Major Project Briefing Note

NNOR Alternative Options— August 2016

DATE: 25 AUGUST 2016  AUTHOR: JAMIE WYLLIE

The following two alternative options were identified by respondents to the Northampton Northern Orbital Route (NNOR) early public consultation.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5A</td>
<td>Link A5199/ northwest bypass to Red House Road, including online improvements to Brampton Lane</td>
</tr>
<tr>
<td>6</td>
<td>The most northerly of the Feb 2016 Consultation Options (Option 4), connecting A5199/ northwest bypass to the A43 but excluding the Moulton Spur</td>
</tr>
</tbody>
</table>

Given the interest in these alternative options, they have been assessed to ‘Options Identification’ stage so they can be compared to the four options presented at the early public consultation. Basic route options have been identified and the traffic model re-run for these two options.

The purpose of this technical note is to provide a brief summary of issues identified with each of the alternative options, tested against the strategic brief for the NNOR: ‘to mitigate the impact of growth proposals for Northampton by providing a highway capacity improvement which would help to reduce future traffic in the northern parts of Northampton and the surrounding villages’.

Basic engineering and traffic data only has been used. A fuller understanding of the business case for any preferred option would require a more detailed appraisal of engineering constraints and importantly the traffic case would be based the overall performance of the highway network (total distance travelled, total travel times, total delay etc.) rather than simplistically looking at peak link flows.
OPTION 5A
A first draft alignment design has been prepared and is contained in Appendix 1. This drawing shows the section of highway which would need to be built to deliver this option (i.e. between Harborough Road and Holly Lodge Drive).

The North West Relief Road would end at Boughton Crossing with a new junction connecting to the A5199 and Brampton Lane. Brampton Lane would become the main link between the North West Relief Road and Moulton Park, increasing traffic on this lane past the Buckton Fields development. The Harborough Road/ Brampton Lane roundabout would have to be enlarged to accommodate the new section of highway. The new section of highway would cross residential land, the Obelisk Centre and agricultural land to reach an enlarged Holly Lodge Drive/ Red House Road junction.

Engineering

- This option does not cross Boughton Park or directly impact upon Moulton, Pitsford or Moulton College, so has much lower impact on existing land uses than the other current options.
- An enlarged Boughton Roundabout (at the junction of Brampton Lane and Harborough Road) is the most appropriate form of junction to connect in the new section of highway at its western end. Introducing a separate signalised junction on Harborough Road was explored to reduce the number of properties affected but is not a feasible way of accommodating the traffic demand as minimum distances between main junctions would not be achieved.
- The roundabout would be much larger than existing to cater for the extra arm and traffic movements. This would require the demolition of a number of well-established properties on both Harborough Road and Vise Road and would require garden land from a number of other properties. The plan shows a first draft land interest outline. At this stage it is thought 3 properties would need to be demolished and garden land would be required from 15 others, though this is very much a first estimate.
- The roundabout would also require land within the Buckton Fields development, which would affect some development plots, e.g. some recently completed houses may need to be purchased and demolished.
- The new section of highway runs directly through the Obelisk Sports Centre, which would be lost to the community, dramatically reduced in size or would need to be relocated.
- The route runs through a deciduous woodland which is designated locally as a both a pocket park and local nature reserve. This is the historic setting for The Obelisk (listed monument) associated with Boughton Park.
- The route crosses relatively flat arable fields behind approximately 60 properties on Obelisk Rise so visual impact will be an issue.

Traffic

The Predicted Traffic Flows Consultation Board has been updated to show summary results for Options 5A and 6, in Appendix 2. The Option 5A traffic modelling results suggest:-

- Option 5A provides significant traffic benefits for Moulton Lane (through Boughton) of 40-50% reductions in peak flows, similar to the other NNOR Options.
- Due to its close proximity, Option 5A provides the greatest AM peak traffic reduction (46%) on Holly Lodge Drive of the current options.
• Most significantly, Option 5A would not provide peak traffic flow benefits through the other villages and northern parts of Northampton intended to benefit from the NNOR (Moulton, Pitsford, Moulton Leys, Round Spinney to name a few), **Option 5A is really serving a different purpose to the other NNOR Options. The new section of highway could be considered a bypass for Boughton and the Harborough Road/ Holly Lodge Drive corridor.**

• Compared to Option 4, Option 5A is predicted to carry more traffic than the proposed Moulton Spur. So a combination of Option 5A and Option 6 could be considered as an alternative to Option 4.

• A 4-9% increase in peak traffic through Chapel Brampton compared to the do-minimum scenario, whereas other NNOR Options are predicting a decrease.

• The traffic modelling has been undertaken at a strategic level. The performance of the enlarged junctions and Brampton Lane would be key to the success of Option 5A and would need to be tested with local modelling techniques to ensure they will perform as required.

**OPTION 6**

Some respondents to the early consultation queried the need for a Moulton Spur (a link road between the NNOR and Moulton Park) and highlighted that it runs through an area of historic interest, containing features of Boughton Park.

Option 6 is a development on Option 4, since Option 4 was identified as the preferred route by most respondents to the early consultation. The Moulton Spur is removed from the scope for Option 6.

**Engineering**

• Removal of the Moulton Spur would mean the setting of listed buildings (Holly Lodge, Spectacle Lodge and Bunkers Hill Farm) along with Spectacle Lane itself, Boughton Green and the ruins of The Church of John the Baptist would not be affected by the NNOR. **However the Moulton Spur design could be refined to avoid some of these heritage assets.**

• An NNOR without the Moulton Spur would provide fewer opportunities to manage the traffic through the villages, in terms of restricting through traffic whilst maintaining access and fewer options for trips to re-route out of Northampton.

**Traffic**

In terms of peak traffic flows, the Option 6 traffic modelling results suggest:-

• Between 10-15% more traffic on access routes into Moulton Park (e.g. Brampton Lane, Harborough Road and Holly Lodge Drive) compared to Option 4.

• Slightly more traffic on Moulton Lane (through Boughton) compared to Option 4 (3-6%)

• 10% more traffic on Overstone Road (through Moulton) in the AM peak compared to Option 4 and significantly more in the PM peak (modelling is showing this as 106% which seems extremely high so the model network should be reviewed in this area).

The Option 6 peak traffic flow results highlight the importance of the Moulton Spur’s contribution to the scheme objective; to provide a high quality route to relieve congestion through the north of Northampton, Pitsford, Boughton and Moulton.
SUMMARY

**Option 5A:** The traffic benefits of Option 5A seem to be limited to Boughton and Boughton Green. The impact is also limited to the same two communities. As a very similar proposal in the late 1980’s met with strong local opposition. It would be difficult to generate a strong business case and local support for this option.

**Option 6:** Removal of the Moulton Spur would reduce the traffic benefits of the NNOR and the potential for management of traffic through the villages and the north of Northampton. More sensitive options for the Moulton Spur could overcome a number of the concerns raised with regards impact on heritage assets.
Appendix 1 Option 5A Sketch Layout
Appendix 2 Updated Traffic Flows Consultation Board
An area-wide traffic model has been used to predict traffic flows in 2031, following construction of the planned Joint Core Strategy developments including the Northeast Relief Road and the A43 Improvements. The model has output results 'without' the Northern Orbital and 'with' the four Northern Orbital Route Options for the AM and PM peak traffic periods.

The model predicts that during the AM and PM peak periods the Northern Orbital will carry around 1500 vehicles per hour, with some sections carrying in excess of 2000 vehicles per hour. These are the combined two way traffic flows.

The comparison tables show the predicted 2031 traffic flows from the model 'without' the Northern Orbital on key local roads and the predicted change in traffic flows on those roads 'with' each of the Northern Orbital Route Options. A negative number indicates a predicted traffic reduction on a given road and a positive number indicates a predicted traffic increase.

As a preferred route is developed, we can examine further ways of reducing traffic flows on minor roads and encourage the use of the new Orbital Route.