Cycle Infrastructure at Schools

Prepared for the NZ Cycling Conference

21st – 22nd September 2001

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Cycle Infrastructure at Schools

This paper outlines the process the Christchurch City Council has gone through and the outcomes we have arrived at, targeting the difficulties faced by children / student cyclists. It presents the consultative, information gathering process and the results albeit only programmed at this stage, that we hope to implement.

Introduction

Christchurch is a great place to live, work and cycle. Christchurch has 10,000 adult cycle commuters per day in the city and some 9000 children/student cyclists per day. The student numbers can be further broken down to 21% of 13 to 17 year olds and 35% of 10 to 11 year olds who chose to cycle to school. However these numbers have been declining since the late 70's.

The Christchurch City Council has made a commitment to both on road and off road cyclists to make "Christchurch the Most Cycle Friendly City" This includes making safe cycle access to and from schools a priority.

The Safe Cycling to School Project

Vision: To make the journey to and from school safer for children who wish to travel by bicycle.

This "project aims, through identifying problem spots and finding engineering solutions, to help children cycle safely and conveniently to school" This differs from the two existing cycle programmes 'Cycle Safe' and 'Safe Routes to Schools' in that it is focused on the physical environment for older children / student cyclists.

Goals of Safe Cycling to School

- To identify routes that children / student cyclists take to and from school
- To help cyclists identify any hazardous locations / problems encountered along their routes.
- To encourage more children/students to cycle.

Consultation and information Gathering

Victoria Lawson of the cycle planning Unit of Christchurch City Council has developed a comprehensive step by step process to obtain information from schools, students and teachers etc.. This enables us to gather good information on the children / student cyclists *(not their parents ideas and opinions)* of the problems they encounter while commuting to and from school.

From the information gathering process a lot of data comes in that can't be addressed with 'engineering solutions'. This is not the focus of the 'safe cycling to school project' or this presentation.

The Process - Overview

The full process is available, from the Cycle Planning Unit of the Christchurch City Council, which includes standard letters, forms, incentives, questionnaires etc.. as described below. It also has helpful suggestions based on issues and obstacles that were encountered dealing with the busy school environment. e.g. what to do if the school initially says no to taking part in the study, the 'best' way we found to contact staff etc..

1. The first step is to identify the school or area to be studied. This is initially based on highest bike shed cycle counts or where there is a grouping of schools with a known high volume of children / student cyclists. When an area is identified, it is termed a bubble. This 'bubble' could incorporate intersections, routes, mid block crossings etc..

2. Send a letter of introduction and briefing. Hopefully the school or cluster of schools within the 'bubble' wish to participate in the 'Safe Cycling To School Project' and the process can continue. This task may require follow up letters, calls and faxes.

3. Thank you for acceptance letter & follow up. This is a courtesy letter that also provides the opportunity to inform the school of what happens next.

4. A questionnaire (including map) is sent to the school, the number of questionnaires sent depend on the sample size agreed during step 3.

5. The option of class work is included here as an opportunity to be seen getting actively involved in the project process. Ideally you would include other Council staff, pedestrian advocate, engineers etc, to fully engage in the feedback dialogue.

6. Collation of Data received during steps 4 and 5 allows you to identify the top rating danger spots. This can be done by firstly combining the returned maps and secondly summarising the comments into issues or locations. This gives you the first picture of the size of the 'bubble' and any intersections, routes or specific stress points.

7. Neighborhood consultation can occur now you have a picture of the stress points that you have identified from the feedback. This will initially be a standard letter to the residents adjacent the targeted area.

8. The on site investigation comes next. This is done when you have the following data available. The feedback form the children / student cyclists, neighborhood responses and any crash data. The site visit should again include other Council staff, pedestrian advocate, engineers etc to observe actual cyclist and traffic, patterns and behaviors.

9. Now you can develop 'engineering solutions' for design, budget and programme approval.

10. Engineering and Education. During steps 3 to 8 you will obtain information that doesn't fit into the 'engineering solutions' category. This should be addressed to ensure a balanced approach to any situation that involves both human behavior and rules.

Results

The project is now at the stage where 'engineering solutions' can be applied to the environment where the children / student cyclists have identified problems. For the purpose of this presentation I have used the 'Burnside Bubble' project to show some examples of outcomes we believe will improve the cycling environment. It is important to note that pedestrians and motorists will also benefit from the modifications we have proposed. By designing cycle facilities that make cycle behavior more predictable, we believe conflicts will be reduced.

Intersection Treatment

Aorangi - Ilam

The problems identified include, difficult to see cars 5, Too fast / busy 4, inconsiderate / aggressive driving 4, too chaotic / confusing 4 and difficult to cross 2. The numbers relate to the number of times an issue was mentioned from the questionnaire.

This solution provides both on and off street options. From the site investigations a link was observed between the Park and Aorangi Road. This corner will have a red coloured surface and extend around the entrance to Aorangi Road to accentuate the presence of cyclists in this area. Parking will be removed from entry and exit areas of the cycle lane to improve cycle access and visibility to traffic. Cycle logos will be implemented at every stress point to reinforce the presence of cyclists. See figure 1 below

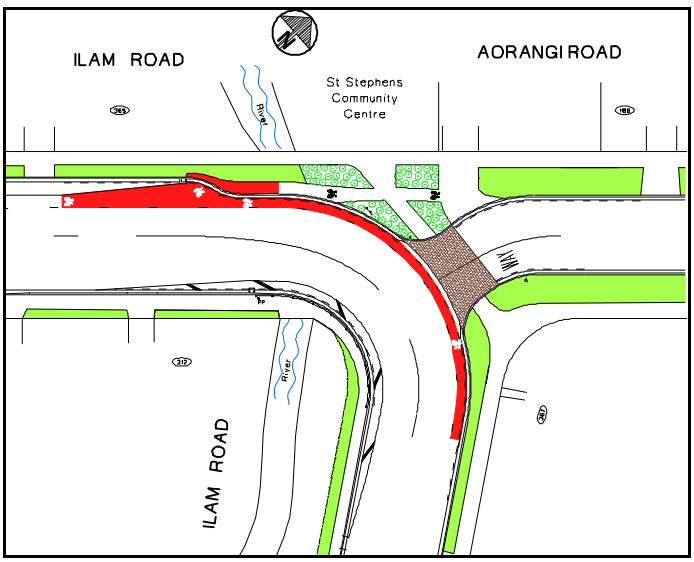

Figure 1 Aorangi - Ilam Intersection

Aorangi - Clyde

The problems identified include, difficult to see cars 8, difficult to cross 6, Too fast / busy 4 and inconsiderate / aggressive driving 3.

This solution again provides on and off street options. We are installing a 3m wide median island with a large holding area and convenient holding rails. This will concentrate crossing to one area and make pedestrians and cyclists more conspicuous to approaching traffic. Cycle logos are marked on the footpath at all locations where they can be expected to enter or exit the road. Holding rails are also provided at the kerb side for the convenience of cyclists. See figure 2 below

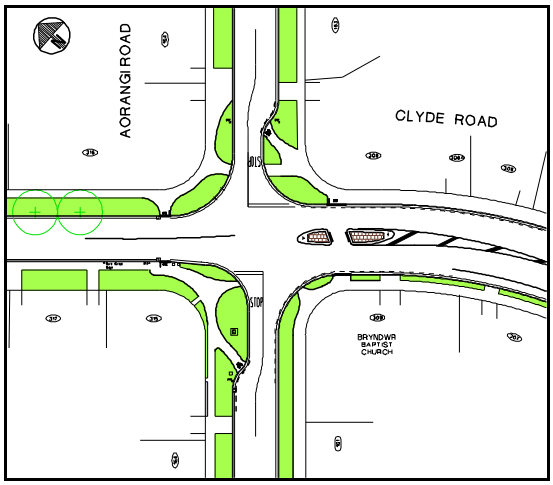

Figure 2 Aorangi - Clyde Intersection

Greers - Guildford

The problems identified include, Too fast / busy 3 and difficult to cross 3. The cyclists have identified the problem of right turning out of Guildford Street onto the busy Greers Road where there is a flush median but no place to wait for a gap to cross or merge with the Greers Road traffic.

The Solution involves changing the shape of the existing pedestrian median island to allow right turning cyclists to move into the island and wait, using new holding rails, for a gap in the Greers Road traffic. See Figure 3 below

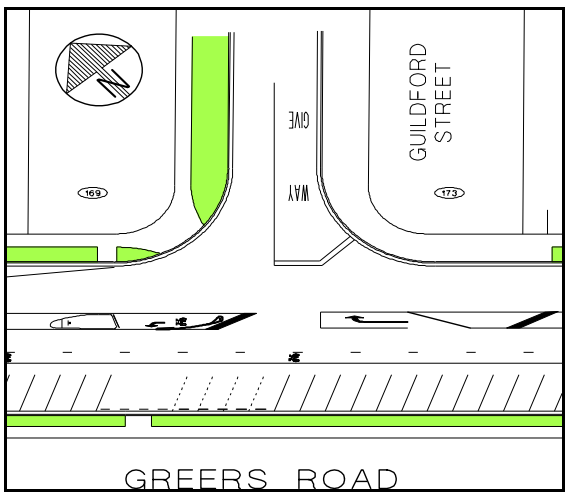

Figure 3 Guildford – Greers Intersection

Greers - Memorial

The problems identified include, Too fast / busy 4, difficult to cross 3, inconsiderate / aggressive driving 2, Highway Engineering to blame 2. The problem here is very complex with a high proportion of northbound children / student cyclists requiring to make a right turn to the Primary School and High School. There are two distinctly different levels of skill, ability and competence amongst the cyclists.

This solution also provides both on and off street options. We are again using cycle and pedestrian logos to advise of use within the area and we are using more red coloured cycle lanes on all approaches and departures to the intersection. There are three options available for making the right turn. Some cyclists are happy to dismount and cross as a pedestrian so we are making the cross walk area wider and the current road rules permit this behavior. Some cyclists make their way to the right turn lane and attempt to turn with the traffic, cyclist can become trapped here for more than one phase change as was observed during the site visit. We are also proposing a 'hook turn' where cyclists can proceed parallel to the through traffic to a point ahead of the traffic waiting on the adjacent approach. This is not permitted under current road law and we are in the process of establishing this intersection as a trial approved by the Land Transport Safety Authority. See Figure 4 below

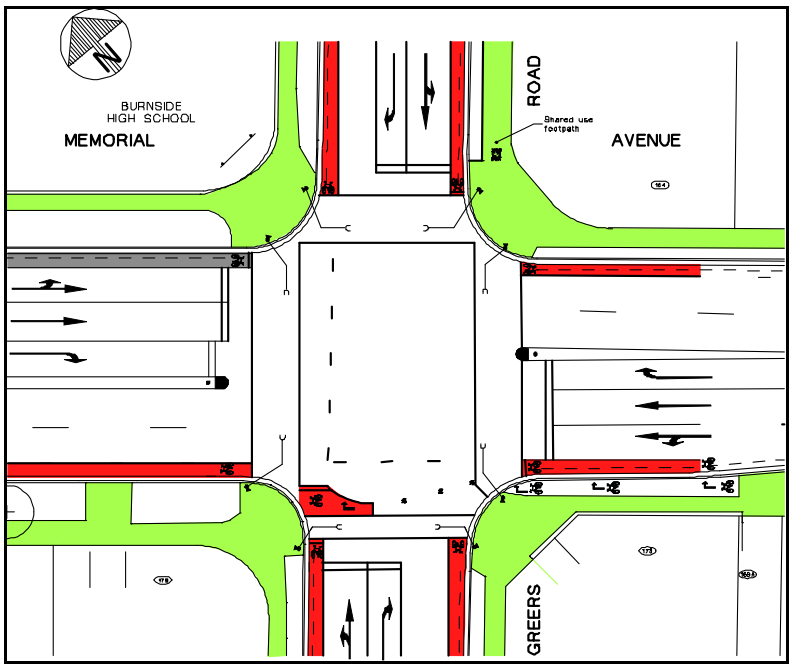

Figure 4 Greers - Memorial Intersection

Mid block Treatment

Grahams Road

The problems identified include, paths too narrow 6, Dangerous 3, inconsiderate / aggressive driving 1, difficult to see cars 1 and difficult to cross 1. Grahams Road forms part of our 'Ring Road' traffic system which has a high proportion of through vehicles.

The solution here will see a short section of red cycle lane to identify the area where cyclists are likely to cross the road. We propose the wholesale removal of parking which should be acceptable to residents as there is a open woodland on one side and the properties on the other side are well set back from the road with ample off street parking available, consultation will confirm this. Cycle logos

will be used along the proposed cycle lane at 50m centres. Cycle holding rails will be installed on the kerb side and in the median area. The wooded median area will be opened up with 70 degree kerbs to orient crossing pedestrians and cyclists to face oncoming traffic prior to crossing. This will require some tree removal, again in consultation with residents and our own arboricultural specialists. See Figure 5 below

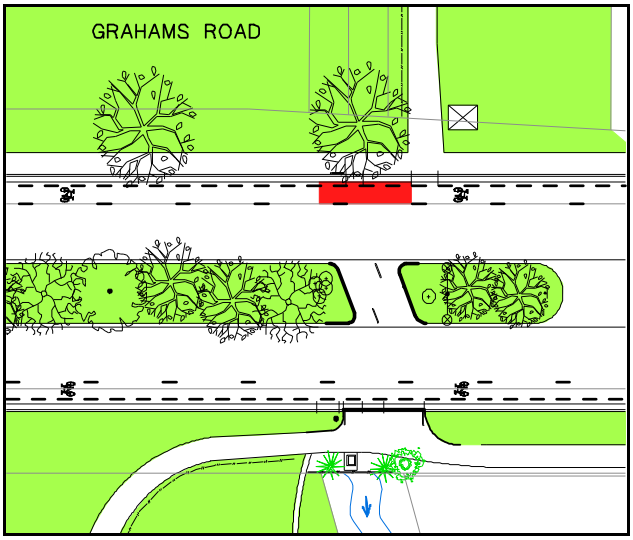

Figure 5 Grahams Road mid block Treatment

Greers Road

The problems identified include, too chaotic / confusing 7, difficult to cross 4, inconsiderate / aggressive driving 1 and dangerous 1. This location is where the High School has a direct link to Jellie Park and its associated parks, skate board facility and water activities.

This solution provides both on and off street options. The footpath will be widened to 3m to accommodate both cyclists and pedestrians with the associated logos to designate and determine path use. Some parking will be removed to enable better access the cycle lane and improve conspicquity of cyclists. Access to the median island will be improved with a new opening opposite the crossing point, while ensuring a physical chicane to prevent high speed access to the road. See Figure 6 below

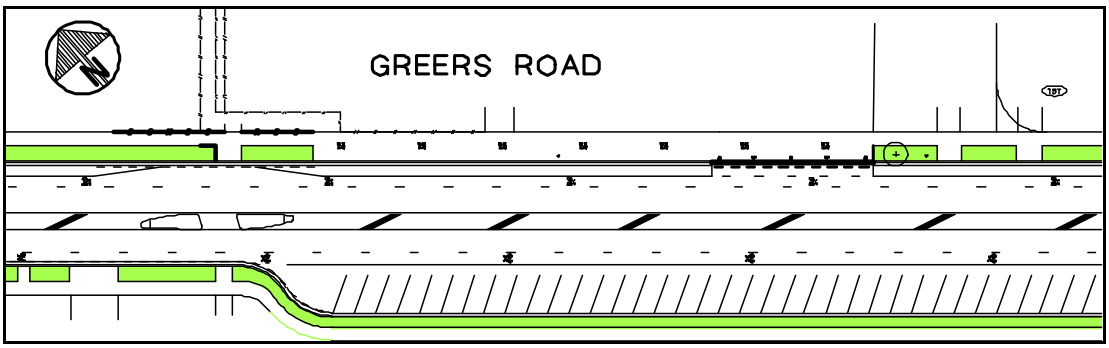

Figure 6 Greers Road Mid block Treatment