

ROTHERHAM BOROUGH COUNCIL – REPORT TO MEMBERS

1.	Meeting:	Economic Development, Planning and Transportation Matters
2.	Date:	21 June 2010
3.	Title:	A630 Rotherham to Thrybergh Smart Route Proposed Improvements
4.	Programme Area:	Economic and Development Services

5. Summary

To seek Cabinet Member approval to undertake the detailed design and implementation of highway improvements at Mushroom roundabout (the junction of the A630 Fitzwilliam Road/Doncaster Road and A6123 Herringthorpe Valley Road/Aldwarke Lane). The proposals include the introduction of traffic lights to control traffic on the roundabout and facilitate the provision of pedestrian crossings on all arms. It also includes for the infilling of the subway on Fitzwilliam Road approach to the roundabout and extending the existing bus only lane.

6. Recommendations

Cabinet Member resolve that the report prepared by WSP and its recommendations be received and that:

- i. detailed design of a traffic light controlled junction with associated highway works be undertaken**
- ii. a community information giving exercise be carried out in partnership with South Yorkshire Passenger Transport Executive**
- iii. the proposal be implemented subject to no issues being raised at the information giving stage.**

7. Proposals and Details

Background:

As part of the Rotherham Bus Key Routes working group; which is made up of representatives First Group; the primary bus operator, South Yorkshire Passenger Transport Executive (SYPTe) and Rotherham Council (RMBC), the SYPTe commissioned a public consultation exercise in June 2009 to establish public opinion on issues that affected the key route between Rotherham Town Centre and the borough boundary with Doncaster along the A630, identified as the Rotherham to Thrybergh Smart Route.

This exercise attempted to establish the public's perception of this bus route and in particular their views on 4 key locations and potential improvements:

College Road roundabout – improvements in and out of the interchange
Fitzwilliam Road – widening the approach to St. Ann's roundabout
Mushroom roundabout – improvements to traffic flow
Doncaster Road (Whinney Hill) – additional in bound bus only lane

The consultation exercise delivered leaflets to over 10,000 properties along and surrounding the route, there were 30 Community Access Points where leaflets could be picked up and feedback given together with advertisements in the Rotherham Advertiser and Rotherham Record. There was also a specific web site for the consultation which allowed contact via email and all mediums provided a contact telephone number. The respondents identified the following areas of concern:

- Improve traffic flow along the corridor and reduce congestion and delays.
- Improve journey time reliability as a whole and improve punctuality and journey times for public transport. Mushroom roundabout was identified as the most important location for improvements with this junction receiving the most frequent single issue response which was the desire to see traffic lights introduced.

As part of the Dalton and East Herringthorpe Development Framework 'master planning' process for Dalton and East Herringthorpe in the summer of 2008 a workshop was held with members of the local community for Dalton and East Herringthorpe to identify local accessibility issues and barriers to accessing local facilities and services. Mushroom roundabout was seen as a major barrier to movement for pedestrians and cyclists particularly across Aldwarke Lane. Members of the group also highlighted that there were safety concerns with the use of the subway on Fitzwilliam Road, particularly during the evening and that this facility is seen as inconvenient to use.

Additionally Mushroom roundabout is identified as a congestion hotspot in the current Local Transport Plan (LTP 2).

Scheme development and analysis:

With this information in mind the working group identified possible interventions along the corridor to improve journey time and journey time reliability primarily for public transport but taking an holistic approach to the objectives these interventions should address accessibility issues and general traffic congestion. SYPTTE then commissioned WSP to evaluate these possible interventions.

WSP worked closely with officers of the Councils' Transportation Unit to carry out the detailed evaluation and jointly developed improvements to the original proposals, a copy of their final report is attached as Appendix A to this report.

To summarise their report they considered the introduction of a number of measures at Mushroom roundabout and the implications these would have on traffic flow, bus movement and pedestrian access. WSP are also considering separately the implications of introducing measures at Whinney Hill and Oldgate Lane but the latter of these will be difficult to deliver due to the presence of statutory undertakers equipment.

A traffic model was developed by WSP to evaluate the effects of introducing these measures along the route as a whole. The options considered at Mushroom roundabout were:

Option 1(a) traffic metering – which involves introducing a set of traffic lights on the A6123 Herringthorpe Valley Road to meter the flow from this arm of the roundabout in order to create gaps on the circulatory carriageway to allow traffic out of A630 Fitzwilliam Road.

Option 1(b) traffic metering with a relocated pedestrian crossing on Herringthorpe Valley Road – this expanded on option 1(a) by relocating the existing crossing but also provided the pedestrian crossing on the desire line.

Option 2 Fitzwilliam Road bus lane extension – this developed further the existing bus lane by extending the bus lane so that the bus exited the bus lane closer to the give way line of the roundabout thereby avoiding more of the queue. This does involve filling in the existing subway and providing an on carriageway crossing.

Option 3 Doncaster Road bus lane extension – discounted due to land issues.

Option 4 Full traffic light control of the roundabout – options were tested both with and without pedestrian crossing facilities.

The analysis of these options undertaken by WSP considered the requirements of public transport for improved journey times but more importantly journey time reliability as journey times can currently fluctuate greatly and have a significant adverse impact on buses running to timetable. As previously mentioned they also considered road safety implications, pedestrian accessibility and general traffic flow and in particular congestion.

The analysis concluded that the full signalisation of the roundabout would give the best return by reducing traffic delay across the modelled network. The 'best return' was determined by giving a financial value to the delay suffered by road users and whilst the full signalisation of the roundabout has a significant cost associated with it (approximately £1.4 million), it does deliver a financial benefit which none of the other proposals are predicted to do.

In light of the significant cost to implement the scheme WSP were asked to evaluate the implications of not extending the bus lane on Fitzwilliam Road and therefore retain the subway and not provide an at grade pedestrian crossing on Fitzwilliam Road. Their report is attached as an addendum to Appendix 'A'. Not including these measures would reduce the overall cost of the scheme but the evaluation undertaken by WSP concluded that the predicted financial benefits from reduced congestion and delay during peak periods would be almost half that of the option to extend. During the peak hour periods the option without extending the bus lane increases the disbenefit to public transport in the morning peak and creates a disbenefit in the evening peak for buses.

The addendum demonstrates that in the first year the financial benefits from implementing the whole scheme are more than double that of the scheme without the extended bus lane across the whole modelled network. It can be seen from the work carried out by WSP that a significant benefit from the scheme is the reduced delays and congestion experienced on the A6123 Aldwarke Lane, the study did not set out to achieve an improvement in delay on this arm of the roundabout but it is an additional benefit of the scheme. It is particularly welcomed when it is considered how key this junction is to traffic movement on the 'northern orbital' route around the town (that section of highway between College Road roundabout and Mushroom roundabout via the A6123 Mangham Road and Great Eastern Way). It provides the potential to direct some traffic towards A6123 Aldwarke Lane rather than via the often congested A633 past Retail World. Notwithstanding the overall benefits to traffic from the scheme it also offers the opportunity to replace a subway with an at grade crossing.

WSP also concluded that providing pedestrian facilities on all arms would not impact upon the operation of the roundabout, the design therefore includes for shared pedestrian and cycle crossings on all entry and exit arms of the roundabout a plan of this arrangement is available in their report attached at Appendix 'A'.

The existing crossings on Doncaster Road and Herringthorpe Valley Road would be relocated. The proposed crossing on Herringthorpe Valley Road would be where it is anticipated that the pedestrian desire line would be. Interrogation of our accident data base suggests that an higher than expected number of personal injury accidents occur at the crossing on Doncaster Road; 8 in the last 3 years which may be due in some part to its location, as this is where on the exit from the roundabout 2 lanes reduce to 1. However further analysis would have to be undertaken to determine the causation. The proposal would include for 2 new at grade crossings one on Aldwarke Lane which would assist in pedestrians crossing between the retail outlets on either side and one to replace the subway on Fitzwilliam Road. There is a significant cost associated with the removal of the subway but subways are perceived by the public as being places where anti social behaviour takes place. This is borne out by the comments made at the 'masterplanning' consultation

exercise where members of the public highlighted the subway crossing as a concern. Some highway authorities are actively encouraging the replacement of subways with at grade crossings due to the perceived anti social behaviour that takes place in and around them.

Due to the relocated pedestrian crossing on Herringthorpe Valley Road it is necessary to close the gap from Herringthorpe Valley Road into Doncaster Road as there isn't sufficient carriageway space to accommodate a right turn deceleration lane. Statutory consultation has commenced with bodies such as the emergency services and chamber of commerce regarding this. South Yorkshire Fire and Rescue Service have raised a concern about the closure of this gap and have requested that we consider reopening the central reserve gap on Fitzwilliam Road to allow them easier access to parts of East Dene. This particular gap was originally for buses only to use and the closure process was instigated when it was highlighted that buses no longer use it and that it was now being used by general traffic as a 'rat run'. It should be relatively straightforward to accommodate the request of South Yorkshire Fire and Rescue whilst still discouraging general traffic from using the gap.

All traffic light installations have an electronic controller to control the operation of the signals these usual work on fixed programmes; WSP recommended that this installation should operate utilising a more responsive type of control called 'MOVA' which can react more quickly to changing traffic conditions further optimising the operation of the roundabout. This type of controller is slightly more expensive but the benefits outweigh the initial set up cost.

The full signalisation of the roundabout with pedestrian crossings on all arms therefore provides the following benefits:

- reduced congestion at the roundabout and across the modelled network particularly on the A6123 Aldwarke Lane
- improved bus journey time reliability (very little variation between peak and off peak)
- at grade pedestrian/cycle crossings on all arms of the roundabout
- additional cycle facilities around the roundabout

8. Finance

The proposed improvements at Mushroom roundabout are estimated to cost £1.4million, the scheme has programme entry for the LTP strategic fund programme with £750,000 identified as available this year and £250,000 provisionally available next financial year. Furthermore, South Yorkshire Passenger Transport Executive has also identified £500,000 to spend on this corridor this financial year and they have indicated they would contribute up to the full amount required for this project.

9. Risks and Uncertainties

The funding is identified in the South Yorkshire Local Transport Plan Strategic Fund Programme for this year and next but this money still has to be fully approved from the members of the Finance and Integrated Transport Working Group, but Council support for the scheme and a commitment to start would give the group confidence that the project could be delivered. Although £250,000 has been provisionally

allocated to this scheme in 2011/12 the final LTP settlement will not be known until later this year.

10. Policy and Performance Agenda Implications

The proposals as outlined would assist in improving congestion and thereby improve air quality at this location. It would also improve accessibility and help to encourage a modal shift towards public transport, cycling and walking. Improved pedestrian crossings at the roundabout may also assist in regenerating this particular area of the borough.

11. Background Papers and Consultation

Dalton and East Herringthorpe Draft Development Framework January 2008

A630 Rotherham – Thrybergh Smart Route Consultation update June 2009

A630 Thrybergh Key Route – Mushroom roundabout improvement option analysis
May 2010

May 2010 Statutory consultation on the proposed closure of the central reserve gap on the A6123 Herringthorpe Valley Road.

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