

1. AVONSIDE DRIVE/FITZGERALD AVENUE/KILMORE STREET INTERSECTION IMPROVEMENTS

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PURPOSE OF REPORT

1. The purpose of this report is to seek Council approval for interim traffic measures for the Avonside/Fitzgerald intersection and to recommend to the Council that the project proceed to implementation.

EXECUTIVE SUMMARY

2. In September 2004 the Council approved a proposal to implement safety improvements at the Avonside Drive/Fitzgerald Avenue/Kilmore Street intersection.
3. The improvements included the earthquake strengthening of the Fitzgerald Avenue "twin bridges" over the Avon River, traffic safety works, maintenance of transport capacity through the intersection and the addition of cycle lanes on the intersection approaches and departures.
4. It was anticipated that this work could be completed as early as June 2005, however, this has been delayed owing to difficulties in determining aspects of the existing bridge structure and therefore the type of bridge strengthening required. The timeframe for this work has now been extended and is scheduled for completion in mid 2008.
5. The existing safety issues at this intersection still remain. Many motorists experience difficulties in undertaking the right turning movements from Fitzgerald Avenue into Avonside Drive and from Fitzgerald Avenue into Kilmore Street.
6. It is therefore proposed to address the existing right turn crashes at the intersection by installing a fully protected right turn movement from Fitzgerald Avenue into Avonside Drive and ban the right turn movement from Fitzgerald Avenue into Avonside Drive.
7. This is an interim measure that will address the safety issues at the intersection and will be in place until the bridge work is completed.
8. An "inform" consultation was undertaken on the interim proposal in November/December 2005 and the immediate community was concerned that their access to the city was to be limited. To help the community understand the need for this work to be undertaken a public meeting was held on 23 February 2006. The outcome from the meeting was a better community understanding of the need to install the interim measure.
9. The physical work and the alteration to the traffic signals that is required for the interim measure forms part of the original traffic safety proposals for the intersection which will be completed when the strengthening work is undertaken on the bridges.

FINANCIAL AND LEGAL CONSIDERATIONS

10. The estimated cost for the interim measure at Avonside Drive/Fitzgerald Avenue intersection is \$30,000 inclusive of all consultation, design and project management.
11. Aside from the resolution to ban the right turn movement from Fitzgerald Avenue into Kilmore Street, there are no legal implications from this project.

BACKGROUND ON AVONSIDE DRIVE/FITZGERALD AVENUE/KILMORE STREET INTERSECTION IMPROVEMENTS

12. The Fitzgerald Avenue "twin bridges" over the Avon River have been identified through the Council's "lifelines" project, as requiring earthquake strengthening. With budgetary funding available to implement the strengthening work the opportunity arose to address transport issues at the intersection at the same time.
13. Fitzgerald Avenue is classified as a major arterial route and part of the avenues inner orbital route. Both Avonside Drive and Kilmore Street are minor arterials feeding traffic to and from the central city.

14. The intersection currently carries approximately 38,000 vehicles per day and is an important part of the roading network.
15. In the five years between 2001 and 2005, 31 crashes have been reported at this intersection in the Land Transport New Zealand crash database. The reported crashes predominately involve right turning vehicles, that is, six crashes from Fitzgerald Avenue turning right into Avonside Drive and eight crashes from Fitzgerald Avenue right turning into Avonside Drive. This intersection is the sixth worst intersection in Christchurch for "Right Turn Against" crashes.
16. The main causal factor in motorists misreading the intersection is that the right turners on both Fitzgerald Avenue approaches do not have sufficient visibility of oncoming traffic to safely execute the existing "filter" right turn movement.
17. The proposed interim measure of banning the right turn from Fitzgerald Avenue to Kilmore Street and protected right turn from Fitzgerald Avenue into Avonside Drive will reduce the right turn crashes by 90% and create annual injury/accident savings of about \$50,000.
18. Due to the lane configuration in Fitzgerald Avenue north of the intersection, it is not possible to install a protected right turn into Kilmore Street without significantly reducing the capacity at the intersection.
19. Right turn opportunities at other intersections are evidently safer. Some intersections further south have lead right turn phases and others with filter right turns have much better forward visibility. The right turn further north into Bealey Avenue is a fully protected movement with sufficient spare capacity.

Consultation

20. Consultation was undertaken in September 2004 advising the community that it was proposed to implement safety improvements at Avonside Drive/Fitzgerald Avenue/Kilmore Street intersection. This was approved by the Council for final design, tender and construction. However unforeseen difficulties in determining some aspects of the structure of the existing bridges, and therefore the type of strengthening required, has pushed the timeframe for this work out to mid 2008.
21. Due to the extended timeframe for the original scheme to be completed, an interim measure was proposed that would meet the safety issues at the intersection.
22. In October/November 2005 an "inform" consultation was undertaken with the community on an interim measure, which enables the safety issues to be addressed. The immediate community was concerned that their access to the city was being impeded so a public meeting was held in February 2006 to explain the proposed measures and reassure the community. The results of this round of consultation were 29 replies of which:
 - Five supported the measure
 - Eighteen did not support the measure
 - Six did not comment
23. The concerns from the community were:
 - Access to the west and the one way system
 - The inconvenience of having to travel via Stanmore Road to Avonside Drive or south of the intersection to access the city.
24. The detour to the south to access the city is approximately 400 metres. Although this is acknowledged as a small inconvenience a greater benefit is gained from banning of the right turn for southbound traffic and the exclusive right turn arrow for northbound traffic, reducing the crashes by 90%.

OPTIONS

25. **Option A – Maintain Status Quo**
This option does not meet the objectives of increasing capacity and safety at the intersection.

26. **Option B – Full Intersection Improvements.**

- Fitzgerald Avenue – northern approach
A “clip on” to the existing bridge to enable a separate left turn traffic lane and a cycle lane to be provided. A realigned separate right turn lane with a “filter” turn is proposed by adding a median island on the western side of the existing bridge.
- Fitzgerald Avenue – northern departure
A cycle lane would be added and a cut down in the median provided for pedestrians crossing
- Fitzgerald Avenue opposite River Road. A “U” turn facility would be added for vehicles wanting to access River Road.
- Fitzgerald Avenue – southern approach
It is proposed to install a cycle lane, a separate left turn traffic lane and protected right turn signal phase for motorists turning into Avonside Drive.
- Fitzgerald Avenue – southern departure
It is proposed to install a cycle lane. The three existing traffic lanes would be maintained
- Avonside Drive – eastern approach
It is proposed to add a cycle lane and specifically mark the kerbside lane for left turning vehicles
- Avonside Drive – eastern departure
It is proposed to formalise the cycle lane by installing cycle symbols.
- Kilmore Street – western approach
It is proposed to install a cycle lane on Kilmore Street from Dawson Street to the intersection
- Kilmore Street – western departure
It is proposed to install a cycle lane on Kilmore Street from the intersection to Dawson Street.

27. This option can not be implemented until the bridge widening and strengthening has been undertaken and is unlikely to be in place before mid 2008.

PREFERRED OPTION

28. Option C - Interim Measure

To address the existing right turn crashes at the intersection the proposal is to install a fully protected right turn movement from Fitzgerald Avenue into Avonside Drive and to ban the right turn movement from Fitzgerald Avenue into Kilmore Street.

29. This will involve the installation of a left turn lane and a cycle lane in Avonside Drive and the removal of the combined right turn straight through lane on the northern approach of Fitzgerald Avenue to a straight through only lane.

30. The supporting measures for the interim proposal will be a traffic signal hardware upgrade to provide the protected right turn from Fitzgerald Avenue into Avonside Drive and installation of appropriate advance warning signs to advise motorists of the right turn ban.

31. The preferred option was chosen as it addresses the safety issues by reducing the “Right Turn Against” crashes at the intersection by 90% and the injury cost saving is estimated at \$50,000. The proposal will not reduce the capacity of the intersection and as the work involved is part of the original scheme the costs will not be written off when the full scheme is implemented.

BOARD RECOMMENDATIONS

1. That the Council implement the interim safety measures as outlined in the report.
2. That vehicles be prohibited at all times from turning right from Fitzgerald Avenue into Kilmore Street.