

1. ASSESSMENT OF WESTERN BUS LAYOVER POSITION

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PURPOSE

The purpose of this report is to seek approval to locate the western bus-layover position on the western side of Hagley Avenue, north of St Asaph Street.

BACKGROUND

A layover is a bus only area at the terminus of a bus route where buses wait before resuming scheduled service. Layovers may be longer than a straightforward bus stop where more than one bus route terminates at the same location. Layovers are found at both ends of a route. They are required for a number of reasons:

- There is no central bus 'station' with sufficient capacity to house all buses between trips.
- To allow buses leeway in their running times to ensure the effects of traffic congestion and other delays do not adversely effect their timetable. The period of layover allowed is currently a minimum of five minutes or 10% of the running time, whichever is the greater.
- To provide the driver with an opportunity to clean the bus and use available toilet facilities.

Layovers also provide additional passenger destinations beyond the central city exchange. That is, they pass through the exchange and proceed to a layover elsewhere. Subject to the constraints of the one way system, routes generally from the west terminate at a layover east of the central city (and generally vice versa for routes from the north, south and east). Layovers are preferably sited with this in mind, locating them at popular destinations to make efficient use of the 'peripheral running' beyond the bus exchange.

CRITERIA FOR A LAYOVER

With the above in mind, an ideal layover location requires the following attributes:

- Be convenient to the bus exchange, minimising running distance and delays.
- The route taken to the layover is appropriate for bus use.
- Is in a location where people want to go to or depart from.
- Sensitive to the local environment.
- Minimises the amount of physical work required.
- Is easily accessible for pedestrians, and is safe.
- Provides adequate space for the number of buses that layover at a given time.
- Preferably provides access to both male and female toilet facilities for the driver.
- Minimises loss of high value parking.

CHANGES TO THE BUS NETWORK AND THEIR EFFECT ON COLOMBO STREET

To meet existing demand for services and to maintain current growth in passenger numbers, new routes and increased frequencies will become operational from 8 June 2004, on north/south routes and from November 2004 improved eastern and western routes become operational.

These changes would result in a 30% increase in buses on Colombo Street between Lichfield Street to Gloucester Street - an already congested section. It is thought that the increased congestion on Colombo Street that this would create, would have a severe detrimental effect on the reliability of all buses and in effect the system could 'fall over'.

In summary, from June 2004 an increase in buses on Colombo Street during weekdays will be as a result of the following service changes:

June 2004 Service Changes	Effect on Colombo Street	
Northern Services		
A - Airport	Increased frequency	
11 - Regents Park (replaces 4 and 11 Casebrook)	Increased frequency	
12 - Northwood	New service	
13 - Redwood	Increased frequency	
14 - Nunweek (replaces 4 - Harewood)	Increased frequency	
15 - Bishopdale	Increased frequency	
16 - Belfast	New service	
17 - Bryndwr	Increased peak frequency	
18 - St Albans	Increased frequency	
June 2004 Service Changes	Effect on Colombo Street	
Southern Services (Delayed from November 2003 in recognition of the need to address these routing issues)		
7 - Halswell	replaces 7 - Increased frequency	
71 - Hoon Hay	} Oaklands, Halswell and Kennedys Bush services	Increased frequency
77 - Kennedys Bush		Increased frequency
11 - Westmorland		Increased frequency
61 - Murray Aynsley		New service
62 - Huntsbury (replaces 12 - Huntsbury)		Increased frequency
67 - Bowenvale (replaces 27 - Bowenvale)		Increased frequency

It is essential these services remain on Colombo Street, as this offers the most efficient route to and from the bus exchange. It is also recognised as the main north/south public transport corridor in the central city where users are accustomed to boarding and alighting at convenient and popular locations, such as the Town Hall, Victoria Square and South City Mall.

MITIGATING THE EFFECT ON COLOMBO STREET

A method of reducing the number of buses on Colombo Street is to reduce the amount of peripheral running by other east/west routes heading for their layovers at Riverside (corner of Rolleston Avenue and Cashel Street) and City East (corner of Manchester and Gloucester Street).

An important reason for the proposed Lichfield Street - Tuam Street swap was to allow buses two-way movement on Lichfield Street, thus avoiding delays in the one way system and enabling more through routing and less peripheral running on Colombo Street. An interim solution to reduce bus numbers on Colombo Street has been developed and is termed the "interim swap", or "cross". This 'interim cross' requires re-routing some of the existing eastern and western routes (including the Sumner routes pending through routing) away from the Riverside and City East layovers reached via Colombo Street. Instead, these routes are proposed to run on the Lichfield Street/Oxford Terrace (eastbound) and St Asaph Street (westbound) corridors, as a surrogate for a two-way Lichfield Street. Until all east/west routes are through routed this will require a new layover to be found along these corridors that meets the requirements discussed earlier.

OPTIONS FOR A LAYOVER WEST OF COLOMBO STREET

Environment Canterbury indicate space for six buses to layover at any one time is required and that eastern routes no's 30, 31, 32, 33, 40, 42, 43, 49, 51 and the 5 express will layover at this new location. This comprises the existing eastern routes that currently layover at Riverside. The remaining (western) routes that layover at Riverside will move to the Polytechnic terminus.

As an indication of the existing use of the Riverside layover, it attracts on average 110 boardings and 40 alightings over a 12 hour period each weekday. This layover currently serves routes no's 20 - Cracroft, 21 - Ilam, 23 - Merrin, 24 - Hyde Park, 31/32 - Sumner/Mt Pleasant, 33 - Woolston, 40 - Wainoni, 49 - North Shore, and B - Burnham. These high boarding figures indicate demand to catch eastern services from here, as passengers of the western routes are likely to be boarding on Tuam Street and alighting at the hospital stop on Oxford Terrace. These figures suggest that the new layover, being the last bus stop on the route and the first pick up, should be as close as possible to the existing layover to minimise the additional walking distance and the risk of losing these passengers.

Layover locations considered were as follows:

- **St Asaph Street - West of Antigua Street (Brewery)**

This would require signal assistance to enable buses safe and convenient egress from St Asaph Street. The walking distance to the existing layover is about 400 metres, so this layover location may present additional walking distance to passengers inbound from the east. The first outbound bus stop would be outside the hospital on Oxford terrace, representing an acceptable additional walk from the existing layover of only 170 metres. This location is, however, isolated from attractions in the area, and in hours of darkness would not be a comfortable location in which to wait for a bus or be dropped off.

- **Antigua Street/Tuam Street Split - Hospital Car Park (Antigua Street)**

This option would avoid the need for new signals, with buses split between two spaces on Antigua Street, two spaces on Tuam Street (extending the existing bus stop), and a further two spaces on Hagley Avenue southbound. This would require the removal of 12 metered parking spaces in total. The additional running of buses laying over on Hagley Avenue would become considerable and intersection delays could become significant along the route back to the hospital bus stop for its first outbound pick up. The walking distance to the existing layover would be about 360 metres, whilst the first pick up stop would be outside the hospital.

- **Hagley Avenue - North of St Asaph Street (Parkside)**

This would also require signal assistance to exit St Asaph Street, and the loss of approximately 26 metered parking spaces on Hagley Avenue. Whilst the additional running distance for each bus would be 300 metres greater than the more direct route via Antigua and Tuam Streets, the buses would all be in one place. The walking distance to the existing layover would be about 360 metres, whilst the first pick up stop would be the hospital stop, a walk of 170 metres from the existing layover.

- **Oxford Terrace - East of Boatshed Footbridge (Boatshed)**

This option would avoid the need for new signals, with buses to make use of Antigua Street from St Asaph Street, and then proceed to Oxford Terrace, via Tuam Street and the hospital bus stop drop off. It would require the loss of 15 well-used metered parking spaces and has amenity value implications being so close to the boatsheds. Without clear pedestrian signing it may also confuse bus users wanting to catch an eastbound route on its outbound journey. They may wait at the hospital stop instead. This site would be most convenient for boarding passengers, being only 170 metres from the existing layover.

- **Oxford Terrace - Extension of Existing Bus Stop (East of Montreal Street)**

This site shares the issues mentioned above but does reduce the need to remove 10 well-used metered parking spaces. It would require a further walk of about 500 metres for boarding passengers from the existing site.

- **Oxford Terrace - West of Durham Street Intersection (Opposite St Michaels Church)**

As above, but involves a yet further walk of over 600 metres. It would require the removal of eight well-used metered parking spaces.

ASSESSMENT OF OPTIONS

After a detailed site survey, only the Brewery and Parkside options are considered appropriate for further consideration. The Oxford Terrace options would detract from the boatshed and riverside public amenity areas whilst also being varying but significant distances from the existing passenger catchments, and also require removal of well utilised metered parking to varying degrees. The Antigua Street/Tuam Street/Hagley Avenue split option is also discarded for reasons of additional running distance, intersection delays and space constraints, whilst also potentially confusing alighting passengers and bus drivers at layover and offering no significant saving in the loss of high value parking.

DETAILED ASSESSMENT OF PARKSIDE AND BREWERY OPTIONS

The remaining two options were assessed using a weighting system based on the layover criteria earlier discussed. This system was used by the Sustainable Transport and Utilities Committee to select the City East layover in February 2002. Given the clear marginal nature of the two remaining options and that route issues are the same for both options, more emphasis has been placed on some of the site issues (criteria 7-9). This has been achieved by making the score ranges 1 (low) to 5 (high) instead of 1 or 5, to reflect the marginal differences between the options within these criteria. The table of scoring below demonstrates that both sites have marginal differences.

Layover Criteria	Brewery	Parkside
Route Issues		
Ease of bus access (1 or 5)	5	5
Requirement for new bus stops (1,3 or 5)	5	5
Environmental sensitivity (1,3 or 5)	3	3
Distance/time costs (1 or 5)	1	1
Site Issues		
Environmental sensitivity (1 to 5)	5	3
Effects on car parking (1 to 5)	2	3
On site works (1 to 5)	1	1
Driver facilities (1 to 5)	1	2
Passenger destination (1 to 5)	2	5
Score	25	28

Route Issues

Both sites score equally on route issues (criteria 1-4) as they both take the same route and share whatever issues may arise. They both require signal assistance to emerge from St Asaph Street, consequently the ease of access for each option scores equally. Both are unlikely to require additional bus stops. Whilst buses currently do not use St Asaph Street west of Antigua Street, it is a minor arterial road with non-residential frontage and so the environmental sensitivity of doing this would not be significant. Both options therefore score equally under this category.

Site Issues

The site issues offer the only differences between the options.

Firstly, the brewery option is a less environmentally sensitive site as it does not impinge upon the parks amenity. It is understood from the Parks and Waterways Unit that the main issue in this respect is noise from idling buses (bus engines cannot be turned off for five minutes).

The brewery option would require the removal of four well-used metered parking spaces and seven well-used, unrestricted parking spaces, used primarily by brewery customers. The Parkside option requires the removal of approximately 26 metered spaces, however, this will be mitigated by the gain of 11 parking spaces at the existing Riverside layover on Rolleston Avenue/Cashel Street.

In terms of on-site works both options require signal assistance to emerge from St Asaph Street. Either site would require the provision of two bus stop shelters, in keeping with the usual requirements for central city layover sites. To mitigate any amenity concerns, these could be made advertising free and of the attractive style and colour provided on Fendalton Road, for example.

Parkside is marginally better than the Brewery in terms of driver facilities, as it is nearer to the hospital.

The only other significant difference between the sites are their convenience as a passenger destination. Parkside is more convenient for passengers heading for the hospital, boatshed and Hagley Community College. The walk from the brewery to the hospital and boatsheds is slower and more complicated.

Passengers will be required to cross St Asaph Street, walk up Antigua Street, and then either along Tuam Street to the crossing point at the Riccarton Avenue intersection or cross Tuam Street at Antigua and then cross Oxford Terrace. Whilst the Parkside layover is only 100 metres nearer to the existing layover by walking distance, the walking times favour Parkside because of the number of crossings required from the Brewery layover.

CONSULTATION

Initially, the range of layover options was not subject to a broad consultation process. Rather, once the Parkside option was known to be preferred, it was included in the Hagley Avenue traffic management project consultation. Specific comment was sought from both the Parking Unit and Greenspace Unit and more recently the hospital and brewery.

In general, the Hagley Avenue consultation process gave both positive and negative responses to the proposed Parkside layover. The positive comments were related to moving the buses away from Rolleston Avenue. The negative comments related to the change to the numbers of parking spaces available on Hagley Avenue. In response to this however, Environment Canterbury have indicated that the spaces now freed-up on Rolleston Avenue can be returned to metered parking.

The Parking Unit were concerned about the loss of metered parking revenue, and the general need for parking in Hagley Avenue, as opposed to the alternative brewery option.

The Greenspace Unit were concerned about the impact on the Park's amenity from the bus layover. In mitigation it can be said that there will not be a continual line of buses on the layover throughout the day and that this will therefore free up the view to and from the park. By inclusion of attractive bus passenger shelters (for example similar to those on Fendalton Road), the impacts could be further mitigated.

Both the hospital and the brewery were consulted on these layover proposals. The brewery expressed deep concern at the potential loss of parking on St Asaph Street. Their concern was focussed on the difficulty their customers would experience and the impact this would have on their ability to do business. The hospital however, had no objection to the Parkside option and recognised the importance of maintaining convenient public transport links for staff, visitors and passengers in general.

CONCLUSION

Parkside is recommended as a layover based on this modified scoring system. It is a better passenger destination than the brewery site, offering ready access to the park, hospital and college, whilst remaining a convenient site from which to access the cultural precinct. The signals necessary at St Asaph Street will allow buses efficient movement, whilst also improving pedestrian movements across both Hagley Avenue and St Asaph Street, which is consistent with the objectives of the Hagley Avenue scheme.

The issues of loss of metered parking and loss of park amenity are realistic impacts of this project. They need to be considered in balance with the positive effects this project will have, namely the reduction in bus numbers on Colombo Street and an ideal location for bus users to access the hospital and surrounds. In addition the parking loss can be offset by restoring some vacated layover positions on Rolleston Avenue to metered parking. There will also be an improvement in the amenity on Rolleston Ave when these buses move out.

Parkside is further recommended by the outcome of consultation with the brewery, who have realistic concerns on the effect the loss of parking would have on their customers; and the hospital, who have no objection to the Parkside option.

It is recommended that the western side of Hagley Avenue, north of St Asaph Street, be approved as the Parkside bus layover location.

Committee

- Recommendation:**
1. That the western side of Hagley Avenue, north of St Asaph Street, be the new Parkside bus layover location.
 2. That two black 'classic' style bus stop shelters, as provided on Fendalton Road, be provided at the layover, and that they are free of advertising.