

# **Pilot home zone schemes: summary of the schemes**

**Prepared for Traffic Management Division, Department for Transport**

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## Executive Summary

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Home zones are residential areas designed with streets to be places for people, instead of just for motor traffic. The nine pilot home zone schemes are in Ealing (London), Lambeth (London), Leeds, Manchester, Magor Village (Wales), Nottingham, Peterborough, Plymouth and Sittingbourne (Kent). Although the home zone sites chosen are very different both in scale and type, none has particularly high vehicle flows and most have few accidents. Home zones are not principally safety schemes but more aimed at improving the quality of life.

TRL was commissioned by the Department for Transport (DfT) to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones. As part of this process, TRL carried out 'before' and 'after' monitoring including: interview surveys with adults and children; collection of traffic flow, traffic speed and accident data; video recording; air quality measurements and noise surveys. The 'before' surveys were carried out in 2000 and the 'after' surveys between 2002 and 2004. 'After' surveys were not carried out at the Lambeth and Peterborough schemes because the works were not completed on site within the monitoring period of this project.

### Home zone measures

The various home zone measures used at schemes included:

- Gateway features at the entrances to the zones.
- 20 mph speed limits in the zones.
- Replacing the parallel parking with echelon parking often on alternate sides of the road.
- Slowing vehicular traffic using measures such as chicanes and humps.
- Shared surfaces for pedestrians and traffic.
- Introducing community areas.
- Planting in the streets including trees, shrubs and flowers.
- Renewing and upgrading the streets including street furniture and lighting.
- Public art.
- Demolition and creation of new 'green streets' in Manchester.
- A Controlled Parking Zone in Ealing.
- A road closure in Ealing.
- A one-way street through the centre of Magor village.
- Cinema on the wall in Leeds.

### Residents support for the home zone schemes

There was substantial support for the home zones from the adult respondents, about two-thirds on average were positive. The lowest percentage (38%) in favour was at Sittingbourne, the highest was at Plymouth (76%), the average was 64%.

On average about three-quarters of adult respondents (see Figure 5.7) living within the home zones thought that the appearance of the streets were now more attractive (32% 'a lot more attractive', 41% 'a little more attractive'). The preferred elements mentioned were; shrub planting, flowers and trees (52%), paving of the road (19%), design (6%), clean/ tidy generally (5%). The completed home zones have, in the opinion of residents themselves, improved the visual amenity of where they live. This is one of the main reasons why the home zones are popular with local residents.

### Impact of the home zones on the availability of on-street parking spaces

There was a clear feeling from the 'after' questionnaires that many residents who were interviewed in Manchester, Plymouth, Ealing, Leeds and Magor regard parking within their home zone as an unresolved issue and felt that further controls or restrictions are needed. Many residents also thought that the home zones have increased parking problems. The local authorities are aware of the issues and a comprehensive parking survey was being carried out in Manchester to find solutions to their problem.

### Impact of the home zones on traffic speeds and traffic flow

#### Traffic speeds

The mean speeds were reduced on average by about 5 mph, to less than 15 mph. The largest speed reduction was at Sittingbourne (8 mph) and the lowest reduction was at Magor (2 mph) although this was partly due to the speeds already being low. The 85th percentile speeds were reduced on average by about 6 mph to less than 19 mph.

The percentage of vehicles exceeding 20 mph was reduced on average from 42% to 12%. The best reduction was at Plymouth where the reduction was from 56% to 10%.

Further measures would be required at all sites to reduce mean speeds to below 10 mph, however the practicality and desirability of further measures would need careful consideration.

Given that all nine home zones were retro-fit, the designers were constrained by the geometry of the existing built environment. This may have limited the opportunities to reduce speeds further.

#### Traffic flows

The average traffic flows have been reduced at all of the schemes except for Sittingbourne which is a *cul-de-sac* and showed no change. The largest change in flow was recorded at Ealing where the flow halved, mainly due to the road closure introduced into Hastings Road. In Magor the road to the Square was made one-way which contributed to the reduction of about a third at the scheme. The average reduction for all schemes was about a quarter.

Ideally, home zone streets should have two-way traffic flows of no more than about 100 vehicles per hour in the afternoon peak hour. Most of the roads within the schemes were within this criteria but there were about 130 vehicles per hour on Blake Grove in Leeds. There were also about 115 vehicles per hour recorded in Nobel Road in Nottingham. At Plymouth and Ealing flows were recorded of 100 vehicles per hour which is at the maximum. It should be noted that many of the sites had very low flows on many of the roads.

### **Impact of the home zones on driver behaviour and perceived safety**

When asked if motorists are more or less considerate to children playing since the home zones were introduced, 38% of respondents thought motorists were 'more considerate', and 8% thought motorists were 'less considerate' (see Figure 5.25). Fifty-three per cent thought that it was 'about the same' as before the home zones were introduced. In Plymouth and Ealing over 50% of respondents thought drivers were 'more considerate'. In Magor as many as 19% thought that drivers were less considerate.

On average, about three-quarters, 74%, of respondents thought that it was 'very safe' or 'quite safe' for adults who were walking or cycling in the home zones. Twenty per cent thought it was 'not very safe' or 'not at all safe', and gave the reasons as being too many parked cars (4%), vehicles travelling too fast (7%), and too much traffic (3%). Respondents were asked how safe they felt it was within the home zones for children walking or cycling. On average fifty-eight per cent thought it was 'very safe' or 'quite safe', 35% thought it was 'not very safe' or 'not at all safe'.

Before the home zones were built people and traffic were separated. The majority of residents consider that they can coexist safely in the same space.

### **Impact of the home zones on adult journeys and activities**

#### ***Walking and cycling***

On average, walking within the home zones was thought to be 'more pleasant' by about half, 44%, of respondents. On average, 80%, of those who had access to a bicycle said that the introduction of the home zones had made 'no difference' to how often they cycled within the home zone areas, though 10% said that they cycled 'more often'. The effectiveness of home zones as a measure to increase cycle use is limited given that they extend for a relatively limited area. Trips within the home zone may be too short to warrant cycling, longer trips would probably have a destination outside the home zone where traffic and road safety concerns would probably remain a deterrent.

#### ***Activities***

Overall there was a slight increase in the time spent outside the home since the home zones were introduced. The activities performed most often were chatting to friends (31%), gardening (22%) and watching children playing

(14%). Manchester, Plymouth and Ealing showed the highest increases where at least 20% spent more time outside their home.

### **Impact of the home zones on child outdoor activities and journeys to school**

#### ***Playing outdoors***

In the 'after' survey, respondents were asked whether children should play in the streets now that they are home zones. Forty-four per cent thought they should, because there is nowhere else to play; the parents know they are safe in the streets; social reasons and more freedom. Thirty-six per cent of respondents thought the children should not play in the street, because the traffic amount is unsafe; they should play in parks; it is not safe and the traffic is too fast.

#### ***Journey to school***

Children were asked questions regarding their journey to and from school. On average, 47% walked, 30% used a bus, 19% used a car, taxi or van and 4% cycled. The highest percentages of children walking to and from school were in Sittingbourne and Plymouth where 82% and 73% walked respectively. The lowest percentage that walked was in Magor which is probably due to the rural location of the scheme.

### **Road traffic injury accidents**

Road accidents were not a serious problem at any of the sites. At the seven sites where monitoring was completed, there was a total of 19 accidents in the five years before the home zones were introduced. This gives an average of about 0.54 accidents per site per year. As the accident numbers are small the 'after' accident analysis would require a further 5 years of data before any conclusions could be drawn as to the overall effect of the home zones on accidents. Preliminary accident data which was available when the scheme reports were written indicated that only one slight accident had occurred in any of the schemes in the 'after' periods. The single accident combined with an 'after' period of 49 site months is equivalent to 0.24 accidents per site per year. This is encouraging because it is about half the 'before' value.

### **Noise and air quality**

The lack of substantial changes in measured noise levels and air pollutant concentrations in Leeds are supported by the results of the interview survey in Leeds. About two-thirds of the respondents living in the home zones thought that traffic noise and traffic pollution in the street had not changed since the home zones were introduced. However, more of the remainder thought noise and pollution had decreased rather than increased and noise and pollution appeared to be less of a concern to residents in the 'after' survey than in the 'before' survey. In Ealing, about three-quarters thought that noise and pollution had decreased and about a quarter thought that they were the same as before. This reduction can be attributed to the amount of traffic in the zone being halved.

### **Relationship between the cost of schemes and residents' support**

The home zones varied in cost from £145,000 at Sittingbourne to £2,300,000 at Plymouth. The cost per property varied from £733 at Leeds to £5530 at Plymouth. However, the cost per property appeared to have little influence on the percentage of respondents who were in favour of the scheme.

It appeared that there was a relationship between the percentage of respondents who thought that walking in the home was 'more pleasant' and the percentage of respondents who were 'in favour' of their home zone after it had been installed. Social factors could have influenced their views.

Monitoring of the home zone pilot has resulted, on average, in the following:

- ✓ The appearances of the streets have been improved, 73% of respondents.
- ✓ There has been a reduction in measured speed, of up to 9 mph.
- ✓ Traffic flows in the zones have been reduced by traffic calming and traffic management.
- ✓ Pedestrian safety has been improved.
- ✓ Parking was managed by the use of angled parking.
- ✓ Nearly all respondents thought that the danger from crime was less or the same.
- There was little change in the time spent outside the home.
- There was little change in perceived noise and air pollution.



# 1 Introduction

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Home zones are residential areas designed with streets to be 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 streets. The outcome will be that they are places for people, including people who walk and cycle, and children, not just for vehicular traffic. Introducing a home zone will allow scope for a wider range of activities in the street space that was formerly considered to be for exclusive use by 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. 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 meet the needs and aspirations of the local residents. It also encourages residents to take 'ownership' of the area.

There are nine home zone schemes, Leeds, Manchester, Nottingham, Magor, Peterborough, Ealing, Lambeth, Sittingbourne and Plymouth, in a pilot programme set up by the Department for Transport (DfT). The programme's aim is to evaluate the benefits of a wide range of home zones in different parts of England and Wales. 'After' surveys were not carried out at the Lambeth and Peterborough schemes because the works were not completed on site within the monitoring period of this project. Therefore this report brings together the results from seven of the nine zones.

## 1.1 The report structure

- This introduction describes the development of the home zone concept in the UK and the DfT pilot home zone programme.
- Section 2 gives brief details of the streets forming the home zones and the consultation and implementation timetable.
- Section 3 describes the measures used to create the home zones.
- Section 4 provides details of the data collection.
- Section 5 considers the impact of home zones on residents and traffic.
- Section 6 looks at some of the issues raised in the home zones design.
- Section 7 contains the summary and conclusions.

## 1.2 Home zones and woonerven

Conventional traffic calming schemes and 20 mph zones have shown that reducing the mean speeds of traffic in urban areas to below 20 mph can have a substantial beneficial effect on road safety (Webster and Mackie, 1996) and (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 (residential precinct) to drive at a walking pace and make allowance for the 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 out in safety. The idea was to introduce legislation such that child pedestrians should have priority and drivers who injured children should be presumed negligent. It was anticipated that this legislation would modify driver/rider behaviour such 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 achieved through 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*, (DETR, 1998), recognised the value of home zones in improving the places where people live and play. The Government expressed interest in working with local authorities to evaluate the effectiveness of home zones. To enable this, nine pilot schemes were established in England and Wales.

The Government's Road Safety Strategy and Speed Policy Review (DETR, 2000), as well as Planning Policy Guidance Note 3, Housing, (DETR, 1999 and 2001) and Planning Policy Guidance Note 13, Transport, (DETR, 2001) all reinforced the Government's commitment to home zones.

The Transport Act 2000 makes provision for home zones in England and Wales. This came into effect in February 2001 and local authorities now have a specific power to designate home zones in their area. They will also be able to 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, sixty-one home zone schemes were initially selected to receive funding through the Challenge.

### 1.3 The DfT pilot programme

TRL was commissioned by the DfT to evaluate the Home Zone Pilot Programme which is being implemented by nine local authorities in England and Wales.

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 been dependent on the implementation of the individual home zone schemes on site. The first home zone to be completed was in The Methleys, Leeds, the results for this zone are reported in TRL Report TRL586 (Layfield, Chinn and Nicholls, 2003). Further reports have been published for Manchester in TRL Report TRL625 (Tilly, Webster and Buttress, 2005), Sittingbourne in TRL Report TRL626 (Webster, Tilly and Buttress, 2005), Magor in TRL Report TRL633 (Layfield, Webster and Buttress, 2005), Plymouth in TRL Report TRL640 (Wheeler, Tilly, Webster, Rajesparan and Buttress, 2005), Ealing in TRL Report TRL646 (Wheeler, Tilly, Webster, Nicholls and Greendhields, 2005) and Nottingham in TRL Report TRL647 (Tilly, Wheeler, Webster, Nicholls 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 achieve implementation within the study time scale. 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 working group endeavoured to include a range of scheme types in the pilot programme to reflect the variety and geographic spread of the schemes submitted.

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

Extensive consultation has taken place with the local communities on problems within the areas and on the evolving design for the schemes. This has taken many forms: leaflets, interview surveys, public meetings, exhibitions, street events, fun days and design workshops. The nine home zone schemes were 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 advised the Department on the results of the monitoring effort, including design and implementation issues. Membership of the group included

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 were to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones which is to allow all road users to coexist in a pleasant safe environment; to identify the need for additional legislation; and to identify and disseminate good practice.

The main success criteria set out by the local authorities can be summarised as follows:

- To improve quality of life and appearance of the streets for residents.
- To reduce speeds in the home zones.
- To divert non-essential vehicles.
- To improve pedestrian safety – particularly for older people and children.
- To design for structured car parking.
- To change the activities of the community.
- To reduce air pollution and noise.
- To improve street lighting to deter crime and improve community safety.

## 2 The pilot home zone sites

Each of the sites chosen for the pilot home zone programme was different in character. This was a deliberate decision to investigate whether home zones are more likely to work in some situations as opposed to others. This section introduces each of the nine home zones in the pilot programme. The characteristics of each site are described in turn, followed by a brief summary of the preliminary consultation with residents. All of the nine home zones were built within an existing residential area, the term 'retro fit' is now commonly used by practitioners to describe this type of home zone.

### 2.1 Locations of the sites and background

The locations of the nine pilot home zone sites are given in Figure 2.1. There are three sites in the north, Nottingham, Manchester and Leeds; one in Wales, Magor; one in the east, Peterborough; one in the south-west, Plymouth; one in the south-east Sittingbourne and two in London, Ealing and Lambeth. As discussed earlier, 'after' surveys were not carried out at the Lambeth and Peterborough schemes because the works were not completed on site within the monitoring period of this project.

#### 2.1.1 Leeds

The Methleys is located in Chapel Allerton to the north of Leeds City Centre. It is called 'The Methleys' because the streets are named Methley Drive, Methley Grove, Methley



**Figure 2.1** Location of the home zone schemes

Terrace etc. The area has a strong local identity and contains about 300 properties arranged in a compact grid pattern of 14 streets. A plan of the area is given in Figure 2.2. The home zone has around 700 residents. The longest road in The Methleys is Methley Drive, about 255m in length, this forms the main east/west route across the area. The houses are mainly back to back Victorian terraces built circa 1905. They have little or no garden space; some have rear access. The south-western part of the site contains a more modern housing development.

Figure 2.3 shows the area before the home zone was built. There is a slight north/south gradient across the site. Most of the streets were relatively wide, with a carriageway width of around 7m to 8.5m with footways 1.7m to 2m wide. Most parking was on-street. Some of the properties have been converted to flats creating multiple occupancy dwellings. These were mainly situated at the eastern end of Methley Drive. As a result parking density here was greater.

There is a printing shop on Blake Grove and, prior to the 'after' monitoring study, a car repair business in old buildings near the junction of Zermatt Street and Methley Place. This site has now been redeveloped for flats.

Before the scheme was implemented, there was some through traffic north/south along Blake Grove on the eastern edge of the site and some through traffic east/west along Methley Drive. Parents dropping off and collecting children from school led to traffic congestion along the northern section of Methley Terrace, just outside the Chapel Allerton Primary School at school start and finish times.

There is an active residents association, Methley Neighbourhood Action Group (MNA), formed in 1994, they have been campaigning for better and safer places where local children can play. The MNA issues a regular newsletter about The Methleys and have organised communal gardening and other events including street sports, annual outdoor 'Screen on the Wall' film shows and even laying turf over sections of a street to demonstrate what it would be like without cars.





**Figure 2.3** Methley Drive, looking west, before the home zone was installed

There are, however, groups within the home zone who have different concerns and sometimes conflicting interests. For example the older residents, who have often lived in the area for a long time, have different interests compared to the residents with young children who have moved into the area more recently. In one particular instance, plans by the Methley Neighbourhood Action Group to build a Millennium Green garden at the north end of Methley Terrace were abandoned following objections from people living around the proposed site.

The main home zone success criteria for Leeds City 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 injury accidents of all road users.
- Increased street based activity and neighbourhood involvement.
- Improved perception of road safety for all road users.

### 2.1.2 Manchester

Northmoor forms part of Longsight, a neighbourhood situated about 3 miles south-east of Manchester City Centre. The area is bounded by the Manchester to Stockport railway line to the west, Crowcroft Park to the south, Pink Barn Lane to the east and Stanley Grove to the north.

Northmoor is a well defined residential area containing about 1400 dwellings, the majority of which are terraced houses built before 1919. These are built on a traditional gridiron layout (see Figure 2.4). Most of the houses have two-bedrooms, no front gardens and only small rear yards. Eight per cent of the properties belonged to the Council, with the remaining 92% being owned by a mix of registered social landlords, co-operatives, private landlords and owner occupiers. Northmoor Road was the main spine road through the home zone, it has reportedly been used as a 'racetrack' for stolen cars and as a 'rat-run' by drivers avoiding congestion on the A6 Stockport Road. Northmoor Road has been subject to some traffic calming measures

including a single-way working chicane, low thermoplastic humps ('thumps') and speed cushions.

The implementation of the Northmoor home zone was planned in 3 phases. Phase 1 was the area bounded by Rushford Street, Stanley Grove, Northmoor Road, and East Street. The Phase 2 and Phase 3 areas were to the east and west of Phase 1 respectively. Figure 2.5 shows a typical street before the scheme was installed. The Phase 1 streets were Stainer Street, Prout Street, Barnby Street and Purcell Street, all are about 150 metres long.

The Northmoor Renewal Area Concept Study (Manchester City Council and Manchester Methodist Housing Association, 1999) reported that the decline of Northmoor had happened relatively quickly over the 15 years before 1999, however, it was not considered so entrenched that the fortunes of the area could not be turned round. The decline had been the result of a combination of environmental, social and economic factors. For example: high levels of unemployment; increasing drug use and vandalism; increasing proportion of private rented accommodation creating an increasingly transient population; a declining demand for terraced properties with two-bedrooms evident by vacant houses; increasing crime rates, particularly burglary, and a deteriorating physical environment.

The study also showed that children, up to 15 years old, made up a relatively high proportion of the population: 27 %. The residential streets leading off from Northmoor Road were similar and repetitive, with made up surfaces and no soft landscaping. Houses had no front gardens, with front doors opening straight onto footways. Due to a lack of play facilities for small children, there was a tendency for them to play in the street. The area had low car ownership, with just over a third, 36%, of households owning a car, nevertheless, parked cars sometimes restricted access for refuse and emergency vehicles. Crime was both a real and perceived problem in the area. The streets suffering from the worst problems of burglaries were those where the houses were accessible from rear alleyways.

The main success criteria for Manchester City Council's Northmoor home zone were to:

- Restrict traffic movement and speeds in the home zone to a minimum in order to improve safety and reduce traffic noise and pollution.
- Control movement through the area to make it less attractive to those escaping from the police and traffic jams.
- Improve pedestrian safety – particularly for older people and children en route to school.
- Design for structured car parking.
- Improve the overall appearance of the streets with landscaping and community art.
- Provide new open spaces, in particular play and seating areas.
- Improve street lighting to deter crime and improve community safety.

**Figure 2.4** Phasing of Northmoor home zone



**Figure 2.5** Purcell Street looking west (Before home zone installed)

### 2.1.3 Sittingbourne

The Cavell Way home zone is located in the western part of Sittingbourne, about 250 metres north of the A2 London Road. Cavell Way is a Moat Housing Group development, constructed in 1993. It consists of 122 family dwellings made up of three pairs of semi-detached houses, 89 terraced family town houses and 27 flats (see Figure 2.6 and Section 3.3). The terraced town houses are in groups of up to nine dwellings. The flats are low rise blocks, Denham House contains 12 flats, Roentgen House contains 9 flats and Pincus House contains 6 flats. The occupants of the estate were a mixture of age groups and there were a relatively high proportion of children, some 280 in total. There was a play area containing two cradle swings, a multi climber with a slide and a grassed area. The housing estate was part of a pocket of relative deprivation, situated within a wider more affluent area. It borders directly onto a Single Regeneration Budget (SRB) area.

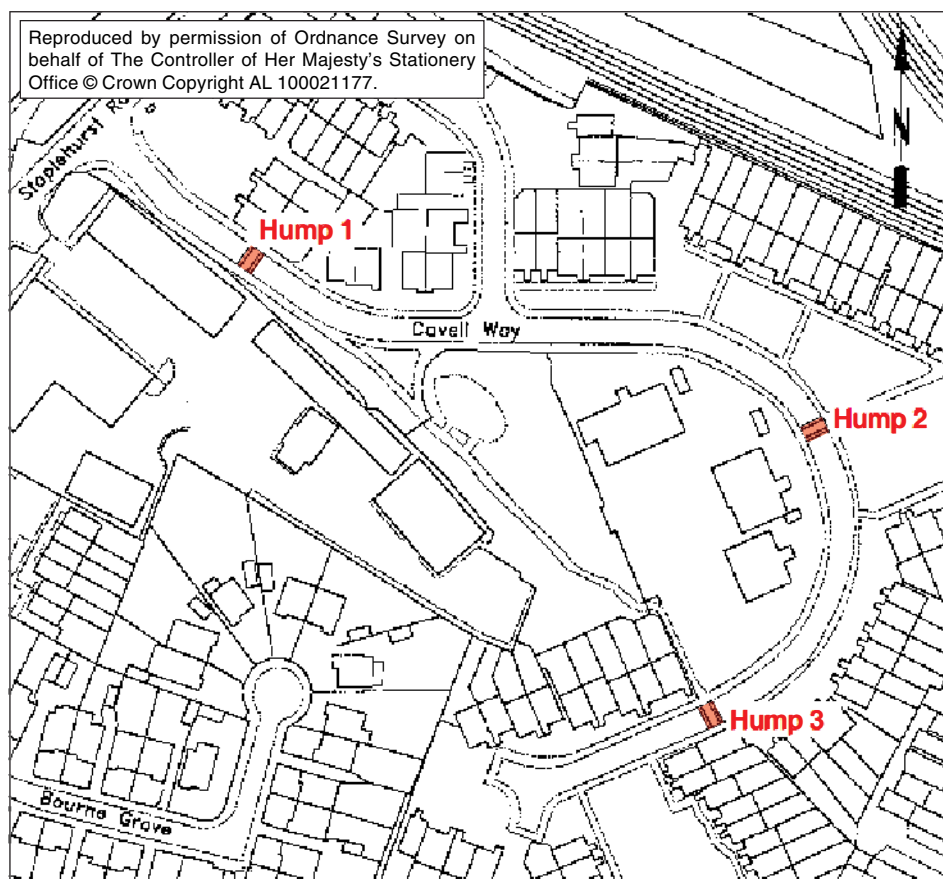
The estate is a clearly definable area with distinct boundaries. Unlike most housing developments, it does not gradually 'merge' into the surrounding land uses. The housing layout was 'inward looking', geographically closed but perceived as being distant from the surrounding land uses. This created a sense of 'place', further reinforced by the fact that there was only one road providing access into and out of the estate.

Cavell Way is a *cul-de-sac* approximately 380 metres in length. It was built in the shape of a hook, and has a small side spur *cul-de-sac* about 130 metres from the entrance.

There was off-street parking in the form of lay-bys and parking courts. Car ownership rates were higher at the far end of Cavell Way. Before the home zone was built there was already limited traffic calming including three road humps. The distance between the 1st and 2nd humps was about 170 metres and between the 2nd and 3rd humps was about 80 metres, residents were concerned about the speed of vehicles even with these humps and wanted to see vehicle speeds reduced further (see Figure 2.7).



**Figure 2.7** Cavell Way looking west from the second flat-top hump (Before the home zone was installed)



**Figure 2.6** Plan of Cavell Way before implementation of the home zone

Play areas had been provided but there was concern amongst residents for the safety of children walking or cycling alone to these areas due to the speed of traffic. There was also concern for the security of small children as the play areas were out-of-sight of their parents' homes.

Cavell Way has an active residents association supported by the Moat Housing Group. The Cavell Way Residents Association had been seeking a home zone type scheme for some time, they successfully canvassed and obtained the support of the majority of the residents of the estate.

The main success criteria for the local authority were:

- Has the home zone scheme improved the quality of life of the area; how do residents feel about their street?
- Has it changed the use or ease of use of the area by pedestrians?
- Has it changed the activities of the community?
- Has there been a reduction in traffic speed and an improvement in perceived safety?

#### 2.1.4 Magor

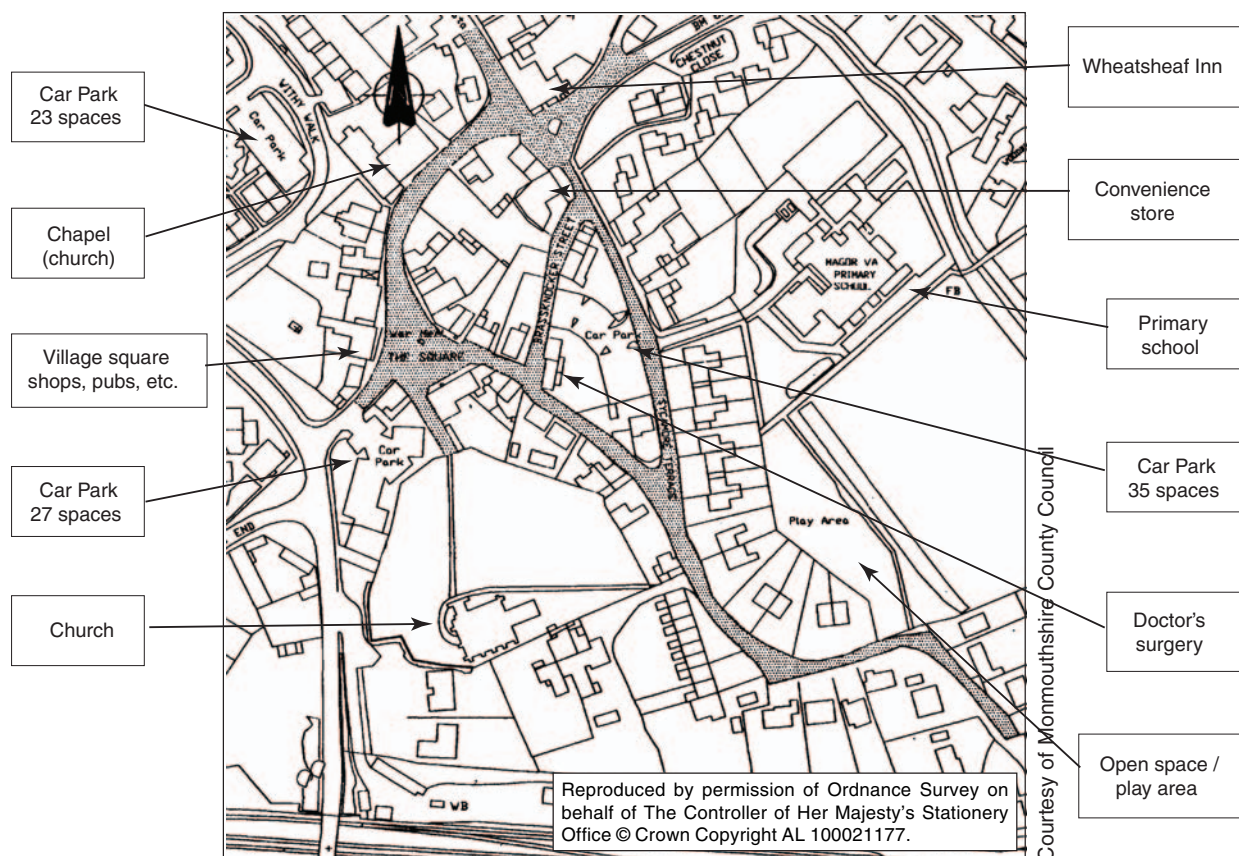
Magor village has a population of around 5000 people. It is situated on the B4245 about 5 miles east of Newport in southern Monmouthshire. To the west of Magor, the B4245 connects with the M4 at junction 23a. Magor and the abutting community of Undy were previously independent

small villages, but over the last 25 years planned residential development had enlarged and merged these two communities. There is little direct employment in the village, thus Magor and Undy are dormitory settlements for the nearby towns of Newport, Cardiff and Bristol.

The home zone site is to the south of the B4245 that runs through Magor. It comprises the historic central core of Magor which is now a conservation area (see Figure 2.8). The site included the old village square and access to the church. The area is primarily residential with about 60 dwellings (see Figure 2.9) and about 20 small shops. The properties are of traditional design and their style and layout maintains an impression of an older village community. Magor Village Primary School and an area of open space are nearby, vehicular access to these is through the home zone. There are three off-street public car parks close to the village centre with a total capacity of about 85 parking spaces.

The Square is the only concentration of shops serving Magor and Undy and contains a post office, bakery, florist, pharmacy, off licence, insurance broker, security shop, three estate agents and a public house. Before the home zone was constructed, The Square was a large expanse of tarmac with traditional cobbles and stone flag paving footways. There are several houses in The Square, most of which front onto a short alley that leads to Brassknocker Street.

The home zone residential roads, Brassknocker Street and Sycamore Terrace, do not have footways along most



**Figure 2.8** Central core of Magor showing the roads within the home zone boundary: The Square, Brassknocker Street and Sycamore Terrace are shaded



**Figure 2.9** General view of a typical Magor residential road (Before home zone was installed)

of their length. This helped to create the impression of shared space, particularly on the narrower sections. Sycamore Terrace is a no through road, at the southern end there is a tennis club, a BT depot and pedestrian access to the open space play area. The northern end of Sycamore Terrace is more heavily trafficked, here there is a convenience store, the Wheatsheaf Inn and vehicular accesses to a public car park and the school.

There has been a lot of residential development within Magor over the last 10 to 15 years. Minor estate roads within the village lead out into the surrounding rural areas. Speeding along these roads was considered to be a problem. The long-term goal is to make the whole of

Magor a 20 mph zone, subject to residents' approval. A consortium of local authorities is looking at transport issues in the area (TIGER – Transport In Gwent Economic Region) with the aim of improving transport provision along the Cardiff/Newport/Chepstow corridor. As part of this initiative a study has been made of routes and mode of travel to school in Magor and Undy. A safer routes to school strategy has been developed. Within the proposed home zone, children travelling to and from the primary school have to be aware of vehicles particularly on Sycamore Terrace, this also applies to children visiting the play area.

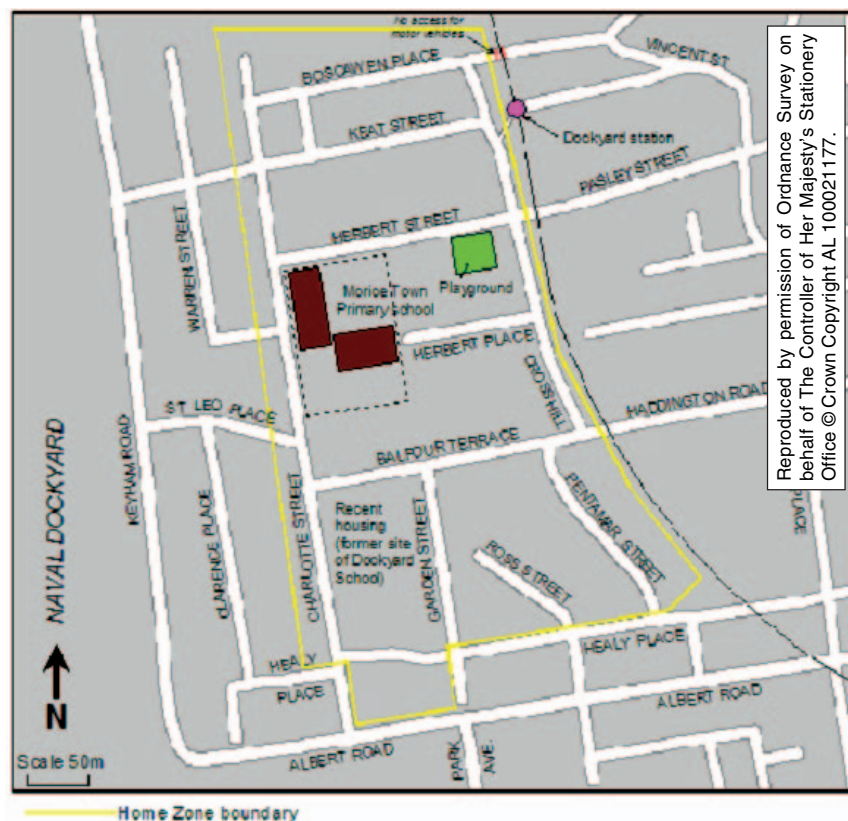
The main success criteria for Monmouthshire County Council include:

- Enhancing social activities
- Deterring non-essential vehicles and reducing vehicle speeds
- Increasing pedestrian and cycle activity and safety
- Improving the environment for residents

### 2.1.5 Plymouth

Morice Town is a small neighbourhood within Devonport, situated 2.5km north-west of Plymouth City Centre. The naval dockyard and river Tamar are to the west. Morice Town was originally developed in the 19th century on land owned by Sir William Morice to house dockyard employees.

The home zone consists of a 2.2km network of 12 streets and contains about 400 dwellings, either houses or flats (see Figure 2.10). Morice Town covers a total area of about 12.5 hectares. The home zone is bounded on the



**Figure 2.10** Plan of the Morice Town home zone before scheme installation

north by a continuous wall, on the east by the Plymouth-Penzance railway line and on the south by Albert Road - a local distributor road. Albert Road itself is outside the home zone. The western edge of the home zone is the back alley behind houses fronting onto Charlotte Street. Most of these are included within the home zone. The road layout forms a grid pattern with a dockyard railway station at the north east corner. There is a steep east to west downhill gradient across the site. Before the installation of the home zone, a bus service ran on or just outside its proposed boundary to the south on Albert Street and to the west on Keyham Road.

Some of the 19th century terraced housing remains, but the majority of these houses have been replaced by post-war social housing. This social housing consists of three and four storey blocks of flats. The main housing areas are:

- Flats in the Ross Street/Pentamar Street/Garden Street and Herbert Street/Keat Street/Boscawen Place areas.
- A 1990s social housing development on the site of Dockyard School.
- Private housing mainly in Charlotte Street, Herbert Place, and Balfour Terrace.

Morice Town Primary School is situated within the home zone and Parkside Secondary School lies just outside on the opposite side of Albert Road.

Figure 2.11 shows the area before the home zone was implemented. The majority of the streets had a carriageway width of between 6 and 7.5m with the remainder being between 4 and 5m. The footways were mostly 1.8 to 2.5m wide, reaching 3.5m in places on Charlotte Street. Car parking by residents was primarily on-street.



**Figure 2.11** Charlotte Street looking north from southern end (Before the home zone was installed)

Amongst the measures for the home zone were gateway features designed by the children of Parkside school. These gateways alert road users that they are entering an area where the built environment gives priority to people. The gateways include signs and features relating to the history of Morice Town. Raised or 'shared surfaces' are a key feature of the home zone, especially in the streets leading to the school. These 'shared surfaces' narrow the road

width thereby calming traffic speeds. Further traffic calming has been achieved through horizontal measures including echelon and alternate parking as well as planters. Vertical measures have been used to a lesser extent. Street lighting provision has also been reviewed in order to reduce the vandalism and crime rate.

Prior to the home zone being built, the area had the second lowest car ownership in Plymouth. It was formally designated an area of deprivation. There were crime problems including car theft, burglary, and domestic violence. There were few local facilities though there are a variety of shops on Albert Road, just outside the home zone area. There are five public houses either within or on the boundary of the home zone, a Salvation Army Hall and a playground on Herbert Street. The 1990s housing development also included a small, overlooked, play space with play equipment. There were many grass spaces around the blocks of flats, but the steep site gradient and fouling by dogs detracted from their use as informal play areas. There was no primary healthcare centre or community centre.

There were no businesses within the home zone, apart from a small business preparing frozen food at the northern end of Charlotte Street. Articulated lorries need to obtain access to the rear of this site raising the issues of residential amenity and road safety.

There was a residents permit holders' parking scheme for the whole of the area of Devonport operating between 9am and 5pm Monday to Friday. However, the overall availability of daytime parking within Morice Town was becoming less of an issue following the loss of jobs within the neighbouring Dockyard. Nevertheless, there was concern that reduced parking for staff and contractors within the dockyard might increase pressure on parking spaces within Morice Town. The limited availability of 'overlooked' parking spaces near to the homes of residents was considered to be an issue by residents. Plymouth City Council co-ordinated a review of the parking provision for residents as part of the development of the home zone.

In May 2000, a new bus service through the home zone to the City Centre was introduced, running along Pasley Street, Herbert Street, Charlotte Street and Albert Road. There were objections to the bus service from a number of Charlotte Street residents who did not want passengers on a double-deck bus looking in their windows or having a bus stop outside their homes. The bus company operated single deck buses and moved the bus layover locations to bus stops outside the home zone. The service was popular with Herbert Street residents, particularly amongst older and disabled people.

The home zone was part of a wider set of initiatives for the area that included a Health Action Zone, Education Zone, and an Employment Action Zone. There was a 'Safer Routes to Schools' project underway at Morice Town and Parkside Schools.

The main success criteria for Plymouth City Council include the achievement of the following:

- Improving the quality of life, how residents now feel about their area.

- Changing the way pedestrians use the area.
- Changing the activities of the community.
- Improving the visual quality of the area.
- Reducing vehicle speeds and improving the safety on the roads.

It was envisaged that the proposed home zone should increase residents' awareness of their community, helping it to be pedestrian friendly, safe and clean. The new playground being developed would give the children somewhere off-street to play, although the small play areas on-street would be designed to be safe for small children, with people using the seating areas to watch and interact with other residents encouraging a stronger community atmosphere.

### 2.1.6 Nottingham

The Nobel Road area (see Figures 2.12 and 2.13) is a distinct part of Clifton, Nottingham's largest outer estate, situated about 6 km south-west of the city centre. Dating from the 1970s, the Nobel Road area is bounded by the distributor roads Barton Lane (A453) on the north-west and Clifton Lane on the east. The Nobel Road home zone contains approximately 600 dwellings and three elderly people's centres. Nobel Road is horseshoe shaped, joining Clifton Lane at each end. The area is characterised by 19 individual *cul-de-sacs* all branching off and linked by Nobel Road. The estimated population of the area was 1,500 in 1999.

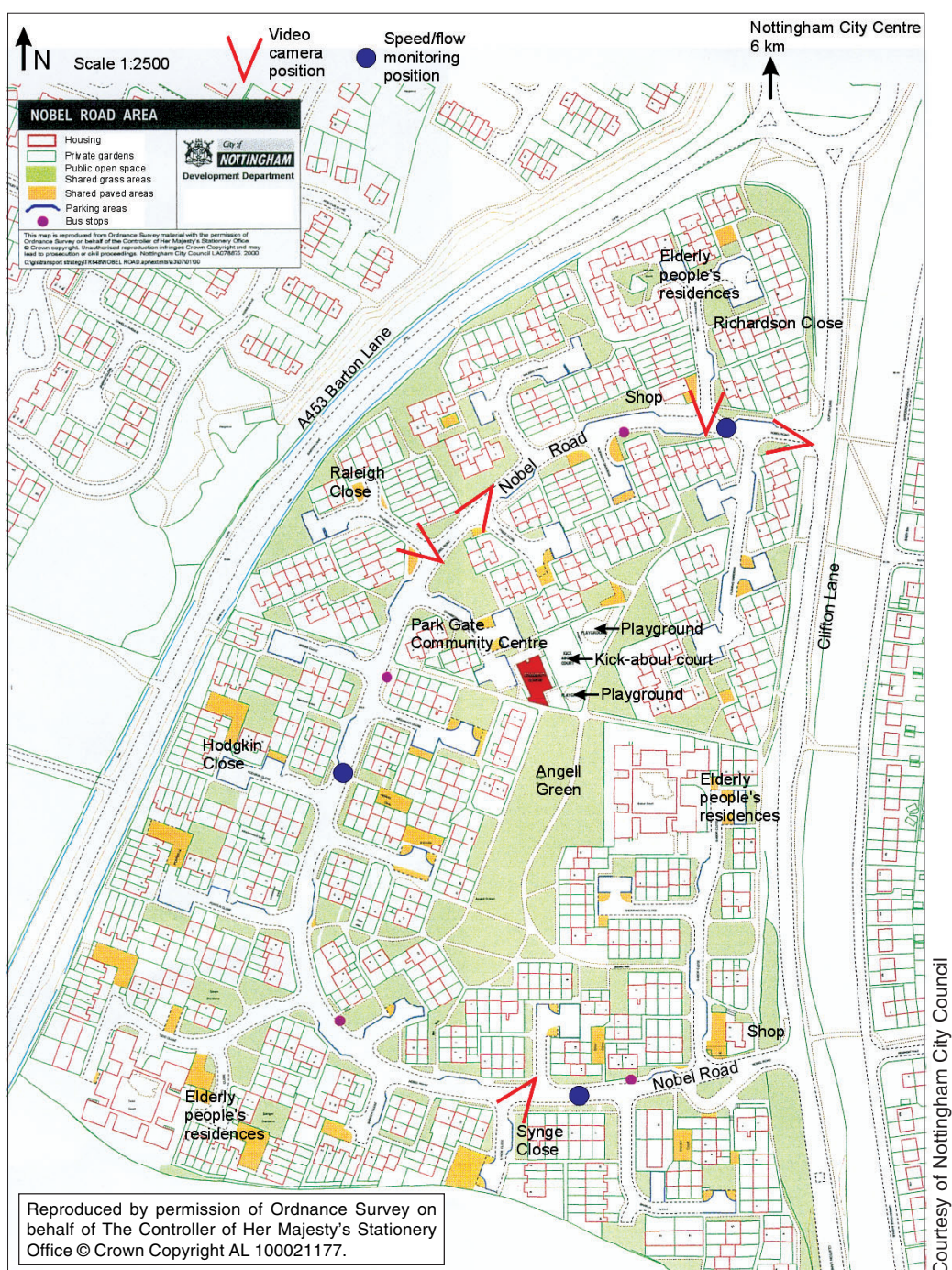


Figure 2.12 Nobel Road, Nottingham: site monitoring positions



**Figure 2.13** Nobel Road, middle section, near Park Gate Community Centre, looking north, before the home zone was installed

The majority of the dwellings are either two-storey or three-storey town houses. Many have off-street car parking provision by way of parking bays adjacent to the road, parking areas or garages. Most houses have front and/or rear gardens, many with adjacent grassed areas, this gives the estate an open aspect. Social housing makes up two-thirds of the housing stock. There is a shop at either end of Nobel Road, in the centre of the area is the Park Gate Community Centre, with adjoining playground and 'kick-about' court. Nearby Angell Green which is a large grassed area with trees overlooked by houses. There is a footpath network within the area enclosed by Nobel Road and Clifton Road. The main paths cross Angell Green, one linking with Clifton Lane. There are no schools within the home zone but there are primary and secondary schools nearby, Nottingham Trent University lies just to the north. There are good bus services on Nobel Road.

The Nobel Road estate was identified as a priority area for environmental improvement. Its problems were compounded by the fact that it lies adjacent to comparatively prosperous areas of the Clifton estate and had therefore been unable to attract regeneration funding. High proportions of both young and elderly residents live on the Nobel Road estate, 30% of residents are under 16 years of age and 17% of households are comprised of a pensioner living alone. It is hoped that the creation of a home zone would help to improve the quality of life of these residents. The area also has higher levels of unemployment, 18% of those economically active, compared to Nottingham City as a whole, 15%.

Nearly 60% of households have no access to a car, but the estate is well served by public transport with seven different bus services providing 12 buses an hour in each direction on Nobel Road. Continuing access to bus services was seen as an intrinsic part of the home zone.

The community centre was under-used but there are short and long term proposals for expansion. The adjacent area was seen to be in need of improvement to link it more closely with surrounding housing. Much of the open space in the estate appeared to be poorly utilised, and there was a shortage of designated play space that contributed to tensions between the young and older residents.

There were local concerns over vandalism and car crime, particularly 'joy riding'. It was considered that these problems could be addressed in part by creating designated play areas and the installation of traffic calming measures.

Given the high proportion of vulnerable road user groups on the estate, it was considered that the creation of a home zone would improve quality of life by creating a safe and secure local neighbourhood for them.

Nottingham City Council views the home zone as a framework for the regeneration of the estate, both to develop community cohesion and as a means of attracting funding to the area. The area has not been eligible for regeneration funding opportunities in the past. The City Council has therefore proposed regeneration and development of the home zone in three distinct phases.

The main success criteria for Nottingham City Council include achievement of the following:

- Reduction of speed on Nobel Road and an improvement in safety.
- Improve the quality of life and how residents feel about their area.
- Having community participation in decisions about the design of the home zone scheme and its construction.
- Creating training and employment opportunities for local people constructing the home zone.

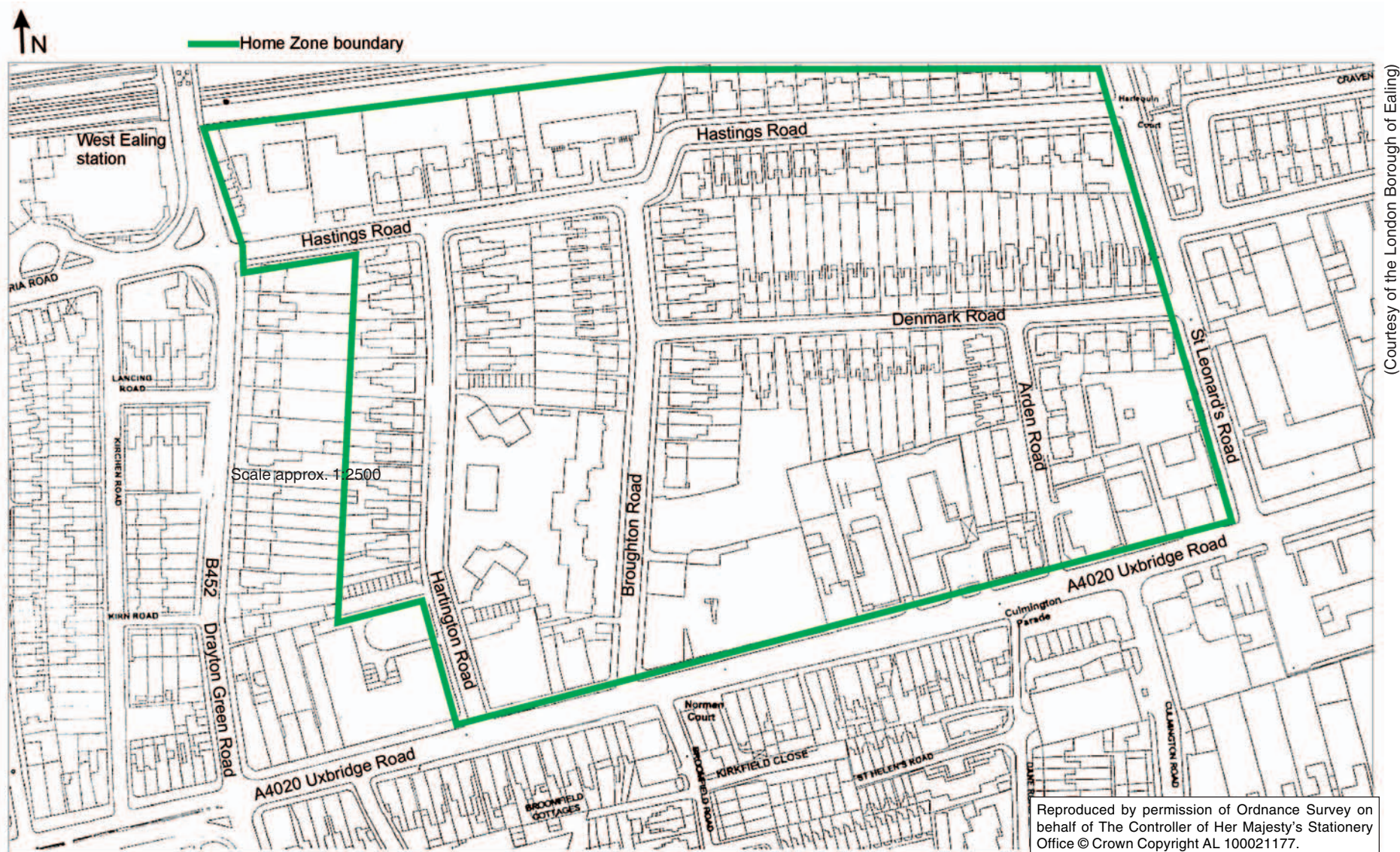
#### **2.1.7 Ealing**

The Five Roads home zone is situated in West Ealing, close to Ealing town centre. The zone comprises five roads arranged in a grid pattern: Hastings Road, Hartington Road, Denmark Road,

Broughton Road and Arden Road (see Figure 2.14). The home zone contains approximately 400 households.

The area is predominantly late Victorian terraced and semi-detached housing. Parking was primarily on-street, parallel to the kerb, before the home zone was built. The houses have front and rear gardens and the streets are tree-lined. Low-rise blocks of flats, built during the 1930s and 1950s, are situated in Hastings Road and Broughton Road respectively. Figure 2.15 shows the area before the home zone was implemented.

A number of businesses, mainly offices and shops, are situated on the edge 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 the local distributor roads of St Leonard's Road and Drayton Green Road respectively and to the south by the very busy Uxbridge Road. The Uxbridge Road is used by seven bus routes and there are 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 services to Slough, Ealing Broadway, Paddington and Greenford. The nearest schools are within 1km of the home zone to the west and north. Ealing Tertiary College and Thames Valley University campuses lie to the east and south-east.



**Figure 2.14** Location plan of the Five Roads, West Ealing home zone



**Figure 2.15** Hastings Road, looking east from junction with Broughton Road

Residents themselves initiated the proposal for a home zone in the area and founded the 'Five Roads Forum' to co-ordinate the planning of the home zone. The Forum included representatives from each road on the estate. 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 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, air pollution, visual intrusion and safety because of increasing traffic in their streets. In early 1999 the Council's Roads Committee approved a 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:

- A poor residential amenity caused by the area being noisy, having air pollution, being unsafe, unattractive and badly lit. A shortage of public space with nowhere for children to play safely. Access to the nearest open space at Walpole Park involved crossing Uxbridge Road. No parking space for residents during the day because of town centre and station parking. This could lead to the blocking of 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.

The main success criteria for London Borough of Ealing 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 injury accidents of all road users.
- Increased street based activity and neighbourhood involvement.
- Improved perception of road safety for all road users.

### **2.1.8 Lambeth**

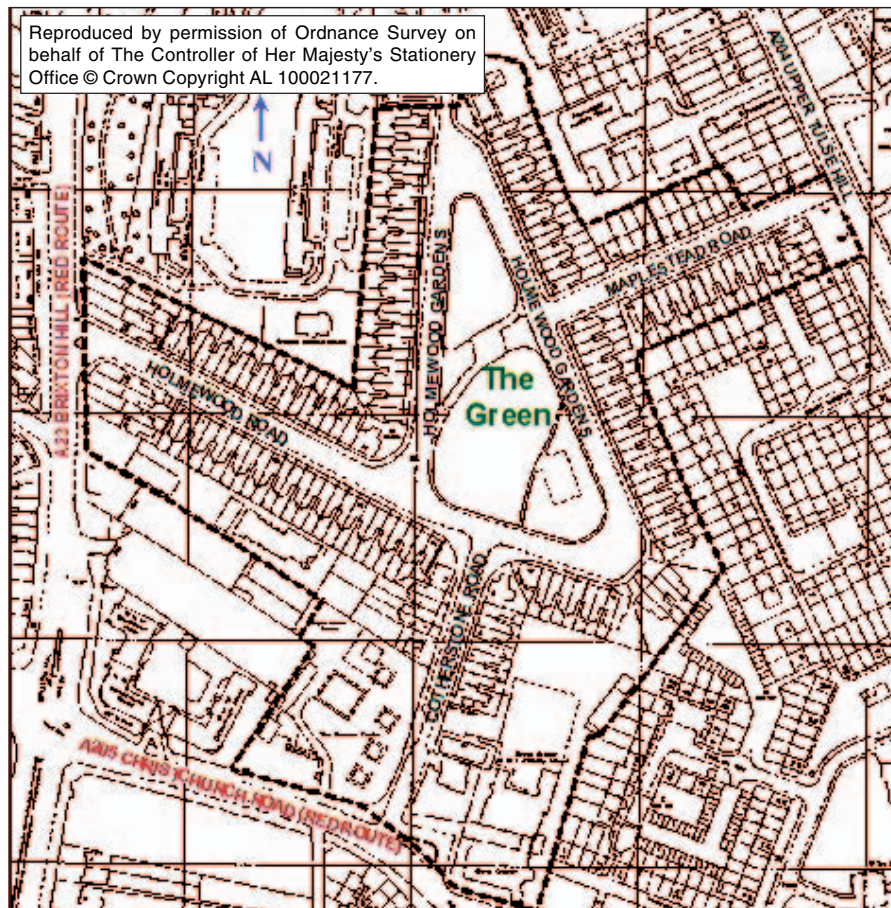
The Holmewood home zone in Lambeth is bounded to the west by the A23 Brixton Hill Red Route and to the south by the A205 Christchurch Road Red Route, the London South Circular. The Roupell Park Housing Estate is adjacent to the proposed zone in the north, whilst the eastern zone boundary is formed by Upper Tulse Hill. The home zone is located within a recently designated conservation area and takes in some 250 households situated along four roads. The housing is predominantly Victorian terraces and, consequently, there is little off-street parking available in the area. A particular feature of the Holmewood area is The Green, located in the middle of Holmewood Gardens (see Figure 2.16 and 2.17). This is divided into two areas; the southern area has childrens play equipment, benches and enough green space to play ball games; the northern is used by local people to exercise dogs. The facilities available within The Green are enjoyed not only by residents living in the proposed home zone but also by other local people from the surrounding area. Also situated within the home zone boundary are three schools and a church.

The Holmewood home zone is characterised by wide roads which enable parking on both sides, whilst allowing two-way traffic to flow comfortably. As traffic volumes are relatively low at certain times of the day, motorists are able to travel at high speeds through the area. There have been some traffic calming measures introduced: entry treatments on the roads accessed from the 'Red Routes'; and road narrowing by the school in Cotherstone Road.

There is significant pedestrian movement through the area by people travelling to work and children on their way to school. In addition, the play area in the green also attracts children and parents from the surrounding area. Conditions for pedestrians were poor. The Green forms an island in the middle of a two-way circular road network though there are no formal crossing points. The footways adjacent to the green also seem disproportionately narrow compared with the width of the carriageway.

Local residents had been actively petitioning Lambeth Borough over traffic-related issues in the Holmewood Area since November 1994. In January 1998, the Holmewood Neighbourhood Association (HNA) was founded as a representative body for local residents and, since then, there has been a continuous dialogue with the local authority.

Residents' concerns include the speed and volume of traffic in the area, the safety of children, poor conditions for pedestrians, prostitution and the fear of crime.



**Figure 2.16** Location of Lambeth home zone



**Figure 2.17** Holmewood Gardens northern corner looking south (Before home zone was installed)

The main success criteria for the London Borough of Lambeth Borough include the following:

- Reduction of speed and volume of traffic in streets within the home zone.
- Reduction of injury accidents and improved perception of road safety for all road users.
- Increased street based activity and neighbourhood involvement.

- Improved quality of life and sustainability.
- Provision of increased opportunities for children's unaccompanied outdoor play.

### 2.1.9 Peterborough

The New England home zone in Peterborough is situated to the north of the city centre and is bounded on its north and west sides by the major routes of A47 and A15. St Pauls Road and Fulbridge Road local distributor roads form the southern and eastern boundaries (see Figure 2.18).

The road layout is a loose grid pattern with a variety of routes running east/west through the area. There are about 1450 households in the New England area living in a mixture of housing types; some more modern semi-detached but mainly Victorian terraces. Also situated within New England are some local shops, a small amount of industrial activity, Fulbridge Infant and Junior school and two areas of playing fields. The area suffers from a general lack of off-street parking facilities, a small element of rat running, some speeding vehicles and congestion arising from school generated car trips.

The original local authority concept for the pilot envisaged a low cost home zone growing from the aspirations of the local community and covering the whole area. However, during the course of the consultation and preliminary design, it was acknowledged that this was not achievable within the pilot programme and that priority



**Figure 2.18** Location of Chaucer Road, Peterborough

should be given to the creation of smaller home zones. This would reflect the local road layout and address particular local needs.

Chaucer Road was the first of the smaller home zones to be proposed and is part of the pilot programme. Chaucer Road lies in the north of the New England area and runs roughly parallel to, and to the south of, a section of the A47 known as Soke Parkway. There are six *cul-de-sacs* off Chaucer Road and two areas of local 'green space'. One is near Herrick Close, the other at the western end of Chaucer Road (see Section 3.9).

There are about 230 households in Chaucer Road and in the *cul-de-sacs* leading off it. Householders are a mix of owner-occupiers and council tenants. Properties on Chaucer Road are predominantly 1950s local authority housing providing a mix of semi-detached and terraced properties (see Figure 2.19). There are also some maisonettes in blocks of four, typically occupied by older residents.

There were no formal play facilities in the area. Some young people use a park located in Walton, just to the north of Soke Parkway. Access to this park is gained through an underpass under Soke Parkway.

There was a local bus service using Chaucer Road; the route running between Peterborough City Centre and Walton.

Traffic management plans for the New England district have existed since the 1980s. These looked at improving the street scene and reducing rat running. Local safety schemes have been put forward year on year and some traffic calming measures have been installed near the proposed home zone; Francis Gardens has an experimental traffic-calming scheme that includes road closures. This has had a mixed level of support from the residents with roughly half in favour of the scheme.

The lack of play facilities for the young has been recognised by residents and the community group. The



**Figure 2.19** Green area on Chaucer Road near Herrick Close, looking west (Before the home zone was installed)

New England Residents Association, is very keen to see the pilot home zone scheme succeed. They see the scheme as being community generated and 'owned', with the Council playing a supporting 'technical role'.

The main success criteria for Peterborough City Council include:

- Improvement in the quality of life, how residents feel about the area.
- Reduction of speed and volume of traffic using the streets within the home zone.
- Improved perception of road safety for all road users.
- Provision of increased opportunities for children's outdoor play.
- Increased street based activity and neighbourhood involvement.

- Improvement in visual quality of the area.
- Reduction in anti-social behaviour.

## **2.2 Consultation and implementation timetable**

The Manchester, Sittingbourne, Magor and Nottingham schemes were used as case studies in Traffic Advisory Leaflets which have been published to provide guidance regarding Home Zones, Planning and Design, TAL 10/01 (DTLR 2001) and Home Zones – Public Participation, TAL 8/02 (DfT 2002). These both provide advice to local authorities on how to approach implementing a home zone.

### **2.2.1 Leeds**

Partners in the project are the Leeds City Council Department of Highways and Transportation and Methleys Neighbourhood Action Group. In 1995, Methleys Neighbourhood Action Group commissioned a community architect to draw up proposals for environmental improvements within The Methleys having identified the need to improve the streetscape. Leeds City Council became involved in 1996 and further developed the scheme.

In 1999, Leeds City Council took the opportunity of the DfT pilot programme to back the residents' proposals for a home zone. All residents were consulted to determine whether people favoured the home zone in principle. Most of the responses were in favour but there were some reservations about the intention at that time to use play street legislation. It was decided to create a 20 mph zone for the entire estate with separate signs to describe the nature of the area and the expected driver behaviour.

The home zone scheme in The Methleys fits into the broad category of 'large neighbourhood home zone schemes' in the DfT pilot home zone programme.

A landscape architect was commissioned to assist with the design of the scheme and in September 2000, the Council conducted a formal consultation on the draft proposals for the home zone. An exhibition was held, publicised by leaflets delivered to each household. A mobile exhibition caravan was sited in the middle of the estate. Around 130 people visited the exhibition including some from neighbouring areas. There was very positive support for all aspects of the scheme by visitors to the exhibition. The main criticism of the proposals was that only a relatively small part of the estate (the western half of Methley Drive) was to be radically changed. However, most residents were aware that parking requirements were constraining more whole scale changes to other streets. Further consultation was carried out through the Leeds City Council / Methleys Neighbourhood Action working party, although residents directly affected by works were consulted individually.

The detailed design was finalised in spring 2001 and 20 mph Speed Limit Orders advertised. Construction started in June 2001 at a total cost of £220,000, this included the cost of the traffic calming and streetscape improvements with the necessary regulatory and home zone entry signing. Implementation was not entirely smooth as some residents claimed that they had not been consulted while others changed their minds about features near their homes.

Site work was completed in December 2001 and planting was completed in March 2002. The residents association organised an official opening on 6th May 2002 with live music, stalls, games, children's entertainment, street performers, maypole dancing, and an outdoor evening movie show at 'The Screen on the Wall'.

### **2.2.2 Manchester**

An extensive consultation exercise was undertaken in February 1999 as part of the Northmoor Road Renewal Area Concept Study.

In August 1999 the Government announced that the Northmoor scheme would be included as one of the nine pilot home zone schemes.

A home zone management structure was established within the regeneration programme, this included representatives from Manchester City Council, Manchester Methodist Housing Association, residents groups, businesses, the Passenger Transport Authority and the emergency services. A full time project leader was appointed to develop and implement the project on site. The design team was a partnership approach between Manchester Engineering Design Consultancy (MEDC) and Ian Finlay Architects.

There was an on-going consultation forum every month with the residents, the local authority, the housing association and the design team on all aspects of the proposed work. A newsletter was circulated to keep people in touch with the progress of the scheme. The forums were held in the evenings at the local cricket club but latterly in the newly converted Community Centre - the former Co-op building in the heart of the neighbourhood. The design team prepared drawings, models and sketches in a form which can be readily understood by residents, leading to better discussion for all concerned.

In Spring 2000 a questionnaire survey covering issues such as car sharing, alley gates, refuse collection, traffic management and the use of open spaces created by the demolition of some properties referred to in this report as 'green streets' was undertaken.

In May 2000 there was a home zone fun day, with a home zone mock-up on Prout Street which was closed for the day. This provided an opportunity for the residents to see how the street might look after it became a home zone. Areas of car parking were painted on the road, part of it was grassed over and some trees and shrubs were also used. A fire engine was in attendance to test the road layout for emergency vehicles. Test areas of different materials were laid for residents to see, compare and give their views on their preferred option. The 'fun' part consisted of live music, circus performers, street games, face painting and barbecues. A local cinema was created in one of the terraced houses.

Complementary work started on Northmoor Road at the site of the Co-op building to convert it into apartments, new shops and a Community Resource Centre.

The installation of Phase 1 was carried out as a rolling programme. Stainer Street was installed between January and May 2001 and Purcell Street was completed in September 2001. Barnby Street and Prout Street were completed in November 2001.

Rebuilding of the new three-storey houses and the ‘green streets’ were completed in Summer 2003. The installation of Phase 2 was completed by the end of 2004. This phase is one of the Department for Transport’s Home Zone Challenge schemes which is described in Section 1.2. The Phase 3 area will follow when funds are available.

The total cost of the Phase 1 highway works was £720,000, comprising £620,000 for the works and £100,000 for design fees. This has been funded by £100,000 from Highways Capital LTP monies and the remainder by the Councils own Housing Department.

Specific issues raised during the consultation process included:

- The number of vacant houses, derelict ‘gap’ sites, the housing stock itself particularly the declining demand for two-bedroom properties. A number of fences, walls, gates and the shop fronts that were in a poor condition. There were high levels of unemployment, increasing drug abuse, vandalism and crime rates.
- There were few areas of open space or play areas for children close to their homes and there is no nursery provision for children under 5 years old.
- The street lighting was described as poor, there was a lack of greenery and there were no recycling facilities.
- The traffic was described as fast moving and there were poor pedestrian facilities.

Before the ‘green streets’ were constructed the residents were asked ‘What would you like to see in the cleared area?’ The five most popular answers were a children’s play area, trees, greenery, planting and hard surfaces.

### 2.2.3 Sittingbourne

Partners in the project include Cavell Way Residents Association, Swale Borough Council, Moat Housing Group and Kent County Council. The consultation with the residents included a street party held in August 1999. After the date had been fixed, the announcement was made that Cavell Way was accepted as part of the national home zone pilot, the street party then turned into a celebration.

An open meeting was held in August 1999 in the New House Youth Centre which is situated about 500 metres from the entrance to Cavell Way. To encourage people to attend it was advertised as: ‘Free fish and chips and a chance to redesign your street.’ There was a speaker from The Methleys area of Leeds, another of the nine pilot home zones.

In September 1999 a visit to Holland was arranged for five residents, including a 14-year-old, to experience a Dutch home zone. This enabled them to consider what could be done on Cavell Way.

A ‘planning for real’ event was held in a portacabin on the estate in October 1999. A model of the estate built by children was displayed. Ten residents trained by Swale Borough Council in the ‘planning for real’ process oversaw the formal consultation. A road safety session was also held, the incentive to attend was a £50 raffle. A total of 110 people visited the portacabin, the turnout by age group is given in Table 2.1.

**Table 2.1 Age group of those visiting ‘planning for real’ portacabin**

| Age group (years) | Visitors to portacabin |          |
|-------------------|------------------------|----------|
|                   | Number                 | Per cent |
| 0-10              | 40                     | 36.4     |
| 11-17             | 25                     | 22.7     |
| 18-29             | 17                     | 15.5     |
| 30-50             | 21                     | 19.1     |
| 50+               | 7                      | 6.4      |
| All ages          | 110                    | 100      |

It was estimated that there were about 280 children in Cavell Way therefore about a quarter visited the portacabin. It was noted that residents from the flats were less well represented than the rest of Cavell Way, positive steps were then taken to involve them more in the future.

The Resident Association Chair said ‘The planning in the portacabin was the most important thing we did. It showed exactly what we were striving for. The model was right there in front of everyone and showed they could get involved’. An example of the ‘Planning For Real Kit’ is shown in Figure 2.20.



Courtesy of Caroline Field, Moat Housing Society

**Figure 2.20** Using the planning for real kit

Working with a local artist, children designed the home zone entry sign. Residents wanted a separate sign for the home zone, after passing the 20 mph sign, to maintain the distinction between a 20 mph zone and the home zone. The home zone sign was a non-statutory sign, it displayed a child’s drawing of children playing. The sign was later replaced with the prescribed home zone signs.

Following the consultation and the production of an overall scheme concept plan, a multi-disciplinary team

developed the overall scheme design into realistic proposals that could be delivered with the likely funds available.

The first phase of the scheme was installed in October 2000, including work at the entrance to Cavell Way. This included an entry gateway feature where the carriageway width has been reduced through the use of low planters, landscaping and the home zone sign itself.

The second phase was installed from May to July 2001, this involved works upon the spur *cul-de-sac* in the estate. The design changed the priority of the junction, including the whole junction being raised to the footway level. This phase also provided extra seating adjacent to the area with planting and links to the adjacent play area.

The third phase was started in August 2002 and was completed in April 2003. It built on the idea of a central shared surface area. The works took longer than expected due to continual vandalism and the need to maintain vehicle access to all residential properties during the construction period. The planting also suffered from vandalism but this was overcome by installing a mobile CCTV camera which proved effective.

Further work was considered desirable to the recreational areas to provide a community facility for local residents. However, no funding is currently available to extend the scheme beyond that which has been completed so far.

Funding was secured for the first two phases, £20,000 from Swale Borough Council and £25,000 from Moat Housing Group and for the third phase £100,000 through the Local Transport Plan. These figures include the design and supervision fees for the civil engineering and landscaping works. The consultation for the scheme has been undertaken by the Housing Association and Swale Borough Council staff.

#### 2.2.4 Magor

Partners in the Magor home zone project include Monmouthshire County Council, the Community Liaison group and the Community Council.

Monmouthshire County Council consulted with residents, schools, traders and local members about all aspects of the home zone. The local authority convened a consultation workshop with children in the local school. A 'Planning for Real' exercise with parents was held the same evening and another the following morning. These exercises enabled an outline design to be drafted.

In May 2000, an exhibition was held which showed conceptual sketches. A questionnaire was used to gauge residents' views. The feedback was generally positive, with 75% in favour. However businesses had some concerns about the possibility of them losing trade. In response, a meeting of the community liaison group was held to discuss the concerns of businesses.

In October 2000, an exhibition and consultation exercise was carried out to present firm details for the design of the home zone. This was again positive but traders continued to oppose the scheme. In March 2001, a further exhibition and consultation on the detailed design was held.

Specific issues raised during the consultation process included:

- Extending the home zone slightly to include the area near the Wheatsheaf Inn.

- Pedestrian access to the home zone.
- Safety and vehicle access to the school.
- Parking near the shops and outside residents' homes.
- Concerns about vandalism specifically in The Square.
- Impact to the business of traders in the village core.

The measures included: road humps, flat-topped junction tables, a one-way system through The Square, removing raised footways, trees along some streets, planters, cycle stands, railings around the war memorial and the introduction of social spaces. The cost of the works was about £250,000.

From June 2001 to November 2001, Phase 1 of the scheme, which mainly involved The Square, was implemented. Between May 2002 and July 2002, Phase 2 part of the scheme around Brassknocker Street and Sycamore Terrace was built. In July 2002, the 20 mph zone signs and the home zone signs were installed.

#### 2.2.5 Plymouth

Partners in the project included the City of Plymouth, Morice Town Community Advisory Group and Keyham Business Group. The home zone proposals were originally instigated by the City Council and despite initial suspicion, the partnership grew in strength. Consultation with residents was achieved through:

- Public meetings with residents and 'stakeholders' - those with a vested interest in the area.
- Questionnaire survey covering areas of social activity, health and transport.
- Partnership building and liaison with those who were able to help take the proposals forward.
- The setting up of a 'Community Advisory Group' representing and reflecting the demography and economy of the area.
- Production of a newsletter starting in January 2000.

A 'planning for real' exercise was carried out in February 2000 followed by a Design Workshop in July 2000. From this a detailed plan was drafted. Works on site began in March 2002. The home zone was formally launched in June 2002 and construction was completed in April 2003.

Specific issues raised during the consultation process included:

- Vehicle speeds, especially near the school.
- The number of heavy goods vehicles.
- The number of 'rat running' vehicles.
- Precedence and protection of vulnerable road users.
- Improvement of parking facilities.
- Improvement of appearance of the area.
- Creation of community spaces.
- Improvement / provision of community facilities.
- Provision of suitable play facilities.
- Improvement of safety and security.
- Improvement of street lighting.

- Shared road space between pedestrians, children, cyclists and car drivers.
- Identification of the boundaries of the area.

It is interesting to note that this community capacity building process has benefited other home zone developments. The Morice Town Forum Resident Group has often acted as host to visiting residents from areas that are seeking to implement home zones of their own. The Residents Group share knowledge and information with others to facilitate the planning and decision making process. They provide a 'real' and comparative study area for their peers in the development of a home zone.

The Morice Town home zone scheme was financed by Plymouth City Council Local Transport Plan funding and SRB5 (Single Regeneration Budget) funding. Additional funding was sought from the European Community and the Home Zones Challenge. The total cost was £2.3M.

### 2.2.6 Nottingham

Partners in the Nobel Road home zone project include Nottingham City Council (NCC), Nobel Road Tenants and Residents Association (NORDTRA) and Barton Lane Community Association (BLCA)

An outline design proposal was approved and submitted to the Department as a bid to be included in the pilot programme. Close liaison was maintained with the Nobel Road Tenants' and Residents' Association and the Barton Lane Residents' Association, who both supported the proposal and were keen to be involved in the development of the home zone, its design, installation and maintenance.

Key to the development of the home zone was the formation of a home zone steering group of local residents, council officers and local councillors which was set up in October 1999. In December 1999, there was a detailed community consultation exercise, involving adults, children and young people. The objective of this exercise was to determine the real issues on the estate from a resident's perspective. The exercise found overwhelming support for reducing traffic speeds on Nobel Road. Consultation on concept design took place with other partners including bus operators, police and other NCC departments.

In February 2000, concept designs were presented to residents at a consultation open day. Proposals for Nobel Road were popular but ideas for the side roads were less enthusiastically received. Parking emerged as a particular issue so a more detailed parking survey was undertaken by residents. The visibility of vehicles from houses was also found to be a key concern.

In April/May 2000 a design workshop was convened. Based on the comments received, designs were redrafted taking account of parking needs, landscaping, and requirements of bus operators and road safety engineers. These were then presented back to residents and agreed by NORDTRA. The construction work on site started in January 2001.

Nottingham City Council Housing Department negotiated a six-month pilot scheme in partnership with a cable company. This was to provide tenants with free

digital TV and internet access enabling tenants to contact the Housing Office regarding repairs and other issues on-line. The Council considered this as an opportunity to explore the use of the internet to communicate with residents about the development of Phase B (see below) through the development of an estate web site. This would be developed as part of a Communications and Publicity Strategy for the estate. This was Council-funded and sought to involve young people in the project.

The City Council considered the home zone in part at least as a regeneration project. The development of the area took place in three distinct phases:

Phase 'A' included traffic calming, a 20 mph zone and landscaping of the spine road, Nobel Road. This phase was completed in October 2001 and the cost was £445,000.

Phase 'B' is a rolling programme, spread over 4-5 years, of improvements to the 19 *cul-de-sacs*, subject to funding availability. The first two *cul-de-sacs* in Chamberlain Close and Richardson Close were completed in Spring 2002. The designs for these two side roads were developed in close consultation with the residents. The cost of this phase was £140,000.

In Phase 'C', a bid for improvements to the community facilities and play provision has been submitted for lottery funding.

### 2.2.7 Ealing

The partners in the Five Roads, Ealing home zone 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 was as follows:

Between Autumn 1998 and November 1999, street meetings with residents were organised to discuss traffic and other problems, and possible solutions including the home zone concept. From this the Five Roads Forum was set up and a newsletter launched. Council officers and councillors were approached with ideas, letters and petitions, traffic and parking surveys were also undertaken.

In March 2000 a topographical survey was undertaken to establish the locations of kerbs, trees, street furniture, lighting and services. A Project Board established, comprising of two residents, two council officers, two councillors and two officer advisors. Its remit was to oversee the project and formally include residents in the decision-making process. Leaflets and a short questionnaire were distributed to all households in the home zone. In April 2000, landscape architects were appointed by the Project Board.

An indicator survey was undertaken whereby a questionnaire was distributed to all households in the home zone. This contained 20 statements about the current street environment, residents were asked to rate how much they agreed with these statements. Photographs were taken by residents of things they liked and disliked in the area.

In June 2000 an open-air exhibition in Hastings Road was organised. Council officers and elected members were in attendance. The exhibition brought together the results of the indicator survey and photographic exercise. Possible

solutions to the problems identified were displayed. This event included childrens activities and a barbecue.

The following month the Ealing Area Committee resolved that the consultation should include people outside the home zone, particularly those living north of the railway in Argyle Road. The consultation was to cover issues such as external impact on traffic and parking.

Formal consultation was carried out on different parking options and various landscaping features. A traffic impact assessment of these options on the home zone and surrounding road network was carried out.

In December 2000, the results of the consultation process were reported to Ealing Area Committee. There had been a 19% response rate, of those three-quarters of residents and businesses were in favour of the home zone though some with reservations. This revealed that echelon parking was the preferred option. On-street play areas were not recommended due to opposition from residents. A shared surface outside Hastings House flats was not supported. Detailed designs were completed by May 2001. Consultation on a Controlled Parking Zone (CPZ) took place in June 2001. By September 2001 works on site had started with the gateway features and street lighting improvements. In April 2002 the CPZ was implemented.

In October 2002, consultation took place with residents within and just outside the home zone on a proposed trial point road closure at the western end of Hastings Road. The objective of the road closure was to eliminate rat-running. The closure, strongly supported by the Five Roads Forum, was subsequently approved by the Council. In December 2002 the Borough's Transport Planning Department held an open day on which the latest plans of the home zone were shown and questions answered.

Hastings Road was closed by the barrier in January 2003, initially on a trial basis. The following month construction of the final phase of the home zone started on site. Six months after installation the Hastings Road road closure was made permanent. A Council survey of residents living in and around the home zone showed that they were generally in favour of it being retained.

The home zone was formally launched on 24 April 2004. The total cost was £375,000.

Whilst not directly related to the home zone itself, it is noteworthy that between July and October 2004 that Transport for London consulted home zone residents on the Shepherds Bush to Uxbridge tram proposal. This would run along the Uxbridge Road which forms a boundary to the home zone. Residents were concerned that as a consequence traffic would be displaced onto side roads and possibly into the home zone.

### **2.2.8 Lambeth**

Partners in the Lambeth home zone project include the London Borough of Lambeth, Holmewood Neighbourhood Association (HNA), Planet Earth Chartered Landscape Architects and MVA.

In April 2000 a questionnaire survey, designed and distributed by HNA in association with Lambeth Borough and MVA, was delivered to all homes in the proposed home zone. Its purpose was to help establish what the local

community liked and disliked about the area and invite ideas as to what improvements could be made as part of the home zone scheme.

Lambeth Borough wanted the consultation process to be clearly independent and impartial, Planet Earth were appointed to oversee consultation with residents and stakeholders in May 2000. Between May and November 2000, Planet Earth held a series of public participation meetings with residents from the proposed home zone and undertook a survey programme in local schools and with teenagers and children on The Green.

In December 2000 an open-air 'Plan-It Weekend' was held to involve more residents into the planning and design process. Exhibitions included a model of the area, drawings, traffic and environmental data, planning and traffic options, residents topic group reports, schools work, a wish list game and a hands on design competition. From the feedback received, the landscape architects produced a green print concept plan for the area. Consultations were held with Transport for London as to the likely impact on traffic outside the home zone.

The green print proposals were exhibited to the residents during May 2001. They were asked to view the proposals and make further contributions to the design process. The proposed features included: closing Cotherstone Road and Holmewood Road; shared surfaces in key areas; better access to and from the central green space; shift in road axis; redefined boundaries; increased pedestrian and play space; new playground; and sustainable drainage systems.

The home zone work was started in April 2004. A trial road closure at the Holmewood Road/Gardens junction was introduced in August 2004. The scheme was substantially completed during 2005.

### **2.2.9 Peterborough**

Partners in the New England home zone project include Peterborough City Council, Ward Councillors, Fulbridge and New England Residents Association, and Street Representatives. The project steering group is made up of officers from Peterborough City Council, the emergency services and street representatives.

Residents organised street meetings in 1999 to discuss traffic and other problems, and suggest possible solutions including the home zone concept. The meetings were well supported by local residents and attended by the Council, Community Police and Community Programme officers.

Door-to-door surveys were carried out in April 2000 across the whole New England area, a public exhibition was held to invite responses to the first draft proposals. Initial issues identified were through traffic, speeding, localised parking problems, lack of a community building, some bad neighbours, localised vandalism/graffiti. The results indicated strong support for closure of some through routes in the area and landscape improvement.

As an initial stage in the creation of a New England home zone, a public consultation was carried out in June 2000 upon the introduction of a 20 mph zone for the whole area, including some trial road closures and no entries. The scheme was generally supported with some reservations but high 'before' speeds and a lack of self enforcing speed

reducing measures made the implementation of the 20 mph zone at this stage unfeasible. Implementation of trial road closures and no entries subsequently took place in November 2000.

In October 2000 a public planning exercise was held to see what residents wanted in their local areas. This gave the council a good indication of what needed to be tackled to achieve home zone principles, although there were significant differences of opinions regarding the use and need for environmental opportunities in the green areas.

Consultation on plans drawn up by landscape architects showing options for the green on Chaucer Road took place in February 2000. Reconciling the views of families with children, families without children and older residents was seen as a priority.

The Residents Association with Peterborough City Council held a consultation event in June 2001 where plans for Chaucer Road and the roads around Fulbridge Infant and Junior Schools were displayed. Those residents attending the event provided important feedback for the Steering Group to consider when preparing the finalised schemes.

The experimental road closures have been made permanent.

The scheme design for the Chaucer Road home zone measures considered include:

- Entrance features.
- Improved landscaping of green space.

- Provision of play facilities.
- Traffic calming measures and 'shared' road space.
- Use of street furniture including seating and planters.

### 3 Home zone measures

The following sections give details of the measures used in each of the nine pilot schemes to create the home zones. These were typically a combination of traffic management, signing, parking, public art and hard and soft landscaping measures.

#### 3.1 Leeds

A schematic plan of the measures used in The Methleys home zone is shown in Figure 3.1.

Although many of the streets within the home zone were substantially unchanged, the specific home zone proposals included:

- Gateway treatments, with 20 mph and home zone signing at the principal entry points to the home zone. This was to make non local drivers aware of the changed environment.
- Traffic calming along Methley Drive, Blake Grove and Zermatt Street to manage the speed of traffic
- A new shared road surface, incorporating coloured block paving and extensive planting, on the western

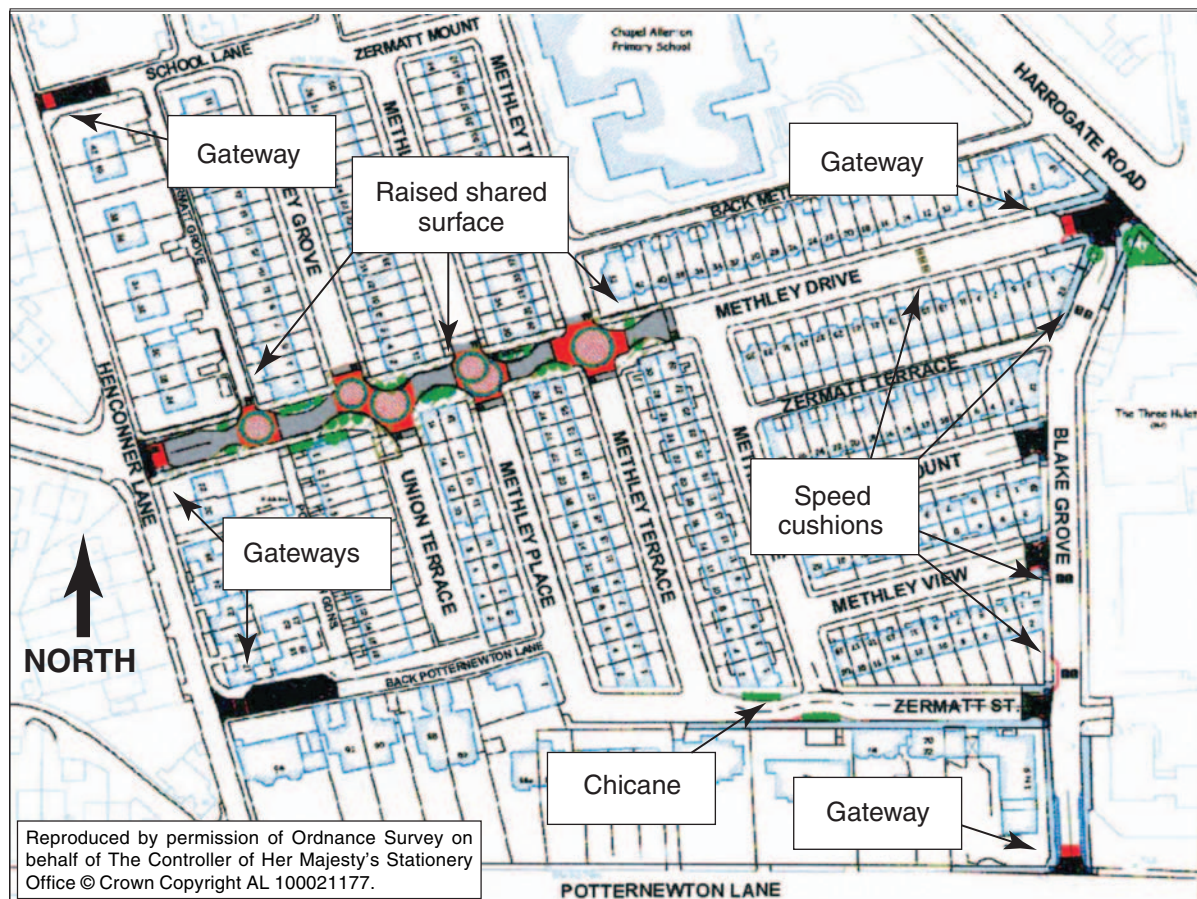


Figure 3.1 Home zone measures in Leeds

section of Methley Drive. The objective was to encourage street based activity and change driver behaviour on this wide straight road through the zone.

During the consultation process with local residents some changes were made to the proposed design. There were minor changes to the location of the gateways, a revision of the layout of the planting and the paved areas on the shared surface on Methley Drive. Speed cushions proposed for Zermatt Street were replaced by a chicane and fewer speed cushions were used on Methley Drive and Blake Grove.

### **3.1.1 Gateways and home zone signing**

At the five gateways to the scheme, the roads were narrowed to between 5 and 6 metres, depending on the location, and patches of buff and imprinted red coloured overlay were applied. The gateway at the western end of Methley Drive incorporated a ramp up to the raised shared surface (see Figure 3.2).



**Figure 3.2** Gateway at western end of Methley Drive

A 20 mph zone was established at the boundary of the home zone. At the time of the implementation, the final form of the 'standard' home zone sign to be used in the UK had not been determined. The boundary of the home zone was therefore denoted through the bottom panel of the standard 20 mph zone sign using a design from a local artist.

### **3.1.2 Shared surface on Methley Drive**

The heart of The Methleys Home Zone is located in the western section of the main spine road, Methley Drive, which has been intensively treated along a length of approximately 140 metres.

Methley Drive was selected for shared surface treatment in order to change existing road user behaviour on this straight east / west route through the zone and create a community area to act as a focal point in the centre of the zone. Due to concerns about the reduction of on-street parking, the shared surface was limited to the western part of Methley Drive where there were fewer houses directly fronting onto the street. This part of Methley Drive mainly

consisted of side road junctions separated by gable ends of terraced houses. The shared surface treatment was not continued into the eastern part of Methley Drive because the different housing layout and the multi-occupancy of some properties. This part of the street has a greater demand for overlooked on-street parking.

The shared surface has been raised to the pre-existing footway level and is accessed by short ramps. It is made up of buff paved areas - 'Traffic Flags', plant beds containing trees, smaller plants and shrubs, coloured concrete blockwork at the junctions with sections of tarmac in between. Some of the trees have also been planted in the buff paved areas protected by metal tree-guards (see Figure 3.3). The incursion of vehicles on to plant beds is prevented by complementary knee-rails. The buff paved areas and plant beds are distinguished from the coloured blockwork and tarmac by pre-cast concrete kerbing set to give a 15 mm upstand.



**Figure 3.3** Tree planting on Methley Drive

The shared surface was located fairly close to the school on Methley Terrace, because it would be used by people accessing the school, it was felt necessary to include the buff paved areas that would be primarily for pedestrian use. The original design for these paved areas was not so linear and had some of them curving around the outside of some of the planted areas. However, during consultation, concerns were raised by some residents about the desirability of having any planted beds close to the gable ends. In order to overcome these concerns, the locations of the affected planted and paved areas were transposed with the result that all the paved areas were located near the gable ends producing a more linear 'footway' effect (see Figure 3.3).

Vehicles travelling along the shared surface have to negotiate the staggered planted areas. These have been arranged to substantially reduce the previous forward 'free view' width of 8.5 metres. The visual impression of

reduced width is likely to become more apparent as the planting matures. Vehicles can pass each other at or near the junctions but are restricted to single lane working adjacent to the planting areas where the width narrows to 4 metres. The linear nature of the tarmacadem vehicle path has been further broken up by the contrasting circular patterns of coloured concrete block paving at the junctions with the adjoining streets.

The circular patterns of paved blocks enhance the visual appearance of the area, it contains bricks imprinted with designs produced by local children and adults. Other artwork emphasising the changed nature of the area has been mounted on suitable walls of properties around the zone (Figures 3.4a and 3.4b).

The trees were planted, and will be maintained, by Leeds City Council. Species chosen were all suited to street planting, they are salt tolerant, have limited root spread and are conical in shape. The start of the single-surface area is marked by a pair of limes (*Tillea cordata*) and the area is flanked by cherry trees (*prunus schubert*, *prunus sargentii* and *prunus hillieri*) all of which flower at the same time. The beds were themed by colour and comprise a variety of

shrubs and herbaceous perennials. Plants like lavender and mahonia provide scent. These beds were planted by the community and they continue to be maintained by the community on a monthly basis. Local people have also added annual bedding plants. One bed was planted by the local school children and includes herbs.

A community notice-board was also set up on a gable wall within the shared surface area.

### ***3.1.3 Traffic calming measures on other streets in the zone Methley Drive***

A set of three-abreast speed cushions placed across the road were installed on the eastern part of Methley Drive. This was to ensure low traffic speeds were maintained between the eastern gateway and the shared surface on the western part of Methley Drive. Originally two sets of speed cushions were proposed on this section but this was reduced to one during consultation with residents. The specified cushion dimensions were: height 70 mm, width 1750 mm and length 1900 mm with a plateau width of 1000 mm and a plateau length of 700 mm.



**Figure 3.4a** Bricks with imprinted artwork



**Figure 3.4b** Example of wall mounted artwork in The Methleys Home Zone

### *Blake Grove*

Speed cushions and road narrowings of 5.5 metres were installed along Blake Grove to calm traffic speeds on this north / south route along the eastern edge of the zone. Blake Grove was also substantially narrowed at the junction with Methley Drive / Harrogate Road in order to reduce the speed of traffic entering Blake Grove from Harrogate Road.

Zermatt Street, Methley View and Methley Mount, were narrowed to 5.5 metres at their junctions with Blake Grove to lower the traffic speeds of vehicles turning to and from Blake Grove.

### *Zermatt Street*

A two-way working chicane with the carriageway width reduced to 5.5 metres was introduced on Zermatt Street near the junction with Methley Lane to control traffic speed. Also it provided an opportunity for additional areas of planting.

## **3.2 Manchester**

The home zone measures were designed to encourage street based activity and change driver behaviour, they took into account comments from the mock-up and fun day held in May 2000. The home zone measures included:

- Introducing 'green streets' between the parallel streets.
- Introducing particular features such as small gardens and wall mounted pots outside the houses.
- Planting trees in the streets.
- Renewing and upgrading the street lighting.
- Replacing the parallel parking with echelon parking on alternate sides of the road.
- Slowing vehicular traffic.

Schematic plans of the measures used in the Northmoor home zone (Phase 1) are available on the Northmoor website given in the references (see Section 9). Copies of these plans showing the phasing, the entrance to the streets and the new areas between the streets known as 'green streets' are reproduced in Figures 2.4 and 3.5.

### **3.2.1 Gateways and signing**

There are gateways at each of the entrances to the home zone, at Stainer Street, Prout Street, Barnby Street and Purcell Street. All of the streets have a home zone entry sign which are shown in Figure 3.6. These signs were authorised by the Department for Transport before the standard home zone signs were designed. It can be seen that the signs incorporate: a) the street name, b) the words 'Home zone' with a black border, c) an adult and child in a triangular red border, d) two small children playing with a balloon and e) the words 'Please drive slowly'. A block paving effect was also used to alert drivers to the fact that they are entering a different type of area where all users of the street share priority. This follows the principles set out in the 'Home zone design guidelines' (IHIE, 2002).

This block paving effect surface is a hot applied, synthetic bitumen compound imprinted with a mould to

look like blocks. It can be vacuumed, swept, jet washed but an important factor is that the 'blocks' cannot become loose or be prised out.

### **3.2.2 Shared surfaces**

The shared surface along each of the four home zone streets is an important part of the scheme because it reinforces the fact that drivers can expect to encounter pedestrians, particularly children playing. Vehicles travelling along the shared surface have to negotiate vehicles parked in the designated angled parking bays as well as any vehicles which are parked in undesignated parking areas. They must also negotiate the large public art 'globes' which form chicanes for moderating vehicle speed along the streets. Vehicles can pass each other near the junctions but are severely restricted along the main part of each street. The former straight alignment of the streets has been further broken up by patterns particularly at the entrances and at the chicanes. These add visual stimulation and are designed to enhance the environment.

Although the home zone concept is for a shared surface, many residents expressed a concern about it. The resultant plan, worked out in close consultation with the residents, has different surface finishes for the vehicle routes and the non-vehicular routes, in some places a narrow footway was retained though in practice it is all one shared surface.

The chicanes in Prout Street are created by the large globes and angled parking (Figure 3.7). An example of parking in an undesignated area of the street is shown in Figure 3.8.

A view of a green street is given in Figure 3.9 which shows the feature in the centre and a new build 3-storey house on the corner of the green street.

An example of the flowers and plants outside house fronts is given in Figure 3.10. New litter bins and alley gating were introduced.

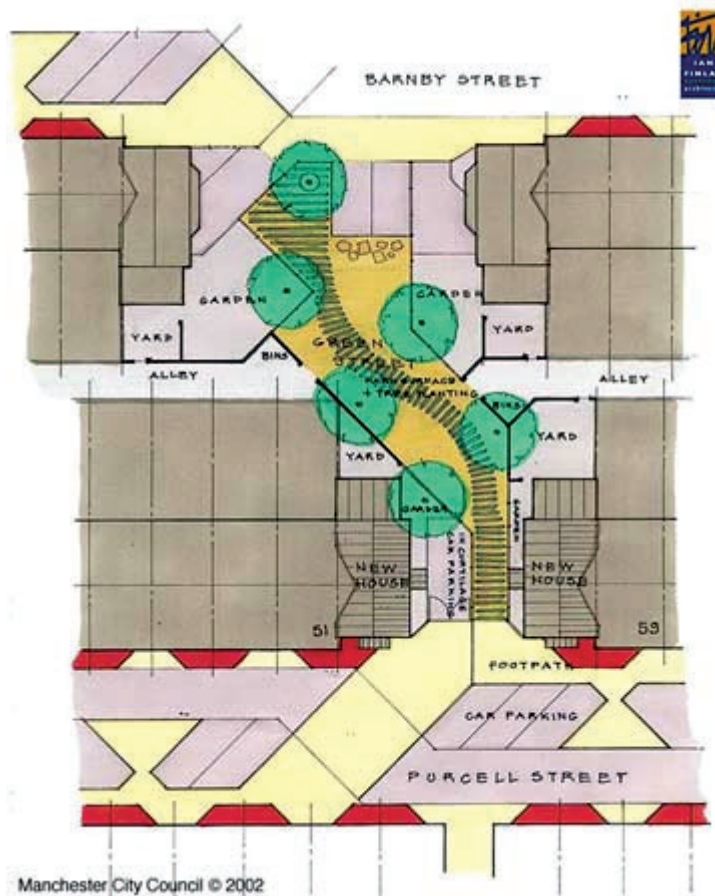
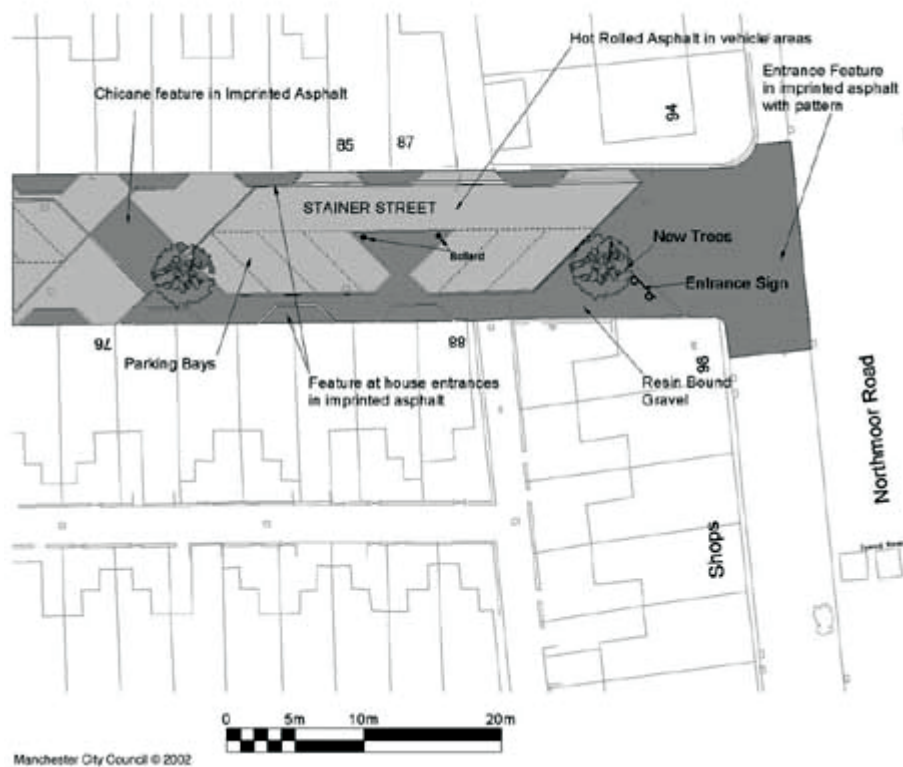
### **3.2.3 Street lighting**

The street lighting was improved to create a brighter and safer street environment. Both wall mounted street lighting and column mounted street lighting were provided. Compact fluorescent lighting was selected which gives white light compared with the previous yellow lighting. Removing the lighting columns and fixing lights to houses helped give the impression that the street is now wider. The lighting dims at midnight when the lighting levels return to those normally associated with a road.

The local authority has reported that the residents are very pleased with the new lighting because they feel safer and appreciate the ability of the lights to dim.

## **3.3 Sittingbourne**

The home zone measures were designed to improve the quality of life in the area for the residents. It was hoped that there would be a change in the use of the neighbourhood by pedestrians with the area becoming more 'people friendly' thereby enabling more community activities. The measures should also lead to a reduction in vehicle speeds and improve the perceived safety for all residents.



Courtesy of Manchester City Council

**Figure 3.5** Home zone measures in Northmoor, Manchester



**Figure 3.6** Home zone entry sign in Purcell Street



**Figure 3.9** New 3-storey house on corner of 'green street'



**Figure 3.10** Flowers and plants outside house fronts



**Figure 3.7** Chicane created by angled parking, trees and large balls



**Figure 3.8** Parking in an undesignated area of the street

- The home zone measures in Sittingbourne included:
- A gateway feature at the entrance to Cavell Way.
  - A road narrowing at the gateway.
  - The existing flat-top hump outside No.7 Cavell Way was retained.
  - Construction of a chicane between an existing flat-top hump and the spur *cul-de-sac*.
  - A raised junction at the spur *cul-de-sac* junction.
  - A priority change at the spur *cul-de-sac* junction.
  - The removal of the fence near the spur *cul-de-sac* junction and playground.
  - New benches near the playground.
  - Planting of trees and shrubs in the home zone.
  - Central shared raised area formed by a new road alignment to maintain slow traffic.
  - The existing flat-top hump outside No.95 Cavell Way was retained.

A schematic plan of the measures used in the Cavell Way home zone are given in Figure 3.11. This shows the existing hump outside No.7, the chicane outside Nos. 8 and 9, the raised junction at the spur *cul-de-sac*, the extent



**Figure 3.11** Home zone measures in Sittingbourne showing initial area of third phase

of the initial work outside Roentgen House (opposite Nos. 32 to 54 Cavell Way) and the existing hump at No.95. The consultation plan also shows extensive planting and play areas. Views along Cavell Way starting from the entry are given in Figures 3.12 to 3.14.

### 3.3.1 Gateways and signing

There is a gateway at the entrance and exit to the home zone (see Figure 3.12). This is at the junction with Staplehurst Road. At the gateway the road has been narrowed, this together with the signing is intended to remind drivers that they are entering a zone where all road users share priority. Again, this follows the principles set out in the 'Home zone design guidelines' (IHIE, 2002). The original entry sign had incorporated the text 'Cavell Way Home Zone' and a picture by children incorporating the words 'children at play' in coloured letters. The sign was later replaced with the prescribed home zone signs.

### 3.3.2 Shared surfaces

The main ‘shared surface’ area is outside Roentgen House, opposite Nos 39 to 53, in the centre of the home zone. This is important because it reminds drivers that pedestrians, particularly children, may be encountered along the road. Vehicles travelling along the shared surface have to negotiate very tight bends which form chicanes calming vehicle speeds along the road, see Figure 3.14. The raised

table junction at the spur *cul-de-sac* has the appearance of a 'shared surface'.

### 3.3.3 Traffic calming measures

### Road humps

Cavell Way originally had three flat-top road humps situated outside No.7, Nos. 43/44 (near Roentgen House) and outside No.95. The humps were retained except for the hump near Roentgen House which was incorporated into the shared surface area. The original humps had the desired effect of moderating vehicle speeds but the speeds were not low enough to constitute a home zone without the further measures being installed.

### *Raised junction*

The junction at the spur *cul-de-sac* is about 130 metres from the home zone entrance, it was raised so that drivers were made more aware of the junction. The junction plateau is about 33.5 metres long with 600 mm long ramps on each approach, it extends about 9 metres into the spur *cul-de-sac*. The entire surface of the raised junction top is covered with a block effect surface. This is a hot applied, synthetic bitumen compound imprinted with a mould to look like real blocks. It can be vacuumed, swept, jet washed but an important factor for this scheme is that the 'blocks' cannot become loose or be prised out. The raised junction surfaces have a skid resistance value of over 55 units.



**Figure 3.12** Home zone exit signs looking towards the Staplehurst Road junction (After 20 mph exit sign installed)



**Figure 3.13** Chicane and bollards at spur *cul-de-sac* junction looking east



**Figure 3.14** View of new road layout near Roentgen House looking north

### *Road narrowing*

At the gateway the road has been narrowed from 5.5 metres to 3 metres making drivers aware that they are entering a home zone. The spur *cul-de-sac* junction has been narrowed to 3.9 metres on the western side and to 3.6 metres on the eastern side on Cavell Way. The road into the spur *cul-de-sac* has been narrowed to 3.5 metres by building brick walls on each side of the road.

### *Chicane*

There is a chicane comprising of two overrun areas, 58 metres from the Staplehurst Road junction. It has alternate overrun areas which protrude about two metres, they are 13 metres apart. At the spur *cul-de-sac* raised junction the roads have been realigned so that there is not a direct route along Cavell Way, this gives the impression that the spur *cul-de-sac* has priority (see Figure 3.13). The main part of the chicane is formed by a wall which is 600 mm above the top of the raised junction.

## **3.4 Magor**

A schematic plan of the measures used in the Magor village home zone (Phase 1) is shown in Figure 3.15.

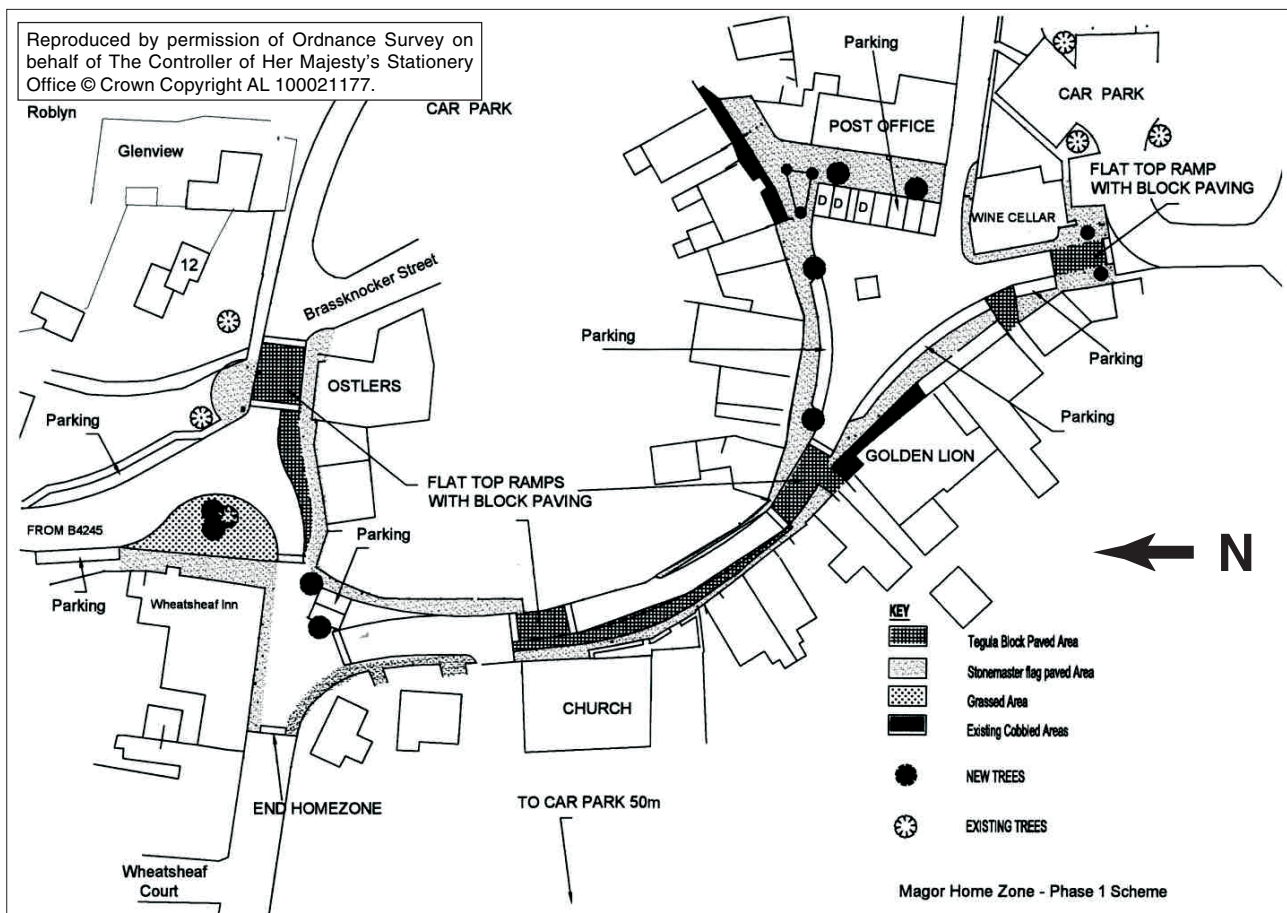
The home zone proposals included:

- Slowing vehicular traffic.
- Reducing the paved area allocated to cars by changing the proportions of car space/pedestrian space more in favour of pedestrians.
- ‘Blurring’ the divisions between vehicular and pedestrian spaces.
- Introducing particular features such as small playgrounds, sitting areas and planters.
- Planting trees in the streets.
- Reducing on-street car parking and increasing the provision of cycle racks.
- Traffic management and the introduction of one-way working southbound through The Square.

Most of the above proposals were implemented, however the small playgrounds caused some concern and were not provided. Gateway treatments with 20 mph and home zone signing were built at the entrances, narrowings and humps were the main traffic calming measures used to slow vehicles.

### **3.4.1 Gateways and signing**

There is one entrance/exit gateway at the northern end of the scheme which leads to the B4245. There are two further exits from the zone which are both one-way, one at the northern end near the Wheatsheaf Inn and another one at the southern end of The Square near the Wine Cellar. A 20 mph zone was established at the boundary of the home zone. The 20 mph zone signs are in both English and Welsh. The gateways incorporate 20 mph road marking roundels to enhance the visual impact of the 20 mph zone and home zone signs (see Figure 3.16).



Courtesy of Monmouthshire County Council

**Figure 3.15** Home zone measures in Magor

*(It should be noted that there is a one-way system in place in the southerly direction past the Wine Cellar as vehicles exit the zone via the flat-top ramp with block paving)*



**Figure 3.16** 20 mph zone entry sign and home zone entry sign behind

### 3.4.2 The Square

The Square is located at the heart of the Magor home zone. A one-way system is in operation, the traffic is only allowed to proceed in a southerly direction towards The Square. The exit from The Square is via a flat-top block-paved hump which is eight metres long with one metre on/off ramps. The road width at the exit is restricted to about four metres by the use of bollards and wider footways. The area outside the post office and around The Square has been improved and enhanced by using 'Stonemaster flags', planting and new railings around the war memorial. Two flat-topped block paved humps have been installed. The larger, near the Golden Lion public house, is 11 metres long and the one outside the church is 7.4 metres long, both have one metre long on/off ramps. A row of bollards has been installed between the pavement and the road on the approach to the church (see Figures 3.17 and 3.18).

### 3.4.3 Traffic calming measures on other streets in the zone

A large semi-circular build-out with a diameter of about nine metres was constructed outside the Wheatshaf Inn to make the route for vehicles narrower (see Figure 3.19). This narrows the road to about seven metres wide in the two-way section (north/south) and four metres wide in the one-way section (east/west). The area also has new trees and a



**Figure 3.17** The Square looking north



**Figure 3.18** Flat-top hump north of The Square



**Figure 3.19** Build-out outside the Wheatsheaf Inn

grassed area to enhance the environment. A large mature tree was moved but died, and was subsequently replaced.

There is an eight metre long flat-topped block-paved hump with one metre long on/off ramps outside Ostler's

convenience store at the entrance to Brassknocker Street and Sycamore Terrace.

Sycamore Terrace also has road humps near the school entrance.

#### *'No entry' to home zone*

As discussed previously, the vehicle route through The Square is one-way southbound. Access from the south is now only possible on foot. It should be noted however that there is a public car park which can be used when approaching The Square from the south. Access to the car park, the entrance of which can be seen on the right of Figure 3.20, was maintained although it is not possible to turn right out of the car park to access The Square.



**Figure 3.20** No entry at southern end of home zone

#### *Pedestrian way from The Square to Brassknocker Street*

The pedestrian route between The Square and Brassknocker Street was refurbished using 'Stonemaster flags' which enhanced the visual appearance of the walkway. The bollards which had been installed previously were retained (see Figure 3.21).



**Figure 3.21** Pedestrians using the walkway between The Square and Brassknocker Street

### Brassknocker Street

No speed control measures were installed along the length of Brassknocker Street but a number of bollards were installed to give a visual narrowing and to segregate the footway from the road.

## 3.5 Plymouth

### 3.5.1 Overview

The scheme was designed to increase residents awareness of their community, helping it to be pedestrian friendly, safe and clean. A plan of the measures used in the Morice Town home zone is shown in Figure 3.22.

The works undertaken included:

- Gateway treatments and home zone signing at all entry points to the home zone. These were designed to have a visual impact and make non-local drivers aware that they are entering an area where people and vehicles share the available space.
- Complete redesign of some streets and junctions to create a single level 'shared surface', reminding motorists that they are now in a different environment and to drive accordingly. 'Shared surfaces' encourage and enable street-based activity.
- Extensive planting and landscaping using herbaceous plants.

- Traffic calming measures on Garden Street, Pentamar Street, Ross Street and Cross Hill which runs north from Balfour Terrace along the eastern boundary of the home zone.

- The use of different coloured and textured surfaces to help people understand how space is expected to be used. Plymouth City Council issued a leaflet (see Appendix A) which gives guidelines for using the home zone. For example:

- *Grey*: indicates shared surface and through routes. Passing places have been provided where the shared surface is narrowed. Grey is also used at junction tables.
- *Yellow*: to delineate pedestrian, community and play areas, some with measures to prevent vehicle incursion.
- *Bright red*: to show vehicle-overflow areas to be kept clear so that buses and HGVs are able to turn corners.
- *Dark red*: with grey border to mark out parking bays within shared surface areas.

Figures 3.23 to 3.27 show typical gateway features, angled parking bays, planters, the decorative island feature at the junction of Charlotte Street and St Leo Place, the community space and parking facilities. The 'max speed 10' supplementary plates used at the gateways were authorised by DfT as they are not prescribed for use with the home zone signs.

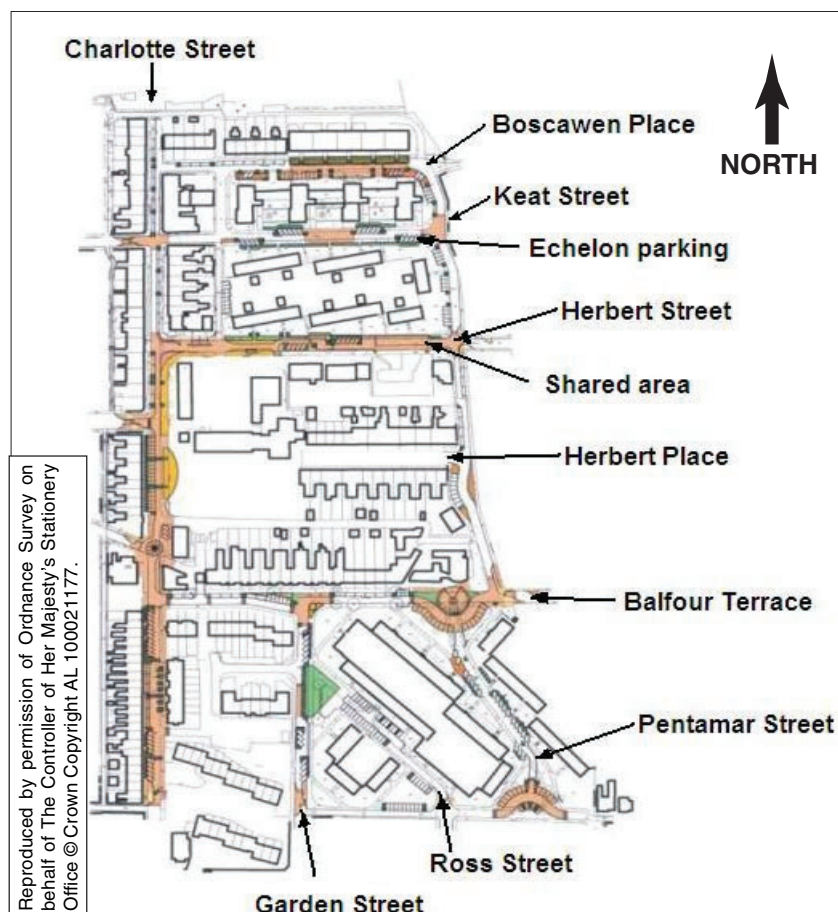


Figure 3.22 Plan of the measures used in Morice Town



Courtesy of the Department for Transport



**Figure 3.26** Decorative island feature at junction of Charlotte Street and St Leo Place



Courtesy of the Department for Transport

**Figure 3.24** Gateway with planting, Charlotte Street (looking north)



Courtesy of the Department for Transport

**Figure 3.27** Community space and parking facilities, junction of Balfour Terrace and Pentamar Street (looking west)



Courtesy of the Department for Transport

**Figure 3.25** Angled parking bays and planters, Charlotte Street

Grey patterned paving is used for the shared surfaces, which have been created across the former carriageway and footways. Passing places have been provided that should not generally be used for parking as it could block the free passage of vehicles. The yellow and red areas use an imprinted surfacing created by laying a screed of thermoplastic material, typically 20mm thick, and pressing a brick pattern into it while still soft. The paved and imprinted surfaces are generally on the most intensively treated streets in the home zone, namely Charlotte Street, Balfour Terrace, Herbert Street, Keat Street and Boscowen Place. The other streets were not redesigned to the same extent but they are still used in a similar way. Herbert Place, a *cul-de-sac* off Cross Hill, and Healy Place, a narrow street along the southern boundary of the zone, were little changed.

All planters in the home zone are constructed of two or three courses of reconstituted stone blocks with slate stone coping slabs. The planters are polygonal, rectangular or triangular and of varying size depending on location.

One of the most striking features of the home zone are the original granite kerbstones which have been relaid in an upright position to protect the verge from vehicles.

The commission for Architecture and the Built Environment (CABE), which campaigns for well-designed buildings and public places, named the Morice Town home zone as one of the UK’s most ‘inspiring places’.

3.6 Nottingham

Phase ‘A’ included traffic calming, landscaping of Nobel Road (see Figure 3.28) and the creation of a 20 mph zone (See Figure 3.29). The works on Nobel Road consist of nine flat-top hump features (see Figure 3.30), two gateway

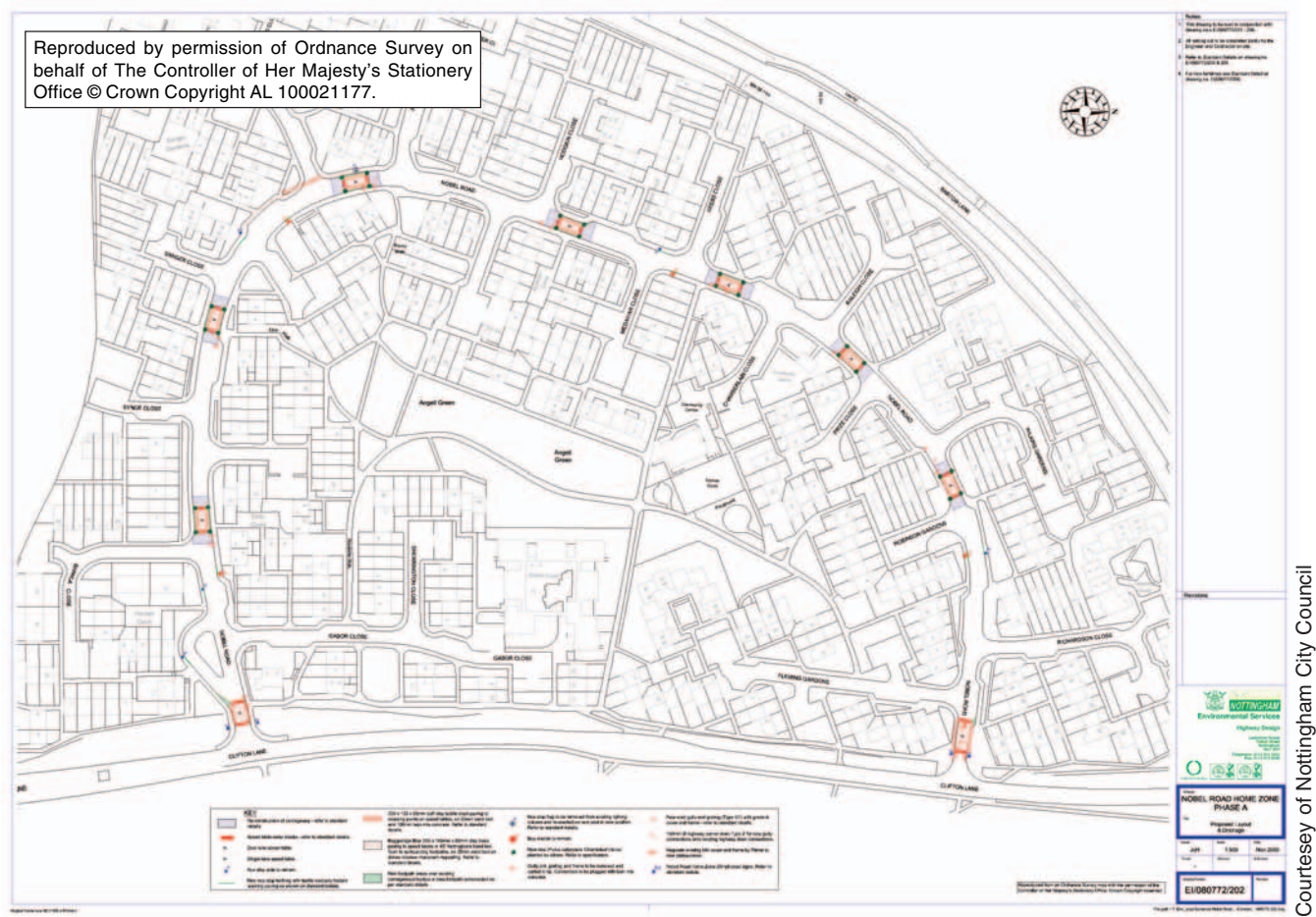


Figure 3.28 Nobel Road home zone phase A



Figure 3.29 Northern entrance to Nobel Road



Figure 3.30 Double-deck bus crossing a hump in Nobel Road

features and seven single carriageway flat-top hump features with tree planting. The features are designed to reduce vehicle speeds to 20 mph or less and reinforce pedestrian crossing points across the road whilst being 'bus-friendly'.

Phase 'B' was the 'mini home zone' areas within Chamberlain Close and Richardson Close given in Figures 3.31 and 3.32. The designs for these two side roads were developed in close consultation with the residents. They include environmental improvements to the properties such as new fencing and tree planting, as well as changes to the road layout to slow traffic down and create community spaces.



**Figure 3.31** New fencing in Richardson Close



**Figure 3.32** Example of flowerbeds in a *cul-de-sac*

#### *Chamberlain Close*

- New road layout including surface treatments.
- Increased parking for residents/visitors.
- New landscaped community area and tree planting.
- Upgrade/adaptation of existing street lighting/ furniture.

#### *Richardson Close*

- New road layout including surface treatments and 'pinch points'.

- Increased parking for residents/visitors.
- New landscaped garden area and tree planting.
- Upgrade/adaptation of existing street lighting/ furniture.
- New pedestrian access from Barton Lane.
- New boundary treatments to residential properties.

### **3.7 Ealing**

A plan of the measures used in the home zone is shown in Figure 3.33. The measures 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.
- 20 mph zone.
- Planting.
- Installation of community mosaics incorporating the road name.
- Closure of Hastings Road at the western end to address the rat-running problem.
- Areas of shared surface.
- Refurbished footways in asphalt with buff chippings.
- Changed road layout to incorporate echelon parking bays, mostly marked on alternate sides to create a chicane effect to help reduce speeds.
- Areas of contrasting surfacing mainly where the parking layout changes from one side of the road to the other side.
- Controlled Parking Zone.
- New street lighting supplementing existing lighting.

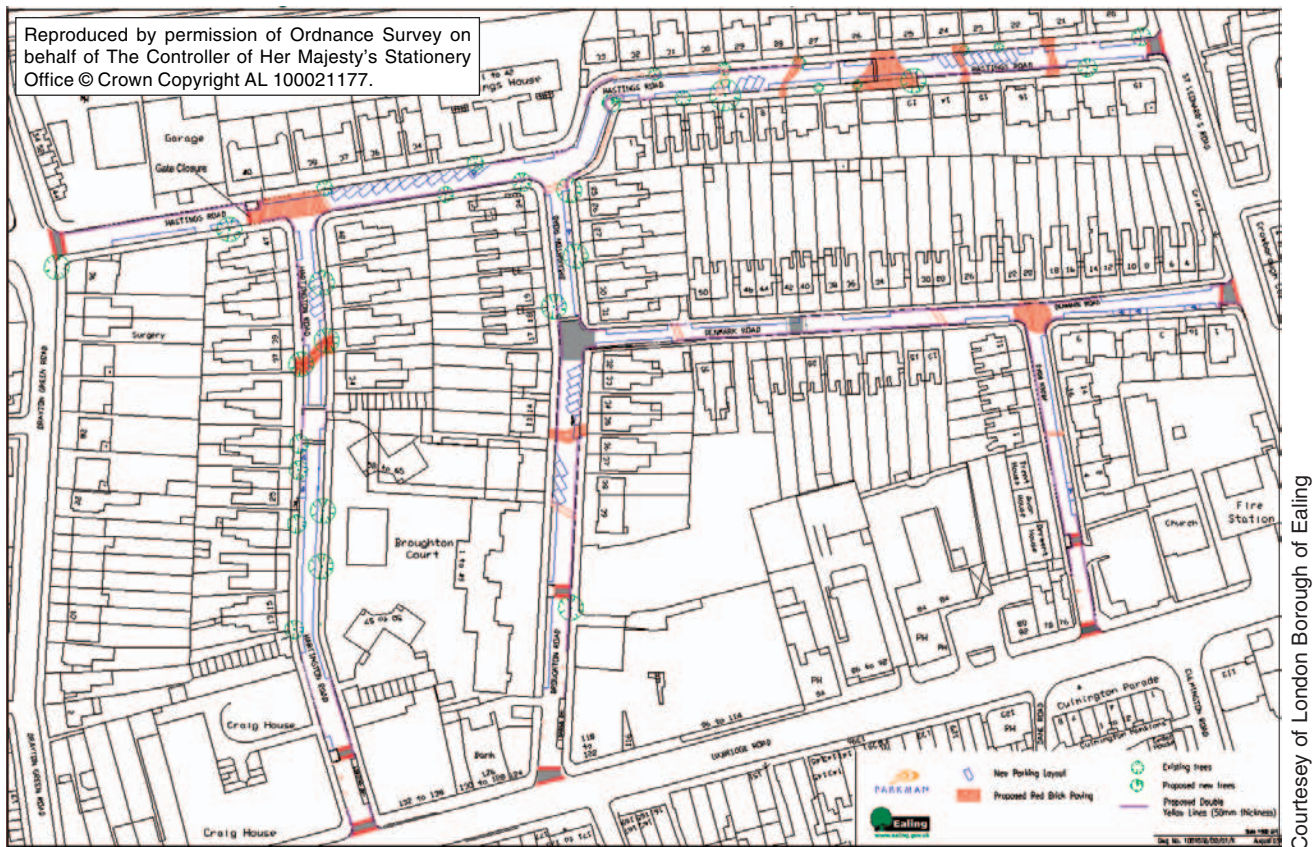
#### **3.7.1 Gateways and home zone signing**

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 are at the junctions of St Leonard's Road with Hastings Road and Denmark Road. Each consists 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 (Figure 3.34). A 20 mph zone was also introduced, the signing for which was erected at the junctions with the boundary roads.

The planters were originally in brick, but following repeated damage by vehicles, they were rebuilt from railway sleepers. Each planter features a circular mosaic, designed by residents and incorporating the road name.

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 the rat running by drivers avoiding the signalled junctions of Uxbridge Road with Drayton Green Road and St Leonard's Road (Figure 3.35). This barrier can be opened by the emergency services as they hold a key. The majority of rat running traffic was routeing via Hastings



**Figure 3.33** Plan of home zone measures used in Ealing



**Figure 3.34** Gateway, east end of Hastings Road

Road and Hartington Road and, to a lesser extent, Broughton Road. After a six month trial, the point road closure was made permanent in June 2003. Access to commercial premises at the western end of Hastings Road was unrestricted.



**Figure 3.35** Barrier, Hastings Road, looking towards junction with Drayton Green Road

### 3.7.2 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 3.36). 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 (see Figure 3.37), this replaced the concrete paving slabs in some areas.



**Figure 3.36** Shared surface, Denmark Road



**Figure 3.38** Build-out on bend, sheltering new parking bays each side of build-out, Hastings Road (looking east)



**Figure 3.37** Block paving used to separate groups of echelon parking in Hastings Road

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 Figures 3.37). 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 and between Denmark Road and Arden Road.

Additional street lighting was installed, doubling the previous provision. Where the original lamp columns were replaced, they were saved for possible reuse in a conservation area. Additional trees were planted.

A build-out was installed on the easterly of the two bends on Hastings Road to protect the parallel parking bays added between the two bends and to the east on the south side of the road (Figure 3.38).

### 3.7.3 Parking

The area became a Controlled Parking Zone (CPZ) in April 2002 two years before the launch of the home zone. The 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 do not live in the home zone
- Shoppers would be able to park in special bays with time limits designed specifically for shoppers, freeing residents' spaces and helping local businesses
- Fewer people would drive through the home zone in search of a parking space.

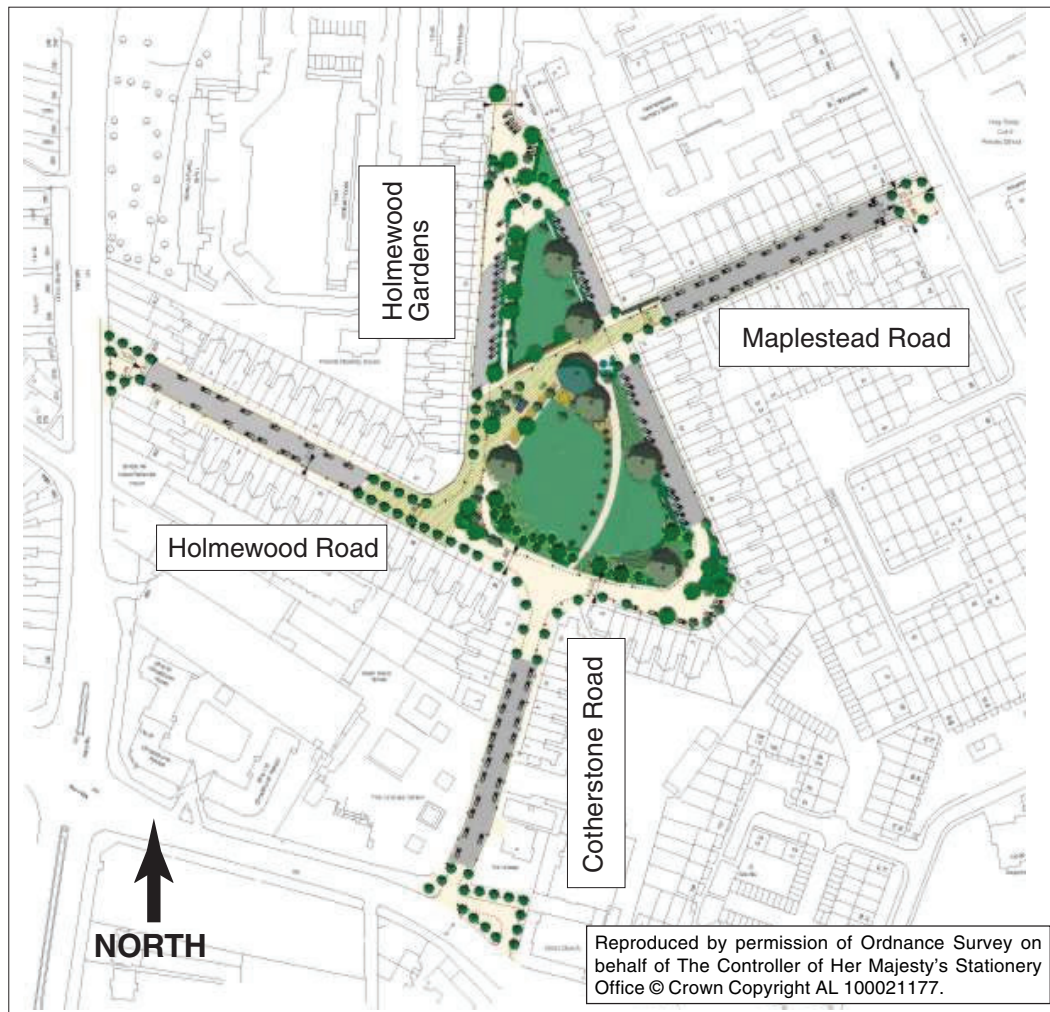
The majority of the new parking bays were angled at 60° to the kerb line and a few were reserved for disabled users. Some parallel parking was retained in between the angled bays. On Arden Road, the narrowest of the five roads, parallel bays were provided on one side only. Elsewhere, parking was not 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.

### 3.8 Lambeth

A plan of the Lambeth is given in Figure 3.39. The features planned for the home zone include:

- Road closures.
- Shared pedestrian and vehicle areas.
- Trees, plant beds and timber bollards.
- Flat-top humps, build-outs, traffic islands and rumble strips.
- New playground.
- Pedestrian crossing points to and from the central green space.
- New car parking bays.
- Width restrictions.

The scheme was substantially completed in 2005. A detailed plan of the proposed measures and the current progress of the scheme can be found at [www.holmewood.org.uk](http://www.holmewood.org.uk).



**Figure 3.39** Plan of home zone site in Lambeth

### 3.9 Peterborough

Three roads within the New England area have point closures to stop rat-running traffic. The closures have a collapsible central guard post to allow access for emergency vehicles.

The key traffic calming features used on Chaucer Road include:

- Gateways including road narrowing, entrance signs and coloured block paved plateaux to indicate that motorists are entering an area that puts the needs of pedestrians before vehicles.
- Horizontal/lateral and vertical shifts in carriageway alignment to reduce vehicle speeds.
- Shared-use areas to promote the right of way of pedestrians over traffic.
- Landscaping has been introduced to help break up the open spaces and reinforce but soften the hard appearance of the above features.
- Chaucer Road has two 'green' areas, the Fulbridge Road Infants School Wildlife Area project and Chaucer Green, that have been improved with funding from outside the scope of the main scheme. Work was carried out in conjunction with the landscaping on the main scheme.
- Improvements to the streetlights.

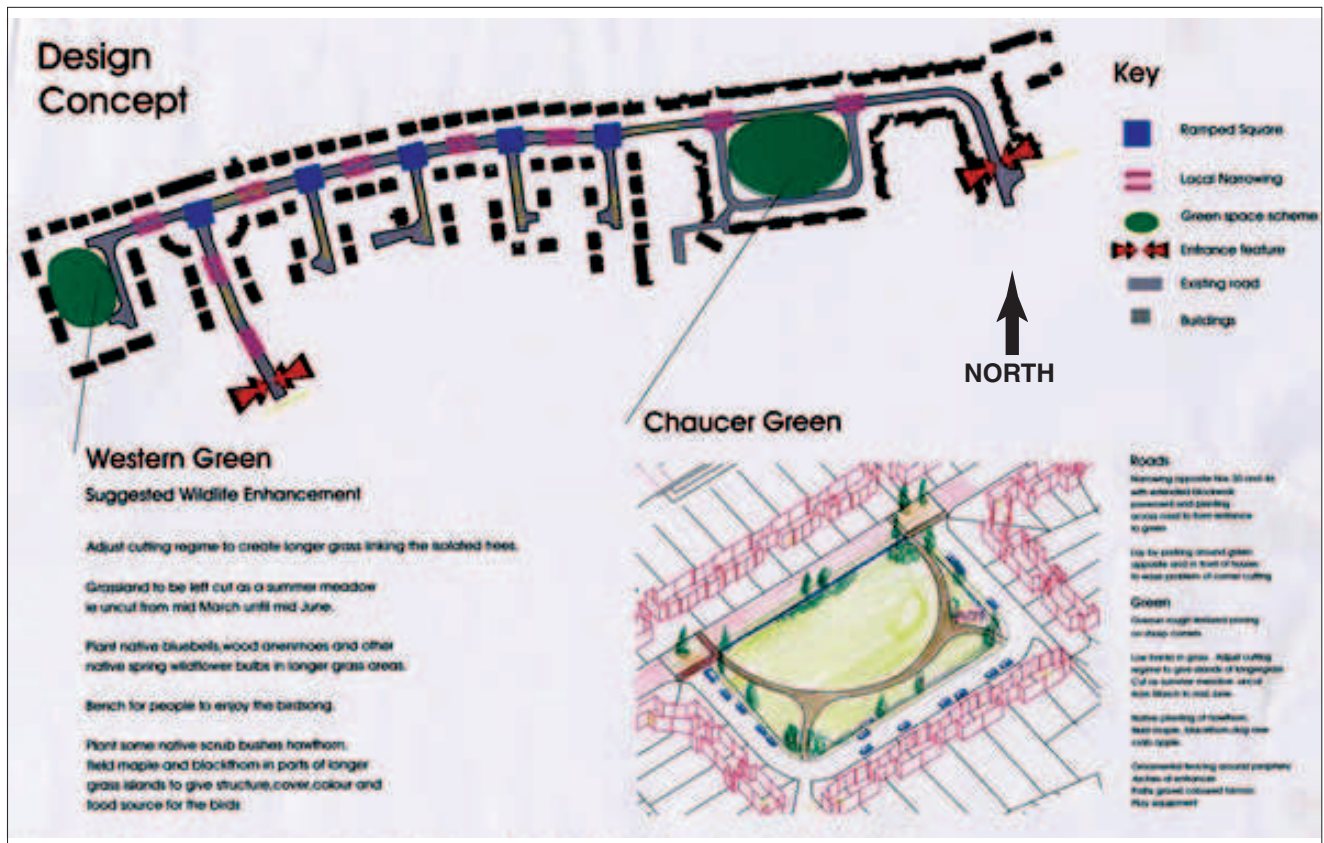
The five *cul-de-sacs* off Chaucer Road now have shared surfaces, rumble strip entry features and reallocation of footway space to parking or soft landscaping (see Figure 3.40).

The Chaucer Road pilot is part of the New England, Peterborough Home Zone Challenge scheme.

## 4 Data collection

The 'before' and 'after' monitoring programme carried out by TRL comprised:

- Attitudinal surveys of adults and children living within each home zone, the results of which form the main basis for determining whether the aims of each home zone have been achieved.
- Collection of traffic flow and speed data.
- Video recording to produce a drive through video and static cameras to record general street activity.
- Accident data analysis.
- Parking surveys.
- Air quality surveys (Leeds only).
- Noise surveys (Leeds only).



Courtesy of Peterborough City Council

Figure 3.40 Plan of Chaucer Road, Peterborough

The main 'before' surveys were carried out by TRL in 2000 and the main 'after' surveys between 2002 and 2004. 'After' surveys were not carried out at the Lambeth and Peterborough schemes because the works were not completed on site within the monitoring period of this project.

#### 4.1 Interview surveys

##### 4.1.1 Interviews with households within the home zones

The 'before' face-to-face household interview surveys with adults and children living within the proposed home zones took place during April to November 2000. Following the scheme implementations, the same respondents, where possible, were interviewed. Their children aged between 7 - 16 years old were interviewed using a questionnaire that concentrated on street activities and behaviour within the home zones.

In both the 'before' and 'after' surveys, adults living within the home were asked about:

- The profile of their household members.
- The perceived level of traffic speeds, traffic flows, traffic noise and traffic pollution within the home zones.
- Bicycle ownership, car or van ownership/access and where the vehicle is parked.
- Frequency of journeys for different purposes and by mode for example walking, cycling and car.
- Safety on the roads from traffic and personal safety from crime.
- Involvement in traffic accidents or 'near miss' incidents.

- How their children travel to school and whether accompanied by adults.
- Where their children play within the home zones.
- Safety in the street for playing.
- What on-street activities adults and children undertake within the home zones.
- The degree of priority given by drivers to pedestrians or cyclists.

In the 'after' surveys, adults were also asked about perceived changes in traffic speeds, traffic flow, traffic noise and traffic pollution; mode of travel; parking provision; safety; playing and other activities within the home zones. They were also asked about the visual appearance of the home zones; the measures used to control traffic; the effect on accessibility to their home by different modes; and views upon further 'things which are needed'.

'Before' interviews were conducted in those streets that were to become part of the home zones. To maximise participation in the surveys, every address selected within the proposed home zones received a minimum of three calls by the interview team at varying times of the day and week, including weekends, before being abandoned as a 'non-contact'. Child interviews were selected from households where an adult had completed an interview.

Only one adult and one child were selected for interview from any one household. Adults were specified as being 17 years old and over. Only those living at the address for at least 6 months for the 'before' survey and two years for the 'after' survey were eligible. Adults selected were Head

of Household or partner of Head of Household. Children selected for interview were between 7 and 16 years old. If there was more than one qualifying child in the household, then the child whose birthday fell next in the calendar year was interviewed. The interview was always conducted after the adult interview in each household, preferably with the adult present.

#### 4.1.2 Characteristics of the adult survey sample

The number of adult interviews carried out at each scheme in the 'before' and 'after' surveys are summarised in Table 4.1.

**Table 4.1 Adult interviews completed in each home zone area 'before' and 'after'**

| Scheme location | No. of interviews |       |
|-----------------|-------------------|-------|
|                 | Before            | After |
| Leeds           | 97                | 99    |
| Manchester      | 87                | 74    |
| Sittingbourne   | 84                | 47    |
| Magor           | 36                | 36    |
| Plymouth        | 96                | 91    |
| Nottingham      | 98                | 73    |
| Ealing          | 98                | 98    |
| Average         | 85                | 74    |

Tables 4.2 to 4.7 and Figures 4.1 to 4.6 give details of age, gender, occupational group, length of time at address, car ownership and number of children under 17 years old in all respondents' households.

The ages of the adult respondents in the 'after' surveys are given in Table 4.2.

On average, about a half of respondents were 45 years old or over, a third were 30 to 45 years old and about 3% were 17 to 21 years old. Manchester and Magor had the highest proportion of people over 60 years old at about 40%. Sittingbourne had the highest proportion of people under 30 years old (39%) and also the highest proportion of people 17 to 21 years old, 10%. These are reflected in the average ages of respondents at Sittingbourne being

**Table 4.2 Age of adult respondent**

| Age group (years)     | Percent |            |               |       |          |            |        | Average |
|-----------------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|                       | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| 17- 21                | 1       | 3          | 10            | 0     | 2        | 1          | 1      | 3       |
| 22 – 29               | 18      | 14         | 29            | 6     | 10       | 10         | 3      | 13      |
| 30 – 44               | 42      | 26         | 40            | 22    | 35       | 33         | 40     | 34      |
| 45 – 59               | 15      | 16         | 14            | 33    | 33       | 36         | 27     | 25      |
| 60 & over             | 23      | 42         | 7             | 39    | 19       | 19         | 30     | 26      |
| Average age of adults |         |            |               |       |          |            |        |         |
| Before                | 43      | 44         | 32            | 52    | 44       | 43         | 49     | 44      |
| After                 | 44      | 51         | 36            | 54    | 46       | 47         | 51     | 47      |
| Change                | +1      | +7         | +4            | +2    | +2       | +4         | +2     | +3      |

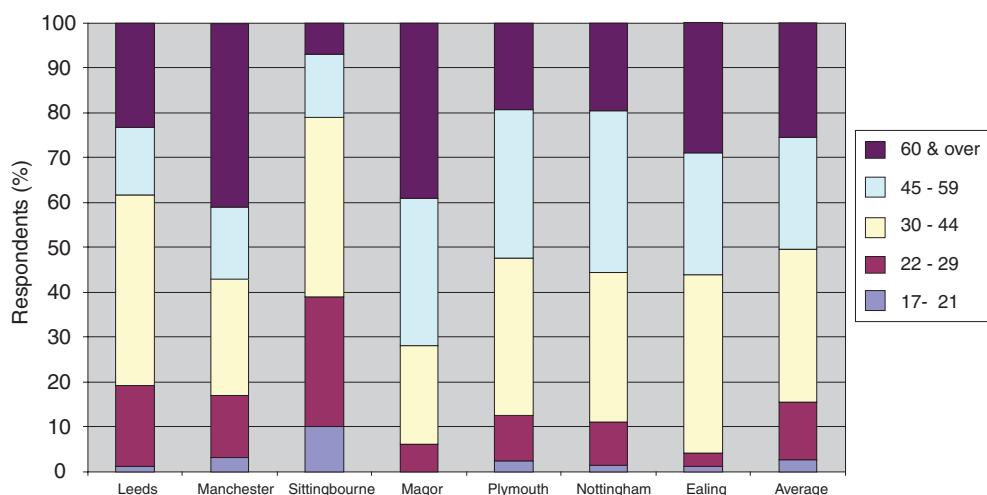
36 years old, 54 years old at Magor and 51 years old at Manchester compared to the overall average of 47 years old for all of the sites.

The gender of respondents are given in Table 4.3.

**Table 4.3 Gender of respondents**

| Gender | Survey | Before and After (percent) |            |               |       |          |            |        | Average |
|--------|--------|----------------------------|------------|---------------|-------|----------|------------|--------|---------|
|        |        | Leeds                      | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Male   | Before | 36                         | 38         | 24            | 53    | 35       | 28         | 42     | 37      |
|        | After  | 32                         | 29         | 14            | 53    | 31       | 24         | 40     | 32      |
|        | Change | -4                         | -9         | -10           | 0     | -4       | -4         | -2     | -5      |
| Female | Before | 64                         | 62         | 76            | 47    | 65       | 72         | 58     | 63      |
|        | After  | 68                         | 71         | 86            | 47    | 69       | 76         | 60     | 68      |
|        | Change | +4                         | +9         | +10           | 0     | +4       | +4         | +2     | +5      |

The results in Table 4.3 show that there was little difference between the percentage of male and female respondents in the 'before' and 'after' surveys. On average



**Figure 4.1 Age of respondents in the 'after' surveys**

males accounted for about a third of those surveyed and females about two-thirds.

Figure 4.2 shows the gender of the respondents in the ‘after’ surveys. The highest proportion of males was in Magor, 53%, and the lowest proportion was in Sittingbourne, just 14%.

The occupational groupings of the respondents in the ‘before’ and ‘after’ surveys were very similar, the ‘after’ survey results are given in Table 4.4.

Table 4.4 Occupational grouping

|       | Percent |            |               |       |          |            |        |         |
|-------|---------|------------|---------------|-------|----------|------------|--------|---------|
| Group | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing | Average |
| A&B   | 24      | 5          | 2             | 25    | 3        | 1          | 35     | 14      |
| C1    | 38      | 7          | 4             | 14    | 9        | 12         | 32     | 17      |
| C2    | 9       | 14         | 6             | 8     | 24       | 15         | 10     | 12      |
| D&E   | 29      | 74         | 88            | 53    | 64       | 71         | 23     | 57      |

Table 4.4 shows that the occupational groupings for the zones were quite different. Leeds and Ealing had about two-thirds of respondents who were managers in groups A, B and C1. Magor had about forty per cent who were managers and the rest all had less than fourteen per cent who were managers. Sittingbourne had the highest per cent of respondents in groups D and E which include semi-skilled, non-skilled or state dependent people.

Figure 4.3 shows that the proportions of the occupational groups are very similar in Leeds and Ealing and are well above the average for managerial occupations. Plymouth, Nottingham and Manchester were also broadly similar.

The respondents were asked how long they had lived at their address. The ‘after’ survey results are given in Table 4.5.

Table 4.5 shows that about half of all respondents had lived in their street for 10 years or more, however in Magor, about a half had lived there for over 20 years. In Sittingbourne, nobody had lived there for more than 20 years because the estate was only built in

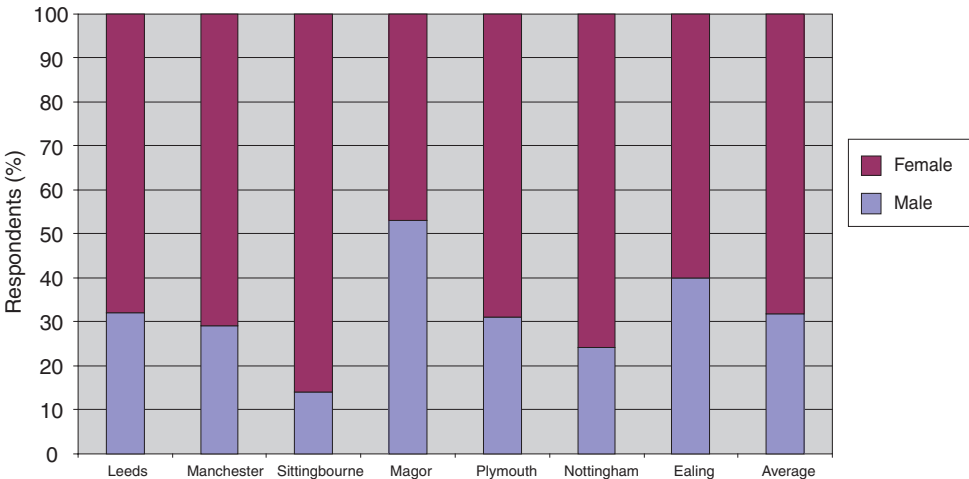


Figure 4.2 Gender of respondents in the ‘after’ surveys

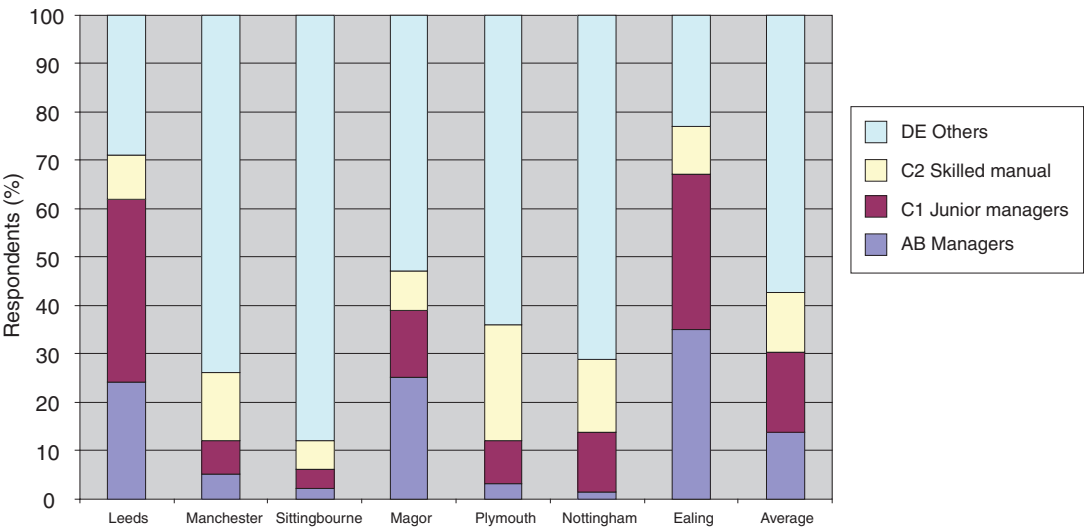


Figure 4.3 Occupational grouping of respondents in the ‘after’ surveys

**Table 4.5 How long have you lived at this address?**

| Time at this address | Percent |            |               |       |          |            |        | Average |
|----------------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|                      | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Under 5 yrs          | 41      | 18         | 36            | 6     | 38       | 20         | 18     | 25      |
| 5 - 10 yrs           | 27      | 45         | 42            | 25    | 27       | 18         | 26     | 30      |
| 10 - 20 yrs          | 20      | 7          | 22            | 17    | 23       | 29         | 22     | 20      |
| Over 20 yrs          | 12      | 28         | 0             | 53    | 11       | 33         | 32     | 24      |

1993 (see Figure 4.4). The highest proportion of respondents who had been at their address for less than 5 years were at Leeds, Plymouth and Sittingbourne. Respondents were asked whether they owned or had access to a car or van. The results for the 'before' and 'after' surveys are given in Table 4.6.

**Table 4.6 Do you own or have access to a car or van you drive yourself?**

| Access to car/van | Percent |            |               |       |          |            |        | Average |
|-------------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|                   | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Before            | 53      | 31         | 40            | 72    | 52       | 36         | 57     | 49      |
| After             | 51      | 34         | 52            | 78    | 48       | 35         | 66     | 52      |
| Change            | -2      | +3         | +8            | +6    | -4       | -1         | +9     | +3      |

Table 4.6 shows that the lowest proportion, about a third, of respondents who had access to a car or van was in Manchester and the highest proportion, about three-quarters, was in Magor. The overall average was about a half with a slight increase in the 'after' surveys. Figure 4.5 shows that Sittingbourne has had the largest increase in the proportion of respondent with access to a car between the two surveys. Plymouth and Leeds had slightly lower

proportions of respondents who had access to a car or van in the 'after' survey however the proportions were similar at about a half. Manchester and Nottingham had the lowest percentages in both surveys.

Respondents were asked how many children under 17 years old are there in the household. The results for the percentages of children under 17 years old are given in Table 4.7.

**Table 4.7 How many children under 17 years old are in your household?\***

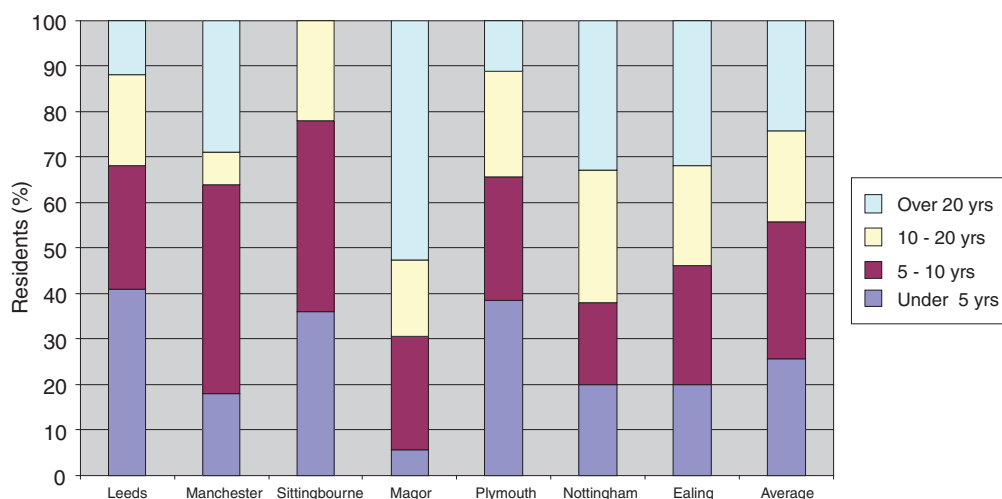
| Survey | Percent |            |               |       |          |            |        | Average |
|--------|---------|------------|---------------|-------|----------|------------|--------|---------|
|        | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Before | 30      | 51         | 83            | 22    | 63       | 60         | 36     | 49      |
| After  | 33      | 45         | 68            | 36    | 51       | 47         | 39     | 46      |
| Change | +3      | -6         | -15           | +14   | -8       | -13        | +3     | -3      |

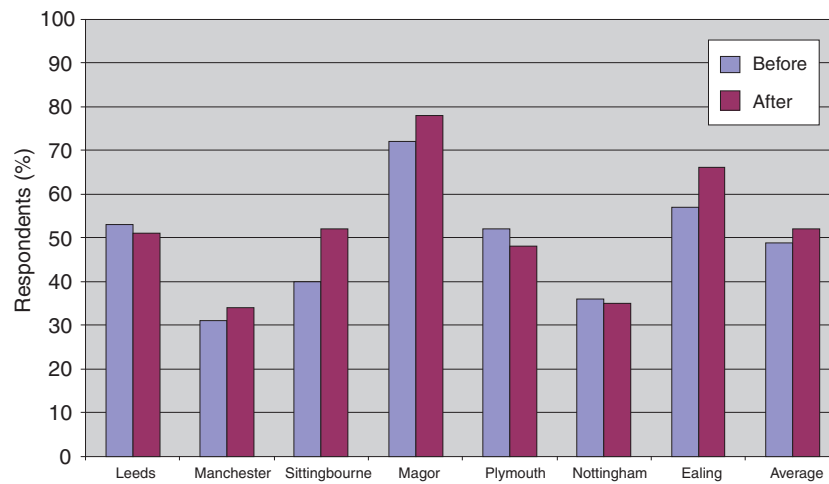
\* Table gives percentages to allow direct comparison between surveys.

Table 4.7 and Figure 4.6 show that about a half of households had children under 17 years old living at their address in the 'before' and 'after' surveys. The highest proportion in both surveys was at Sittingbourne, about three-quarters, and the lowest were at Leeds and Magor, about a third of respondents. Magor showed the largest increase, only Leeds and Ealing showed slight increases and all the others showed decreases.

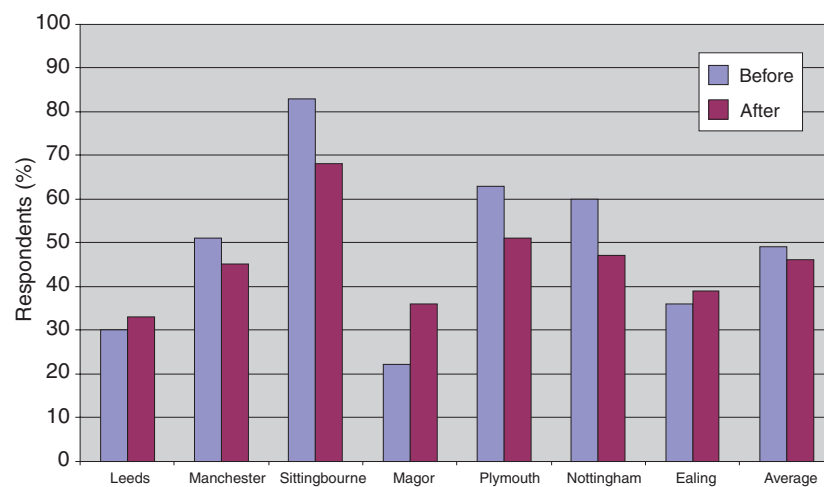
#### 4.1.3 Characteristics of the child survey sample

The ages of the children living in the home zones who were interviewed in the 'after' survey are given in Table 4.8. 'Before' interviews were carried out with children aged between 7 and 16 years old. The 'after' interviews took place with further children aged between 7 and 16 years old. Some of the children interviewed in the 'after' survey were in the age group 17 to 19 years old because they had been interviewed in the 'before' survey.

**Figure 4.4 Time at address of respondents**



**Figure 4.5** Access to car or van of respondents



**Figure 4.6** Children under 17 years old at address

**Table 4.8** Ages of child respondents

| Age group               | Percent |            |               |       |          |            |        | Average |
|-------------------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|                         | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| 7-9 yrs                 | 19      | 20         | 12            | 0     | 10       | 9          | 23     | 13      |
| 10-12 yrs               | 29      | 35         | 53            | 14    | 39       | 32         | 27     | 33      |
| 13-16 yrs               | 33      | 40         | 35            | 57    | 29       | 50         | 45     | 41      |
| 17-19 yrs               | 19      | 0          | 0             | 29    | 10       | 0          | 5      | 9       |
| Unknown                 | 0       | 5          | 0             | 0     | 13       | 9          | 0      | 4       |
| Average age of children |         |            |               |       |          |            |        |         |
| Average                 | 13      | 12         | 12            | 15    | 13       | 13         | 12     | 13      |

Table 4.8 and Figure 4.7 show that overall about half of the child respondents were up to 12 years old; at Magor this group only accounted for fourteen per cent compared with sixty-five per cent at Sittingbourne. This difference was reflected in the average of children interviewed being

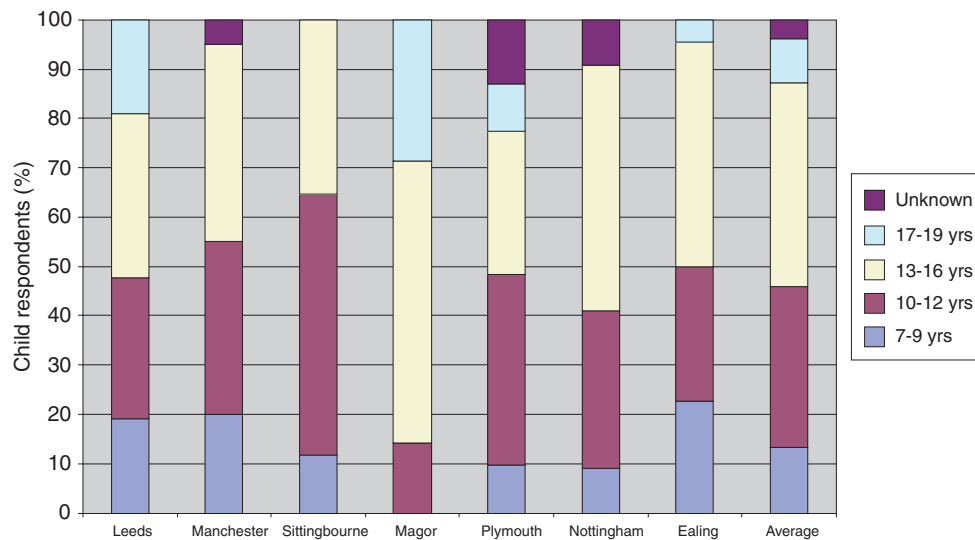
12 years old at Manchester, Sittingbourne Ealing and 15 years old at Magor. The average age of children was about a year older in the 'after' surveys compared with the 'before' surveys.

Table 4.9 and Figure 4.8 show that males accounted for over half of the children interviewed in the 'after' surveys at Magor and Plymouth with 57% and 55% respectively. The lowest percentage of males interviewed was at Nottingham where just 32% were males. On average across all the home zones, males accounted for 46% and females accounted for 54% of the children interviewed.

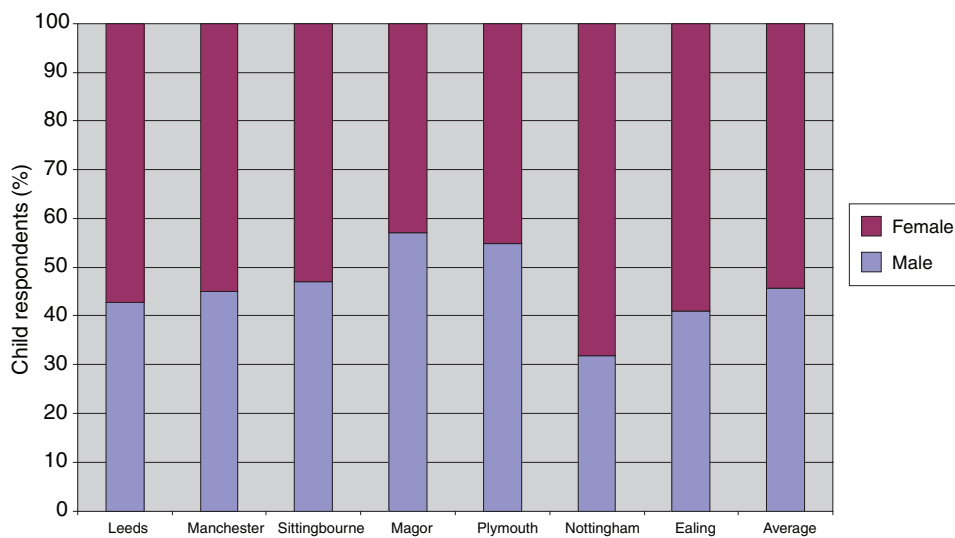
## 4.2 Traffic flows and speeds

Traffic flow and speed data were measured during school term-time by TRL using Automatic Traffic Counters (ATCs) and tube detectors. The 'before' and 'after' traffic flow and vehicle speed measurements were made over three weeks at various locations within each home zone. As far as possible the 'after' measurements of speed/flow were carried out at the same locations as in the 'before' surveys.

The ATC stores speed information by allocating speeds within a given range (e.g. between 5 and 10 mph) to a



**Figure 4.7** Age of child respondents in the ‘after’ surveys



**Figure 4.8** Gender of child respondents in the ‘after’ surveys

**Table 4.9** Gender of child respondents in the ‘after’ surveys

| Gender     | Percent |            |               |       |          |            |        | Average |
|------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|            | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Male       | 43      | 45         | 47            | 57    | 55       | 32         | 41     | 46      |
| Female     | 57      | 55         | 53            | 43    | 45       | 68         | 59     | 54      |
| Difference | +14     | +10        | +6            | -14   | -10      | +36        | +18    | +8      |

particular ‘speed bin’. For this study, the ‘speed bins’ on each ATC were set to provide adequate detail on low speeds, below 20 mph, as well as for higher speeds above 40 mph. Problems can be encountered when vehicles park on the ATC equipment, when vehicles are travelling below 10 mph or when traffic is queuing to turn right or left.

Some of these problems were encountered but the differences in speeds and the percentage difference in flow, ‘before’ to ‘after’, are considered to be representative of the real values for the site.

### 4.3 Video records

Video recordings were made using lamp post mounted cameras, both ‘before’ the schemes were implemented and again ‘after’ they had been built. The surveys were undertaken at a variety of locations within the home zones for 12 hours between 07:00 and 19:00 hours on a weekday and on a Saturday.

The locations chosen took account of the type of traffic calming measures and the hard and soft landscaping features that were proposed during the design of the home zone schemes. Up to five locations were chosen depending on the site.

The video footage from these cameras was analysed to determine pedestrian counts and classified traffic counts as

well as to provide information on street activity and pedestrian behaviour. Changes in street activity and behaviour within the home zones may be very small, weather dependent and difficult to detect, even if many hours of data are collected. Therefore, the data from the video recordings is unlikely to be reliable as a quantitative measure unless the changes in activity are very large. Information on changes in street activity and behaviour provided by the interview surveys are therefore considered to be as representative of the real situation as are the video recordings.

#### 4.4 Traffic accidents

Information on road traffic injury accidents reported to the police, known as STATS19 (DfT, 2004), within the home zones and the areas surrounding the home zones were obtained for a five year period before each scheme was installed. Details of these accidents can be found in the individual scheme reports. However, with the number of injury accidents being small in the five years before the home zones were built and the two years since works were completed on sites, it is unlikely that any change in accident frequency will be statistically significant.

Further information on accidents and near misses 'before' and 'after' the installation of the scheme has been obtained from the interview surveys. Respondents living within the home zones were asked whether as a pedestrian, cyclist or car user, they had been involved in any accidents or near misses within the area covered by the home zones. Further details were obtained from those giving positive responses.

Because of problems with exact definitions of accidents/near misses and uneven recollection, this data is unlikely to provide a reliable indicator of changes in the numbers of accidents or in accident frequency. However, it will help to understand the types of accidents/near misses that may be associated with home zones and highlight any operational problems. The data also provides supporting evidence for information collected on changes in perceived safety.

#### 4.5 Noise and air quality

'Before' and 'after' noise and air quality measurements were only carried out at Leeds, full details on these can be found in TRL Report TRL586 (Layfield, Chinn and Nicholls, 2003). The following paragraphs from the report summarises the conclusions of these studies.

##### 4.5.1 Noise

The main conclusion from the surveys in Leeds is that measured and predicted changes in daytime traffic noise levels, LA10,18h, at the junction of Methley Drive and Methley Terrace indicate reductions of about 1 dB(A) after the scheme was in operation. However, reductions in traffic noise levels of less than 3 dB(A) are unlikely to be perceived. The introduction of the home zone scheme based on this limited survey would indicate no expected change in people's perception of road traffic noise for those living in this area.

##### 4.5.2 Air quality

A comparison of local air quality data in Leeds for benzene and nitrogen dioxide (NO<sub>2</sub>) before and after the installation of the home zone indicates that there has been little change in the concentrations of these air pollutants in the area.

The concentrations of kerbside benzene during the 'before' study were close to urban background levels and well below the Air Quality Standard for benzene of 5ppb (parts per billion). This indicates that any sources of benzene emissions in the area were not significantly affecting local air quality. Benzene concentration at the background control site decreased slightly between the 'before' and 'after' surveys. Benzene concentration, relative to the background control site, increased at the kerbside sites on Methley Drive and Blake Grove between the 'before' and 'after' surveys. However, these changes were small and not statistically significant.

As with benzene, the concentrations of kerbside NO<sub>2</sub> were close to the urban background levels and below the Air Quality Standard for NO<sub>2</sub> of 40 mg/m<sup>3</sup>. NO<sub>2</sub> concentration at the background control site decreased slightly between the 'before' and 'after' surveys. NO<sub>2</sub> concentration, relative to the background control site, also decreased at the kerbside sites on Methley Drive and Blake Grove between the 'before' and 'after' surveys. However, these changes were small and not statistically significant.

## 5 Impact of the home zones

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The majority of the adult residents interviewed were supportive of their home zone and thought that it had a positive impact in terms of appearance. Safety from traffic danger was generally considered better by children, adults thought walking and cycling in the home zones was safer.

#### Overall the average of adult residents views towards the home zones

On average over half the adult residents interviewed thought that:

- It was safe from road traffic for adults walking or cycling (74% safe or very safe).
- The appearance of the street had improved (73%)
- The residents were in favour of the home zones (64%)
- Motorists had changed the way they drove within the home zones (62% of motorists)
- It was safe from road traffic for children walking or cycling (58% safe or very safe).
- There was sufficient consultation (52%)

On average, there were roughly equal responses as to whether they thought that the:

- Views of residents were taken into account (37% Yes, 37% No, 26% don't know)
- Pleasure of driving in the home zones was (more pleasant 31%, less pleasant 28%, same 41%)
- Children should play in the street now that it is a home zone. (44% Yes, 36% No, 20% mixed feelings)

On average, over half of the adult residents interviewed thought that there was no change in the issues listed below.

- The friendliness of people in the street (79%)
- Driving standards, amount of poor driving (69%)
- Air pollution from traffic (68%)
- The safety from crime for adults and children walking & cycling (68% and 67%)
- Traffic noise (64%)
- Parking problems (57%)
- Consideration of motorists towards children playing in or near the street (53% same, 38% more considerate)
- The amount of traffic (53% no change)

### Summary of all children's views on changes since the home zones

On average, the home zones had the biggest impact on:

- The appearance of the streets (better 53%, same 36%, worse 11%).
- Road safety (better 47%, same 44%, worse 9%).
- Traffic speed (better 45%, same 42%, worse 13%).

On average, most of the children thought there was no change in following:

- Their journey to and from school (same 82%).
- Where they played outside (same 80%).
- How much fun it is when playing outside (same 74%).
- How friendly people are to each other (same 69%).
- How often they play outdoors near their home (same 69%).

Children's views were similar to the adults in that many also thought that the streets looked more attractive. Generally they felt safer and considered that traffic speeds were slower, though some thought that there had been no change and a few thought that traffic was faster.

## 5.1 Residents' support for the home zones, consultation and changes to the street.

### 5.1.1 Adult residents living in the home zones

There was substantial support (see Figure 5.1) for the home zones from the adult respondents, about two-thirds on average were in favour. The lowest percentage (38%) in favour was at Sittingbourne, the highest was at Plymouth (76%), the overall average for the pilot was 64%.

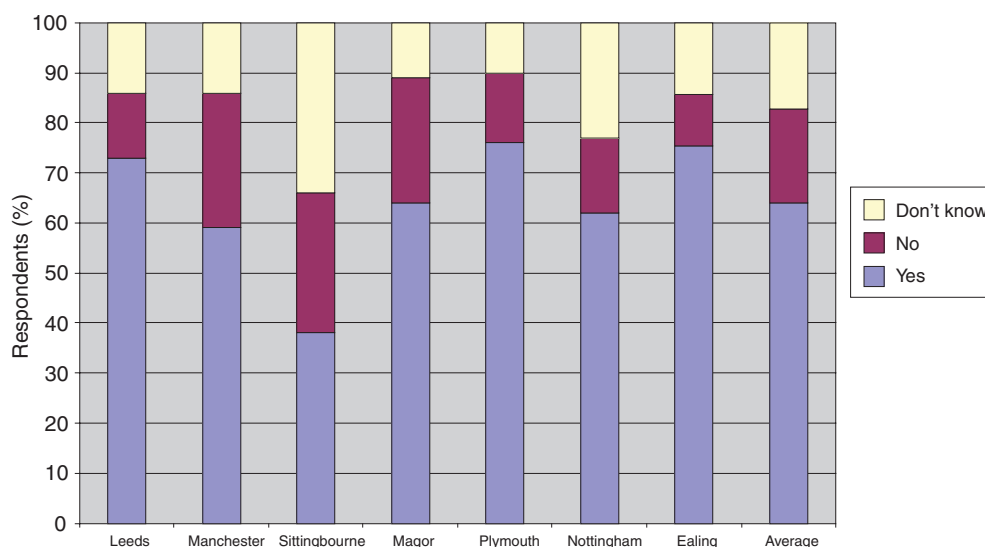
In Sittingbourne three respondents thought that the home zone was a waste of money but one of the respondents gave the following very important comment:

***'Wasted the money because it's not appreciated'***

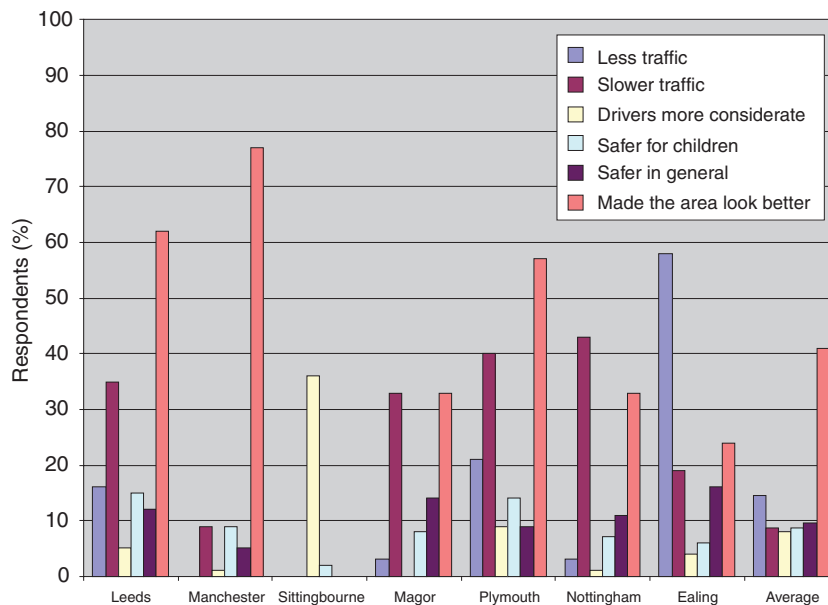
Residents' perceptions of the advantages of the home zones are given in Figure 5.2. This shows that the most common advantage for the zones was that it made the area look better, though no respondents at Sittingbourne made this comment. Less traffic, slower traffic and safety were mentioned at most of the zones which is encouraging as they are all related issues. At Sittingbourne drivers were thought to be more considerate to others using the shared space.

Figure 5.3 gives the percentages of respondents who mentioned categories of road users thought to benefit from the home zones. On average the most respondents (36%) thought all residents benefited from the home zone schemes. Other people thought to benefit were children (23%), no-one (16%), pedestrians (9%), don't know (9%) and older people (4%). In Ealing, 67% of respondents considered that all residents benefited, whereas in Sittingbourne and Magor only 11% thought all residents benefited. In Sittingbourne children were thought to be the main group to benefit (38%).

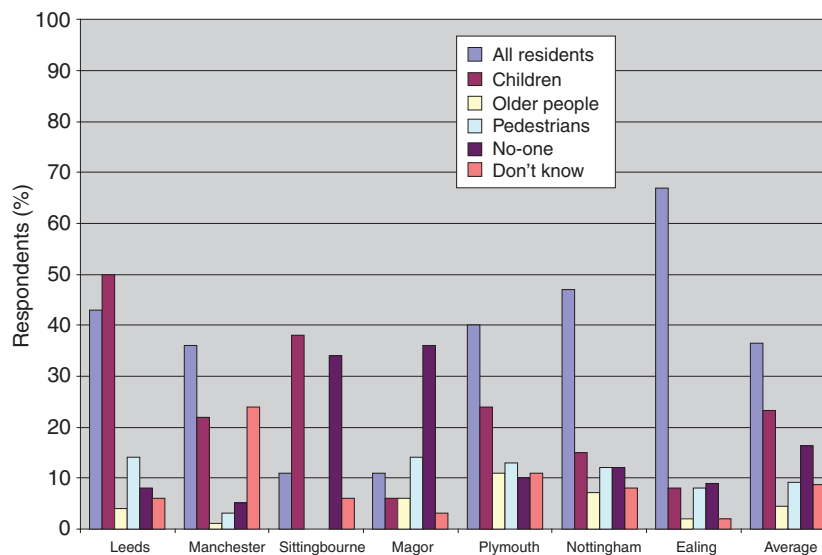
On average over half the respondents living within the home zones thought that there had been sufficient consultation (see Figure 5.4) before work began (52% 'yes', 30% 'no', 17% 'don't know'). The 'yes' category ranged from 36% at Sittingbourne to 70% at Leeds.



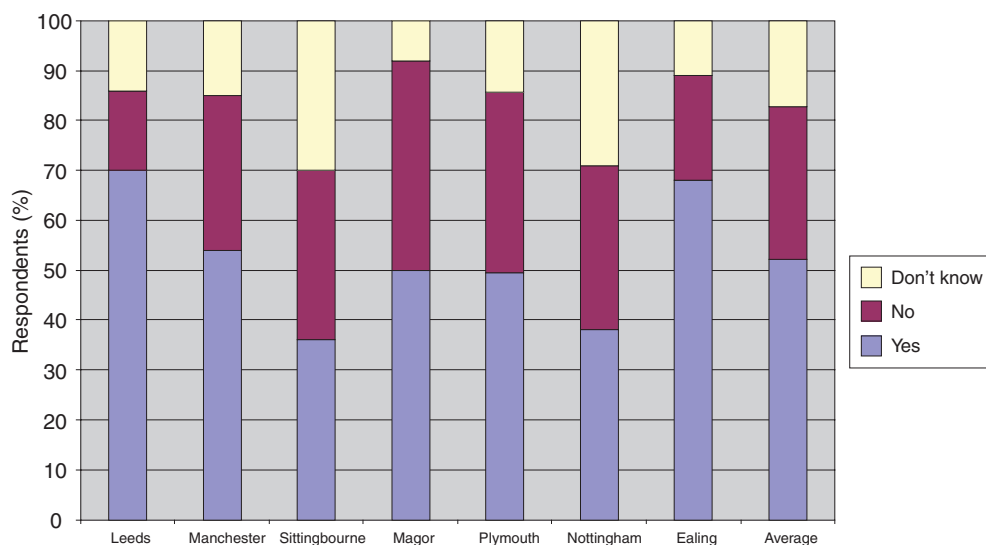
**Figure 5.1** Overall, are you in favour of the home zone now it has been installed?



**Figure 5.2** Adult residents perceived advantages of home zones



**Figure 5.3** People perceived to benefit from the home zones



**Figure 5.4** Do you think there was enough consultation?

Over a third thought that the views of residents (see Figure 5.5) were adequately taken into account in the design of the scheme (37% ‘yes’, 37% ‘no’, 26% ‘don’t know’). The ‘yes’ category ranged from 21% at Sittingbourne to 53% at Leeds.

### 5.1.2 Children living in the home zones

On average, 65% of the children interviewed in the ‘after’ survey felt that their street had changed since becoming home zones. The highest percentage was at Plymouth (94%) and the lowest was at Magor (29%).

There were many suggestions from children for improving the home zones. These can be summarised as:

- Play areas (24%) - particularly in Leeds, Nottingham and Manchester.
- Youth clubs (10%) - particularly in Plymouth, Nottingham and Magor.
- More swings and play equipment (8%) - particularly in Sittingbourne.
- Less traffic (7%) - particularly in Leeds and Magor.

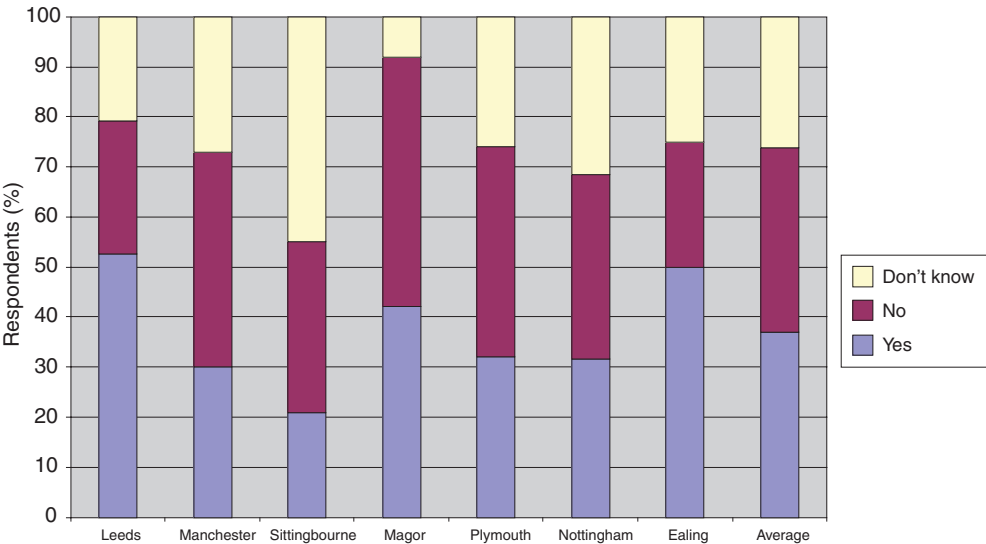
## 5.2 Satisfaction with the streets

### 5.2.1 Adults living in the home zones

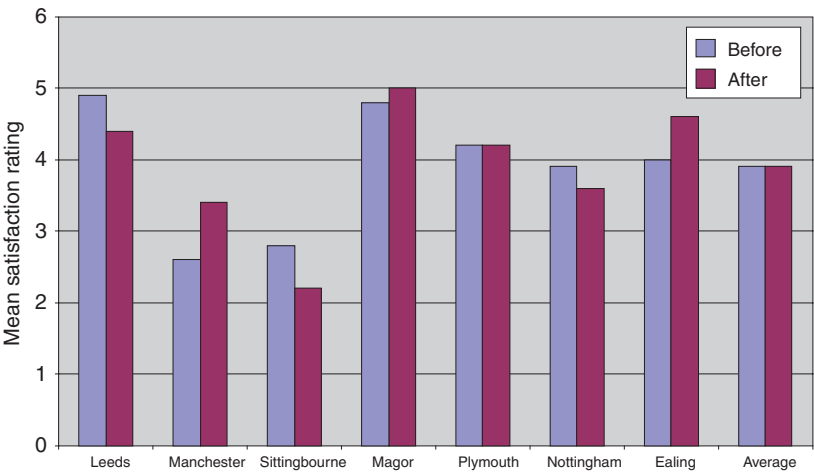
Overall adult respondents living within the home zones were generally positive about their street as a place to live, with most people in both ‘before’ and ‘after’ surveys rating their street as satisfactory (see Figure 5.6). The scale used in the surveys went from ‘definitely unsatisfactory’ = 0 to ‘definitely satisfactory’ = 6. The mean rating of satisfaction was 3.9 in the ‘before’ and 3.9 in the ‘after’ survey. The largest differences between the ‘before’ and ‘after’ surveys were at Manchester which increased from 2.6 to 3.4, an increase of 0.8 and at Sittingbourne which decreased from 2.8 to 2.2, a decrease of 0.6.

### 5.2.2 Children living in the home zones

The children interviewed thought that people were friendly after the home zones were installed (42%), they could play outside (19%), it was safe/quiet (19%) it had amenities (18%) and it looked nice (14%). It should be noted that amenities were not mentioned at Sittingbourne or Nottingham and ‘looking nice’ was not mentioned at Sittingbourne.



**Figure 5.5** Do you think the views of residents were adequately taken into account in the design of the scheme?



**Figure 5.6** How do you feel about this street as a place to live?

Over half of the children in Magor thought that there was nothing to do, about a quarter in Leeds and Manchester did not like bullies and crime in their area. Just under a third of children in Sittingbourne did not like the home zone being 'dirty'.

## 5.3 Environment

### 5.3.1 Adults living in the home zones

On average about three-quarters of adult respondents (see Figure 5.7) living within the home zones thought that the streets were now more attractive (32% 'a lot more attractive', 41% 'a little more attractive'). The preferred elements mentioned were; shrub planting, flowers and trees (52%), paving of the road (19%), layout and design (6%) and generally clean and tidy (5%). Nottingham was the only home zone which included new fencing in its design, this was mentioned by 38% of respondents as being attractive.

Only about 14% of all respondents on average thought that their home zone was less attractive than before. A common concern was litter and general rubbish.

Traffic noise and pollution were not major areas of concern for most residents interviewed, the home zones were perceived to have had little impact on these issues. On average about two-thirds of the respondents living within the home zones thought that there was no change in traffic noise (64%) or traffic air pollution (68%) in their street.

About a quarter (24%) of the residents, had lived in their street for at least 20 years and knew their neighbours by name. Almost all (97%) of the adult respondents said that that they knew at least one person by name in one or more households in their street, about half said that they knew at least one person by name in at least five households in their street.

On average 83% of the respondents said that they now 'often' or 'occasionally' spent time chatting to friends or neighbours, this is similar to the average of 81% reported in the 'before' survey. Respondents were asked whether

the street was more or less friendly since becoming home zones (see Figure 5.8). The vast majority of respondents thought there had been no change (more friendly 15%, less friendly 4%, about the same and don't know 81%). The highest percentages of those responding 'more friendly' were recorded in Ealing (38%) and Plymouth (30%). The lowest were at Nottingham and Sittingbourne with 1% and 2% respectively. Not a single person in Ealing thought that the street was now less friendly.

### 5.3.2 Children living in the home zones

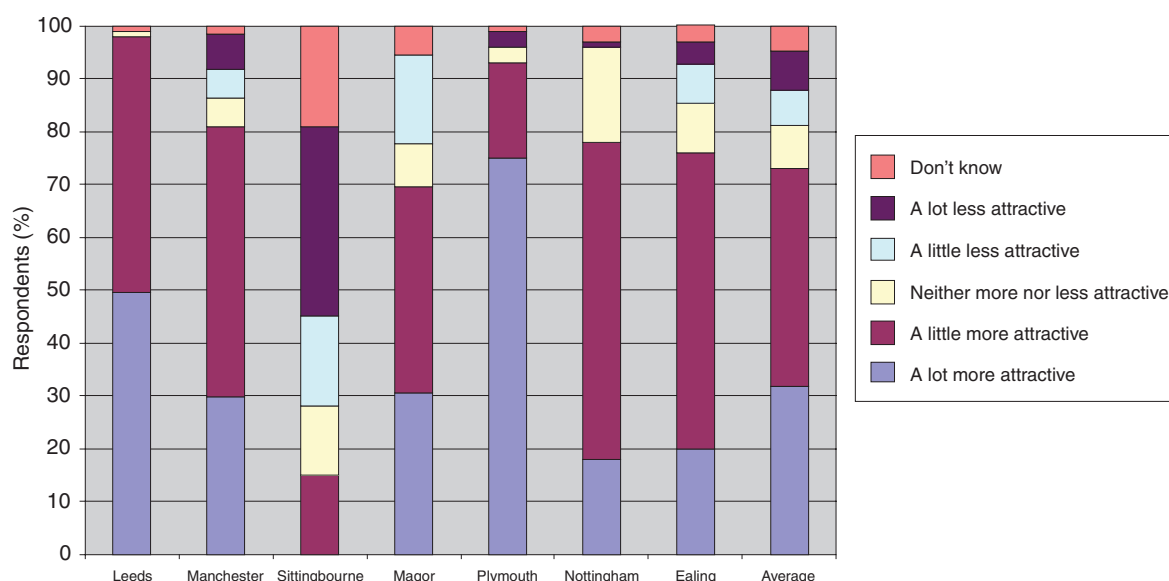
On average 65% of children thought that the streets had changed now that they were home zones. When questioned further, the appearance of the street (see Figure 5.9) was the most commonly mentioned improvement with 53% saying that the appearance was better, 36% said that there was no change and 11% said that it was worse.

The appearance in Sittingbourne was thought to have got worse by 41% of the children but 29% thought that it had got better and 29% thought that it was the same. The main reasons given for the appearance being worse were the amount of rubbish, the obstacles being hit and they also mentioned that it had been nice at first.

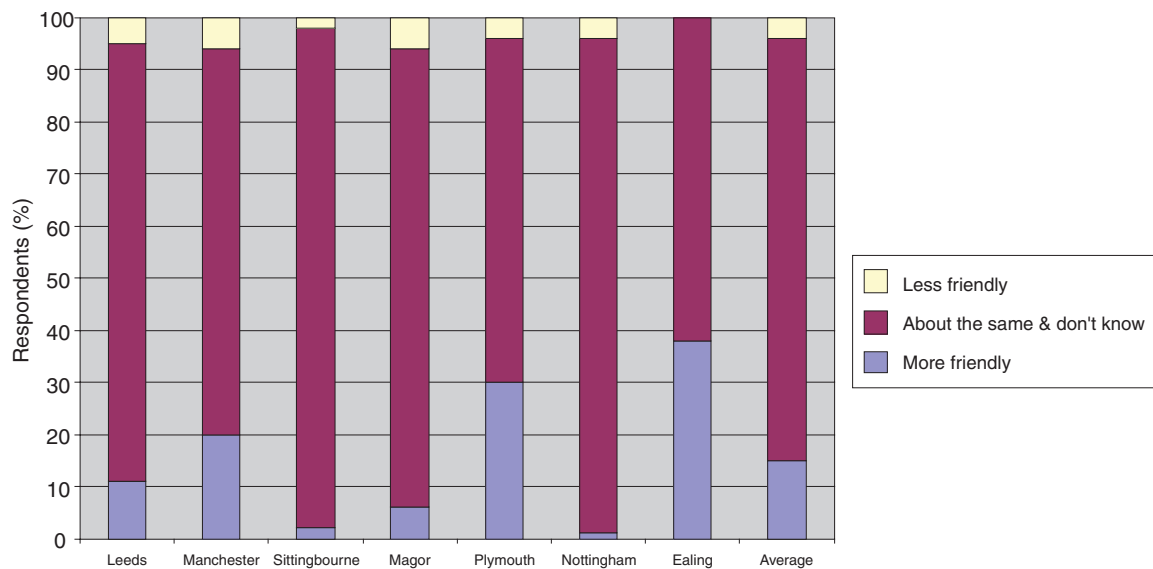
In Nottingham only 14% thought that the appearance was better, 9% thought that it was worse but the majority (77%) thought that it was the same.

The children most commonly mentioned the flowers, plants, trees, the road/path surface, the layout and general tidiness as improvements.

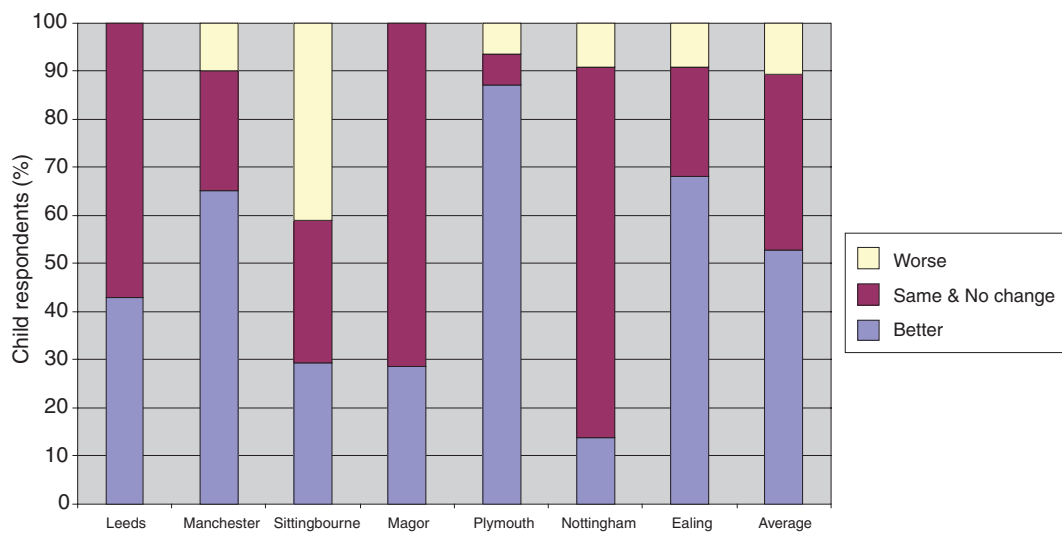
Children were asked whether the street was more or less friendly since becoming home zones (see Figure 5.10). Most children thought there had been no change (more friendly 25%, less friendly 5%, about the same 70%). The highest percentages of those responding 'more friendly' were recorded at Plymouth (43%) and Ealing (42%). Sittingbourne and Plymouth were the only zones which had any children who thought people were less friendly.



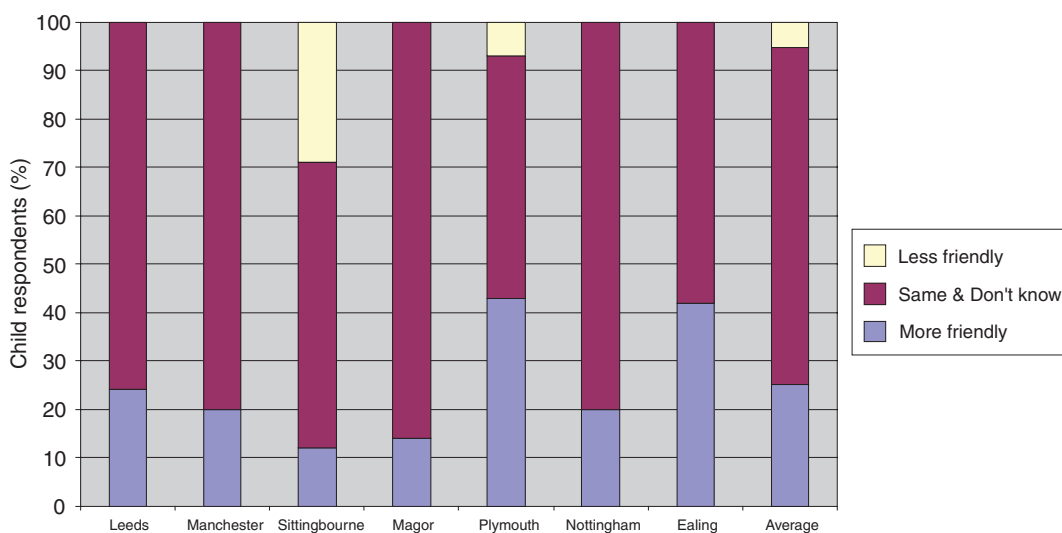
**Figure 5.7** Has the home zone made the appearance of the streets more attractive or less attractive?



**Figure 5.8** Is this street more friendly or less friendly since it became a home zone?



**Figure 5.9** How has the appearance of the street changed now that it is a home zone?



**Figure 5.10** How friendly are the people in your street to each other, do you think they are more friendly or less friendly since the street became a home zone?

Children were asked whether there were more things to do since becoming home zones. The vast majority of children thought there had been no change (better 22%, worse 11%, about the same 66%). The highest percentages of those responding 'better' were recorded at Plymouth (45%), Ealing (32%) and Manchester (30%). The lowest was recorded in Sittingbourne where none thought there was now more to do, 41% thought the amount of things to do had fallen. At Magor all of the children thought there had been no change. Ealing, Leeds and Magor were the only zones where no children answered that there was now less to do.

### 5.4 Car parking

The demand for car parking in the home zones is generated by residents, their visitors, people visiting or working in the shops and from people driving their children to school.

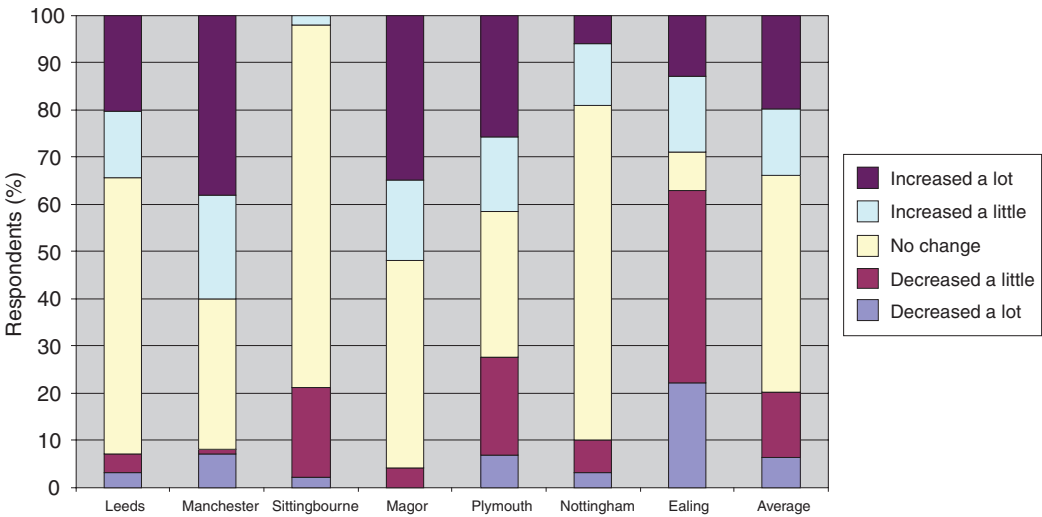
In the 'before' interview surveys about a half of the

respondents living within the home zones drove a car, in the 'after' survey this had risen to 56%.

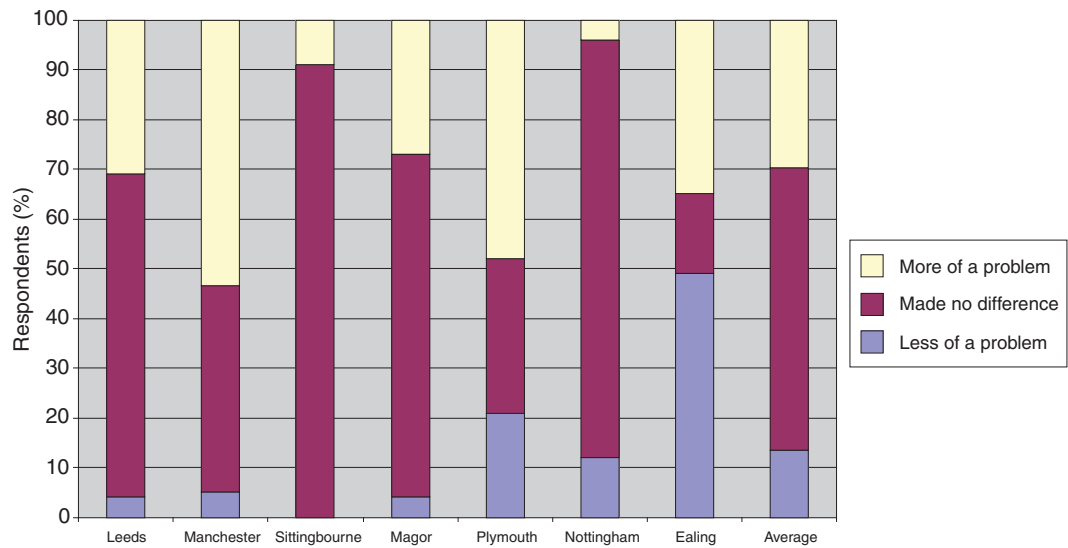
#### 5.4.1 Adult residents' perception of car parking issues

Over one-third (34%) of all respondents thought that parking problems had increased since the home zones were introduced (see Figure 5.11). Just under a half (46%) thought there had been no change 20% thought that it had decreased. The largest problem was reported in Manchester where 60% of respondents thought that parking problems had increased. This can be compared with Sittingbourne where only 2% thought that parking problems had got worse.

About a third (30%) of respondents who drove a car said that the home zones had made parking outside their home 'more of a problem' for themselves, their family or visitors. Just over a half (57%) said that there was no difference in parking problems (see Figure 5.12).



**Figure 5.11** Since the home zone was introduced do you think parking problems have increased or decreased in your street?



**Figure 5.12** Is parking outside your home more of a problem or less of a problem for you, your family or your visitors since the street became a home zone? (Respondents who drove a car)

Some reasons given by residents experiencing parking problems were:

- Fewer parking spaces.
- Cars from other streets park in our street.
- People park for the shops.
- Some people take up two spaces.
- Some families have more than one car.
- Some park in non-designated areas of the street.

There was a clear feeling from the ‘after’ questionnaires that many respondents who were interviewed in Manchester, Plymouth, Ealing, Leeds and Magor regarded parking within their home zone as an unresolved issue and felt that further controls or restrictions on parking were needed. Many respondents thought that the home zones had worsened parking problems within the zones but, on average, the majority felt that it had made no difference.

#### 5.4.2 Discussion of car parking issues

In Leeds, parking on the shared surface was not a major issue but it did highlight the need for carefully designed parking areas. They need to be simple, aesthetically attractive and clearly defined. The system of different coloured surfaces in Plymouth can help residents to understand and use the parking spaces as intended. They can also serve as shared space or over-run areas for larger vehicles. In Ealing the main problem associated with parking was due to non-residents parking within the home zone outside the restricted times.

In Magor, while the one-way system may have reduced the ease of access to some car parking spaces, there was little evidence that the home zone measures had greatly altered the number of on-street or off-street parking spaces available.

About 5 years ago Northmoor in Manchester was depopulating and about 30% of shops and houses were boarded up. There was speculation that those who could afford to were moving away from the area resulting in fewer cars. Substantially more parking spaces have been

provided than were needed when the designs were being drafted. The area is now repopulating because it is a desirable place to live, it is affordable, has good local amenities, trees, greenery, it is attractive and safer than other areas. This has resulted in more people living in the area and a corresponding increase in parking demand. In addition, the Northmoor Road shops are now fully occupied creating more parking demand from traders and customers. A comprehensive parking survey is being carried out by the Council and solutions will be found to the problems that residents are experiencing.

### 5.5 Traffic, driver behaviour and safety

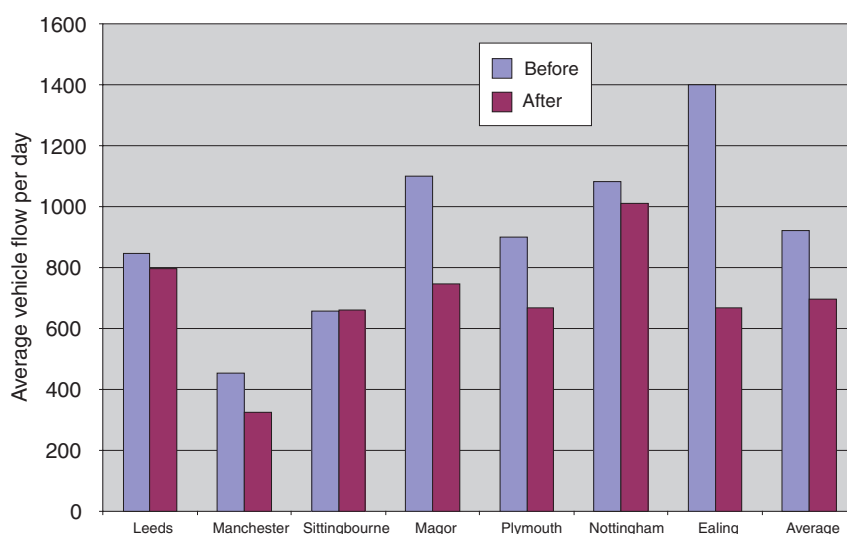
#### 5.5.1 Measured changes in traffic flows

Mean daily (24-hour) two-way vehicle flows in the home zones were measured ‘before’ and ‘after’ the home zones were implemented, these are summarised in Table 5.1. Details of average hourly vehicle flows on weekdays, Saturdays and Sundays are given in the individual reports.

**Table 5.1 Mean daily vehicle flows in the home zones**

| Period   | Mean daily two-way vehicle flow |            |               |       |          |            |        | Average |
|----------|---------------------------------|------------|---------------|-------|----------|------------|--------|---------|
|          | Leeds                           | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Before   | 845                             | 452        | 656           | 1100  | 899      | 1082       | 1400   | 919     |
| After    | 797                             | 323        | 659           | 745   | 666      | 1008       | 668    | 695     |
| Change   | -48                             | -129       | +3            | -355  | -233     | -74        | -732   | -224    |
| % change | -6                              | -29        | 0             | -32   | -26      | -7         | -52    | -24     |

The results in Table 5.1 and Figure 5.13 show that the average flows have been reduced at all of the schemes except for Sittingbourne. This is probably because it is a *cul-de-sac* and hence has no through traffic that could be reassigned. The average reduction for all schemes was about a quarter. The largest change in flow was recorded at Ealing where the flows halved, this was mainly due to the



**Figure 5.13** Average vehicle flow per day

road closure introduced along Hastings Road. In Magor, the road to the Square was made one-way, this contributed to a traffic reduction of about a third.

Ideally, home zone streets should have two-way traffic flows of no more than about 100 vehicles per hour in the afternoon peak hour. This is usually the time of day when there is most conflict between vehicles and people, including children playing (IHIE, 2002). After the home zone schemes were introduced, the maximum afternoon weekday peak hour flows on any of the streets surveyed were about 130 vehicles per hour, this was on Blake Grove, Leeds (see Table 5.2 and Figure 5.14). One site at Nottingham recorded 115 vehicles per hour and sites at Plymouth and Ealing both recorded 100 vehicles per hour which are very close to the recommended maximum. It should be noted that these are single representative roads within a wider network, many of the other roads within the schemes had very low flows. The flows on all of the various roads monitored can be seen in detail in the individual scheme reports.

**Table 5.2 Vehicle flows in the afternoon peak in the home zones**

| Period   | Peak hour afternoon vehicle flow |            |               |       |          |            |        | Average |
|----------|----------------------------------|------------|---------------|-------|----------|------------|--------|---------|
|          | Leeds                            | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Before   | 120                              | 60         | 60            | 155   | 145      | 120        | 240    | 29      |
| After    | 130                              | 35         | 60            | 75    | 100      | 115        | 100    | 88      |
| Change   | +10                              | -25        | 0             | -80   | -45      | -5         | -140   | -41     |
| % change | +8                               | -42        | 0             | -48   | -31      | -4         | -58    | -32     |

### 5.5.2 Measured changes in traffic speeds

Vehicle speeds were measured at each site and the mean and 85th percentile speeds were calculated for each home zone as a whole. Only sites considered to be representative of each home zone as a whole were selected. The mean speeds

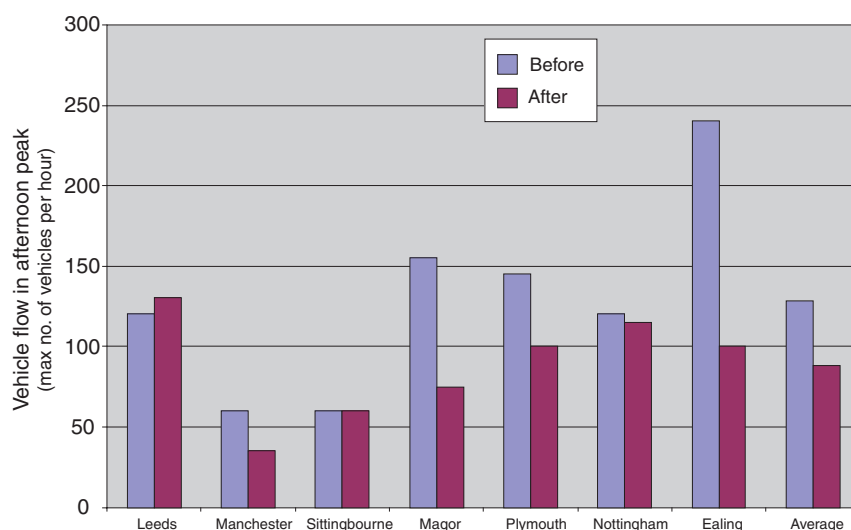
for all of the home zones are given in Table 5.3 and Figure 5.15, the corresponding 85th percentile speeds are given in Table 5.4 and Figure 5.16. The mean and 85th percentile vehicle speeds on shared surfaces are given in Figure 5.17. The proportion of vehicles travelling above 20 mph in the zones are given in Table 5.5 and Figure 5.18.

For all home zones, the overall mean speed was reduced by about 5 mph from 19.2 mph to 14.5 mph. The mean speed of 11.2 mph at Manchester was the average of three roads which all had shared surfaces. The individual mean speeds on the three roads were 9.4 mph, 11.5 mph and 12.6 mph. The corresponding mean speeds at Leeds, Sittingbourne and Plymouth for shared surface roads were 13.8 mph, 12.4 mph and 12.8 mph indicating that shared surfaces are most likely to have a mean speed of less than 15 mph though they are unlikely to be below 10 mph.

The 'max speed 10' supplementary plates specially authorised by the Department for Transport for use in Plymouth had little effect on the mean vehicle speed.

The overall 85th percentile speed was reduced by 6 mph from 24.4 mph to 18.4 mph. The 85th percentile speed of 14.7 mph at Manchester was the average of three roads which were all on shared surfaces. The individual 85th percentile speeds on the three roads were 13.9 mph, 14.2 mph and 16.1 mph and these give an indication of the range which can be expected on similar shared surface roads. The corresponding 85th percentile speeds at Leeds, Sittingbourne and Plymouth for shared surface roads were 18.4 mph, 15.0 mph and 16.0 mph (see Figure 5.9). These results indicate that shared surfaces are most likely to have a 85th percentile speed of less than 20 mph but they are unlikely to be below 15 mph.

The 'max speed 10' supplementary plates specially authorised by the Department for Transport for use in Plymouth had little effect on the 85th percentile vehicle speed.



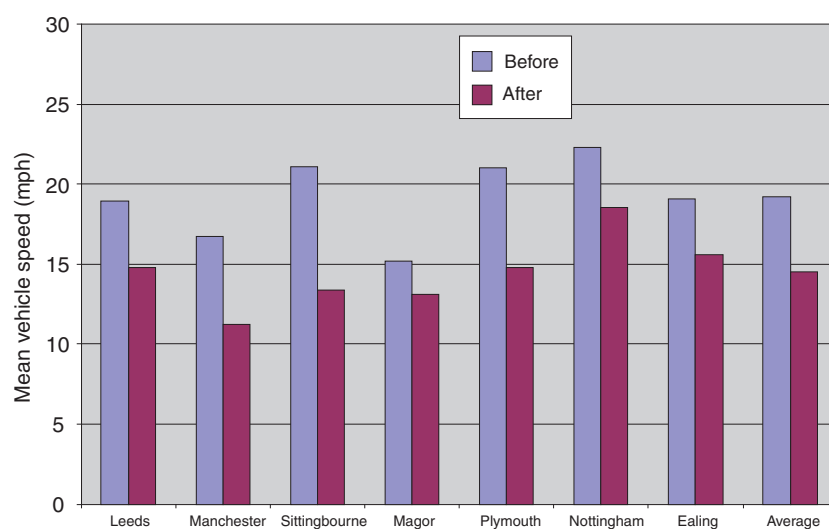
**Figure 5.14 Vehicle flows in the afternoon peak hour**

**Table 5.3 Before and after mean vehicle speeds in the home zones**

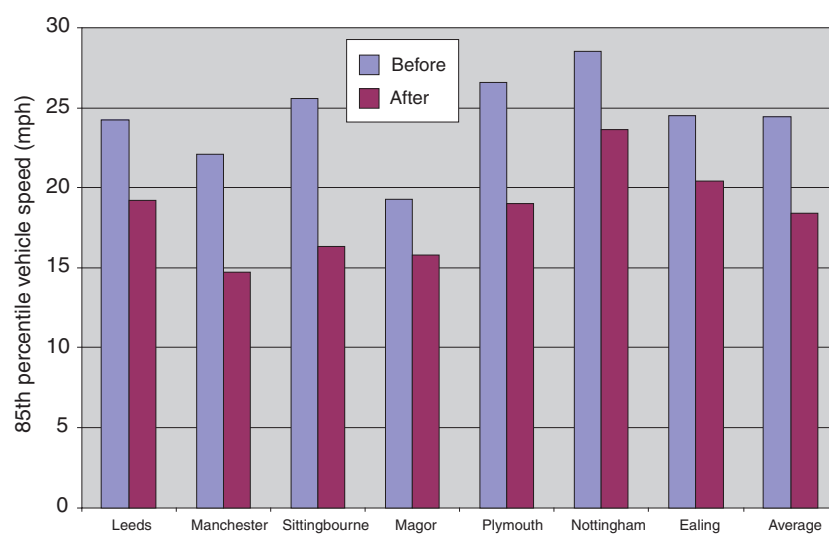
| Period   | Mean vehicle speed (mph) |            |               |       |          |            |        |         |
|----------|--------------------------|------------|---------------|-------|----------|------------|--------|---------|
|          | Leeds                    | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing | Average |
| Before   | 18.9                     | 16.7       | 21.1          | 15.2  | 21.0     | 22.3       | 19.1   | 19.2    |
| After    | 14.8                     | 11.2       | 13.4          | 13.1  | 14.8     | 18.5       | 15.6   | 14.5    |
| Change   | -4.1                     | -5.5       | -7.7          | -2.1  | -6.2     | -3.8       | -3.5   | -4.7    |
| % change | -22                      | -33        | -36           | -14   | -30      | -17        | -18    | -24     |

**Table 5.4 Before and after 85th percentile speeds in the home zones**

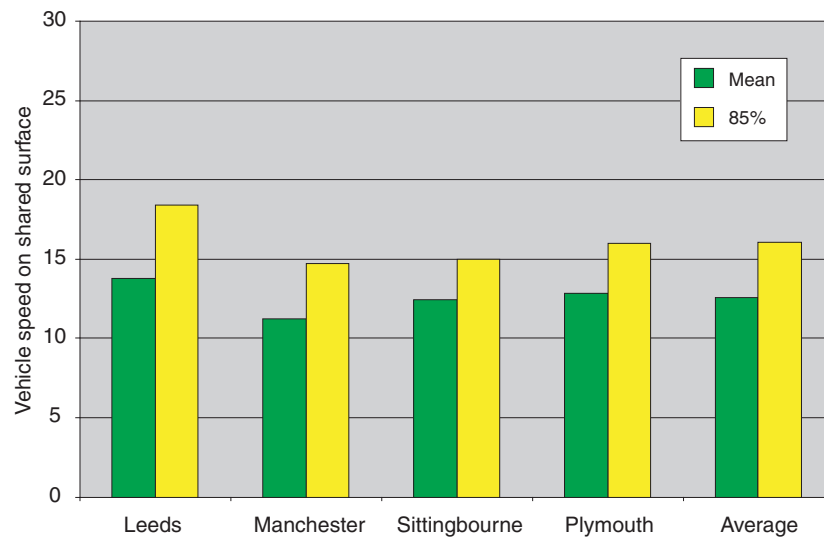
| Period   | 85th percentile vehicle speed (mph) |            |               |       |          |            |        |         |
|----------|-------------------------------------|------------|---------------|-------|----------|------------|--------|---------|
|          | Leeds                               | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing | Average |
| Before   | 24.2                                | 22.1       | 25.6          | 19.3  | 26.6     | 28.5       | 24.5   | 24.4    |
| After    | 19.2                                | 14.7       | 16.3          | 15.8  | 19.0     | 23.6       | 20.4   | 18.4    |
| Change   | -5.0                                | -7.4       | -9.3          | -3.5  | -7.6     | -4.9       | -4.1   | -6.0    |
| % change | -21                                 | -33        | -36           | -18   | -29      | -17        | -17    | -25     |



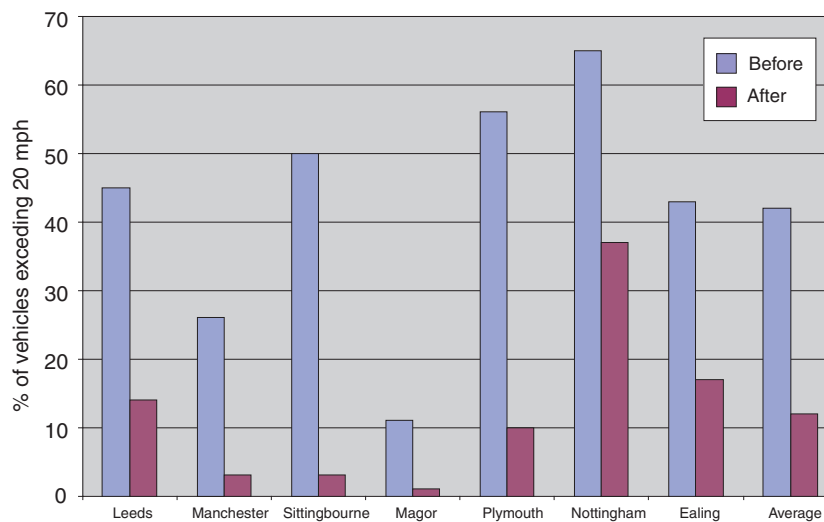
**Figure 5.15 Mean vehicle speeds in the home zones**



**Figure 5.16 85<sup>th</sup> percentile vehicle speeds in the home zones**



**Figure 5.17** Mean and 85<sup>th</sup> percentile vehicle speeds on shared areas in the home zones



**Figure 5.18** Percentage of vehicles exceeding 20 mph in the home zones

**Table 5.5** Before and after proportions of vehicles exceeding 20 mph

| Period | Vehicles exceeding 20 mph (%) |            |               |       |          |            |        | Average |
|--------|-------------------------------|------------|---------------|-------|----------|------------|--------|---------|
|        | Leeds                         | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Before | 45                            | 26         | 50            | 11    | 56       | 65         | 43     | 42      |
| After  | 14                            | 3          | 3             | 1     | 10       | 37         | 17     | 12      |
| Change | -31                           | -23        | -47           | -10   | -46      | -28        | -26    | -30     |

The traffic speed results may be summarised as follows:

- The results in Tables 5.3 to 5.5 show that there was an overall average reduction in mean speed of 5 mph, a reduction of 6 mph in 85th percentile speed and the proportion of vehicles exceeding 20 mph was reduced from 42% to 12%.

- The largest speed reduction was at Sittingbourne where mean speeds were reduced by 8 mph, 85th percentile were reduced by 9 mph and the percentage of vehicles exceeding 20 mph were reduced from 50% to 3%.
- The smallest reduction in traffic speed was at Magor where the mean speed was reduced by 2 mph however, the mean speed was already very low at 15 mph in the 'before' survey. The percentage exceeding 20 mph was reduced from 11% to 1%.
- The highest mean and 85th percentile speeds of 19 mph and 24 mph respectively were recorded at Nottingham. Here, 37% of drivers were exceeding the speed limit of 20 mph after the scheme had been implemented compared with 65% exceeding 20 mph before the zone was installed.
- The 'max speed 10' supplementary plates specially authorised by the Department for Transport for use in Plymouth had little effect on vehicle speeds.
- Speeds were lower on shared surfaces than the average within the zones.

### 5.5.3 Accidents and near misses

Information on reported road traffic injury accidents known as STATS19 (DfT, 2004) at the seven sites where monitoring was completed has been analysed and the results are given in Table 5.6. This table indicates that accidents were not a serious problem. The total of 19 accidents in the five years before the home zones were introduced gives an average of about 0.54 accidents per site per year. As the accident numbers are small then the ‘after’ accident analysis would require a further 5 years before any conclusions could be drawn as to the overall effect of the home zones on accidents. Preliminary accident data which was available when the scheme reports were written indicated that only one slight accident had occurred in any of the schemes in the ‘after’ periods. The single accident combined with an ‘after’ period of 49 site months is equivalent to 0.24 accidents per site per year. This is encouraging because it is about half the ‘before’ value.

**Table 5.6 Accidents in the zones before introduction (5 years of STATS19 data)**

|            | Accidents within each home zone (5 years before) |            |               |       |          |            |        |       |
|------------|--------------------------------------------------|------------|---------------|-------|----------|------------|--------|-------|
| Type       | Leeds                                            | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Edling | Total |
| Severity   |                                                  |            |               |       |          |            |        |       |
| Serious    | 0                                                | 0          | 0             | 0     | 0        | 1          | 1      | 2     |
| Slight     | 2                                                | 5          | 0             | 1     | 3        | 0          | 6      | 17    |
| Total      | 2                                                | 5          | 0             | 1     | 3        | 1          | 7      | 19    |
| Casualty   |                                                  |            |               |       |          |            |        |       |
| Cyclist    | 2                                                | 0          | 0             | 0     | 1        | 0          | 0      | 3     |
| Pedestrian | 0                                                | 3          | 0             | 0     | 2        | 1          | 2      | 8     |
| M/cyclist  | 0                                                | 0          | 0             | 1     | 0        | 0          | 1      | 2     |
| Other      | 0                                                | 6          | 0             | 0     | 0        | 0          | 4      | 10    |
| Total      | 2                                                | 9          | 0             | 1     | 3        | 1          | 7      | 23    |

Respondents were asked if any members of their household had been involved in a road accident or ‘near miss’ before the home zones were constructed. This question was also asked after the home zones were introduced. The results of the two surveys have been averaged for all of the home zones and the results are given in Table 5.7.

**Table 5.7 Overall accidents and near misses mentioned by respondents**

| Accident or near miss category | Percent |       |        |
|--------------------------------|---------|-------|--------|
|                                | Before  | After | Change |
| No                             | 85      | 90    | +5     |
| Yes, while walking             | 2       | 1     | -1     |
| Yes, while cycling             | 0       | 0     | 0      |
| Yes, while in a car            | 3       | 1     | -2     |
| Yes, near miss while walking   | 3       | 3     | 0      |
| Yes, near miss while cycling   | 1       | 1     | 0      |
| Yes, near miss while in a car  | 5       | 4     | -1     |
| Yes, not stated                | 1       | 0     | -1     |

The results in Table 5.7 are encouraging because a lower percentage of respondents mentioned being involved in accidents or near misses and all categories were similar or lower after installation.

### 5.5.4 Residents perceptions of changes in traffic, driver behaviour and safety

#### Adults living in the home zones

On average, about three-quarters (74%) of respondents thought that it was ‘very safe’ or ‘quite safe’ for adults walking or cycling in the home zones. Twenty per cent thought it was ‘not very safe’ or ‘not at all safe’, and gave the reasons as being too many parked cars (4%), vehicles travelling too fast (7%), and too much traffic (3%). Respondents were asked how safe they felt it was within the home zones for children walking or cycling. On average 58% thought it was ‘very safe’ or ‘quite safe’, 35% thought it was ‘not very safe’ or ‘not at all safe’.

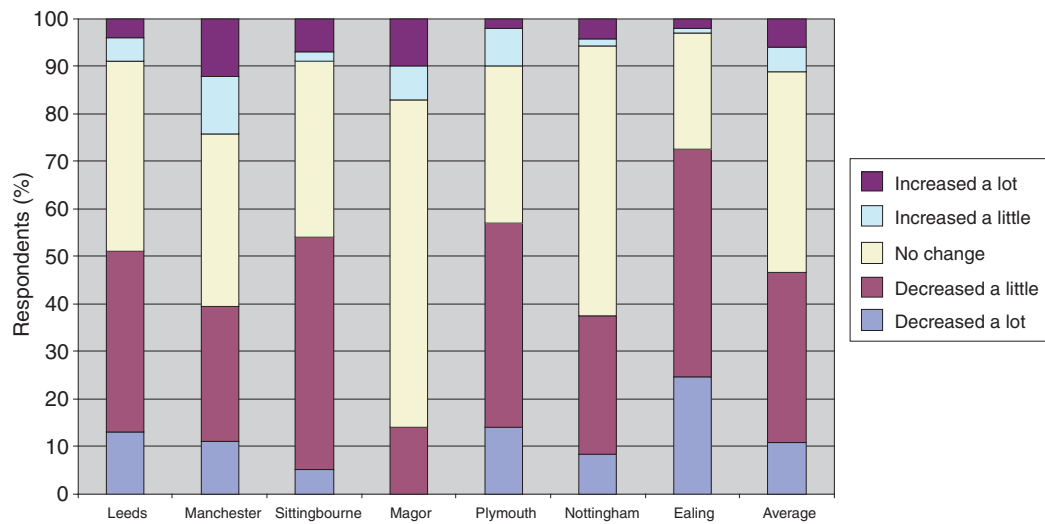
Respondents were asked how much they were bothered by various traffic problems in their own street since the home zones were introduced, and whether those problems had increased or decreased as a result of the home zones. The traffic problems enquired about were the speed of traffic; the amount of traffic; danger to children from road traffic; traffic noise; traffic pollution; parking problems; and poor driving standards/behaviour. Since the home zones were introduced, an average of 34% of respondents thought that parking problems had increased. The most noticeable change was at Manchester (see Section 5.4.1).

For many adult respondents, the home zones appeared to have made an impact on their perception of traffic using the streets (see Figures 5.19 to 5.24). On average, many respondents (47%) thought that the speed of vehicles had fallen, some thought it had increased (11%) but many thought (42%) that there was no change. The amount of traffic was thought to have increased by 16% of the respondents, however over half (53%) thought that there was ‘no change’, some (31%) thought that it had decreased. The danger to children was thought to have decreased by 32%, traffic noise and traffic pollution were all thought to have decreased slightly but about two-thirds thought that there was no change in traffic noise or traffic pollution.

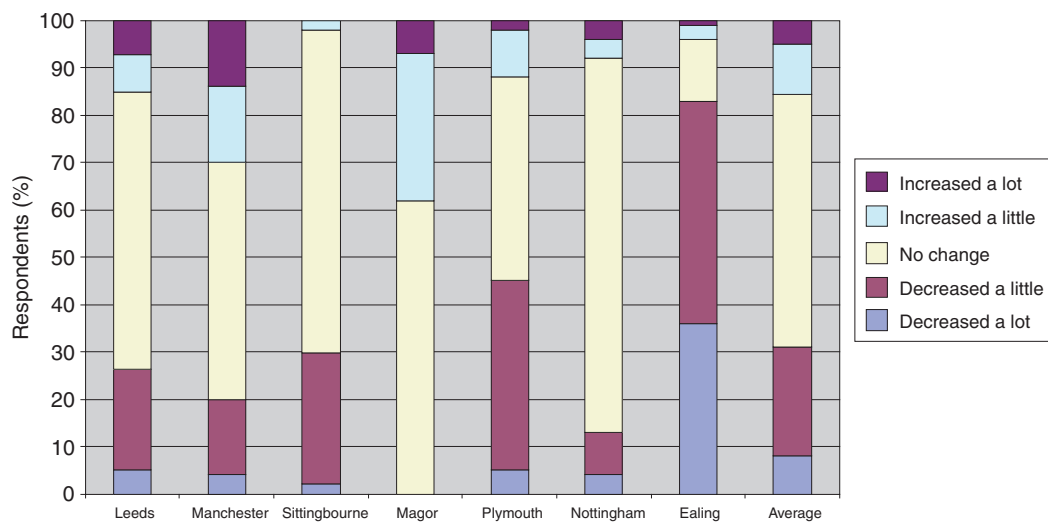
Figure 5.24 shows that on average most respondents thought that driving standards had not changed since the home zones had been installed, however at Ealing, nearly a half thought that driving standards/behaviour had improved. A summary of the perceptions of respondents to traffic issues in the street are given in Table 5.8.

**Table 5.8 Summary of perception of adult respondents at home zones on traffic in their street**

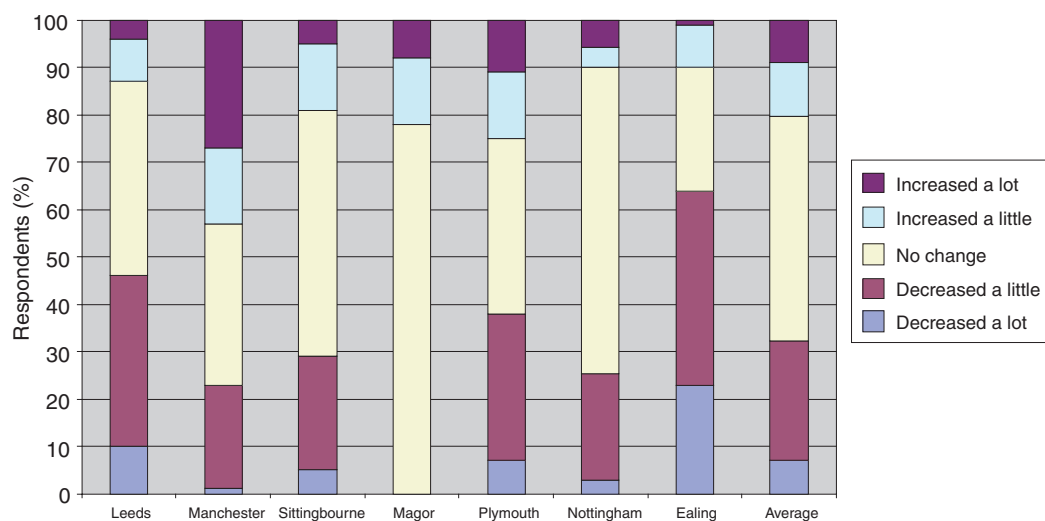
| Activity or category                 | Perception of respondents (%) |             |             |
|--------------------------------------|-------------------------------|-------------|-------------|
|                                      | ‘Increased’                   | ‘No change’ | ‘Decreased’ |
| Vehicle speeds                       | 11                            | 42          | 47          |
| The amount of traffic                | 16                            | 53          | 31          |
| Danger to children from road traffic | 20                            | 48          | 32          |
| Traffic noise                        | 10                            | 64          | 26          |
| Traffic pollution                    | 8                             | 68          | 24          |
| Poor driving standards/behaviour     | 15                            | 69          | 16          |
| Parking problems                     | 34                            | 46          | 20          |
| Average                              | 16                            | 56          | 28          |



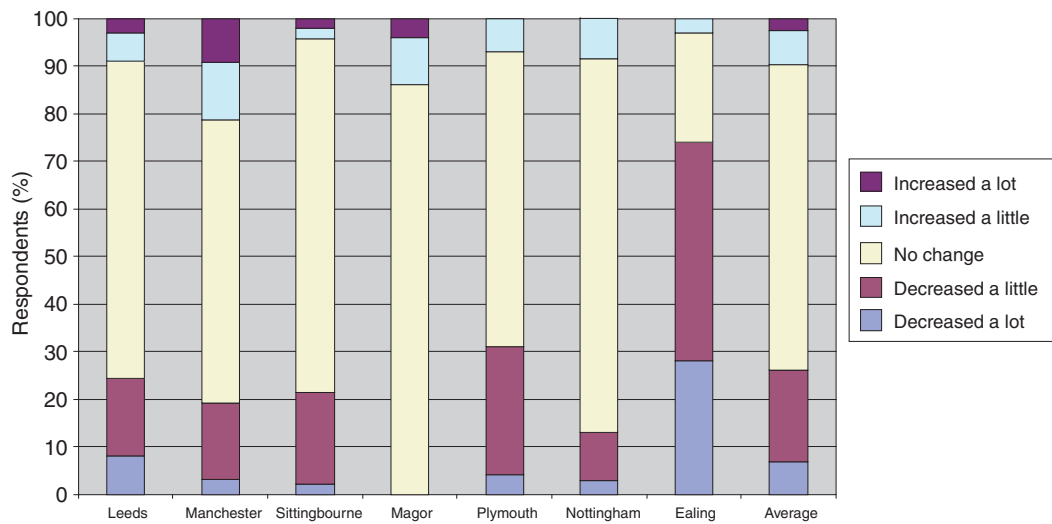
**Figure 5.19** Since the home zone was introduced to you think vehicle speeds have increased or decreased in your street?



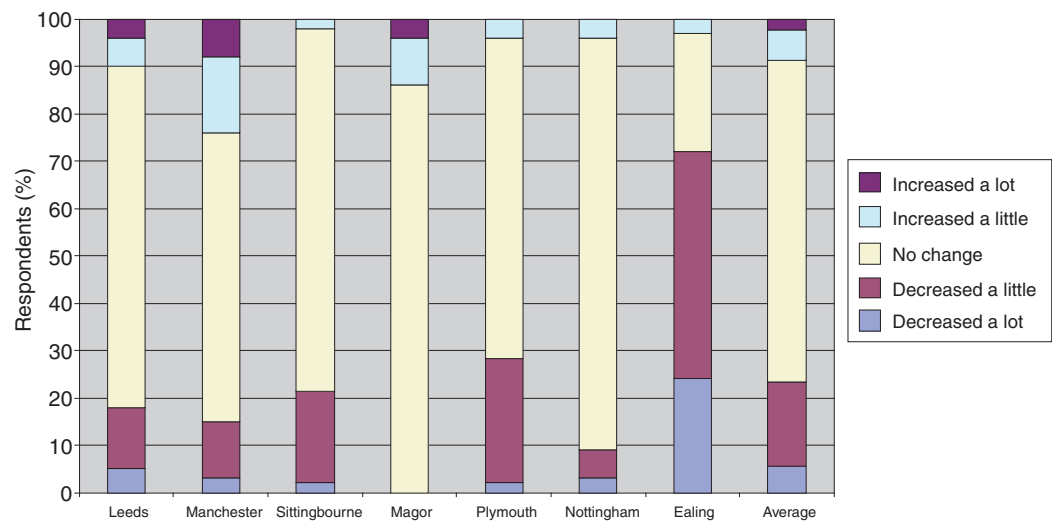
**Figure 5.20** Since the home zone was introduced do you think the amount of traffic has increased or decreased in your street?



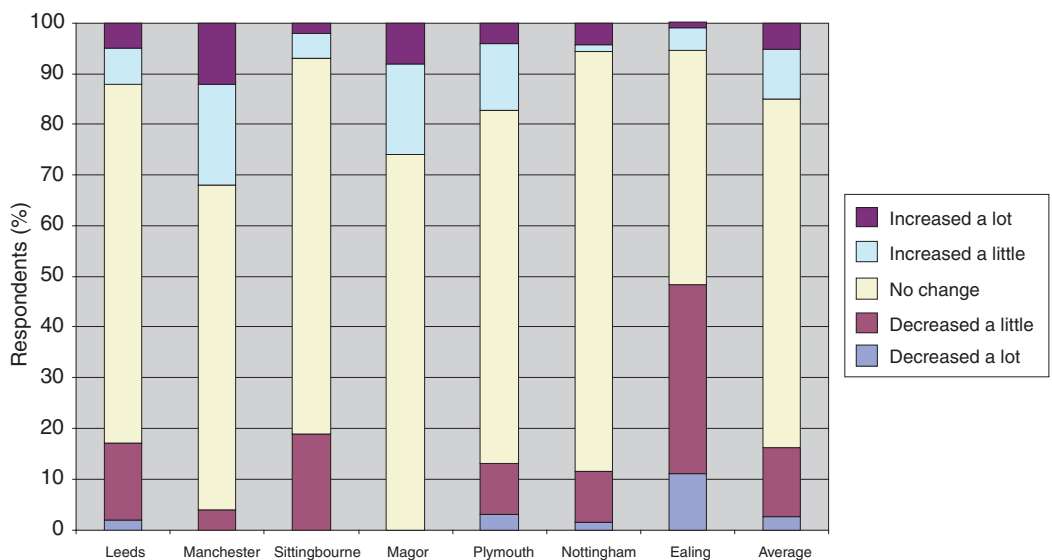
**Figure 5.21** Since the home zone was introduced do you think the danger to children from traffic has increased or decreased in your street



**Figure 5.22** Since the home zone was introduced do you think traffic noise has increased or decreased in your street?



**Figure 5.23** Since the home zone was introduced do you think traffic pollution has increased or decreased in your street?



**Figure 5.24** Since the home zone was introduced do you think poor driving standards / behaviour have increased or decreased?

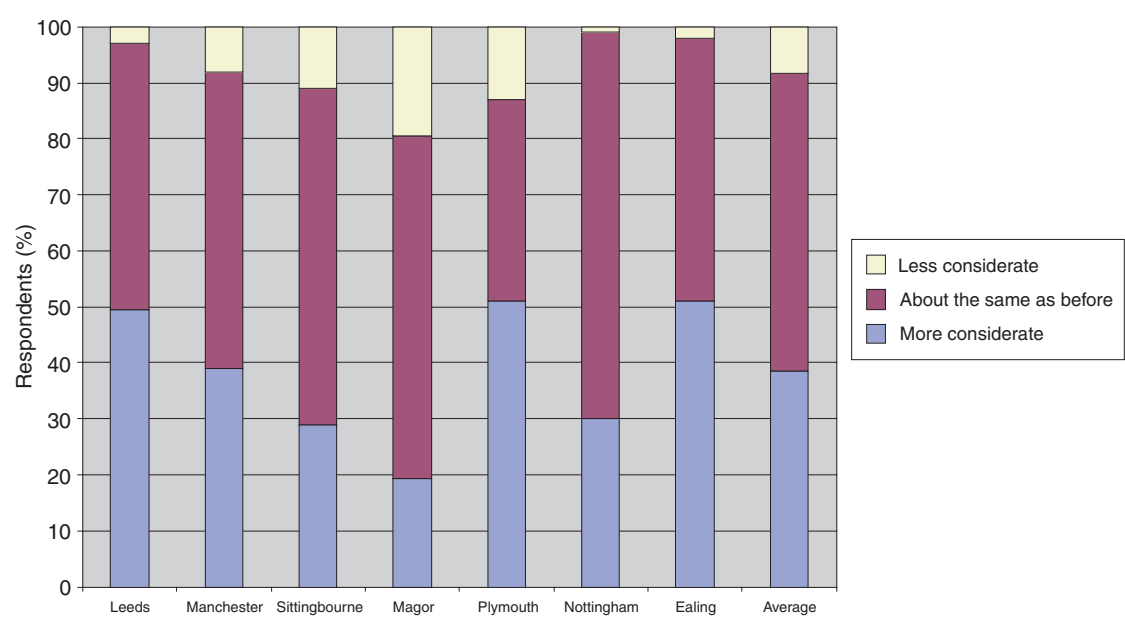
Table 5.8 shows that on average about a half of respondents thought that the traffic problems were unchanged. There was an overall improvement in all categories except parking where more thought that parking problems had increased than decreased.

When asked if motorists are more or less considerate to children playing since the home zones were introduced, on average 38% of respondents thought they were ‘more considerate’, and 8% thought they were ‘less considerate’ (see Figure 5.25). Fifty-three per cent thought that it was ‘about the same’ as before the home zones were introduced. In Plymouth and Ealing over 50% of respondents thought drivers were ‘more considerate. In Magor as many as one in five, 19%, thought that drivers were less considerate.

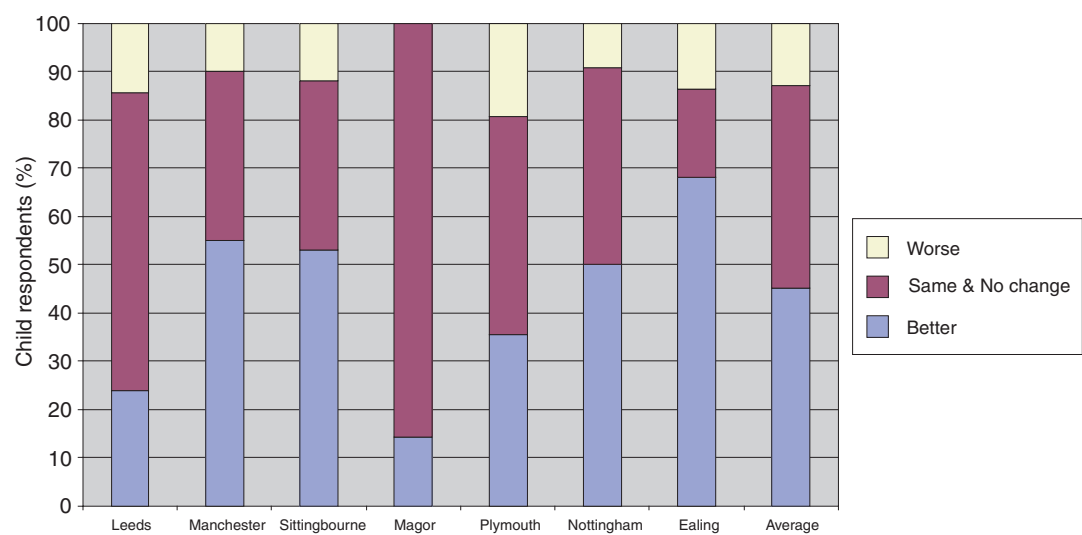
### Children living in the home zones

Children were asked about the effect of traffic speed, amount of traffic, road safety and driver behaviour. The results are given in the Figures 5.26 to 5.29. Figure 5.26 shows on average that most children thought that traffic speeds were the same or better and very few thought that they were worse. The results for the amount of traffic, Figure 5.27, were similar to Figure 5.26 though at Plymouth about 35% thought that the amount of traffic was worse, compared with 19% who thought that the traffic speed was worse.

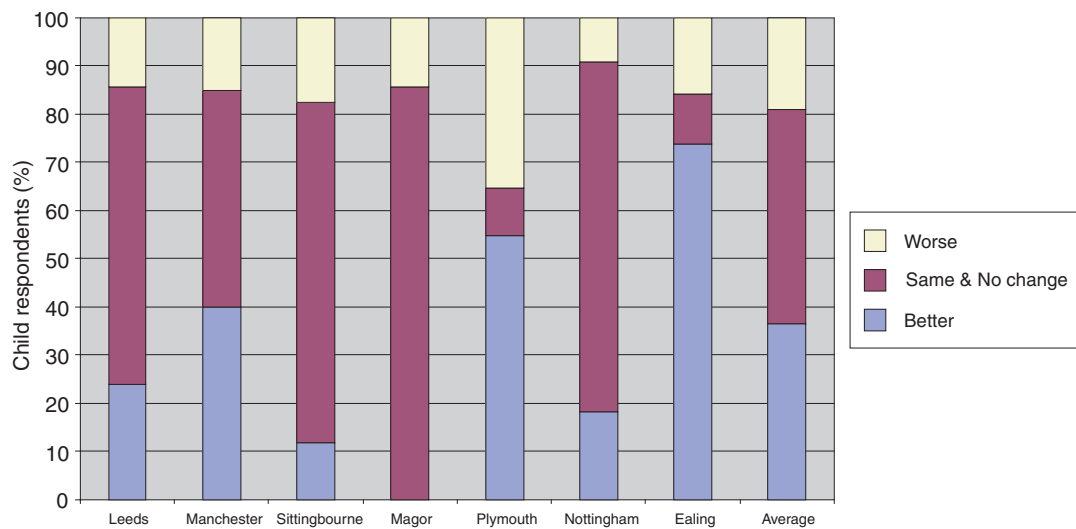
Figure 5.28 shows that, on average, very few children thought that road safety was worse and at three sites no children thought that it was worse. On average about 45% thought that it was better, 45% thought that it was unchanged and 10% thought that it was worse.



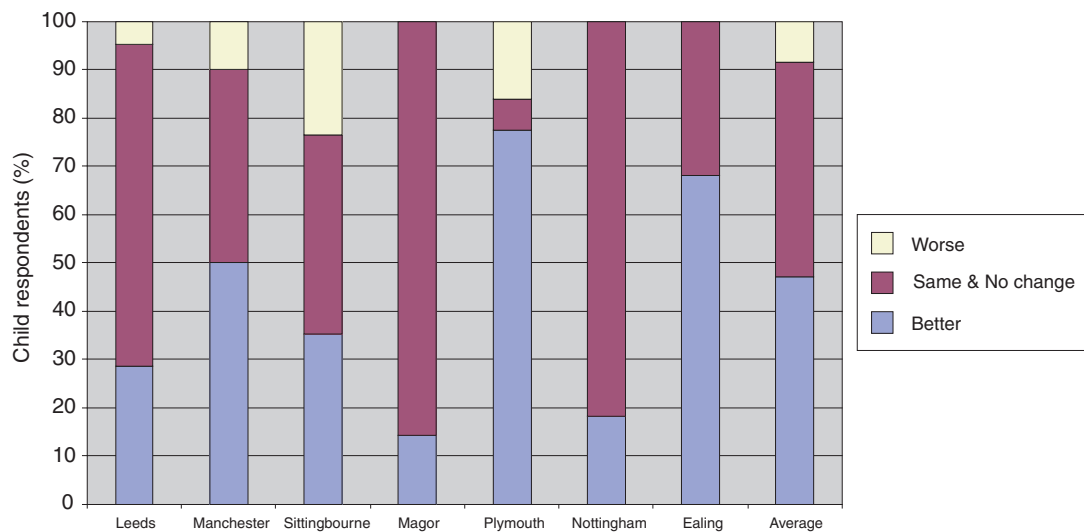
**Figure 5.25** On the whole do you think that motorists are more considerate or less considerate towards children playing in or near the street since it became a home zone?



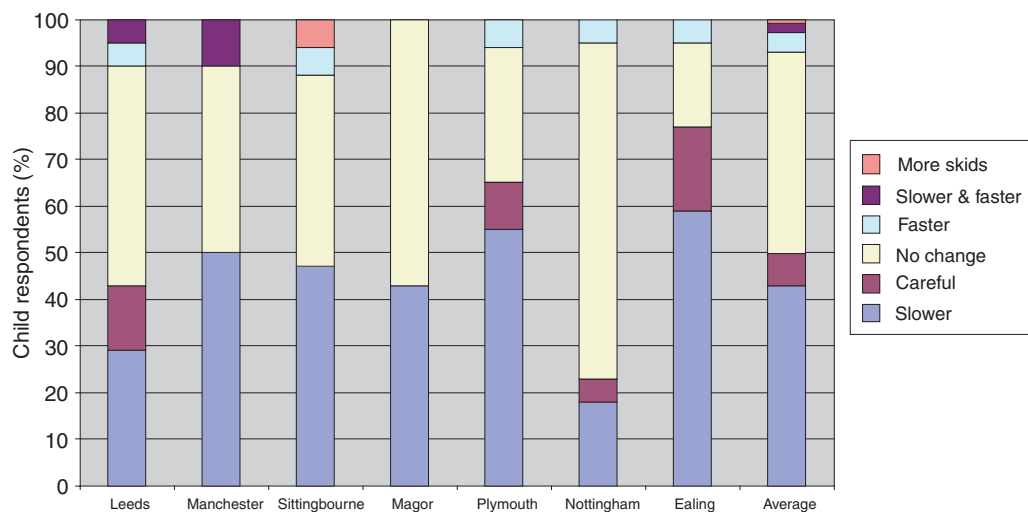
**Figure 5.26** How has traffic speed changed?



**Figure 5.27** How has the amount of traffic changed?



**Figure 5.28** How has road safety changed?



**Figure 5.29** How have drivers changed their driving?

Figure 5.29 shows that an average of about a half thought that drivers were either slower or more careful. Just under a half thought that there was no change and only a few thought that the drivers were faster. Magor was the only scheme where nobody thought that the vehicles were faster. In Manchester and Leeds a few children thought that some drivers were slower and some other drivers were faster.

## 5.6 Perceived danger from crime

### 5.6.1 Adults' views

With regard to danger from crime, most adult respondents in the 'after' surveys thought there was 'no change' in the danger for children (67%) and for adults (68%) but 23% and 22% respectively thought that it was safer ('a lot safer' or 'a little safer'). The highest percentage who thought it was safer was at Ealing (39%) and lowest was at Nottingham, (11%).

Respondents were asked if they had been a victim of crime. The results for the before and after surveys are given in Table 5.9.

**Table 5.9 Respondents who had been a victim of crime before and after the home zones**

| Crime      | Percent |            |               |       |          |            |        | Average |
|------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|            | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Before     | 30      | 37         | 13            | 14    | 40       | 22         | 29     | 26      |
| After      | 24      | 24         | 12            | 11    | 21       | 23         | 20     | 19      |
| Change     | -6      | -13        | -1            | -3    | -19      | +1         | -9     | -7      |
| Change (%) | -20     | -35        | -8            | -21   | -48      | +5         | -31    | -23     |

In the 'before' surveys an average of 26% of respondents had been a victim of crime. In the 'after' surveys 19% of respondents had been a victim of crime. This indicates that whilst crimes are still occurring, it is possibly now at a lower rate. It is encouraging that Plymouth showed a reduction from 40% to 21%, Manchester showed a reduction from 37% to 24% and Ealing reduced from 29% to 20%. These results indicate an overall crime reduction of about a quarter.

### 5.6.2 Children's views

On average, of the children who used bikes, 9% were 'a lot bothered', 23% were 'quite a lot bothered', 38% were 'not much bothered' and 31% were 'not bothered at all' about their bike being stolen. In Leeds, 50% of children were 'a lot' or 'quite a lot bothered' about their bike being stolen compared to only 17% in Magor.

Mugging or other physical assault was a slight problem, 10% of the children were 'a lot bothered', 16% 'quite a lot bothered', 41% 'not much bothered' and 34% 'not bothered at all' about this possibility. The percentages of 'a lot and quite a lot bothered' combined were similar for all zones but at Magor there were no answers in these

categories, 83% of children were not bothered about mugging at all.

Stranger danger was a slight problem, 13% of the children were 'a lot bothered', 22% 'quite a lot bothered', 43% 'not much bothered' and 23% 'not bothered at all' by 'stranger danger'. The percentages of 'a lot' and 'quite a lot bothered' combined were the highest at Sittingbourne, Nottingham and Plymouth at 47%, 45% and 40% respectively. The lowest was at Magor with only 14% 'quite a lot bothered'.

### 5.6.3 Recorded crime figures for Plymouth

Crime statistics supplied by Plymouth City Council showed that from April 2001 to March 2002 there were 92 recorded crimes in the Morice Town home zone. In 2002/03 there were 142 recorded crimes during the construction of the zone though there were only 9 recorded crimes in the year 2003/2004 since the zone was completed. This shows that there has been a 90% reduction in recorded crime between the 'before' and 'after' periods. Violent crime was reduced by 62% and vehicle crime by 96%. Criminal damage fell by 100%, as did domestic burglary and other theft.

## 5.7 Using the street

In the 'after' survey respondents were asked who, in practice, takes priority in the home zone streets (see Figure 5.30). On average 39% thought motorists take priority, 29% thought that all users were equal, 21% thought pedestrians took priority and 1% thought that cyclists took priority. Ten percent did not know who took priority. In Magor, 74% thought that motorists took priority which was considerably higher than the other zones. Manchester had the highest percentage, 45%, who thought that all users took equal priority.

### 5.7.1 Walking

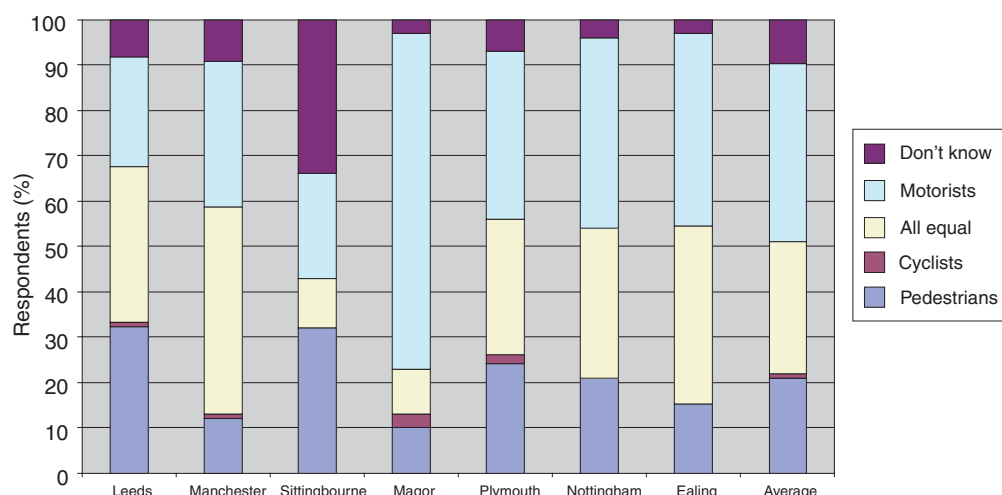
On average most respondents (77%) said that they walk to the shops 'at least twice a week' along streets in the home zones, with about half (46%) going to the shops 'daily' or 'every weekday'. These values were similar to the 'before' survey where most respondents (80%) said that they walk to the shops 'at least twice a week' along streets in the home zones, with about half (53%) going to the shops 'daily' or 'every weekday'.

On average, walking within the home zones was thought to be 'more pleasant' by about half (44%) of respondents (see Figure 5.31). The reasons for this were trees, plants and flowers (22%) and the area is tidier (13%). Other reasons were, better surface (6%), less traffic (4%), slower traffic (2%), better pavements (2%) and no kerbs (2%).

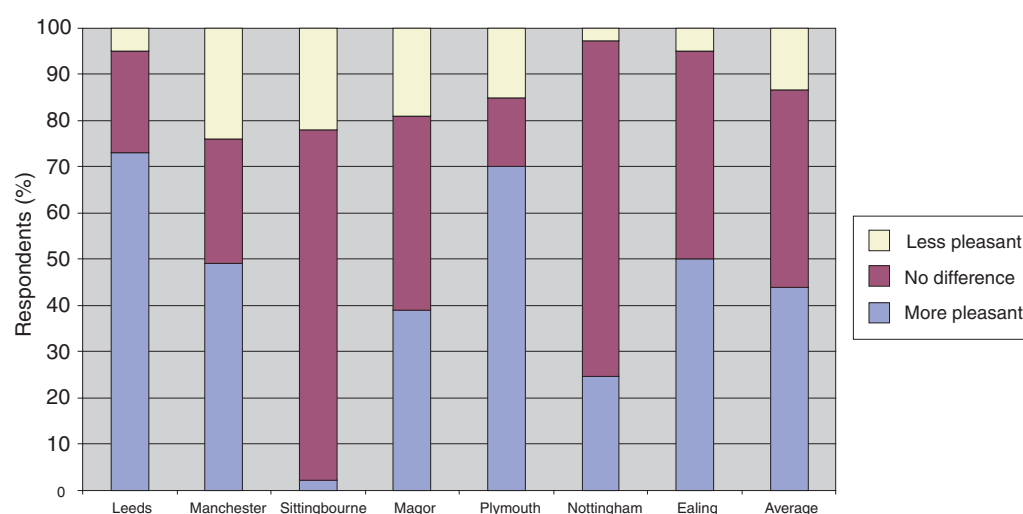
### 5.7.2 Cycling

#### Adults

On average 22% of the respondents in the 'before' survey and 21% of respondents in the 'after' survey said that they owned or had access to a bicycle that they rode themselves. In the 'after' survey, about 4% of respondents



**Figure 5.30** In practice, who takes priority on the home zone streets?



**Figure 5.31** Generally speaking, is walking within the home zone more pleasant or less pleasant than before?

cycled at least twice a week in the home zones. A further 8% rode once a week or occasionally on various journeys.

On average, most of those who had access to a bicycle said that the introduction of the home zones had made ‘no difference’ to how often they cycled within the home zone areas (80%), 10% said that they cycled ‘more often’, and 10% said that they cycled ‘less often’. These results are similar to those reported in two 20 mph zones where these also had little effect on cycling (DETR, 2000 and 2001).

On average, 30% of cyclists thought that cycling in the home zones was ‘more pleasant’ than before, 60% of cyclists thought that cycling in the home zones was ‘no different’ than before and 10% thought that it was ‘less pleasant’. In Ealing, 60% thought that cycling was ‘more pleasant.’

#### Children

Overall, there were similar percentages of children who either had a bike or one that they could borrow in both the ‘before’ and ‘after’ surveys. After the home zone had been built, 22% used their bike ‘more often’, 21% used it ‘less often’ and 57% used it ‘the same’ after the home zones were installed. On average 28% thought cycling was now

more fun’, 10% thought that it was ‘less fun’ and 62% thought that it was ‘about the same’.

#### 5.7.3 Driving

On average, about a half of respondents (49% in the ‘before’ survey and 56% in the ‘after’ survey) living within the home zones had access to a car or van. In the ‘before’ survey 24% drove at least 2 days a week compared with 30% in the ‘after’ survey.

About two-thirds of the car or van users (62%) said that they had changed the way they drove on roads within the home zones since they were introduced:

- Many people (20%) mentioned driving more slowly. Descriptions of how or why they had slowed were ‘because of the humps’ (2%) and to ‘observe the speed limit’ (2%).
- Some respondents (7%) said that they were more cautious. Reasons given included having to be more alert (3%), because of children, parked cars and cars reversing.
- Some respondents (2%) mentioned that they drove less in their home zone.

On average (see Figure 5.32), about a third (31%) of the car/van users thought that driving within the home zones was ‘more pleasant’ and 28% thought that it was ‘less pleasant’. The remainder (41%) thought that it had made ‘no difference’. Ealing had the highest percentage of respondents who thought that driving was ‘more pleasant’ (59%). In Magor and Sittingbourne nobody thought that driving in their zone was ‘more pleasant’.

### 5.7.4 Activities in the street / outside the house

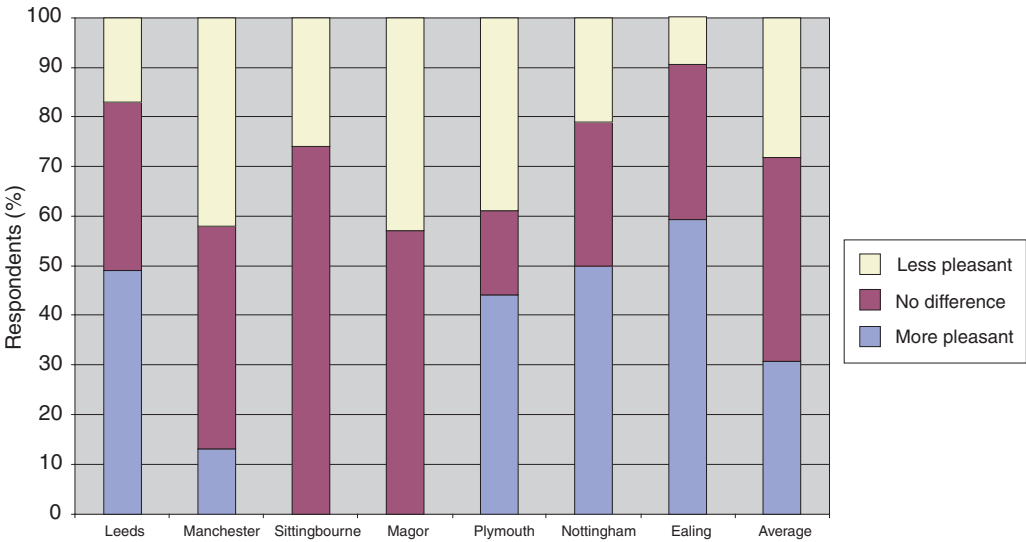
#### Adults

Respondents were asked how often they spent time outside of their house engaged in the following activities: chatting to neighbours/friends; watching over children playing; gardening at the front of the home; washing/mending the car; or playing games with other adults/children. The activities performed most often were chatting to friends (31%), gardening (22%) and watching children playing (14%). Respondents were also asked if they spent more or

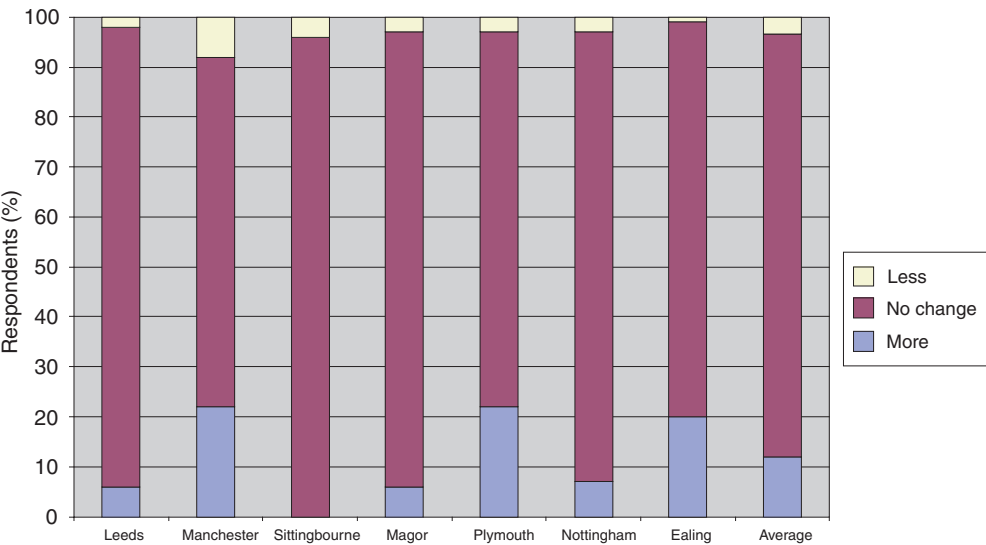
less time outside their home. The results are given in Table 5.10 and Figure 5.33. Overall there was a slight increase in the time spent outside the home since the home zones were introduced. The highest increases were at Manchester,

**Table 5.10 Do you think you spend more time or less time outside the front of your home when the weather is reasonable, since the street became a home zone?**

|               | Percent |            |               |       |          |            |        | Average |
|---------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|               | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| Time outdoors |         |            |               |       |          |            |        |         |
| More time     | 6       | 22         | 0             | 6     | 22       | 7          | 20     | 12      |
| Less time     | 2       | 8          | 4             | 3     | 3        | 3          | 1      | 3       |
| No change     | 92      | 70         | 96            | 91    | 75       | 90         | 79     | 85      |



**Figure 5.32** Is driving within the home zone ‘more pleasant’ or ‘less pleasant’ than before?



**Figure 5.33** Do you think you spend more time or less time outside the front of your home when the weather is reasonable, since the street became a home zone?

Plymouth and Ealing where at least 20% spent more time outside their home. At least 70% of respondents spent the same amount of time outside their home and on average only about 3% spent less time outside their home.

### Children

On average, the most popular outdoor activities in the after survey for children were chatting (49%), football (37%), riding bikes or scooters (34%), chasing games (15%) and hide and seek (12%). Others mentioned were ball games, skipping, roller blades, roller skates, skateboards and going to the shops. Overall there was little change in the activities of the children. At Ealing in the before survey, roller blades, roller skates or skate boards were the most popular activity but in the after survey they were not mentioned by any children.

### 5.7.5 Children in the street

#### Adults' views

In the 'after' survey respondents were asked where the children had played/spent time outdoors. The most popular places are given in Table 5.11.

Table 5.11 shows that there have been decreases in the overall percentage of children playing in gardens and open spaces but there has been an increase in those playing in the street outside their own home.

In the 'after' survey, respondents were asked whether children should play in the streets now that they are home zones. Forty-four per cent thought they should because there is nowhere else to play; they know they are safe; social reasons and more freedom. Thirty-six per cent of respondents thought the children should not play in the street because the traffic amount is unsafe; they should play in parks; it is not safe and traffic is too fast. Twenty per cent had mixed feelings.

#### Children's views

On average, the most popular places (see Table 5.12) for playing were open spaces (45%), in street outside own home (35%), in street but not outside own home (16%), other streets (20%), own back garden (16%) and play areas in own street (11%).

Comparing the results from Tables 5.11 and 5.12 show that the adults' and children's views were similar for where children played as regard 'open spaces' and 'in the street outside home'. They were however very different for 'own back garden' with about 40% of adults thinking their children played there but only about 17% of children saying that they actually play in their own back garden.

Children were asked if they played or spent more time outdoors near their home after the home zones had been installed. The results are given in Table 5.13.

The results in Table 5.13 and Figure 5.34 indicate that overall 69% of children spent the same amount of time outdoors near their home, 22% spent more time and 9% spent less time. Plymouth had the largest percentage of children who spent more time outside their own home. Even more children spent time outside playing in open spaces such as parks and grassy areas not actually outside

**Table 5.11 During the last year or so/ since the street became a home zone, where have your children played or spent time outdoors?**

| Play location<br>of children<br>Survey | Before and After (Percent) |            |               |       |          |            |        | Average |
|----------------------------------------|----------------------------|------------|---------------|-------|----------|------------|--------|---------|
|                                        | Leeds                      | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| <b>Own back garden</b>                 |                            |            |               |       |          |            |        |         |
| Before                                 | 27                         | 34         | 61            | 79    | 37       | 63         | 72     | 53      |
| After                                  | 24                         | 19         | 51            | 44    | 25       | 48         | 62     | 39      |
| Change                                 | -3                         | -15        | -10           | -35   | -12      | -15        | -10    | -14     |
| <b>Own front garden</b>                |                            |            |               |       |          |            |        |         |
| Before                                 | 22                         | 12         | 12            | 29    | 10       | 51         | 9      | 21      |
| After                                  | 44                         | 12         | 5             | 0     | 9        | 24         | 6      | 14      |
| Change                                 | +22                        | 0          | -7            | -29   | -1       | -27        | -3     | -7      |
| <b>Someone else's back garden</b>      |                            |            |               |       |          |            |        |         |
| Before                                 | 24                         | 9          | 28            | 64    | 20       | 32         | 46     | 32      |
| After                                  | 20                         | 6          | 11            | 63    | 7        | 32         | 25     | 23      |
| Change                                 | -4                         | -3         | -17           | -1    | -13      | 0          | -21    | -9      |
| <b>Open space (park, grassy area)</b>  |                            |            |               |       |          |            |        |         |
| Before                                 | 39                         | 46         | 58            | 93    | 37       | 58         | 71     | 57      |
| After                                  | 22                         | 61         | 32            | 94    | 39       | 28         | 22     | 43      |
| Change                                 | -17                        | +15        | -26           | +1    | +2       | -30        | -49    | -14     |
| <b>In street outside own home</b>      |                            |            |               |       |          |            |        |         |
| Before                                 | 24                         | 17         | 45            | 50    | 18       | 30         | 17     | 29      |
| After                                  | 60                         | 35         | 19            | 69    | 25       | 33         | 22     | 38      |
| Change                                 | +36                        | +18        | -26           | +19   | +7       | +3         | +5     | +9      |
| <b>In own street not outside home</b>  |                            |            |               |       |          |            |        |         |
| Before                                 | 16                         | 3          | 18            | 57    | 18       | 17         | 16     | 21      |
| After                                  | 33                         | 19         | 8             | 0     | 10       | 13         | 15     | 14      |
| Change                                 | +17                        | +16        | -10           | -57   | -8       | -4         | -1     | -7      |
| <b>Other street</b>                    |                            |            |               |       |          |            |        |         |
| Before                                 | 24                         | 2          | 2             | 57    | 13       | 7          | 16     | 17      |
| After                                  | 38                         | 17         | 6             | 13    | 12       | 19         | 4      | 16      |
| Change                                 | +14                        | +15        | +4            | -44   | -1       | +12        | -12    | -1      |
| <b>In parking area</b>                 |                            |            |               |       |          |            |        |         |
| Before                                 | 6                          | 0          | 22            | 36    | 4        | 7          | 3      | 11      |
| After                                  | 2                          | 4          | 0             | 31    | 5        | 0          | 0      | 6       |
| Change                                 | -4                         | +4         | -22           | -5    | +1       | -7         | -3     | -5      |

their own home, see Table 5.12. Leeds and Manchester appear to be the most popular zones for children because 33% and 29% of children spent more time outside near their home compared to 7% and 6% spending less time. Over half of the children spent the same amount of time outdoors near their home in all zones except in Plymouth where the figure was just over a third.

Children were asked how safe they felt since the home zones had been built, the results are given in Figure 5.35. This shows that overall fewer than 10% felt less safe, about 40% felt safer and about half felt about the same. At Leeds and Magor all of the children felt safer or the same, none felt less safe.

**Table 5.12 Where do you play when you are outside?  
Or whereabouts do you go when you are outdoors with your friends?**

| Outdoor activity Survey                   | Before and After (Percent) |            |               |       |          |            |        | Average |
|-------------------------------------------|----------------------------|------------|---------------|-------|----------|------------|--------|---------|
|                                           | Leeds                      | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| <b>Own back garden/yard</b>               |                            |            |               |       |          |            |        |         |
| Before                                    | 17                         | 14         | 22            | 0     | 20       | 19         | 33     | 18      |
| After                                     | 9                          | 20         | 0             | 29    | 16       | 9          | 27     | 16      |
| Change                                    | -8                         | +6         | -22           | +29   | -4       | -10        | -6     | -2      |
| <b>Open space (park, grassy area)</b>     |                            |            |               |       |          |            |        |         |
| Before                                    | 11                         | 24         | 53            | 100   | 50       | 64         | 7      | 44      |
| After                                     | 29                         | 85         | 29            | 71    | 58       | 32         | 14     | 45      |
| Change                                    | +18                        | +61        | -24           | -29   | +8       | -32        | +7     | +1      |
| <b>Play area in own street</b>            |                            |            |               |       |          |            |        |         |
| Before                                    | 11                         | 0          | 34            | 0     | 40       | 11         | 13     | 16      |
| After                                     | 0                          | 0          | 12            | 14    | 35       | 5          | 14     | 11      |
| Change                                    | -11                        | 0          | -22           | +14   | -5       | -6         | +1     | -5      |
| <b>In street outside own home</b>         |                            |            |               |       |          |            |        |         |
| Before                                    | 28                         | 38         | 53            | 0     | 38       | 34         | 47     | 34      |
| After                                     | 57                         | 55         | 24            | 14    | 26       | 36         | 32     | 35      |
| Change                                    | +29                        | +17        | -29           | +14   | -12      | +2         | -15    | +1      |
| <b>In own street not outside own home</b> |                            |            |               |       |          |            |        |         |
| Before                                    | 6                          | 0          | 3             | 0     | 15       | 11         | 33     | 10      |
| After                                     | 38                         | 9          | 41            | 0     | 13       | 5          | 5      | 16      |
| Change                                    | +32                        | +9         | +38           | 0     | -2       | -6         | -28    | +6      |
| <b>Other street</b>                       |                            |            |               |       |          |            |        |         |
| Before                                    | 33                         | 5          | 3             | 0     | 15       | 11         | 20     | 12      |
| After                                     | 43                         | 25         | 6             | 14    | 13       | 27         | 14     | 20      |
| Change                                    | +10                        | +20        | +3            | +14   | -2       | +16        | -6     | +8      |
| <b>In parking area</b>                    |                            |            |               |       |          |            |        |         |
| Before                                    | 17                         | 0          | 16            | 0     | 8        | 11         | 0      | 7       |
| After                                     | 0                          | 0          | 0             | 43    | 13       | 5          | 0      | 9       |
| Change                                    | -17                        | 0          | -16           | +43   | +5       | -6         | 0      | +2      |

**Table 5.13 Do you play (or spend time) outdoors near your home more / less / about the same as you used to before it became a home zone?**

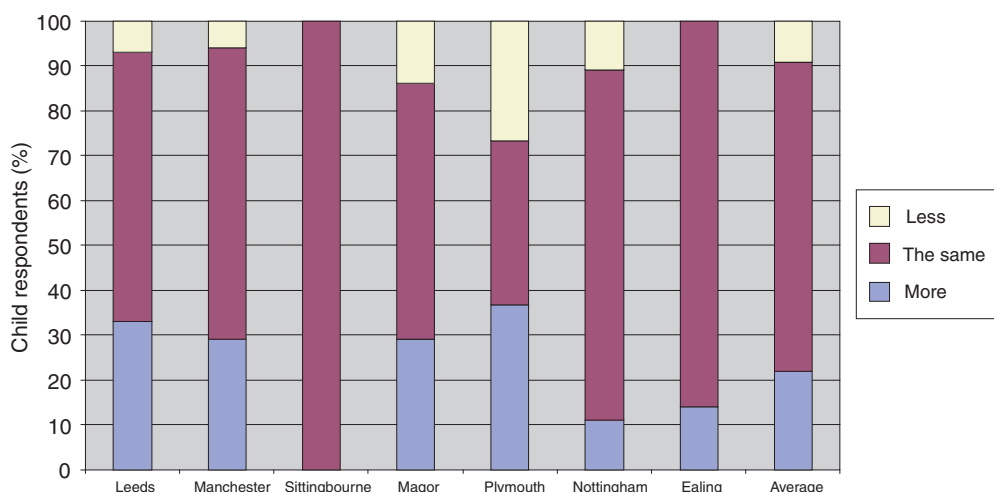
| Outdoor activity | Percent |            |               |       |          |            |        | Average |
|------------------|---------|------------|---------------|-------|----------|------------|--------|---------|
|                  | Leeds   | Manchester | Sittingbourne | Magor | Plymouth | Nottingham | Ealing |         |
| The same         | 60      | 65         | 100           | 57    | 37       | 78         | 86     | 69      |
| More             | 33      | 29         | 0             | 29    | 37       | 11         | 14     | 22      |
| Less             | 7       | 6          | 0             | 14    | 27       | 11         | 0      | 9       |

Children were also asked questions regarding their journey to and from school (see Figure 5.36). On average, 47% walked, 30% used a bus, 19% used a car, taxi or van and 4% cycled. The other modes used by one child only were the ferry in Plymouth and the train in Ealing. The highest percentages of children walking to and from school were in Sittingbourne and Plymouth, where 82% and 73% walked respectively. The lowest percentage that walked was in Magor, this is probably due to the rural location of the scheme.

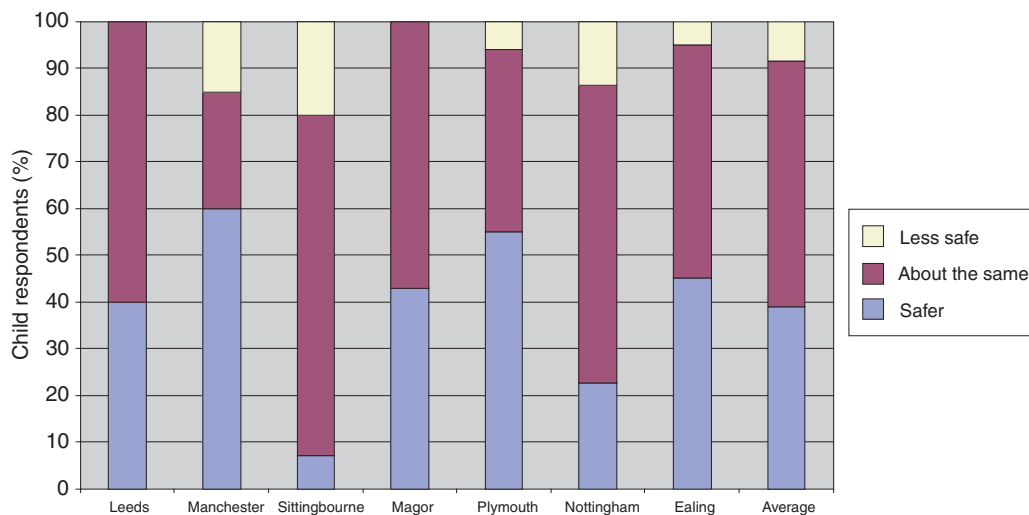
Most of the children (82%) said that their journey to school was the 'same as before' the home zones, 13% of the children thought it 'was better' and 5% thought that it 'was worse'. In Leeds, Manchester and Ealing none of the children thought that their journey to school was worse.

## 6 Discussion

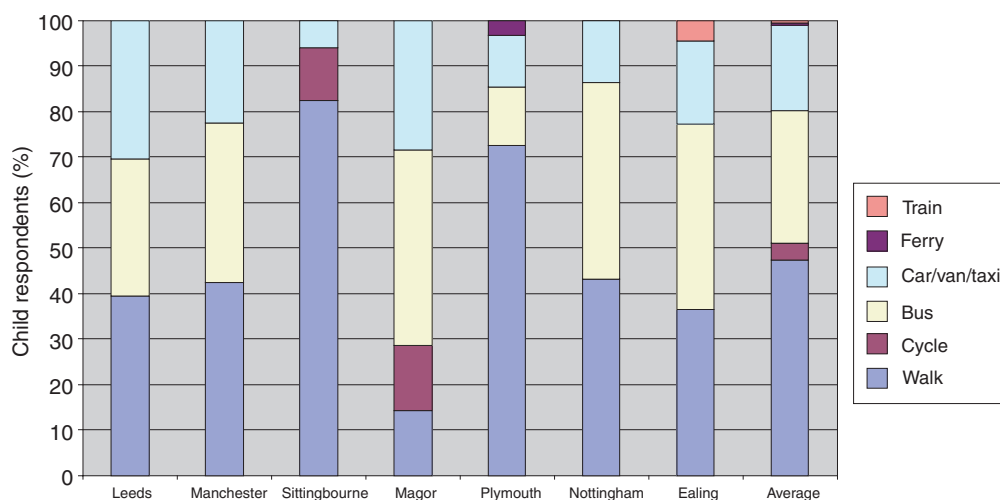
The home zones reported on are examples of zones introduced into existing roads rather than created as part of new housing schemes. The areas had many positive features promoting their selection as one of the DfT pilot home zone schemes. They varied between the village scheme in Magor through the traditional high density, pre



**Figure 5.34 Do you play (or spend time) outdoors near your home more / less / about the same as you used to before it became a home zone?**



**Figure 5.35** When you are outdoors near your home, do you feel safer / or not as safe / or about the same as you did before the home zone?



**Figure 5.36** How do you normally get to school in the morning and home in the afternoon?

1919, two bedroom terraced housing with no front gardens in Manchester and Leeds, to a modern *cul-de-sac* estate in Sittingbourne.

The schemes were designed to enhance social activities and safety, particularly for pedestrians. This was achieved by reducing vehicle speeds and improving the environmental appearance of the areas.

### 6.1 Home zone boundary signing

Home zone 'gateway' signs were used at the boundaries to the home zones to alert drivers to the home zones and to the need for lower speeds. The signs used in Leeds and Manchester were specially authorised by DfT because the 'standard' home zone signs had not been determined at that time.

Informative 'home zone' and 'home zone ends' signs (see Figure 6.1) are now included in the Traffic Signs Regulations and General Directions 2002 (TSRGD, 2002) and can be used if the home zone is designated in accordance with the Transport Act 2000 or the Transport (Scotland) Act 2001.

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 a home zone. The purpose of the signing is to warn drivers of the zone and make them more aware of their surroundings using appropriate road features. Provided the 20 mph signs and home zone signs are both clearly visible there should be no problems.

The positioning of the home zone gateway signs in Nottingham may lead to some confusion as they are in a separate location to that where the actual home zone was eventually built. When the home zone was originally designated it was intended to extend the full length of Nobel Road and the *cul-de-sacs* leading from it. However, due to budgetary constraints, it would have been prohibitively expensive to create shared space with all associated hard and soft landscaping works along the full length of Nobel Road and each of the *cul-de-sacs*. In the event, home zones in the purest sense were only created in Chamberlain Close and Richardson Close as discussed in this report. Whilst the home zone technically starts where the home zone signs are



**Figure 6.1** Information home zone signs

currently located, the built environment does not read as a home zone until Chamberlain Close and Richardson Close are entered. An alternative location for the signs would have been at the junctions of Nobel Road and Chamberlain Close and Richardson Close though in these locations the signs themselves may have been visually intrusive detracting from the money spent enhancing the appearance of the estate.

Despite these anomalies regarding sign location, there should be no problems provided the signs are clearly visible as discussed earlier.

## 6.2 Effect of cost of schemes

The cost of a home zone may appear to be relatively high compared to other traffic calming or traffic management measures. The estimated cost per property of each zone, the percentage of respondents in favour of their zone, the 85th percentile and mean speeds and the percentage who thought that walking in their zone was more pleasant are given in Table 6.1. This indicates that the cost per property has little influence on the percentage of respondents in favour of their zone.

The cost per property is given in Table 6.1 because it is a more useful measure than the cost per metre of road which is typically quoted as £1000 per metre for a home zone. As a comparison the Manchester scheme covered 600 metres giving a cost of £1200 per metre.

The cost per property at Leeds is relatively low. This is partly due to the fact that the expensive shared surface

only accounted for about 11% of the total length of road treated in the home zone. Many of the other roads in the zone had no measures apart from the gateway treatments at the entrances to the zone because of the need to maintain sufficient parking in these streets. The cost at Nottingham is the cost of Nobel Road and two of the 'mini home zones' in the *cul-de-sacs* that feed off it. If all of the *cul-de-sacs* off Nobel Road are completed then the total cost would be about £1,775,000 thus the final cost per property at Nottingham is likely to be about £2,950 which is similar to the £2,880 at Manchester.

The results given in Table 6.1 indicate that there is a slight tendency for the 85th percentile speed to be generally lower at sites where the cost per property was higher. There appears to be a relationship between the percentage in favour of their home zone and the percentage who thought that walking in their home zone was more pleasant after installation, this is given in Figure 6.2.

## 6.3 Comments

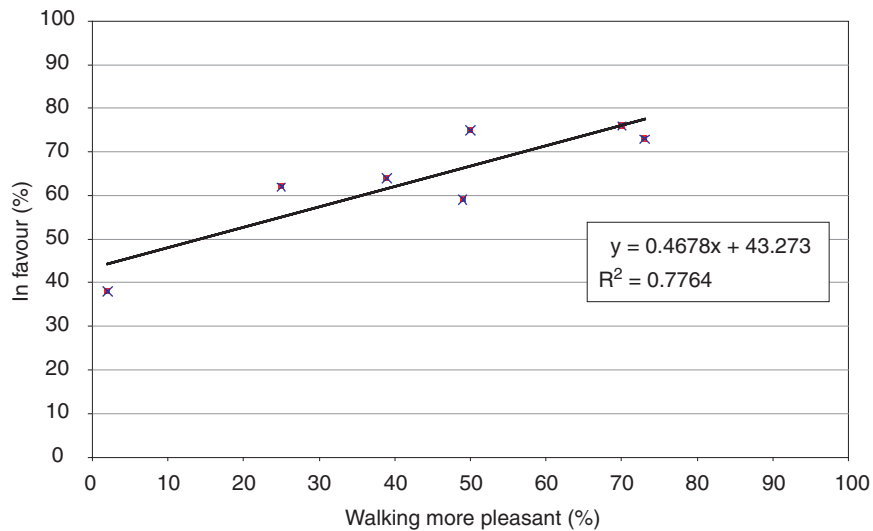
Questionnaire surveys should have a balance of the types of questions which give an opportunity for comments from respondents. Many comments are specific to a scheme and are not always applicable to other schemes. Sometimes perceived effects reported by respondents are not supported by the measured values. This can be due to the respondents having high expectations or, in the case of the speed of vehicles it could be due to isolated vehicles

**Table 6.1** Cost per property, % in favour, walking more pleasant and effect on speed.

| Location                | Estimated cost of zone (£1000s) | No. of properties in zone | Estimated cost per property (£) | In favour (%) | Walking more pleasant (%) | 85% speed reduction (mph) | 85% speed (mph) | Mean speed (mph) |
|-------------------------|---------------------------------|---------------------------|---------------------------------|---------------|---------------------------|---------------------------|-----------------|------------------|
| Leeds                   | 220                             | 300                       | 733                             | 73            | 73                        | 5.0                       | 19.2            | 14.8             |
| Nottingham <sup>1</sup> | 585                             | 600                       | 975                             | 62            | 25                        | 4.9                       | 23.6            | 18.5             |
| Ealing                  | 375                             | 370                       | 1014                            | 75            | 50                        | 4.1                       | 20.4            | 15.6             |
| Sittingbourne           | 145                             | 122                       | 1189                            | 38            | 2                         | 9.3                       | 16.3            | 13.4             |
| Manchester              | 720                             | 250                       | 2880                            | 59            | 49                        | 7.4                       | 14.7            | 11.2             |
| Magor                   | 250                             | 80                        | 3125                            | 64            | 39                        | 3.5                       | 15.8            | 13.1             |
| Plymouth <sup>2</sup>   | 2300                            | 416                       | 5530                            | 76            | 70                        | 7.6                       | 19.0            | 14.8             |
| Average                 | 636                             | 303                       | 2205                            | 64            | 44                        | 6.0                       | 18.4            | 14.5             |

<sup>1</sup> The cost of the Nottingham scheme includes two of the nineteen *cul-de-sac* roads.

<sup>2</sup> The cost for Plymouth includes the complete scheme including Challenge Funding.



**Figure 6.2** Relationship between the percentages of respondents who were in favour of their zone and those who thought that walking in their zone was more pleasant

travelling relatively fast which are remembered by the respondents rather than all of the other slower vehicles.

It was noted in Sittingbourne that some residents thought that the vehicle speeds midway along Cavell Way were faster in the evenings compared to other times in the 'after' period. The difference in speed at this location, 'before' to 'after', could not be determined, however, an analysis of the 6 hour evening period from 18:00 to 24:00 hours and the rest of the day showed that the actual speeds were similar in the 'after' period though perceived to be different by some residents. The results are shown in Figure 6.3.

In Sittingbourne, it was clear from the satisfaction with the street surveys that social factors were an important aspect of the Cavell Way area. Since the attitude surveys were carried out further work has been carried out by Swale Borough Council, particularly new planting to replace that which had been vandalised, removed or stolen. This additional work should enhance the area and this should be borne in mind when comparing the results of the attitude surveys for Sittingbourne. The Multiple Index of Deprivation (IMD) is discussed in detail in the

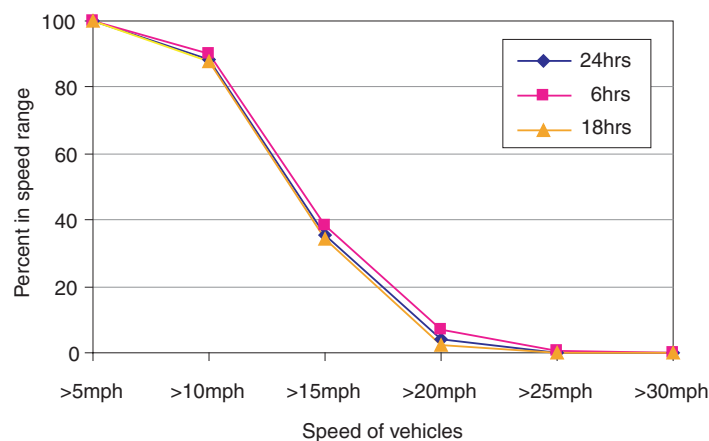
Sittingbourne scheme report (Webster, Tilly and Buttress, 2005). The index is made up of the following categories: income, employment, health/disability, education/skills/training, housing/services, crime and the living environment which gives an insight into the social factors of an area.

#### 6.4 Lessons learnt

As home zones in Great Britain are still evolving it is important that any lessons learnt at a scheme are borne in mind when planning, designing and implementing new schemes so that similar problems can be minimised. A brief summary of the lessons learnt from each scheme retrieved from the home zone website [www.homezonenews.org.uk](http://www.homezonenews.org.uk) in 2005 are given below:-

##### 6.4.1 Local authority officers

*'For officers, the undertaking of the comprehensive consultation and participation process has provided useful additional experience which can be applied to*



**Figure 6.3** Evening speeds (6 hrs) compared with rest of day speeds (18 hrs) and all day (24 hrs) midway along Cavell Way, Sittingbourne

*other transport schemes in the city. The value of having an informed and committed community group involved has been recognised.'*

*'Partnership working was important.'*

*'It is important to get the local community involved with the project at an early stage and keep them informed and involved with the project as it develops. Physical measures to get vehicle speeds down to the target level appear to be essential.'*

*'Allow adequate (extensive) time and resources for consultation.'*

*'Consultation with residents raised many issues that go beyond home zone proposals (such as the need for a community centre). The process, however, has left the community feeling increasingly empowered to start to address issues for themselves, including seeking funding. They successfully applied for a grant for £5,000.'*

*'Essential ingredients are: an enthusiastic resident group and staff and resources to support the group as the project evolves; committed funding sources and clear procurement route; a dedicated Project Manager.'*

*'Allow plenty of time for the consultation process.'*

*'Do not underestimate the importance of good communication and be aware of the power of the media.'*

#### **6.4.2 Resident groups**

*'It is worthwhile for residents to begin the process of trying to get a home zone. It helps to rebuild a sense of community in the neighbourhood whatever the end result. People begin to know and support each other. Some people begin to think about whether they need to use their cars!'*

*A long consultation period gives the opportunity for people to think about what they really want and accept new ideas. It is useful for the residents to have a mediator from outside their group and it is important to involve the local councillors/other residents' groups.*

*Enjoy the process: it's slower than you could possibly imagine!'*

*'There were some in the community who said it would never happen, but the evidence is now plain to see and we are extremely pleased with what we have achieved. We are already noticing and feeling the benefits of living in a home zone, benefits that are readily recognised by other people who visit here.'*

## **7 Summary and conclusions**

### **Background**

The nine pilot home zone schemes are in Ealing (London), Lambeth (London), Leeds, Manchester, Magor Village

(Wales), Nottingham, Peterborough, Plymouth and Sittingbourne (Kent). Although the home zone sites chosen are very different both in scale and type, none had particularly high vehicle flows and most had few accidents. Home zones are not principally safety schemes but more aimed at improving the quality of life.

TRL was commissioned by the DfT to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones. As part of this process, TRL carried out 'before' and 'after' monitoring including: interview surveys with adults and children, collection of traffic flow, traffic speed and accident data; and video recording. The 'before' surveys were carried out in 2000 and the 'after' surveys from 2002 to 2004.

### **Home zone measures**

Each of the home zones in the pilot was individual in character and a variety of measures was used in each home zone. These measures included:

- Gateways at the entrances to the zones.
- Introducing 20 mph zones.
- Replacing the parallel parking with echelon parking, often on alternate sides of the road.
- Slowing vehicular traffic using measures such as chicanes and humps.
- Shared surfaces.
- Introducing community areas.
- Planting in the streets including trees, plants and flowers.
- Renewing and upgrading the streets, including street lighting.
- Many roads substantially unchanged in Leeds.
- Colour coded surfaces in Plymouth to designate shared areas, pedestrian areas, overrun areas and parking areas.
- Demolition and creation of new 'green streets' in Manchester.
- Change of priority at a junction in Sittingbourne.
- Mini home zones in Nottingham.
- A Controlled Parking Zone and a road closure in Ealing.
- Introducing a one-way street in the centre of Magor village.

### **Residents support for the home zone schemes**

There was substantial support for the home zones from the adult respondents, about two-thirds on average were positive. The lowest percentage (38%) in favour was at Sittingbourne, the highest was at Plymouth (76%), the average was 64%.

On average about three-quarters of adult respondents (see Figure 5.7) living within the home zones thought that the appearance of the streets were now more attractive (32% 'a lot more attractive', 41% 'a little more attractive'). The preferred elements mentioned were; shrub planting, flowers and trees (52%), paving of the road (19%), design (6%), clean/ tidy generally (5%). The completed home

zones have, in the opinion of residents themselves, improved the visual amenity of where they live. This is one of the main reasons why the home zones are popular with local residents.

### **Impact of the home zones on the availability of on-street parking spaces**

There was a clear feeling from the 'after' questionnaires that many residents who were interviewed in Manchester, Plymouth, Ealing, Leeds and Magor regard parking within their home zone as an unresolved issue and felt that further controls or restrictions are needed. Many residents also thought that the home zones have increased parking problems. The local authorities are aware of the issues and a comprehensive parking survey was being carried out in Manchester to find solutions to their problem.

### **Impact of the home zones on traffic speeds and traffic flow**

#### ***Traffic speeds***

The mean speeds were reduced on average by about 5 mph, to less than 15 mph. The largest speed reduction was at Sittingbourne (8 mph) and the lowest reduction was at Magor (2 mph) although this was partly due to the speeds already being low. The 85th percentile speeds were reduced on average by about 6 mph to less than 19 mph.

The percentage of vehicles exceeding 20 mph was reduced on average from 42% to 12%. The best reduction was at Plymouth where the reduction was from 56% to 10%.

Further measures would be required at all sites to reduce mean speeds to below 10 mph, however the practicality and desirability of further measures would need careful consideration.

Given that all nine home zones were retro-fit, the designers were constrained by the geometry of the existing built environment. This may have limited the opportunities to reduce speeds further.

#### ***Traffic flows***

The average traffic flows have been reduced at all of the schemes except for Sittingbourne which is a *cul-de-sac* and showed no change. The largest change in flow was recorded at Ealing where the flow halved, mainly due to the road closure introduced into Hastings Road. In Magor the road to the Square was made one-way which contributed to the reduction of about a third at the scheme. The average reduction for all schemes was about a quarter.

Ideally, home zone streets should have two-way traffic flows of no more than about 100 vehicles per hour in the afternoon peak hour. Most of the roads within the schemes were within this criteria but there were about 130 vehicles per hour on Blake Grove in Leeds. There were also about 115 vehicles per hour recorded in Nobel Road in Nottingham. At Plymouth and Ealing flows were recorded of 100 vehicles per hour which is at the maximum. It should be noted that many of the sites had very low flows on many of the roads.

### **Impact of the home zones on driver behaviour and perceived safety**

When asked if motorists are more or less considerate to children playing since the home zones were introduced, 38% of respondents thought motorists were 'more considerate', and 8% thought motorists were 'less considerate' (see Figure 5.25). Fifty-three per cent thought that it was 'about the same' as before the home zones were introduced. In Plymouth and Ealing over 50% of respondents thought drivers were 'more considerate'. In Magor as many as 19% thought that drivers were less considerate.

On average, about three-quarters, 74%, of respondents thought that it was 'very safe' or 'quite safe' for adults who were walking or cycling in the home zones. Twenty per cent thought it was 'not very safe' or 'not at all safe', and gave the reasons as being too many parked cars (4%), vehicles travelling too fast (7%), and too much traffic (3%). Respondents were asked how safe they felt it was within the home zones for children walking or cycling. On average fifty-eight per cent thought it was 'very safe' or 'quite safe', 35% thought it was 'not very safe' or 'not at all safe'.

Before the home zones were built people and traffic were separated. The majority of residents consider that they can coexist safely in the same space.

### **Impact of the home zones on adult journeys and activities**

#### ***Walking and cycling***

On average, walking within the home zones was thought to be 'more pleasant' by about half, 44%, of respondents. On average, 80%, of those who had access to a bicycle said that the introduction of the home zones had made 'no difference' to how often they cycled within the home zone areas, though 10% said that they cycled 'more often'. The effectiveness of home zones as a measure to increase cycle use is limited given that they extend for a relatively limited area. Trips within the home zone may be too short to warrant cycling, longer trips would probably have a destination outside the home zone where traffic and road safety concerns would probably remain a deterrent.

#### ***Activities***

Overall there was a slight increase in the time spent outside the home since the home zones were introduced. The activities performed most often were chatting to friends (31%), gardening (22%) and watching children playing (14%). Manchester, Plymouth and Ealing showed the highest increases where at least 20% spent more time outside their home.

### **Impact of the home zones on child outdoor activities and journeys to school**

#### ***Playing outdoors***

In the 'after' survey, respondents were asked whether children should play in the streets now that they are home zones. Forty-four per cent thought they should, because there is nowhere else to play; the parents know they are

safe in the streets; social reasons and more freedom. Thirty-six per cent of respondents thought the children should not play in the street, because the traffic amount is unsafe; they should play in parks; it is not safe and the traffic is too fast.

### ***Journey to school***

Children were asked questions regarding their journey to and from school. On average, 47% walked, 30% used a bus, 19% used a car, taxi or van and 4% cycled. The highest percentages of children walking to and from school were in Sittingbourne and Plymouth where 82% and 73% walked respectively. The lowest percentage that walked was in Magor which is probably due to the rural location of the scheme.

### **Road traffic injury accidents**

Road accidents were not a serious problem at any of the sites. At the seven sites where monitoring was completed, there was a total of 19 accidents in the five years before the home zones were introduced. This gives an average of about 0.54 accidents per site per year. As the accident numbers are small the 'after' accident analysis would require a further 5 years of data before any conclusions could be drawn as to the overall effect of the home zones on accidents. Preliminary accident data which was available when the scheme reports were written indicated that only one slight accident had occurred in any of the schemes in the 'after' periods. The single accident combined with an 'after' period of 49 site months is equivalent to 0.24 accidents per site per year. This is encouraging because it is about half the 'before' value.

### **Noise and air quality**

#### ***Noise***

The main conclusion from the surveys, in Leeds, is that measured and predicted changes in daytime traffic noise levels, LA10,18h, at the junction of Methley Drive and Methley Terrace indicate reductions of about 1 dB(A) after the scheme was in operation. However, reductions in traffic noise levels of less than 3 dB(A) are unlikely to be perceived. This limited survey would indicate no expected change in people's perception of road traffic noise for those living in this area.

#### ***Air quality***

A comparison of local air quality data, in the Leeds home zone, for benzene and nitrogen dioxide (NO<sub>2</sub>) before and after the installation of The Methleys home zone indicates that there has been little change in the concentrations of these air pollutants in the area.

### ***Views of residents***

The lack of substantial changes in measured noise levels and air pollutant concentrations are supported by the results of the interview survey in Leeds. About two-thirds of the respondents living in the home zones thought that traffic noise and traffic pollution in the street had not

changed since the home zones were introduced. However, more of the remainder thought noise and pollution had decreased rather than increased and noise and pollution appeared to be less of a concern to residents in the 'after' survey than in the 'before' survey. In Ealing, about three-quarters thought that noise and pollution had decreased and about a quarter thought that they were the same as before. This reduction can be attributed to the amount of traffic in the zone being halved.

### **Relationship between the cost of schemes and residents' support**

The home zones varied in cost from £145,000 at Sittingbourne to £2,300,000 at Plymouth. The cost per property varied from £733 at Leeds to £5530 at Plymouth. However, the cost per property appeared to have little influence on the percentage of respondents who were in favour of the scheme.

It appeared that there was a relationship between the percentage of respondents who thought that walking in the home was 'more pleasant' and the percentage of respondents who were 'in favour' of their home zone after it had been installed. Social factors could have influenced their views.

### **Meeting the study objectives**

The main success criteria set out by the local authorities can be summarised as follows:

- To improve quality of life and appearance of the streets for residents.
- To reduce speeds in the home zones.
- To divert non-essential vehicles.
- To improve pedestrian safety – particularly for older people and children.
- To design for structured car parking.
- To improve street lighting to deter crime and improve community safety.
- To change the activities of the community.
- To reduce air pollution and noise.

Monitoring of the home zone pilot has resulted in the following:

- ✓ The appearances of the streets have been improved.
- ✓ There has been a reduction in measured speed.
- ✓ Traffic in the zones has been reduced by traffic calming and traffic management.
- ✓ Pedestrian safety has been improved.
- ✓ Structured parking was achieved by the use of angled parking.
- ✓ Nearly all respondents thought that the danger from crime was safer or the same.
- ✓ There was a slight increase in the time spent outside the home.
- Perceived noise and air pollution were reduced at Ealing but little changed at the other sites.
- There was little change in measured noise and air pollution at Leeds.

## Conclusions

- 1 The surveys carried out indicate that the appearances of the home zones have been improved. The main attractive elements mentioned were the plants, flowers, trees and paving.
- 2 On average about two-thirds of respondents were in favour of the home zones with the highest support of about three-quarters in Plymouth.
- 3 The cost per property of each home zone appeared to have little influence on the percentage of respondents who were in favour of each scheme.
- 4 Vehicle speeds were relatively low before the home zones were installed and the measures used had the effect of reducing the speeds by 2 to 9 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. The practicality and desirability of further measures would need careful consideration. The 'max speed 10' supplementary plates specially authorised by the Department for Transport for use in Plymouth had little effect on vehicle speeds.
- 5 Traffic flows in the area were significantly reduced after the installation of the home zones. Much of the changes can be attributed to redistribution of traffic. However, on average, over half of the respondents did not perceive a change in the amount of traffic.
- 6 Many respondents interviewed in Manchester, Plymouth, Ealing, Leeds and Magor regarded parking within their home zone as an unresolved issue. Many thought that their home zone had increased parking problems.
- 7 Walking in the home zones was thought to be more pleasant by just under half of the residents and there was a slight increase in the amount of time that residents spent outside.
- 8 Respondents were divided as to whether children should play in the streets after they became home zones. Some had concerns about the amount of traffic and some thought that the children should play in the parks.
- 9 Injury accidents were not a serious problem in the home zone areas before installation and early indications are that the after accidents are about half the before accidents which is encouraging. Accidents and near misses mentioned by respondents appear to suggest that these types of incidents may have been reduced as well.
- 10 The measured traffic noise in the Leeds home zone showed a slight reduction after installation though this was not likely to be perceived by those living in the area.
- 11 The measured air quality data for benzene and nitrogen dioxide in the Leeds home zone showed little change after installation of the home zone.
- 12 It appeared that there was a relationship between the percentage of respondents who thought that walking in the home was 'more pleasant' and the percentage of respondents who were 'in favour' of their home zone after it had been installed.
- 13 Social factors could have influenced the views of some respondents particularly in Sittingbourne.

## 8 Acknowledgements

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Northmoor website [www.northmoorhomezone.org.uk](http://www.northmoorhomezone.org.uk)

Northmoor Urban Art Project artist's website  
[www.homepage.mac.com/franz1](http://www.homepage.mac.com/franz1)

Five Roads website [www.fiveroadsforum.org.uk](http://www.fiveroadsforum.org.uk)

Methleys website [www.methleys.org.uk](http://www.methleys.org.uk)

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Plymouth leaflet [www.homezoneschallenge.com/plymouth/Plymouth%20Newsletter.pdf](http://www.homezoneschallenge.com/plymouth/Plymouth%20Newsletter.pdf)

Lambeth website [www.holmewood.org.uk](http://www.holmewood.org.uk)

IHIE Home zone website <http://www.homezones.org.uk/>





### Making a difference

This leaflet is designed to help inform all those who live, work or travel through a Home Zone. Home Zones are designed by residents to lower traffic speeds, improve the environment, change the nature of the road space so that it is shared equally by all road users including pedestrians, introduce plants and features to improve the quality of life for the residents.

Only 50 years ago, children playing in the street and neighbours talking to each other were commonplace, and a feature of community life. The increasing number and speed of vehicles on our roads has divided communities and made these activities much less appealing. It is hoped that Home Zones will help to regain some of this community spirit and enrich the resident's lives.

### Guidelines for using a Home Zone

Home Zones should offer people better and safer places to live and work, but need the help of everyone to make this happen. You can help by:

- **Driving at no more than 10 mph** - this gives time for everyone to walk, drive, cycle, talk and play in a safer space. Being thoughtful about other road users and residents needs - they all have equal rights to use the same space
- Parking your car, motorcycle etc. in marked spaces where provided, or space that will not obstruct or cause a problem. Please be thoughtful of others' needs.
- Keeping to the Highway Code, the space remains a public highway; vehicles blocking any route can be booked for obstruction and all other traffic regulations remain in force.
- Making sure that when you are walking or playing you do not hold up traffic moving through the Zone.

Home Zones bring considerable investment into an area, investment that is usually matched in time and effort by the community to bring about the positive changes that take place. The community and the residents work hard and want to see their Home Zone mature and develop over the coming years. This can be achieved with your help and support.



### What are Home Zones?



Home Zones are residential streets in which the road space is shared between drivers of motor vehicles and other road users, with the wider needs of residents (including people who walk and cycle, the elderly and children) being accommodated. They are about promoting quality of life and neighbourliness.”

Department for Transport 2001



Produced by: Plymouth City Council, Transport & Planning - Road Safety, Tel: 01752 307730

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### Yellow

Mainly pedestrian, community and play areas.

### Bright Red

Vehicle overrun areas. These must be kept clear so that large vehicles like buses and lorries are able to turn corners.



Some streets have been redesigned and are now one level, as are many of the junctions. This helps to show motorists that they are in a different environment. By using coloured and textured surfaces it can also help to show different uses. The pictures on this page give a basic guide to this use. Other roads in the Home Zone have not been redesigned to the same extent but are still shared space and should be used in a similar way.

### Gateways

Entrance and exit gateways show when you are entering and leaving the Home Zone.



### Dark Red

Marked parking bays.

### Grey

Shared surface and through route. Passing places have been provided where the shared surface has been narrowed. These should not generally be used for parking. Make sure vehicles are able to pass freely.



## Abstract

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Home zones are residential areas designed with streets to be places for people, instead of just for motor traffic. The nine pilot home zone schemes are in Ealing (London), Lambeth (London), Leeds, Manchester, Magor Village (Wales), Nottingham, Peterborough, Plymouth and Sittingbourne (Kent). Although the home zone sites chosen are very different both in scale and type, none has particularly high vehicle flows and most have few accidents. Home zones are not principally safety schemes but more aimed at improving the quality of life.

TRL was commissioned by the Department for Transport (DfT) to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones. As part of this process, TRL carried out 'before' and 'after' monitoring including: interview surveys with adults and children; collection of traffic flow, traffic speed and accident data; video recording; air quality measurements and noise surveys. The 'before' surveys were carried out in 2000 and the 'after' surveys between 2002 and 2004. 'After' surveys were not carried out at the Lambeth and Peterborough schemes because the works were not completed on site within the monitoring period of this project. Therefore this report brings together the results from seven of the nine zones.

## Related publications

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- TRL647 *Pilot home zone schemes: evaluation of Nobel Road, Nottingham* by A Tilly, A Wheeler, D Webster, D Nicholls and S Buttress. 2005 (special price £10)
- TRL646 *Pilot home zone schemes: evaluation of Five Roads Area, London Borough of Ealing* by A Wheeler, A Tilly, D Webster, D Nicholls and S Greenshields. 2005 (special price £10)
- 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)
- TRL625 *Pilot home zone schemes: evaluation of Northmoor, Manchester* by A Tilly, D Webster and S Buttress. 2005 (special price £10)
- 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 £35, 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 £50, code L)
- TRL374 *Traffic calming in historic core zones: High Street Route, Shrewsbury* by A Wheeler. 1999 (price £35, code H)
- TRL311 *Traffic calming - Public attitude studies: a literature review* by D C Webster. 1998 (price £35, code H)
- TRL215 *Review of traffic calming schemes in 20mph zones* by D C Webster and A M Mackie. 1996 (price £35, code H)
- TRL The safety benefits of 20mph zones in London by J Barker and D Webster (2004) *Annual Research Review 2003* (price £50)
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