

5. HAGLEY AVENUE TRAFFIC MANAGEMENT IMPROVEMENTS

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The purpose of this report is to provide further information to the Committee regarding the proposal to provide traffic management improvements on Hagley Avenue and to seek approval to proceed to public consultation.

This report should be read in conjunction with the "Inner City Bus Routing 'Interim' Cross Requirements" report which is also on the agenda for this meeting (refer clause 7).

BACKGROUND

In April 2002 a draft plan of traffic improvements for Hagley Avenue was presented to the Committee requesting approval for public consultation. The draft plan had been previously presented to both the Spreydon/Heathcote and the Hagley/Ferrymead Community Boards and their comments reported to the Committee. The Hagley/Ferrymead Community Board also made a deputation to the Committee expressing its concerns. The Committee subsequently resolved to proceed with the draft plan for public consultation.

In May 2002 the Council resolved not to adopt the Committee's resolutions instead it resolved that no decision be made on the proposal until a decision was reached on the proposed Lichfield/Tuam Street one-way swap. In a subsequent response to the direction the one-way swap was taking, the Council resolved in November 2002 that a joint meeting of the Committee and Hagley/Ferrymead Community Board be held for the purpose of considering the possibility of the April 2002 report and draft plan being resubmitted to the Committee.

The joint meeting was held and reported to the Council in April 2003. The Council resolved:

1. *That this issue be referred to the Sustainable Transport and Utilities Committee for further consideration and report to Council.*
2. *That members of the Hagley/Ferrymead Community Board be invited to participate in the discussions regarding this issue when it is considered by the Sustainable Transport and Utilities Committee.*

This report further develops the original report so that it reflects the current conditions and includes consideration of the Committee's April 2003 suggestions and requests which included:

- The number of accidents including cyclists and pedestrians in Hagley Avenue,
- Pedestrian signals at Hagley College,
- Removal of car parks in an area that is short of parking,
- Possible changes at Grove Road to provide more parking,
- Improved efficiency of the Hagley Avenue intersection,
- Reduction of traffic to one lane on Lincoln Road,
- Compatibility of the Moorhouse Avenue/Hagley Avenue intersection with the future Blenheim Road route,
- Provision of an off-road cycle lane in Hagley Park,
- Angle parking on Hagley Avenue.

the report also explains why the proposed option is recommended.

The proposal changes the service levels of a minor and major arterial road and therefore requires the recommendation of the Sustainable Transport and Utilities Committee.

EXISTING ENVIRONMENT

Hagley Avenue is a minor arterial road and is a heavily used cycle route linking the southwest suburbs with Central Christchurch. Peak one and one half hour cycle counts show over 200 cyclists on Hagley Avenue.

It is also a heavily used pedestrian link and generator with a large community college and the hospital in the immediate vicinity and a major recreation and sport park running the length of the west side. There are signalised crossings at each end of Hagley Avenue and one pedestrian crossing at approximately half way (opposite Hagley Community College).

The 24-hour traffic volume is 16,000 vehicles weekdays reducing to 11,400 and 9,000 respectively on Saturdays and Sundays.

Due to its close proximity to many destinations the Avenue has strong on-street parking usage. The northern section of the Avenue has metered parking whilst the southern section has non-metered parking which is generally all day parking utilised by commuters and local residents.

Hagley Avenue, including both the Riccarton Avenue and Moorhouse Avenue intersections, has had 100 registered accidents over the last five years comprising four serious, 31 minor and 62 non-injury. Seven accidents have involved cyclists and a further seven accidents have involved pedestrians in a congested area that also has a large number of near misses. Of the four serious accidents, two of these involved cyclists and one involved a pedestrian.

CONSULTATION

There was limited consultation in May/June 2003 with key stakeholders (refer below) who had previously been consulted in January 2002, to update them on the process and establish their position with regard to the proposed option. This will ensure the Committee is making decisions based on the best and most current information we are able to provide.

Hagley College

The main concern from the College is for students who cross Hagley Avenue during the morning recess and at lunchtime. Their preference would be for a signalised crossing to replace the existing crossing. However, they realise that that is not a good roading option if the St Asaph Street intersection is to be signalised. It was agreed that if the St Asaph Street intersection was signalised there would still be a need for a facility at the present crossing point and there may also need to be alterations made to the driveway entrance into the college grounds. They did not see any issues with providing cycle lanes on the road.

Netball Association

Dropping off players on Saturday is the worst aspect for the Netball Association. They would ideally like to see an off-road drop-off zone but realise that this is not possible on Hagley Park. If the P5 drop-off zone could be vigorously enforced at all times, they feel that the Saturday congestion could be reduced. There is a problem with people who insist on parking on the broken yellow lines, the P5 drop-off zone and parking over the driveway. There is also an issue with weekday school sport and bus parking. The buses do not use the drop-off zone but all arrive about the same time and double park. The Netball Association did not have a solution to this issue.

Preschool

The preschool staff did not have any issues with the proposals although the owner is concerned about the pedestrian refuge island as it was seen as a potential area for people to be 'bowled over'. During the week double-parked school buses cause access problems for the business. Drivers on Saturday park over the preschool driveway. The preschool felt that a P5 drop-off zone on their side of the road would be good.

Motel

The motel has no issues with the proposal and does not object to removal of parking. They have a second entrance off Moorhouse Avenue.

Environment Canterbury

Environment Canterbury were approached for their views on the proposals in terms of the level of service provided to bus users. The following issues arose from these discussions.

- Hagley Avenue is served by Route 20 Cracroft, which operates on a half hourly frequency throughout most of the week. This route is only served by one stop in each direction on Hagley Avenue - the pair of stops being situated a short distance north of Selwyn Street. There are further stops 475 metres to the south (in Grove Road) and 500 metres to the north (serving the hospital). The stops in Grove Road are close to another pair only 250 metres further south and both these pairs are not well used. Environment Canterbury have indicated it would be sensible to rationalise these stops into a single pair midway between the existing pairs. It would then be desirable that a further pair be provided just north of the Lincoln Road/Moorhouse Avenue/Hagley Road/Grove Road intersection, increasing the catchment of the service, providing consistent bus stop spacing and a convenient link to the sporting and recreational activities associated with the park. The Selwyn Street and hospital stops would be retained.
- Both Councils are investigating improvements to the way buses move around the city centre in advance of the introduction of major service improvements to routes serving both the north and south of the city in June 2004. These improvements are primarily increases in the frequency of the services. Long term solutions for this are being considered by the Central City Transport Working Party but interim changes are needed to allow the June 2004 service reviews to proceed. These interim solutions are focused on reducing the number of buses travelling north of the square to the Riverside (Rolleston Avenue) and creating a new peripheral terminal south of the river, possibly on Hagley Avenue near Riccarton Avenue. This location also provides a more efficient and reliable route to and from the bus exchange. If this concept is proved desirable (work continues on these investigations), traffic signals could be required at the Hagley Avenue/St Asaph Street intersection to guarantee efficient bus egress from St Asaph Street. This would also benefit high pedestrian demand at the college with the addition of appropriate pedestrian facilities.

PROPOSAL

The proposed changes (refer attached plan) have been designed to improve safety for all users of Hagley Avenue and also achieve an overall increase in the level of service at the Moorhouse Avenue/Grove Road/Lincoln Road/Hagley Avenue intersection. The proposal includes the following main features:

Changes at Moorhouse Intersection

- Making the outside lane a right turn only lane at both Hagley Avenue and Lincoln Road approaches to the intersection.
- Reduction from two lanes to one lane at the departures from the intersection on both Lincoln Road and Hagley Avenue.
- Reduction from two traffic lanes to one traffic lane at the eastern approach on Moorhouse Avenue into Lincoln Road.
- Removal of the right turn movement from the Moorhouse Avenue east approach into Hagley Avenue.
- Introduction of a detector loop on the southbound lane on Lincoln Road just south of Moorhouse Avenue which will regulate queue lengths from the railway crossing to Moorhouse Avenue and avoid over congestion on Lincoln Road and at the intersection.

Pedestrian Facilities/Kerb Build Outs

- Pedestrian islands and kerb build outs on Hagley Avenue at the netball court entrance, the Selwyn Road intersection and the college entrance.
- Provision of right turn lanes on Hagley Avenue into Selwyn Street and St Asaph Street.

Flush Median and Cycle Lane Marking

- Cycle lanes to run the complete length of Hagley Avenue and the approaches and departures at the Moorhouse Avenue intersection.
- A painted flush median along the full length of Hagley Avenue.
- Improved entrance and exit works from Hagley Avenue to the path in the park.

St Asaph Street Signalisation

- Traffic signals at the St Asaph Street intersection.
- Kerb build on Hagley Avenue.
- Proposed island on St Asaph Street.

RESPONSES TO ISSUES RAISED AT PREVIOUS COMMITTEE MEETINGS

Number of accidents including cyclists and pedestrians in Hagley Avenue

There have been 100 registered crashes over the last five years - 97 through the Land Transport and Safety Authority and three through the Council's cycle crash register. These include seven cycle and seven pedestrian incidents.

It is recognised that approximately 40-50% of all injury cycle crashes are registered in New Zealand and even less reported for non-injury cycle crashes.

Pedestrian signals at Hagley College

A video of the pedestrian crossing at Hagley College was taken. From this the number of pedestrians and vehicles were counted and this enabled Council officers to determine whether a signalised crossing was justified. The figures did meet the warrant figures for a signalised pedestrian crossing but Council officers have some concerns. It is felt that many of the young people that use the crossing would not wait for the crossing to activate and would be likely to duck across the road in the gaps. There does not appear to be a perfect answer but signals at St Asaph Street and a pedestrian refuge at the crossing point will meet the needs of Hagley College. The pedestrian refuge at the school crossing point and the one at Selwyn Street will create a shadow effect and provide a safe crossing.

Removal of parking in an area that is short of parking

The following general observations were made in June 2003 of the existing parking use on a Saturday morning:

- 85% to 95% parking occupancy on Riccarton Avenue and Deans Avenue. Parking mostly associated with rugby and soccer.
- 75% parking occupancy on Moorhouse Avenue adjacent to Hagley Park. Parking associated with netball, rugby and soccer.
- 85% to 95% parking occupancy in the Horticultural Centre and adjacent off-street car park, depending on events at the centre (100% during ski sales, bird show, cat show etc). Parking associated with netball, rugby and soccer.
- 100% occupancy in Selwyn Street. Parking mostly associated with netball.
- 100% occupancy in Moorhouse Avenue (north side) between Hagley Avenue and Selwyn Street. Parking here mostly associated with netball.
- 100% occupancy in Hagley Avenue. Parking mostly associated with netball.

The proposed scheme will remove 38 car parks and provide two new bus stops and the Parkside Terminal. Three parking spaces will be made into a five minute parking zone. None of the car parks would be lost because of the introduction of the cycle lanes.

(a) Moorhouse Avenue to Selwyn Street

Twelve parking spaces would be removed on the north east approach to Moorhouse Avenue. This will allow for the inclusion of a pedestrian island and adequate queuing distance at the intersection. Two new bus stops will be provided and three parking spaces will be changed to a five minute parking zone near the pre-school.

(b) Selwyn Street to St Asaph Street

There would be no loss of parking supply between Selwyn Street and Antigua Street.

(c) St Asaph Street to Riccarton Avenue

Removal of seven parking spaces on the west side of Hagley Avenue at the St Asaph Street intersection where traffic signals and kerb build out is proposed and a further 18 spaces to allow for the bus terminal.

Removal of one car parking space on the east side of Hagley Avenue on the north east approach to the St Asaph Street intersection.

Possible changes at Grove Road to provide more parking

Grove Road currently has kerb and dish channel. There is the potential to provide 15 additional car parks on Grove Road between the railway line and Moorhouse Avenue by using angle parking at the time when the kerb and channel is renewed. In the draft Future Kerb And Channel Renewal Programme, Grove Road is due to have the kerb and channel renewed in 2009/10. Grove Road could also be narrowed where it intersects Moorhouse Avenue to improve safety to pedestrians and cyclists crossing the road on their way to the park. This work could possibly be undertaken at a similar time to the Blenheim Road deviation when further improvements to the efficiency of the intersection and level of service would be desirable.

Improved safety and efficiency of the Hagley Avenue intersection

This intersection has recently been audited as part of an accident black spot crash study. Recommendations from that audit include adding additional overhead signals and banning the right turn manoeuvre from Moorhouse Avenue into Hagley Avenue.

The proposed scheme includes exclusive right turn lanes on the Hagley Avenue and Lincoln Road approaches, providing the opportunity to improve the efficiency of the intersection by changing the phasing operation of the traffic signals. It is proposed to operate the Hagley Avenue and Lincoln Road approaches as a 'single-diamond overlap', whereby the right turns from each approach run in the same phase. A similar type of phasing operates at many other intersections in the city, for example the Brougham Street approaches of the Brougham Street/Colombo Street intersection.

Traffic modelling indicates the proposed scheme will allow the intersection to run more efficiently, improving the overall level of service from E to D with a 10% to 15% reduction in average intersection delay.

It is predicted that the Blenheim Road deviation due to be completed in 2007 will increase the amount of traffic going through the intersection by around 10%. Any improvements in the operation of the intersection should be welcomed as they will ease some of the pressure caused by this increased traffic flow.

Reduction of traffic to one lane on Lincoln Road

The departure from the intersection on Lincoln Road will be reduced from two lanes to one lane. As a result the available stacking area between the railway crossing and the intersection will be reduced. This could result in traffic congestion with queues extending back to the intersection at times of rail activity or local major events. To manage this, a loop to detect the presence of queues is proposed. A red arrow will temporarily stop vehicles from east Moorhouse Avenue entering Lincoln Road until the queue reduces. Effectively the queuing would be transferred to Moorhouse Avenue, where there is queuing capacity to cope with any overflow from Lincoln Road.

Compatibility of the Moorhouse Avenue/Hagley Avenue intersection with the future Blenheim Road Route

The proposed changes will allow the intersection to operate more efficiently. Essentially this will improve the flow of traffic on Moorhouse Avenue and will have no foreseeable adverse effects on the proposed future changes with the Blenheim Road deviation.

Cycleways

Cycle Count Survey

A cycle count was carried out in May 2003 during the morning and evening peak of cyclists who use the road and the path in the park, along Hagley Avenue. The results of the survey are shown below:

Time	Cycle Counts	
	On Path	On Road
1.5 hour morning peak	16	50 (into the city)
	4	20 (out of the city)
1.5 hour evening peak	14	25 (into the city)
	13	56 (out of the city)

These results indicate approximately 76% of all the cycle trips are made on the road.

Consideration of an off-road cycle lane in Hagley Park

At previous seminars the option of looking to create or improve the existing off-road pathway within Hagley Park had been raised instead of providing any form of cycle facility on the Avenue.

It is advised that if the option of upgrading the existing off-road pathway parallel to Hagley Avenue is pursued (or a variation of this), instead of providing on-road cycle facilities the following circumstances will result:

- Cyclists travelling south would need to detour from their chosen route and traverse two extra major signalised crossings to join and leave the path, one of which will require them to dismount and walk their bike across the intersection. This would add delay and comparably give them a lower level of priority and service compared to staying on the Avenue.
- The southbound cyclists would also share the following disadvantages with north bound cyclists. The pathway provides lower operating speeds and less clear priorities. Cyclists would have to share their path with pedestrians of all ages, runners, people walking dogs and others, which creates less certainty than using the road where it is more clear who has priority and how other users will behave. This potentially results in lower cycle speeds and more chance of collisions with other path users.
- It is most probable that most southbound cyclists would continue to utilise the road as it has many advantages over an off-road path notably; directness, connectivity, convenience will be faster and with higher and clearer priorities. The same rationale applies for northbound cyclists that many cyclist would continue to maintain their path on the road as it is more suitable to their needs.
- The removal of the on-road cycle facilities from the existing proposal for Hagley Avenue would not have any significant effect on the level of vehicle parking needing to be removed. The strategic outcome of this scenario if adopted will be a downgrading level of service for cyclists that will make it harder to achieve gaining the objectives of the Council's Cycle Strategy.

It should be noted that in addition to proposing to provide on-road cycle facilities staff are looking to highlight and upgrade the parks shared off-road pathway entrance at Moorhouse Avenue and add some minor upgrading to better provide for recreational and other cyclists and path users.

Angle parking on Hagley Avenue

Hagley Avenue is a minor arterial road carrying large volumes of traffic having an AADT in excess of 14,000 vehicles per day. The project team looked at the possibility of providing angle parking and investigated angle parking turning movements. This highlighted there would be insufficient road width even if cycle lanes were not provided and would result in dangerous conflict with other traffic movements on the road. Park land would need to be acquired to allow safe angle parking turning movements. For these reasons, the project team do not recommend angle parking on Hagley Avenue.

TIMELINE

The project timeline for this project is as follows:

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|--|-------------------|------|
| • Consultation | October-November | 2003 |
| • Feedback analysis and refine scheme option | November-December | 2003 |
| • Sustainable Transport and Utilities Committee approval | February | 2004 |
| • Design | February-March | 2004 |
| • Construction | May-June | 2004 |

ESTIMATE COST AND BUDGET

A breakdown of the scheme estimates and budget provisions for traffic management improvements on Hagley Avenue is shown below:

Moorhouse to south of pedestrian crossing facility at Hagley College

Item	Estimate	Budget
Changes at Moorhouse Intersection	\$10,000	\$10,000
Pedestrian Facilities/Kerb Build Outs	\$123,782	\$80,000
Flush Median/Cycle Lane Marking and Entrance/Exit works to Path on the Park	\$45,089	\$88,686
TOTAL	<u>\$178,871</u>	<u>\$178,686</u>

South of pedestrian crossing facility at Hagley College to Riccarton Road

St Asaph Street Signalisation \$134,245 Not Budgeted

The funding for the traffic signals at St Asaph Street will need to be considered as part of the next Annual Plan round.

CONCLUSION

Existing pedestrian and cycle movements are very strong throughout the proposal area where traffic volumes are very high. The proposed changes will create a safer environment for all users and improve the function of Hagley Avenue. The flush median and pedestrian islands will improve the safety of pedestrians and the cycle lanes at both intersections and mid block will improve the safety and provide road space for cyclists. The flush median and changes to the lane markings and kerb lines will improve the safety and efficiency of Hagley Avenue for all users and improved traffic flows and an overall increase in the level of service will be achieved at the Moorhouse Avenue/Grove Road/Lincoln Road/Hagley Avenue intersection. These changes together with the Parkside Terminal will result in the loss of 38 car parks on Hagley Avenue. There is however, the potential for providing 15 additional car parks on Grove Road by providing angle parking when the kerb and channel is renewed in 2009/10. Furthermore, a major reduction in the use of the Riverside terminus on Rolleston Avenue, could ultimately allow six bus stops to be removed and 12 metered car parks to be reinstalled in an area of high amenity value.

The proposal presented including the on-road cycle facilities will help the Council towards achieving its long-term transport visions. Following the public consultation phase a summary of feed-back along with a finalised plan will be presented to the Committee for implementation.

It should be noted also that a seminar for the Committee, Councillors and Community Board members will be held in November 2003 to discuss roading issues on the perimeter of Hagley Park.

Staff

Recommendation: That the proposal as presented proceed to public consultation.

Chairman's

Recommendation: That the above recommendation be adopted.