Pilot home zone schemes: evaluation of Cavell Way, Sittingbourne

Prepared for Charging and Local Transport Division, Department for Transport

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Executive Summary

Background

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

Cavell Way 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 3 pairs of semi-detached houses, 89 terraced family town houses and 27 flats. 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 are a mixture of age groups though there is a relatively high proportion of children, some 280 in total. The housing estate is in a pocket of relative deprivation within a wider more affluent area. It borders directly onto a Single Regeneration Budget (SRB) area. There is a play area which contains two cradle swings and a multi climber with a slide.

The road is a cul-de-sac approximately 380 metres in length in the shape of a hook with a small side spur cul-de-sac about 130 metres from the entrance. There is off street parking in the form of lay-bys and parking courts. Limited traffic calming in the form of three road humps was already in existence but residents were concerned about the speed of vehicles and wished to see speeds reduced further.

Funding was secured for the first two phases from Swale Borough Council (£20,000) and from Moat Housing Group (£25,000) and for the third phase through the Local Transport Plan (£100,000). The figure includes the design and supervision fees of £10,000 for the civil engineering works and £4,000 for the landscaping works. The consultation for the scheme has been undertaken by the Housing Association and Swale Borough Council staff and a cost has not been calculated. Site work was completed in April 2003 which was later than expected due to continual vandalism and the need to maintain vehicle access for all residents along the road.

Further work was considered desirable to the recreational areas not on the highway and ideally to provide a community facility for the residents. However, no funding is currently available to extend the scheme beyond that which has been completed so far.

TRL was commissioned by the Charging and Local Transport Division of the DfT to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones. Home zones should allow all road users to coexist in a pleasant safe environment. 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 between April and June 2000 and the ‘after’ surveys in September and October 2003.

Home zone measures

The home zone measures 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 around the 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.

Residents support for the home zone scheme

There was some support for the home zone from the adult respondents living within the home zone boundary with 38% being positive. In the ‘before’ survey 64 of the 84 respondents (76%) thought the home zone was ‘a good idea’ though 6 respondents (7%) did not. In the ‘after’ survey 38% of the respondents were in favour of the home zone, 28% of the respondents were not in favour and 34% of the respondents were undecided.

About a half of the respondents thought that the area was less attractive post completion than before, citing the following concerns: mounds of earth and rubbish (12 respondents), weeds (three respondents), bricks and rubble (two respondents), islands and wood around them (two respondents), one big mess (one respondent), an eyesore (one respondent) and everything (one respondent).

Impact of the home zone on the availability of on-street parking spaces

The home zone measures slightly reduced the spaces available for on-street parking, however, the reduction was not enough to cause any problems due to the number which were previously available. The home zone measures did not seriously affect the off-street parking available for residents of Cavell Way.

There is a feeling from the ‘after’ questionnaires that a few residents who were interviewed regard parking within the home zone as a problem. However, there is little evidence that the home zone measures have greatly affected the on-street or off-street parking for most of the respondents.
Impact of the home zone on traffic speeds and traffic flow
Outside No.9 Cavell Way, the mean vehicle speed decreased by 4.5 mph to 15.7 mph and the 85th percentile speed was reduced by about 4.3 mph to about 19.2 mph. Interim speed measurements, after the entrance to Cavell Way had been completed, were carried outside No.9 Cavell Way in July/August 2001. The mean and 85th percentile speeds were 16.9 mph and 20.5 mph respectively.

Outside Roentgen House the mean vehicle speed was 12.4 mph and the 85th percentile speed was 15.0 mph after the home zone was installed. ‘Before’ speeds were not measured at this location.

Outside No.59 Cavell Way the mean vehicle speed was 13.9 mph and the 85th percentile speed was 17.1 mph after the home zone was installed. ‘Before’ speeds were not measured at this location.

Outside No.26 Cavell Way the mean vehicle speed, recorded with a radar gun, decreased by 10.5 mph to 11.5 mph and the 85th percentile speed was reduced by about 13.8 mph to about 13.9 mph. The maximum speed recorded in the ‘before’ was 35 mph and in the ‘after’ the maximum was 17 mph giving a reduction of 18 mph.

Flows on the treated road within the home zone outside No.9 increased slightly, though by less than 1%. This is probably due to a general increase in traffic between the monitoring periods.

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 (CROW, 1998 and IHIE 2002). After the home zone was installed this criteria was met with the highest being 60 vehicles per hour on weekdays between 17.00 and 18.00.

For many adult respondents, the home zone appeared to have made an impact on their perception of traffic using the streets, particularly the speed of traffic. Over half of the respondents thought that the speed of traffic had decreased some thought there was no change (37%) and some (9%) thought it had increased. The amount of traffic was thought to have increased by 2% of the respondents, over two-thirds (68%) thought that there was no change, 29% thought that it had decreased.

Impact of the home zone on driver behaviour and perceived safety
When asked if motorists are more or less considerate to children playing since the home zone was introduced, 28% of respondents thought they were more considerate and 11% thought they were less considerate. Fifty-seven per cent thought that it was about the same as before the home zone was introduced, four per cent gave no answer.

Fifty-seven per cent of respondents thought that it was ‘very safe’ or ‘fairly safe’ for adults walking or cycling in the home zone. Twenty-one per cent thought it was ‘not very safe’ or ‘not at all safe’, and gave the reasons as vehicles travelling too fast (6%), too much traffic (2%), inconsiderate drivers (2%) and the pavements not defined (2%).

Impact of the home zone on adult journeys and activities
Nearly two-thirds of adult respondents living within the home zone thought that the ease of day to day journeys within the home zone had not changed. Most of the remainder (30%) thought that their journeys were more difficult and the rest (6%) did not know if it had changed. The main reasons given by those who thought that their journeys were more difficult were: the islands and bends are too tight (17%), ‘no view of traffic due to bend in road’ (2%), ‘too many children’ (2%), ‘got worse but told it would improve’ (2%), ‘poor design’ (2%), ‘no pavements’ (2%), ‘some drivers not calmed’ (2%) and ‘depends what part of the estate you live on’ (2%). No respondents thought that their journeys were easier after the home zone was built.

Walking in the home zone was thought to be more pleasant by only one respondent (2%) who gave a reason mentioned ‘the greenery’. Over three-quarters of the respondents (76%) thought that the home zone had made walking neither more nor less pleasant than before. The remaining ten respondents (22%) thought that walking in the home zone was less pleasant than before. The reasons given for it being less pleasant were: rubbish and dirt (six respondents, 13%), children cause trouble (two respondents, 4%), fast traffic at the end of the road (one respondent, 2%) and foul language (one respondent, 2%).

The only adult respondent who cycled thought that cycling in the home zone was less pleasant than before due to ‘the way you are spoken to by people’.

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; cleaning/decorating the home; washing/mending the car. The activities performed most often were chatting to neighbours (32%) and watching over children playing (19%). About 30% occasionally took part in the other activities mentioned, apart from playing games, where 83% said they never do this. Ninety-one per cent said there had been no change in the time spent outside the home since the home zone was introduced, 4% said they spent less time outside and 5% of respondents did not give an answer.

Impact of the home zone on outdoor activities and journeys to school
In the ‘after’ survey, respondents were asked whether children should play in the street now that it is a home zone. Twenty per cent thought they should not because; ‘it is unsafe’ (6%), dangerous for young children (4%), traffic is unsafe (4%), and they should play in the parks (2%). Forty per cent of respondents thought the children should play in the street, because children need to play (9%), there...
is nowhere else to play (9%), because that is the idea (6%), have to play somewhere (4%) and you can’t stop them (2%). Forty per cent had mixed feelings because they thought it depended on the age of the children (9%), nowhere else for them to go (9%), dangerous and not appropriate (4%), traffic unsafe (2%), need to play (2%) and children are abusive (2%).

Thirteen per cent of respondents thought it was ‘very safe’ or ‘fairly safe’ for pre-school or infant school-aged children to spend time unsupervised in the street since it became a home zone. The main dangers again were speed of traffic (66%), ‘stranger danger’ (36%), bullying (30%), the amount of traffic (28%) and mugging (21%).

Fifty-two per cent of respondents thought that it was ‘not very safe’ or ‘not at all safe’ for junior/middle school-aged children to spend time unsupervised by an adult in the street since it became a home zone. The main dangers again were speed of traffic (43%), ‘stranger danger’ (26%), bullying (17%), the amount of traffic (15%) and mugging (11%). However, 38% of respondents thought it was ‘very safe’ or ‘fairly safe’ for junior school-aged children to spend time unsupervised in the street since it became a home zone. In the ‘before’ survey similar proportions of respondents thought it was ‘safe’ or ‘unsafe’ to the ‘after’ survey, and again the main reasons for it being unsafe was the speed of traffic.

Sixty per cent of respondents thought it was ‘very safe’ or ‘fairly safe’ for secondary school-aged children to spend time unsupervised in the home zone streets. Twenty-eight per cent thought it was ‘not very safe’ or ‘not at all safe’. Respondents cited reasons as follows: speed of traffic (17%), bullying (13%), ‘stranger danger’ (9%), crime/mugging (9%) and the amount of traffic (2%). In the ‘before’ survey 15% thought it was ‘not very safe’ or ‘not at all safe’, with 12% citing the speed of road traffic as the reason.

Of the 17 children interviewed, 14 children said that their journey to school was the same as before the home zone, one child thought it was worse and two did not give an answer. The reason given for it being worse was that ‘people in the road are nasty’.

Road traffic injury accidents

There were no road traffic injury accidents, reported to the police, within the home zone area or on Staplehurst Road within 15 metres of the Cavell Way junction between 1st January 1995 to 31st December 2000. Similarly, during the construction period 1st January 2000 to 30th April 2003 there were no injury accidents in the home zone or on Staplehurst Road within 15 metres of the Cavell Way junction.

Preliminary data (not yet validated by Kent County Council) indicates that there have been no injury accidents in the home zone or on Staplehurst Road within 15 metres of the Cavell Way junction in the ‘after’ period from 1st May 2003 to 30th September 2003.

There were four accidents and fourteen ‘near misses’ mentioned by respondents in the ‘before’ survey. In the ‘after’ survey there were three accidents and two ‘near misses’ mentioned by respondents. Overall, these results suggest that these type of incidents may have been reduced.
1 Introduction

Home zones are residential areas designed with streets to be places for people, not 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 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 of the local residents. It also encourages residents to take ownership of the area.

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

1.1 The report structure

- Section 1 describes the development of the home zone concept in the UK and the DfT pilot home zone programme.
- Section 2 gives details of the road forming the Cavell Way home zone and the consultation and implementation timetable.
- Section 3 describes the measures used in Cavell Way to create a home zone.
- Section 4 and appendices A and B provide details of the data collection.
- Section 5 considers the impact of home zone on residents and traffic.
- Section 6 looks at socio economic factors and signing.
- Section 7 contains the summary and conclusions.

1.2 Home zones and woonerven

Conventional traffic calming schemes and 20mph zones have shown that reducing the mean speeds of traffic in urban areas to below 20mph can have a substantial beneficial effect on road safety (Webster and Mackie, 1996) 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 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 new legislation such that child pedestrians should have priority and drivers who injured children should be presumed negligent. It was anticipated that this new legislation would modify driver 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 enforced by a combination of traffic calming measures and other design features (Children’s Play Council, 1998).

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


The Transport Act 2000 makes provision for home zones in England and Wales. This came into effect in February 2001 and local authorities 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 pounds 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 selected to receive funding through the Challenge.

1.3 The DfT pilot programme

TRL was commissioned by the Charging and Local Transport Division of the DfT to evaluate the Home Zone Pilot Programme which is being implemented by nine local authorities in England and Wales. Further details can be found at the home zone website www.homezonenews.org.uk.

The Home Zone Pilot Programme started in 1999 and the main ‘before’ surveys were completed in 2000. The major
part of the consultation, scheme design and construction took place between spring 2000 and spring 2004. The timing of the ‘after’ surveys and reporting has been dependent on the implementation progress of each individual home zone schemes. The first home zone to be completed was in The Methley, Leeds, the results for this zone are reported in TRL Report TRL586 (Layfield et al., 2003).

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, a broad category of schemes 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 reflecting 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 in terms of scale and type, none have particularly heavy flows and most have few accidents. Home zones are not principally safety schemes but more particularly heavy flows and most have few accidents. Home zones are not principally safety schemes but more.

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 including leaflets, interview surveys, public meetings, exhibitions, street events, design workshops. The nine home zone schemes are being designed and funded by local authorities and the implementation timetables for the individual schemes have varied according to the progress with consultation, the size and type of scheme, the extent of the work involved and the acquisition of sufficient funds.

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

1.4 Study objectives

The DfT’s objectives are to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones which is to allow all road users to coexist in a pleasant safe environment; to come to a view on the need for additional legislation; and to identify and disseminate good practice guidance.

Main success criteria for the local authority are:

- 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 speed and an improvement in perceived safety?

2 The site

The Cavell Way, Sittingbourne home zone is an example of a home zone being introduced to an existing housing estate. The term ‘retro fit’ is now commonly used by practitioners to describe this type of home zone. Cavell Way is located in the western part of Sittingbourne, about 250 metres north of the A2 London Road, (see Figure 2.1). 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. 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 are a mixture of age groups though there is a relatively high proportion of children, some 280 in total. The housing estate is in a pocket of relative deprivation within a wider more affluent area. It borders directly onto a Single Regeneration Budget (SRB) area. There is a play area which contains two cradle swings a multi climber with a slide and a grassed area.

The estate is a clearly definable area with distinct boundaries. Unlike most housing developments, it does not gradually merge into its surrounding land uses. The housing layout is ‘inward looking’, geographically close but perceived as being distant from neighbouring developments. This feeling of ‘place’ is reinforced by the fact that there is only one road providing access in to and out of the estate.

The road is a cul-de-sac approximately 380 metres in length in the shape of a hook, it has a small side spur cul-de-sac about 130 metres from the entrance (see Figure 2.2). There is off-street parking in the form of lay-bys and parking courts. Car ownership is higher at the far end of Cavell Way. Limited traffic calming including three road humps was already present. 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 wished to see vehicle speeds reduced further (see Figures 2.3 to 2.6).

Door to door ‘before’ interview surveys with adult residents found that about 40% of households had at least one car, about 83% had children under 17 years of age and about 7% were over 60 years old. The occupational group categories of respondents were ‘Managers’ 6%, ‘Skilled manual’ 6% and others 88%.
Figure 2.1 Location of Cavell Way home zone in Sittingbourne, Kent

Figure 2.2 Plan of Cavell Way before implementation of the home zone
Figure 2.3 Cavell Way looking towards the Staplehurst Road junction (Before the home zone was installed)

Figure 2.4 Cavell Way looking east from the spur cul-de-sac junction (Before the home zone was installed)
Figure 2.5 Cavell Way looking west from the second flat-top hump (Before the home zone was installed)

Figure 2.6 Courtyard parking for numbers 44 to 53 Cavell Way near the second flat-top hump (Before the home zone was installed)
2.1 Background

Play areas are provided but there is 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 are 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 has been seeking a home zone type scheme for some time, they canvassed and obtained the support of the majority of the residents of the estate.

2.2 Consultation and implementation timetable

The Cavell Way scheme was used as a case study in two Traffic Advisory Leaflets which have been published dealing with 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 upon how to approach implementing a home zone.

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 also 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 which was also one 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 were trained by Swale Borough Council in the ‘planning for real’ process and undertook the formal consultation, and a road safety session was also held. This time, 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.

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 2.7.

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

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<th>Age group (years)</th>
<th>Number</th>
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</table>

Working with a local artist, children designed the home zone entry sign. Residents wanted a separate sign for the home zone, after passing the 20mph sign, to maintain the distinction between a 20mph zone and the home zone. The home zone sign is a non-statutory sign, it displays a child’s drawing of children playing as shown in Figure 2.8. The sign was latter replaced with authorised 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 designed by the local children.

The second phase was installed from May to July 2001, this involved works upon the spur cul-de-sac in the estate. The design changes the priority of the junction, it includes the whole junction being raised to the pavement level. This
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 residents' properties during the construction period. The planting also suffered from vandalism but this was overcome by installing a mobile CCTV camera which was effective at deterring the vandalism.

Further work was considered desirable to the recreational areas not on the highway and ideally to provide a community facility for the 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. The figure includes the design and supervision fees of £10,000 for the civil engineering works and £4,000 for the landscaping works. The consultation for the scheme has been undertaken by the Housing Association and Swale Borough Council staff and a cost has not been calculated.

3 Home zone measures

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 being 'people friendly' thus enhancing community activities. The measures should also lead to a reduction in vehicle speeds and improve the perceived safety for all residents.

The home zone measures 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 3.1. This shows the existing hump outside No.7, the chicane outside Nos. 8 & 9, the raised junction at the spur cul-de-sac, the extent of the initial work outside Roentgen House 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 3.2 to 3.11.

3.1 Gateways and signing

There is a gateway at the entrance to, (see Figure 3.2), and exit from, (see Figure 3.3), the home zone. This is at the junction with Staplehurst Road. The original entry sign incorporated the text ‘Cavell Way Home Zone’ and a picture by children incorporating the words ‘children at play’ in coloured letters. At the gateway the road has been narrowed and home zone signing has been added so that drivers are aware that they are entering an area that is not the same as a conventional road where motor vehicles take priority (see Figures 3.2 and 3.3). This follows the principles set out in the ‘Home zone design guidelines’ (IHIE, 2002) that is to send a clear message to drivers that they are entering a residential area where road space is shared.

3.2 Shared surfaces

The main ‘shared surface’ area is outside Roentgen House. This is the core of the home zone, it 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 the very tight bends which form chicanes thereby moderating vehicle speeds along the road. Vehicles are severely restricted along this part of the road. The raised table junction at the spur cul-de-sac has the appearance of a ‘shared surface’.

3.3 Traffic calming measures

Road humps

Cavell Way originally had three flat-top road humps situated outside No.7, 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 outside Roentgen House. The original humps had the desired effect of moderating vehicle speeds (see Section 5) but the speeds were not low enough to constitute a home zone without the further measures being installed.
Figure 3.1 Home zone measures showing initial area of third phase outlined in red
Figure 3.2 Cavell Way home zone entry sign designed by children (Before 20 mph zone entry sign installed)

Figure 3.3 Home zone exit signs looking towards the Staplehurst Road junction (After 20 mph exit sign installed)
Figure 3.4 Chicane created by two semi-circular overrun areas and original flat-top hump looking west to the Staplehurst Road junction

Figure 3.5 New narrowed entrance to spur cul-de-sac
Figure 3.6 Chicane and bollards at spur cul-de-sac junction looking east

Figure 3.7 Shrubs, trees and additional new seating near playground looking south east at spur cul-de-sac
Figure 3.8 Additional new seating near playground and spur cul-de-sac

Figure 3.9 Planting and low bollards outside Roentgen House
Figure 3.10 Courtyard parking opposite Roentgen House looking east (Vehicle speed and flow measuring site, location 3)

Figure 3.11 View of new road layout near Roentgen House looking north
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 from ‘Prismo’. This type of surface registered as ‘Imprint’ 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. They therefore cannot be subsequently stolen or thrown about by antisocial elements in the area. The surface has a skid resistance value of over 55 units.

At the gateway the road has been narrowed from 5.5 metres to 3 metres so that drivers are 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.

There is a chicane (see Figure 3.4), 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. The main part of the chicane is formed by a wall which is 600 mm above the top of the raised junction. At the shared surface area outside Roentgen House drivers have to negotiate the very tight bends which form chicanes for moderating vehicle speeds along this stretch of the road.

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

- Attitudinal surveys of adults and children living within the home zone, the results of which form the main basis for determining whether the aims of the home zone have been achieved.
- Collection of traffic flow and vehicle speed data.
- Video recording to record general street activity.
- Analysis of accident data. However with low accident numbers any change is unlikely to give a statistically significant result.

The main ‘before’ surveys were carried out by TRL between April and June 2000 and the main ‘after’ surveys in September 2003.

### 4.1 Interview surveys

#### 4.1.1 Interviews with households within the home zone
‘Before’ face-to-face household interview surveys took place during April 2000, with adult residents and their children living within the proposed home zone area. Following the scheme implementation, the same respondents, where possible, were interviewed, in October 2003. Their children aged between 7 – 16 years old were interviewed using a questionnaire that focused on street activities and behaviour within the home zone.

In both the ‘before’ and ‘after’ surveys, questions to adult respondents living within the home zone included:

- Characteristics of their household.
- Perceptions of traffic speeds and traffic flows.
- Traffic noise and traffic pollution inside the home zone.
- Bicycle ownership and car ownership.
- Parking issues.
- Mode and frequency of travel for different purposes.
- Safety on the roads from traffic and personal safety from crime.
- Involvement in traffic accidents and ‘near miss’ incidents.
- How their children travel to school.
- Where their children play within the area.
- Safety in the street for playing.
- On-street activities undertaken within the home zone.
- The degree of priority given by drivers to pedestrians or cyclists.

In the ‘after’ surveys, respondents 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 zone. Respondents were also asked about the visual appearance of the home zone, the measures used to control traffic, the effect on accessibility to their home by different modes and the need for further ‘things which are needed’.

Interviews were conducted in the streets in Cavell Way that were to become part of the home zone. Every address within the proposed home zone received a minimum of three calls 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 17 years old or 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. 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 ‘before’ interviews were carried out in April 2000 with 84 adults living in the area of the proposed home zone.
zone (see Table 4.1). The ‘after’ surveys were carried out in October 2003 with 47 adults living in the same streets, 32 of whom had previously been interviewed. It was only possible to interview 32 of the people that had been part of the ‘before’ survey because the estate has a high turnover of residents, many of those originally interviewed had since moved house and only residents who had lived in the estate for at least two years were interviewed.

Table 4.1 Number of adults interviewed in Cavell Way in each survey

<table>
<thead>
<tr>
<th>Cavell Way</th>
<th>Date of interviews</th>
<th>Number</th>
<th>Per cent in both surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before survey</td>
<td>April 2000</td>
<td>84</td>
<td>38</td>
</tr>
<tr>
<td>After survey*</td>
<td>October 2003</td>
<td>47</td>
<td>68</td>
</tr>
<tr>
<td>Interviewed in both surveys</td>
<td>n/a</td>
<td>32</td>
<td>n/a</td>
</tr>
</tbody>
</table>

* The ‘after’ interviews were only completed if the respondent had lived at the address for two years or more.

In the ‘after’ survey almost 90% of the respondents lived in terraced housing, 7% lived in semi-detached housing and 4% in flats (see Table 4.2). The decrease in the percentage who lived in flats could affect their perception of the home zone. Almost all of the properties had gardens, with over a half being described as small gardens in both the ‘before’ and ‘after’ surveys.

Table 4.2 Type of property lived in by respondents

<table>
<thead>
<tr>
<th>Property type</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-detached house</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Terraced house</td>
<td>65</td>
<td>39</td>
</tr>
<tr>
<td>Flat</td>
<td>12</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 4.3 gives details of age, gender, occupational group, length of time at address, household composition, and car ownership of all respondents. In the ‘after’ survey, 86% were female (74% in ‘before’ survey), less than 10% of respondents were 60 years old or over, about 22% had lived in the street for ten years or more. Cavell Way was built just over ten years ago in 1993. About two-thirds had children under 17 years old living at their address. Similarly about two-thirds of households owned one or more cars in the ‘after’ survey.

4.1.3 Characteristics of the child survey sample

The profile of the sample of children interviewed are given in Table 4.4. ‘Before’ interviews were carried out in April 2000 with thirty-two children aged between 7 and 16 years old. The ‘after’ interviews took place, over three years later in October 2003, with seventeen children aged between 7 and 16 years old. Thirteen children, seven boys and six girls, were interviewed in both surveys. There was a clear shift towards the older age groups with only 12% in the 7-9 years old group in the ‘after’ survey compared with 44% in the ‘before’ survey. The average age was 11 years old in the ‘before’ survey and 11 1/2 years old in the ‘after’ survey. Obviously the children interviewed in both surveys had grown older in the period between the ‘before’ and ‘after’ surveys.
4.2 Traffic flows and speeds
Traffic flow and speed data surveys were undertaken by TRL during school term-time using Automatic Traffic Counters (ATCs). The ‘before’ traffic flow and vehicle speed measurements were made using permanent loop detectors over a three week period in May/June 2000 at the following locations (shown in Figure 4.1). Radar speeds were taken on 8th March 2000 outside No.26 Cavell Way.

- Location 1: Outside No.9 Cavell Way (Permanent ATC loop site, between chicane, see Figure 3.4).
- Location 2: Outside No.26 Cavell Way (Radar speed site).

Some interim ‘after’ measurements of speed/flow were carried out in July/August 2001 at Location 1 on Cavell Way. ‘After’ traffic flow and vehicle speed measurements were made in September/October 2003 at Locations 1, 3 and 4 and on 17th September 2003 at Location 2:

- Location 3: Outside Roentgen House (Temporary ATC tube site, see Figure 3.10).
- Location 4: Outside No.59 Cavell Way (Temporary ATC tube site about 25 metres from hump 3).

Table 4.4 Characteristics of the children interviewed

<table>
<thead>
<tr>
<th>Characteristics of children</th>
<th>‘Before’ (B) survey</th>
<th>‘After’ (A) survey</th>
<th>(A – B) Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Per cent</td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-9 years old</td>
<td>14</td>
<td>44</td>
<td>2</td>
</tr>
<tr>
<td>10-12 years old</td>
<td>8</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td>13-16 years old</td>
<td>9</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>Age not known</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>All children</td>
<td>32</td>
<td>100</td>
<td>17</td>
</tr>
</tbody>
</table>

Gender:

<table>
<thead>
<tr>
<th>Gender</th>
<th>‘Before’ (B) survey</th>
<th>‘After’ (A) survey</th>
<th>(A – B) Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Per cent</td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td>47</td>
<td>8</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>53</td>
<td>9</td>
</tr>
</tbody>
</table>

Figure 4.1 Cavell Way home zone – site locations for automatic vehicle counts, speed measurements and for fixed video cameras
The ATC stores speed information by allocating speeds within a given range, for example between 5 and 10 mph, to a 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 or when vehicles are travelling below 10 mph. Some problems were encountered with the speed and flow measurements, there was a slight problem at Location 1 where the permanent loop counter was used. It should be borne in mind that the absolute values given for Location 1 may not be directly comparable with the other locations, because of the technical problems 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 location.

4.3 Video records

Video recordings were made using lamp post mounted cameras, ‘before’ the implementation of the scheme, at a variety of locations within the home zone for 12 hours between 07:00 and 19:00 hours on a weekday and on Saturday in term time.

The recordings took place on 7th and 8th April 2000. The locations chosen took account of the type of traffic calming measures and the home zone environmental features proposed. The ‘before’ video recording locations were as follows:

- Location 1: Midway along the spur cul-de-sac, looking south.
- Location 2: Near hump1 looking east towards the children’s play area.
- Location 3: Near the flats where the path to the town centre starts, looking south-east.
- Location 4: Near the entry to the zone, looking south-east to cover turning movements.

The locations of the video cameras are given in Figure 4.1. 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 zone were very small, very weather dependant and difficult to detect, even when 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. Therefore, in Cavell Way, the information on changes in street activity and behaviour provided by the interview surveys are thought 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 STATIS19 (DfT, 2003), have been supplied by Swale Borough Council for 5 years from 1st January 1995 to 31st December 1999. This data has included accidents within the home zone and on also on Staplehurst Road up to 15 metres from the Cavell Way junction. Details from the accident data were analysed to obtain the ‘before’, ‘during construction’ and the ‘after’ period which is from 1st May 2003 to date. However, with the number of injury accidents being zero in the ‘before’ period of five years and the ‘after’ study period being only 5 months, it is unlikely that any change in accident frequency will be statistically significant because of the small numbers involved.

Further information on accidents, injury and damage only, and near misses before and after the installation of the scheme has been obtained from the interview surveys. Respondents living within the home zone were asked whether as a pedestrian, cyclist or car user, they had been involved in any accidents or near misses within the home zone area or at the junction with Staplehurst Road. 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 helps in understanding the types of accidents/near misses that may be associated with a home zone and highlight any operational problems. The data also provides supporting evidence for information collected on changes in perceived safety.

5 Impact of the home zone

Thirty-eight per cent of the adult residents who were interviewed after the home zone had been completed were supportive of the home zone, twenty-eight per cent were not supportive and thirty-four per cent were undecided. About a half thought that it made the street less attractive in terms of the appearance of the area. Safety from traffic danger was considered a little better for children and adults walking and cycling in the home zone.

**Summary of 47 adult residents views towards the home zone**

Over half the adult residents interviewed thought:

- that it was unsafe for infant school or younger children to play ‘in the street’ (66%);
- that they had not changed the way they drove within the home zone (58% of motorists);
- that people are very or fairly safe from traffic danger for adults walking and cycling in the home zone (57%);
- that it was very or fairly safe from crime for adults walking and cycling in the home zone (55%);
- it had made the streets less attractive (53%), 15% thought that the street was now more attractive.

There were roughly equal responses to:

- there was sufficient consultation (36% Yes, 34% No, don’t know 30%);
- are you in favour of the home zone (38% Yes, 28% No, don’t know 34%);
- the safety from traffic for adults walking and cycling (41% Safer, 42% No change, 17% less safe);
- the safety from traffic for children walking and cycling (41% Safer, 42% No change, 17% less safe).
Over half the adult residents interviewed thought that there was no change in the issues listed below:

- the frequency of their journeys along their street by walking (98%);
- the frequency of their journeys driving along the street (96% of drivers);
- the friendliness of people in the street (94%);
- the time they spent outside the front of their home (91%);
- the ease of parking outside their home (90% of drivers);
- the time spent by their children outdoors (77%);
- that walking along the street was as pleasant (Same 76%, less pleasant 22%, more pleasant 2%);
- traffic pollution (76%);
- the safety from crime for adults walking and cycling (75% no change, 25% a little safer);
- the safety from crime for children walking and cycling (75% no change, 25% a little safer);
- poor driving standards / behaviour (74%);
- traffic noise (74%);
- whether driving along the street was more was pleasant (74% of drivers);
- parking problems (67%);
- the ease of their day to day journeys within the home zone (64% no change, 30% more difficult);
- street as a place to live (61%) (includes 11% who did not know);
- whether motorists were more considerate towards children playing in or near the street (57%).

Summary of 17 children’s views on changes since the home zone

The home zone had the biggest impact on:

- the traffic speed - better 9 (53%), worse 2 (12%), same 2 (12%), no answer 4 (24%);
- appearance after home zone – worse 7 (41%), better 5 (29%), same 3 (18%), no answer 2 (12%);
- safety in the street – better 6 (35%), worse 4 (24%), same 3 (18%), no answer 4 (24%);
- how friendly people are to each other – less friendly 5 (29%), more friendly 2 (12%), don’t know 10 (59%).

Most of the children thought there was no change in following:

- their journey to and from school was – same 14 (82%), better 0 (0%), worse 1 (6%), no answer 2 (12%);
- do you play or spend time near your home – same 13 (76%), no answer 4 (24%);
- how much fun it is when playing outside – same 13 (76%), more fun 1 (6%), less fun 1 (6%), don’t know 2 (12%);
- where they played outside – same 13 (76%), changed 0, no answer 4 (24%);
- do you feel safer outdoors – same 11 (65%), less safe 3 (18%), safer 1 (6%), don’t know 2 (12%).

Children’s views were similar to the adults in that many thought that the streets looked worse because of rubbish. Generally they felt safer in the street and felt some drivers were slower, however, some thought that it was less safe outdoors.

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

Adult residents living in the home zone

There was limited support for the home zone from the adult respondents living within the home zone boundary with over a third being positive. By comparison, in the ‘before’ survey 64 of the 84 respondents (76%) thought the home zone was ‘a good idea’ and 6 respondents (7%) thought that it was ‘not a good idea’. In the ‘after’ survey 38% of the respondents were in favour of the home zone, 28% of the respondents were not in favour and 34% of the respondents were undecided. This could be because there had been a change in the residents interviewed and the new residents may not have been as involved or as interested in the home zone process or concept as the original residents.

Residents’ perceptions of the advantages of the home zone changed between the ‘before’ and ‘after’ surveys (see Figure 5.1). In particular people tended to expect that the impact of the home zone on the appearance of the area and the impact on traffic safety would be greater than that achieved. They tended to expect few drivers would be more considerate and few expected that less child supervision would be needed whereas in practice both were achieved.

The most commonly perceived advantages of home zones mentioned by the adult respondents in the ‘before’ survey were related to traffic and safety issues - slower traffic (44%), safety generally (21%), safer for children (43%) and children will be able to play in the street (17%). It was also thought that it would make the area look better (17%) and there would be fewer accidents (10%). In the ‘after’ survey the main advantages were thought to be that ‘drivers more considerate’ (36%) and ‘less supervision of children required’ (13%). Therefore it had gone some way to achieve the aims and objectives of the scheme.

When asked about disadvantages of the home zone (see Figure 5.2), many people mentioned children running riot in the ‘after’ survey (19%) whereas nobody (0%) mentioned this in the ‘before’ survey. This could have been partly due to the change in the residents interviewed in the estate, see Table 4.1. Concerns about mess and rubbish, including dumped cars, were mentioned in the ‘after’ survey by 75% of the respondents. Three respondents (6%) thought that the home zone was a waste of money whereas in practice both were achieved.

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Children’s views were similar to the adults in that many thought that the streets looked worse because of rubbish. Generally they felt safer in the street and felt some drivers were slower, however, some thought that it was less safe outdoors.

This comment was by only one resident but it underpins the whole philosophy of home zones in that the success depends on the residents looking after their own environment and appreciating the benefits of it. Clearly social factors are involved and these are discussed later in the report but it would appear that the Cavell Way home zone had little chance of true success while some of the residents including children do not respect the area and their neighbours.
Figure 5.3 gives the percentages of respondents who mentioned categories of road users thought to benefit from the home zone. In the ‘before’ survey, nearly a half of the respondents (45%) thought children would benefit from the home zone scheme. Other people thought to benefit were all residents (42%), parents with young children at home (12%), pedestrians (8%), older people (6%), disabled people (1%), cyclists (1%) and no one (1%). In the ‘after’ survey fewer people felt these categories, particularly residents (11%), were benefiting but many thought that no one was benefiting (34%).

About a third of the respondents living within the home zone thought that there had been sufficient consultation with residents before work began (36% ‘yes’, 34% ‘no’, 30% ‘don’t know’) though under a quarter thought that the views of residents were adequately taken into account (21% ‘yes’, 34% ‘no’, 45% ‘don’t know’). This may have been partly due to the change in residents in the area.

Nearly a half (45%) of the respondents living within the home zone thought that the changes to the streets were not sufficient to make the home zone work in practice (23% ‘yes’, 45% ‘no’, 32% ‘don’t know’). This may have been partly due to the change in the residents interviewed in the area.

Respondents were asked about changes they thought were still needed. Many of these concerned the scheme design, the appearance and other residents. These are listed below in rank order:

- take down and start again (five respondents, 11%);
- clean up the rubbish (three respondents, 6%);
- more plants and trees (three respondents, 6%);
- ‘clearout’ some residents (two respondents, 4%);
- more for the kids to do (two respondents, 4%).

---

Figure 5.1 Perceived advantages of the home zone (adult respondents)

Figure 5.2 Perceived disadvantages of the home zone (adult respondents)
The following were all given by one respondent each: a caretaker on the estate; bigger park for the kids; cameras to catch speeders; cameras to catch vandals; get the yobs off; more thought put in; raise the paths so children know the difference and speed bump right across the road.

5.2 Satisfaction with the street

5.2.1 Adults living in the home zone

Overall adult respondents living within the home zone were not positive about their place to live, with most people in both ‘before’ and ‘after’ surveys rating their street as slightly less than ‘satisfactory’. The mean rating of satisfaction was 2.8 in the ‘before’ survey, this had reduced to 2.2 in the ‘after’ survey. The scale used went from ‘definitely unsatisfactory’ = 0, through ‘satisfactory’ = 3 to ‘definitely satisfactory’ = 6.

When asked specifically what they disliked about their streets, respondents in both surveys mentioned that it was untidy, rubbish, bad neighbours and too many noisy kids; they liked the nice properties, friendly neighbours and also they liked the cul-de-sac. One respondent commented:

- I used to like it but it’s gone down hill so much.

The main dislikes in the ‘before’ survey were ‘bad neighbours’ (26%), ‘untidy and rubbish’ (23%), ‘too much traffic’ (19%) and ‘lack of children’s play area’ (19%). In the ‘after’ survey, fewer respondents mentioned ‘too much traffic’ (6%) and ‘lack of children’s play area’ (2%) but ‘kids’ were a problem for 28% of respondents. The main problems specifically with children/kids given by the respondents were as follows:

- children wrecking things;
- children from other areas;
- kids running riot and anti-social behaviour;
- not much for the kids to do at all;
- children get you down;
- kids playing football;
- children make it hell;
- kids causing nuisance;
- children swearing and damaging everything;
- the children basically little brats;
- the children’s disruption;
- the kids are disrespectful;
- the kids language;
- the kids run riot, now having my milk stolen;
- unruly children;
- kids on mopeds;
- the trouble kids get into;
- too many children;
- children hanging about.

It is clear from these comments that many of the children appear to do many things which can be regarded as anti-social. This type of behaviour is likely to overshadow the good points of the home zone for many of the residents.

The ‘untidy/rubbish’ comments increased slightly to 26% and a sample of the actual comments are given as follows:

- a lot of litter;
- all the rubbish;
- building work is always done in school holidays;
- rubbish everywhere and mounds of earth;
- needles I find in the street;
- dumping of old furniture;
- rubbish all over;
- the mess and rubbish;
- the mess and druggies rubbish;
- the rubbish in the road.

It is clear from these comments that rubbish and mess is a real concern for many residents. It appears that the rubbish is widespread and it was noted by the survey interviewers that they saw furniture which had been dumped in the road as reported by a respondent above.

Other dislikes in the ‘after’ survey were: vandalism (6%), drugs (6%) and thefts (4%). It should be noted that many of these problems are social issues and not comments about the built environment. Social issues of the area are discussed further in Section 6.

For half of the respondents, the home zone made no difference to the street where they lived. When asked if they felt the home zone had made much difference to the street as a place to live, responses were as follows: 15% said ‘yes better’, but 24% said ‘yes worse’, 50% said it made ‘no difference’ and 11% ‘didn’t know’. For those respondents saying the home zone had made a difference to their street, the most common reasons mentioned which were better were ‘the slower traffic’
(4 respondents), ‘safer for children’ (one respondent) and ‘quieter’ (one respondent).

Some individual respondents also mentioned things that had got worse, and these included: ‘disturbance from children’ (three respondents), ‘more dangerous’ (three respondents), ‘driving is more difficult’ (two respondents), ‘faster traffic’ (two respondents), ‘no parking space’ (one respondent), ‘islands are an eyesore’ (one respondent) and ‘rubbish’ (one respondent).

5.2.2 Children living in the home zone

Over half (59%) of the children interviewed in the ‘after’ survey said that they liked living in their street because it was friendly and the neighbours were good (see Table 5.1). This figure was comparable with the proportion of children (66%) who liked this aspect of their street before the home zone was implemented. When asked, how friendly are people to each other, two children thought they were ‘more friendly’, five children thought that they were ‘less friendly’ and ten children thought that there was ‘no difference’.

Table 5.1 What children liked about living in their street

<table>
<thead>
<tr>
<th>Children liked</th>
<th>Before (B) [n=32]</th>
<th>After (A) [n=17]</th>
<th>A – B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly, good neighbours</td>
<td>21 66</td>
<td>10 59</td>
<td>-7</td>
</tr>
<tr>
<td>The park playing field</td>
<td>8 25</td>
<td>1 6</td>
<td>-19</td>
</tr>
<tr>
<td>Playing out/ space to play</td>
<td>5 16</td>
<td>1 6</td>
<td>-10</td>
</tr>
<tr>
<td>Convenient to shops/ school and facilities</td>
<td>2 6</td>
<td>0 0</td>
<td>-6</td>
</tr>
<tr>
<td>Quiet/no trouble/tidy</td>
<td>2 6</td>
<td>0 0</td>
<td>-6</td>
</tr>
<tr>
<td>Cycle/scooter/roller blades</td>
<td>2 6</td>
<td>1 6</td>
<td>0</td>
</tr>
<tr>
<td>Nothing/not much</td>
<td>6 19</td>
<td>1 6</td>
<td>-13</td>
</tr>
<tr>
<td>Don’t know/other</td>
<td>2 6</td>
<td>3 18</td>
<td>+12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children disliked</th>
<th>Before (B) [n=32]</th>
<th>After (A) [n=17]</th>
<th>A – B</th>
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<td>2 6</td>
<td>0 0</td>
<td>-6</td>
</tr>
<tr>
<td>Quiet/no trouble/tidy</td>
<td>2 6</td>
<td>0 0</td>
<td>-6</td>
</tr>
<tr>
<td>Cycle/scooter/roller blades</td>
<td>2 6</td>
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<tr>
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<td>6 19</td>
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<td>-13</td>
</tr>
<tr>
<td>Don’t know/other</td>
<td>2 6</td>
<td>3 18</td>
<td>+12</td>
</tr>
</tbody>
</table>

The preferred elements mentioned were: the brickwork (two respondents), the layout/design (two respondents), the few trees that have survived and more control over it (one respondent each).

After implementation of the home zone no children mentioned disliking their street because of drugs, drink, traffic, bullies or not enough park equipment (see Table 5.2). Many still disliked the dirt, rubbish, people, road-works and nothing to do. Stealing bikes and other possessions appeared to have increased, however it is possible that some children may have regarded this as ‘bad behaviour’ in the ‘before’ survey because this category reduced considerably from 22% ‘before’ to 6% ‘after’.

Ten children thought that car drivers had altered the way that they drive. Eight thought that drivers were ‘slower or a lot slower’ but one thought that drivers were ‘a bit faster and do racing’ and another thought that drivers ‘do more skids’. On the whole children noticed the change.

Table 5.2 What children disliked about living in their street

<table>
<thead>
<tr>
<th>Children disliked</th>
<th>Before (B) [n=32]</th>
<th>After (A) [n=17]</th>
<th>A – B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly, good neighbours</td>
<td>21 66</td>
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<td>-7</td>
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<tr>
<td>The park playing field</td>
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<td>1 6</td>
<td>-10</td>
</tr>
<tr>
<td>Convenient to shops/ school and facilities</td>
<td>2 6</td>
<td>0 0</td>
<td>-6</td>
</tr>
<tr>
<td>Quiet/no trouble/tidy</td>
<td>2 6</td>
<td>0 0</td>
<td>-6</td>
</tr>
<tr>
<td>Cycle/scooter/roller blades</td>
<td>2 6</td>
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<td>0</td>
</tr>
<tr>
<td>Nothing/not much</td>
<td>6 19</td>
<td>1 6</td>
<td>-13</td>
</tr>
<tr>
<td>Don’t know/other</td>
<td>2 6</td>
<td>3 18</td>
<td>+12</td>
</tr>
</tbody>
</table>

5.3 Environment

5.3.1 Adults living in the home zone

Fifteen per cent of adult respondents living within the home zone thought that the home zone road was ‘more attractive’ and all of these thought it was ‘a little more attractive’, nobody thought that it was a lot more attractive.

The preferred elements mentioned were: the brickwork (two respondents), the layout/design (two respondents), the few trees that have survived and more control over it (one respondent each).

About a half of the respondents thought that the area was less attractive now than before, citing the following concerns: mounds of earth and rubbish (12 respondents), weeds (three respondents), bricks and rubble (two respondents), islands and wood around them (two respondents), one big mess (one respondent), an eyesore (one respondent) and everything (one respondent).

Examples of some of the less attractive features mentioned by respondents are given in Figures 5.4 to 5.6.

Traffic noise and pollution were not major areas of concern for most of the residents interviewed and the home zone measures were perceived to have had little impact on these issues. Over 50 per cent of the respondents living within the home zone were ‘not very much’ or ‘not at all’ bothered by traffic noise or traffic pollution in their street either before or after the home zone had been introduced. About three-quarters also thought that traffic noise and traffic pollution had neither increased nor decreased since the home zone was introduced.

About two-thirds of the residents had lived in their street for over 5 years and knew their neighbours by name. Almost all (98%) of the adult respondents living within the home zone said that they knew at least one person by name in two or more households in their street and about sixty-five per cent said that they knew at least one person by name in six or more households in their street.

About a third of the respondents said that they often spent time chatting to friends / neighbours in the street. Respondents were asked whether the street was more or less friendly since becoming a home zone. The vast majority of respondents thought there had been no change, more friendly 2%, less friendly 2%, about the same 94% and don’t know 2%.
Figure 5.4 View looking west to the spur cul-de-sac junction showing the unattractive appearance of the home zone mentioned by some residents

Figure 5.5 Damage to cobbled area showing missing cobbles and rubbish mentioned by some residents
Figure 5.6 View showing an example of weeds mentioned by some residents

Figure 5.7 Typical parking outside the front of home numbers 54 to 63 Cavell Way
5.3.2 Children living in the home zone
One of the seventeen children interviewed thought that the streets looked prettier now that it was a home zone. Three of the children mentioned the rubbish and damage, one mentioned that they use the humps for skateboarding and one mentioned that it is like an obstacle course. Other comments were as follows:
● it looked nice at first;
● people hit the bollards.

5.4 Car parking
The home zone of Cavell Way contains 95 houses and 27 flats. There is a spur cul-de-sac consisting of house numbers 12 to 23 Cavell Way. There is demand for car parking in Cavell Way from residents and their visitors.

In the ‘after’ interview survey about half of the respondents living within the home-zone drove a car or van. Nearly all of these respondents parked their vehicles on the road directly outside their home or in a designated parking area. The remainder (9%) of the drivers parked their vehicles on the road but not outside their home. Examples of parking are given in Figures 3.3, 3.10 and 5.7.

5.4.1 On-street parking
It is possible to park on-street along some parts of Cavell Way particularly before the spur cul-de-sac when entering. On-street parking is available between the raised surface area outside Roentgen House and the end of Cavell Way. However, in practice there is very little on-street parking evident on the roads within the home zone because there is generally sufficient off-street parking available.

5.4.2 Off-street parking
There is plentiful off-street parking in the form of lay-bys and parking courts. There is parking available in front of many properties and the flats have a large parking area behind the flats. The main parking courts are outside house numbers 1 to 7, 30 to 53 and 64 to 82 Cavell Way.

5.4.3 Impact of home zone measures on car parking

On-street parking
The home zone measures slightly reduced the space available for on-street parking, however, the reduction was not great enough to cause any problems due to the over supply which was available previously.

Off-street parking
The home zone measures did not seriously affect the amount of off-street parking available for residents of Cavell Way.

5.4.4 Residents’ perception of car parking issues

Adults living in the home zone
Only about a quarter of respondents were ‘very’ or ‘quite’ bothered about parking problems in their street. The proportion reduced slightly between the two surveys in both the ‘very bothered’ and ‘quite bothered’ categories. Over two-thirds (67%) of respondents who drove a car said that the home zone had made no difference to parking on the street outside their home for themselves, their family or visitors. About 19% said that parking problems had ‘decreased a little’ and 2% said they had ‘decreased a lot’. About an eighth (12%) said that parking was a little more of a problem. This was part of a general question about traffic issues and they were not asked for the reason for their answer.

Respondents living within the home zone said that parking problems in the zone had not changed (40%) since the home zone was introduced, 4% thought it was more of a problem, over half (56%) did not answer this question.

The reasons given for the parking problems were as follows:
● next door have a lot of cars and take my space;
● two spaces were taken to narrow the road;
● spaces have been removed.

When asked what they thought were the main disadvantages of the home zone, six respondents (7%) mentioned less parking in the ‘before’ survey, only one respondent (2%) mentioned less parking in the ‘after’ survey.

There is a feeling from the ‘after’ questionnaires that a few residents who were interviewed regard parking within the home zone as a problem. There is little evidence that the home zone measures have greatly affected the on-street or off-street parking for most of the respondents.

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 area were measured ‘before’ and ‘after’ the home zone was implemented and are summarised in Table 5.3. Appendix A contains details of vehicle flows on weekdays, Saturdays and Sundays.

The ‘before’ flows in May/June 2000 averaged about 656 vehicles per day outside No.9 Cavell Way where the permanent loop site was located. This was the key location for flows into and out of the home zone.

Technical problems were encountered, during the ‘before’ and ‘after’ monitoring due to parked vehicles and vehicles straddling the loop detectors at Location 1. It was therefore necessary to use only data which appeared to be unaffected, however some small scale errors may have been undetectable. With the errors being small it is unlikely that they would have affected the overall results for that location.

After the home zone was implemented, daily two-way flows outside No.9 Cavell Way were about 659 vehicles per day giving an increase of about 0.5%. ‘After’ flows outside Roentgen House and outside No.59 Cavell Way were on average about 500 and 357 vehicles per day respectively.

Flows on the treated road within the home zone outside No.9 Cavell Way were about 1% higher in the ‘after’ survey. This may have been due to a general increase in traffic between the monitoring surveys and the rise in car ownership in the area (see Table 4.3 and Note 1).
Bar charts of mean hourly flows on weekdays, Saturdays and Sundays, during the ‘before’ and ‘after’ monitoring periods, are presented in Appendix A.

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 (CROW, 1998 and IHIE 2002). After the home zone was installed this criteria was met at all locations with the highest being 60 vehicles per hour on weekdays between 17:00 and 18:00 hours.

Classified vehicle flows taken from the video recordings at Location 4 are given in Table 5.4. These results show that about 90% of vehicles were cars or light goods vehicles on both days, 7% were bicycles on both days, about 2.5% were medium goods vehicles, less than 1% were motorcycles and buses. There were no heavy goods vehicles.

### Table 5.3 Summary of ‘before’ and ‘after’ traffic flows in Cavell Way

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside No.9 (loop site)</td>
<td>Eastbound</td>
<td>345</td>
<td>344</td>
<td>-1 (-0.3%)</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>311</td>
<td>315</td>
<td>+4 (+1.3%)</td>
</tr>
<tr>
<td></td>
<td>Two-way</td>
<td>656</td>
<td>659</td>
<td>+3 (+0.5%)</td>
</tr>
<tr>
<td>Roentgen House (tube site)</td>
<td>Southbound</td>
<td>n/a</td>
<td>252</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>n/a</td>
<td>247</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Two-way</td>
<td>n/a</td>
<td>499</td>
<td>n/a</td>
</tr>
<tr>
<td>Outside No.59 (tube site)</td>
<td>Southbound</td>
<td>n/a</td>
<td>175</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>n/a</td>
<td>182</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Two-way</td>
<td>n/a</td>
<td>357</td>
<td>n/a</td>
</tr>
</tbody>
</table>

1 The flows outside No.9 Cavell Way had some technical problems but are considered to be representative.
2 The ‘after’ flows were measured in July/August 2001 after the entrance treatment to Cavell Way had been completed.

Both days, 7% were bicycles on both days, about 2.5% were medium goods vehicles, less than 1% were motorcycles and buses. There were no heavy goods vehicles.

Classified flows on Staplehurst Road (measured 400 metres north of Cavell Way) were supplied by Swale Borough Council for 20th January 2000 and the results are given in Table 5.5. The flows were for a period of 12 hours from 07:00 to 19:00. They show that most of the traffic was in the car and light goods vehicle category (97%). Bicycles were the next most common but accounting for only 1.2% of the flow. Bus/coach, medium/heavy goods and motorcycles accounted for 0.7%, 0.7% and 0.5% respectively. The total flow was just over 2000 vehicles for the 12 hour period.

### Table 5.4 Classified vehicle flows from video recordings at Location 4

<table>
<thead>
<tr>
<th>Vehicle classification</th>
<th>07:00 to 19:00 on Friday 7th April 2000</th>
<th>07:00 to 19:00 on Saturday 8th April 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of vehicles</td>
<td>Number of vehicles</td>
</tr>
<tr>
<td></td>
<td>Eastbound</td>
<td>Westbound</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Car and light goods</td>
<td>297</td>
<td>288</td>
</tr>
<tr>
<td>Medium goods</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Heavy goods</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bus and minibus</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bicycle</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>328</td>
<td>328</td>
</tr>
</tbody>
</table>

The 2-way morning peak hour for Staplehurst Road was about 300 vehicles between 8:00 and 9:00 hours and the afternoon peak hour was 245 vehicles between 15:00 and 16:00 hours. The off peak flows were generally between about 100 and 150 vehicles per hour.

### Table 5.5 Classified vehicle flows on Staplehurst Road

<table>
<thead>
<tr>
<th>Vehicle classification</th>
<th>07:00 to 19:00 on Thursday 20th January 2000</th>
<th>2-way (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of vehicles</td>
<td>Eastbound</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Car and light goods</td>
<td>1126</td>
<td>929</td>
</tr>
<tr>
<td>Medium and heavy goods</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Bus and coach</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Bicycle</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>1160</td>
<td>960</td>
</tr>
</tbody>
</table>

The 2-way morning peak hour for Staplehurst Road was about 300 vehicles between 8:00 and 9:00 hours and the afternoon peak hour was 245 vehicles between 15:00 and 16:00 hours. The off peak flows were generally between about 100 and 150 vehicles per hour.

### 5.5.2 Measured changes in traffic speeds

The changes in mean and 85th percentile (85%) speeds in Cavell Way before and after the introduction of the home zone are shown in Table 5.6. The mean speed is the average speed recorded at that location. The 85th percentile speed is the speed at which 85% of the vehicles travel below or alternatively 15% travel above at the same location.
Outside No.9 Cavell Way the mean vehicle speed decreased by 4.5 mph to 15.7 mph and the 85th percentile speed was reduced by about 4.3 mph to about 19.2 mph. Interim speed measurements, after the entrance to Cavell Way had been completed, were carried outside No.9 Cavell Way in July/August 2001. The mean and 85th percentile speeds were then 16.9 mph and 20.5 mph respectively indicating that the speeds had reduced by about 3.3 mph and 3 mph respectively due to the initial entrance work carried out. The speed reductions reflect the fact that vehicles do not have to slow much to negotiate the features at this site.

Outside Roentgen House the mean vehicle speed was 12.4 mph and the 85th percentile speed was 15.0 mph after the home zone was installed. This reflects the fact that high speeds are not possible due to the road geometry. Before speeds were not taken at this location.

Outside No.59 Cavell Way the mean vehicle speed was 13.9 mph and the 85th percentile speed was 17.1 mph after the home zone was installed. Before speeds were not taken at this location.

Outside No.26 Cavell Way the mean vehicle speed, recorded with a radar gun, decreased by 10.5 mph to 11.5 mph and the 85th percentile speed was reduced by about 13.8 mph to about 13.9 mph. These speed reductions are due to the junction table at the spur road. The maximum speed recorded in the ‘before’ was 35 mph and in the ‘after’ the maximum was 17 mph giving a reduction of 18 mph. It was noted that there were eight light goods vehicles in the ‘before’ survey and the mean speed of these vehicles was about 1.5 mph slower than the 134 cars recorded.

Overall effect on traffic speeds
The overall results in Table 5.6 show that mean and 85th percentile speeds were reduced by 7.7 mph and 9.3 mph to 13.4 mph and 16.3 mph respectively which is acceptable for a 20 mph zone and is not far from the 10 mph level which is an objective for a home zone.

Table 5.7 and Figure 5.8 show the proportion of vehicles travelling faster than a given speed on Cavell Way at various locations:

<table>
<thead>
<tr>
<th>Location in Cavell Way</th>
<th>Direction of traffic flow</th>
<th>‘Before’ (mph)</th>
<th>‘After’ (mph)</th>
<th>Speed change ‘After’ – ‘Before’ (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>85%</td>
<td>Mean</td>
</tr>
<tr>
<td>Outside No.9 (loop site)</td>
<td>Eastbound</td>
<td>18.1</td>
<td>21.0</td>
<td>15.9</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>22.2</td>
<td>26.0</td>
<td>15.5</td>
</tr>
<tr>
<td></td>
<td>Two-way</td>
<td>20.2</td>
<td>23.5</td>
<td>15.7</td>
</tr>
<tr>
<td>Roentgen House (tube site)</td>
<td>Southbound</td>
<td>n/a</td>
<td>n/a</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>n/a</td>
<td>n/a</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td>Two-way</td>
<td>n/a</td>
<td>n/a</td>
<td>12.4</td>
</tr>
<tr>
<td>Outside No.59 (tube site)</td>
<td>Southbound</td>
<td>n/a</td>
<td>n/a</td>
<td>14.5</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>n/a</td>
<td>n/a</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>Two-way</td>
<td>n/a</td>
<td>n/a</td>
<td>13.9</td>
</tr>
<tr>
<td>Outside No.26 (radar site)</td>
<td>Eastbound</td>
<td>21.5</td>
<td>27.3</td>
<td>11.5</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>22.5</td>
<td>28.0</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>Two-way</td>
<td>22.0</td>
<td>27.7</td>
<td>11.5</td>
</tr>
<tr>
<td>Overall sites</td>
<td>Two-way</td>
<td>21.1</td>
<td>25.6</td>
<td>13.4</td>
</tr>
</tbody>
</table>

1 There were 142 and 161 radar vehicle speed measurements taken outside No.26 Cavell Way in the ‘before’ and ‘after’ surveys respectively.

5.5.3 Road accidents and near misses
Road accidents from STATS19 data
Information on road traffic injury accidents reported to the police, known as SATS19 (DfT, 2003), have been supplied...
Table 5.7 The percentage of vehicles travelling faster than a given speed along Cavell Way

<table>
<thead>
<tr>
<th>Location in Cavell Way</th>
<th>Survey period</th>
<th>0 mph</th>
<th>5 mph</th>
<th>10 mph</th>
<th>15 mph</th>
<th>20 mph</th>
<th>25 mph</th>
<th>30 mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside No.9 (loop site)</td>
<td>Before (B)</td>
<td>100</td>
<td>100</td>
<td>99</td>
<td>88</td>
<td>43</td>
<td>11</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>After (A)</td>
<td>100</td>
<td>100</td>
<td>96</td>
<td>56</td>
<td>9</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>(A) - (B)</td>
<td>0</td>
<td>0</td>
<td>-3</td>
<td>-32</td>
<td>-34</td>
<td>-9</td>
<td>-2.5</td>
</tr>
<tr>
<td>Roentgen House (tube site)</td>
<td>Before</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>100</td>
<td>100</td>
<td>82</td>
<td>15</td>
<td>1</td>
<td>0.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(A) - (B)</td>
<td>0</td>
<td>0</td>
<td>-3</td>
<td>-32</td>
<td>-34</td>
<td>-9</td>
<td>-2.5</td>
</tr>
<tr>
<td>Outside No.59 (tube site)</td>
<td>Before</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>100</td>
<td>100</td>
<td>89</td>
<td>35</td>
<td>3</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(A) - (B)</td>
<td>0</td>
<td>0</td>
<td>-40</td>
<td>-85</td>
<td>-57</td>
<td>-23</td>
<td>-4.2</td>
</tr>
<tr>
<td>Outside No.26 (radar site)</td>
<td>Before (B)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>89</td>
<td>57</td>
<td>23</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>After (A)</td>
<td>100</td>
<td>100</td>
<td>60</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(A) - (B)</td>
<td>0</td>
<td>0</td>
<td>-40</td>
<td>-85</td>
<td>-57</td>
<td>-23</td>
<td>-4.2</td>
</tr>
</tbody>
</table>

Figure 5.8 Before and after percentages of vehicles in speed range outside No. 9 Cavell Way

Figure 5.9 Evening speeds (6 hrs) compared with rest of day speeds (18 hrs) and all day (24 hrs) outside No. 59 Cavell Way
by Swale Borough Council from 1st January 1995 onwards. This data has included accidents within the home zone and on also on Staplehurst Road within 15 metres of the Cavell Way junction.

The results which are given in detail in Appendix B show that in the ‘before’ period of five years from 1st January 1995 to 31st December 2000, there were no injury accidents which had occurred in the home zone area or on Staplehurst Road within 15 metres of the Cavell Way junction.

In the construction period 1st January 2000 to 30th April 2003 there were also no injury accidents in the home zone or on Staplehurst Road within 15 metres of the Cavell Way junction.

Preliminary data, not yet validated by Kent County Council, indicates that there have been no injury accidents in the home zone or on Staplehurst Road within 15 metres of the Cavell Way junction.

Road ‘accidents’ and ‘near misses’ mentioned by respondents

In the ‘before’ survey respondents mentioned being involved in four road ‘accidents’ and fourteen ‘near misses’. There were two accidents whilst in a car, one accident while cycling and one accident while walking. There were four ‘near misses’ while in a car, two ‘near misses’ while cycling, four ‘near misses’ while walking and four ‘near misses’ where no further information was given.

In the ‘after’ survey respondents mentioned being involved in three accidents and two ‘near misses’. The three accidents included two accidents while in a car and one accident while walking. The two ‘near misses’ mentioned included one ‘near miss’ while in a car and one ‘near miss’ while on a bike. The five incidents mentioned occurred as follows: one in the summer of 2002, two in the winter of 2002, one in the spring of 2003 and one in the summer of 2003. This indicates that they have occurred fairly evenly throughout the time period. Overall, these results suggest that these ‘incidents’ may have been reduced after the home zone was completed.

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

In the ‘after’ survey fifty-seven per cent of respondents thought that it was very safe or fairly safe for adults walking or cycling in the home zone. Twenty-one per cent thought it was not very safe or not at all safe, and gave the reasons as vehicles travelling too fast (6%), too much traffic (2%), inconsiderate drivers (2%) and pavements not defined (2%). Respondents were asked how safe they felt it was within the home zone for children walking or cycling. Forty-five per cent thought it was very safe or ‘fairly safe’, 34% thought it was ‘not very safe’ or ‘not at all safe’ and 19% didn’t know.

Those who thought it was unsafe for children in the home zone were asked for their reasons. The most mentioned reason was vehicles travelling too fast (19%). Other concerns included too much traffic (4%) and that the pavements are not defined (4%). In the ‘before’ survey forty-seven per cent had thought it was very or fairly safe, and 51% had thought it was not very safe or not at all safe in their street. The main causes for concern were vehicles travelling too fast (26%), too much traffic (13%), children have no road sense (6%) and inconsiderate drivers (1%).

On roads outside of the home zone, 55% of respondents in the ‘after’ survey thought it was very safe or fairly safe for pedestrians and cyclists. Thirty-six per cent thought it was not very safe or not at all safe for pedestrians and cyclists, and gave the main reason as danger from road traffic (34%). A further 9% didn’t know how safe it was on the roads outside the home zone.

Respondents were asked how considerate motorists in the home zone are towards children and adults in various situations: children crossing the road, children cycling, children playing on or near the street, adults crossing the road, and adults cycling. In all cases more respondents thought drivers were considerate (64%) rather than not considerate (32%), 4% did not know.

When asked if motorists are more or less considerate to children playing since the home zone was introduced, 28% of respondents thought they were more considerate, and 11% thought they were less considerate. Fifty-seven per cent thought that it was about the same as before the home zone was introduced.

Respondents were asked how much they were bothered by various traffic problems in their own street since the home zone was introduced, and whether those problems had increased or decreased as a result of the home zone. The traffic problems enquired about were: the speed of traffic, the amount of traffic, danger to children from road traffic, cyclists, traffic noise, traffic pollution, lorries, parking problems, and poor driving standards/behaviour.

Respondents were bothered very much or quite a lot by danger to children from traffic (85%) in the before survey. Since the home zone was introduced, 48% of respondents were bothered by danger to children from traffic.

For many adult respondents, the home zone appeared to have made an impact on their perception of traffic using the streets, particularly regarding the speed of traffic (see Table 5.8). Some respondents thought that speed of traffic had increased, some thought there was no change but over half thought that it had decreased. The amount of traffic was thought to have increased by just 2% of the

Table 5.8 Perception of respondents on the effect of home zone on traffic in their street

<table>
<thead>
<tr>
<th>Activity or category</th>
<th>‘Decreased’ %</th>
<th>‘Increased’ %</th>
<th>‘No change’ %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed of traffic</td>
<td>54</td>
<td>9</td>
<td>37</td>
</tr>
<tr>
<td>The amount of traffic</td>
<td>29</td>
<td>2</td>
<td>68</td>
</tr>
<tr>
<td>Danger to children from road traffic</td>
<td>29</td>
<td>19</td>
<td>52</td>
</tr>
<tr>
<td>Traffic noise</td>
<td>21</td>
<td>4</td>
<td>74</td>
</tr>
<tr>
<td>Traffic pollution</td>
<td>21</td>
<td>2</td>
<td>76</td>
</tr>
<tr>
<td>Parking problems</td>
<td>21</td>
<td>12</td>
<td>67</td>
</tr>
<tr>
<td>Poor driving standards/behaviour</td>
<td>19</td>
<td>7</td>
<td>74</td>
</tr>
<tr>
<td>Average</td>
<td>28</td>
<td>8</td>
<td>64</td>
</tr>
</tbody>
</table>
respondents and over two-thirds (68%) thought that there was no change, 29% thought that it had decreased. The danger to children, traffic noise and traffic pollution were all thought to have decreased slightly but over half thought that there was no change.

Seventy-four percent of the respondents thought that there was no change in the poor driving standards, 19% perceived a decrease in the poor driving standards and 7% perceived an increase in the poor driving standards (see Table 5.8). This is similar to the results in Table 5.9 which indicate that the average percentage of considerate motorists is also similar being only reduced slightly from 70% in the ‘before’ survey to 64% in the ‘after’ survey.

Table 5.9 Perception of the consideration of motorists towards child and adult road users

<table>
<thead>
<tr>
<th>Road user activity</th>
<th>‘Very considerate’ and ‘fairly considerate’ combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>‘Before (B)’</td>
</tr>
<tr>
<td>Children walking/crossing the road</td>
<td>64%</td>
</tr>
<tr>
<td>Children cycling</td>
<td>66%</td>
</tr>
<tr>
<td>Children playing on or near the street</td>
<td>66%</td>
</tr>
<tr>
<td>Adults walking/crossing the road</td>
<td>77%</td>
</tr>
<tr>
<td>Adults cycling</td>
<td>75%</td>
</tr>
<tr>
<td>Average</td>
<td>70%</td>
</tr>
</tbody>
</table>

In the ‘after’ survey in their own streets, respondents were bothered ‘very much’ or ‘quite a lot’ by danger to children 48% (85% ‘before’), the speed of traffic 41% (82% ‘before’), cyclists 35% (36% ‘before’) and poor driving standards or driving behaviour 35% (71% ‘before’). Nineteen per cent of respondents thought that the danger to children from road traffic had increased since the introduction of the home zone.

5.6 Perceived danger from crime

5.6.1 Adult’s views

With regard to danger from crime, about half of adult respondents in the ‘after’ survey and at least three-quarters in the ‘before’ survey believed that both children and adults who walk/cycle in their street are ‘very’ or ‘fairly safe’. Nineteen per cent of respondents in the ‘after’ survey thought that it is not safe for children and gave the causes for concern as ‘muggings, attacks and theft’. Thirteen per cent of respondents thought that it was not safe for adults and also mentioned ‘muggings, attacks and thefts’ as their main reason.

About forty-five per cent of the adult respondents thought that the home zone had not changed the perceived danger from crime for children or adults when walking or cycling, however forty per cent did not give an answer. All of the remainder (15%) thought that the home zone had made it a little safer.

Six of the adults (12%) who were interviewed had been a victim of crime in the home zone since it had been introduced (two household crimes, three car crimes and one personal crime eg mugging). This was a similar percentage to that found in the ‘before’ survey (14%) when they were asked whether they had ‘been a victim of crime in the last year or so’.

In the ‘before’ and ‘after’ surveys 36% and 15% of the respondents’ households were a member of the Neighbourhood Watch scheme respectively.

5.6.2 Children’s views

Of the 17 children with bikes, 4 children were ‘quite a lot bothered’, five children were ‘not much bothered’, two children were ‘not bothered at all’ about their bike being stolen and six children did not give an answer. Mugging was not a concern for children with three being ‘not at all bothered’, eight were ‘not much bothered’ but four children were ‘quite a lot bothered’ about being mugged or other physical assault. Two children did not answer the question.

5.7 Using the street

Before the home zone was introduced, adult respondents were asked about who should have priority in their street. Most thought that either all road users should have equal priority (28%) or that pedestrians should have priority (61%). Very few (6%) thought that motorists should have priority and only 3% thought that cyclists should have priority.

Respondents were asked who takes priority in practice in the home zone streets and most (32%) said that pedestrians take priority. About 23% of the respondents felt that motorists took priority and 11% thought that all users had equal priority in the street. Over a third (34%) did not know who took priority.

Nearly two-thirds of adult respondents living within the home zone thought that the ease of day to day journeys within the home zone had not changed. Most of the remainder (30%) thought that their journeys were more difficult and the rest (6%) did not know if it had changed. The main reasons given by those who thought that their journeys were more difficult were: the islands and bends are too tight (17%), no view of traffic due to bend in road (2%), too many children (2%), got worse but told it would improve (2%), poor design (2%), no pavements (2%), some drivers not calmed (2%) and depends what part of the estate you live on (2%). No respondents thought that their journeys were easier since the home zone was built.

5.7.1 Walking

Adults

Most respondents (54%) said that they walk at least twice a week along Cavell Way in the home zone to go to the shops, with about a quarter (24%) doing so daily or every weekday. About a third of respondents (36%) walk at least twice a week along the road in the home zone for leisure purposes, about a third (34%) walk at least twice a week to see friends and about 28% walk at least twice a week accompanying their children to school, nursery or playgroup. Only 8% walked to work at least twice a week, 87% never walked to work. Almost all (98%) of the respondents said that the introduction of the home zone had made no difference to how often they walk in the
home zone. There was just one respondent (2%) who said they now walked more often.

Walking within the home zone was thought to be more pleasant by only one respondent (2%) who gave the reason as being more ‘greenery’.

Over three-quarters of the respondents (76%) thought that the home zone had made walking neither more nor less pleasant than before. The remaining ten respondents (22%) thought that walking in the home zone was less pleasant than before. The reasons given for it being less pleasant were: rubbish and dirt, six respondents (13%), children cause trouble, two respondents (4%), fast traffic at the end of the road, one respondent (2%) and foul language, one respondent (2%).

The numbers and categories of pedestrians from video camera footage cameras at the Cavell Road/Staplehurst Road junction (Location 4) was analysed for the 12 hours from 07:00 to 19:00 hours on Friday 7th April 2000. The results are given in Table 5.10.

Table 5.10 Pedestrian flows at the entry to Cavell Way from video recordings

<table>
<thead>
<tr>
<th>Pedestrian category</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Two-way</th>
<th>Per cent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>65</td>
<td>91</td>
<td>156</td>
<td>61</td>
</tr>
<tr>
<td>Adult</td>
<td>44</td>
<td>50</td>
<td>94</td>
<td>37</td>
</tr>
<tr>
<td>Adult (senior citizen)</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>146</td>
<td>256</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 5.10 shows that adults and senior citizens accounted for 37% and 2% respectively, children accounted for 61% of all pedestrians.

Children

The percentage of children interviewed who walked to school increased between the ‘before’ and ‘after’ surveys from 66% to 82%. There was a corresponding drop in the percentage who went to school by car. Some of the difference may have arisen because the age distribution of the children showed that they were generally older in the after survey (see Table 4.3). In the ‘before’ survey, 50% of children were accompanied by an adult, but in the ‘after’ survey it was lower at 18%. It appeared that a higher proportion of children were going to school with children of a similar age in the ‘after’ survey (59%) compared with 31% in the ‘before’ survey.

Most of the children (82%) felt that the school journey was neither better nor worse since the home zone was built. Only one child thought that the journey was worse than before and they gave the reason as being ‘people in the road are nasty’.

In the adult survey, the respondents who walked daily with their children to school, nursery or playgroup fell slightly from 29% to 24%.

The video footage filmed on Friday 7th April 2000 from the cameras at the Cavell Road/Staplehurst Road junction (Location 4) and also near the street end where the path to the town centre starts (Location 3) was analysed for the 12 hours from 07:00 to 19:00. The categories were designed to indicate whether a child was being accompanied by an adult or not and whether the adult was also pushing a buggy. The term ‘buggy’ has been used because it is a common term however it has been used to include prams and pushchairs. It should be noted that a child was regarded as accompanied provided it was judged, by the videotape observer, that the adult was sufficiently close to the given child to have an influence on the child. Only children who were walking were included in the children totals and not those in buggies (see Table 5.11).

Table 5.11 Pedestrian categories in Cavell Way taken from video recordings

<table>
<thead>
<tr>
<th>Location and pedestrian category</th>
<th>Number in category</th>
<th>Per cent of total</th>
<th>Number of children</th>
<th>Number of adults</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location 3 (near hump 2)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child</td>
<td>162</td>
<td>45</td>
<td>162</td>
<td>0</td>
</tr>
<tr>
<td>Child + adult</td>
<td>20</td>
<td>6</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Children + adult</td>
<td>6</td>
<td>2</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Adult</td>
<td>123</td>
<td>34</td>
<td>0</td>
<td>123</td>
</tr>
<tr>
<td>Adult + buggy</td>
<td>33</td>
<td>9</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td>Adult + buggy + (child or children)</td>
<td>8</td>
<td>2</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Adult (senior citizen)</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>362</td>
<td>100</td>
<td>203</td>
<td>200</td>
</tr>
<tr>
<td>All pedestrians</td>
<td>403</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Per cent of children accompanied 20%

<table>
<thead>
<tr>
<th><strong>Location 4 (near home zone entry)</strong></th>
<th>Number in category</th>
<th>Per cent of total</th>
<th>Number of children</th>
<th>Number of adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>132</td>
<td>57</td>
<td>132</td>
<td>0</td>
</tr>
<tr>
<td>Child + adult</td>
<td>7</td>
<td>3</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Children + adult</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Adult</td>
<td>64</td>
<td>28</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>Adult + buggy</td>
<td>12</td>
<td>5</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Adult + buggy + (child or children)</td>
<td>8</td>
<td>3</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Adult (senior citizen)</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>232</td>
<td>100</td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td>All pedestrians</td>
<td>256</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Per cent of children accompanied 15%

Location 3

Table 5.11 shows that at location 3, there were 41 children accompanied by an adult (20%) and 162 children unaccompanied by an adult (80%) out of the 203 children observed. The unaccompanied children accounted for 45% of all the pedestrians by category, adults without a child or buggy accounted for 34%, adult with buggy 9%, senior citizen 3%, adult and child 6%, adult with buggy and children 2% and adult with children 2%.


5.7.3 Driving

Over half of respondents (52%) living within the home zone had access to a car or van along the home zone road at least twice a week. All but one respondents (96%) said that the home zone had made no difference to how often they drove in the home zone. Only one respondent said that they drove less often.

Less than half of the car / van users (ten respondents) said that they had changed the way they drove on roads within the home zone since it was introduced. Many people mentioned driving more slowly. Other descriptions of how/why they had changed included: drive slower now (six respondents), go slower round the rubbish (one respondent), slower because of the height of the humps (one respondent) and you have to drive slowly or else you will clip your wheels on the pavement (one respondent).

Almost three-quarters of the car/van users (17 respondents) thought that driving within the home zone was neither more nor less pleasant than before. The remainder (six respondents) thought that driving within the home zone was less pleasant than before. No one thought that driving was more pleasant.

The main reasons cited for driving being less pleasant were spaces have been removed (one respondent), it is an eyesore because of the rubbish (one respondent), ramps are too high (one respondent), no one gives way (one respondent), it is an obstacle course (one respondent) and it is inconvenient and awkward (one respondent).

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; cleaning/decorating the home; washing/mending the car. The activities performed most often were chatting to neighbours (32%) and watching over children playing (19%). About 30% occasionally took part in the other activities mentioned, apart from playing games, where 83% said they never do this. Ninety-one per cent said there had been no change in the time spent outside the home since the home zone was introduced, 4% said they spent less time outside and 5% of respondents did not give an answer.

Children

The most popular outdoor activities were chatting (13 respondents), riding bikes or scooters (6 respondents), football (7 respondents), chasing games (3 respondents), hide and seek, basketball and manhunt (all one respondent).

5.7.5 Children in the street

Adults views

Thirty-two households in the ‘after’ survey had children below the age of 17 years old: twelve households with one child, similarly twelve households with two children, five households with three children, two households with four children and one household with five children. No respondents inside the home zone had more than five children. There were 64 children in total. The school ages of the children are shown in Table 5.12, along with the distribution from the ‘before’ survey. It can be seen that the distributions are similar.

The respondents were asked where their children had played/spent time outdoors. In the ‘before’ survey,
children spent time outdoors in a wide range of areas. Seventy-nine of the hundred and thirty children (61%) played in their own back garden, seventy-six children (58%) played in open spaces, and fifty-eight children (45%) in the street outside their own home. Thirty-six children (28%) played in someone else’s back garden, twenty-eight children (22%) played in the parking area, twenty-four children (18%) played in their own street but not outside their own home, nineteen children (15%) played in the play area in their own street, eighteen children (14%) played around doorways or entrances and sixteen children (12%) played in their own front garden. Other places mentioned were someone else’s front garden, local shops, play area in other street and other street.

Again in the ‘after’ survey respondents were asked where the children had played/spent time outdoors. Thirty-two of the 64 children (50%) played or spent time in their own back garden, twenty children (31%) in open spaces and twelve children (19%) in the street outside their own home. Additional areas where children spent time were in the play area in their own street ten children, (16%), in their own street but not outside own home five children, (8%), play area in other street four children, (6%), other streets four children, (6%) and two children (3%) spent time around doorways or entrances. One child never played or spent time outside. Four children (6%) who played outside never played in the street.

Respondents were asked how often their children play in the street since it became a home zone. In the before survey, 79% of the children ‘often’ or ‘occasionally’ spent time in the street, with 10% never doing so. This had reduced to 59% in the ‘after’ survey with 6% never doing so. When asked whether their child or children spent more or less time outdoors in the street since it became a home zone, 77% of those who answered the question said there had been ‘no change’, 17% said their child or children spent ‘less time’ and 6% said their child or children spent ‘more time’.

Respondents in the ‘before’ survey were asked whether children should play in the street if it is safe to do so. Thirty-six per cent thought they should not, stating that; the traffic amount is unsafe (15%), children should play in parks (12%), children run across the road (6%), play areas should be provided (4%) and children are abusive (1%). Fifty-five per cent thought the children should play in the street because ‘there is nowhere else for them to go’ (21%), ‘know they are safe’ (12%), ‘they need freedom’ (4%), ‘I want to know where the children are’ (2%), ‘nothing for them to do’ (1%) and ‘not safe in the parks!’ (1%). Ten per cent had mixed feelings about the issue, ‘traffic amount is unsafe’ (4%), ‘I want to know where the children are’ (2%), ‘nowhere else for them to go’ (1%), ‘children abusive’ (1%) and ‘children run across the road’ (1%).

In the ‘after’ survey, respondents were asked whether children should play in the street now that it is a home zone. Twenty per cent thought they should not, the reasons given were ‘it is unsafe’ (6%), dangerous for young children (4%), traffic is unsafe (4%), and they should play in the parks (2%). Forty per cent of respondents thought the children should play in the street, because children need to play (9%), nowhere else to play (9%), because that is the idea (6%), have to play somewhere (4%) and you can not stop them (2%). Forty per cent had mixed feelings because they thought it depended on the age of the children (9%), nowhere else for them to go (9%), dangerous and not appropriate (4%), traffic unsafe (2%), need to play (2%) and children are abusive (2%).

Respondents were asked how safe they thought it was for children to play/spend time unsupervised by an adult in their street since it became a home zone. Thirteen per cent of respondents thought it was ‘very safe’ or ‘fairly safe’ for pre-school or infant school-aged children to spend time unsupervised in the street since it became a home zone. Seventy-four per cent thought it was ‘not very safe’ or ‘not at all safe’ for pre-school-aged children to play unsupervised in the street. The main dangers were thought to be the speed of traffic (66%), ‘stranger danger’ (36%), bullying (30%), the amount of traffic (28%), mugging (21%) and other reasons (2%). In the ‘before’ survey, 78% had thought it was ‘not very safe’ or ‘not at all safe’ to play unsupervised in the street, for very similar reasons to the ‘after’ survey. There was less concern for crime/mugging (12%) and bullying (20%) in the ‘before’ survey.

 Fifty-two per cent of respondents thought that it was ‘not very safe’ or ‘not at all safe’ for junior/middle school-aged children to spend time unsupervised by an adult in the street since it became a home zone. The main dangers again were speed of traffic (43%), ‘stranger danger’ (26%), bullying (17%), the amount of traffic (15%) and mugging (11%). However, 38% of respondents thought it was ‘very safe’ or ‘fairly safe’ for junior school-aged children to spend time unsupervised in the street since it became a home zone. In the ‘before’ survey similar proportions of respondents thought it was ‘safe’ or ‘unsafe’ to the ‘after’ survey, and again the main reasons for it being unsafe was the speed of traffic.

Sixty per cent of respondents thought it was ‘very safe’ or ‘fairly safe’ for secondary school-aged children to spend time unsupervised in the home zone streets. Twenty-eight per cent thought it was ‘not very safe’ or ‘not at all safe’. Respondents cited reasons as follows: speed of traffic (17%), bullying (13%), ‘stranger danger’ (9%), crime/mugging (9%) and the amount of traffic (2%). In the ‘before’ survey 15% thought it was ‘not very safe’ or ‘not at all safe’, with 12% citing the speed of road traffic as the reason.

Children’s views

The most popular places for playing were in own street but not outside own home (seven respondents), open space eg park (five respondents), in street outside own home (four respondents), playing in other street (three respondents) and playing in own street (two respondents). Other responses were; someone else’s back garden and in doorways or entrances.

Of the seventeen children, thirteen ‘played or spent the same time’ outdoors after the home zone was installed, four did not give an answer.

Of the seventeen children interviewed, fourteen children said that their journey to school was the same as before the home zone, one child thought it was worse and two did not give an answer. The reason given for it being worse was that ‘people in the road are nasty’.
6 Socio economic factors and discussion

Social factors of the Cavell Way area

It was clear from the satisfaction with the street surveys reported in section 5.2 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 or removed. This additional work should enhance the area and this should be borne in mind when reading the summary and conclusions of the attitude surveys. Swale Borough Council have collated information for TRL on indicators of deprivation in Swale. The Multiple Index of Deprivation (IMD) which was published by The Office of the Deputy Minister in May 2004 was the basis for the data used. The IMD 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. The deprivation index is very complicated calculation and as an example the income and employment deprivation components are given below:

**Income deprivation components**

- Adults and children in Income Based Job Seekers Allowance households (2001).
- Adults and children in Working Families Tax Credit households whose equivalised income (excluding housing benefits) is below 60% of median before housing costs (2001).
- Adults and children in Disabled Person’s Tax Credit households whose equivalised income (excluding housing benefits) is below 60% of median before housing costs (2001).
- National Asylum Support Service supported asylum seekers in England in receipt of subsistence only and accommodation support (2002).
- In addition, an Income Deprivation Affecting Children Index and an Income Deprivation Affecting Older People Index were created.

**Employment deprivation components**

- Unemployment claimant count (JUVOS) of women aged 18 – 59 and men aged 18 – 64 averaged over 4 quarters (2001). JUVOS is the Joint Unemployment & Vacancies Operating System,
- Participants in New Deal for the 18 – 24s who are not included in the claimant count (2001).
- Participants in New Deal for 25+ who are not included in the claimant count (2001).
- Participants in New Deal for Lone Parents aged 18 and over (2001).

More information can be found on the Office of the Deputy Prime Minister website (see refs). The table from the website is reproduced as Table 6.1 which shows the weightings of the various categories (domains).

There are 354 districts in England and Swale is ranked 110 overall in the deprivation index and it is ranked 2 out of 13 in Kent showing that overall it is a relatively deprived district.

**Table 6.1 Domain weights for the IMD 2004**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Domain weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income deprivation</td>
<td>22.5%</td>
</tr>
<tr>
<td>Employment deprivation</td>
<td>22.5%</td>
</tr>
<tr>
<td>Health deprivation and disability</td>
<td>13.5%</td>
</tr>
<tr>
<td>Education, skills and training deprivation</td>
<td>13.5%</td>
</tr>
<tr>
<td>Barriers to housing and services</td>
<td>9.3%</td>
</tr>
<tr>
<td>Crime</td>
<td>9.3%</td>
</tr>
<tr>
<td>Living environment deprivation</td>
<td>9.3%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

England has been divided into 32,482 Super Output Areas (SOAs) which have a minimum population of 1000 and an average of 1500. The areas are statistical areas and do not necessarily reflect communities as they are perceived in a locality. This applies to Cavell Way which is in the South Grove ward and the London Road/Cryalls Lane SOA which was ranked 72 out of 82 SAOs in Swale. It was in the worst 60% of domains for income deprivation nationally (see Table 6.2).

**Table 6.2 IMD 2004 national ranks for London Road/ Cryalls Lane SOA**

<table>
<thead>
<tr>
<th>Domain</th>
<th>National rank</th>
<th>In the worst X%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income deprivation</td>
<td>19571</td>
<td>60%</td>
</tr>
<tr>
<td>Employment deprivation</td>
<td>22613</td>
<td>70%</td>
</tr>
<tr>
<td>Health deprivation and disability</td>
<td>22183</td>
<td>68%</td>
</tr>
<tr>
<td>Education, skills and training deprivation</td>
<td>16871</td>
<td>52%</td>
</tr>
<tr>
<td>Barriers to housing and services</td>
<td>28356</td>
<td>87%</td>
</tr>
<tr>
<td>Crime</td>
<td>20000</td>
<td>62%</td>
</tr>
<tr>
<td>Living environment deprivation</td>
<td>12496</td>
<td>38%</td>
</tr>
<tr>
<td>Overall IMD rank</td>
<td>23527</td>
<td>–</td>
</tr>
<tr>
<td>Overall (In the worst X%)</td>
<td></td>
<td>72%</td>
</tr>
</tbody>
</table>

However, local knowledge of the Swale Borough staff thought that Cavell Way was more like the North Grove ward and the Quinton Road SOA (just north of Cavell Way) which was ranked 18 out of 82 with an IMD index of 31.34 (ranked 7382 out of 32482 in England where 1 is the most deprived area and 32482 the least deprived area). The Quinton Road SOA was just outside the worst 20% of areas nationally with a value of 23% but it was within the 20% worst areas for income (worst 10%) and education/skills/training (worst 13%). The housing and living environment categories were relatively good at 64% (eg top 36%) each which was probably due to the housing being built in 1993 and therefore still quite new. It should
be noted that these two categories have weightings of 9.3% which count towards the overall IMD 2004 deprivation score (see Table 6.1).

It can be seen that Table 6.3 is similar to the results which were found in the questionnaire surveys reported earlier in this report eg 88% were in the semi-skilled/unskilled manual workers or state dependent category which can be compared with the income deprivation score of 10% and the employment deprivation score of 23%.

### Table 6.3 IMD 2004 national ranks for Quinton Road SOA

<table>
<thead>
<tr>
<th>Domain</th>
<th>National rank</th>
<th>In the worst X%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income deprivation</td>
<td>3353</td>
<td>10%</td>
</tr>
<tr>
<td>Employment deprivation</td>
<td>7367</td>
<td>23%</td>
</tr>
<tr>
<td>Health deprivation and disability</td>
<td>14211</td>
<td>44%</td>
</tr>
<tr>
<td>Education, skills and training deprivation</td>
<td>4158</td>
<td>13%</td>
</tr>
<tr>
<td>Barriers to housing and services</td>
<td>20890</td>
<td>64%</td>
</tr>
<tr>
<td>Crime</td>
<td>11405</td>
<td>35%</td>
</tr>
<tr>
<td>Living environment deprivation</td>
<td>20935</td>
<td>64%</td>
</tr>
</tbody>
</table>

| Overall IMD rank                          | 7382          | –               |
| Overall (In the worst X%)                 | –             | 23%             |

### Home zone boundary signing

A home zone ‘gateway’ sign was used at the boundary to the Cavell Way home zone to alert drivers to the home zone and to the need for lower speeds.

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 according to the Transport Act 2000. The purpose of the signing is to warn drivers of the zones and make them more aware of the built environment and how it is used is different.

Recent design guidelines (IHIE, 2002) suggest that the target speed of 10 mph within home zones will be achieved more easily where there is a stepped reduction in speed created by a 20 mph zone surrounding the home zone. Provided the 20 mph signs and home zone signs are both clearly visible there should be no problems. In Cavell Way, the 20 mph zone and the home zone both start at the same position.

### Figure 6.1 Information home zone signs

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**7 Summary and conclusions**

**Background**

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

Cavell Way is a cul-de-sac 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 houses and flats. The occupants of the estate are a mixture of age groups though there is a relatively high proportion of children, some 280 in total. The estate has a high turnover of residents. The housing estate is in a pocket of relative deprivation within a wider more affluent area. It borders directly onto a Single Regeneration Budget (SRB) area. There is a play area which contains two cradle swings and a multi-climber with a slide. There is off street parking in the form of lay-bys and parking courts. Limited traffic calming in the form of road humps was already in existence but residents were concerned about the speed of vehicles and wished to see speeds reduced further.

Door to door ‘before’ interview surveys with adult residents found that: about 40% of households had at least one car, about 83% had children who were under 17 years old and about 7% were over 60 years old. Nearly three-quarters of those interviewed were female. The occupational group categories of respondents were ‘managers’ 6%, ‘skilled manual’ 6% and other categories 88% which included semi-skilled, unskilled and state dependent respondents.

Further work was considered desirable to the recreational areas not on the highway and ideally to provide a community facility for the 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 from Swale Borough Council, Moat Housing Group and through the Local Transport Plan. The consultation for the scheme has been undertaken by the Housing Association and Swale Borough Council staff. Site work
was completed in April 2003 which was later than expected due to continual vandalism and the need to maintain vehicle access for all residents along the road. The planting also suffered from vandalism but this was overcome by installing a mobile CCTV camera which was effective at deterring the vandalism.

TRL was commissioned by the Charging and Local Transport Division of the DfT to assess the effectiveness of the pilot home zone schemes in achieving the aims of home zones. Home zones should allow all road users to coexist in a pleasant safe environment. 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 between April and June 2000 and the ‘after’ surveys in September and October 2003.

**Home zone measures**

The home zone measures included:

- Gateway treatments, with 20 mph and home zone signing at the entry point to the home zone. These were to make non-local drivers aware of the changed environment. Flat-top road humps and chicanes; extensive planting and other hard landscaping techniques were installed to manage vehicle speeds.
- A 20 mph zone was established for the home zone.
- The spur road junction has been turned into a raised junction with a chicane effect which effectively changes the priority at the junction.
- The heart of the Cavell Way home zone is the shared surface area. The traffic is restricted by the creation of a more tortuous route. Access to the raised area is via a ramp similar to a flat-top hump.

**Residents support for the home zone scheme**

Post installation, there was some support for the home zone from the adult respondents living within the home zone with nearly forty per cent being in favour and about a third having no opinion. In the ‘before’ survey seventy-six per cent (64 respondents) thought the home zone was a ‘good idea’ and seven per cent (6 respondents) did not. In the ‘after’ survey thirty-eight per cent (18 respondents) were in favour of the home zone, twenty-eight per cent (13 respondents) were not in favour and thirty-four per cent (16 respondents) had no opinion. Fifteen per cent of adult respondents interviewed in the ‘after’ survey thought that the home zone had made the appearance of the streets more attractive. The main attractive elements mentioned were the brickwork, layout/design and the few trees that have survived. About a half (53%) thought that it was less attractive due to rubbish, rubble, weeds and mess. This may have been partly due to the fact that there were some new residents during the study period and the extensive vandalism that had occurred to the planted areas.

**Impact of the home zone on the availability of on-street parking spaces**

The home zone measures slightly reduced the spaces available for on-street parking however the reduction was not sufficient to cause any problems due to the number which were previously available. The home zone measures did not seriously affect the off-street parking available for residents of Cavell Way.

There is a feeling from the ‘after’ questionnaires that a few residents who were interviewed regard parking within the home zone as a problem. The problems highlighted were that some spaces were removed to narrow the road and also one respondent had a neighbour with a lot of cars. Thus there is little evidence that the home zone measures have greatly affected the on-street or off-street parking for most of the respondents.

**Impact of the home zone on traffic speeds and traffic flow**

**Traffic speeds**

Outside No.9 Cavell Way, the mean vehicle speed decreased by 4.5 mph to 15.7 mph and the 85th percentile speed was reduced by about 4.3 mph to about 19.2 mph. Interim speed measurements, after the entrance to Cavell Way had been completed, were carried outside No.9 Cavell Way in July/August 2001. The mean and 85th percentile speeds were 16.9 mph and 20.5 mph respectively.

Outside Roentgen House the mean vehicle speed was 12.4 mph and the 85th percentile speed was 15.0 mph after the home zone was installed. ‘Before’ speeds were not taken at this location.

Outside No.59 Cavell Way the mean vehicle speed was 13.9 mph and the 85th percentile speed was 17.1 mph after the home zone was installed. ‘Before’ speeds were not taken at this location.

Outside No.26 Cavell Way the mean vehicle speed, recorded with a radar gun, decreased by 10.5mph to 11.5 mph and the 85th percentile speed was reduced by about 13.8 mph to about 13.9 mph. The maximum speed recorded in the ‘before’ was 35 mph and in the ‘after’ the maximum was 17 mph giving a reduction of 18 mph.

These results indicate that vehicle speeds have been decreased by about 10 mph to a level which is acceptable for a 20 mph zone but further measures would be required to reduce speeds to below 10 mph as given in the IHIE publication (IHIE, 2002).

**Traffic flows**

Traffic flows on the treated road within the home zone outside No.9 increased slightly, though by less than 1%. This is probably due to a general increase in traffic between the monitoring periods.

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 (CROW, 1998 and IHIE 2002). After the home zone was installed this criteria was met at all locations with the highest being 60 vehicles per hour on weekdays between 17:00 and 18:00 therefore the home zone meets the traffic flow criteria.
Impact of the home zone on driver behaviour and perceived safety

When asked if motorists are more or less considerate to children playing since the home zone was introduced, 28% of respondents thought they were more considerate, 11% thought they were less considerate and 57% thought that it was about the same as before the home zone was introduced.

Fifty-seven per cent of respondents thought that it was ‘very safe’ or ‘fairly safe’ for adults walking or cycling in the home zone. Twenty-one per cent thought it was ‘not very safe’ or ‘not at all safe’, and gave the reasons as vehicles travelling too fast (6%), too much traffic (2%), inconsiderate drivers (2%) and the pavements not defined (2%).

Forty-five per cent of respondents thought that it was ‘very safe’ or ‘fairly safe’ for children walking or cycling in the home zone. Thirty-four per cent thought it was ‘not very safe’ or ‘not at all safe’, and gave the reasons as vehicles travelling too fast (19%), too much traffic (4%), the pavements not defined (4%).

Impact of the home zone on adult journeys and activities

Nearly two-thirds of adult respondents living within the home zone thought that the ease of day to day journeys within the home zone had not changed. Most of the remainder (30%) thought that their journeys were more difficult and the rest (6%) did not know if it had changed. The main reasons given by those who thought that their journeys were more difficult were: the islands and bends are too tight (17%), ‘no view of traffic due to bend in road’ (2%), ‘too many children’ (2%), ‘got worse but told it would improve’ (2%), ‘poor design’ (2%), ‘no pavements’ (2%), ‘some drivers not calmed’ (2%) and ‘depends what part of the estate you live on’ (2%). No respondents thought that their journeys were easier after the home zone was built.

Walking in the home zone was thought to be more pleasant by only one respondent (2%) who gave a reason mentioned ‘the greenery’. Over three-quarters of the respondents (76%) thought that the home zone had made walking neither more nor less pleasant than before. The remaining ten respondents (22%) thought that walking in the home zone was less pleasant than before. The reasons given for it being less pleasant were: rubbish and dirt (six respondents, 13%), children cause trouble (two respondents, 4%), fast traffic at the end of the road (one respondent, 2%) and foul language (one respondent, 2%).

The only adult respondent who cycled thought that cycling in the home zone was less pleasant than before, due to ‘the way you are spoken to by people’.

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; cleaning/decorating the home; washing/mending the car. The activities performed most often were chatting to neighbours (32%) and watching over children playing (19%). About 30% occasionally took part in the other activities mentioned, apart from playing games, where 83% said they never do this. Ninety-one per cent said there had been no change in the time spent outside the home since the home zone was introduced, 4% said they spent less time outside and 5% of respondents did not give an answer.

Impact of the home zone on outdoor activities and journeys to school

In the ‘after’ survey, respondents were asked whether children should play in the street now that it is a home zone. Twenty per cent thought they should not, because ‘it is unsafe’ (6%), dangerous for young children (4%), traffic is unsafe (4%), and they should play in the parks (2%). Forty per cent of respondents thought the children should play in the street, because children need to play (9%), there is nowhere else to play (9%), because that is the idea (6%), have to play somewhere (4%) and you can’t stop them (2%). Forty per cent had mixed feelings because they thought it depended on the age of the children (9%), nowhere else for them to go (9%), dangerous and not appropriate (4%), traffic unsafe (2%), need to play (2%) and children are abusive (2%).

Thirteen per cent of respondents thought it was ‘very safe’ or ‘fairly safe’ for pre-school or infant school-aged children to spend time unsupervised in the street since it became a home zone. The main dangers again were speed of traffic (66%), ‘stranger danger’ (36%), bullying (30%), the amount of traffic (28%) and mugging (21%).

Fifty-two per cent of respondents thought that it was ‘not very safe’ or ‘not at all safe’ for junior/middle school-aged children to spend time unsupervised by an adult in the street since it became a home zone. The main dangers again were speed of traffic (43%), ‘stranger danger’ (26%), bullying (17%), the amount of traffic (15%) and mugging (11%). However, 38% of respondents thought it was ‘very safe’ or ‘fairly safe’ for junior school-aged children to spend time unsupervised in the street since it became a home zone. In the ‘before’ survey similar proportions of respondents thought it was ‘safe’ or ‘unsafe’ to the ‘after’ survey, and again the main reasons for it being unsafe was the speed of traffic.

Sixty per cent of respondents thought it was ‘very safe’ or ‘fairly safe’ for secondary school-aged children to spend time unsupervised in the home zone streets. Twenty-eight per cent thought it was ‘not very safe’ or ‘not at all safe’. Respondents cited reasons as follows: speed of traffic (17%), bullying (13%), ‘stranger danger’ (9%), crime/mugging (9%) and the amount of traffic (2%). In the ‘before’ survey 15% thought it was ‘not very safe’ or ‘not at all safe’, with 12% citing the speed of road traffic as the reason.

Of the 17 children interviewed, 14 children said that their journey to school was the same as before the home zone, one child thought it was worse and two did not give an answer. The reason given for it being worse was that ‘people in the road are nasty’.

Road traffic injury accidents

There were no road traffic injury accidents, reported to the police, within the home zone area or on Staplehurst Road within 15 metres of the Cavell Way junction between
1st January 1995 to 31st December 2000 ‘before’
construction started. Similarly, during the construction
period from 1st January 2000 to 30th April 2003 there were
also no injury accidents in the home zone or on Staplehurst
Road within 15 metres of the Cavell Way junction.

Preliminary data (not yet validated by Kent County
Council) indicates that there have been no injury accidents
in the home zone or on Staplehurst Road within 15 metres
of the Cavell Way junction in the ‘after’ period from 1st May

There were four road ‘accidents’ and fourteen ‘near
misses’ mentioned by respondents in the ‘before’ survey.
In the ‘after’ survey there were three ‘accidents’ and two
‘near misses’ mentioned by respondents. Overall, these
results suggest that these ‘accidents’ and ‘near misses’ may
have been reduced after the home zone was completed.

Meeting the study objectives
There were four main success criteria set out by the local
authority. These are as follows:
- 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 speed and an improvement
  in perceived safety?

Monitoring of the home zone pilot has shown the
following:
- There has been a reduction in measured speed and also
  perceived speed and safety.
- The ease of use of the area by pedestrians has been
  improved for adults with them finding that motorists are
  more considerate since the home zone was constructed.
  There was no difference in how considerate motorists
  were towards children but almost three-quarters were
  very considerate or fairly considerate in both surveys.
- There has been very little change in the activities of the
  community with all adults interviewed spending the
  same or less time outside their home when the weather
  is reasonable. All of the children spent the same time
  outside their home.
- The overall amenity of the area decreased slightly between
  the two surveys. The main problem areas were untidy,
  rubbish, bad neighbours and too many kids however this
  was offset to some extent by other residents who liked the
  nice properties, friendly neighbours and the cul-de-sac.

Conclusions
The following conclusions are based on the surveys carried
out in 2000 and late 2003. The housing association estate
has a high turnover of residents and therefore the results
obtained may alter as the mix of residents changes over
time. Social issues were important and these were thought
to have played a significant role in many of the views
expressed by the residents:

1. The high turnover of residents meant that many of
   those originally interviewed had since moved house.
   The estate is in a pocket of relative deprivation within a
   wider more affluent area and it contains a high
   proportion of children. Almost 90% of those
   interviewed in the ‘after’ survey were semi-skilled,
   unskilled or state dependent respondents which had
   increased from 77% in the ‘before’ survey.
2. The surveys carried out indicate that fifty-seven per
   cent of respondents thought that it was ‘very safe’ or
   ‘fairly safe’ for adults walking or cycling in the home
   zone and forty-five per cent of respondents thought that
   it was ‘very safe’ or ‘fairly safe’ for children walking or
cycling in the home zone.
3. Sixty per cent of respondents thought it was ‘very safe’
or ‘fairly safe’ for secondary school-aged children to
   spend time unsupervised in the home zone streets.
   Thirty-eight per cent of respondents thought it was
   ‘very safe’ or ‘fairly safe’ for junior school-aged
   children to spend time unsupervised in the street since it
   became a home zone. Thirteen per cent of respondents
   thought it was ‘very safe’ or ‘fairly safe’ for pre-school
   or infant school-aged children to spend time
   unsupervised in the street since it became a home zone.
4. Vehicle speeds were generally below 30 mph before the
   home zone was installed and the additional measures
   used had the effect of reducing the speeds by about
   10 mph to a level acceptable for a 20 mph zone.
   Further measures would be required to reduce the
   speeds to below 10 mph. Most respondents thought that
   there were not enough changes to the streets to make
   the home zone work in practice.
5. Traffic flows in the area were unchanged after the
   installation of the home zone. This can be attributed
   mainly to the fact that the road is a cul-de-sac.
6. There were no road traffic injury accidents reported to
   the police either ‘before’ the scheme was implemented,
   or ‘during’ or ‘after’ the home zone was installed.
   Accidents and ‘near misses’ mentioned by respondents
   in the ‘before’ and ‘after’ surveys. However the ‘after’
surveys suggest that overall these type of accidents and
   near misses may have been reduced after the home
   zone was completed.
7. Fifteen per cent of the respondents thought that the
   appearance of the home zone in Cavell Way had been
   improved. About a half of the respondents thought it
   was less attractive. The unattractive elements
   mentioned were the mounds of earth, rubbish, weeds,
rubble and general mess.
8. In the ‘after’ survey, thirty-eight per cent were in
   favour of the home zone, twenty-eight per cent were
   not in favour and thirty-four per cent were undecided.
9. The home zone measures did not greatly affect the
   space available for parking however it was clear from a
   few respondents that parking was a problem for them.
10. There was little change in the amount of time that
    adults and children spent outside and walking in the
    home zone was generally thought to be as pleasant as
    before although it was noted that only one resident
    thought that it was more pleasant.
The majority of respondents thought that children, younger than secondary school age, should not play in the street, even after it had become a home zone, because of the speed of traffic, the amount of traffic, stranger danger and bullying.

8 Acknowledgements

The work described in this report was carried out in the Transportation Division of TRL Limited. The authors are grateful to Wayne Duerden from the Department for Transport, Brian Planner from Swale Borough Council and Moat Housing Group for their help during the monitoring of the home zone scheme. Thanks are also given to Lynn Basford who carried out the quality review and auditing of this report and Roger Layfield who led the project until he retired from TRL.

9 References


Manchester City Council and Manchester Methodist Housing Association (1999). Northmoor Renewal Area, Manchester: Concept Study. Manchester CC and Manchester MHA.


Other references


Department for Transport website www.dft.gov.uk.


Northmoor website www.northmoorhomezone.org.uk.


Pilot home zone website www.homezonenews.org.uk.

Appendix A: Traffic flows by time of day

Figure A.1 Cavell Way: vehicle flow by time of day – ‘before’
(a) Cavell Way: After phase 2 (outside no. 9) 2-way vehicle flows by time of day (weekdays)
26-27, 30-31 July and 1-3, 6-8 August 2001

(b) Cavell Way: After phase 2 (outside no. 9) 2-way vehicle flow by time of day (Saturdays)
28 July and 4 August 2001

(c) Cavell Way: After phase 2 (outside no. 9) 2-way vehicle flow by time of day (Sundays)
29 July and 5 August 2001

Figure A.2 Cavell Way: vehicle flow by time of day – ‘after’
(a) Cavell Way: After phase 3 (outside Roentgen House) 2-way vehicle flows by time of day (weekdays)
16 - 19, 22 - 26, 29 - 30 September and 1 - 3, 6 - 10, 13 October 2003

(b) Cavell Way: After phase 3 (outside Roentgen House) 2-way vehicle flows by time of day (Saturdays)
20, 27 September and 4, 11 October 2003

(c) Cavell Way: After phase 3 (outside Roentgen House) 2-way vehicle flows by time of day (Sundays)
21, 28 September and 5, 12 October 2003

Figure A.3 Cavell Way: vehicle flow by time of day – ‘after’
Figure A.4 Cavell Way: vehicle flow by time of day – ‘after’
Appendix B: Road traffic accidents and incidents

Appendix B1: Road traffic injury accidents

Information on reported road traffic injury accidents known as STATS19 (DfT, 2003), within the home zone and on Staplehurst Road within 15 metres of the Cavell Way junction at the home zone entrance, have been supplied by Swale Borough Council from 1st January 1995 onwards.

The results show that in the ‘before’ period of five years from 1st January 1995 to 31st December 2000, there were no injury accidents which had occurred in the home zone area or on Staplehurst Road within 15 metres of the Cavell Way junction.

During the construction period from 1st January 2000 to 30th April 2003 there were also no injury accidents in the home zone or on Staplehurst Road within 15 metres of the Cavell Way junction.

Preliminary data (not yet validated) shows that there have been no injury accidents in the home zone or on Staplehurst Road within 15 metres of the Cavell Way junction in the ‘after’ period from 1st May 2003 to 30th September 2003.

In the home zone area and on Staplehurst Road within 15 metres of the Cavell Way junction there were no injury accidents in the ‘before’ period or in the ‘construction’ period. There have been no accidents in the ‘after’ period of five months up to the end of (September 2003) but it should be noted that this data was only provisional at the time of writing.

Overall summary of injury accident data

- The results above show that there have been no injury accidents in the home zone reported to the police ‘before’, ‘during the construction’ or ‘after’ the home zone was installed.

There have been no injury accidents on Staplehurst Road within 15 metres of the Cavell Way junction reported to the police ‘before’, ‘during the construction’ or ‘after’ the home zone was installed.

Appendix B2: Road traffic incidents in home zone area mentioned by respondents

The road traffic incidents, classed as either ‘accidents’ or ‘near misses’, mentioned by the respondents of the questionnaire must be treated with some caution as they are only a sample of the residents of Cavell Way but it is thought that they may be indicative of the real situation.

Incidents which resulted in accidents

There was one walking accident in the ‘before’ period and one accident in the ‘after’ period. There were two in-car accidents in the ‘before’ period and two in-car accidents in the ‘after’ period. There was one cycling accident in the ‘before’ period whereas there were none in the ‘after’ period. These results may appear slightly disappointing because this gives a total of four accidents ‘before’ and three accidents ‘after’ which is a similar number.

Incidents which resulted in near misses

The results showed that ‘near misses’ while walking appear to have been reduced from four incidents to zero over a similar time period. ‘Near misses’ when in a car were reduced from four incidents to one incident, while cycling they were reduced from two to one and other incidents were reduced from four to zero near misses.

This gives a total of fourteen near misses in the ‘before’ period and two near misses in the ‘after’ period which is very encouraging. It is often pure chance that determines if a ‘near miss’ could have resulted in an accident if the circumstances or timings had been fractionally different.

The types of accidents are summarised in Table B1. Location of the incidents (‘after’ survey only)

The locations of the incidents were as follows:
- Outside No.36 Cavell Way.
- Outside No.21 Cavell Way.
- Behind the flats in Cavell Way.
- At exit from Cavell Way near the walls.
- Cavell Way (exact location not specified).

Two of the incidents involved cars reversing into pedestrians, one involved a poor car manoeuvre at the exit resulting in a two car collision, one involved a ‘boy racer’ who nearly hit a cyclist and the other involved a child who walked out from behind an island.

Overall summary of results of road traffic incidents mentioned by respondents

- Combining all of the incidents gives eighteen incidents in the ‘before’ survey and five incidents in the ‘after’ survey which is a reduction of almost three-quarters. Clearly this is only an indicative estimate because of the way the samples were taken but the reduction is encouraging for the area as a whole.
It was slightly disappointing that respondents mentioned four accidents in the 'before' survey and mentioned three accidents in the 'after' survey which are similar numbers.

<table>
<thead>
<tr>
<th>Incident type</th>
<th>Period</th>
<th>Walking</th>
<th>In car</th>
<th>Cycling</th>
<th>Other</th>
<th>Total</th>
<th>Difference (A – B)</th>
<th>Difference (%)</th>
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<tr>
<td>Near miss</td>
<td>Before (B)</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>14</td>
<td>-12</td>
<td>-86%</td>
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<tr>
<td></td>
<td>After (A)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accident</td>
<td>Before (B)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>-1</td>
<td>-25%</td>
</tr>
<tr>
<td></td>
<td>After (A)</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All incidents</td>
<td>Before (B)</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>18</td>
<td>-13</td>
<td>-72%</td>
</tr>
<tr>
<td></td>
<td>After (A)</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATS19 accidents</td>
<td>Before (B)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>(for comparison)</td>
<td>After (A)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td></td>
</tr>
</tbody>
</table>

\^ 'Before' and 'after' periods are about one year or so before or after the home zone
Abstract

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

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

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TRL625  Pilot home zone schemes: evaluation of Northmoor, Manchester by A Tilly, D Webster and S Buttress. 2005 (special price £10)
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