

7. INNER CITY BUS ROUTING 'INTERIM CROSS' REQUIREMENTS

Officer responsible City Streets Manager	Authors Paul Roberts, Transport Planner – Network, DDI 941-8618
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The purpose of this report is to:

- Inform the Sustainable Transport and Utilities Committee of the implications of inner city bus routing changes planned by Environment Canterbury (Ecan), associated with their 'Interim Cross' option, including on-street infrastructure requirements.
- To seek approval to proceed to public consultation on the infrastructure proposals.

This report should be read in conjunction with the "Hagley Avenue Traffic Management Improvements" report, contained in clause 5 of the agenda.

BACKGROUND

The Opportunity

The Christchurch City Council and Environment Canterbury (Ecan) have recently adopted an updated joint public transport strategy. A key element for the success of this strategy is provision of more attractive bus services, through increased frequency and coverage. Ecan wish to increase bus frequencies over current levels to assist in meeting this objective, as well as to better cater for large recent increases in bus patronage. However, it has been acknowledged by staff of both Ecan and the Council that simply increasing frequencies without making inner city bus routing changes (and providing more through-routing) will result in severe congestion on Colombo Street. This would be counter-productive for bus operators and passengers, as well as detrimental to the amenity of the street.

The current bus routing system requires peripheral termini at five locations, as shown on the attached plan. These peripheral termini are required because buses cannot stop for extended time periods inside the Bus Exchange. Existing peripheral termini on Rolleston Avenue (known as the Riverside terminus) and Gloucester Street (known as the City East terminus) result in inefficient bus routing, increasing distance and running times. The Committee will also be aware of the previous representations made on adverse impacts of the Riverside terminus.

Furthermore, the current bus routing system also prevents efficient through-routing, which ECan wish to pursue.

The Options

To resolve many of these issues, ECan in April 2000 proposed a new inner city bus routing option, which is known as the "Pure Cross". The aim of this option is to improve operation of the Lichfield Street Bus Exchange and to allow bus frequencies to be increased, without resulting in severe congestion on Colombo Street. However, the "Pure Cross" option relies on Lichfield Street providing two-way bus movement. This project has since been referred to the Central City Transport Working Party, as part of a more comprehensive review of inner city transport matters.

ECan has therefore proposed an option for accommodating increased through-routing and frequencies with retention of Lichfield Street as a one-way street. This is known as the "Quasi Cross" or "Interim Cross". To prevent confusion, this has been referred to as the "Interim Cross" throughout this report.

Implementation of the Interim Cross arrangement will significantly reduce the need for use of both the Riverside terminus on Rolleston Avenue and the City East terminus on Gloucester Street. However, most of the buses that stop at the Riverside terminus will instead need to stop at a new Parkside terminus, which would be located on Hagley Avenue. Changes to three intersections would also be required, the most significant being the signalisation of the Hagley Avenue/St Asaph Street intersection. Further detail on these required changes is given below.

Option Timing

Because of contractual review requirements, ECan wish to introduce higher frequencies on north-south routes from June 2004. A second set of frequency increases are proposed for introduction in November 2004. With no changes to current routing patterns, this could have resulted in about 30% more buses in central Colombo Street (Lichfield-Gloucester).

To mitigate this impact, ECan therefore hopes to have the Interim Cross arrangement operating by June 2004. The on-street infrastructure changes to support this option would need to be in place by this time. In order to make the necessary contractual changes, Ecan have asked if the Council could give an indication, by the middle of November 2003, of their willingness to install the necessary infrastructure.

BUS VOLUMES

Changing the bus routing pattern to the 'Interim Cross' will alter bus movements within the inner city, as shown on the attached plan. In particular, it is anticipated that daily bus volumes on Colombo Street north of Lichfield Street could be reduced from 2,014 bus movements per day at current levels to 1,432 buses/day, a reduction of approximately 30% compared to current levels, even after the proposed frequency increases. This would be the minimum decrease, with further reductions likely to be affected by adoption of more through-routing.

However, because Lichfield Street would still be one-way, the 'Interim Cross' pattern necessitates a rather convoluted routing pattern to enter or leave the Bus Xchange (for buses heading to the west of the City). When combined with proposed increases in bus frequency (somewhat offset by proposed through-routing), the anticipated reduction in bus movements on Colombo Street north of Lichfield Street (including through the Square) would therefore be offset by increases in daily bus volumes elsewhere, eg:

- From 1,427 buses/day to 1,511 buses/day (+6%) on Lichfield Street between Colombo and Manchester Streets;
- From 395 buses/day to 836 buses/day (+112%) on Manchester Street between Lichfield and St Asaph Streets;
- From 825 buses/day to 1,349 buses/day (+64%) on St Asaph Street between Manchester and Colombo Streets; and
- From 914 buses/day to 1,454 buses/day (+59%) on Colombo Street south of St Asaph Street,

These changes, which are shown diagrammatically on the attachment, could be accommodated providing the following measures are implemented.

CHANGES REQUIRED BY THE CHRISTCHURCH CITY COUNCIL TO SUPPORT PROPOSED BUS CHANGES

Analysis by staff of the City Streets Unit has determined that the following changes to the road network would need to be implemented by Council to support this change in bus patterns:

- Introduction of a right turn arrow on the southbound approach from Manchester Street into St Asaph Street;
- Introduction of a right turn arrow on the northbound approach from Colombo Street into Lichfield Street;
- One car park is also proposed to be removed on the west side of Colombo Street, immediately north of St Asaph Street. This will alleviate an existing problem with the movement of buses into Colombo Street (north), which would otherwise be exacerbated by the proposed increase in these bus movements;
- Signalisation of the Hagley Avenue/St Asaph Street intersection;
- Removal of 15 existing metered P120 parking spaces on the west side of Hagley Avenue between St Asaph Street and Riccarton Avenue, to be replaced with 5 bus stops; and
- Installation of two seats to serve passengers at this terminus.

Ecan have requested that at this stage no changes are made at the Riverside terminus (such as the anticipated removal of bus stops and replacement with car parks), as they are still in the process of determining their reduced requirements.

The first two would be funded out of existing operational budgets at minimal cost. Whilst there would be some impact on existing users of these intersections, any negative impacts to users (for example those using the approach opposite the proposed right-turn arrows) would be balanced at least somewhat by the reduced delay to the right-turners (which will of course include many bus passengers). No consultation is considered necessary or proposed to effect these changes.

HAGLEY AVENUE REQUIREMENTS

Changes to Hagley Avenue are required to provide the Parkside terminus and to signalise the Hagley Avenue/St Asaph Street intersection to cater safely and efficiently for increased bus volumes.

The changes required in Hagley Avenue to support the 'Interim Cross' are intimately linked to the traffic management measures proposed in the associated 'Hagley Avenue Traffic Management Improvements' report. Amongst other things, those measures include installing cycle lanes, a flush median, pedestrian refuges, and changes to the Moorhouse Avenue intersection.

To reduce confusion, the proposed measures have all been detailed and costed in the 'Hagley Avenue Traffic Management Improvements' report, including requirements directly associated with the Parkside terminus. The attached plan associated with that report has also been included with this report. To allow appropriate allocation of budgets, the proposed measures have been divided into two schemes as follows:

- Part 1 (red on plan) is south of the proposed pedestrian refuge at Hagley Community College.
- Part 2 (blue on plan) is north of the proposed pedestrian refuge at Hagley Community College

(The pedestrian refuge has been included in Part two, by virtue of the integrated provision this affords for pedestrian crossing facilities in conjunction with the proposed signals at St Asaph Street)

Part Two

Part two is primarily associated with the 'Interim Cross' requirements. This project includes the following elements:

- Cycle lanes and a flush median, to continue the proposals associated with the traffic management measures further south;
- Bus stops on the west side of Hagley Avenue, extending to 90m in length. These bus stops will remove 15 existing metered car parks;
- Two seats on Hagley Avenue for waiting passengers;
- Signalisation of the St Asaph Street intersection.

Car Parks

The existing car parks on the west side of Hagley Avenue are metered for the entire week. Given the location of the parking meters, it is expected that most displaced users will be short stay visitors to Christchurch Hospital. A new parking building built by Christchurch Hospital will assist in alleviating the displaced car parks from Hagley Avenue. Furthermore, a major reduction in the use of the Riverside terminus on Rolleston Avenue, could ultimately allow six bus stops to be removed and twelve metered car parks to be reinstalled. This area serves not only the cultural precinct, but also is in reasonable proximity to serve as overspill parking for the Hospital.

Pedestrian Signals at Hagley Community College

There has been consideration given to installing pedestrian signals outside Hagley Community College instead of signalising the Hagley Avenue/St Asaph Street intersection. Comment on this option is given in the 'Hagley Avenue Traffic Management Improvements' report.

TIMELINE

The project timeline for this project is as follows:

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| ● Consultation for Hagley Avenue | October-November | 2003 |
| ● CCC Approval in principle to changes to ECan | November | 2003 |
| ● Feedback Analysis and Refine Scheme Option | November-December | 2003 |
| ● Sustainable Transport and Utilities Committee Approval | February | 2004 |
| ● Design | February-March | 2004 |
| ● Construction | March-May | 2004 |

ESTIMATED COST AND BUDGET

Part two of the Hagley Avenue scheme is estimated to cost \$140,000 (tbc). This expenditure is currently unbudgeted, being unforeseen at the time of preparation of the current Annual Plan. The City Streets Unit anticipates that it could find this money from within the existing capital budget but would also seek a contribution from ECan if the Local Government (replacement) Act is passed later this year as anticipated. The details of the budget source(s) (eg Public Transport Initiatives) would be reported to the Committee in February 2004.

CONCLUSIONS

Increases in bus frequencies proposed by Ecan from June 2004 could put significant pressure on Colombo Street. To mitigate the impact of these increases, it is proposed to implement an 'Interim Cross' bus routing option.

The principal benefits of this change will be a reduction in the impact of buses in Colombo Street north of the Exchange, and notably at the existing Riverside (Rolleston Avenue) terminus.

Implementing the Interim Cross arrangement will require creation of a new peripheral terminus on Hagley Avenue and signalisation of the Hagley Avenue/St Asaph Street intersection. These measures are linked closely to the traffic management measures proposed in the 'Hagley Avenue Traffic Management Measures' report. Requirements as a direct result of the Interim Cross include removal of 15 car parks on Hagley Avenue, to be replaced with five bus stops. There will also be car parks re-installed in Rolleston Avenue.

Installation of right turn arrows are also required at the Colombo Street/Lichfield Street and Manchester Street/St Asaph Street intersections to cater for the changes in bus volumes anticipated as a result of the Interim Cross.

Following the proposed public consultation phase, a summary of feedback along with the proposed plans will be presented to the Committee for implementation.

Staff

Recommendation: That the Sustainable Transport and Utilities Committee support the proposal for Hagley Avenue, as presented, to proceed to public consultation.

Chairman's

Recommendation: That the above recommendation be adopted.