



SHEFFIELD CITY COUNCIL Cabinet Highways Committee Report

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Report of: Simon Green, Executive Director, Place

Date: 8th September 2011

Subject: Proposed Junction Changes At St Georges Terrace/Brook Hill

Author of Report: John Bann, Head of Transport & Highways

Summary:

The report aims to provide members with information on how the 'exit' route of Regent Street has coped with the anticipated additional traffic since the Glossop Road bus and tram gate has been enforced to determine whether a signal controlled crossing of St Georges Terrace should be progressed to make the junction fully signalised. .

Reasons for Recommendations:

The two traffic lanes on St Georges Terrace have proved difficult to cross for pedestrians, especially elderly local residents wishing to catch a bus from the relocated stop on Broad Lane.

Recommendations:

1. Approve the design and construction of the previously approved (and consulted on) signal controlled crossing as originally intended at the Broad Lane end of St George's Terrace illustrated in Appendix C
 2. Inform local Councillors and Central Community Assembly of this decision.
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Background Papers:

Category of Report: OPEN

Statutory and Council Policy Checklist

Financial Implications
Yes: Cleared by Matthew Bullock
Legal Implications
No: Cleared by: Julian Ward
Equality of Opportunity Implications
Yes: Cleared by: Ian Oldershaw
Tackling Health Inequalities Implications
No
Human rights Implications
No
Environmental and Sustainability implications
No
Economic impact
No
Community safety implications
No
Human resources implications
No
Property implications
No
Area(s) affected
Central and Walkley
Relevant Cabinet Portfolio Leader
Councillor Leigh Bramall
Relevant Scrutiny Committee if decision called in
Economic Environment Wellbeing
Is the item a matter which is reserved for approval by the City Council?
No
Press release
No

PROPOSED JUNCTION CHANGES AT ST GEORGES TERRACE/BROOK HILL

1.0 SUMMARY

1.1 The report aims to provide members with information on how the 'exit' route of Regent Street has coped with the anticipated additional traffic since the Glossop Road bus and tram gate has been enforced to determine whether a signal controlled crossing of St Georges Terrace should be progressed to make the junction fully signalised.

2.0 WHAT DOES THIS MEAN FOR THE PEOPLE OF SHEFFIELD

2.1 Comments from City Centre, South and East Planning and Highways Board during the original scheme approval process led to a commitment to review the need for providing a pedestrian crossing across St Georges Terrace near Brook Hill. The proposed changes should make it easier for pedestrians to cross in this location, improving access to a local bus stop. However, there will be conflicting views about the new pedestrian crossing point, between drivers, who can see signals as obstructing traffic flow and pedestrians, who see them as an aid to cross the road.

3.0 OUTCOME AND SUSTAINABILITY

3.1 The response to feedback on the operation of the junction since camera enforcement occurred contributes to the Putting the customer first objective of the Council Plan "A City of Opportunity", with discussions that respond to customer comments about the difficulty in crossing St Georges Terrace.

3.2 A key outcome of the report will be to determine whether the addition of a signalised crossing of St Georges Terrace should be progressed.

4.0 REPORT

Background

4.1 In tandem with the upgrading of an existing pedestrian crossing on Broad Lane, a complementary scheme was developed to fully signalise the St Georges Terrace/Brook Hill junction and introduce a further controlled pedestrian crossing point across St Georges Terrace.

4.2 The introduction of traffic signals at this junction forms an integral part of the Broad Lane access strategy associated with development of the New Retail Quarter (NRQ). It is also consistent with the City Centre Masterplan aim of introducing a number of 'access loops' for city centre traffic, with Broad Lane and Rockingham Street being used to access the NRQ, West Street and City Hall area. However, it was also planned to help with managing traffic away from Glossop Road after camera enforcement of the bus and tram gate started as Regent Street would be the main alternative route out of the area.

- 4.3 Following local consultation, the new traffic signal controlled junction at St Georges Terrace/Brook Hill was approved at the 16th February 2009 City Centre, South and East Area Planning and Highways Board.
- 4.4 While the St Georges Terrace/Brook Hill junction signalisation scheme was being constructed, a report seeking approval for camera enforcement of the bus and tram gates on Glossop Road was presented to the 20th July 2009 City Centre, South and East Area Planning and Highways Board. This report cross referenced the benefit of the signal controlled junction at St Georges Terrace/Brook Hill as a way of helping traffic exit the Glossop Road area during camera enforcement hours.
- 4.5 Although the 20th July 2009 meeting approved the completion of the design and implementation of the Glossop Road Bus and Tram Gates, this was subject to the non activation of the previously approved traffic lights at the junction of St. Georges Terrace with Brook Hill until the Board (now Cabinet Highways Committee) received a report examining the displacement of traffic on Regent Street/St George's Terrace. This was to be within 6 months of the implementation of the camera enforcement scheme. As a result, a 'Give Way' line rather than traffic signals was implemented as part of the scheme. Photograph One in Appendix B shows the current layout at the junction.
- 4.6 Following a significant publicity campaign and a period of two months where warning notices rather than Penalty Charge Notices (commonly referred to as fines) were issued, full camera enforcement commenced in August 2010.
- 4.7 This report acts as the feedback on the evening peak hour traffic effects on Regent Street. and St Georges Terrace during bus and tram gate enforcement hours – namely Monday to Friday, 1600-1830. There are generally no issues with delays exiting St Georges Terrace onto Brook Hill during the rest of the day.

Monitoring

- 4.8 Because of the nature of the original bus and tram gate enforcement scheme, a significant 'before and after' monitoring programme was put in place. As well as traffic and journey time data, informal feedback from some local residents highlighted a particular issue with accessing the new location for the out of town bus stop on Broad Lane, particularly for older residents of St Georges Court as this now involves crossing St Georges Terrace without a controlled crossing.

What did we expect to happen on Regent Street and what is happening?

- 4.9 A computer traffic model was used to investigate the evening peak hour impacts on the wider road network of enforcing bus and tram gates in different locations on Glossop Road. The 'base scenario' represented the situation in 2009, with the preferred option being enforcement of the proposed bus and tram gate between Regent Street

and Cavendish Street with the inclusion of traffic signals at St Georges Terrace.

Traffic Flows - Regent Street

- 4.10 The model predicted that evening peak hour flows on Regent Street would reduce by around 10% without traffic lights on St Georges Terrace over the base, but the scenario WITH traffic lights increased flow by around 15%. This suggested that having the traffic signals at the top of St Georges Terrace would make Regent Street a more attractive exit route out of the city centre, whilst not having traffic lights would encourage vehicles to seek alternative exits out the city centre. In practice, without traffic lights, traffic on Regent Street has reduced by 15%. Overall in the same period, traffic levels around the city centre have fallen by around 3%. It is therefore suggested that the modelling predictions are quite robust.

How is the junction working now?

- 4.11 When the upgraded 'toucan' crossing on Broad Lane was originally switched on, the crossing signal only changed when it was 'called' (where a pedestrian or cyclist pushed the button). However, in preparation for the potential need to use the crossing on Broad Lane to help manage queues on St Georges Terrace during the evening peak hour, queue detection equipment was implemented on St Georges Terrace, just by the junction of Portobello.
- 4.12 The queue detection loop on St Georges Terrace can be used to determine the frequency of how often (and how quickly) the crossing point on Broad Lane responds to the 'call' button being pressed by a pedestrian or cyclist and is managed through the Urban Traffic Control (UTC) system depending on factors including the time of day, day of the week and effects on other local junctions.
- 4.13 The signal timing plan based on using the queue detection loop was first implemented in the middle of August 2010, then changed in early October 2010 to provide more green time for pedestrians and cyclists crossing Broad Lane.
- 4.14 Using a sample weeks data in March 2011, the queue loop detected queues on only a very small number of occasions - around 3% of the time that the bus and tram gate is enforced.

Pedestrians

- 4.15 A pedestrian count between 1600 and 1830 in June 2011 showed that 147 people crossed St Georges Terrace at its junction with Brook Hill. The 'busiest' hour was 1600-1700 when 65 people crossed. This currently uncontrolled crossing is on a walking route from the University campus to recently developed student accommodation blocks in the St Georges area.

Summary

- 4.16 In summary, current evening peak hour traffic plans in the area have managed the situation for traffic so additional signals are not currently necessary for traffic management reasons. However, although there are generally no issues with delays exiting St Georges Terrace onto Brook Hill for the majority of the day, there is still an issue of pedestrian access across St Georges Terrace, particularly for the elderly. Installation of a signal controlled crossing in this location would improve pedestrian facilities in the area.

Relevant Implications

- 4.17 Subject to members' approval, it is proposed to fund the new pedestrian crossing through fine income from existing camera enforcement sites. As a lot of work has already been done at the site, this cost would be around £20,000. There are no legal implications associated with this report. An Equality Impact Assessment has been done for this scheme which intends to contribute to the Council's environmental objectives by reducing the impact of the car, whilst increasing the attractiveness of other sustainable transport modes such as walking, cycling and public transport. It highlights the universal attractive to pedestrians of a crossing, being particularly beneficial to the elderly and disabled.

5.0 ALTERNATIVE OPTIONS CONSIDERED

- 5.1 Officers have considered a variety of options including:
- doing nothing
 - considering different types of crossings over St Georges Terrace
 - moving the bus stop down Broad Lane
- 5.2 Doing nothing is an option, but would lead to a continuation of the access issues to a bus stop, particularly for the elderly residents of St Georges Court.
- 5.3 Different types of crossings over St George's Terrace have been considered:
- Reducing the width of St Georges Terrace to one lane to make the uncontrolled crossing distance shorter. This is an option, but it would cause some additional traffic queues on St George's Terrace and would be expensive as it involves changing the existing kerblines and using high quality materials. In addition, reducing the road width now could create capacity issues in the future as a result of other changes to the highway network proposed through the new retail quarter development.
 - Zebra crossing in the location of the currently uncommissioned crossing. The current crossing point is too close to Broad Lane to turn it into a zebra crossing – the detail of the existing site is included in Photograph One in Appendix B. There should ideally be at least two car lengths after a zebra crossing before the 'Give Way' line in which to allow vehicles to wait without sitting on the crossing.

- Separate signal controlled crossing (not co-ordinated with the wider junction signals) in the location of the currently uncommissioned crossing. The current crossing point is too close to Broad Lane to turn it into a separate signal controlled crossing. There should ideally be at least two car lengths after the crossing before the 'Give Way' line in which to allow vehicles to wait without sitting on the crossing. The current layout would not allow this.
- Allowing for the fact that the existing location does not appear to be practical, then all the existing equipment would have to be removed and a new crossing facility constructed further down St Georges Terrace. This would create the possibility that the new crossing point would be some distance from where people want to be so it would just not get used. The costs of removing equipment, re-designing and providing facilities in an alternative location will be high.

5.4 Moving the bus stop is an option, but not without consequences. In order to improve access to the outbound (uphill) bus stop, it would need to be moved to a new location between St George's Terrace and Mappin Street. Although a new location for the bus stop has been found:

- The location would restrict the west bound (uphill) traffic lane on Broad Lane, particularly at peak times. Although there would be scope for smaller vehicles to overtake a stationary bus, road widths would be 'tight' and may create the possibility of head on collision with vehicles travelling in opposing directions.
- Visibility of the nearside traffic signals at St Georges Terrace could be masked by a stationary bus at the stop. However, there are secondary sets of signals on the central islands which would remain visible.
- The costs of removing equipment, re-designing and providing bus stop facilities in an alternative location will be reasonably high.
- This solution does not improve the wider issue of a lack of pedestrian crossing facilities across St Georges Terrace

6.0 REASONS FOR RECOMMENDATIONS

6.1 In purely traffic terms the signals are not necessary on St Georges Terrace and may cause extra journey delays at quiet times. The signals will have queue detection equipment on their approach, so that if queues form, the signals on Broad Lane will turn red, stopping traffic on Broad Lane and creating a gap for traffic to exit St Georges Terrace. This will minimise longer delays.

6.2 However, the two traffic lanes on St Georges Terrace have proved difficult to cross for pedestrians, especially elderly local residents wishing to catch a bus from the relocated stop on Broad Lane.

6.3 A lot of the required work for the signal junction/crossing has already been done at the site (the detail of the existing site is included in Photograph One in Appendix B), therefore it is recommended to

implement a signal controlled crossing across St Georges Terrace and link it to the existing crossing of Broad Lane to provide full signalisation of this junction.

7.0 RECOMMENDATIONS

- 7.1 Approve the design and construction of the previously approved (and consulted on) signal controlled crossing as originally intended at the Broad Lane end of St George's Terrace illustrated in Appendix C
- 7.2 Inform local Councillors and Central Community Assembly of this decision.

Simon Green
Executive Director of Place

8 September 2011

Appendix A: Results of 'before' and 'after' Glossop Road bus and tram gate camera enforcement traffic count data.

Traffic data for St Georges Terrace, counted at Broad Lane

	1600-1830	Thursday 5 th	Thursday 9 th	Notes
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		June 2008	June 2011	
St Georges Terrace/ Broad Lane junction	Left	606	689	
	Straight on (illegal)	193	0	This manoeuvre no longer possible as blocked off as part of the scheme
	Right (illegal)	16	4	
	TOTAL	815	693	15% reduction

Traffic data on Regent Street, counted at Portobello

	1600-1830	Thursday 5 th June 2008	Thursday 9 th June 2011	Notes
Regent Terrace/ Portobello junction	Left (Portobello)	39	59	Expected increase as this manoeuvre is the alternative access route around the (now enforced) bus and tram gate
	Straight on	690	703	
	Right (for cyclists)	0	0	
	TOTAL	729	762	5% increase

Traffic data at Fitzwilliam Street, Glossop Road, Regent Street junction

	1600-1830	Thursday 5 th June 2008	Thursday 9 th June 2011	Notes
Fitzwilliam Street, Glossop Road, Regent Street junction	First left from Fitzwilliam (Convent Walk)	5	0	This manoeuvre no longer possible as Convent Walk one way reversed as part of scheme
	Second left from Fitzwilliam (Glossop all)	274	123	Camera enforcement started in August 2010
	Second left from Fitzwilliam (Glossop permitted vehicles)	28	58	50% increase in both black cab and cycles counted
	Straight on (Regent Street)	473	455	
	Right	5	5	
	TOTAL	785	641	18% reduction