

4. FENDALTON ROAD –“NO U-TURN” AT HOLMWOOD ROAD

General Manager responsible:	General Manager Environment
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PURPOSE OF REPORT

1. The purpose of this report is to seek the support of the Board for the preferred course of action to ultimately accommodate “U-Turns” on Fendalton Road at the Holmwood Road intersection.

BACKGROUND

2. At the 12 July 2005 meeting the Board received a report (July report) from staff which detailed the safety concerns associated with city bound vehicles on Fendalton Road conducting U-turns at the Holmwood Road intersection. Several options were presented to alleviate the problem. The Board resolved that *“subject to a six month trial then review by the Board, U-turns be prohibited at Fendalton Road at the Holmwood Road intersection for vehicles travelling in a south-easterly direction.”*
3. Following installation of the regulatory “No U-turn” sign local residents began to express their concern regarding the process and the implications of the restriction. An onsite meeting was held on Friday 19 August 2005 and attended by a large group of residents plus some Community Board Members and Council staff. There was general agreement at the meeting that the intersection of Fendalton Road and Holmwood Road presents a number of safety issues one of which is the implications of motorists conducting U-turns. The decision to prohibit U-turns was made as this is considered a cost effective safety improvement. However, it was agreed that the alternative options of U-turning at Wood Lane and turning into Holmwood Road and conducting a U-turn also presented safety concerns. It was agreed that Council staff would carry out further examination of turning options with a view to maintaining a U-turn facility at the Fendalton Road/Holmwood Road intersection. This examination has been completed and the findings are embodied in this report.

ROAD SAFETY

4. The issue at the heart of the discussion is essentially one concerning whether or not to permit u-turns at the intersection. Should it be considered that u-turns are to be permitted then further consideration needs to be given as to how such turns are provided for?
5. The primary consideration is road safety. While the recorded crash data alone does not present a compelling case for taking remedial action, the anecdotal evidence suggests that “near misses” associated with the u-turn manoeuvre, are a frequent occurrence. Surveys conducted and detailed in the July report support this evidence. Some local residents are of the view that the u-turn manoeuvre can be conducted safely. The examination suggests that there is some truth in this, subject to how the turning vehicle is positioned and where the turn is commenced from. To conduct the turn, with the least impact on the safety and efficiency of the intersection, the turning vehicle must either; move completely into the gap between islands i.e. completely into the *shadow* of the central median island so as not to obstruct or hinder following vehicles; or the motorist executes the turn in the absence of any following vehicles within a distance that may require such vehicles to slow or take evasive action. Both of these factors are dependant on the behaviour and the choices of the turning motorist and there is little, if any, margin for error or misjudgement as the intersection is not specifically designed to accommodate such turns. Therefore, while the u-turn *may* be conducted safely it cannot be concluded that permitting the u-turn is safe, for the simple reason that not all motorists have the level of driving ability, or make the correct judgements needed, to prevent any adverse effect on the traffic stream. As detailed, this is reflected in the frequency of “near miss” situations.

ALTERNATIVES

6. There are a limited number of alternatives available to motorists while the u-turn is prohibited. These are detailed in the July report. Local residents are of the view that the alternatives do not provide any greater level of safety over permitting the u-turn manoeuvre at the Fendalton Road/Holmwood Road intersection. In particular it is suggested that conducting a u-turn at Wood Lane is potentially more dangerous because following vehicles presume the u-turning motorist is going to turn right at the Deans Avenue intersection and are therefore not expecting the vehicle to stop or slow at Wood Lane. The other alternative requires a city bound motorist to turn left into Holmwood Road, execute a u-turn within Holmwood Road then turn right out of Holmwood Road. This is considered difficult and in particular the right turn out of Holmwood Road should not be encouraged.
7. It is acknowledged that the alternatives are not “ideal” and it is accepted that there are safety concerns associated with each. It is difficult to quantify the level of safety of allowing u-turns at Holmwood Road relative to the alternatives and this is perhaps the main thrust of the argument put forward by local residents.
8. There were two options detailed in the July report that accommodated u-turns for city bound motorists. These comprised the “status quo” (prior to the installation of the “no u-turn” sign) and the narrowing or “cutting back” of the central median island to allow motorists the ability to move out of the path of following vehicles. These options are shown in **Attachment 1**. The implications of proceeding with the status quo are detailed in the July report and essentially result in the intersection continuing to experience “near miss” situations with the continued potential for crashes to occur.

FURTHER EXAMINATION

9. As mentioned, further examination has been conducted concerning the ability of intersection to accommodate u-turns without alteration. This examination reveals that it is possible for a 90 percentile motorcar to queue in the shadow of the central median island, clear of the through traffic lane, and complete the u-turn manoeuvre without encroaching into the kerbside parking area on the south side of Fendalton Road. However the ability of the 90 percentile motorcar to complete the manoeuvre is totally dependant on how the motorist positions the vehicle within the gap in the median. To complete the manoeuvre successfully the motorist is required to commence the turn from within the through traffic lane. The turn cannot be completed by the 90 percentile motorcar if the motorist attempts to position the vehicle parallel to the traffic flow within the gap. Diagrams illustrating the manoeuvres are shown in **Attachment 2** and **2A**.
10. The other option, which involves cutting back the central median, allows and encourages u-turning motorists to manoeuvre out of the path of following vehicles prior to conducting the turn. As this option moves the position of the turning vehicle further across (in a lateral sense) Fendalton Road, it is not possible for a 90 percentile motorcar to successfully complete the turn without encroaching into the kerbside parking area on the south side of Fendalton Road. Larger vehicles cannot successfully complete the turn in the available roadway width and would need to either mount the kerb or reverse back to complete the turn in more than a single manoeuvre. Diagrams illustrating these manoeuvres are shown in **Attachment 3**. It follows that while this option has the advantage of encouraging vehicles to move out of the through traffic lane prior to turning, it does not provide any advantage in terms of the ability of the vehicle to complete the turn.
11. The option of cutting back the central island is estimated to cost approximately \$41,000. In the absence of reported crashes directly attributable to “u-turn” manoeuvres such expenditure does not attract a high priority for funding.

CONCLUSION

12. Banning the u-turn manoeuvre is likely to improve road safety at the Holmwood Road intersection. However it is likely to exacerbate existing safety concerns by increasing the number of u-turns at Wood Lane and increasing the number of right turns out of Holmwood Road. It is difficult to quantify which situation provides the greatest adverse effect on the safety and efficiency of the road network. Ideally, to avoid a "migration" of any effects, the u-turn manoeuvre should be accommodated at Holmwood Road. It was agreed at the meeting with local residents that Council would strive to achieve this. If the u-turn manoeuvre is to be accommodated then it is important that the manoeuvre is made as safe as practicable. In this context, cutting back the median island to afford u-turning vehicles protection from, and minimise the disruption to the through moving traffic stream is considered desirable. Removal of kerbside parking for a short section on the south side of the intersection will be required to allow the turn to be completed by a 90 percentile car, which is considered the minimum design standard for this situation. While there remains an absence of reported crashes it is unlikely that the physical works will attract funding at least in the short term. Therefore, if the ban on u-turns is to be removed, it is important that the level of safety continues to be monitored. Should a relevant crash history develop prior to the physical works being implemented, then reinstatement of the ban is advisable.
13. In summary there is a need to accommodate u-turns for vehicles travelling in a south-easterly direction on Fendalton Road at the Holmwood Road intersection. Cutting back the median island (as shown in **Attachment 1**) is the preferred method of accommodating these manoeuvres. However, this will not be achieved in the short term. Therefore removing the ban is an option, but the safety of the intersection should continue to be monitored and should a crash history develop prior to the implementation of physical works then the Board should readdresses the option of re-introducing the ban.

STAFF RECOMMENDATION

It is recommended that the Community Board agree that:

- (a) The ban on u-turns for vehicles travelling in a south-easterly direction on Fendalton Road at the Holmwood Road intersection be revoked.