



Road Safety and Children's Crossings in Western Australia

A report prepared for the Walking
Committee by Praevia Ltd 2005



Background

- Report commissioned by Walking Committee in March 2005
- Completed in August 2005
- Focussed on warrant criteria and application process for children's crossings
- Considered aspects of road safety related to walking or cycling to and from school
- Made 14 recommendations to the Committee for consideration



Terms of Reference

- Threshold levels of the warrants for children's crossings and their appropriateness
- Number of Type A and B warrants issued to date
- Total number of applications (in 2004)
- Financial issues in relation to wardens
- Case studies of four schools to highlight/ review issues



Methodology

- Report used three elements for the research:
 - Desk top review of literature and statistics of road safety for pedestrians and child pedestrians
 - Site visits and review of actual children's crossings including case studies of metropolitan and a regional crossing site
 - Focus group interviews with parents to consider their views and attitudes in a preliminary review



Limitations of the research

- There are several limitations of the research:
 - Limited time to adequately review data and conduct interviews
 - Focus on existing crossings and not potential crossing sites
 - Small focus groups
 - Single review of crossing sites
 - Limited access to WA Police data for crossing application reviews



What did we find?

Part A: Literature and statistical findings:

- Limited information available on WA pedestrian and child pedestrian crash data
- Low incidence of crashes at warden controlled crossings
- Child pedestrian accidents usually occur between 4 and 6pm and more often involve males between 8 and 12
- Most crashes are mid-block and at unsupervised points, particularly with child running out onto road
- Between 1996 and 2004, 206 pedestrian fatalities recorded in WA, with 18 children – regional and remote included – but none at a warden controlled crossing!



Part A cont'd

- When recording road deaths, remember that for every death, there are between 10 and 15 serious injuries
- Children are more likely to suffer abdominal and leg injuries due to their height and weight compared to the vehicle
- Children often low report – meaning that only 68% will report the crash, for fear of “getting into trouble” and therefore numbers are underestimated
- Ability and perception of vehicle speed in children is limited due to head, cognitive ability, experience and understanding of distance/ speed relations to age 12 and perhaps beyond



Part A cont'd

- Education has limited success in road safety education in children
- Requires repetition and demonstration
- Understanding comes from experience
- Safe experience includes “bike ed”, walking school bus, supervised parent walks to and from school, knowledge of routes and understanding of road pedestrian rules
- Education is limited if vehicle drivers assume they “own the road”.
- Consideration of “Safe Routes to School” program as successful supplement to children’s crossings program



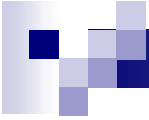
Part A cont'd

- School zones operation is limited and doesn't create a sense of responsibility in local drivers
- More than 50% of driver's fined for speeding in 40kmh school zones live locally
- Parents are driving their children to school in response to perceived danger in children walking to and from school – western world phenomenon
- Rise in childhood obesity can be construed from reduction in child cycling and walking activity
- School zones operational hours in South Australia are a useful model to consider for changes in Western Australia



Part A recommendations

- Further research to compare data across states and consider pedestrian crossing styles
- Planning for children's routes to schools must be considered more urgently than current planning allows by DET and local govt
- School zone operations – why limited to time and dates – need to operate longer and more consistently
- Zebra and mid-block crossings need to be considered to facilitate walking school buses, child pedestrians and safer pedestrian crossings generally

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- Driver education needs to focus on road access by vulnerable road users, including pedestrians and cyclists
 - Driver education (including license tests) needs to include reference to children's crossings in the book and tests
 - Double demerit point applying to school term commencement to reinforce driver behaviour improvements
 - Implementation of school zone operational hour changes – South Australia example



Part B: Warrant criteria

- Two types of children's crossings:
 - Type A – warrant criteria of 15,000 for primary schools, 25,000 for secondary schools with minimums
 - Type B – half the Type A warrant criteria
- Application by school to Traffic Warden State Management Unit in WA Police



Part B: Cont'd

- Conflict ratio calculated from product of through vehicles and child pedestrians/ cyclists in one hour period over a week on a sunny day to maximise opportunity
- Undertaken by Main Roads after application to TWSMU received.
- Applicant school must undertake preliminary surveys to support application
- Once completed referred to School Crossings and Road Safety Committee – Applications Committee



Part B: Cont'd

- SCRSC Applications membership: WA Police (Chair), MRWA, DET, WALGA
- Committee is cabinet appointed
- May invite representative from Perth Transit Authority if rail line in crossing vicinity
- Decisions then referred to Commissioner for Police and Commissioner for Main Roads for implementation
- Budget is not set on specific number of approvals – approve and it shall be implemented
- Difficulty in managing local govt resources for infrastructure



Part B: Cont'd

- TWSMU are not included in many pedestrian committees and working parties – underestimates their capacity to contribute
- WA Police representatives are not always informed of children's crossings
- DPI not included on SCRSC – again misses capacity to contribute to crossing decisions
- Information on future growth of area, school body or pedestrian activity is not considered, and often unknown to SCRSC at application assessment
- Need to develop better linkages



Part B Recommendations

- Inclusion of DPI on SCRSC is recommended
- Inclusion of TWSMU on other vulnerable road users is recommended in addition to WA Police
- Communication strategy required to develop better understanding of process of application, criteria and limitations
- DPI could assist schools in surveys and planning reports to demonstrate demand in applications, and to support parent body in developing strategies to increase child activity



Part B recommendations cont'd

- Warrant criteria for Type B should include process of reviewing future growth and demand estimations
- Training for WSB volunteers should be included in (or at least coordinated with) traffic warden training programs (at whose expense?)
- Public liability is an issue for Type B warrant offers and this could be addressed by better liaison between DET, DPI and the schools to ensure that more are able to take up the offer



Part C: Case Studies

- Stubbs Terrace, Shenton Park
- South West Hwy/ Udoc Rd, Harvey
- Troode Street, Munster
- Belgravia Street, Belmont
- Reviewed but not reported – Pinaster Parade, Ellenbrook and North Cottesloe WSB program



Part C: Stubbs Tce

- Inappropriate crossing type
- Sited next to railway station, common pedestrian route, high pedestrian traffic most of the day, peak with Shenton College students, 181,554 peak conflict ratio during review dates
- Needs an alternative crossing – zebra or mid-block
- Pedestrians often block traffic at peak times and cannot be controlled
- Elderly and disabled users of crossing site



Part C: SW Hwy/ Udoc Rd

- Does not meet warrant criteria
- Public pressure to get crossing in place
- Poorly placed site
- Did not meet conflict ratio at any time during review
- Pedestrians using it are primarily going to shops or petrol station, not to or from school
- Due process for crossings was disregarded and highlights example of need being outweighed by public pressure



Part C: Troode St

- Type B crossing at Catholic Primary School
- New crossing in 2005 with active parent body
- Numbers of pedestrians are increasing due to placement of crossing
- Training of volunteer wardens through TWSMU
- Located poorly at t-junction, and will need reviewing if upgraded to Type A
- Community driving crossing and actions



Part C: Belgravia St

- Problem crossing because despite very busy road, conflict ration was not met during review periods
- Pedestrians using crossing are primarily going to shops
- No other pedestrian phase at traffic lights on Gt Eastern Hwy or Belgravia St intersection
- Highlights need to install pedestrian phase at lights with Type B warden to assist young children to operate safely
- Crash at crossing in late 2004 with limited visibility with four lanes of traffic and one warden. Now has two wardens but at what cost?



Part C: Ellenbrook

- Increasing traffic along Pinaster Parade, with four schools in region and increased parent traffic
- Good pedestrian facilities in estate and in planning but poor levels of child walking
- Mortgage belt area with most parents working, increasing incidence of drop offs
- Gnangara Rd crossing is bridge, as did not reach conflict ratios for warden in 2003



Part C: North Cottesloe WSB

- Review was observation of operation only
- WSB route includes children's crossing so demonstrates effectiveness of both applications/ programs
- School is small and community close
- Many parents walking with children as well as WSB – safer road environment generally
- WSB example to demonstrate success for other areas



Part D: Focus Groups

- Two Groups:
 - Private primary school with Type B crossing
 - Public school with no crossing and no application history
- Primarily mothers, and all of children between 5 and 12 years of age



Part D: cont'd

- Low recognition of traffic wardens/ children's crossing programs when asked about "road safety for children"
- Education was noted as key
- Safe age to walk to school unassisted was (averaged) between 8 and 10 years
- Considered bullying, paedophiles, abduction, being hit by car as key safety concerns



Part D: cont'd

- Low levels of children walking or cycling in both groups with most being picked up and dropped off the majority of the time
- No mention of WSB, Safe Routes to School or Road Aware programs when responding to road safety programs available
- All suggested traffic wardens as important
- All suggested 40kmh zones needed
- All suggested educational programs needed
- All suggested TV advertising and promotion needed



Issues

- Is warrant criteria appropriate? Why do we count through traffic rather than gaps?
- What can be done about driver behaviour?
- Increasing pedestrian access to roads, especially for children, needs to be raised
- More communication between agencies