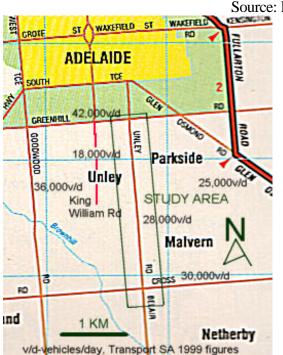
Introduction

This paper discusses the results of survey research into Unley Road, a problematical main street environment in Adelaide's inner southern suburbs (see figure 1). Whereas the orthodox road safety view may have been to eliminate main street environments such as Unley Road because of the high potential for traffic conflict that they pose, communities now appear to value these environments highly because they inject much needed retailing diversity into the urban environment. The "Sharing the Main Street " manual (1993) provided guidelines on how to manage such environments, under the theme of "environmental adaptation", whereby the land use and road space were modified to be more compatible with pedestrian activity. However, these guidelines did not stress the safety aspect instead focusing on improving the environment so that retailing shopping streets could survive in a commercial sense against "big box" regional shopping centres of the Westfields ilk. This research suggests that there is a need to be much more directed in the methodology to determine safety issues in mainstreet environments rather than simply assuming that environmental improvements will be sufficient in working towards the goal of a zero road toll.



Source: Penguin Books (1995), Explore Australia, p277

Figure 1. Map of study area showing indicative traffic volumes on major roads. Note the proximity of Unley Road to Adelaide's city centre.

The first part of this paper characterises Unley Road as a classical "main street" environment and then explains in qualitative terms why safety is an issue for Unley Road. The survey methodology is then briefly discussed. Because the major source of accident risk along Unley Road is due to pedestrians crossing, the nature of this risk is examined in detail using survey data of both legal and illegal pedestrian crossing activity. Community perceptions of risk and community ideas for responding to these risks are then explored. The paper concludes with specific recommendations with regard to Unley Road and comments on the value of this style of community consultation.

Unley Road-a classic main street environment

Unley Road is a classic main street environment in the sense that it is dominated by commercial frontages along most of its length and the vast majority of these businesses are dependent on Unley Road for both vehicle access and their customer base. Moreover, Unley Road also serves an important through traffic function. Hence, Unley Road is a road corridor environment where both the through traffic and access functions it could be argued are equally important. Westerman et. al. (1989) identified a typology of three different road environments in a continuum of compromises between movement and frontage accessibility. At one end of this continuum, were "type I" roads such as freeways in which the movement function is almost 100% dominant, while at the other extreme of the continuum were "type III" roads such as residential shareways in which the frontage access is completely dominant. In the middle of this continuum, which applies to the vast majority of urban roads and "main street" environments, are "type II" roads, where both the movement and access functions are equally dominant. Implicit in this approach is the idea that land use adjacent to the arterial road is an integral aspect in optimising the movement/frontage accessibility compromise. Unley Road, 2km south of Adelaide's city centre, is typical of a type II road environment. Austroads' (1998) "Cities for Tomorrow" resource document and Better Practice Guide develops this theme further by stressing that an integrated land use management approach is needed to effectively deal with corridor environments such as Unley Road.

The research focused on a 2.7km long segment of Unley Road between Greenhill Road (northern end) and Cross Road (southern end). Unley Road is a narrow inner suburban arterial road oriented along a north-south axis with 2 through lanes and a bicycle lane in each direction (see figure 2). The footpaths are generally 3.75m in width while the road carriageway is about 15m wide. The kerbside cycle lanes are 1.5m wide in each direction. Many buildings, particularly those of a commercial nature are built on the property boundary along Unley Road. This means that any road-widening scheme that is contemplated would be an expensive and politically difficult undertaking. There are also heritage buildings at the heart of the Unley Road retail district at the intersection of Arthur Street and Unley Road that would make road widening difficult.

On-street parking is available off-peak in Unley Road, but it tends to reduce the through traffic to one lane in each direction and compromises the usefulness of the bicycle lanes. Parking in the side streets off Unley Road is in short supply, particularly in the more narrow streets and near the schools in the area. There is considerable off-street parking provision, however, some car-parks do not appear to be easy to access or seem relatively remote and can be under-utilised at times (see figure 2).



Source; Photo taken late Saturday afternoon on 4/12/1999 by author

Figure 2. Off-street parking area behind Unley Road's western flank between Mary Street and Arthur Street

Unley Road is subjected to high traffic volumes. It is currently a critical component of southern Adelaide's metropolitan road network. The large traffic volumes that have affected the Unley City Council area around Unley Road has resulted in the adoption of a 40km/h speed limit and traffic calming measures including road closures to prevent traffic using the area as short-cuts from the congested arterial roads. The Unley Road speed limit is currently 60km/h. The high daily traffic volumes on roads in the surrounding main road network, does not provide much spare capacity to ease the traffic pressure on Unley Road. Daily traffic volumes (see figure 1) (Transport SA, 1999) are:

*Unley Road 28,000 vehicles per day (v/d), with about 3% of that flow being heavy commercial vehicles.

- *Greenhill Road-42,000v/d (an east-west arterial, north of Unley Rd.)
- *King William Road-18,000v/d (a parallel sub-arterial, 700m west of Unley Rd.)
- *Goodwood Road-36,000v/d (a parallel arterial road, 1.8km west of Unley Rd.)
- *Cross Road-30,000v/d (an east-west arterial, south of Unley Rd.)
- *Glen Osmond Road-25,000v/d (a northwest-southeast arterial, 1km east of Unley Rd.)

Significant potential traffic conflict and congestion arises from turning movements along Unley Road and from parking or stopping vehicles. Indeed, there are some 39 intersections along Unley Road, although nine of these have are negligible traffic generators because of their short length. Unley Road has major bus routes serving the city and inner southern suburbs.

Although development along Unley Road is generally of a mixed nature, it tends to be dominated by commercial (including professional suites) and retailing activity (see table 1). Special uses such as community activities (ie schools, church and council chambers) are also located on Unley Road. Most of the development does not exceed 2 storeys in height and most of the development that is accessible to the public is located at ground level. Several

businesses and small retailing centres tend to have open parking facing onto Unley Road. There are some automotive related activities on the southern end of Unley Road, but these relate mainly to the retailing of cars. There is little in the way of significant residential development along Unley Road, either of a low density or medium density nature. Also, while there are a large number of popular hotels, restaurants and cafes along Unley Road, it does not appear to have the critical mass to resemble the Rundle Street or Gouger Street "eating" precincts in Adelaide's city centre. Taking the retailing activity along Unley Road as a whole, the Unley Road retail precinct is the most significant strip retailing centre in Adelaide's inner southern suburbs (on par with a major District centre). Any plans for the management of Unley Road from a traffic perspective needs to carefully consider what the impact will be on retailing.

Source: Photo taken late afternoon on 4/12/1999 by author



Figure 3. Carriageway characteristics of Unley Road near the intersection of Frederick Street looking south. Note the parked cars in the kerb-side cycle lane.

Table 1Categorised establishments with primary access* to Unley Road
(Source: Unley Road Main Street Association (c2000))

| | (Source: Only Road Main Street Association ((2000)) | | | | | |
|--|---|---|------------|---|------------|--|
| CATEGORY | Number (%) | CATEGORY | Number (%) | CATEGORY | Number (%) | |
| Restaurants, hotels, cafes, delis & take aways | 44 (11.1%) | Household services & domestic appliances | 21 (5.3%) | Religious, education | 6 (1.5%) | |
| Fashion, clothes, shoes | 42 (10.6%) | Other retail & professional services | 18 (4.5%) | Bookshops & newsagencies | 5 (1.3%) | |
| Furniture, homewares, décor & garden | 36 (9.1%) | Antiques, old wares | 15 (3.8%) | Museum, galleries & picture framers | 5 (1.3%) | |
| Health care, dentistry & pharmacies | 35 (8.8%) | Sporting, leisure, entertainment | 13 (3.3%) | Travel | 5 (1.3%) | |
| Hair & beauty salons | 32 (8.1%) | Real estate & property | 11 (2.8%) | Builders, contractors | 5 (1.3%) | |
| Food & drink | 28 (7.1%) | Car sales & services | 8 (2.0%) | Second hand goods & charity shops | 4 (1.0%) | |

| Banking, financial, legal & professional services | 24 (6.0%) | Jewellery & gifts | 7 (1.8%) | Community services | 4 (1.0%) |
|--|-----------|-------------------|----------|-----------------------|--------------|
| Business services | 24 (6.0%) | Florists | 6 (1.5%) | | |
| | | | | TOTAL | 397 (100.0%) |

*Some businesses are located in arcades leading off Unley Road

Unley Road has some visually attractive elements due to a number of "heritage buildings", a large park next to Unley Shopping Centre, some cafes and up market retailing, and a few mature trees (mainly on side streets though). Many of the sidewalks along Unley Road have been surfaced with coloured concrete pavers. However, the ubiquitous utility poles (known locally as "stobie poles"), ugly overhead wiring, the unsympathetic advertising signage and a preponderance of mediocre contemporary development do not help to enhance Unley Road's aesthetics.

Why the safety of Unley Road is a critical issue

Vehicle and accident statistics for Unley Road would not seem to suggest that Unley Road is any less safe than metropolitan Adelaide's other "main street" environments (Transport SA, 1999). However, the movement function of Unley Road is considerably compromised by a number of factors. These include kerbside parking in off-peak hours, bicycle lanes in peak hours, pedestrians crossing and numerous junctions (both controlled with signals and uncontrolled) that result in turning movements that are disruptive to through traffic.

In off-peak hours, Unley Road becomes a 1.5 lane width road in each direction despite the traffic continuing to use the road as if there were two lanes of normal width in each direction (see figure 3). The potential hazard is exacerbated for cyclists in off-peak periods because parked cars straddle the cycle lane thereby forcing cyclists into an ambiguous half lane with the attendant risk of not only being sideswiped by overtaking cars but also at risk from parked cars pulling away from the kerb or occupants of parked cars opening car doors into their path. Although there is provision for pedestrians to cross Unley Road at regular intervals in the main retailing areas, the absence of a continuous central median presents extreme hazards for pedestrians that attempt to cross illegally, particularly away from the traffic signals. Given that there are very high traffic volumes travelling at relatively high speeds, the potential for conflict not only between vehicles but also between vehicles and vulnerable road users such as pedestrians and cyclists, would seem to be high. Although Unley Road's consistently high levels of traffic congestion during business hours appears to minimise the risk of severe accidents because of the lower traffic speeds, nevertheless, the Unley Road environment is potentially hazardous.

Quite apart from the risks entailed within the road space itself, the road side environment of Unley Road is most unforgiving to errant vehicles or hapless pedestrians who may get in the way of an out of control vehicle. Parked kerbside vehicles may provide some measure of protection however, but they also obscure sighting distances for pedestrians crossing midblock away from traffic signals. Many building frontages are setback less than 4m from the kerb, and some buildings have post supported verandas extending to the kerb. Unyielding power

utility poles occur at regular intervals along Unley Road. There are also a number of large trees, but these tend to be behind the building lines.

If a road safety audit (Austroads, 1994) were to be applied to Unley Road, it would probably perform poorly for a range of critical reasons. This reasons include Unley Road's high speed limit (60km/h) particularly when combined with the hazardous nature of the road's environment, restricted sighting distances, potential conflict due to parking manoeuvres, high through traffic demands and the lack of safety for vulnerable road users such as pedestrians and cyclists. Although Austroads' (1994) Road Safety Audit Guidelines suggest that road environment factors contribute to only 28% of road accidents, after human factors (accounting for 95% of accidents), there is considerable overlap of human factors with road environment factors (85%).



Source: Photo taken late afternoon on 4/12/1999 by author

Figure 4. Unley Road footpath, looking north

Survey methodology

The survey methodology consisted of four components relevant to this paper. These included counts of pedestrian crossing activity within 200m north and south of Unley Shopping Centre at the core of Unley Road's retail area during business hours on a Thursday (9am to 9pm on 2/12/99) and on a Saturday (9am to 5pm on 4/12/99). A caution needs to be read into the results for the Thursday since the temperature reached almost 40C which caused power to fail for about 20 minutes on two occasions during the afternoon. When this happened, people vacated the shops. Interestingly, the functionality of the traffic and pedestrian flows did not appear to be greatly impeded by the lack of traffic signals, neither were there any more potential traffic conflict situations than usual according to the survey observers. This may be

because road users exercised more caution than usual given the exceptional circumstances. If Unley Road was without traffic signals on a permanent basis, however, it is likely that drivers would become accustomed to this and possibly take their safety for granted.

A visitor questionnaire survey in the same area was also conducted on the same two days yielding a total of 188 responses. A postal questionnaire survey of establishments located along Unley Road between Cross Road and Greenhill Road (mostly commercial businesses) was completed in February 2000, and 111 responses received (a response rate of 30%), without further follow-up reminders. The final component was a postal questionnaire survey of all households within 200m of Unley Road by the most practicable route, which yielded 210 responses (a response rate of 21%), also without follow-up reminders. Through the questionnaire surveys, a total of 509 respondents provided their perceptions of Unley Road's physical and safety characteristics, together with suggestions for improving the safety and amenity of Unley Road. The questionnaires largely relied on Likert scale questions and a few open ended questions. The data from the questionnaire surveys were then coded into SPSS and analysed. The research did not gather data on observed conflict situations occurring on Unley Road, due to the subjectiveness and variability of observers making a judgement about what constitutes a strong potential for a vehicle/vehicle, vehicle/roadside object or vehicle/pedestrian accident outcome.

Pedestrian crossing activity in Unley Road's core

Tables 2 and 3 provide an indication of the number of pedestrians crossing Unley Road during the whole survey period, according to whether it was in accordance with the traffic signals (ie legally) or illegally (against a traffic signal) or away from traffic signals (jaywalking). Figure 5 details the locations of where pedestrian crossing activity were surveyed. What is interesting about Unley Road is that despite its relatively low pedestrian flows on the footpath (see table 4), ranging from between around 200-700 pedestrians/hour, crossing activity on Unley Road is of the same magnitude.

Table 2Pedestrian crossing activity* in Unley Road's core (Thurs, 9am-9pm)
(Source: Allan (2000))

| LOCATION ON UNLEY RD | Legally (at traffic signals) | Illegally (at traffic signals) | Jaywalking |
|-------------------------------|------------------------------|--------------------------------|------------------|
| *Pedestrian signals opposite | 334 (28 persons/h) | 428 (36 persons/h) | NA |
| Frederick Street | · • | · • · | |
| *Traffic signals at Arthur St | 554 (45 persons/h) | 44 (4 persons/h) | NA |
| *Traffic signals at Oxford | 556 (46 persons/h) | 150 (13 persons/h) | NA |
| Tce | | | |
| *Traffic signals at entry to | 520 (43 persons/h) | 28 (2 persons/h) | NA |
| Unley Shopping Centre | | | |
| *Midblock crossings | NA | NA | 96 (8 persons/h) |
| between Arthur St and | | | |
| Frederick St | | | |
| *Midblock crossings | NA | NA | 70 (6 persons/h) |
| between Oxford Tce and | | | |
| entry to Unley Shopping | | | |
| Centre | | | |

*Both directions persons/h-persons/hour

This suggests that many pedestrians (assuming they come by car), locate fairly close to the location of the establishment/s they intend visiting which means at worst, they only have to cross Unley Road to reach the intended establishment/s (as opposed to walking up and down Unley Road). The other interesting finding is that when the illegal crossings are expressed as a ratio to total crossings, they are remarkably similar on both days (29.4% on the Thursday and 31.8% on the Saturday). The major problem area for illegal crossings appears to be just north of the shopping core that is between the traffic

Table 3Pedestrian crossing activity* in Unley Road's core (Sat, 9am-5pm)
(Source: Allan (2000))

| LOCATION ON UNLEY | Legally (at traffic | Illegally (at traffic | Jaywalking |
|-------------------------------|---------------------|-----------------------|--------------------|
| RD | signals) | signals) | |
| *Pedestrian signals opposite | 306 (38 persons/h) | 32 (4 persons/h) | NA |
| Frederick Street | | | |
| *Traffic signals at Arthur St | 290 (36 persons/h) | 14 (2 persons/h) | NA |
| *Traffic signals at Oxford | 340 (43 persons/h) | 48 (6 persons/h) | NA |
| Тсе | · • · | | |
| *Traffic signals at entry to | 174 (22 persons/h) | 20 (3 persons/h) | NA |
| Unley Shopping Centre | · • · | | |
| *Midblock crossings | NA | NA | 380 (48 persons/h) |
| between Arthur St and | | | - |
| Frederick St | | | |
| *Midblock crossings | NA | NA | 38 (5 persons/h) |
| between Oxford Tce and | | | · • / |
| entry to Unley Shopping | | | |
| Centre | | | |

*Both directions persons/h-persons/hour

Table 4Pedestrian footpath flows (both directions) in Unley Road's core
(Source: Allan (2000))

| SURVEY PERIOD | | West side (north-south/south-north) | East side (north-south/south-north) |
|-------------------|----|-------------------------------------|-------------------------------------|
| Thursday, 9am-9pm | | 708 (59 persons/h) | 338 (28 persons/h) |
| Saturday, 9am-5pm | | 204 (26persons/h) | 438 (55 persons/h) |
| 47D 1 11 11 | /1 | /1 | |

*Both directions persons/h-persons/hour

Source: Allan (2000)

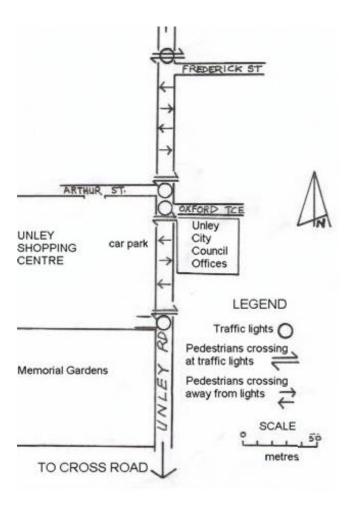


Figure 5 Surveys of Pedestrian footpath flows in Unley Road's core

signals at Arthur Street and the pedestrian signals at Frederick Street (61% on the Thursday and 57% on the Saturday). Rather incredibly, the surveys showed that during business hours on the Thursday, approximately 816 pedestrians (out of 2780 pedestrians), and on the Saturday, 532 pedestrians (out of 1642 pedestrians) exposed themselves to an unnecessary accident risk crossing Unley Road.

Community perceptions of the safety issues

A focus of the surveys of community perceptions of safety issues affecting Unley Road was to determine using a qualitative style of respondent interrogation. This was done to gauge attitudes amongst respondents to safety related issues such as: the severity of traffic congestion; speed; traffic volumes; the proportion of trucks in the traffic flow; general road safety for road users; footpath safety; and pedestrian crossing safety. A Likert scale spanning from 1 to 5 was used to rate these issues by respondents. The results are tabulated in table 5.

Table 5 shows that there was a remarkable degree of agreement amongst visitors, traders and householders about the severity of traffic congestion being high (4.0-4.1), and this seems to be

the safety issue of most concern to respondents. In hindsight, the 5 point Likert scale selected for this research was probably a bit limiting because its range is not sufficient to show significant movement away from the central neutral position (represented by a score of 3). Hence, for the other remaining issues, community attitudes do not seem highlight issues as being a severe problem or no problem at all.

High traffic speed seemed to be marginally more of an issue with the traders (score of 3.4), than for visitors and householders (scores of 3.1 and 3.2 respectively). Visitors, and householders appeared to rate traffic volume as being relatively high (scores of 3.7 and 3.6 respectively) when compared to traders (score of 3.4). Visitors did not perceive trucks in the traffic flow to be as much a problem as it was for traders and householders (score of 2.9 versus 3.5 and 3.4 respectively).

With regard to specific safety issues, its seems that there was a noticeable divergence between the views of visitors and those of the traders and householders. For example, while visitors rated the safety for road users and the safety of Unley Road for pedestrians crossing at 2.7-2.8 respectively, traders ranked these issues in the range of 3.4 to 3.7. Interestingly, it seems that although visitors rated road safety for road users and crossing pedestrians to be of most concern after traffic congestion, they seemed to rate the safety of the footpath for pedestrians relatively highly (3.5). By contrast, traders and householders both rated the safety of the footpath with a relatively low score of 2.6.

Providing an explanation for the rationale of respondents for making what appears to be conflicting judgements regarding Unley Road's safety, particularly with regard to footpath safety versus road safety would be speculative. However, one could surmise that visitors as pedestrians may be more aware of problems in crossing or travelling on Unley Road than traders and householders who may have accessed the Unley Road area by car and may plan their trip so that they do not have to cross Unley Road.

With Unley Road, there appears to be a dichotomy between perceptions of footpath safety as opposed to safety for road users and crossing pedestrians. This may be due to the measure of protection provided by parked vehicles along Unley Road, but it does not explain why traders and householders do not concur with the visitor's rating of this issue.

The aggregate findings suggest that apart from the issue of traffic congestion, none of the issues appeared to be of severe concern if one takes a score of 3 to represent a neutral value. However, by the same token, if a score of 5 in issues 5-7 (see table 5) represents an ideal, risk free road environment, then it would seem that respondents were far from unanimous in perceiving Unley Road to be a "safe" road environment.

Table 5Community perceptions of safety issues affecting Unley Road
(Source: Allan (2000))

| SAFETY ISSUE* | | | VISITORS | TRADERS | HOUSEHOLDERS | |
|------------------------|----------|----|----------|---------|--------------|-----|
| Number of respondents> | | | 188 | 111 | 210 | |
| 1. | Severity | of | traffic | 4.0 | 4.1 | 4.0 |

| | congestion | | | |
|----|--|-----|-----|-----|
| | (5=bad<>1=good) | | | |
| 2. | Traffic speed (5=high<>1=low) | 3.1 | 3.4 | 3.2 |
| 3. | Traffic volume | 3.7 | 3.4 | 3.6 |
| 4. | (5=high<>1=low) % of Trucks in traffic flow | 2.9 | 3.5 | 3.4 |
| 5. | (5=high<>1=low) Safety for road users | 2.7 | 3.7 | 3.4 |
| 6. | (5=high<>1=low) Safety of footpath for | 3.5 | 2.6 | 2.6 |
| | pedestrians (5=high<>1=low) | | | |
| 7. | Safety of pedestrians crossing | 2.8 | 3.7 | 3.4 |
| | (5=high<>1=low) | | | |

*Likert scale that applies to each safety issue: [LOW <54321>HIGH]

Community views on improving the Unley Road environment

All three questionnaire surveys sought the views of respondents regarding specific actions that could improve Unley Road. The visitor survey presented this issue to visitors as an openended question. However, the trader and householder postal questionnaire surveys provided an appendix with suggested actions that were numbered so that respondents had the choice of either treating it as an open-ended question, or alternatively, they could simply note the numbers of the listed actions that they agreed with. The actions were not ranked in order of priority for each particular action mentioned by a respondent, although the order of mention could have been used as a rough proxy in this regard. The data from the postal questionnaire surveys lent themselves to quantitative analysis and this is detailed in table 6. It should be noted, however, that most respondents provided anecdotal comments they may not have lent themselves to the style of analysis presented in table 6.

In terms of traffic related measures, the most popular measures to improve Unley Road were: road widening (20.9%); reducing the speed limit to 50km/h (18.4%); more right turn access to local streets on Unley Road (18.1%); improving cycling access along local streets (13.4%); a pedestrian bridge (13.4%); and discouraging through traffic (11.5%). There was negligible community support for heavy engineering solutions such as making Unley Road into a 6 lane arterial road, increasing the speed limit to 70km/h, or constructing grade separated intersections. Interestingly, although there was strong support for a 50km/h speed limit, this was much weaker for a 40km/h limit (5.3%). However, aggregating support for lower speed limits (23.7%) indicates that this is the single action with most support from the community. Traders were generally less enthusiastic for change than householders, although their preferences for improvements closely mirrored the general pattern of actions supported by householders, albeit to a lesser extent. The only action that both traders and householders were unanimous in agreement for was having a single lane in each direction (8.1%). Traders showed no support at all for actions that could hurt passing trade such as increasing the movement capacity of Unley Road.

Actions related to parking produced some interesting contrasts between the traders and residents. For example, householders (35.2%) overwhelmingly favoured parking bans on Unley Road, whereas traders did not (8.1%). Clearly parking seems to be the driving issue for traders, particularly compared to traffic and the environment. The traders, when compared with householders, focused to a much greater extent on the need for parking with more capacity (31.5% versus 19.5%) and more convenience (27% versus 9.5%). Parking as an issue may be of critical importance for traders, but for householders, it is not perceived to be anywhere nearly as critical.

With regard to environment related issues, a strong difference in the strength of preferences emerges again between traders and householders. While 43.8% of householders favoured more trees along Unley Road, this proposed action attracted only modest support from traders (9.7%). Householders (40.5%) strongly favoured quality redevelopment of frontages sympathetic to the character of heritage buildings along Unley Road, whilst traders were more cautious on this action (27.9%). Both traders and householders appeared to be equally supportive (at around 20%) of more modest environmental improvements such as a coordinated building paint scheme and widened footpaths with street art.

| Table 6 | Community views on actions necessary to improve Unley Road |
|---------|--|
| | (Source: Allan (2000)) |

| ACTIONS TO IMPROVE UNLEY ROAD | Traders | Householders | TOTAL |
|---|-----------|--------------|-----------|
| | % (n=111) | % (n=210) | % (n=321) |
| TRAFFIC RELATED | | | |
| 1. Widen Unley Road | 17.1 | 22.9 | 20.9 |
| 2. Reduce speed limit to 50km/h | 16.2 | 19.5 | 18.4 |
| 3. Have more right turn access to local streets on Unley Road | 12.6 | 21.0 | 18.1 |
| 4. Improve cycling access to Unley Road shops along local streets | 9.9 | 15.2 | 13.4 |
| 5. Have a pedestrian bridge across Unley Road | 9.0 | 15.7 | 13.4 |
| 6. Discourage through traffic from using Unley Road | 8.1 | 13.3 | 11.5 |
| 7. Build an arterial road bypass to take through traffic off Unley Road | 2.7 | 12.9 | 9.3 |
| 8. Have only one lane in each direction | 8.1 | 8.1 | 8.1 |
| 9. Remove cycling lanes in favour of a painted refuge median | 9.9 | 6.2 | 7.5 |
| 10. Build an overpass at the Greenhill Rd/Unley Rd intersection | 4.5 | 5.7 | 5.3 |
| 11. Reduce speed limit to 40km/h | 5.4 | 5.2 | 5.3 |
| 12. Build a tunnel under Unley Rd to take through traffic | 0 | 5.7 | 3.7 |
| 13. Have a one-way road system | 2.7 | 2.9 | 2.8 |
| 14. Remove traffic lights from Unley Rd & close local road access to | 2.7 | 2.4 | 2.5 |
| Unley Rd | | | |
| 15. Make Unley Rd into a 6 lane arterial road | 0.9 | 2.4 | 1.9 |
| 16. Increase speed limit to 70km/h | 0 | 1.9 | 1.2 |
| PARKING RELATED | | | |
| 1. Ban parking on Unley Rd | 8.1 | 35.2 | 25.9 |
| 2. More parking capacity | 31.5 | 19.5 | 23.3 |
| 3. More convenient parking | 27.0 | 9.5 | 15.6 |
| 4. More undercover parking | 16.2 | 13.8 | 14.6 |
| 5. Better signposting for parking and facilities | 23.4 | 5.2 | 11.5 |
| 6. Longer parking limits | 9.9 | 2.9 | 5.3 |
| 7. Shorter parking limits | 1.8 | 3.3 | 2.8 |
| ENVIRONMENT RELATED | | | |
| 1. Plant more trees along Unley Road | 9.7 | 43.8 | 38.3 |
| 2. Remove unattractive buildings and encourage high quality | 27.9 | 40.5 | 36.1 |
| redevelopment sympathetic to Unley Road's heritage buildings | | | |
| 3. Make the buildings more attractive with a coordinated paint scheme | 20.2 | 20.5 | 20.6 |
| 4. Widen the footpaths and landscape them; have street art | 17.1 | 21.9 | 20.2 |

The way forward-suggested recommendations

Transport SA, the state road authority with primary responsibility for Unley Road has plans to remove Unley Road's ugly utility poles, placing services underground. In addition to these plans, there is currently a community consultation process under way that Transport SA is coordinating which involves all major stakeholders to ensure that there is strong community input finding ways to improve Unley Road. While Unley Road does not have a bad safety record with regard to fatal traffic accidents, it is potentially an unsafe road, with much anecdotal evidence (although not explored here), to suggest that Unley Road could be improved both for road users and its visual amenity. Moreover, the extent of illegal pedestrian crossing activity highlighted in this research suggests that there is a very high accident risk to pedestrians on Unley Road.

There is strong community awareness of many of Unley Road's obvious deficiencies, but at the same time, it does not appear that the community wants the nature of the road to be radically transformed into a high capacity, limited access high speed arterial road. Safety needs to be improved for pedestrians in particular, since this research has demonstrated very high levels of illegal crossings by pedestrians which poses an unacceptably high accident risk. Traders in particular seem wary of solutions that will remove through traffic and on-street parking from Unley Road with tunnels, by-passes or flyovers. Householders appear to strongly support the redevelopment of building frontages that detract from the character of the street and they strongly desire a softer more landscaped appearance through the use of trees. However, trees can cause problems for road safety, especially within the narrow confines of Unley Road, where sighting distances are already limited and the speed limit is a rather high 60km/h. Given that there is community support for a lower speed limit and very strong community support for environmental improvements, safety upgrading along Unley Road could proceed on the primary premise of environmental improvements, while road safety, parking and better crossing opportunities would be presented as complementary concerns. Because Unley Road is critical to the livelihood of over 350 businesses, it is essential that whatever might be proposed for Unley Road has the support of the traders.

Specific actions to improve Unley Road in the anecdotal comments in the survey findings tended to emphasise the problems caused by parking on Unley Road, the cycle lanes, right turning vehicles and the unease for pedestrians crossing. Notwithstanding these viewpoints, however, detailed engineering and urban design investigations are needed to evaluate the range of possibilities, but these can be optimised with community consultation input. The surveys that were completed for Unley Road were a useful mechanism for gauging community opinion regarding how Unley Road can be improved, both in terms of amenity and safety.

Conclusions

This research discussed in this paper suggests that in improving main street environments, questionnaire surveys of key groups in the community (traders, visitors and shoppers), can have enormous value. A possible caution in interpreting the results of this research is that it has not specifically sought the views of motorists who use Unley Road as a through traffic route. To a large extent, the improvement of safety of the Unley Road environment requires a detailed road engineering and urban design response, but this style of community consultation can indicate to the experts the broad thrust of what the community desires with this type of main street environment. Interestingly, despite the obvious traffic hazards posed by Unley Road's environs, the survey findings of community attitudes suggest that the people who visit, live and work along Unley Road still want the essential character of the street to remain. Notwithstanding this, the community does not seem to be averse to detailed amenity and traffic safety improvements being initiated.

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