

- 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

Response to Objector's Proof and Questions

Mr & Mrs Robinson

Response from Lincolnshire County Council to letter/proof of evidence from Mr & Mrs Robinson

1 Issues Raised by Mr & Mrs Robinson

- Assessment of scheme impacts
- Capacity of Greetwell Road junctions
- Taking account of user requirements
- Adequacy of traffic modelling
- Safety of Greetwell Hollow

2 Response from LCC

2.1 Assessment of scheme impacts

2.1.1 In their evidence, Mr and Mrs Robinson state that “we suggest that the financially motivated removal of the overbridge was implemented without proper research into the impact it would have on local traffic flows.” Mr and Mrs Robinson go on to state that “If LCC had done this research then they would have realised that the alternative routes would not satisfy the test of being reasonably convenient.”

2.1.2 All issues related to the partial closure of Hawthorn Road were recognised at the time of the decision to remove the Hawthorn Road overbridge from the proposals. Prior to the planning application, the Best and Final Funding Bid submission in 2011 was supported by technical documentation including the Design Considerations and Further Development of Value Engineering Proposals Report (August 2011) (Core Document: CD46). This report states that “*The dual carriageway design proposed an overbridge carrying Hawthorn Road over the bypass, however this is not considered to be required as alternative routes are available to those travelling east-west on this road which make construction of a bridge not cost effective.*”

2.1.3 In her report on the 2013 Orders at paragraph 8.39 the Inspector noted:

"In order for the stopping up of Hawthorn Road to be acceptable under the terms of the 1980 Act 'a reasonably convenient route shall be available or will be provided'. To be convenient, a route has to be suitable for the needs and purposes of all types of user, which requires consideration of journey length, time and safety. The exact same level of convenience need not be demonstrated. Under the public sector equality duty due regard has to be given to the need to advance equality of opportunity, which in this case applies particularly to those who may be disadvantaged by reason of age and disability".

2.1.4 In her report at paragraph 8.50 the Inspector also noted:

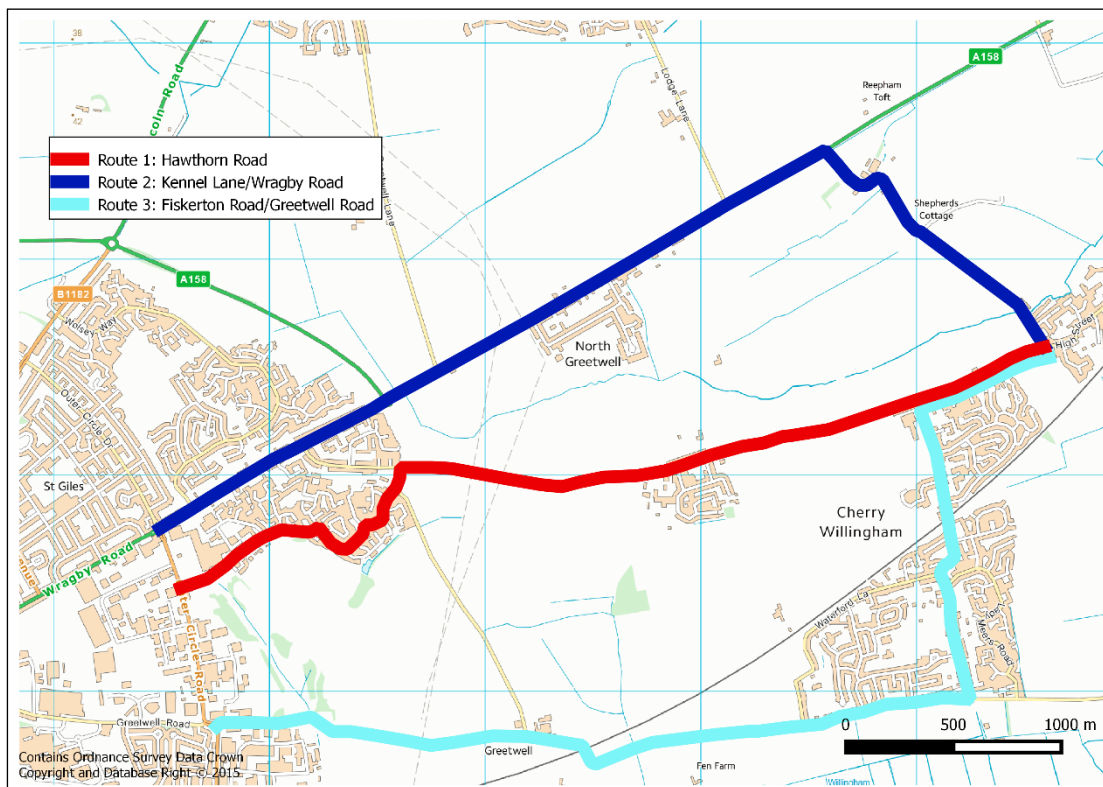
"I conclude that the inherent physical characteristics and the traffic conditions of Kennel Lane, Greetwell Road and the bypass would be suitable for these roads to form part of safe alternative routes to the use of Hawthorn Road. Some journeys would involve a more circuitous or less direct route and become slightly longer in

terms of distance, but journey time is unlikely to be as seriously affected as suggested in the objections. The indication is that reasonably convenient alternatives would be available for people travelling by motor vehicle. In addition, there probably would be journeys that would be little affected in time or distance or see an improvement. There is no evidence that the stopping up proposal would have an adverse effect on scheduled regular bus services."

2.1.5 Dr Billington presents in his evidence information on the relative journey distances, times and safety of the alternative routes compared to Hawthorn Road both before and after LEB is open. In paragraph 3.2.4 of his evidence, Dr Billington states that "it is recognised that each individual trip on any given day will have a specific origin and destination and will follow its own specific route. It would be impossible to map all of these for every trip originating in the Cherry Willingham, Reepham and Carlton estate areas and so the routes identified should only be considered as being representative of the wider range of movements.

"The journey time on each route was surveyed five times in each time period on typical weekdays. The resulting average times can be considered a robust representation of normal conditions.

Figure 1 – Routes Considered in Accident and Journey Time/Distance Analysis



The measured distances and surveyed journey times were as shown in the table below.

Table 1 – Measured Distances and Surveys Journey Times on Selected Routes

Travel Times/Distance	Route 1 (Red)		Route 2 (Dark Blue)		Route 3 (Light Blue)	
	West Bound	East Bound	West Bound	East Bound	West Bound	East Bound
	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes
AM Peak Period	5.9	5.9	7.2	6.3	8.4	7.1
Inter Peak	5.9	5.6	6.4	5.8	7.0	6.9
PM Peak Period	6.6	5.9	6.1	6.0	6.9	6.9
Distance (kilometres)	4.5	4.5	5.0	5.0	5.6	5.6
Comparison with Route 1	West Bound	East Bound	West Bound	East Bound	West Bound	East Bound
AM Peak Period	N/A	N/A	1.3	0.4	2.5	1.2
Inter Peak	N/A	N/A	0.4	0.2	1.1	1.3
PM Peak Period	N/A	N/A	-0.5	0.0	0.4	0.9
Distance (kilometres)	N/A	N/A	0.5	0.5	1.1	1.1

It can be seen that compared to the Hawthorn Road route, the largest additional distance covered by using either of the alternatives would be 1.1 kilometres, incurred using the Greetwell Road option while using Kennel Lane/Wragby Road option would add only 0.5 kilometres.”

2.1.6 In his evidence, Dr Billington states that “Journey times will also vary by time period and direction and this is addressed in the information in the table below.

Table 2 – Journey Times between Pairs of Trip Origins and Destinations

Origin	Destination	Change in Journey Time (Minutes) in Scheme Opening Year		
		AM Peak	Inter-peak	PM Peak
Cherry Willingham	Railway Station	-02:03	-05:53	-08:02
Cherry Willingham	Wragby Road Tesco	+02:28	+00:22	-00:27
Cherry Willingham	Carlton Estate	+05:00	+02:57	+02:44
Cherry Willingham	City Centre	-01:58	-00:31	-02:21
Cherry Willingham	Fire and Rescue Station	-03:37	-07:28	-09:30
Cherry Willingham	Lincoln County Hospital	+02:20	+00:36	+00:05
Railway Station	Cherry Willingham	-05:05	-02:14	+01:00
Wragby Road Tesco	Cherry Willingham	-00:05	-00:06	+00:18
Carlton Estate	Cherry Willingham	+01:20	+01:33	+01:30
City Centre	Cherry Willingham	-02:40	-00:23	-03:52
Fire and Rescue Station	Cherry Willingham	-06:22	-03:07	-00:51
Lincoln County Hospital	Cherry Willingham	+00:04	+00:22	-00:08
Reepham	Railway Station	-04:01	-06:30	-06:36

Origin	Destination	Change in Journey Time (Minutes) in Scheme Opening Year		
		AM Peak	Inter-peak	PM Peak
Reepham	Wragby Road Tesco	+00:50	+00:33	+00:03
Reepham	Carlton Estate	+01:05	+03:12	+03:12
Reepham	City Centre	-04:19	-01:50	-02:43
Reepham	Fire and Rescue Station	-05:50	-08:06	-08:04
Reepham	Lincoln County Hospital	+01:08	+00:03	-00:16
Railway Station	Reepham	-03:42	-01:33	+01:21
Wragby Road Tesco	Reepham	-00:02	-00:05	-00:16
Carlton Estate	Reepham	+01:23	+01:34	+01:30
City Centre	Reepham	-03:01	+00:04	-03:14
Fire and Rescue Station	Reepham	-05:17	-02:26	-00:34
Lincoln County Hospital	Reepham	+00:11	+00:24	-01:28

In this table, an increase in journey times is indicated as “+” while a decrease is indicated as “-”.

For some local trips it can be seen that journey times are expected to increase at certain times of the day, with the greatest increase of five minutes expected to be between Cherry Willingham and the Carlton estate in the morning peak. However, for some trips slightly further afield, for example to and from the city centre and the railway station, there will be improvements in journey times.”

2.1.7 In paragraph 3.3.10 of his evidence, Dr Billington states that “...there is nothing in the analysis of the historic data which indicates that the alternatives to Hawthorn Road are inherently less safe either in terms of the risk of being involved in an accident or in likely severity of accidents. It is not expected that any changes in traffic flow resulting from the Scheme would affect the relative safety of these local roads.”

2.1.8 Dr Billington notes in his summary at Paragraph 5.1.5:

"With regard to the transport issues relevant to the choice of the Hawthorn Road junction, my evidence has shown that there are currently safe and reasonably convenient alternative routes available for movements to and from Cherry Willingham and Reepham, and that this will remain the case in the future with the Scheme in place."

2.1.9 Dr Billington identified that there would be 'minimum impact on local journey times'; as a result the additional financial impact of using the alternative routes is also likely to be small.

2.1.10 With regards to potential improvements on the alternative routes, as part of its statutory duty the County Council monitors all of its road network and maintains and improves it as appropriate and where budgets allow. The alternative routes will continue to be included in this monitoring programme following the opening of LEB.

2.2 Capacity of Greetwell Road Junctions

- 2.2.1 In Section 2.2 of their proof of evidence, Mr and Mrs Robinson discuss the impact of the partial closure of Hawthorn Road on traffic using Greetwell Road. In paragraph 2.2.1, they claim that drivers will be forced onto Greetwell Road. The LEB will provide a number of options for drivers to access Lincoln in addition to Greetwell Road. Drivers will have additional choices of using the LEB junctions with Washingborough Road, B1188 Lincoln Road and Sleaford Road. Furthermore, Wragby Road will also be accessible by turning southbound onto the LEB from Hawthorn Road and heading north back up the LEB from the Greetwell Road roundabout.
- 2.2.2 Mr and Mrs Robinson state that the additional traffic using Greetwell Road will lead to a considerable increase in delay at the double mini-roundabout junction with Allenby Road and Outer Cir Road. They state that delays of over 30 minutes, and queues blocking back to the LEB, are forecast to occur on the Greetwell Road East approach in the AM peak hour. It is suggested that capacity improvements are undertaken at this junction in addition to the provision of an overbridge on Hawthorn Road.
- 2.2.3 It is not clear where Mr and Mrs Robinson have got their forecast delay and queue figures at this location; however, based on an assessment of Mr Moore's Proof of Evidence it is considered that these values are a significant over estimation. Modelling of the Alternative Option 1, with an overbridge at Hawthorn Road, shows that there is forecast to be a similar increase in traffic on this section of Greetwell Road. Notwithstanding this, this junction is recognised by LCC as already being a sensitive junction. It is accepted that LCC has statutory undertaking to ensure the junction operates at an acceptable level regardless of the construction of the LEB. As a result an assessment of limited proposals to improve the capacity of the eastern approach to the Greetwell Road\Allenby Road element of the junction has also been assessed which indicates that when implemented the junction will operate within capacity. Proposals for future development in the area will be required to assess the impact on junctions in this area and provide appropriate mitigation measures where issues are identified. This issue is addressed in further detail in Section 2.5 of the response issued to Mr Moore (which will be circulated upon completion).

2.3 Taking account of user requirements

- 2.3.1 Mr and Mrs Robinson state that user requirements were not adequately taken into account as part of the process to amend the proposals which resulted in the removal of the Hawthorn Road overbridge from the Scheme. The scheme developer since 2005 has taken into account not only the users of the new road but also the possible effects on others. The scheme has planning permission and the public had the opportunity to make comments of the application at that time and when the revised NMU bridge proposal went through the planning process. As part of the granting of planning permission, the effects of the proposal were taken into account and have been examined further since.
- 2.3.2 The Council has used both the traffic model and new traffic surveys to assess the impact of the LEB scheme and the removal of the overbridge from the proposals. This assessment has also enabled the Council to confirm that reasonably convenient alternative routes will be available following the opening of the Scheme. As stated

above, the Inspector at the previous Public Inquiry found that there were reasonably convenient alternative routes for vehicular traffic.

2.4 Adequacy of traffic modelling

- 2.4.1 Mr and Mrs Robinson question the suitability of the Greater Lincoln Traffic Model in assessing the impact of the scheme on links and junctions in the vicinity of the Hawthorn Road and Greetwell Road.
- 2.4.2 The Greater Lincoln Traffic Model is a regional model covering a large area. It has been produced using an approved procedure and has been calibrated using a considerable amount of local traffic data.
- 2.4.3 In addition to traffic data from the 2006 Base year LCC commissioned a series of traffic surveys in 2015. These surveys were used to refine to Base model where appropriate. In addition these surveys were used to calibrate traffic flows in the vicinity of Hawthorn Road in the Sensitivity Test.
- 2.4.4 Capacity assessments have been undertaken at a number of junctions in the local area. The assessments indicate that the implementation of the scheme would benefit a number of junctions. Notwithstanding this LCC has a statutory duty to monitor all of its road network and maintains and improves it as appropriate and where budgets allow. Junctions in the vicinity of the LEB would be included in the monitoring program following the opening of the LEB.

2.5 Safety of Greetwell Hollow

- 2.5.1 Mr and Mrs Robinson comment on the opportunity to improve the safety of the blind bend at the bottom of Greetwell Hollow.
- 2.5.2 Following repeated reports of flooding at the bottom of Greetwell Hollow the Highways Area Officer for the route entered into dialogue with the owners of the adjacent Quarry in 2009. The source of the flooding being the surface water run off from the disused quarry workings and the Bunkers Hill Development.
- 2.5.3 This resulted in an agreement being reached with the land owners with support from the Internal Drainage Board, to carry out a scheme of remedial works that are listed as follows:
- Clearance of the upstream end of the culvert of silt and debris
 - Clearance of the storage pond upstream of the culvert of silt, debris, trees and overhanging vegetation
 - Creation of a cut off grip to intercept water running down the access track in order to divert flows to the attenuation ponds in the quarry floor and be stored within.
- 2.5.4 The works were then completed in the spring of 2011; since that time the conditions have improved vastly with flooding across the road only in exceptional circumstances for short periods and only after significant weather events.
- 2.5.5 The Stage II Road Safety Audit carried out in January of 2014 in respect of the published proposals (CD86) identified a consideration (referred to as a "problem"

using the language of the safety audit) associated with the increased usage of the route. Discussions with the Lincolnshire Road Safety Partnership that resulted in the response issued in July of 2015 narrowed the potential issues down to the following two:

- Forward visibility through the bends being impeded due to overgrowth of verges
- The skidding resistance of the carriageway through the bends requiring enhancement.

2.5.6 The above are to be dealt with by the Highway Authority under its statutory powers.

2.5.7 It is also anticipated that the route will be improved as a planning condition under the proposed NEQ development of the former quarry and the issues eliminated.

3 Responses to Questions to Mr Smith from Mr and Mrs Robinson

3.1 **Question 1:** (2.2.3/3.2.10/ supplied model turning counts) You mention in 2.2.3 that the alternative road corridors adjacent to Hawthorn Road that are designated as part of the alternative routes are relatively busy. In particular Greetwell Road is quoted as currently carrying 640 PCU's. In the forecast this rises to 1006, a substantial increase. It is also noted in 3.2.10 that the junction of the LEB with Greetwell Road is forecast to have some queuing during the AM peak.

a. Did it occur to you that the increase in Greetwell Road AM peak westbound traffic might also cause a problem when it arrives at the junction with the Outer Circle Road. This potentially resulting in a significant increase in journey times on a principal alternative route.

3.2 **Answer:** Yes, but research and analysis led me to discount that thought. The flows quoted are 2-way so it doesn't all represent traffic arriving at the OCR / Greetwell Road, some of it is traffic departing the junction in the Eastbound direction.

b. Can you detail any analysis you made of this potential issue, your conclusions and the rationale for coming to those conclusions?

3.3 **Answer:** Not all traffic heading along Greetwell Road would be headed for the City Centre. Some 46% of the traffic arriving at the LEB junction would be making use of the LEB alignment, acting in its capacity as a distributor road.

3.4 Outer Circle Road junction is already on the cusp of capacity issues in AM peak. NEQ would add to that traffic volume. LCC would exercise its statutory duties to maintain traffic flow at this location. Remedial measures are available.

c. If you did consider the issue why does it not appear in your proof of evidence?

3.5 **Answer:** Because it is not materially important to the side road order associated with Hawthorn Road.

d. If you did consider the issue was this reported to Lee Rowley?

3.6 **Answer:** The issue was discussed verbally but not documented for reasons identified in c. Conclusions based on a subsequent analysis of the junction (including traffic the unrelated to LEB) have already been included in a response to Mr Paul Moore.

3.7 **Question 2:** (supplied model turning counts) The forecast DM 2018 flows (436) on Hawthorn Road for the AM peak from Cherry towards Bunkers Hill are considerably lower than the forecast for RPC Alternative 1 (565). I find this very counter intuitive as in Alternative 1 Hawthorn Road is essentially the same as the DM state, yet the model is suggesting that the existence of the bypass seems to force traffic onto Hawthorn Road.

e. Where is this significant increase coming from and why?

3.8 **Answer:** The increase is 129 pcus, or a 31% increase. In Alternative 1 the introduction of the LEB alignment encourages traffic from western areas of Cherry Willingham who would previously be travelling via Greetwell Road to make use of LEB via Hawthorn Road Wb and Wragby Road Eb, and also traffic from Cherry Willingham heading towards the City via St Augustine Rd and Outer Circle Road.

4 Responses to Questions to Mr Rowley from Mr and Mrs Robinson

4.1 **Question 1:** (Para (c) top of page 54/ supplied model turning counts/12.1) You state in response to an objection that "Stopping up of Hawthorn Road and impact on traffic flows along Wragby Road, Fiskerton Road, Kennel Lane and in the villages" that:

"(c) The change in traffic flows on the existing network with and without the scheme has been assessed and this has included assessing the potential changes on Wragby Road, Kennel Lane, Fiskerton Road and the surrounding villages. The data identifies that there is expected to be an increase in traffic flows along Wragby Road and Fiskerton Road resulting from traffic routing changes associated with the scheme. However, it is not anticipated that these changes will have any significant detrimental effects.

12. Reasonably Convenient Alternative Routes

12.1. *As noted in the evidence of Dr Billington and Mr Chetwynd, an assessment of potential alternative routes have been carried out. This includes a journey time assessment of three routes by Dr Billington and a geometric assessment of a number of routes by Mr Chetwynd.*

12.2. *The conclusions reached by the two assessments are that the alternative routes are generally reasonably similar to Hawthorn Road in both distance and journey time, and that geometrically they are all of a similar nature to each other and generally to rural roads in Lincolnshire. Further details of the conclusions can be found in the evidence of Dr Billington and Mr Chetwynd."*

As indicated in the above quotes and elsewhere in your proof assessments have been made of affected junctions including those on the alternative routes.

The LCC supplied forecast flow for Greetwell Road westbound during the AM peak grows from 640 to 1006 with the LEB.

- a. Did it occur to you that the increase in Greetwell Road AM peak westbound traffic might cause a problem when it arrives at the junction with the Outer Circle Road. This potentially resulting in a significant increase in journey times on a principal alternative route.
- b. Can you detail any analysis you made of this potential issue, your conclusions and the rational for coming to those conclusions?
- c. If you did consider the issue why does it not appear in your proof of evidence?

4.2 **Answer:** These questions have been answered in Section 3 as they are the same as those raised with Mr Smith. It should be noted that this junction is outside of the scope of the scheme that has planning permission and is not therefore included within the Orders.

4.3 **Question 2:** (Table on page 10 Route and Layout) one of the design decisions was:

To remove the Greetwell Road Improvement Scheme from the LEB scheme.

Rational - LCC decided as part of the value engineering process that the scheme should no longer form part of the LEB scheme to reduce the overall scheme cost.

- a. What is your understanding of the reason for the original inclusion of the Greetwell Road Improvement Scheme in the LEB scheme?
- b. What has changed that means that the scheme is no longer necessary?
- c. Do you agree that as it was originally proposed to spend over £4m on this short length of road that this indicates the need was previously assessed as high?
- d. Given that this section of Greetwell Road is on a principal alternative route and hence carrying substantially more traffic than was planned with the original LEB scheme, is the improvement now even more necessary with the current LEB scheme than it was with the original LEB scheme?

4.4 **Answer:** A Major Scheme Business Case for the previous dual carriageway scheme was prepared by LCC and submitted to DfT in 2009. In parallel a planning application for the scheme was submitted which was granted consent in 2010. The scheme at that time included improvements to Greetwell Road between the bypass and Outer Circle Road junction, which were described as follows in the Business case document:

“The improved Greetwell Road will be a dual 2 All Purpose carriageway 7.3 meters wide with 1 metre paved hard strips on either side before narrowing to a single carriageway highway 7.3 metres wide as it approaches the urban fringe of Lincoln. A ghost island junction will be formed along Greetwell Road at a new access to Allenby Industrial Estate”

4.5 This improvement was intended to improve the horizontal and vertical alignment of Greetwell Road; however, there are no details available of the incremental costs and benefits of this addition to the LEB scheme, although the Scheme represented good Value for Money in accordance with DfT assessments. As noted above a new junction was provided in to the Allenby Industrial Estate to improve access to that site and it was also intended that it would assist in providing access to the North East Quadrant (NEQ) development that is proposed to be accessed from Greetwell Road.

- 4.6 Following the Comprehensive Spending Review in 2010, LEB was not included by DfT in the list of schemes which were considered by them to represent value for money in the financial climate at that time and LCC therefore undertook a value engineering exercise in order to reduce the scheme costs, while maintaining benefit levels as high as possible. As a result of this exercise, LEB was redesigned as a single carriageway scheme (although LCC continue to have aspirations to see a dual carriageway LEB at some point in the future), and the Greetwell Road improvement was identified as one of a number of elements which, although providing benefits to the scheme were not considered sufficient a core requirement of the scheme to be retained. This was because it was not considered to be contributing sufficiently to the scheme objectives which are as follows:
- Objective 1: To support the delivery of sustainable economic growth and the Growth Point agenda within the Lincoln Policy Area through the provision of reliable and efficient transport infrastructure.
 - Objective 2: To improve the attractiveness and liveability of central Lincoln for residents, workers and visitors by creating a safe, attractive and accessible environment through the removal of strategic through traffic (particularly HGVs)
 - Objective 3: To reduce carbon emissions, improve air and noise quality within the Lincoln Policy Area, especially in the Air Quality Management Area in central Lincoln, by the removal of strategic traffic (particularly HGVs)
- 4.7 It was also identified that any future improvements to Greetwell Road which are found to be necessary for the safe and efficient operation of the network would need to be funded separately from the main scheme, as DfT were unlikely to consider funding off-line works on side roads adjacent to the scheme. As a result, the Greetwell Road improvement element was removed from the scheme for which funding was sought from DfT. The scheme with these changes included received Programme Entry from DfT in November 2011 and planning permission was granted in June 2013.
- 4.8 The analysis of historic accident data described in Dr Billington's proof of evidence shows that the safety record of Greetwell Road is similar to Hawthorn Road and Wragby Road and the Lincolnshire Road Safety Partnership has not identified any sites of concern on this road. Therefore, there are no immediate safety grounds to justify the expenditure on the Greetwell Road improvements, although the LRSP will continue to monitor the safety record of all roads in the vicinity of LEB after the scheme is open and will recommend any necessary improvements justified by the accident record.
- 4.9 With regard to the junction of Greetwell Road and Outer Circle Road, this junction is recognised by LCC as already being a sensitive interchange. It is accepted that LCC as the Highway Authority has a Statutory Duty under The Traffic Management Act 2004 to ensure that the junction operates at an acceptable level regardless of the construction of the LEB. As a result an assessment of limited proposals to improve the capacity of the eastern approach to the Greetwell Road\Allenby Road element of the junction has also been assessed which indicates that when implemented the junction will operate within capacity. Proposals for future development in the area will be required to assess the impact on junctions in this area and provide appropriate

mitigation measures where issues are identified. This issue is addressed in further detail in Section 2.5 of the response issued to Mr Moore (which will be circulated upon completion).