
Meeting of Executive Members for City Strategy and Advisory Panel

27th January 2009

Fishergate Gyratory Multi-Modal Study

Summary

1. This report advises on progress of the first stage of the Fishergate Gyratory Multi-Modal Study. This study was commissioned to investigate options for improving the traffic flow around the gyratory with the aim of improving accessibility and safety for all road users, particularly pedestrians and cyclists. The study also considers local air quality issues.
2. The report outlines progress with the study so far, and sets out the key requirements that any future scheme option(s) will need to satisfy. It also highlights how some of these may conflict with each other and therefore compromise solutions are likely to be needed.
3. The report seeks Member endorsement of the proposed next steps within the study, and recommends that a further update report is brought to a future EMAP describing potential options and how they satisfy, as far as is practicable, the key requirements.

Background

4. The current layout of Fishergate gyratory and the junctions at either end is shown at Annex One. The road system carries large volumes of traffic and cycles, as well as being a prominent walking route to the city centre. It is a car dominated environment that severs the local community and causes access difficulties for non-vehicular modes. Accident statistics show that over the five year period May 2003 to April 2008 there were 53 accidents within the study area, of which 24 (45%) involved a collision between a vehicle and cyclist or pedestrian.
5. Redevelopment of the Barbican Leisure Centre and adjoining car park has provided the Council with Section 106 developer funding to evaluate and improve the anticipated future walking routes between the refurbished Barbican Centre and St George's Field Car Park.
6. The gyratory is within the York Air Quality Management Area (AQMA). Two locations, immediately surrounding the Fishergate/Paragon Street junction have annual mean concentrations of nitrogen dioxide exceeding recommended levels.

7. To help address these difficult issues in a coordinated way, Halcrow were commissioned in October 2008 to undertake a multi-modal study of the Fishergate gyratory and immediate surrounding area. The first phase of the study has involved a lot of information gathering and the identification of key issues, as set out in more detail below. The aims of the study are to:
- Identify current and future pedestrian desire lines and how to cater for them.
 - Identify and cater for cyclist desire lines and minimise conflict with other modes.
 - Identify suitable bus routes and measures. (e.g. bus only movements)
 - Review the operation of the gyratory.
 - Consider whether Piccadilly junction should be re-opened to improve bus access and the implications for other traffic.
 - Consider the impact of opening the right turn from Tower Street onto Skeldergate Bridge at the roundabout.
 - Consider the effects of changes to the road layout and operation on access to and from the adjacent areas.
 - Identify appropriate measures to improve air quality.

The study and its findings

Assessment of the current situation

Accidents

7. During the five-year period, between May 2003 and April 2008, 53 accidents were recorded. Of these, one was fatal, five were serious and 47 were slight. Further analysis shows that 24 accidents involved a pedestrian or cyclist, which represents a high percentage of the total.
8. Particular concentrations of accidents exist around the Kent Street and Tower Street roundabouts. For example, there were 13 accidents at the Kent Street/Fawcett Street junction, of which five involved pedestrians and two involved cyclists. The percentages of accidents involving pedestrians and cyclists at other locations on the gyratory were also high, although the total number of accidents at any given location was lower. For example four of the five accidents (80%) at Piccadilly/Fishergate junction involved pedestrians, and three of the seven accidents (43%) at Paragon Street/Fawcett Street involved non-motorised users.

Highway layout and vehicle flows

9. The gyratory system that dominates the study area exists to facilitate the simplified operation of a number of other junctions in the surrounding area. Paragon Street, Fishergate and Tower Street are all 'A' class roads and designated under the Council's speed management plan as 'traffic

routes'. All routes are subject to a 30mph speed limit. Tower Street (North), George Street (pedestrians and cyclists only) and Piccadilly provide access to the city centre core. Kent Street provides access to the east and Fewster Way provides access to the residential areas and hotel to the west of the study area. Access is restricted along Piccadilly to ban coaches and HGVs greater than 7.5 tonnes. Footways are provided throughout the study area and cycle facilities are intermittent.

10. The gyratory system was introduced to simplify traffic flows through the area but this means that the highway in this area is congested at peak periods and is busier than it might otherwise be as a result of restricted turning movements. Restricting turning movements require vehicles to travel all the way around the gyratory. Of vehicles that travel all the way around the Fishergate gyratory in the AM peak periods 81(71%) enter from Piccadilly and turn right onto Tower Street; 24 (21%) enter from Piccadilly and turn left onto Bishopgate Street and 7 (6%) enter from Tower Street and turn left onto Bishopgate Street. These levels are significantly lower than vehicle numbers that use only part of the gyratory for their journey, for example, in the AM peak 420 vehicles enter Fishergate from the south and 444 leave Fawcett St towards Fulford Road and 739 vehicles travel around the southern end of the gyratory system.

Cycle flows and turning movements

11. The Fishergate study area has limited highway facilities catering for cyclists. Several roads to the north of the area form part of the National Cycle Network but do not extend into the Fishergate gyratory. Cycling within the traffic stream is generally acceptable when traffic speeds are low, there is good visibility and traffic flows are not excessive, there is adequate carriageway width and cyclists are not forced to make conflicting movements across lanes of traffic. These conditions do not exist on the gyratory and so it does not provide a desirable environment for cyclists. Narrow lanes on dual carriageway sections have been highlighted as an issue as is the number of lanes within the gyratory system requiring cyclists to be confident and have good visibility in order to cross them. Due to the narrow cycle lanes (well below standard at 0.8m in some places) it is difficult for cyclists to pass standing traffic when the area becomes congested.
12. Surveys show that cycle movements include 26 cyclists entering the gyratory in the AM peak from Fulford Rd and 18 leave Fawcett Street towards Fulford Road. In the PM peak these figures are 12 and 28 respectively. Cyclists travelling around the southern end of the gyratory were 7 in the AM peak and 10 in the PM peak. There were 36 cyclists heading east at the Fishergate/Paragon St junction, of which 15 entered Fawcett Street. Cycle flows across the remainder of the study area are of a similar magnitude, which may reflect the difficulty in crossing lanes and the lack of facilities available to cyclists to enable them to cycle on appropriate desire lines.
13. On-road cycle facilities are situated at the following locations:
 - On all approaches to the Tower St/Bishopgate Street junction

- Westbound approach of Paragon St at junction with Fawcett St
- Southbound on Fawcett St after junction with Kent St; extending southbound along Fishergate (0.8m wide)
- Northbound on Fishergate (0.8m wide) on approach to junction with Escrick Terrace/Fishergate.

Pedestrians

14. On the Council map of designated pedestrian priority routes Fishergate and Tower Street are regarded as category 'A' because they provide links with the city centre. Paragon Street is category 'B' providing access to shops and schools. There are significant trip pedestrian attractors within the study area including schools, the Barbican Centre and St George's Field Coach and Car park. The Fishergate area includes two formal crossing facilities for pedestrians; Fishergate and Paragon Street, on the westbound approach to the Paragon Street/Fawcett Street junction and a less formal crossing outside the Fishergate Primary School. A further five key locations have been identified on site at which significant pedestrian crossing movements take place and need to be looked at in more detail. These are:
 - Crossing Tower Street, near to roundabout junction, between River Ouse and York Crown Court side of the road.
 - Crossing Tower Street between the entrance to St George's Field car park and York Castle.
 - Crossing Fishergate to/from junction with Piccadilly.
 - Crossing Fawcett Street between Paragon Street and Kent Street junctions.
 - Crossing Fawcett Street at Kent Street junction.
15. The lack of formal pedestrian crossing points and severance caused by the gyratory has created an 'island' at the centre of the gyratory. The area surrounding Tower Street also presents significant challenges to pedestrians with a lack of crossings and extensive guardrails on all approaches.
16. Pedestrian flows are high through the gyratory. In the AM peak for example surveys identified 72 pedestrians crossing Paragon Street heading south and 108 crossing paragon Street northbound. 72 pedestrians crossed Fishergate and Tower Street northbound to access Piccadilly.

Bus services, stops and movements

17. Analysis of bus service timetables shows the gyratory system carries 14 inbound and 8 outbound bus services throughout the day, with four of the services operating on a 10-15 minute frequency.

18. The study area contains three bus stops, Fewster Way, Fawcett Street and Escrick Terrace. The three stops provide for 18 public transport and two tourist services, with the majority of routes running through the gyratory using just two of the stops, Fewster Way (inbound) and Fawcett Street (outbound). The third stop at Escrick Terrace is reserved for school buses. Buses using these stops provide services linking the city centre to destinations such as Beverley, Bridlington, Clifton, the University, Designer outlet, Fulford, Hull, Pocklington etc.
19. There are three broad types of bus use within the study area, tour buses/coach drop off, service buses (conventional) and service buses (ftr). Notable issues arising from these different bus uses include the potential for layover and higher emissions from the tour buses and the ftr's have limited articulation, having a greater impact on swept paths which means that otherwise feasible options to redirect traffic flows or change the layout of existing junctions may have to be discounted.
20. The physical road network affects inbound services travelling around the gyratory; a particular constraint is the narrowing of Fawcett Street as it merges into Fishergate at the southern end of the gyratory. Buses are required to straddle both of the available right turn lanes, including the ftr, which operates on a 10 minutes frequency. This has the effect of generally slowing all vehicles around this section of the gyratory.
21. Inbound service travelling north along Fishergate and Tower Street are unable to turn right directly into Piccadilly and instead must continue to the Tower Street roundabout, U-turn and travel southbound along Tower Street to Piccadilly. This detour affects 11 services and adds approximately 350m to 400m to the route. A further detour exists for buses travelling into the city from the east. Services must travel south along Fawcett Street and loop the southern end of the gyratory system before travelling north along Fishergate and Tower Street, adding approximate 250m to the route.

Parking and servicing

22. Limited amounts of on-road parking spaces are available on Fawcett Street and Fishergate. Waiting and loading restrictions apply along almost all other sections of the gyratory, with the exception of Tower Street which has no marked restrictions but due to the nature of the road and the traffic using it, experiences minimal, if any parking or loading activity. On-road parking and time restrictions along Fishergate limit parking to an hour with no return within the hour.

Air Quality

23. Fishergate gyratory falls within the Air Quality Management Area (AQMA). Diffusion tube monitoring of nitrogen dioxide is present in five locations in the study area and a permanent monitoring station measuring nitrogen dioxide and PM₁₀ is located opposite Fishergate Primary school. Two locations immediately adjacent to the Fishergate/Paragon Street junction have annual mean concentrations of nitrogen dioxide exceeding objective values (40ug/m³). An additional two

locations (Paragon Street and Fawcett Street) experience levels above 36ug/m³, close to objective levels.

Consultations

24. To identify the issues and problems experienced by users consultation with key stakeholders was undertaken. A list of stakeholders is attached as Annex two. Fishergate ward Members were consulted via email, external stakeholders were consulted by email and letter and internal stakeholders were consulted via a workshop. All groups considered that improvements should be made to the gyratory with key areas being a safer and more attractive environment for pedestrians and cyclists; improving air quality and providing measures for public transport to facilitate turning movements and improve journey times. A summary of the responses is contained at Annex two.

Review of previous and other ongoing studies and scheme bids

25. Several studies were reviewed in order to appreciate the scheme in a wider context to ensure it is complementary to the longer term objectives for the locality and the city overall. A brief outline of their respective influence follows.
26. The Castle Piccadilly Planning brief provides guidance on policy development and design parameters. One of the key objectives is to improve connectivity between the Castle, Piccadilly and the city centre. Pedestrian routes are of particular importance and enhancements to Piccadilly and St George's Field car park will be expected. Priority will be given to pedestrian use in improving the public realm and the opportunity should be taken to upgrade interchange and public transport facilities. One option for improvement could be a bus gate at the Fishergate/Piccadilly junction.
27. The Air Quality Action Plan 2 sets out the long term strategy for improving local air quality. The report identifies congested streets with limited opportunity for dispersion as the primary cause of pollution 'hotspots'. The report identifies that 57 per cent of nitrogen dioxide emitted in the Fishergate area originates from motorised vehicles.
28. Fulford Road improvements extend south from Fishergate along the A19 to the A64 interchange. The Fulford Road study developed four key packages of measure, which could complement future proposals for Fishergate. A comprehensive package of cycle facilities along the corridor, localised bus priority, relocation of traffic queues outside the main urban area as well as improvements to signals and junction enhancements. If benefits are to be continued further towards the city at Fishergate, additional signalling along the radial may be required.
29. A bid to the Regional Transport Board has also been submitted for Access York Phase 2, consisting of improvements to the Outer Ring Road (ORR) and other measures on roads within the ORR to improve the situation for walking, cycling and public transport. If the bid for inclusion in the Regional Funding Allocation programme is successful, it

will have an impact on (reducing) traffic flows around the Inner Ring Road and connecting radial routes.

Key Requirements

30. Improving access and safety for pedestrians and cyclists is the main reason for considering improvements at the gyratory. In considering the study area a multi-modal approach has been adopted to take into account potential improvements for all modes. Through examination of the stakeholder responses and discussion at a workshop Halcrow held with Officers, the identified key requirements for any future scheme option(s) to satisfy included:
 - Improving crossing facilities for pedestrians on desire lines, particularly on Tower Street and links to Piccadilly.
 - Consider ways in which vehicle movements around the gyratory can be reduced by opening up junctions and allowing appropriate turning movements.
 - Improve existing cycle facilities and provide additional facilities.
 - Accommodate cyclists desire lines and remove the need to travel around the gyratory.
 - Reduce conflict for pedestrians and cyclists particularly at the Tower Street/Fishergate/Paragon Street junction.
 - Reduce journey time and distances for public transport by enabling additional turning movements.
 - Improve safety for pedestrians and cyclists particularly at junctions and enable desire lines to be followed without the need to make difficult manoeuvres across lanes e.g. travelling south from Tower Street to Fulford Road and Travelling north from Fishergate to Piccadilly or Tower Street (N)
 - Improve air quality particularly around the school sites.
 - Maintain service accesses.
 - Maintain highway capacity.

31. Improvements for pedestrians and cyclists will form the main focus of any future report but some measures that have been discussed as part of an ideas workshop include:
 - Bus lanes on Fishergate and Fawcett Street.
 - Signalising Fishergate/Paragon Street/Tower Street and other junctions on the gyratory.
 - Contra flow bus lane on Fishergate.
 - Bus gate on Escrick Terrace.
 - Contra flow cycle lane on Paragon Street.
 - Allow right turn manoeuvres from Tower Street, southbound, to Piccadilly.
 - Pedestrian crossings at Tower Street
 - Pedestrian refuge on Fishergate
 - Reduce Tower Street, southbound, to one vehicular lane and introduce a bus lane.

Initial appraisal

32. Whilst many of the key requirements are complementary, others are not. For example, reallocating road space, on the gyratory to facilitate cycle lanes or bus lanes will have an adverse effect on its efficiency thereby increasing congestion and/or vehicle queue lengths, potentially leading to a degradation in air quality.
33. It will, therefore, be difficult to devise a scheme option(s) that satisfies all of the key requirements. Hence, the relative benefits/disbenefits of any scheme option(s) will need to be considered by Members to decide on a preferred option for further evaluation and detailed design.

Options and Analysis

34. The following options are, available to the council:
 - Option 1 - accept the principal that the Fishergate gyratory should be altered to improve the accessibility and safety for all road users, particularly pedestrians and cyclists. The alterations and enhancements to be considered will have an impact on the operation of the junctions and congestion to varying degrees. Subject to this, scheme options should be presented to a future EMAP for their relative benefits/disbenefits to be considered by Members in order to decide on a preferred option for further evaluation, consultation and detailed design
 - Option 2 reject the principal and leave the gyratory in its current format
35. Option 1 will enable further study to take place, which will develop and identify a preferred option that meets as many of the key requirements as possible.
36. Option 2 will not assist in identify any improvements for pedestrians, cyclists or air quality.

Corporate Priorities

37. Implementing alterations to Fishergate gyratory and its associated junctions to improve accessibility and safety for all road users, particularly pedestrians and cyclists, will contribute to the following Corporate Priorities:
 - Reduce the environmental impact of council activities and encourage, empower and promote others to do the same. *There is considerable scope for encouraging more people to use more sustainable forms of transport in a safer environment.*
 - Increase the use of public and other environmentally friendly modes of transport. *There is considerable scope for encouraging a more walking, cycling and use of buses as the improvements will include new cycle lanes and new/improved pedestrian crossings.*

- Improve the health and lifestyles of the people who live in York, in particular among groups whose levels of health are the poorest. *There is considerable scope for encouraging a more walking, cycling and use of buses as the improvements will include new cycle lanes and other measures to benefit pedestrians and public transport users.*
38. Local Transport Plan 2006-2011 (LTP2): The scheme would contribute to several of the aims of LTP2, namely:
- To reduce the levels of actual and perceived safety problems;
 - To enhance opportunities for all community members, including disadvantaged groups, to play an active part in society;
 - To improve the health of those who live or work in, or visit, York, and
 - To reduce the impact of traffic and travel on the environment, including air quality, noise and the use of non-renewable resources.

Implications

39. This report has the following implications:
- **Financial** - There are no financial implications for the council at this stage. Once the detailed design has been undertaken, further resources may be required to undertake additional consultation and implement the measures.
 - **Human Resources (HR)** – There are no HR implications for the council.
 - **Equalities** - The potential improvements to reach opportunities and facilities within York using wider range of more sustainable transport that would have otherwise been unattractive.
 - **Legal** – There are no legal implications at present.
 - **Crime and Disorder** – There are no legal implications at present.
 - **Information Technology (IT)** – there are no IT implications at present.
 - **Property** – There are no property implications at present.
 - **Sustainability** – No comments.
 - **Other** – No comments.

Risk Management

40. In compliance with the Council's Risk Management Strategy the main risk that has been identified in this report could lead to the inability to meet the council's objectives (Strategic).
41. Measured in terms of impact and likelihood, the risk score for the recommendation is less than 16 and thus at this point the risks need

only to be monitored, as they do not provide a real threat to the achievement of the objectives of this report.

Recommendations

42. That the Advisory Panel advise the Executive Member to:
- i. Note this report (including, Annexes).
 - ii. Accept the principal that the Fishergate gyratory should be enhanced to improve the accessibility and safety for all road users, particularly pedestrians and cyclists. The alterations and enhancements to be considered will have an impact on the operation of the junction and congestion to varying degrees.
 - iii. Receive a further report from officers at a future EMAP describing potential options and how they satisfy, as far as is practicable, the key requirements.

Reason: The study confirmed that current facilities for pedestrians and cyclists are less than ideal, evidenced by the number of accidents that have occurred in the past five years. Accepting the principal that the Fishergate gyratory should be enhanced, particularly and ultimately deciding on an option to address the issues as far as is practicable should improve safety for all road users, pedestrians and cyclists.

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Report Approved



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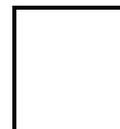
Specialist Implications Officer(s)

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Wards Affected:

Fishergate

All



For further information please contact the author of the report

Background Papers

None

Annexes

Annex 1 – Plan of Fishergate Study Area
Annex 2 – List of Consultees and responses