

- 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

Notes of Clarification on LCC Evidence

20 August 2015

Item 1: What provision is there for Bus Services using the LEB.

There are no specific facilities provided for the operation of Bus Services along the LEB as the route is not designed to pass through residential areas and as such it is not envisaged that any of the bus operators would wish to locate bus stops on the LEB itself. In consultation with the operators, none have indicated a desire to do this.

However, the LEB will provide a direct route between communities which are currently poorly connected, for example north and south of the River Witham and so it is possible that operators may introduce new services which run on LEB, if there is sufficient demand to justify this. However, as stated above it is not envisaged that any services will stop on the route.

Furthermore, as part of the consultation process with the operators it has been indicated that LEB will provide a valuable diversion route for services during disruptions to the network allowing them to better maintain service levels and reliability for passengers.

The City of Lincoln will continue to be a terminus for National Express services from London Victoria Coach Station to the Lincoln City Bus Station when the LEB has been completed.

Item 2: Separation between Hawthorn Road Left In Left Out Junction and the A158 Wragby Road Roundabout.

The Inspector queried the proximity of the two junctions and whether or not due regard had been paid to the relevant design standards.

The junction proposal is designed in accordance with TD42/95 as a major minor priority junction. The proposal is designed as a left in left out only junction with a physical central reserve to limit the number of possible turning manoeuvres and has been modelled in PICADY to assess its performance with design year flows. There is no overriding requirement within the standards relevant to this junction form that provides minimum distances from adjacent major minor junctions other than the following:

- Modelling of performance to ensure blocking back will not affect the preceding junction
- Safety auditing of the proposals.

An assessment of weaving lengths between junctions in accordance with TD22/06; The Design of Grade Separated Junctions, is not appropriate in both the current scheme under consideration and any future dual carriageway scheme as a grade separated solution would not be required as it would be inappropriate for the standard of route.

Item 3: Have longitudinal gradients been used in the analysis of junction capacity.

The effects of longitudinal gradients on junction capacity have not been assessed in ARCADY as there is no guidance that states such adjustments should be made to and have therefore not been modelled in the analysis of junction capacity on the LEB.

Item 4: Has account been taken in the overtaking assessment of gradients greater than 5 %.

There is no requirement specified in paras 7.20 to 7.23 of TD9/93 to consider gradients greater than 5% as part of the overtaking assessment. Climbing lane sections have been provided at the following locations to mitigate gradients greater than 2%:

- Washingborough Road and Heighington Road
- Washingborough Road and Greetwell Road.

Item 5: Can we confirm the status of the High Load Route (two structures at 5.7 metres?)

This has been dealt with in Mr Rowley's response to Mr Lakes Questions (LCC3i3) in his response to question 2.1:

'Following the grant of planning permission in June 2013, detailed design commenced shortly after on the scheme in advance of issuing tender documents. During the emerging design for the LEB the decision was taken in July 2013, by the County Council Client in consultation with the County Structures Abnormal Loads team, to design all the structures on the LEB for abnormal loads and high loads, to enable the A15 route within Lincolnshire from Sleaford to north of Lincoln to be designated as an Abnormal Load route and High Load route once the LEB was opene'd.

And in his response to question 2.8:

'Condition 10a of the planning permission for the scheme requires "No development shall take place until full details of all permanent bridges, structures, underpasses, bridge walls, abutments and crossings have been submitted to and approved in writing by the CPA. Such details shall include information on the colours and treatment of all surfaces, finishes and textures associated with these elements (e.g. railings, wing walls, side walls of underpass) as well as exact clearance heights. The bridges, structures, underpasses, bridge wing walls, abutments and crossings shall thereafter be constructed in accordance with the approved details." In order to discharge this condition, details of all of the permanent structures (including clearances) on the scheme will be submitted for approval to the County Planning Authority'.

Item 6: Non-balanced carriageway – does this require a relaxation or departure and what is the extent of unbalanced carriageway.

Para 3.1 of TD9/93 recommends: *‘the crossfall or camber should be 2.5% from the centre of single carriageways, or from the central reserve of dual carriageways to the outer channels’.*

There are 3.2 km of straight sections of carriageway that adopt the approach of straight crossfall from carriageway edge to carriageway edge and there are no adverse cambers within the scheme. The County Council therefore concludes that there are no relaxation or departures required.

This matter is dealt with in further detail in the Stage 1 Road Safety Audit Response dated February of 2014 (CD86).

Item 7: Provide details of flare lengths used in ARCADY assessments.

Effective Flare Lengths used in ARCADY Assessments

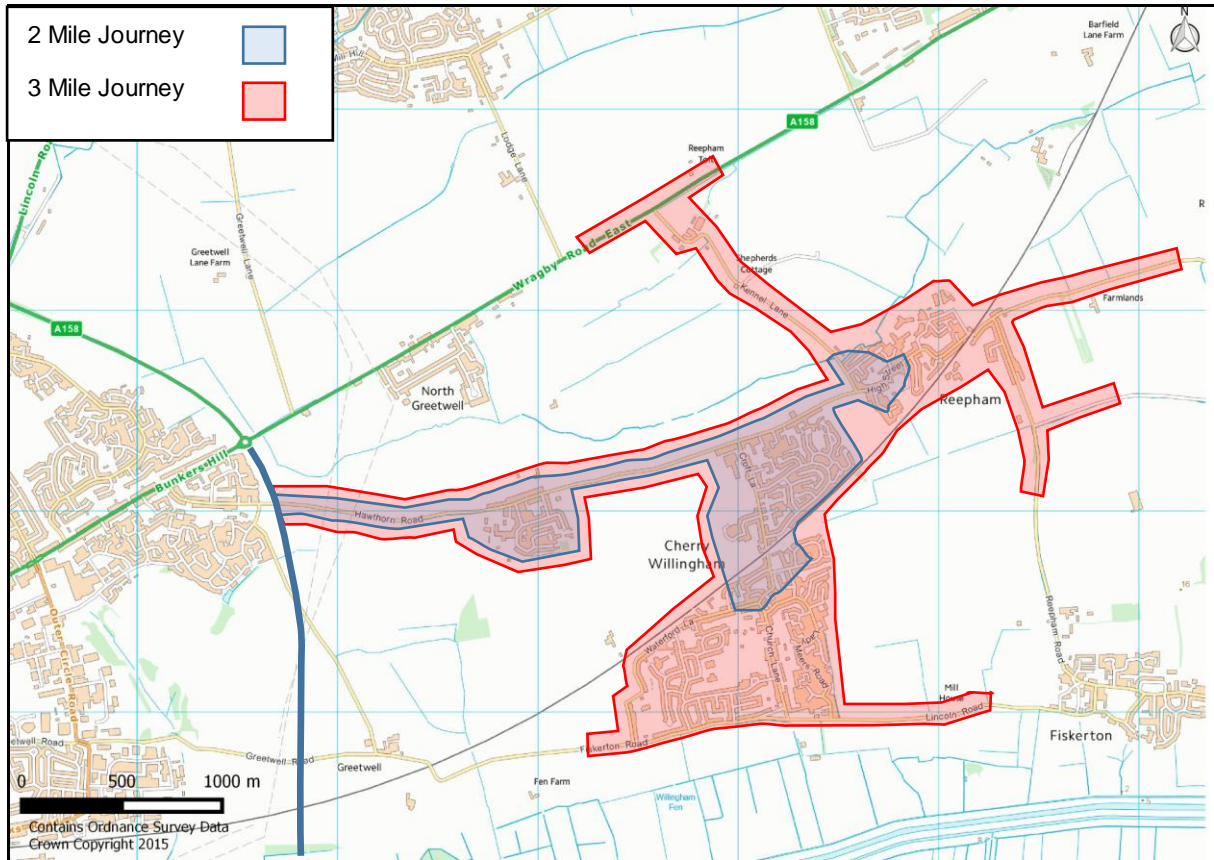
Roundabout	Arm	Flare Length (m)
Wragby Road	LEB South	37.8
Greetwell Road	LEB North	25.1
	LEB South	4.8*
Washingborough Road	LEB North	21.9
	LEB South	33.0
Lincoln Road	LEB North	27.9
	LEB South	25.9
Sleaford Road	LEB North	29.0

*LEB south approach to Greetwell Road is two lanes

Item 8: Journey Distances from LEB.

The following figure presents the two and three-mile distances for journeys travelling east from the point where the LEB will cross the line of Hawthorn Road.

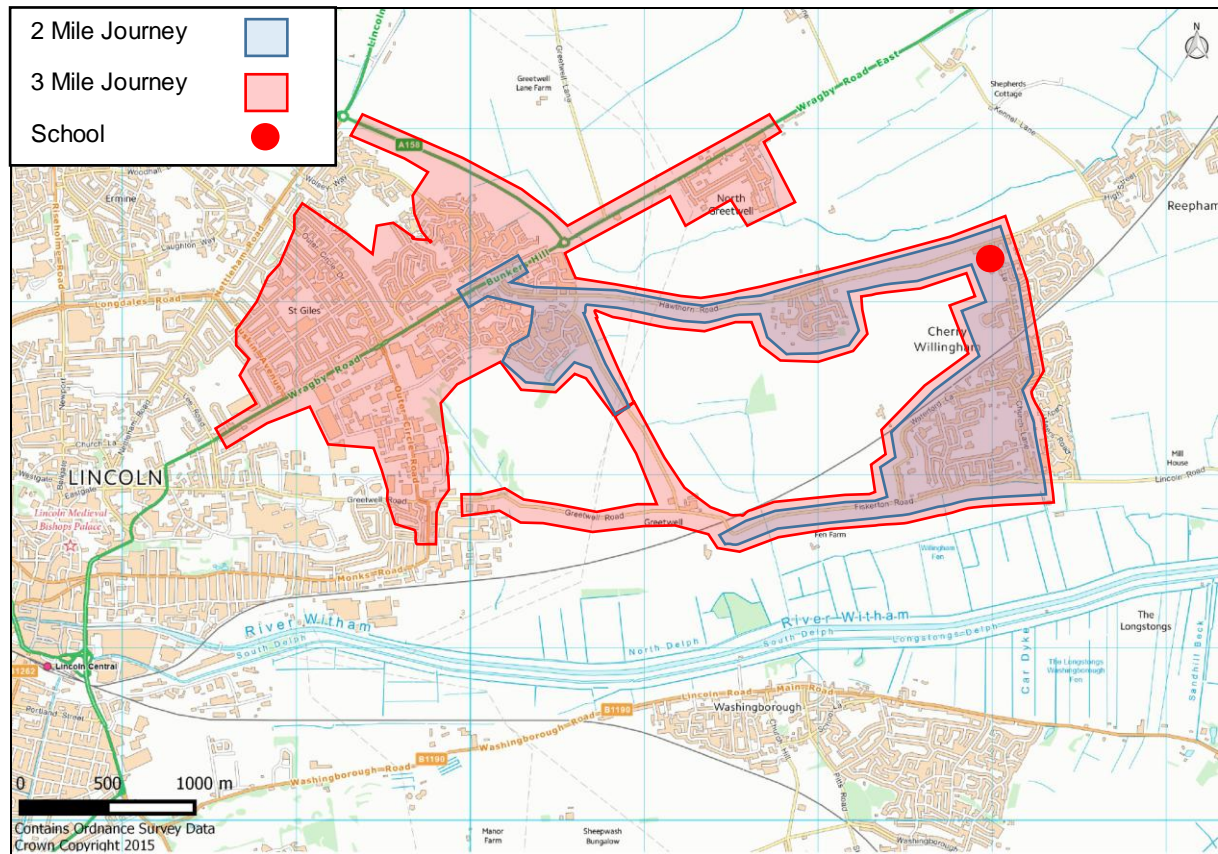
Figure 1 – Two and Three Mile Distances East from the Line of LEB



Item 9: Journey Distance from Cherry Willingham Community School.

The following figure presents the two and three-mile distances for journeys travelling west from Cherry Willingham Community School.

Figure 2 – Two and Three Mile Distances West from the Cherry Willingham Community School



Item 10: Distance between Current and Alternative School Bus Stops.

In Dr Billington’s evidence, Mr Skepper of Stagecoach is quoted as follows about a school bus service Stagecoach operates: *“we are likely to re-route [the 548 service] to run in via Greetwell Road, on to Outer Circle Road, and then pick up the normal route. There are stops along the Bunkers Hill end of Hawthorn Road and near the Poacher but these would be within reasonable walking distance to an alternative stop on Outer Circle Drive.”*

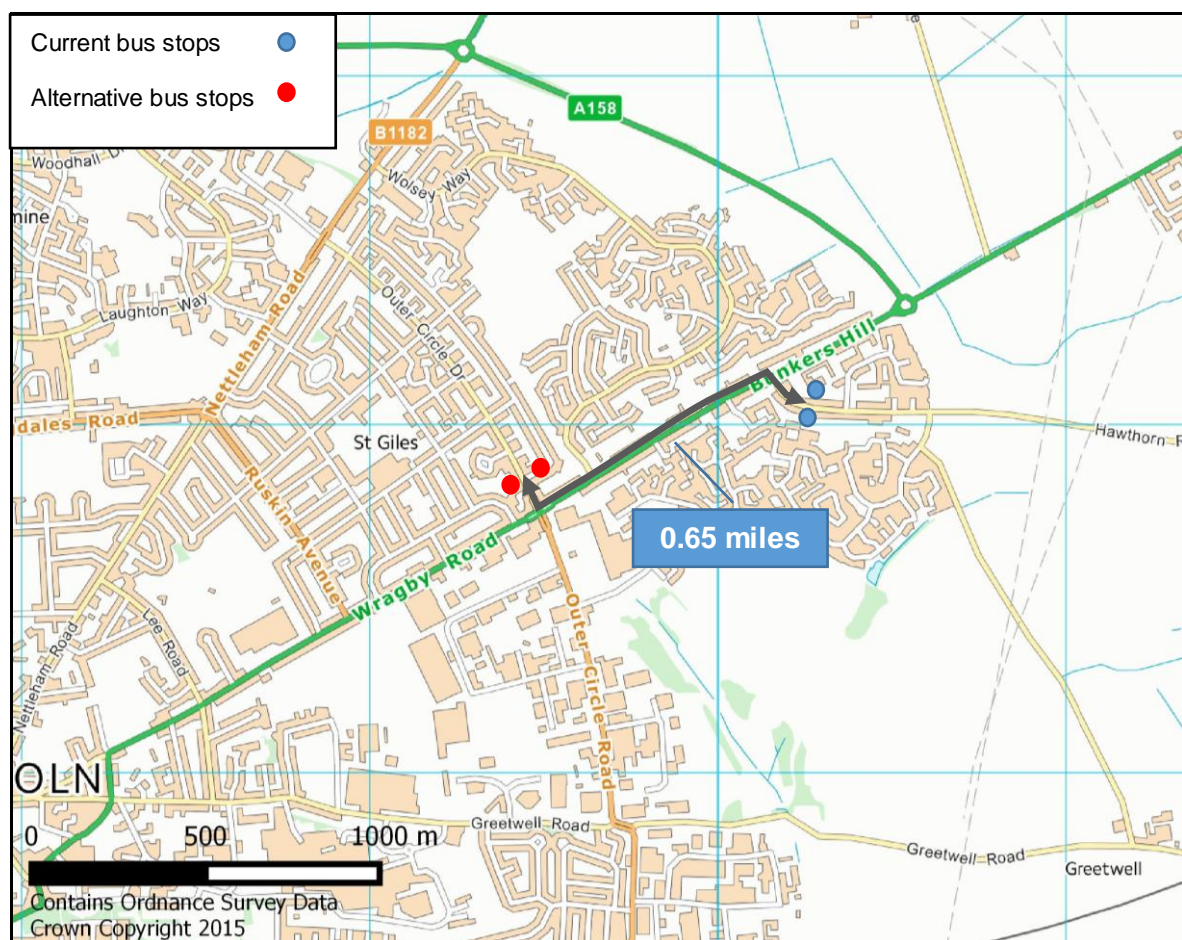
The Inspector asked how far the alternative stops on Outer Circle Drive would be from the existing stops on Hawthorn Road. As can be seen in the figure below, the stops are approximately 0.65 miles/1.05km apart. The County Council has had further discussions with Mr Skepper and the following is a summary of those discussions.

The 548 service predominantly exists to bring schoolchildren from out of the city (Scampton, Welton, Dunholme, Cherry Willingham, etc) into Lincoln to the Lincoln Priory LSST School. Given that the bus has to travel into Lincoln from the north of the city, the route within the boundary is largely set as a matter of convenience to offer a through journey for students as an alternative to using service bus network, i.e. it avoids them having to change bus services in the city bus station.

For school pupils there are alternative bus services from the Bunkers Hill stops, which are 275metres from the existing stops on Hawthorn Road (Service 6, 10). These can be used to travel to the Bus Station and there are connecting bus services from the bus station to the foot of Cross O Cliff Hill (Service 13, 14, 27) so connections are relatively easy to make. The same journey can be made in reverse at the end of the school day.

The same ticketing choices are available to all students whether they are using the local service buses or the dedicated school services, which means that there should be no financial penalty incurred.

Figure 3 – Distance between Hawthorn Road Bus Stops and Alternative



Item 11: Comparison of Facilities in Carlton Centre and the Villages

The following information provides a summary of the facilities available in the Carlton Centre and the villages of Cherry Willingham and Reepham.

Carlton Centre Businesses

- Small supermarket x3
- Clothing shops x2
- Consumer goods shops x4
- Card shop
- Café/coffee shop x3

- Post Office
- Pharmacy
- Hair salon x2
- Dentists
- Doctors' surgery
- Building society
- Travel agent
- Bookmaker
- Charity shop
- Fitness centre
- Dance centre
- Nursery
- Bar
- Fast food outlet

Cherry Willingham Businesses

- Hair salon x2
- Tea room
- Hot food takeaways x4 – fish & chips, pizza, Chinese x2
- Newsagent
- Butcher
- Pharmacy
- Small supermarket
- Pub x2
- Doctors' surgery
- Library
- Post office
- Garage

Reepham Businesses

- Post office
- Pub

Item 12: Frontage of Alternative Routes

Route	Description of Route	Percentage of Urban Frontage	Percentage of Non- Frontage
1	via Hawthorn Road – St Augustine Road, Carlton Blvd	49%	51%
2	via Kennel Lane – Wragby Road	44%	56%
3	via Hawthorn Road Croft Lane Church Lane, Fiskerton Road and Greetwell Road	48%	52%

Item 13: Time Series Peak Spreading

Evidence from peak spreading is provided in a separate document (LCC29).

Item 14: One-way or Two-way Flows Quoted

In sections 2.2.3, 2.2.4 and 2.2.5 of Mr Smith's Proof of Evidence, all flows quoted (in PCUs) represent one-way flows.

Item 15: Northbound Left-in Left-out Slip

A test of the proposed LI-LO are as follows.

Direction	AM Peak Hour	Inter Peak Hour	PM Peak Hour
Off Slip	66	59	48
On Slip	90	276	389
Comment	Low flows, primarily from Bunkers Hill	High flow on Carlton Blvd St Augustine Rd. Rat running	High flow on Carlton Blvd St Augustine Rd. Rat running

Hence the slip is lightly trafficked by the correct type of traffic (access and egress to local area), however there is inappropriate rat running in the IP and PM peak.

Item 16: Confidence in Surveys

Based on research from WebTAG (Unit m1 – Data Sources) the 95% confidence interval is estimated to be at a 10% level of accuracy for a 12 hour period. All MCC counts were undertaken for 12 hours. To interpret this the true value would lie outside the 10% envelope 5 times out of 100. This is typically twice that of ATC data (5% accuracy) which is commonly related to 2 weeks multiple observation associated with ATC. Compared with the validation criteria (absolute difference <100 pcus for flows below 700 pcus) count accuracy will not be a limiting factor.

Item 17: Cost Benefit Ratio of LEB Dual Scheme vs Single Carriageway Scheme

A separate document provided on this subject (LCC21).

Item 18: Clarification of Labelling in Paul Smith Proof of Evidence

Errata:

Figure 3.5 – 2018 PM Peak Hour Two-way Vehicular Flows; should read Figure 3.5 – 2018 Inter Peak Two-way Vehicular Flows.

Item 19: Explanation of Traffic Patterns in Figures

Hawthorn Road West. Increase in flows in Objectors Alternatives over the Do Minimum Case. In Figure 3.4 through 3.9 onwards there is an increase in 2-way flow volumes annotated, primarily in the AM peak, between the Do Minimum and DS Objectors Alternative 1 (with overbridge). The reasoning for this is twofold. Firstly with the overbridge, the most attractive path from Reepham and Cherry Willingham villages is via the overbridge on Hawthorn Road, diverted away from Kennel Lane and other routes. Secondly in 2033 onwards the LEB dependent development (NEQ) accentuates the flow differences between the DM and the DS, a proportion of which utilises Hawthorn Road west to access the bypass.

Item 20: Peak Demand within ARCADY

The ARCADY peak profile is based on a 12.5% uplift in demand flow over the average flat rate hourly value across the central 30 minutes of the peak hour. To ensure the total hourly demand flow remains equal to the average value the shoulders, first and last 15 minutes of the peak hour, either side of the central 30 minute peak are reduced by 12.5%. Therefore the net effect of the peaked profile is effectively a 25% difference between shoulder and peak.

Item 21: Status of Developments between Cherry Willingham and ‘Little Cherry’

A number of sites have been promoted by landowners and developers for inclusion as site allocations through the SHLAA process. These sites have been assessed and those proposed to be allocated will be identified as part of the latest consultation for the emerging Central Lincolnshire Local Plan but this information is not currently in the public domain. However, draft site allocations will be presented to committee on 7 September and the committee reports are likely to be available during week beginning 24 August. The consultation is due to occur for six weeks from October.

Item 22: Capacity Assessment of the Hawthorn Road Eastern LILO Junction

Results of the PICADY capacity assessment of the Hawthorn Road Eastern LILO junction are provided in Appendix C of Mr Smith’s Proof of Evidence and repeated below.

	AM		PM	
	Max RFC Max	Max RFC Max	Max RFC Max	Max RFC Max
2033 Do-Something				
Hawthorn Road Left Turn	0.963	12	0.096	0
2033 Do-Something Sensitivity Test				
Hawthorn Road Left Turn	0.808	4	0.094	0
2033 Do-Something Alternative Option 2				
Hawthorn Road Left Turn	0.690	2	0.668	2

Item 23: Programming of Wragby Road/Kennel Lane Improvement

Lincolnshire County Council can confirm that works to improve the Wragby Road/Kennel Lane are included in the North Division forward works programme.

No actual programme date has been set as the County Council is carrying out its prioritisation rankings for 2016/2017, but funding is in place from our Integrated Transport Block allocation.

Item 24: NMU provision on Greetwell Road as part of Dual Carriageway Scheme

The plan provided in Appendix A provides details of the NMU provision that was proposed as part of the dual carriageway scheme.

Item 25: Cycling between Branston and Lincoln

The Inspector asked whether cycling facilities extend the entire way between Branston and Lincoln. The footway / cycleway along Lincoln Road terminates at the top of Canwick Hill and cyclists have three choices:

1. Continue down Canwick Hill on carriageway having crossed the B1188 (least desirable option)
2. Dismount and continue down Canwick Hill on the footway until picking up the NMU route that resumes at the junction of Hall Drive
3. Dismount and take the footpath that runs north along the eastern boundary of the Canwick Village Recreation Ground which terminates at Heighington Road, remount and cross Heighington Road continuing north along Montague Road, turning west onto Hall Drive and continuing along to the junction with Canwick Hill where the journey can be resumed on the NMU route that runs down the eastern side of the hill.

Montague Road and Hall Drive are 'Quite Streets'.

Item 26: How LEB deals with NMUs at junction route

The following tables have been extracted from Mr Chetwynd's Proof of Evidence and have been supplemented with information on the facilities on the minor arms at each junction.

Principal Rights of Way, and NMU Routes affected by the LEB	Operational Impacts on NMUs	Mitigation / Provision
Cycle path along the south side of the A158 Wragby Road	Construction of the fourth arm of the roundabout will sever the existing route.	At grade crossing facilities are provided across the fourth arm of the roundabout. Alternatively NMUs can divert along the NMU provision on the east side of the LEB and back to Bunkers Hill via the Hawthorn Road NMU Bridge

		and the NMU route.
Footpath - Gtwl/140/1	Permanent severance of existing route.	Diversion of route along LEB east and west NMU routes and Hawthorn Road NMU Bridge.
Footway/Cycleway on Hawthorn Road	Hawthorn Road severed by the LEB and stopped up to the west.	Provision of grade separated NMU bridge to the South of Hawthorn Road.
Restricted Byway – CHER/133/1	No overall impact	Connectivity provided to the LEB NMU provision and Greetwell Road East.
Footpath - Viking Way	No overall impact as it passes under the Network Rail underbridge.	Provision enhanced by connectivity being provided to the LEB NMU provision.
Footpath – Gtwl/102/1	No overall impact as it passes under the River Witham Bridge.	-
Sustrans Route / National Cycle Route No.1	No overall impact as it passes under the River Witham Bridge.	Provision enhanced by connectivity being provided to the LEB NMU provision and ramped access to a new crossing of the South Delph.
Cycle path Lincoln Road Branston	Construction of roundabout will sever the existing route.	Construction of grade separated facility (underpass) including equestrian facilities as well as connectivity to the LEB NMU. At grade crossing arms of Lincoln Road West.

Other Routes affected by the LEB	Operational Impacts on NMUs	Mitigation / Provision
Greetwell Fields	Permanent severance of existing route.	1. North West – connection is provided to the Western NMU. 2. South East – Route reclassified as a bridleway and diverted from the South along the Eastern side of the LEB on the new NMU Route.
B1308 Greetwell Road	Construction of the roundabout will divert the existing Highway route.	1. Provision of grade separated NMU bridge to the North of Greetwell Road with connectivity provided to the main NMU route on the LEB. 2. At grade crossing of the western arm of Greetwell Road
B1190 Washingborough Road.	Construction of the roundabout will divert the existing Highway route.	1. Provision of at grade facilities across the LEB to the North of Washingborough Road with connectivity provided to the main NMU route on the LEB and the Sustrans Route No 1. (see note below) 2. Provision of at grade facilities across Washingborough Road West
C113 Heighington Road Canwick	No overall impact.	Provision of grade separated road bridge over the LEB with connectivity provided to the NMU route on the LEB.
C2 Bloxholm Lane.	Permanent diversion of the existing Highway route to the new roundabout on the A15.	Provision of grade separated bridge over the LEB maintaining the existing route for NMU's only with connectivity provided to the NMU route on the LEB.

A15 Sleaford Road Waddington.	Construction of the roundabout will divert the existing Highway route.	At grade access from the highway provided to the NMU route on the LEB with traffic islands designed to accommodate future expansion of the network.
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Appendix A – NMU Provision at Greetwell Road as part of the Dual Carriageway Scheme