

# **Objectors' Alternative Proposals Alternative 1 Hawthorn Road Overbridge**

- 1. The Lincolnshire County Council (A15 Lincoln Eastern Bypass)  
(Classified Road) (Side Roads) Order 2014.**
- 2. The Lincolnshire County Council (A15 Lincoln Eastern Bypass)  
Compulsory Purchase Order 2014.**
- 3. Application In Relation To Proposed Compulsory Purchase Of Land  
Held By The Canal & River Trust.**

Department for Transport Reference: NATTRAN/EM/LAO/0084

**Promoted By:** Reepham Parish Council

**Supported By:** Mr A Lake

# **Contents**

- 1. Introduction**
- 2. Engineering and Buildability**
- 3. Environmental Impacts**
- 4. Traffic, Safety and Economics**
- 5. Consequential Impacts**
- 6. Land Requirements**
- 7. Planning Considerations**
- 8. Costs and Funding**
- 9. Programme**
- 10. Conclusion**
- 11. Previous Inspectors Comments from the 2014 Inquiry**

**Appendix – Plan Showing Alternative 1**

## **1. Introduction**

The A15 Lincoln Eastern Bypass is a Major Project promoted by Lincolnshire County Council. The published Scheme includes the construction of 7.5km of single carriageway between the A158 Wragby Road in the north and the A15 Sleaford Road in the south. It also includes the additional NMU bridge at Hawthorn Road.

Alternative 1 (as submitted by Reepham Parish Council on 1 July 2015) involves the provision of an all user bridge to maintain the current route of Hawthorn Road and replace the NMU bridge, on the line of Hawthorn Road. The left in/left out junction with the LEB is removed and there is no direct access to the bypass.

Alternative 1 was published in the Lincolnshire Echo on 23<sup>rd</sup> July 2015.

The County Council has carried out a desktop assessment of the Alternative but has not undertaken a detailed engineering design, or environmental assessment. The time available within the statutory process would make such detailed work unfeasible and the cost of a fully detailed assessment would not be justified in the County Council's view. Further information can be derived from the response to the proof of evidence submitted by Mr Alex Lake in support of Reepham Parish Council.

This note records the results of the desktop study assessment.

## **2. Engineering and Buildability**

The structure would generally be in accordance with that included in the dual carriageway scheme of 2009. The structure is of two spans requiring the construction of a Pier in the proposed central reserve which would require the inclusion of a Vehicle Restraint System. The alternative proposal uses Bank Seat abutments at the top of the proposed cutting.

The Bridge deck would need to be deeper than that required for an NMU Bridge in order to accommodate the additional design loading for road vehicles and would retain the need for high parapet rails to provide protection for Equestrians and Cyclists. This coupled with the increased vertical curvature to accommodate the design speed parameters of the existing route and provide the High Load Route clearance over the proposed scheme at 6.45 metres would mean that increased earthworks would be required to accommodate the approaches on the mainline of the LEB and some regrading of the Western approach to the structure.

The main carriageway has been lowered under the proposed alternative by 890mm but would need to be lowered a further 1000mm in order to accommodate the required headroom as a High Load Route. The main carriageway would also need to meet the future requirements of a dual carriageway in terms of vertical design parameters to be consistent with the LEB as promoted. The promoted alternative has not followed this approach and is one step below desirable minimum for a single carriageway crest value and has an absolute minimum sag value. In order to provide a future proofed scheme designed to a dual carriageway standard the alternative has been revised for consideration under this assessment. The revision significantly increases cut as a result

of lowering the carriageway and generates approximately 19,000 cubic metres of additional material. This material would be unacceptable for reuse in the scheme and would have to be disposed off-site adding considerable costs to the scheme; the costs are summarised in section 8 below.

The increase in cut and the further lowering of the route would create additional problems with the interception of ground waters that would need to be dealt with by the installation of extensive pre excavation infiltration drainage and further surcharging of the already lined attenuation ponds in the current scheme. The enlarged cut area would increase the volume of water to be attenuated resulting in significantly larger ponds that would extend beyond the current planning boundary and therefore leave the scheme without a drainage solution and drainage consent.

The increase in cut would also impact on the deck length which would increase from the 54 metres as proposed to 73 metres further increasing the cost of the structure. The retaining wall along the West side of the LEB that protects the Eastern boundary of the Public Open Space would also have to be increased in length and depth which would also significantly increase costs.

There would also be an increased impact on the statutory undertakers diversions over and above those required by the scheme.

### **3. Environmental Impacts**

This would have a moderate visual impact over and above that of the proposed NMU bridge due to the increased earthworks on the approach.

It would introduce more road noise and pollution in the Carlton Boulevard Development than the Scheme due to the increase in traffic flows resulting from not stopping up Hawthorn Road and providing left in left out access. There may be some limited noise benefit for the lowering of the main line but this is likely to be outweighed by the additional flows elsewhere.

### **4. Traffic, Safety and Economics**

As stated in Mr Smiths Evidence; some journeys to and from Cherry Willingham and Reepham would be shorter and quicker with this alternative and some would be longer and slower; as has been outlined previously in evidence presented to the Inquiry. Considering only the traffic associated with Cherry Willingham and Reepham, in the 2018 Opening Year, the over bridge would deliver a saving of less than 2% in vehicle kilometres travelled in all of the time periods considered and a daily saving of less than 5% in vehicles hours spent travelling. These savings equate to an average of 0.1 kilometres per vehicle trip and less than 1 minute per vehicle trip in the peak periods.

However, when considering all traffic in the Lincoln area, analysis shows that the differences in journey times and distance travelled between the preferred scheme and this alternative are negligible and would make no discernible difference to the benefits in a cost/benefit analysis.

This alternative will attract higher flows on Hawthorn Road on both sides of LEB in the AM peak giving a higher safety risk for pedestrians and cyclists, including school children.

This alternative will also attract additional traffic through the Carlton development, increasing traffic flows on Hawthorn Road to the west of LEB, St Augustine Road and Carlton Boulevard. This will have a negative impact on residents of the Carlton development in terms of air quality, noise and safety.

## **5. Consequential Impacts**

Following the Secretary of State's decision not to confirm the Orders after the previous Inquiry, the County Council took the opportunity to refine its current modelling. This was done in order to better understand travel patterns in the locality, refine model responses to take account of detail and provide a platform upon which the revised future growth and local development assumptions could be tested with the latest configuration of LEB. The modelling work included a Sensitivity Test in which traffic flows on Hawthorn Road were calibrated to surveyed 2015 traffic flows.

The results of the modelling work indicate that the Junction of Hawthorn Road with Bunkers Hill would be significantly over capacity due to traffic growth with the non-stopping up of Hawthorn Road. This is also the case in the Sensitivity Test. The only option available to address the imbalanced flows at this junction would be to provide traffic signals.

The junction of Wragby Road with Outer Circle Road is currently running near to capacity and would be relieved with the construction of the LEB. However, the inclusion of an overbridge at Hawthorn Road would increase traffic levels sufficiently to require improvements that would provide additional capacity as necessary on the Wragby Road East / Bunkers Hill approach including the junction of Wolsey Way. This is also the case in the Model Sensitivity Test.

## **6. Land Requirements**

The proposed alternative requires land that falls outside of the highway boundary for which Planning Permission exists for both the permanent works and the temporary works areas required to construct the alternative. Some of the additional land is within Public Open Space which is outside of the extent of land within the published CPO before the Inquiry. The acquisition of such land would require the consideration of the need to go through the special parliamentary procedure to acquire the land in accordance with Section 19 of the Land Acquisition Act 1981 which would have cost and delay implications and will need approval from the Secretary of State. The North West corner of the abutment falls outside of the Planning Highway Boundary for the scheme, it is not possible to move the proposed structure South without realigning Hawthorn Road and impacting on the existing layout of Hawthorn Road and Saint Augustine Road which in turn would require land outside of the current Planning Boundary. Land would also be required under licence for temporary works and to allow the future maintenance of the structure and earthworks.

Additional land outside the planning boundary would also be required to accommodate the proposed noise barrier and NMU route, which includes the diversion of the existing right of way; that is to run North South along the eastern side of the LEB.

The proposal will require additional land and as a result will need new Compulsory Purchase Orders. A change to the Side Roads Order will also be required to reverse the current proposal to stop up Hawthorn Road.

## **7. Planning Considerations**

A new Planning Permission would be required to accommodate the new bridge and the removal of the left in left out junction.

## **8. Cost\Funding**

The net additional cost of providing the road bridge including the bridge, the required lowering of the carriageway and associated matters in lieu of an NMU bridge and the left in left out junction removed is approximately £3.12m.

Consequential junction improvements in the City arising from the LEB would be assessed post implementation of the Scheme and delivered as part of the Highway Authority's general duties and obligations under the Highways and Traffic Management Acts. Additional consequential junction improvements arising from this alternative proposal would however include the following:

- Signalisation of Hawthorn Road Bunkers Hill junction - £0.87m
- Improvement of Wragby Road / Outer Circle Road junction - £0.85m.

The overall net increase is approximately £4.84m.

Additional costs would also be incurred due to the elongated construction programme to construct the road bridge.

The change would require additional funding and would potentially require a resubmission of a new Business Case for the scheme to DfT as a result of the changes to the costs and benefits of the scheme.

## **9. Programme**

Programme would be delayed because of the new planning application and CPO\SRO.

## **10. Conclusion**

The Alternative, when compared with the Scheme with planning permission does not provide any advantages that justify investigating it any further.

There is no advantage in traffic terms over the Scheme beyond some very limited opportunities for movements between residential areas close to the LEB and villages to the east; which in the Scheme will be served for all non-motorised movements by the additional NMU bridge.

In all other respects, the advantages offered by the LEB without the Hawthorn Road over-bridge are reduced or negated by this provision. There is also significant additional cost when compared to the provision in the published scheme.

## 11. Previous Inspectors Comments from the 2014 Inquiry

At the previous Inquiry the Inspector concluded the following with respect to an Alternative No 1 (the provision of a bridge to maintain the current route of Hawthorn Road as a direct access to Bunkers Hill to replace the proposed NMU bridge and with the left in left out junction removed):

*"In summary, there would be limited improvements to vehicle journeys between the Carlton area and the east villages and the safety issue for cyclists would be resolved. Nevertheless, these positive factors are substantially outweighed by the negative traffic, environmental and economic effects and Alternative 1 offers no material advantage over the Scheme".*

### Appendix – Plan Showing Alternative 1

