

15. PEDESTRIAN CROSSING AT THE DANIELS ROAD/MAIN NORTH ROAD INTERSECTION

Officer responsible City Streets Manager	Author Bill Sissons, DDI 941 8621 and Tony Spowart, Transit New Zealand
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The purpose of this report is to inform the Board of the reasons why the signalised crossing at the intersection of Daniels/Main North Road was shifted from the north side to the south side of this intersection.

Along with signal timing and phasing issues, this shift was seen as an operational issue carried out by Transit New Zealand and so did not require the approval of the Community Board. It is acknowledged, however, that the Board should have been informed of the change prior to it happening.

BACKGROUND

Main North Road forms part of SH74 and is the responsibility of Transit New Zealand. In May of this year, Transit New Zealand carried out a Minor Safety Improvement Works project at the Daniels/Main North Road intersection consisting of shifting the signalised crossing across main North Road from the north side of the intersection to the south side of the intersection.

In February 2002 the City Streets Unit was approached by a Community Board Member requesting that action be taken to address the concerns of the elderly while crossing Main North Road at Prestons Road and Daniels Road. The residents concerns were in regard to traffic turning right out of Prestons Road and Daniels Road conflicting with and intimidating pedestrians legally crossing Main North Road at the pedestrian signals. An initial response to the request saw a meeting with the residents of Manse Place in April 2002. Manse Place is an elderly persons housing complex adjacent to Daniels Road. The purpose of the meeting was to inform them on the meaning of the different signal phases for pedestrians and when they should and should not start the cross movement. Following on from this meeting an approach was made to Transit New Zealand to initiate physical changes to improve the safety of pedestrians crossing Main North Road at Prestons Road and Daniels Road intersections.

The plan was to do the work at Prestons Road first then Daniels Road in a subsequent year. Transit New Zealand's representative, Tony Spowart, reported this intent to the Community Board in November 2002. Early this year Transit New Zealand informed Council Officers that due to corner radius and drainage issues, at Prestons Road, insufficient funds were available to complete the project in the 0203 financial year. Transit New Zealand therefore agreed to Council Officers requests to transfer the money to the Daniels Road intersection. This change to the programme was not reported to the Community Board and the change to the intersection at Daniels Road was completed in May 2003.

After the shift, Elected members, Council Officers and Tony Spowart met, in June this year, with some local residents to discuss their concerns. As a result of the feedback from that meeting, the flashing red clearance time was increased and another meeting was held with residents of Manse Place, adjacent to the intersection, to go over the operation of the signals and what the signal displays mean.

A petition requesting that the crossing revert to the previous position was received from "residents" in August of this year

CRASH STATISTICS

The following information regarding pedestrian crashes in Christchurch was obtained from the LTSA:

- **Signalised Tee** Intersections – Crash numbers involving right turn traffic are 2.5 time higher than crash numbers involving left turn traffic.
- **All** Intersections – Crash numbers involving right turn traffic are 2.5 time higher than crash numbers involving left turn traffic.

VEHICLE AND PEDESTRIAN COUNTS

An intersection count carried out in August 2000 furnished the following vehicle volumes:

Approach	Time of Day		
	7:30 – 8:30	14:00 – 15:00	16:30 – 17:30
Daniels LT	228	98	101
Daniels RT	39	32	35
Main Nth Sbd LT	19	34	46
Main Nth Sbd Thru	1445	815	839
Main Nth Nbd Thru	579	954	1537
Main Nth Nbd RT	57	120	191

Recent pedestrian counts are as follows:

Crossing	Time of Day				
	7:00 - 9:00*	10:00 - 11:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00
Crossing Main Nth South Side	14	5	13	6	4
Crossing Main Nth North Side**	?	1	1	1	2
Crossing Daniels	?	30	38	30	30

* Counted by Myra Barry

** The signalised crossing has been removed from this north side.

DISCUSSION

Pedestrian/vehicle conflicts at signalised Tee intersections are clearly more prevalent when the vehicle is turning right out of the stem of the Tee rather than left. Because the crash figures have been averaged over all Tee intersections in Christchurch, the effects of different proportions of left and right turning vehicles has been taken into account.

The uneven volumes of right and left turn vehicles at this intersection is not unique and many signalised Tee intersections in Christchurch have higher left than right turn volumes. Even though the volume of left turn vehicles is consistently more at this intersection, the safety benefits still justify the shift.

Even at the sites when a right turn vehicle late-start is provided to help protect the pedestrians (as occurred at this site), many complaints are still received from pedestrians concerned that motorists are not giving way to them.

The reason why the right turn conflict is worse than the left turn conflict stems from the location of the point of conflict.

With the left turn/pedestrian conflict, the pedestrian moving away from the left turn vehicle has their back to the vehicle right at the start of the phase when the vehicle has been stationary. When pedestrians are moving towards the left turn vehicle, they can at least see the vehicle and eye-ball the driver when they reach the conflict point.

With the right turn/pedestrian conflict, however, the point of conflict is a long way away from the right turn vehicle's stop line and consequently the vehicle is moving at some speed when it reaches that point. Combine this with the fact that the pedestrian crossing from the same side as the vehicles will have their back to the vehicle gives it a much greater potential for conflict. Of course the wider the road being crossed, the worse this situation is.

SUMMARY

In response to pedestrian concerns and in line with good traffic engineering practice, Transit New Zealand shifted the signalised crossing at the Daniels/Main North Road intersection from the north side of the intersection to the south side in May 2003. The crossing shift was purely a safety improvement measure that can be backed up with crash data.

Conflicts between pedestrians and vehicles will always occur at intersections like this where it is inappropriate to have an exclusive pedestrian phase. Because of better visibility by pedestrians and lower vehicle speeds at the point of possible conflict, it is always safer to have pedestrians crossing on the left of the stem of the Tee rather than the right.

Safety audits of new and existing signalised intersections throughout the country are regularly recommending that the signalised crossings on the right of the stem of a Tee be removed because of safety concerns. The problems highlighted in Christchurch are also occurring throughout New Zealand.

Staff

Recommendation: That the information be received.

Chairperson's

Recommendation:

1. For discussion.
2. That the Shirley/Papanui Board request Clayton Cosgrove to take up the issue of pedestrian safety on crossings and safety enforcement in Parliament.
3. That the Board request vehicle and pedestrian counts to be carried out on Daniels Road/Main North Road.
4. That the Board encourage the community to report to Council any signal maintenance faults at this intersection.