% of adult respondents in the ‘before’ survey believed that adults were ‘very’ or ‘fairly’ safe walking or cycling. Sixty-one per cent thought that it was ‘very’ or ‘fairly’ safe for children walking and 56% for children cycling. By comparison, streets surrounding the respondent’s street were considered by 49% to be ‘very’ or ‘fairly’ safe.

In the ‘after’ survey, 82% of adult respondents believed that adults were ‘very’ or ‘fairly safe’ walking or cycling, and 73% thought that it was ‘very’ or ‘fairly’ safe for children walking and cycling.

In the ‘before’ survey, 82% of adult respondents believed that adults were ‘very’ or ‘fairly safe’ walking or cycling, and 73% thought that it was ‘very’ or ‘fairly’ safe for children walking and cycling.

In the ‘after’ survey, 37% thought that adults were ‘a lot’ or ‘a little’ safer walking or cycling and 39% thought that children were a lot’ or ‘a little’ safer walking or cycling.

In the ‘before’ survey, 29% of respondents were victims of crime in their street within the previous year. Car crimes were the most frequent and forty-five per cent of the respondents were members of a Neighbourhood Watch scheme. In the ‘after’ survey, 20% of respondents had been a victim of crime in the home zone in the previous year, a fall of 9%. These consisted of 8 car crimes, 6 household crimes and 1 mugging. This indicates that crimes were still occurring, but possibly at a lower rate. Forty-three per cent of respondents were now in a Neighbourhood Watch scheme.

About half of respondents thought that it was unsafe for children to play/spend time in the street because of ‘stranger danger’, particularly for pre-school/infant school-age children. About one-fifth of respondents thought that there was danger from other crime for children playing in the street, including mugging and assault.

#### Children's views

Of the 22 children who used bikes, one said that they cycled to school. Regarding bicycle crime, 6 children mentioned this was a concern, 7 children were ‘not worried much’ and 5 were ‘not worried at all’ about their bike being stolen. Five children said that it was more fun and 8 said it was ‘about the same’ cycling in the home zone compared with before scheme installation.

5.5 Using the street

Before the home zone was introduced, adult respondents were asked about who should have priority in their streets. Fifty-seven per cent said that pedestrians should have priority, while 34 per cent said that pedestrians, cyclists and motorists should have equal priority.

In the ‘after’ survey, these expectations were only partially met. Respondents were asked who takes priority in practice in the home zone streets. Thirty-nine per cent of respondents felt that pedestrians and motorists had equal priority, 42% felt that motorists take priority and 15% said that pedestrians take priority.

Forty-eight per cent of respondents thought that the ease of day-to-day journeys within the home zone were unchanged, but only 8% thought that their journeys were more difficult. Three respondents blamed the Hastings Road barrier for the latter because they had to make a detour.

5.5.1 Walking

Eighty-two per cent of respondents said that they walk to the shops ‘at least twice a week’ along streets in the home zone, with over half going to the shops ‘daily’ or ‘every weekday’. Almost all the respondents (90%) said that the introduction of the home zone had made ‘no difference’ to how often they walked, though all but two of the remainder said that they walked more often.

Half of the respondents thought that walking within the home zone was now ‘more pleasant’, the main reasons being less traffic, attractive surroundings and pleasant environment, better lighting and better surfaces to walk on. However, 43% perceived no change. Those who thought walking was now less pleasant (5%) gave reasons such as parking on/narrower pavements (e.g. having to push a ‘buggy’ in the road) and dislike of the colour of the shared surface.
5.5.2 Cycling

**Adults**

Twenty-five per cent and thirty per cent respectively of respondents in the ‘before’ and ‘after’ surveys said that they owned or had access to a bicycle. In the ‘after’ survey, one respondent cycled to work daily. A further twelve respondents rode at least occasionally on various journeys.

Twenty-three of the 29 respondents who had access to a bicycle said that the introduction of the home zone had made ‘no difference’ to how often they cycled. Five said that they cycled ‘more often’, none said that they cycled less.

Sixteen respondents thought that cycling in the home zone was ‘more pleasant’ than before for similar reasons as those given for walking. The remainder, 11 respondents, thought that cycling in the home zone was ‘no different’ than before.

**Children**

Eighteen children either had a bike or one that they could borrow. Of these, three used their bike more often, six less often and eight about as often after scheme installation. One was unsure.

5.5.3 Driving

Two-thirds of respondents living within the home zone had access to a car or van. About one-third (34%) used a car/van along streets in the home zone daily/every weekday to go to work and 16% drove children every weekday to school/nursery/playgroup. Eighty-seven per cent of these respondents said that the home zone had made no difference to how often they drove their car or van. Seven said that they drove less often and one said that they drove more often.

Nearly half (44%) of the car/van users said that they had changed the way they drove on roads within the home zone since its introduction, almost all by driving more slowly / carefully. Two had changed their route.

Almost 60% of the car/van users thought that driving within the home zone was more pleasant than before. The main reasons given were less traffic, less parking / easier to negotiate and better forward visibility (e.g. because of less parking). Thirty-one per cent thought that it had made no difference to how often they drove their car or van. Seven said that they drove less often and one said that they drove more often.

5.5.4 Activities in the street / outside the home

**Adults**

Respondents were asked how often they spent time outside their house engaged in various activities. The most frequent daily activities were said to be chatting to neighbours/friends (20% of respondents) and gardening at the front of the home (10%). Regarding activities done occasionally, 61% of respondents chatted to neighbours/friends, 50% cleaned or decorated the home, 48% gardened at the front of the home and 39% washed/maintained the car. Seventy-nine per cent, however, said that they spent no more time than before outside the home, with the remainder spending more time.

**Children**

The most popular outdoor activities were football (7 respondents), hide-and-seek (5 respondents) and chasing games, riding bikes/scooters and chatting/‘hanging out’ (4 respondents each).

5.5.5 Children in the street

In the ‘before’ and ‘after’ surveys, respondents had a total of 69 and 54 children respectively. The school ages of the children are shown in Table 5.9, along with the distribution from the ‘before’ survey. The proportions of young (pre-secondary school) and older children were similar in the two samples.

<table>
<thead>
<tr>
<th>Type of school</th>
<th>‘Before’</th>
<th>‘After’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-/nursery school</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Infant/Primary school</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>Secondary school</td>
<td>33</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Adults’ views**

The respondents were asked in the ‘before’ survey where the children played/spent time outdoors. Seventy-two per cent and forty-six per cent respectively of the children spent time in their own and someone else’s back garden, and 71% spent time in an open space (more than one answer was possible). Thirty-four children (49%) played in the street, of which 12 played outside their home and 11 each played in their own street away from the home and in another street. Small numbers (six or less) spent time in their own or someone else’s front garden, in a play area or parking area, or around doorways, entrances or local shops. Three children never spent time outdoors.

In the ‘after’ survey, it was reported that 42% and 31% respectively of the children played/spent time outdoors. Seventy-two per cent and forty-six per cent respectively of the children spent time in their own and someone else’s back garden, and 71% spent time in an open space (more than one answer was possible). Thirty-four children (49%) played in the street, of which 15 played outside their home and 11 each played in their own street away from the home and in another street. Small numbers (four or less) spent time in their own or someone else’s front garden, or in a local play area. Two children never spent time outside.

Respondents were asked how often their children played in the street. In the before survey, they reported that 55% of the children often or occasionally spent time in the street, but 43% never did so. In the ‘after’ survey, this had increased slightly to 64% and 31% respectively. Thirty per cent of respondents said that their children spent more time in the street since it became a home zone, but 53% of respondents said that there had been no change.

Respondents in the ‘before’ survey were asked whether children should play in the street ‘if it is safe enough’. Fifty-three per cent thought they should not, stating that...
‘they would not be safe enough’ (23 respondents), that ‘they should play in parks’ (15 respondents), ‘the amount of traffic is unsafe’ (13 respondents), ‘children run across the road’ / ‘need to be supervised’ (2 each), and ‘cars are too fast’ / ‘parked cars’ / ‘problem with bullying’ (1 each).

Forty-one per cent thought the children should play in the street because ‘they will meet other children more freely’ (10 respondents) ‘would give them more freedom’ (9 respondents), ‘adult would know that they are safe’ (8), there is ‘no where else for them to go’ (7), they ‘don’t have a garden/garden not big enough’ (5) and they are ‘not safe in the parks’ (1).

Five per cent had mixed feelings about the issue because ‘the amount of traffic is unsafe’ (3 respondents), they ‘don’t think it will be safe enough’ (3) and ‘children run across the road’ (1).

In the ‘after’ survey, respondents were asked whether children should play in the street now that it was a home zone. Thirty-four per cent thought they should because it was safer than before, citing mainly social interaction was good for them and that ‘it is the idea of a home zone’. Forty-five per cent thought the children should not play in the street, mainly because of danger from traffic, ‘stranger danger’ and a street being inappropriate as a place to play. Twenty-one per cent had mixed feelings saying that, for example, children would be better off playing in the park.

Respondents were asked how safe they thought it was for children to play/spend time unsupervised by an adult in their street since it became a home zone. Ninety-five per cent thought it was unsafe for pre-school/infant school-aged children to play unsupervised in the street. The main dangers were thought to be the speed of traffic, 64%, the amount of traffic, 48%, and ‘stranger danger’, 24%. Eleven per cent were concerned about mugging or physical assault, and 3% were concerned about bullying from other children. The results were similar to those from the ‘before’ survey.

Seventy-four per cent of respondents thought that it was unsafe for primary school-aged children to spend time unsupervised by an adult in the street since it became a home zone. The main dangers were again thought to be the speed of traffic (53%), the amount of traffic (40%) and ‘stranger danger’ (35%). Mugging or physical assault was a concern for 7% of respondents. However, 22% of respondents thought it was ‘fairly safe’ for primary school-aged children to spend time unsupervised in the street since it became a home zone. None mentioned that they considered it ‘very safe’. Again, the results were similar to those from the ‘before’ survey.

Sixty-one per cent of respondents thought it was at least ‘quite safe’ for secondary school-aged children to spend unsupervised in the home zone streets, but 32% thought that it was unsafe, again because of the speed/ amount of traffic and ‘stranger danger’. In the ‘before’ survey, 42% thought it was unsafe for the same reasons.

Children’s views

The most popular places for playing were in the street outside their home (7 child respondents) and in their own back garden/yard (6 children). Other places were someone else’s back garden, open spaces, in another street or play area in own street (each 3 children), and someone else’s front garden, play area in other street, in own street but not outside their home, and outside other local amenities (all one child).

Of the 22 children, 19 had friends close by and 13 played or spent time with their friends near their home. Of these 13, seven did so at least twice a week. All but two children spent about the same time outdoors as they did before the scheme was installed. The most popular pursuits were football (7 children), hide and seek (5), chasing games, riding bikes/scooters and chatting/hanging out (4 each).

Of the nine children who did not play outside near their home, 8 played inside their home and 6 in someone else’s. Forty spent time outdoors away from their own street and one spent time elsewhere indoors. Six of these nine children, however, would have liked to spend time outdoors around their home, but they said that they would not know what to do, they didn’t know other children, they had received complaints from residents, or they were not allowed.

Five children mentioned that the creation of the home zone and shared space allowed them to carry out activities they could not before. For example, they could now attend street parties, and play or walk in the street.

Of all 22 children, only three had changed where they spent time outdoors since the area became a home zone; two of these said it was because they were older, and the third said it was safer and they could play in an area where they couldn’t not before. Three-quarters of the children thought that it was about as much fun to spend time outdoors as before.

Twenty-two children answered a question in the ‘after’ survey regarding their journey to school. Eighteen children said that their journey to school was the ‘same as before’ and four thought it ‘was better’ because there was ‘less traffic’ / ‘quieter’.

5.6 Accidents

Information on injurious accidents within the home zone area was taken from the STATS19 database. The ‘before’ period (January 1st 1997 to December 31st 2001) covered the five years prior to the start of scheme installation. No ‘after’ data were available at the time of writing, but data for an ‘interim’ period covering nearly two years during the phased introduction of the home zone from February 2002 were collected.

In the ‘before’ period, seven accidents were identified, six slight and one serious accident involving a pedestrian. Of the seven, four were junction accidents, two were pedestrian accidents, and a single vehicle accident involved a moped.

During the ‘interim’ period (February 2002 through December 2003), two accidents resulting in slight injury were recorded within the home zone, one involving a pedestrian and one with an unlit parked vehicle.

As indicated above, it is too early to attempt a meaningful analysis of the impact of the home zone on accidents. Even if there are changes in accident frequency, these are unlikely to be statistically significant because of the small numbers of accidents expected to be involved.
However, the data might help in the understanding of the types of accidents that may occur after the installation of a home zone, and highlight any problems associated with the zone operation. The data could also support information collected about perceived changes in safety.

6 Discussion

The Five Roads scheme is an example of a home zone introduced into existing streets, rather than being created as part of a new housing scheme. The area has many positive features promoting its selection as one of the DfT pilot home zone schemes. It was not too large, comprising about 400 households in a compact grid of streets, with residents in the zone having to drive less than 500m to reach the home zone boundary, and many living within 400m of a bus stop. All of the houses had front and rear gardens. Traffic travelled along the streets at relatively low speeds, though two streets were used as ‘run-runs’ to avoid signalled junctions on Uxbridge Road, with distributor roads forming the east and west boundaries of the home zone. The streets were congested with parked vehicles, some belonging to commuters, and this, in part, contributed to the low speeds. The home zone concept was actively promoted by the residents’ association and the Borough Council, and was supported by the majority of the community before and after the implementation of the scheme. The prospect of a home zone encouraged a culture of street activity, such as street parties and barbecues, some being held to publicise the proposals.

The home zone scheme was not designed to radically change the appearance of all the streets within the zone. The aim was to build on the existing home zone characteristics of the area, to formalise the change in expectations of shared road space with boundary signing, to change driver behaviour, improve safety for vulnerable road users and to create a ‘sense of community’.

Home zone boundary signing

A 20 mph zone was established at the boundary of the Five Roads home zone and artwork incorporating the street name was fitted to each of the gateway planters. The standard home zone signs, ‘home zone’ and ‘home zone ends’ signs (Figure 3.2) from the Traffic Signs Regulations and General Directions 2002 (DfT, 2002b) were used.

Recent design guidelines (IHIE, 2002) suggest that the target speed of 10 mph within home zones will be achieved more easily where there is a stepped reduction in speed created by a 20 mph zone surrounding the home zone. If, as in the Five Roads, the start of 20 mph zone is the same as, or very close to, the start of the home zone, the message to drivers may become confused and the ‘home zone’ element may be overlooked. Although measured mean speeds fell comfortably below 20mph, the target speed was not achieved. More intervention would be needed, such as frequent measures giving horizontal deflection, but in this location it would probably be at the expense of parking spaces, which were at a premium because little off-street parking was available.

However, it is not clear what currently available signing alternative would have served this design of scheme better. The ‘20 mph zone’ element could not be omitted because the 20 mph zone was needed to allow the use of traffic calming measures within the home zone, such as the raised tables, without separate signing.

Road closure

The introduction of a point closure near the western end of Hastings Road eliminated the problem of ‘rat running’ vehicles, reducing traffic flows by up to 80% on the worst affected roads (Hartington Road, Broughton Road and the western section of Hastings Road). This feature alone, with support from the residents, was an easy way of assuring the viability of a home zone in this area by cutting peak flows to 100 vehicles per hour or lower. This flow level is regarded as a reasonably safe limit for shared surfaces where different classes of road user have equal priority.

Controlled parking

The introduction of the controlled parking zone was designed to reduce/eliminate parking by commuters using West Ealing station and people shopping on Uxbridge Road because both groups made it more difficult for residents to park conveniently. The number of spaces was maintained as far as possible by introducing echelon parking. This also served as a traffic calming measure by arranging spaces on alternate sides of the street. Shoppers’ bays were retained, but charging was introduced. Despite the retention of a similar number of spaces, parking was still seen to be a problem by about one-third of residents interviewed, particularly in evenings and at weekends. Other main reasons for dissatisfaction with parking were ‘fewer spaces’ and ‘visitors having to pay’.

The shared surface

Raised shared surfaces were installed on stretches of all five roads to encourage a change in driver behaviour. It was, however, possible to retain parking on these sections. Some residents, however, were worried that they would engender a false sense of security, especially on the part of children playing in the street, and a number of residents were unsure as to who had priority on these sections.

Vehicles travelling along the shared surface had to negotiate the staggered parking areas and were generally restricted to single lane working. Speeds were reduced to below 20mph (i.e. 15-18mph depending on street), but a more tortuous vehicular route would be needed to achieve home zone target speeds of about 10 mph.

The management of parking within the shared surface area did not appear to be a major issue in this scheme, but it is likely to occur in other home zone schemes and highlights the need for a simple and aesthetically acceptable system that is clear to all.
7 Summary and conclusions

Background

The Five Roads area in the London Borough of Ealing is one of nine home zone schemes in a pilot programme set up by the Department for Transport (DfT). The programme’s aim is to evaluate the potential benefits, particularly with regard to shared road space, of a wide range of home zones in different parts of England and Wales.

Situated in West Ealing, the home zone lies close to Ealing town centre and the Borough’s main shopping area. The zone comprises five roads in a grid pattern: Hastings Road, Hartington Road, Denmark Road, Broughton Road and Arden Road, and is bordered by the main railway line from London Paddington, A4020 Uxbridge Road, St Leonard’s Road and Drayton Green Road on the north, south, east and west respectively. Containing about 400 households, mostly owner-occupied, the area is predominantly late Victorian terraced and semi-detached housing with front and rear gardens. There are also two low-rise apartment blocks built during the 1930s and 1950s. The nearest schools are within 1km of the zone, and a number of businesses (including shops) are situated on the edge of the area, mainly on Uxbridge Road.

The main problem in the area of the home zone prior to scheme installation was ‘rat-running’ traffic. Vehicles were trying to avoid delays at the signalled junctions of Drayton Green Road and St Leonard’s Road with Uxbridge Road. There were also parking problems for residents exacerbated by shopper and commuter parking, some commuters using the nearby West Ealing station. There were no play facilities for children in the area, and access to a nearby park and green involved crossing the very busy Uxbridge Road.

Partners in the project included the London Borough of Ealing, the Five Roads Forum (5RF) formed by the Residents’ Association, together with engineering consultants and landscape architects appointed by the Borough Council. During the period 1998-2001, prior to scheme installation, the following took place:

- Street meetings by residents to discuss traffic and other problems, and possible solutions including the home zone concept. These were followed by submission of ideas and petitions to the Borough Council.
- Creation of Five Roads Forum and launch of a newsletter.
- Establishment of Project Board comprising residents, council officers, councillors and officer advisors. The role was to oversee the project, to formally include the residents in the decision-making process and to appoint landscape architects.
- On-street surveys of traffic, parking and physical features of the area. A photographic survey was undertaken by the residents and landscape architects to record things they liked and disliked in the area.
- Leaflet distribution and questionnaire surveys on parking and street environment.
- An open-air exhibition (including children’s activities and barbecue) to display the results of the area surveys and possible solutions to the problems identified.
- Formal consultation on traffic calming and landscaping proposals as well as options for parallel or echelon parking. A traffic impact assessment of these options on the home zone and surrounding road network was undertaken. The consultation included residents in the immediate area around the home zone to cover issues such as external impact on traffic and parking, and also covered a proposal for a controlled parking zone.
- Committee approval for the scheme was secured in early 2001 following majority support for the home zone (with preference for echelon parking) from residents and local businesses. This was followed by meetings with residents to review the plans for each road.
- Meetings with residents to review detailed plans for each road and 5RF workshops on cosmetic aspects of gateway design.

Scheme installation began in September 2001, followed by implementation of the controlled parking zone in April 2002. Following further consultation, a gated barrier to prevent ‘rat-running’ was installed on Hastings Road as a 6-month trial measure in January 2003, and was made permanent later in the year. Changes were also made to the controlled parking zone. The home zone, which cost £375,000, was launched in April 2004.

TRL was commissioned by the DfT to assess the effectiveness of the pilot home zone schemes in achieving the aim of home zones. Home zones should allow all road users to co-exist in a pleasant safe environment. As part of this process, TRL carried out ‘before’ and ‘after’ monitoring including interview surveys with adults and children, and collection of traffic flow, traffic speed and accident data. The ‘before’ surveys were carried out in October/November 2000 and March 2001, and ‘after’ surveys in March and May 2004.

Home zone measures

The measures included:

- Gateway features comprising a raised table and a planter with an artist-designed mosaic incorporating the street name.
- Areas of shared surface created by raising the road surface to footway level and resurfacing in asphalt with coloured chippings.
- A gated road closure at the western end of Hastings Road to prevent ‘rat-running’.
- A Controlled Parking Zone, and parallel parking replaced with a mixture of echelon and parallel parking (with groups of bays on alternate sides of the road to slow vehicles). Parking outside the marked bays was prohibited.
- Red block paving of varying area and shape at intervals across the street.
- Additional tree planting.
- Renewal and upgrading of the street lighting.
Residents’ support for the home zone scheme
Of 98 adult residents interviewed by TRL after scheme installation, about three-quarters:
- Supported the home zone, compared with two-thirds in the ‘before’ survey.
- Thought that the home zone had made the appearance of the streets more attractive.
- Thought that the streets were now safer from traffic.
  - About two-thirds thought that:
    - There was enough consultation.
    - Motorists were now more considerate towards pedestrians and cyclists.
    - Motorists were now more considerate towards children playing in the street.
    - Walking within the home zone was generally more pleasant than before.

Perceived advantages of the scheme
Residents were asked the same questions before and after scheme installation on perceived advantages of the scheme. The main ‘before’ expectations which were bettered in the ‘after’ survey concerned the amount of traffic (for 60% of respondents in the ‘after’ survey), the area’s appearance and general safety, noise and air pollution and drivers being more considerate.

Perceived disadvantages of the scheme
The main disadvantages perceived in both surveys were problems associated with parking (by over a quarter of respondents), e.g. non-residents parking within the home zone outside restricted times. About 10% of respondents identified new problems in the ‘after’ survey, i.e. with the shared areas (difficulty telling the road from the footway, and a false sense of security for children playing in the street), maintenance and quality of construction, and rubbish in the planters. Expected problems e.g. noisy children and originally proposed seating attracting undesirables largely did not arise.

Impact of the home zone on traffic flows and speeds
The gated closure of Hastings Road had the biggest impact on vehicle flows. Just before its installation there was a 10% reduction in traffic flows across the home zone. After installation, the two-way flow fell from 2400/day to 400/day on the western section of Hastings Road and from 1500/day to 400/day on Hartington Road. The flow on the eastern section of Hastings Road and on Broughton Road fell by about a quarter (to 700 and 1050 respectively) but on Denmark Road, the flow was up slightly to 800/day, possibly owing to some re-routing of traffic within the home zone.

Ideally, home zone streets should have two-way flows of no more than 100 vehicles per hour in the afternoon peak hour, when there can be the most conflict between vehicles and people, including children playing. The hourly flow was well below this level, except on Broughton Road which was slightly over the recommended level at 105 vehicles per hour.

Mean and 85th percentile speeds fell by 6-8mph on Broughton Road and Hartington Road, and by 2-3mph on Hastings Road, but there was little change on Denmark Road where speeds were already low. Across all monitoring positions ‘after’ mean and 85th percentile speeds were 15-18mph and 19-23mph respectively.

Before scheme installation, about half the vehicles exceeded 20mph. Denmark Road was an exception where about one-tenth exceeded this speed. After scheme installation, about one-tenth exceeded 20mph on average on Broughton Road, Denmark Road and Hartington Road, with one-fifth to one-third on Hastings Road.

Impact of the home zone on driver behaviour and perceived safety
Considering danger from road traffic, 87% of respondents thought that it was safe for adults walking or cycling in the home zone. Those who thought it was unsafe gave the reasons as the amount/speed of traffic, less traffic allowing higher speeds, and not being able to distinguish between the road and ‘pavement’. Three-quarters thought that the home zone was safe for children walking or cycling.

About 60% to 80% of respondents perceived the speed and amount of traffic as less problematic, though a quarter thought that parking problems had actually increased. About half of respondents perceived no change, or an increase, in poor driving standards/behaviour.

Nearly two-thirds of respondents thought that drivers were considerate towards children and adults in various situations (walking, cycling, children playing in the street) following scheme implementation, against only a third in the ‘before’ survey.

Impact of the home zone on perceived danger from crime
Over three-quarters of respondents believed that adults and children were safe from crime walking or cycling, against around two-thirds in the ‘before’ survey. Over one-third of respondents thought that adults and children were safer than before. In the year prior to the ‘before’ and to the ‘after’ survey, nearly 30% and 20% of respondents respectively were victims of crime, particularly car crime. About half of respondents still thought that young children were unsafe playing in the street because of ‘stranger danger’. In the ‘after’ survey, about half of the children who used a bike were not worried about their bike being stolen.

Impact of the home zone on using the street
About two-fifths of respondents thought that pedestrians and motorists now had equal priority in the street, which was slightly lower than in the ‘before’ survey.

Nearly half of adult respondents thought that the ease of day-to-day journeys within the home zone was unchanged. Nearly all respondents considered that the home zone had made no difference to how often they walked in the zone. Over 80% walked to the shops at least twice a week. Half of respondents thought that walking had become more pleasant, but over two-fifths perceived no difference.
Eighty per cent of adult respondents and nearly half of child respondents with a bike cycled in the home zone the same amount as before. Over half of adult respondents thought that it was more pleasant to cycle in the zone than before.

Of the two-thirds of respondents having access to a car/van, 87% drove as often as before, but nearly half changed the way they drove. Almost 60% thought driving in the zone was more pleasant than before.

Impact of the home zone on activities in the street
One-fifth of adult respondents when outside the house chatted to neighbours often and three-fifths occasionally chatted. One tenth gardened outside their home often and nearly half did so occasionally. The third most popular activity was washing/working on the car. Football was the most popular activity for children.

Impact of the home zone on children
Over three-quarters of respondents’ children played in their back garden and one-third played in someone else’s back garden. Over a quarter went to an open space. Half spent some time in the street, just over half of them outside their home. In the ‘before’ survey, a similar proportion reported playing in their back garden or in the street, but more used open spaces and other people’s back gardens. A slightly greater proportion of children, about two-thirds, reported playing in the street regularly in the ‘after’ survey than in the ‘before’. Fifty-three per cent of respondents in the ‘before’ survey were opposed to their children playing in the street for safety reasons, falling slightly to 45% in the ‘after’ survey.

Nearly all respondents thought that it was still unsafe after scheme installation for pre-school/infant school-age children to play in the street, the main reasons being the speed/amount of traffic and ‘stranger danger’. This was little changed from the ‘before’ survey. About three-quarters of respondents felt the same regarding primary school children in both surveys, the perceived dangers being the same as in the ‘before’ survey.

Child respondents said that the most popular places for playing were in the street outside their home or in the back garden. Nearly all of the children had friends close by with whom over two-thirds played near their home. The scheme had little impact on the amount of time spent outdoors. The most popular activity was football. Eighteen out of the 22 children interviewed said that the scheme had not made any difference to their school journey.

Accidents
Injury accident data within the home zone area were obtained from the STATS19 database for five years (1997-2001) before the start of scheme installation and for an interim period during construction (2002-03). No meaningful ‘after’ data were available at the time of writing. Seven ‘before’ accidents (one serious) were identified; four were junction accidents, two (including the serious accident) involved a pedestrian and one involved a mopед only. During the interim period, one involved a car and an unlit parked vehicle and one involved a car and a pedestrian.

DfT’s objectives
The DfT’s objectives are to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones, to come to a view on the need for additional legislation, and to identify and disseminate good practice guidance.

Meeting the study objectives
There were five main success criteria for Ealing Borough Council. These were as follows:

- Reduction of speed of traffic using the streets within the home zone.
- Provision of increased opportunities for children’s outdoor play.
- Reduction of injurious accidents of all road users.
- Increased street based activity and neighbourhood involvement.
- Improved perception of road safety for all road users.

Monitoring the home zone pilot has shown the following:

- There has been a reduction in measured speed and vehicle flow.
- All children thought that it was ‘more fun’ or ‘the same’ playing outside their home.
- The effect on injurious accidents could not be quantified because the time since introduction was short, however the reduction in incidents mentioned by respondents was encouraging.
- Respondents thought that the people in their street were more friendly.
- It was thought to be safer from traffic danger for both adults and children.

Conclusions
1. The surveys carried out indicated that the appearance of the home zone in Ealing has been improved. The main attractive elements mentioned were the plants, flowers, trees, and the paving of the road.
2. The home zone measures maintained a similar number of parking spaces and the Controlled Parking Zone was designed to reduce parking by commuters, but a third of respondents thought that parking was still a problem.
3. There was little change in the amount of time that residents spent outside, but walking in the home zone was thought to be more pleasant by about half of residents.
4. About a third of respondents thought that children should play in the street after it became a home zone. Just under a half thought that they should not play in the street because they were concerned about the amount of traffic.
5. Vehicle speeds were relatively low before the home zone was installed and the measures used had the effect of reducing the speeds by about 2 to 8 mph to a level acceptable for a 20 mph speed limit. Further measures would be required to reduce mean speeds to below 10 mph on all streets. Nearly two-thirds of respondents thought that enough changes had been made to the streets to make the home zone work in practice.
Traffic flows in the area were significantly reduced due to the point closure of Hastings Road which had the effect of re-routing much of the traffic.

Accidents were not a problem in home zone area. Accidents and near misses mentioned by respondents appeared to suggest that these type of incidents might have been reduced.

**8 Acknowledgements**

The work described in this report was carried out in the Transportation Division of TRL Limited. The authors are grateful to Wayne Duerden of the Department for Transport, Evan Bates of the London Borough of Ealing and Tony Singh of Mouchel Parkman for their help during the monitoring of the home zone scheme. Thanks are also due to Roger Layfield of TRL.

**9 References**


- **Other references**


Appendix A: Traffic flows by time of day

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(a) Broughton Road: ‘Before’ 2-way vehicle flow by time of day (weekdays) 2, 3, 9, 16 October 2000

(b) Broughton Road: ‘Before’ 2-way vehicle flow by time of day (Saturday) 14 October 2000

(c) Broughton Road: ‘Before’ 2-way vehicle flow by time of day (Sunday) 15 October 2000

Figure A1 Broughton Road – ‘Before’
No data for Sunday 23 May 2004 are available owing to parked vehicles

Figure A2 Broughton Road – ‘After’
(a) Denmark Road: ‘Before’ 2-way vehicle flow by time of day (weekdays)
2-6, 9, 11-13, 17-21 October 2000

(b) Denmark Road: ‘Before’ 2-way vehicle flow by time of day (Saturdays)
7, 14, 22 October 2000

(c) Denmark Road: ‘Before’ 2-way vehicle flow by time of day (Sundays)
8, 15 October 2000

Figure A3 Denmark Road – ‘Before’
(a) Denmark Road: ‘After’ 2-way vehicle flow by time of day (weekdays)
17-21 May 2004

(b) Denmark Road: ‘After’ 2-way vehicle flow by time of day (Saturday)
15 May 2004

(c) Denmark Road: ‘After’ 2-way vehicle flow by time of day (Sunday)
16 May 2004

Figure A4 Denmark Road – ‘After’
Figure A5 Hartington Road – ‘Before’
Figure A6 Hartington Road – ‘After’
Figure A7 Hastings Road (east of Broughton Road) – ‘Before’
(a) Hastings Road (east of Broughton Road): 'After' 2-way vehicle flow by time of day (weekdays)
17-21 May 2004

(b) Hastings Road (east of Broughton Road): 'After' 2-way vehicle flow by time of day (Saturday)
15 May 2004

(c) Hastings Road (east of Broughton Road): 'After' 2-way vehicle flow by time of day (Sunday)
16 May 2004

Figure A8 Hastings Road (east of Broughton Road) – ‘After’
(a) Hastings Road (W of Broughton Road): 'Before' 2-way vehicle flow by time of day (weekdays)
3-5, 11-13, 17-20 October 2000

(b) Hastings Road (W of Broughton Road): 'Before' 2-way vehicle flow by time of day (Saturday)
21 October 2000

(c) Hastings Road (W of Broughton Road): 'Before' 2-way vehicle flow by time of day (Sunday)
22 October 2000

Figure A9 Hastings Road (west of Broughton Road) – ‘Before’
(a) Hastings Road (west of Broughton Road): ‘After’ 2-way vehicle flow by time of day (weekdays)
17-21 May 2004

(b) Hastings Road (west of Broughton Road): ‘After’ 2-way vehicle flow by time of day (Saturday)
15 May 2004

(c) Hastings Road (west of Broughton Road): ‘After’ 2-way vehicle flow by time of day (Sunday)
16 May 2004

Figure A10 Hastings Road (west of Broughton Road) – ‘After’
Appendix B: Accidents

Information on injurious accidents within the home zone area was extracted from the database known as STATS19 (DfT, 2004). The ‘before’ period (January 1st 1997 to December 31st 2001) covered the five years prior to the start of scheme installation. No ‘after’ data were available at the time of writing, but data for an ‘interim’ period covering nearly two years during the phased introduction of the home zone from February 2002 were collected.

In the ‘before’ period, a total of seven accidents were identified, six of which resulted in slight injuries only; a further accident resulted in a serious injury to a pedestrian. The locations of the accidents and a brief description of their nature are as follows:

Broughton Road/ Denmark Road junction
- A collision caused by a car turning into the path of another car.

Hartington Road
- A car in collision with a pedestrian.

Broughton Road
- A car in collision with a pedestrian.

Hastings Road/ Hartington Road junction
- Two accidents involving cars turning into the path of another car.
- A single vehicle accident involving a moped.
- A shunt by a car into another car which was waiting to turn.

During the ‘interim’ period (February 2002 through December 2003), two accidents have been recorded within the home zone resulting in slight injury:

Hastings Road/ Broughton Road junction
- A car in collision with a pedestrian.
- After turning, a car collided with an unlit, parked goods vehicle.

As indicated above, it is too early to attempt a meaningful analysis of the impact of the home zone on accidents. Changes in accident frequency are unlikely to be statistically significant because of the small numbers of accidents expected to be involved. However, the data might help in understanding the types of accidents that may occur after the installation of a home zone and highlight any problems associated with the zone operation. The data could also provide support for information collected about perceived changes in safety.
Abstract

Home zones are residential areas where the built environment is designed to be places for people, not just for motor traffic. Their aim is to change the way that streets are used in order to improve the quality of life for residents including children and those that walk or cycle. A home zone allows a wide range of activities to take place in the street on space that was formerly considered to be exclusively for vehicles. Changes to the layout of the street should emphasise this change of use, so that motorists perceive they should give informal priority to other road users. Both hard and soft landscaping are appropriate.

The Five Roads area of Ealing is one of nine home zone schemes in a pilot programme set up by the Department for Transport (DfT). TRL was commissioned by DfT to assess the effectiveness of each pilot home zone scheme in achieving its aims. In order to determine their impact, a comprehensive ‘before’ and ‘after’ monitoring programme was devised. This included attitudinal surveys of residents both adults and children, collection of traffic flow, traffic speed, accident data and video recording. This report presents a comparison of the results of these ‘before’ and ‘after’ surveys and reaches a conclusion regarding the impact the home zone has had upon resident’s lives.

Related publications

TRL640  Pilot home zone schemes: evaluation of Morice Town, Plymouth by A Wheeler, A Tilly, D Webster, Y Rajesparan and S Buttress. 2005 (special price £10)
TRL633  Pilot home zone schemes: evaluation of Magor village, Monmouthshire by R Layfield, D Webster and S Buttress. 2005 (special price £10)
TRL626  Pilot home zone schemes: evaluation of Cavell Way, Sittingbourne by D Webster, A Tilly and S Buttress. 2005 (special price £10)
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TRL586  Pilot home zone schemes: evaluation of The Methleys, Leeds by R Layfield, L Chinn and D Nicholls. 2003 (special price £10)
TRL439  Traffic calming - a literature search on the design and performance of traffic calming measures by D C Webster. 2000 (price £40, code H)
TRL397  Traffic calming: Environmental assessment of the Leigh Park Area Safety Scheme in Havant by J Cloke, D Webster, P Boutler, G Harris, R Stait, P Abbott and L Chinn. 1999 (price £60, code L)
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