

# WALKING TO SCHOOL FOR BETTER HEALTH AND SAFETY

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## ABSTRACT

Leichhardt Council, in partnership with the Health Promotion Unit of Central Sydney Area Health Services, piloted Walk to School (WTS) project with the school community of Forest Lodge Public School, an inner-city primary school. The project sought to focus the attention of Council, local health agencies and the school community on the need for managing travel to school through a whole-of-school approach and the delivery of a coordinated, integrated package of measures designed to lead to a safer and healthier community. More specifically, the project aimed to raise awareness about the benefits of walking and increase the number of primary school children being walked to and from school instead of being driven.

A series of personal encounters and newsletters were the key strategies used to reach parents and teachers, while classroom based activities, reinforced by incentives, were the strategies used to raise students' awareness. Engineering and enforcement strategies were also critical to the general project outcomes. The development and adoption of a school travel policy ensured a continued emphasis on travel management by one of the largest trip generators in the area.

The Kindergarten to Year 6 (K-Y6) student population at Forest Lodge Public consisted of 234 students. More than 80% of them lived within 1km from the school and therefore within walking distance. However, at least 47 % were driven to school and a further 15% travelled by bus. A student travel survey, conducted by classroom teachers across all grades, revealed a significant suppressed demand for walking and cycling. Travel data collected over a four-week period demonstrated an overall 3.4% reduction in car trips. The classes with the largest (61%) percentage of students whose journey to school was by car experienced the largest travel mode shift (14% reduction).

This pilot project was successful in focusing the school community's attention on the impacts of traffic and encouraging it to take responsibility for managing school travel so as to reduce the adverse effects on their children's health and safety. To a lesser extent, it was successful in demonstrating that it is possible to modify parent and student travel behaviour, and identified some strategies that could lead to even greater change. On the strength of the outcomes, Leichhardt Council has extended the project into a 5-year program. The pilot project was awarded the national Kellogg Heart Foundation Award in 2001.

There is a dearth of data on school travel in Australia. Therefore, it is not surprising that the 'Walk to School' pilot project generated much interest in NSW and other Australian states. Because Australia is lagging behind the rest of the world in its recognition of the impact of transport to other key social indicators, it is not surprising that this pilot project has provided the stimulus for similar programs such as the "walking bus" recently trialed by PlanningNSW.

This paper contextualises the methodology of the project within a travel management model, provides a brief outline of the strategies implemented and summarises the outcomes of the project.

## BACKGROUND

Australia is lagging behind in its recognition of the extensive links between transport, environment and health (Mason, 2000; Moodie and Borthwick, 2000). European countries, such as the UK and The Netherlands, have developed national policies that have given rise to a number of substantial government and non-government programs to curb the use of the private motor vehicles and encourage more walking and cycling (DETR, 1999; Davis, 1996; INPHORMM, 1998). In 1999, ministers responsible for health, environment and transport from 54 countries adopted the World Health Organisation (WHO Europe) Charter on Transport, Environment and Health following the findings of a review of evidence of health risks from motorised transport. This landmark document identifies transport policy and practice as a social determinant of health and health equality (WHO 1999; Mason, 2000).

The document recognises that health arguments need to be central to the debate about the continuing expansion of the motor vehicle travel and emphasises the inter-relationship of transport, land-use planning and health issues (Mason 2000). In Australia, health professionals are beginning to make these links at the local area level (CSAHS 2001). Planners too are recognising the urgent need for planning and building guidelines that form stronger links between transport and land use to enable the development and design of communities which enhance quality of life and place (Speidel, 2002).

Clear connections have also been made between walking and cycling friendly communities and economic viability (CAST 2000; ERA 1998; VNG, 2000). Although this aspect did not fall in the scope of the pilot project discussed, it is worthy of investigation in future projects, for as the link between transport and health is more apparent at the local level (Mason 2000), so too are the economic benefits of reducing car travel.

In Australia, the areas of greatest attention have been road traffic accidents and noise and air pollution. Health and ecological impacts are only now seriously drawing attention (Moodie and Borthwick 2000).

The British Medical Association's report, *Road transport and health* (in Mason 2000), gives a composite picture of the health impacts of transport. According to Mason (2000), this picture has been obscured by the separate consideration of the impact of health issues, such as traffic accident deaths and injuries, the environment hazards of motor vehicle pollution, and health risks of a sedentary lifestyle. Mason is critical of measures engaged thus far to reduce these adverse effects as they have tended to be implemented in isolation rather than as part of an improved, integrated transport policy. Mason advocates a composite ecological approach that looks at both health promoting and health damaging aspects of transport. This approach has been widely adopted in the UK where it has been promoted by government policy.

The *Walk Safely to School* pilot project was inspired by this approach, as implemented by a number of local authorities in the UK and promoted by Sustrans which recognises that, now days, most children are driven to school even though they could walk.

## INTRODUCTION

School journeys contribute substantially to peak hour traffic. UK studies indicate that almost 30% of school journeys to school were made by car in 1996 (DETR 1999). However, data on journeys to school is not systematically collected in Australia. Some states do extensive travel surveys as part of Safer Routes to School programs, the information is never collated. Perhaps this indicates the low priority given to school travel management at the policy level, notwithstanding the recognised environmental, social and health impacts of the practice of driving children to school. This practice not only deprives children of the opportunity to undertake regular, physical activity that will lead to a long-term healthy habit, it also deprives them of the opportunity to learn fundamental pedestrian safety practice at a critical time in their development, when they can be supervised by a parent/carer.

The reasons why parents drive their children to school are varied. However, many parents drive their children because they perceive roads to be dangerous, which, ironically, leads to more congestion and its corollary effects. This health-damaging cycle is being successfully turned around into a health-promoting cycle in the UK through projects such as Sustran's "Safe Routes to School"

In the UK, the government has encouraged the application of the Travel Demand Management (TDM) model, introduced in the 1970's. This model has been used by a number of governments, enterprises and transport operators (Mason 2000; DETR 1999). It developed as a result of a more multi-disciplinary social approach and a stronger emphasis on people's needs and how these can be satisfied at the local level.

Leichhardt Council's commitment to ecological sustainability and the limitations presented by the historical and geographic characteristics of the area, have led to a recognition and appreciation for integrated transport policies that address some of Council's key concerns: traffic congestion, (air and noise) pollution and the safety and health of the local community. The Road Safety Officer, located in the in the Strategic Environmental Planning Unit, was in a position to apply the TDM approach to address three key issues facing primary school aged children in the local community (Leichhardt Council, 2000):

1. The level of injury sustained on the road by young children. Pedestrians represent 25% of all people killed or injured in the Leichhardt Council area.
2. The pronounced reduction of daily physical activity in primary school aged children linked to an increasing level of cardiovascular disease and other inactivity related diseases. Obesity of primary school aged children has tripled in Australia in the decade 1985-1995.
3. The increasing pollution levels and degradation of the natural environment as a result of increased motorised traffic.

### **Pedestrian safety in the Leichhardt Council area**

Pedestrian safety in Leichhardt is a key road safety concern. Although there has been a decrease in the number of pedestrian casualties in the Leichhardt LGA since 1998, from 62 (=25 % of all casualties) to 49 (19% of all

casualties) in 2000, local pedestrian casualties continue to be over represented when compared to the Sydney Region and the State (where they represent 15% and 11% of all casualties respectively). In the three year period between 1997 – 1999 there was a total of 163 pedestrians injured or killed on roads in the Leichhardt Council area, of which more than 8% were primary school aged children.

There are 22 primary schools in the Leichhardt Council area. Schools experiencing road safety problems tend to approach Council. The most common problems identified by the school relate to parking behaviour, traffic congestion, volume of through traffic and speeding. More often than not, the schools expect Council to come up with the solutions. However, it is clear that the problems experienced at the local level, by these school communities, are manifestations of a complex interface between people and environment that requires a more sophisticated and multifaceted response that addresses the fundamental causes. More importantly, it requires a strong collaborative approach and willingness on the part of the school community, Council and other stakeholders, to share responsibility for the interdependent problems and their solutions. In brief, it calls for what Mason refers to as a ‘composite ecological approach’ (Mason 2000 a) inherent in the TDM model, which places emphasis on people, places and mobility rather than moving cars.

### **Council’s commitment to the environment**

Leichhardt Council is strongly committed to achieving environmental outcomes. For nearly 2 decades it has been recognised as a local government leader in this field. Leichhardt Council continues to pursue a strong environmental agenda through such policies as the Environment Strategy and the Integrated Transport Strategy, and participation in Agenda 21 projects and other international projects, such as the Cities for Climate Protection Program, which requires participating Councils to reduce local levels of gas emissions.

## **METHODOLOGY**

### **Project objectives and strategies**

The project objectives were developed in partnership with the key stakeholders before lodging a funding submission with the NSW Department of Sport and Recreation. The objectives of the project were to:

- increase the number of children walking to school on a regular basis;
- reduce the number of short car trips;
- reduce traffic congestion around the school; and
- improve road safety around the school.

The WTS project adopted a comprehensive whole-of-school approach to health promotion and road safety, involving the school Principal, staff and students, as well as parents, Council, businesses and health promotion professionals. Planning commenced in late 2000 and implementation at the commencement of the 2001 school year. The project culminated on the last day of school in Term 1 on ‘Walk Safely to School Day’, 6 April 2001.

In addition to conducting a road safety audit, a series of workshops/meetings and weekly newsletters were developed to sensitise parents and teachers to the need to reduce the number of short car trips made to school. This was done in conjunction with classroom based activities that explored the benefits of walking. These comprised: a poster competition to promote the inaugural “Walk Safely to School Day”, a banner painting competition exploring pedestrian safety issues and the benefits of walking, a general school assembly dedicated to WTS, and a mapping exercise for each class to illustrate the routes walked to school. A media strategy was engaged to raise the project profile and support the school community’s efforts.

Travel surveys, travel diaries and a series of focus groups conducted with students, parents and teachers were key strategies used to ascertain travel patterns and collect quantitative and qualitative data for the project evaluation.

### **Project Evaluation**

More than 40% of the project budget was devoted to its evaluation. The Road Safety Officer, the Physical Activity Team and researchers in the Central Sydney Area Health Promotion Unit, developed an evaluation plan in the initial phase of development of the project. Two researchers/facilitators were engaged to undertake the target group evaluation. Both had extensive experience using qualitative research methods in various settings. The researchers/facilitators were selected independent of the WTS Project and were given comprehensive background material on the project, as well as a project briefing session and introduction to the key people involved.

The aim of the WTS Target Group Evaluation was to look at the following issues through interviews and focus groups with individuals and groups involved in the WTS Project:

- Extent of the support for the WTS (WTS) concept and WTS Project;

- Degree of success of the WTS Project implementation;
- Exploration of the barriers to walking and what needs to happen to change travel behaviour;
- Extent of support for the Walking Bus;
- Barriers to the Walking Bus and possible solutions;
- Impact of the WTS Project on travel options; and
- Feedback on project activities.

The WTS target group evaluation involved conducting semi-structured focus group discussions and one-on-one interviews using a pre-prepared interview schedule of questions. A schedule of interview questions was developed for each group in consultation with the WTS Project Team and the Target Group Evaluation Project researchers

Two individual interviews were conducted with the school Principal and the P&C President. In addition, five focus groups were conducted with a group of teachers, Year 5 & 6 students, Year 3 & 4 students, a walking parent group, and a non-walking parent group.

The evaluation process used for this project has been used as a ‘best practice’ guide by the Department of Local Government (Patterson 2002).

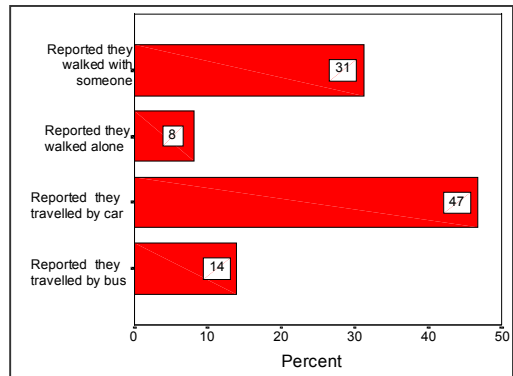
## RESULTS

### Findings from student travel surveys

Travel Surveys were completed in Week 3 of the first school term, at the commencement of the implementation phase of the project. They were used to capture baseline information on the common mode of travel, as reported by the students, before they were exposed to any information disseminated by the project about travel to school.

The surveys were administered to all students from K-6. Children in Years 2-6 completed the form as a class activity while children in K-1 were assisted by their parents at home. There was a 78% response rate. Of the respondents, 49% were aged between 8-9 years, and 66% of students had no siblings at the school.

**Figure 1: Students’ Self-Reported Travel mode to Forest Lodge Public School**

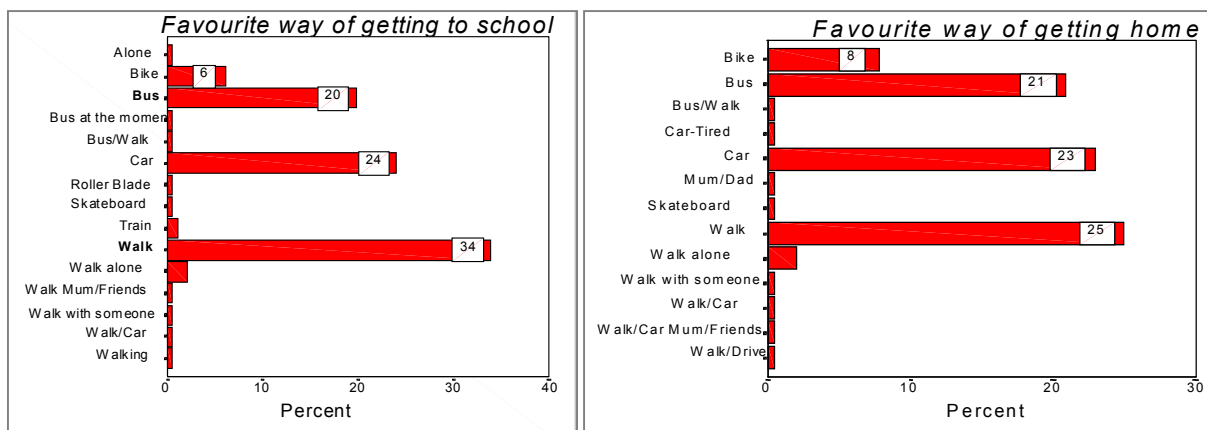


Results from the travel survey indicated that more than 80% of students at Forest Lodge Public School live within 1km of the school and therefore are in walking distance. However, at least 47% reported being driven to school and a further 14% reported travelling by bus (see Figure 1). Based on the self-reported travel mode of students it is clear that such a project could, potentially, bring up to a 41% shift in travel mode if all those students who live within 1km of the school and currently do not walk were to do so.

There was no notable variation in the choice of travel mode reported from one day to the next over the course of the school week. However there were slight variations between morning and afternoon journeys (a 1.2% decrease in children walking in the afternoon, a 0.9% reduction in car use and a 2.5% increase in bus travel in the afternoon).

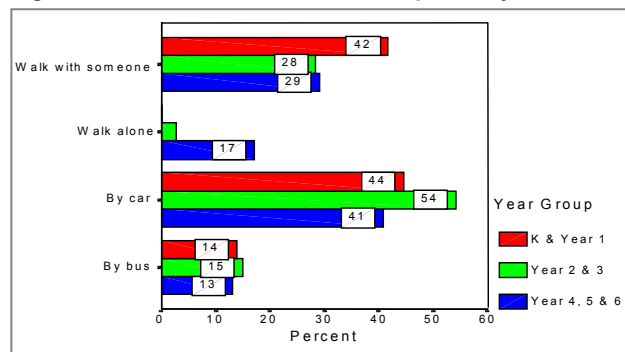
- Of those walking about 25% walk alone, 40% walk with one other person, 35% with a parent;
- 57% of children reported that they go straight home from school. Others either attend after-school care or stop off elsewhere on the way.

**Figure 2 – Preferred Mode of Travel**



The most significant finding from the survey relates to the preferred travel mode reported by students. The survey revealed a suppressed demand for walking, cycling, and bus travel (see Figure 2). Only 24% of respondents favoured the car, however more than 47% reported being driven to school. More than 41% of respondents would prefer to walk (alone or with someone) to school in the morning (and 32% in the afternoon). About 22% would prefer to go home by car, 21% by bus and another 8% by bike. If children could choose how they get to school, instead of the parents, one would expect 23% less children travelling to school by car. At Forest Lodge Public School this would equate to 54 students shifting travel mode and a reduction of more than 100 car trips.

**Figure 3: Mode of travel to school as reported by students**



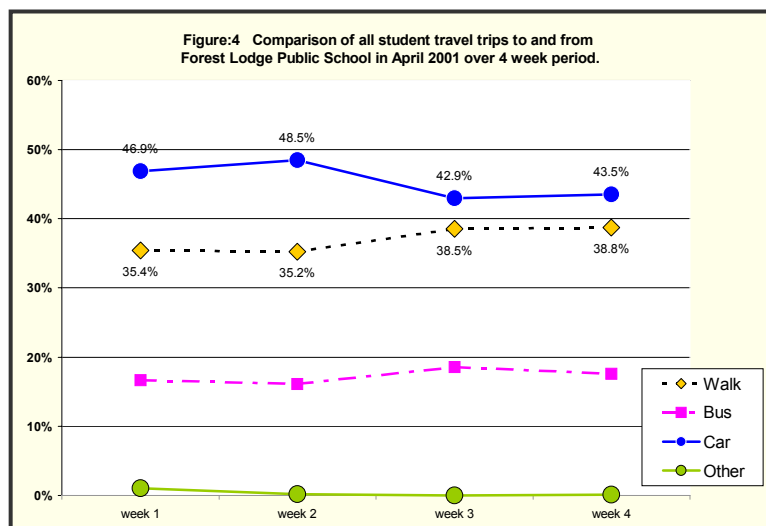
The travel survey also revealed a disturbing trend. As many as 42% of children in kindergarten and Year 1 are walked to and from school, however as children get older (in Years 2 and 3) they tended to be mostly driven (54%), see Figure 3.

It is not until students are in the later school years (Years 5& 6) that some (29%) return to walking, many (17%) unsupervised. However, most (41%) continue to be driven, leaving us to question if or when they might get road safety experience in those developmental years.

#### Monitoring student travel – outcomes of travel diaries

For four weeks (Week 7 – Week 10 of the first school term), Council provided each class (K-6) with an attractive weekly diary that was used by all 234 students to record their mode of travel to and from school each day for the final 4 weeks of the project. These weekly diaries were poster size (A1) and pinned to classroom doors. Unlike the Travel Survey conducted in Week 3, which examined the students' self-reported travel behaviour, the Travel Diaries provided information on actual mode of travel.

Daily travel data collected from students over this four-week period demonstrated an overall increase of 3% of students walking and a 3.4% reduction in the number of children driven to school. The graph in Figure 4 illustrates the small, but gradual and consistent change in actual travel mode achieved over this brief period. The results were encouraging as the desired direction of change was achieved across all, bar one, of the nine classes at Forest Lodge Public School. One class (Year 2) indicated a 14% reduction in the number of children driven to school in that period.



Of interest is the difference between the students' reported mode of travel to school at the commencement of the project and the actual mode of travel as measured by the diaries four weeks later. In the Travel Survey 39% of respondents said they usually walked to school, while diaries recording travel behaviour in Week 7 indicates 4.6% fewer students actually walking. This might suggest some positive bias in reporting worthy of further investigation. It also suggests that self-reporting is not a reliable method to ascertain actual student travel behaviour.

The results achieved over the four-week period are below the New Zealand, UK and other Australian projects, which have reported as much as a 30% reduction in car trips (EECA 2001, Ampt 1999; INPHORMM 1998, Davis 1996). However, this was a pilot project, and the monitoring period was of limited duration and provides only preliminary results. Nevertheless, these results are sufficient to demonstrate a desired trend that is likely to be improved once results of the road audit and the school travel policy are firmly in place. This trend can be

sustained and improved if, with the support of Council and health authorities, the school community's focus can be maintained on managing travel to and from school.

### **Outcomes of focus groups and interviews**

The overwhelming response to the WTS Project from all the participants in the evaluation process was that it was 'a great idea'. Parents and school staff were keen to look at how the benefits of the project could be consolidated and/or extended. Students were happy to repeat the project and had really enjoyed all the activities conducted during the project.

Several major themes emerged during the evaluation process: Response to the WTS concept, working in the school environment, communicating with young people, changing parents' travel behaviour, the walking bus idea and the future of the project. These themes are detailed in the project report available on Council's website.

While there were many valuable suggestions about how the WTS Project could be improved and some criticism of the project implementation it is important to note that the initial response at the majority of focus groups and interviews was extremely positive.

The majority of participants were very enthusiastic about the WTS concept and the WTS Project and the following comments were standard responses at the beginning of the interviews and focus groups.

*"It's a great thing to promote"* (parent)

*"All those things, like the travel diary and the WTS Day and the tattoos and the recognition for the kids, it certainly got the message across"* (school principal)

*"I liked to walk for the exercise and fresh air"* (student)

*"It's great, I walked to school as a kid, the kids love it"* (parent)

*"The kids loved it...it was great for the kids, wonderful, but it was a lot of hard work"* (teacher)

The focus groups and interviews covered many aspects of the project, including all the strategies employed. Having engaged independent consultants to carry out the interviews and focus groups provided candid responses which have proven very useful in the extension of the program.

In relation to reported changes in travel behaviour, it seems that all students participating in the focus group (N=5) that were normally driven to school had put significant pressure on their parents to walk during the course of the WTS Project. There was a general perception that some people had started walking to school as a result of the project and that 'heaps' of people had walked to school on WTS Day.

All the students who participated in the focus-group discussions (N= 11) had taken on the positive messages about walking, particularly in relation to 'exercise' and 'fresh air' and 'using less petrol'. However, the younger children seemed to have better recall of these benefits than their older peers.

'Walking with friends' was one of the positives identified by most young people. This emerged as a potential conflict of interest between parents and children where the young people saw 'meeting friends' as one of the major benefits of walking while some parents worried that meeting friends may be a distraction to safe walking.

Six parents were interviewed, four who customarily walked and two who drove. All the parents interviewed were very committed to and positive about the concept of walking to school and supportive of the various activities undertaken during the WTS Project. Most parents felt that there had been an increase in the number of people walking to school as a result of the project. All the parents interviewed were more conscious of modes of travel to and from school and most said that they tried to walk to school more regularly as a result of the project.

Two parents interviewed had completely changed their travel mode from driving to walking as a direct result of the WTS Project and pressure from their children to walk. Both these parents and their partners were working and they had to make particular changes to adapt their lives to enable them to walk their children to and from school. Both parents interviewed were very happy with the new walking travel mode and thought that it was a much healthier and happier approach to travel to school. However, they acknowledged that it did require a conscious effort to explore their travel options and some flexibility in working conditions.

*"I had a lot of pressure from my child to walk, I had to rearrange things, leave work five minutes early to make it over to the school on time..."*

*"We had a system where I dropped them off by car and my partner picked them up by car... but they wanted to walk and I got more flexibility in my job so now they walk to and from school every day, except Mondays when they still have to get picked up by car."*

Both parent groups identified pedestrian safety in the local area as the main barrier to walking to school. Most parents felt that if the WTS Project wanted to encourage people to walk to school then safety issues needed to be resolved first.

*“If you want us to walk to school; then you need to make it safe.”*

While it was felt that more people may well be walking as a result of the project, participants felt the current traffic situation was still dangerous with little protection for pedestrians. The ongoing safety concerns of parents are set out in the detailed interview reports but included obstruction to footpaths, speed limits, timing of traffic lights and the need for safer pedestrian crossings.

*“I thought it was worthwhile, I’d do it again.”*

The Principal and President of the P&C also felt that more parents were walking, at least some of the time, as a result of the project and that parents were initiating more discussion about travel modes to school amongst themselves.

*“People are more aware of walking to school and they feel a bit guilty if they’re not, they are constantly apologising – ‘I had to drive today because ...’ ”*

The Principal felt that the WTS Project had changed people’s behaviours around the school and that there was less traffic around the school.

*“The entrances are not congested now”...parents are using the drop off and pick up zones, and less parents are parking in the school grounds.” “There’s generally less chaos now.”*

All the participants interviewed were enthusiastic about continuing or repeating the WTS Project in some form. Everyone interviewed had seen the WTS Project as a positive experience.

### **Overall project outcomes**

The outcomes from the focus groups suggest that the project was successful in focusing the school community’s attention on the impact of traffic and of sharing responsibility for reducing its adverse effects on children’s health and safety as well as the general wellbeing of the community. Although parents expressed some reservations in the initial stages of the project, this soon changed to strong support. Parents were particularly supportive when they realised that Council officers were committed to the project and that Council had begun to address some of the road safety problems identified by parents who participated in the road audit.

The parents assisted the Road Safety Officer in identifying road safety problems that discourage parents from walking their children to school. Footpath obstructions, speeding traffic, and poor crossing facilities were some of the key concerns. Many of the road safety problems identified were referred to the responsible authority, the RTA. Some of these were remedied before the end of the pilot project and others were under investigation.

A mapping exercise undertaken by students to illustrate the routes they used to walk to school served to assist the Works and Services division of Council to review priorities of the Footpath Improvement Program which led to the installation of kerb ramps along those routes.

Lack of safe crossing facilities and footpath obstructions, particularly due to illegally parked vehicles, were found to be a major obstacle to safe access on key walking routes to the school. This was the main reason why one of the more creative strategies, the ‘Walking Bus’, was not implemented as part of the pilot project.

In response to this, an enforcement/education campaign was also developed and implemented by the RSO and Council’s Compliance section. Brochures targeting parents and residents were produced and distributed via the school and direct mailing to households and businesses around the school and along the key travel routes. Drivers were informed of the safety issues and warned that Council enforcement officers would be patrolling the area and issuing fines to motorists who infringed the law. This was followed by vigorous enforcement of the area.

As a result of the WTS pilot project, Forest Lodge Public School adopted a travel policy that encourages parents to walk their children to school and provides healthier and safer alternatives for when they do drive. The school promotes its policy on a regular basis through its newsletters and as part of the recruitment drives and orientation activities each new school year.

Results achieved in the pilot project also indicate that positive outcomes can be achieved with limited resources.

The project generated much interest and received substantial press coverage in local papers and the Sydney Morning Herald. A number of other councils, health workers and road safety practitioners have demonstrated

interest in initiating similar projects. The Warren Centre, the Premier's Department and PlanningNSW have demonstrated interest in the WTS Project. In fact, in 2002 PlanningNSW initiated a 2-year "Pathways to Schools" program.

The results of the target group evaluation indicate that the school community can be encouraged to take greater responsibility for improving the safety of children around schools and promoting safer and healthier travel to school. *The full results are detailed in the "Walk to School Pilot Project Report" on Council's website: [www.mycommunity.com.au/leichhardt](http://www.mycommunity.com.au/leichhardt)*

The WTS pilot project has been recognised as a model project for improving health outcomes. It won both the State and National Heart Foundation Kellogg Award for Local Government in 2001.

Currently, data on school journeys is not collected at the local government level. This is one of the first projects to do so. The results are used by Council's Road Safety Officer to tailor the Walk to School Program to each school and plan education campaigns to support the Walk to School Program. This data is also used by Council's Environmental Officers to calculate reductions in gas emissions as part of the Cities for Climate Protection Project, of which Council is a participant.

Leichhardt Council has since extended the program (over five years) to all local primary schools in order that road safety around schools can be addressed through a partnership arrangement that shares responsibility and addresses the fundamental causes of the adverse effects of transport at the local government level. The proposed program identifies and coordinates the engineering, educational and enforcement strategies that can be developed and implemented by Council and other stakeholders in order to achieve the best safety and environmental outcomes within the constraints of existing budgets, that eventually are also shown to lead to better health outcomes.

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