

A14
**Cambridge to Huntingdon
improvement scheme**
Development Consent Order Application

HE/A14/EX/164

TR010018

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Highways England's Comments on Joint Local Impact Report Submission Version 2

September 2015

The Infrastructure Planning (Examination Procedure) Rules 2010



A14 Cambridge to Huntingdon improvement scheme

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1 Introduction

1.1 Purpose of this report

- 1.1.1 Cambridgeshire County Council, Huntingdonshire District Council, South Cambridgeshire District Council and Cambridge City Council submitted a *Joint Local Impact Report (LIR) submission version 1* at Deadline 2 on 15 June 2015 (REP2-184) in accordance with the requirements set out in the Planning Act 2008 (the 2008 Act) and Advice Note One: Local Impact Reports (version 2, April 2012, The Planning Inspectorate).
- 1.1.2 Highways England submitted a response to the Joint LIR submission version 1 at Deadline 4 on 07 July 2015 (Applicant reference HE/A14/EX-57, PINS reference REP4-019).
- 1.1.3 At Deadline 8 on 02 September 2015 Cambridgeshire County Council, Huntingdonshire District Council, South Cambridgeshire District Council and Cambridge City Council submitted the following documents in relation to the Joint LIR:
- Joint LIR submission version 2 (REP8-011);
 - Joint LIR submission version 2 tracked changes (REP8-012); and
 - Joint LIR - addendum of changes between submission version 1 and submission version 2 (REP8-013).
- 1.1.4 In addition to the *Joint LIR submission version 2*, Cambridgeshire County Council submitted a *Written Representation on Local Traffic* for Deadline 8 (REP08-010) and paragraph 1.1.2 states that;
- "It must be read in conjunction with the Local Impact Report submitted for Deadline 8".*
- 1.1.5 Highways England submitted an interim response to the key issues raised in the Joint LIR submission version 2 and the Written Representation on Local Traffic at Deadline 9, on 10 September 2015 (Applicant reference HE/A14/EX/146 and PINS reference REP9-021).
- 1.1.6 This report has been submitted at Deadline 10 on 28 September 2015 and provides a final response to any outstanding issues and updates identified in the *Joint LIR submission version 2* and the *Written Representation on Local Traffic*. The response is presented in consolidated form, including the responses previously given at Deadline 9 as well as the responses submitted for the first time at Deadline 10.

- 1.1.7 For information relating to the context of the scheme please refer to chapters 1 to 4 of the *Environmental Statement* (Applicant reference 6.1, PINS reference APP-332 – APP-335).

1.2 Structure of this report

- 1.2.1 This report provides an update and final response to the Highways England interim report submitted at Deadline 9 in relation to any outstanding issues and updates identified by Highways England in the *Joint LIR Submission Version 2* and the *Written Representation on Local Traffic*.
- 1.2.2 This report addresses the updated documents in the following sections:
- Section 2.1 Joint LIR Submission Version 2 Chapter 8;
 - Section 2.2 Joint LIR Submission Version 2 Chapters 2, 9 10 and 11; and
 - Section 2.3 Written Representation on Local Traffic.

2 Highways England's High Level Response to Key Issues

2.1 Joint LIR Submission Version 2 - Chapter 8

- 2.1.1 Cambridgeshire County Council commissioned consultants to examine the traffic impacts on the local roads. This section was omitted from Chapter 8 in the *Joint LIR submission version 1* at Deadline 2 on 15 June 2015 (REP2-184) and has been inserted in Chapter 8 in the joint LIR submission version 2 (REP8-011) at Deadline 8, on 02 September 2015.
- 2.1.2 At Deadline 9, on 10 September 2015 Highways England provided an interim response on the key issues identified in Chapter 8 (Applicant reference HE/A14/EX/146 and PINS reference REP9-021).
- 2.1.3 Table 2-1 below provides a consolidated response to the issues in Chapter 8 'Impact on the A14 Cambridge to Huntingdon Improvement Scheme on Local Traffic' in the Joint LIR Submission Version 2 (REP8-011). Highways England's responses from Deadline 9 are shaded grey.

Table 2-1: Issues identified in the Joint LIR Submission Version 2 – Chapter 8

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
Chapter 8, section 8.1, paragraphs 8.1.1 to 8.1.2	<p><i>A programme of local impact testing, and a sensitivity test was carried out by Highways England, to address concerns raised by the local authorities regarding the validation of CHARM and issues in the modelling likely to have an impact on traffic forecasts on the local network. As a result of this work, the Local Authorities have accepted the latest modelling as a suitable basis to consider the traffic impacts of the A14 on the local road network.</i></p> <p><i>The versions of the A14 traffic model considered in this section are:</i></p> <ul style="list-style-type: none"> • CHARM3A – Local Impact Test (LIT), and • CHARM3A Sensitivity Test 2 (DS S2). 	<p>Highways England welcomes the local authorities' acceptance of the latest traffic modelling as a suitable basis to consider the impacts of the A14 scheme on the local road network. However, as set out in paragraph 1.1.3 of the <i>Progress report on discussions regarding post scheme monitoring of traffic on local roads and mitigation</i> (Applicant reference HE-A14-EX-147, PINS reference REP9-022), Highways England considers that the CHARM3a core forecasts are the most representative of the changes on the A14 and on local roads and reflect the validated Base Year model.</p> <p>It has however been agreed that the post-scheme monitoring and mitigation package will be based on forecast traffic flows in the CHARM3a LIT + S2 scenario.</p>
Chapter 8, section 8.2, paragraph 8.2.2	<p><i>As per WebTAG Unit 3.19, link flows that meet either of the two specific criterion should be regarded as satisfactory. This allows links where only one of the criteria has been met to be considered acceptable for overall flow validation purposes.</i></p>	<p>The current version of the Department for Transport's (DfT) Web-based Transport Analysis Guidance (WebTAG) that sets out calibration and validation criteria and acceptability guidelines (and that used for the validation standards of CHARM2 and CHARM3a) is WebTAG unit M3.1 and not unit 3.19. WebTAG was redesigned at the beginning of 2014. The criteria and acceptability guidelines that are referred to – at least for model validation purposes – are however, the same.</p>
Chapter 8, section 8.2, paragraph 8.2.3	<p><i>Individual link validation for the whole of CHARM2 is reported in Table 3.2 of the J2A Local traffic Impact Report. This demonstrates that, 87% of the morning peak counts meet WebTAG criteria. The inter peak (94%) and evening peak (81%) therefore, the performance of the AM and Inter-peak periods meet the WebTAG acceptability guideline of 85% with the PM Peak marginally below at</i></p>	<p>The <i>Local Traffic Impact Report</i> (LTIR) (Applicant reference HE/A14/EX/73, PINS reference REP6-002) sets out the results of the Local Impact Test (LIT) scenario on version 3a of the Cambridge to Huntingdon A14 Roads Model (CHARM3a).</p> <p>The results presented in Table 3.2 of the Local Traffic Impact Report are the validation of CHARM3a and not CHARM2 as</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p>81%. In the review undertaken by the County Council it was decided that if >70% of sites on the local road network matched this would be an acceptable level of validation as it is difficult for all model flows to match the count data in all areas in a strategic model with the wide geographic coverage of the CHARM Model. These thresholds have been applied to the assessment of the local impacts.</p>	<p>erroneously stated in the Joint Local Impact Report submission version 2 (REP8-011).</p>
<p>Chapter 8, section 8.3, paragraphs 8.3.1 to 8.3.3</p>	<p>CCC identifies a number of areas that need detailed assessments. These areas were selected based on local concerns and local knowledge.</p> <p><i>The County Council has considered local network impacts in each of these areas focussed on four modelled scenarios, these being:</i></p> <ol style="list-style-type: none"> 1. <i>the 2035 future Local Impact Test 'without scheme' model, also known as Do Minimum (CHARM 3A + LIT DM);</i> 2. <i>the 2035 future Local Impact Test 'with scheme' model, known as Do Something (CHARM 3A + LIT DS);</i> 3. <i>the 2035 future Sensitivity Test 2 'without scheme' model, also known as Do Minimum (CHARM 3A + LIT S2 DM);</i> 4. <i>the 2035 future Sensitivity Test 2 with scheme' model, known as Do Something (CHARM 3A + LIT S2 DS).</i> 	<p>It should be noted that the changes made in the CHARM3a LIT + Sensitivity Test 2 (LIT+S2) scenario are only applied in the 'Do Minimum' (i.e. without scheme) scenarios. The traffic forecasts in the 'Do Something' (i.e. with scheme) scenarios are unchanged from the CHARM3a LIT scenario. This is because the sections of road which were subject to the changes in the speed flow curve in the Sensitivity Test 2 Do Minimum scenario would be replaced or relieved as a result of the scheme. As such the future year traffic forecasts in scenarios 2 and 4 in paragraph 8.3.3 of the Joint Local Impact Report submission version 2 (REP8-011) are identical.</p>
<p>Chapter 8, section 8.3, paragraph 8.3.5</p>	<p><i>Do Something Scenario:</i> <i>This scenario includes the changes to the local and strategic road networks as a result of the introduction of the proposed scheme. These scenarios also include the</i></p>	<p>The 'Do Something' scenario referred to here by Cambridgeshire County Council (and in subsequent sections of the Joint Local Impact Report submission version 2 (REP8-011) is actually the 'Do Something+' scenario as referred to in all other</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p><i>trips and infrastructure improvements resulting from Phase II of the Northstowe development as this can only go ahead once the A14 is improved.</i></p>	<p>documentation by Highways England. The 'Do Something' scenario (as referred to by Highways England) contains only the additional infrastructure of the proposed A14 Cambridge to Huntingdon improvement scheme. The 'Do Something+' contains both the proposed scheme and the additional development and infrastructure associated with the development of Phase II of the proposed Northstowe development. Within Highways England's assessments of the scheme, the 'Do Something' has been used for economic appraisal whilst the 'Do Something+' has been used for the environmental and operational assessments.</p>
<p>Chapter 8, section 8.3, paragraphs 8.3.7 to 8.3.8</p>	<p><i>Traffic flow changes are presented for the morning and evening peak hours as being in traffic terms the most sensitive. As AADT is derived from peak hour flows in the model by means of expansion factors, changes in daily flows would depend on local factors that are unknown.</i></p> <p><i>Less reliance could therefore be placed on daily flow changes, than peak hour changes. In presenting impacts consideration has been given to likely total daily changes in flow.</i></p> <p><i>Impacts have been considered, not only in terms of capacity and performance, but also amenity value in local communities. An increase in traffic on a road through a community may not present any capacity or performance issues, but has potential to cause increased dissatisfaction with the local environment and create a perception of reduced road safety.</i></p> <p><i>Increased traffic is likely to raise existing concerns over speeding traffic, and create a concern of reduced access</i></p>	<p>As suggested in paragraph 8.3.7 of the Joint Local Impact Report submission version 2 (REP8-011), expansion factors have been used to convert the forecast morning peak hour, average interpeak hour and evening peak hour flows from the traffic model in-to annual average daily traffic (AADT) flows. These expansion factors have been derived from analysis of observed traffic count data on a selection of strategic and local roads from across the study area, with different expansion factors applied to each of the strategic roads (i.e. M11, A14, A1, A428), County A-roads (e.g. A1096, A1198, A141, A1123) and other local roads. While the specific expansion factors will vary from site to site depending on local conditions, the average factors applied for each road type are considered to be representative of the relationship between peak hour and daily traffic flows on the strategic and local road networks. As such, the AADT forecasts presented in the Traffic Modelling Update Report (Applicant reference HE-A14-EX-43, Applicant reference REP2-018)) are considered to be representative of the likely impacts on the scheme on the strategic road network in 'normal' conditions while the -AADT forecasts presented Local Traffic Impact Report (Applicant reference HE-A14-EX-73, PINS reference REP6-002)</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p><i>to property and reduced enjoyment of property. These factors cannot be established quantitatively, and consultation with affected communities will be needed before mitigation is identified.</i></p>	<p>are considered to be representative of the likely impacts on the scheme on the local road network in 'normal' conditions.</p>
<p>Chapter 8, section 8.4, paragraph 8.4.11</p>	<p>This section considers local network impacts in Area 1 – Alconbury, Little Stukeley, Great Stukeley. This section includes tables setting out how the traffic flows on the key roads ((Ermine Street and A14 Spur Road) in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the Scheme (DM) and also in both with scheme scenarios (DS+ and S2 DS) in both the AM and PM peak periods.</p> <p>Paragraph 8.4.11 summarises the impact of the scheme on the local roads in Area 1. It states:</p> <p><i>“The results of the modelling in both the CHARM3A + LIT and CHARM3A + LIT D2 scenarios indicates that, based on the links that have been assessed, the introduction of the proposed A14 scheme results in a significant reduction in the level of traffic predicted on the local road network in this area of the model in the DS+ scenario when compared to the DM scenario and therefore the scheme generally has a beneficial impact on the local road network.”</i></p>	<p>Highways England agrees with the conclusion of the local authorities that the impacts of the A14 scheme on local roads in Area 1 are generally beneficial.</p>
<p>Chapter 8, section 8.5, paragraph 8.5.5</p>	<p><i>Of the roads in this area that are predicted to see an increase, the largest of these are on the new sections of road that do not exist in the DM scenario. Of the roads that exist in both the DM and DS scenarios the largest increases are seen on the B1514 between Hinchibrooke Park Road and Edison Bell Way where the increase is in</i></p>	<p>An increase in traffic is expected on the B1514 between Hinchibrooke Park Road and Edison Bell Way. With the provision of the Views Common Link and the Mill Common Link and new at-grade connections, this section of the B1514 is used by more local traffic routeing around the town centre. Analysis from the model shows that no strategic traffic makes use of this</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p><i>the region of 300 PCU's in both the AM and PM Peak periods.</i></p>	<p>link. The increases on this section of the B1514 occur in isolation; other sections of the B1514 are forecast to experience reductions in traffic volumes as a result of the introduction of the scheme. There are also significant reductions forecast within Huntingdon town centre (ring-road) as a result of the removal of the viaduct over the East Coast Mainline and new local connections which more than offset the increase on this section of road.</p>
<p>Chapter 8, section 8.5 , paragraph 8.5.10 to 8.5.19</p>	<p>Section 8.5 covers Area 2: Huntingdon, Brampton, Hartford Godmanchester Buckden and the Offords. It assesses how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the Scheme (DM) and also in both with scheme scenarios (DS+ and DS S2).</p> <p>Paragraph 8.5.10 summarises the impact of the scheme on the local roads in Area 2. It states:</p> <p><i>“The results of the modelling In this area of the model in both the CHARM3A + LIT and CHARM3A + LIT D2 [sic] scenarios indicates that the introduction of the proposed A14 scheme generally results in a significant reduction in the level of traffic predicted on the local road network and therefore the scheme is shown to have a positive impact on the local road network overall with the largest benefit shown in the PM peak period. There are however a number of roads that are predicted to experience an increase in traffic as a result of the introduction of the scheme.”</i></p> <p>Paragraphs 8.5.11 to 8.5.18 sets out roads that needs to</p>	<p>Highways England agrees with the conclusion of the local authorities that the impacts of the A14 scheme on local roads in Area 2 are generally beneficial.</p> <p>Of the local roads identified in paragraphs 8.5.11 to 8.5.18 for further consideration during detailed design, Highways England recognises the perceived potential sensitivity of the B1514 Brampton Road between Hinchingbrooke Park Road and Edison Bell Way, the B1514 Buckden Road in Brampton, Mill Road between The Offords and Buckden and the B1043 through The Offords and has agreed to include these locations in the provisions for post-scheme monitoring and mitigation.</p> <p>Highways England recognises that the scheme would result in increases in traffic flows on some County A-roads, including the A141 around Huntingdon and the A1198 south of the Huntingdon Southern Bypass. In these locations, Highways England considers that the increases in traffic flows are primarily due to local traffic diverting from other, less appropriate local roads, and therefore that the scheme is helping the County Council to put the right traffic on the right roads. As such, Highways England does not consider it appropriate to monitor traffic flows or provide further mitigation measures on these routes. This position has been agreed in principle with Cambridgeshire County Council as</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p>be addressed through the detailed design phase of the proposed development. This includes:</p> <ul style="list-style-type: none"> • <i>B1514 from Hinchingsbrooke Park Road to Edison Bell Way</i> • <i>A141 St Peters Road to A1123</i> • <i>A1198 South of Huntingdon Southern Bypass</i> • <i>B1514 Buckden Road</i> • <i>Mill Road Buckden</i> • <i>B1043 The Offords</i> <p>Para 8.5.19 goes further to state that:</p> <p><i>“further works needs to be done to reconcile the increase on this route in CHARM3A + LIT, with a reduction except north of Offord Cluny in CHARM3A + LIT + S2. If there is an increase, as there appears to be, County Council and Huntingdonshire District Council should be consulted in detailed design, and the need for measures to mitigate adverse impacts of the increased traffic evaluated. Consultation with the local community may also be required.”</i></p>	<p>set out in section 2.1 of 'Matters Arising from the Traffic ISH (HE-A14-EX-157).</p>
<p>Chapter 8, section 8.5, paragraphs 8.5.11 to 8.5.19</p>	<p><i>The roads that need to be addressed through the detailed design phase of the proposed development are as follows</i></p> <ul style="list-style-type: none"> • <i>B1514 from Hinchingsbrooke Park Road to Edison Bell Way</i> • <i>A141 St Peters Road to A1123</i> • <i>A1198 South of Huntingdon Southern Bypass</i> • <i>B1514 Buckden Road</i> • <i>Mill Road Buckden</i> • <i>B1043 The Offords</i> 	<p>Highways England is committed to ongoing engagement with the Local Authorities throughout the detailed design process. Highways England maintains, however, that the results of the traffic modelling exercise are robust and would not expect significant design changes to be required in the detailed design phase.</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
Chapter 8, section 8.6, paragraph 8.6.6	<p>Area 3: Houghton and Wyton, St Ives, Fenstanton, Fen Drayton is assessed in this section. It sets out how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the Scheme (DM) and also in both with scheme scenarios (DS+ and DS S2).</p> <p>Paragraph 8.6.6 summarises the impact of the scheme on local roads in Area 3. It states:</p> <p><i>“The results of the modelling in both the CHARM3A + LIT and CHARM3A + LIT D2 scenarios indicates that the introduction of the proposed A14 scheme results in a reduction the levels of traffic on the majority of the roads in this area. There is however predicted to be an increase in the level of traffic using the A1096 junction at Galley Hill due to reassignment from the A1123 and Low Road, and therefore this junction needs to be considered in the detailed design process to ensure that there is no residual impact of the A14 scheme at this junction.”</i></p>	<p>Highways England agrees with the conclusion of the local authorities that the impacts of the A14 scheme on local roads in Area 3 are generally beneficial.</p> <p>Highways England has identified the potential adverse impact of the scheme on the northern side of the Galley Hill junction and has agreed to include this location in the provisions for post-scheme monitoring and mitigation. The precise locations to be monitored are yet to be agreed.</p>
Chapter 8, section 8.6, paragraph 8.6.6	<p><i>The results of the modelling in both the CHARM3A + LIT and CHARM3A + LIT D2 scenarios indicates that the introduction of the proposed A14 scheme results in a reduction the levels of traffic on the majority of the roads in this area. There is however predicted to be an increase in the level of traffic using the A1096 junction at Galley Hill due to reassignment from the A1123 and Low Road, and therefore this junction needs to be considered in the detailed design process to ensure that there is no residual</i></p>	<p>Highways England agrees that, for those routes assessed in 'Area 3' as defined in the Joint Local Impact Report, the majority of locations result in a benefit from the proposed A14 scheme. The increase in traffic on the A1096 junction at Galley Hill is caused by traffic re-routeing from the A1123 and Low Road onto the de-trunked A14 which, as a result of the introduction of the Huntingdon Southern Bypass, has available capacity to accommodate these trips. This re-routeing is expected as a result of the scheme and is traffic re-assigning to a more</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<i>impact of the A14 scheme at this junction.</i>	appropriate route. Highways England has committed to the monitoring of the junction at Galley Hill (paragraph 7.9.14 <i>Transport Assessment</i> (Applicant reference 7.2, PINS reference APP-756).
Chapter 8, section 8.7, paragraph 8.7.4	<i>The table above indicates that in the CHARM3A + LIT S2 DM the level of increase is greater than in the + LIT scenarios. This is due to the use of the Mean Journey times in this scenario that better represents the conditions on the A14 and therefore there is more traffic predicted on the local roads avoiding congestion on the A14.</i>	It is important to note that, in the CHARM3a + LIT S2 sensitivity test as noted, the traffic modelling has not made 'use of Mean Journey times' to the extent that a validation exercise against the mean observations has been undertaken. Instead, the sensitivity test has altered the speed-flow curves on the A14 to have reduced capacities (beyond what would be expected of best practice modelling) to better represent conditions worse than the observed median and approaching the observed mean travel times. Highways England agrees that the table referred to does show higher levels of increase in the + LIT scenarios as a result of the additional congestion on the A14 caused by the S2 sensitivity test.
Chapter 8, section 8.7, paragraph 8.7.6	This section covers Area 4: Swavesey and Over. It sets out how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 with and without the Scheme (DM and DS+). It considers the impacts in both the LIT and LIT+S2 scenarios. Paragraph 8.7.6 summarises the impact of the scheme on local roads in Area 4. It states: <i>"The results of the modelling in both the CHARM3A + LIT and CHARM3A + LIT D2 scenarios indicates that the introduction of the proposed scheme indicates that the levels of traffic on the majority of the roads in this area are</i>	Highways England agrees with the conclusion of the local authorities that the impacts of the A14 scheme on local roads in Area 4 are generally beneficial. Highways England has extracted forecast traffic flows on a selection of local roads in Area 4 for the following scenarios: <ul style="list-style-type: none"> • DM – without A14 scheme and without Northstowe Phase 2 development; • DS – with A14 scheme and without Northstowe Phase 2; • DS+ – with A14 scheme and with Northstowe Phase 2 By comparing these traffic forecasts it is possible to determine the impacts of the A14 scheme on these local roads in isolation.

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response																				
	<p><i>predicted to reduce as a result of introduction of the scheme. However, greater clarity is required in order to be able to assess whether the increases shown in the DS+ scenarios are as a result of the introduction of the A14 improvements or as a result of Phase 2 of the Northstowe Development. If they are shown to be a result of the introduction of the A14 improvements then this will need to be addressed in the detailed design of the proposed scheme."</i></p> <p>Para 8.7.7 to 8.7.10 identifies the key roads in the area that require further investigation. This includes:</p> <ul style="list-style-type: none"> • <i>Swavesey Road</i> • <i>Longstanton Road/Gravel Bridge Road/Over Road</i> • <i>B1050/Longstanton</i> • <i>Traffic increase on Middlewhich/Boxworth End/Bucking Way Road is likely to have a negative impact in Swavesey.</i> 	<p>Table 1 summarises the forecast AADT flows in 2035 based on the CHARM3a + LIT scenario.</p> <p>Table 1: Forecast 2-way AADT flows on local roads in Area 4</p> <table border="1" data-bbox="1234 491 2002 810"> <thead> <tr> <th>Location</th> <th>2035 DM</th> <th>2035 DS</th> <th>2035 DS+</th> </tr> </thead> <tbody> <tr> <td>Swavesey Road (west of Swavesey)</td> <td>3,100</td> <td>3,000 (-3%)</td> <td>4,100 (+32%)</td> </tr> <tr> <td>Over Road (north of Longstanton)</td> <td>1,800</td> <td>2,100 (+17%)</td> <td>2,100 (+17%)</td> </tr> <tr> <td>Middle Watch (through Swavesey)</td> <td>9,700</td> <td>11,200 (+15%)</td> <td>12,700 (+31%)</td> </tr> <tr> <td>Bucking Way Road (south of Swavesey)</td> <td>8,300</td> <td>8,800 (+6%)</td> <td>8,600 (+4%)</td> </tr> </tbody> </table> <p>The impact of the scheme on the B1050 is discussed under Area 7.</p> <p>From this analysis it can be seen that the A14 scheme is forecast to have little impact on traffic flows on Swavesey Road and Bucking Way Road, however, traffic flows on Over Road and Middle Watch are forecast to increase by around 15% as a result of the scheme. The increase on Swavesey Road is the result of traffic from Swavesey and Over using this route to access the A14 eastbound at the Swavesey junction rather than routeing via Ramper Road and the B1050. The increase in traffic on Over Road appears to be the result of traffic diverting to avoid congestion around the Northstowe Phase 1 access.</p> <p>Highways England considers that the increase in traffic flows on Middle Watch is due to local traffic accessing the A14 more</p>	Location	2035 DM	2035 DS	2035 DS+	Swavesey Road (west of Swavesey)	3,100	3,000 (-3%)	4,100 (+32%)	Over Road (north of Longstanton)	1,800	2,100 (+17%)	2,100 (+17%)	Middle Watch (through Swavesey)	9,700	11,200 (+15%)	12,700 (+31%)	Bucking Way Road (south of Swavesey)	8,300	8,800 (+6%)	8,600 (+4%)
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Swavesey Road (west of Swavesey)	3,100	3,000 (-3%)	4,100 (+32%)																			
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Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
		<p>directly and therefore that the scheme is helping the County Council to put the right traffic on the right roads. As such, Highways England does not consider it appropriate to monitor traffic flows or provide further mitigation measures in this location.</p> <p>Although there is forecast to be a large percentage increase in traffic flows on Over Road, the absolute change in flow is small and traffic volumes would remain well within the capacity of the existing road network. Consequently, Highways England does not consider it appropriate to monitor traffic flows or provide further mitigation measures in this location.</p> <p>The additional traffic associated with the Northstowe Phase 2 development is not forecast to change traffic flows on Over Road or Bucking Way Road but would result in further increases in traffic on Swavesey Road and Middle Watch.</p>
Chapter 8, section 8.7, paragraph 8.7.6	<p><i>The results of the modelling in both the CHARM3A + LIT and CHARM3A + LIT D2 scenarios indicates that the introduction of the proposed scheme indicates that the levels of traffic on the majority of the roads in this area are predicted to reduce as a result of introduction of the scheme. However, greater clarity is required in order to be able to assess whether the increases shown in the DS+ scenarios are as a result of the introduction of the A14 improvements or as a result of Phase 2 of the Northstowe Development. If they are shown to be a result of the introduction of the A14 improvements then this will need to be addressed in the detailed design of the proposed scheme. The key roads in this area that require further</i></p>	<p>Highways England agrees with the principle that increases in traffic on links in 'Area 4' should be established as being linked to either the A14 improvement scheme or the proposed Northstowe Phase II development. If increases in traffic on these links were attributable to the expansion of Northstowe and not the proposed A14 improvements then Highways England should not be required to undertake further investigation of potential mitigation options.</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<i>investigation are as follows:</i>	
Chapter 8, section 8.8, paragraph 8.8.6	<p>This section assesses Area 5: Elsworth, Boxworth, Knapwell. It includes tables which set out how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the Scheme (DM) and also in two with scheme scenarios (DS+ and DS S2).</p> <p>Para 8.8.6 summarises the impact of the scheme on the local roads in Area 5. It states:</p> <p><i>“The introduction of the scheme leads to a reduction in the level of traffic on the local road network and therefore the scheme represents a benefit for the local road network. This is a result of the relief of congestion on the A14 meaning that more journeys are drawn back to the main roads in the area reducing the impact on these local roads. There is however predicted to be a moderate increase in traffic in the +LIT scenario on Boxworth Road although this reduces in the S2 scenarios and therefore it is likely that the outcome is neutral. However, this needs to be monitored to ensure that this is the case.”</i></p>	<p>Highways England agrees with the conclusion of the local authorities that the impacts of the A14 scheme on local roads in Area 5 are generally beneficial.</p> <p>It has been agreed that the post-scheme monitoring and mitigation package will be based on forecast traffic flows in the CHARM3a LIT + S2 scenario. As the scheme is forecast to result in a significant reduction in flows on Boxworth Road in this scenario, Highways England does not consider it necessary to include this location in the provisions for post-scheme monitoring and mitigation. The precise locations to be monitored are yet to be agreed.</p>
Chapter 8, section 8.9, paragraphs 8.9.6 to 8.9.9	<p>This section assesses Area 6: Papworth Everard and Hilton. It includes tables showing how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the Scheme (DM) and also in two with scheme scenarios (DS+ and DS S2).</p>	<p>Highways England agrees with the conclusion of the local authorities that the impacts of the A14 scheme on local roads in Area 6 are generally beneficial.</p> <p>Highways England recognises the perceived potential sensitivity of Graveley Way through Hilton and has agreed to include this</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p>In the CHARM3A + LIT 2035 DM scenario the levels of traffic on the roads within this area are predicted to increase with the largest increases predicted on Gravely Way and the A1198 north of Gravely Way.</p> <p>In the CHARM3A + LIT S2 scenario the level of traffic in the DM is higher than in the + LIT scenario. This is the result of the increase congestion in this model causing traffic to re-route to avoid congestion on the A14. The largest increases are predicted on the A1198.</p> <p>Paragraph 8.9.6 to 8.9.9 state that:</p> <p><i>It is the opinion of the County Council that the S2 scenarios represent a more realistic prediction of the impact of the scheme in this area. The introduction of the scheme leads to a general reduction in the level of traffic on the local road network and therefore the scheme represents a benefit for the local road network. This is a result of the relief of congestion on the A14 meaning that more journeys are drawn back to the main roads in the area reducing the impact on these local roads. There are however two sections of road within this area that need to be monitored to enable the actual impact of the A14 scheme to be assessed, these are:</i></p> <ul style="list-style-type: none"> • B1040 – Potton Road • Graveley Way <p><i>Hilton Parish Council raised concerns over traffic routing down the B1040 from Galley Hill and using Graveley Way</i></p>	<p>route in the provisions for post-scheme monitoring and mitigation. The precise locations to be monitored are yet to be agreed.</p> <p>As indicated in the Local Traffic Impact Report (Applicant reference HE-A14-EX-73, PINS reference REP6-002), the forecast increase in traffic on the B1040 Potton Road is a due to local traffic switching back to this route from Hilton Road. Highways England considers that Potton Road is a more appropriate route for this traffic, and therefore that the scheme is helping the County Council to put the right traffic on the right roads. As such, Highways England does not consider it appropriate to monitor traffic flows or provide further mitigation measures in this location.</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response																
	<p><i>to reach the A1198. This is indeed the case, but the additional traffic is balance by a reduction in traffic from the St Neots area cutting across through Graveley to the A1198 and then via Graveley Way to reach the B1040. The impacts in Hilton in terms of local traffic are broadly neutral, with slight increases that are due to local traffic using alternative routes</i></p>																	
<p>Chapter 8, section 8.10, paragraph 8.10.6</p>	<p>This section covers assessment of Area 7: Bar Hill, Longstanton, Willingham, Oakington and Northstowe. It includes tables showing how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the Scheme (DM) and also in two with scheme scenarios (DS+ and DS S2).</p> <p>In the CHARM3A + LIT 2035 DM scenario the levels of traffic on the roads within this area are predicted to increase. The largest increases are predicted on Water Lane/Station Road/Oakington Road.</p> <p>In the CHARM3A + LIT S2 2035 DM scenario the level of growth on the local road network is less than in the + LIT scenario.</p> <p>Para 8.10.6 concludes that:</p> <p><i>The results of the modelling in area 7 indicate that the introduction of the scheme will result in a slight increase in the levels of traffic using Crafts Way in Bar Hill to access the A14 and the Local Access Road. However it appears that this is simply traffic re-routing within Bar Hill and appears to be most likely not an impact of the A14. Further</i></p>	<p>Highways England has extracted forecast traffic flows on a selection of local roads in Area 7 for the following scenarios:</p> <ul style="list-style-type: none"> DM – without A14 scheme and without Northstowe Phase 2 development; DS – with A14 scheme and without Northstowe Phase 2; DS+ – with A14 scheme and with Northstowe Phase 2 <p>By comparing these traffic forecasts it is possible to determine the impacts of the A14 scheme on these local roads in isolation.</p> <p>Table 2 summarises the forecast AADT flows in 2035 based on the CHARM3a + LIT scenario.</p> <p>Table 2: Forecast 2-way AADT flows on local roads in Area 7</p> <table border="1" data-bbox="1234 1023 2002 1334"> <thead> <tr> <th>Location</th> <th>2035 DM</th> <th>2035 DS</th> <th>2035 DS+</th> </tr> </thead> <tbody> <tr> <td>B1050 Hatton's Road (between A14 and LAR)</td> <td>19,400</td> <td>22,800 (+18%)</td> <td>33,400 (+72%)</td> </tr> <tr> <td>B1050 Hatton's Road (south of N'stowe Ph2 Access)</td> <td>19,400</td> <td>20,700 (+7%)</td> <td>37,600 (+94%)</td> </tr> <tr> <td>B1050 Hatton's Road (north of N'stowe Ph2 Access)</td> <td>19,400</td> <td>20,700 (+7%)</td> <td>16,500 (-15%)</td> </tr> </tbody> </table>	Location	2035 DM	2035 DS	2035 DS+	B1050 Hatton's Road (between A14 and LAR)	19,400	22,800 (+18%)	33,400 (+72%)	B1050 Hatton's Road (south of N'stowe Ph2 Access)	19,400	20,700 (+7%)	37,600 (+94%)	B1050 Hatton's Road (north of N'stowe Ph2 Access)	19,400	20,700 (+7%)	16,500 (-15%)
Location	2035 DM	2035 DS	2035 DS+															
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Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response			
	<p><i>work needs to be done to establish the cause of the traffic changes and if it is an impact of the A14. The junctions of Crafts Way with Acorn Avenue and Fox Hollow will need to be checked for any impact, if the change is due to the A14.</i></p>	<p>B1050 Hatton's Road (west of Longstanton)</p>	<p>14,300</p>	<p>14,100 (-1%)</p>	<p>11,200 (-15%)</p>
		<p>B1050 Station Road (through Willingham)</p>	<p>13,600</p>	<p>13,900 (+2%)</p>	<p>16,100 (+18%)</p>
		<p>Station Road (through Oakington)</p>	<p>8,300</p>	<p>7,200 (-13%)</p>	<p>6,800 (-18%)</p>
		<p>From this analysis it can be seen that the A14 scheme is forecast to have limited impact on traffic flows on the B1050 to the north of the new Local Access Road, while flows on Station Road through Oakington would be reduced. Only the section of the B1050 between the A14 and the new Local Access Road would be significantly increased as a result of the A14 scheme, however this section would be widened to dual 2 lane standard as part of the scheme proposals to accommodate the increased flows.</p> <p>The additional traffic generated by the Northstowe Phase 2 development would significantly increase flows on the B1050 to the south of the proposed Phase 2 access road and also on the B1050 through Willingham to the north, however, there would be reductions on the B1050 to the west of Longstanton and on Station Road through Oakington. These additional impacts would need to be addressed by the Northstowe Phase 2 developer.</p> <p>The changes in flow in Bar Hill appear to be the result of a transfer of traffic between Crafts Way and Saxon Way, with flows on the former increasing and flows on the latter decreasing. The overall volume of traffic entering and exiting Bar Hill is not expected to be significantly changed by the scheme. Consequently, Highways England does not consider it</p>			

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response																								
		appropriate to monitor traffic flows or provide further mitigation measures in this location.																								
Chapter 8, section 8.11, paragraph 8.11.6 to 8.11.16	<p>This section covers Area 8: Dry Drayton and Madingley. It includes tables which set out how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the scheme (DM) and also in two with scheme scenarios (DS+ and DS S2).</p> <p>Paragraph 8.11.6 concludes that:</p> <p><i>The DS+ scenarios indicate that the levels of traffic on the roads in this area increase with the exception of Dry Drayton Road. However, it is not clear if the increased levels of traffic are a result of the introduction of the A14 improvements or if this is the result of the increased traffic from the Northstowe development. However, the routing changes are made possible by the design of the A14 Local Access Road and the change of the junction between the LAR and The Avenue to all movements. It therefore becomes a more attractive route than Dry Drayton Road. As a consequence, traffic currently using Dry Drayton Road switches to using The Avenue, causing a significant increase on The Avenue and a significant reduction on Dry Drayton Road. As the junction between The Avenue and Dry Drayton Road is on the north side of Madingley, changes in Madingley, on the High Street are more muted. Neither Dry Drayton Road nor The Avenue are high quality roads, being in poor condition, and narrow with restricted visibility.</i></p>	<p>Highways England has extracted traffic forecasts on a selection of local roads in Area 8 for the following scenarios:</p> <ul style="list-style-type: none"> DM – without A14 scheme and without Northstowe Phase 2 development; DS – with A14 scheme and without Northstowe Phase 2; DS+ – with A14 scheme and with Northstowe Phase 2 <p>By comparing these traffic forecasts it is possible to determine the impacts of the A14 scheme on these local roads in isolation.</p> <p>Table 3 summarises the forecast AADT flows on local roads in Area 8 in 2035 based on the CHARM3a + LIT scenario.</p> <p>Table 3: Forecast 2-way AADT flows on local roads in Area 8</p> <table border="1" data-bbox="1234 935 2000 1313"> <thead> <tr> <th>Location</th> <th>2035 DM</th> <th>2035 DS</th> <th>2035 DS+</th> </tr> </thead> <tbody> <tr> <td>Oakington Road (north of Dry Drayton)</td> <td>9,600</td> <td>9,600 (+0%)</td> <td>9,700 (+1%)</td> </tr> <tr> <td>Scotland Road (south of Dry Drayton)</td> <td>7,500</td> <td>9,200 (+23%)</td> <td>9,400 (+25%)</td> </tr> <tr> <td>The Avenue (north of Madingley)</td> <td>4,000</td> <td>5,800 (+45%)</td> <td>6,700 (+68%)</td> </tr> <tr> <td>High Street (through Madingley)</td> <td>3,700</td> <td>3,700 (0%)</td> <td>4,600 (+24%)</td> </tr> <tr> <td>Cambridge Road (east of Madingley)</td> <td>4,300</td> <td>4,400 (+2%)</td> <td>4,800 (+12%)</td> </tr> </tbody> </table>	Location	2035 DM	2035 DS	2035 DS+	Oakington Road (north of Dry Drayton)	9,600	9,600 (+0%)	9,700 (+1%)	Scotland Road (south of Dry Drayton)	7,500	9,200 (+23%)	9,400 (+25%)	The Avenue (north of Madingley)	4,000	5,800 (+45%)	6,700 (+68%)	High Street (through Madingley)	3,700	3,700 (0%)	4,600 (+24%)	Cambridge Road (east of Madingley)	4,300	4,400 (+2%)	4,800 (+12%)
Location	2035 DM	2035 DS	2035 DS+																							
Oakington Road (north of Dry Drayton)	9,600	9,600 (+0%)	9,700 (+1%)																							
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Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p>Paragraphs 8.11.7 to 8.11.16 state that:</p> <p><i>Of the roads that are predicted to experience an increase in the level of traffic, Scotland Road, The Avenue, High Street and Cambridge Road will all need further investigation. The demand of traffic to travel through Madingley and Dry Drayton should be reviewed.</i></p> <p><i>It is noted that Highways England has considered the benefit of a link between the A428 and A14 at Girton, but concluded that there is no strategic demand for a link given the predominance of local traffic. It is suggested that the cost and impact of a link would also need to be considered.</i></p> <p><i>Consideration should also be given to maintaining left in/left out access at The Avenue, with more extensive consultation on closure and the impacts of closure studied. This is an impact of the A14 design, and should be considered in the detailed design stage of the A14.</i></p> <p><i>It is suggested that Solutions to satisfy local traffic demand from the A14 corridor to the A428 corridor should be studied and evaluated, including the feasibility of a connection from the LAR to the A428 at Girton when planning for any upgrade/improvement of the A428 and for Northstowe Phase 3.</i></p> <p><i>Furthermore, the resilience of the Northstowe infrastructure proposals for the traffic forecasts now established for the A14 should be considered and, if there is additional incremental impact from the A14 scheme,</i></p>	<p>From this analysis it can be seen that the A14 scheme is forecast to increase traffic flows on Scotland Road and The Avenue, but that traffic flows on Oakington Road, High Street and Cambridge Road are not expected to change significantly. Highways England recognises the perceived potential sensitivity of the roads through Dry Drayton and Madingley and has agreed to include sensitive locations in the provisions for post-scheme monitoring and mitigation. The precise locations to be monitored are yet to be agreed.</p> <p>Further increases in traffic are forecast on The Avenue, High Street and Cambridge Road as a result of the Northstowe Phase 2 development. These additional impacts would need to be addressed by the Northstowe Phase 2 developer.</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<i>further mitigation potentially devised.</i>	
Chapter 8, section 8.11, paragraph 8.11.14	<i>In the short term as part of the A14 scheme consideration should be given to maintaining left in/left out access at The Avenue, with more extensive consultation on closure and the impacts of closure studied. This is an impact of the A14 design, and should be considered in the detailed design stage of the A14.</i>	The scheme proposed by Highways England confers a benefit on trips using the Avenue, by providing an all-access junction with the Local Access Road. The current left-in, left-out arrangement at the northern end of the Avenue is necessitated by the road layout and the joining of the route onto the A14 slip road which is one-way in the northwest bound direction. The design of the Local Access Road is such that all movements can be catered for giving improved access towards Cambridge. The current designs are an improvement on the <i>status quo</i> . Highways England is not promoting the closure of The Avenue. Such a closure would need to be carefully considered in terms of the impacts on residents of Dry Drayton village. Ultimately, either closure or maintenance of existing arrangements would be a decision for the future to be made by the Local Highway Authority.
Chapter 8, section 8.11, paragraph 8.11.15	<i>In the longer term solutions to satisfy local traffic demand from the A14 corridor to the A428 corridor should be studied and evaluated. The proposed A428 upgrade from Caxton to the A1 may increase traffic demand from Northstowe to the A428. Similarly the proposal that the A428 becomes an expressway may also increase demand. The A14 and A428 serve different demands, so it is unlikely that the A14 will in anyway provide an alternative route, as has been shown by sensitivity tests carried out by Highways England. Therefore the feasibility of a connection from the LAR to the A428 at Girton should be considered in planning for any upgrade/improvement of the A428 and for Northstowe Phase 3.</i>	Highways England agrees that the results of its sensitivity testing of the proposed A428 Caxton Gibbet to A1 scheme have shown that the A14 and A428 serve different demands and distributions of trips. The two schemes are complementary rather than being interdependent. Highways England does not propose to investigate the potential for a link between the Local Access Road and the A428 as part of its A14 proposals. However, the proposed design of the Local Access Road would not preclude investigations of such a scheme in the future should there be a need to do so. What may be necessary or appropriate for Northstowe Phase 3 will need to be determined by the appropriate planning authority when that phase is consented.

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response												
<p>Chapter 8, section 8.12, paragraphs 8.12.6 to 8.12.8</p>	<p>This section considers the local network impacts in Area 9: Girton, Histon and Impington, Cottenham, Milton. The section includes tables setting out how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the Scheme (DM) and also in two with scheme scenarios (DS+ and DS S2).</p> <p>Paragraph 8.12.6 to paragraph 8.12.8 provides a summary:</p> <p><i>The DS+ scenarios indicate that the levels of traffic on the roads in this area is very similar in both models and therefore the use of mean journey times does not have a significant impact in this area of the model. However, it is not clear if the traffic changes in this area are as a result of the introduction of the A14 improvements or if this is the result of the increased traffic from phase 2 of the Northstowe development. This needs to be clarified and, if it is as the result of the introduction of the A14 scheme, will need to be addressed in the detailed design phase of the scheme with appropriate mitigation measures identified and delivered.</i></p> <p><i>B1049 Bridge Road, Histon – this link is predicted to experience a slight increase in the AM Peak but a slight increase in the PM Peak. This is most likely as traffic re-routes to access the A14 and Cambridge via the most</i></p>	<p>Highways England agrees with the conclusion of the local authorities that the scheme would have limited impact on local roads in Area 9.</p> <p>Table 4 summarises the forecast AADT flows on B1049 Bridge Road in Histon and New Road / Park Lane in Impington 8 in 2035 based on the CHARM3a + LIT scenario.</p> <p>Table 4: Forecast 2-way AADT flows on local roads in Area 9</p> <table border="1" data-bbox="1234 743 2000 935"> <thead> <tr> <th>Location</th> <th>2035 DM</th> <th>2035 DS+</th> <th>% Change</th> </tr> </thead> <tbody> <tr> <td>B1049 Bridge Road (through Histon)</td> <td>23,400</td> <td>23,400</td> <td>0%</td> </tr> <tr> <td>New Road / Park Lane (through Impington)</td> <td>8,600</td> <td>8,600</td> <td>0%</td> </tr> </tbody> </table> <p>From this analysis it can be seen that the A14 scheme is forecast to have limited impact on traffic flows on these two roads. Consequently, Highways England does not consider it appropriate to monitor traffic flows or provide further mitigation measures in these locations.</p> <p>It is noted that paragraph 8.12.7 in the Joint Local Impact Report submission version 2 (REP8-011) makes reference to flows on the B1049 Bridge Road increasing in both the AM and PM peak hours. This is incorrect. As the tables in Section 8.12 show, the scheme would result in lower peak hour flows on the B1049 (relative to the DM scenario) in both the CHARM3a LIT and</p>	Location	2035 DM	2035 DS+	% Change	B1049 Bridge Road (through Histon)	23,400	23,400	0%	New Road / Park Lane (through Impington)	8,600	8,600	0%
Location	2035 DM	2035 DS+	% Change											
B1049 Bridge Road (through Histon)	23,400	23,400	0%											
New Road / Park Lane (through Impington)	8,600	8,600	0%											

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p><i>appropriate junction and therefore, the impact on this road needs to be checked in detailed design to ensure that the local junctions can accommodate the predicted increase.</i></p> <p><i>Park Lane, Histon – This link is predicted to experience an increase in PM peak. Although this is likely to be within the capacity of the road, the level of traffic on this road will need to be monitored and mitigation provided if appropriate.</i></p>	<p>CHARM3a LIT + S2 scenarios.</p>
<p>Chapter 8, section 8.13, paragraphs 8.13.6 and 8.13.7</p>	<p>This section covers Area 10: Cambridge. It assesses how the traffic flows on the key roads in this area are predicted to change in the model between the base year and the predicted traffic flows in the future year of 2035 without the scheme (DM) and also in two with scheme scenarios (DS+ and DS S2).</p> <p>Paragraph 8.13.6 and 8.13.7 state that:</p> <p><i>The introduction of the A14 Scheme does not look to significantly change the overall numbers of vehicles entering Cambridge but it does change the routes that are used with the biggest difference being the increase in trips on Huntingdon Road west of Girton Road. It is interesting that the increase on this road is predicted to be significantly lower closer to the City Centre (east of Girton Road). This indicates that the introduction of the Local Access Road (which improves ease of access via this radial, and hence encourages journeys into Cambridge to reroute via Huntingdon Road) is estimated to increase the number of journeys that can access Cambridge via Huntingdon Road and reduces the number of trips on other routes into the City. This therefore provides an</i></p>	<p>Highways England agrees with the conclusion of the local authorities that the impacts of the A14 scheme on local roads in Area 10 are generally beneficial.</p> <p>Highways England recognises that the scheme would result in increases in traffic flows on Huntingdon Road in north-west Cambridge. However, Highways England considers that the increases in traffic flows are primarily due to local traffic diverting from other, less appropriate local roads (e.g. local roads through Oakington and Girton village), and therefore that the scheme is helping the County Council to put the right traffic on the right roads. As such, Highways England does not consider it appropriate to monitor traffic flows or provide further mitigation measures on Huntingdon Road.</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
	<p><i>improvement for some areas. However, despite this, the levels of increase in trips on Huntingdon Road may be sufficient to cause problems within the wider local road network and therefore it will be necessary for the impact of the Local Access Road on the operation of Girton Corner and this section of Huntingdon Road more widely to be fully assessed in the detailed design of the proposed development.</i></p> <p><i>The results of this analysis indicate that, with the exception of Huntingdon Road (west of Girton Road), the A14 scheme will be beneficial in reducing traffic on many of Cambridge City's radial routes. However, due to the weaker validation of Cambridge City's local roads within all versions of the model to-date, the City Council finds it difficult to have full confidence in these projections. Therefore monitoring is expected to be provided by HE on Cambridge radials so these projections can be monitored and mitigation set in place if predicted reductions are not achieved.</i></p>	
Chapter 8, section 8.13, paragraph 8.13.7	<p><i>The results of this analysis indicate that, with the exception of Huntingdon Road (west of Girton Road), the A14 scheme will be beneficial in reducing traffic on many of Cambridge City's radial routes. However, due to the weaker validation of Cambridge City's local roads within all versions of the model to-date, the City Council finds it difficult to have full confidence in these projections. Therefore monitoring is expected to be provided by HE on Cambridge radials so these projections can be monitored and mitigation set in place if predicted reductions are not achieved.</i></p>	<p>For the majority of cases, the A14 will have little to no impact on the Cambridge radial routes, particularly in the east and south of the city. Analysis of previous models and forecasts, undertaken in-line with guidance set out in WebTAG unit M3.1 section 2 all show similar results. Highways England agrees that there will be some switching between radials in the north and west of Cambridge (Madingley Road, Huntingdon Road, Histon Road and Milton Road) as a result of the scheme. These are the result of traffic being able to select a more appropriate route into the city as a result of relief on the A14.</p> <p>It should be noted that the validation of the traffic model, particularly the CHARM3a 'core' model and the subsequent</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 – Chapter 8 (REP8-011)	Highways England's Response
		<p>Local Impact Test (LIT) is very good on the Cambridge outer radial cordon and meets the guidance provided by the DfT in WebTAG unit M3.1. It is accepted that the validation of the model within the city centre is less good than the outer radial cordon; however, the level of performance achieved is considered reasonable given the lack of predicted impacts within the city centre and is suitable for the part of the model that does not form the 'Area of Detailed Modelling', in-line with tests as set out in WebTAG unit M3.1 section 2 guidance. Highways England considers that the modelling exercise undertaken is aligned with both the strategic nature of the proposed scheme and DfT guidance and the modelling is therefore robust. Without prejudice to that position, in order to give additional comfort to local authorities, Highways England agrees in principle to the monitoring of routes around Cambridge. More detail on this is contained in an update on discussions on monitoring and mitigation submitted at Deadline 9. However, given the lack of predicted impact of the A14 proposals on routes to the south and east of Cambridge as shown by all previous versions of the model, it is unlikely that any mitigation would be required.</p>

2.2 Joint LIR Submission Version 2 – Chapters 2, 9, 10 and 11

- 2.2.1 In addition to the update to Chapter 8, various text amendments have been made by Cambridgeshire County Council, Huntingdonshire District Council, South Cambridgeshire District Council and Cambridge City Council in the *Joint LIR submission version 2* (REP8-011) in chapters 2, 9, 10 and 11. The complete list and details of the paragraph changes is set out in the *Joint LIR addendum of changes between submission version 1 and submission version 2* (REP8-013).
- 2.2.2 A response to the key issues identified in the amended paragraphs in Chapters 2, 9, 10 and 11 was submitted in Highways England's interim response at Deadline 9, on 10 September 2015 (Applicant reference HE/A14/EX/146 and PINS reference REP9-021).
- 2.2.3 Highways England has reviewed and noted the remaining updates and amendments to the Joint LIR submission version 2 as set out in the *Joint LIR addendum of changes between submission version 1 and submission version 2* (REP8-013) and has no further comments.
- 2.2.4 Table 2-2 below is therefore a direct extract of table 2-2 from Highways England's interim response submitted at Deadline 9. It should be noted that the paragraph reference numbers in table 2-2 relate to the paragraph numbers as shown on the 'clean' version of the *Joint LIR submission version 2* (REP8-011).

Table 2-2: Key Issues identified in the Joint LIR Submission Version 2 – Chapters 2, 9 10 and 11

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text	CCC Reason for Text Amendment	Highways England’s Response
Cultural Heritage: 9.2.7	<p>Text added:</p> <p><i>“The compaction and distortion of archaeological deposits do not only occur in alluvium or peat, as has been recently evidenced at the excavations for Astra Zeneca’s headquarters building at the Addenbrookes Bio-Medical campus, where funerary urns and burial remains were shattered and distorted, having lain beneath the former hospital car parks and then beneath spoil mounds. If the applicant’s intention is to properly mitigate these areas through a programme of archaeological work, this will be acceptable, but this is not currently present or clear in the mitigation strategy”.</i></p>	CCC has requested more detail on the possible impact and necessity of appropriate mitigation strategy.	<p>Soil storage areas will be archaeologically investigated prior stripping of the topsoil. Archaeological recording will be undertaken to ensure archaeological remains are preserved by record.</p> <p>The proposed mitigation for archaeological investigation, including geophysical survey, trial trenching and archaeological excavation is presented in the Written Scheme of Investigation for Archaeological Investigation.</p>
Cultural Heritage: 9.2.16	<p>Text amended:</p> <p><i>“The construction impacts of the six borrow pits will be major upon buried archaeological remains, requiring a robust approach to the archaeological investigation of these large landscape areas. However, we are not yet able to agree to the mitigation strategy as it does not include all borrow pit areas (borrow pit 5 is omitted from the WSI) nor how they would be specifically examined, or what the research objectives of examination would be. Consequently, the WSI is not in compliance with policy CS36. Assurances need to be provided that the borrow pits will be appropriately examined through prior evaluation in order to design the proportionate mitigation strategies</i></p>	Archaeology Written Statement of Investigation (WSI) and Environmental Statement (ES) must present well-specified identified mitigation strategies for these large excavation areas.	<p>This matter is to be further discussed as part of the preparation of the WSIs which will provide a high-level outline of the methodology for archaeological works.</p> <p>Requirement 8 of the draft DCO obliges Highways England to consult the relevant planning authority on the WSI.</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text	CCC Reason for Text Amendment	Highways England's Response								
	<i>needed at these sites”.</i>										
Ecology: 9.3.14	<p>Text added:</p> <p><i>“Effects on bat roosts are subject to licensing from Natural England (NE). Draft mitigation licence applications are currently being considered by NE. No licence would be issued unless it was demonstrated there would be no adverse effect on the conservation status of bats.</i></p> <p><i>The register of environmental actions and commitments includes a commitment to enhance the corridor between Brampton Woods and the scheme to provide better habitat for a range of species including bats and dormice.”</i></p>	Further information received from Highways England.	<p>A letter of no impediment with regard to the draft bat licence has now been received from Natural England.</p> <p>Highways England remains committed to enhancing the corridor between Brampton Woods and the scheme and to provide better habitats for dormice and bats.</p>								
Noise: 9.4.45	<p><u>Table 22: Residential areas where a significant observed adverse effect from noise, as a result of the Scheme, would be experienced post mitigation:</u></p> <table border="1" data-bbox="600 1015 1254 1319"> <thead> <tr> <th data-bbox="600 1015 770 1078">Location</th> <th data-bbox="770 1015 927 1078">Effect with scheme</th> <th data-bbox="927 1015 1093 1078">Mitigation</th> <th data-bbox="1093 1015 1254 1078">Residual effect</th> </tr> </thead> <tbody> <tr> <td data-bbox="600 1078 770 1319">Dwellings in the vicinity of Great North Road, Manor Lane,</td> <td data-bbox="770 1078 927 1319">Indirect effect as a result of airborne noise increase in road traffic noise.</td> <td data-bbox="927 1078 1093 1319">The scheme would significantly enhance the existing noise mitigation</td> <td data-bbox="1093 1078 1254 1319">No likely significant negative effects</td> </tr> </tbody> </table>	Location	Effect with scheme	Mitigation	Residual effect	Dwellings in the vicinity of Great North Road, Manor Lane,	Indirect effect as a result of airborne noise increase in road traffic noise.	The scheme would significantly enhance the existing noise mitigation	No likely significant negative effects	Amend table to show only locations where a significant observed effect would be present post-mitigation.	<p>The deletions are noted and welcomed.</p> <p>However, Table 22 still shows adverse effects that are not significant observed adverse effects (as relevant to the first aim of NPSNN 5.195). This was noted in Highways England's response to the Joint LIR submission version 1 at Deadline 4 on 07 July 2015 (HE/A14/EX-57) (REP4-019) The effects at Brampton, RAF Brampton and Pear Tree</p>
Location	Effect with scheme	Mitigation	Residual effect								
Dwellings in the vicinity of Great North Road, Manor Lane,	Indirect effect as a result of airborne noise increase in road traffic noise.	The scheme would significantly enhance the existing noise mitigation	No likely significant negative effects								

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text				CCC Reason for Text Amendment	Highways England's Response
	Hillfield, Ash End, Beech End, Maple End, Willow End, School Lane, Sharps Lane, Rusts Lane, High Street, Field Close and Frumetty Lane in Alconbury		measures in this location, replacing the current noise fence barrier with a new taller fence barrier.			Close are likely significant effects in terms of the EIA (because of noise change and principally the number of dwellings exposed to the change). However as set out in the response to the LIR, the future noise levels at these locations are substantially below the relevant Significant Observed Adverse Effect Level (SOAEL). SOAELs and the important difference between 'significant observed adverse effects' (on health and quality of life) and 'likely significant effects' is set out clearly in section 14.2 of Chapter 14 (Applicant reference 6.1, PINS reference APP-345) and Appendix 14.3 (Applicant reference 6.3, PINS reference APP-707) of the ES.
	Stewart Close, western edge of Brampton (minor)	Predicted increase in noise from road traffic which is likely to cause a minor adverse effect	no specific mitigation proposed	Minor adverse effect on the acoustic character of the area around the closest properties.		
	Western edge of RAF	Predicted increase in noise from	no specific mitigation proposed	Minor adverse effect on		

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text				CCC Reason for Text Amendment	Highways England's Response
	Brampton (minor)	road traffic which is likely to cause a minor adverse effect		the acoustic character of the area around the closest properties.		
	Rectory Farm Great North Road, Brampton	predicted to experience noise levels higher than the noise insulation trigger levels	The installation of noise insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	Significant observed effect would be avoided		
	Little Meadow and Woodhatch Farm, Thrapston Road, Ellington	Noise levels are currently above the threshold for a significant observed	3m absorptive barrier for Little Meadows and Woodhatch Farm.	current significant observed adverse effects would be avoided with the		

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text				CCC Reason for Text Amendment	Highways England's Response
		adverse effect.		scheme in operation.		
	Dwellings in the vicinity of Pear Tree Close, Fenstanton	Predicted increase in noise from road traffic which is likely to cause a moderate adverse effect	no specific mitigation proposed	noise levels would remain a significant observed adverse effect		
	Friesland Farm, Conington	significant observed adverse effects	The installation of noise insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	Significant observed effect would be avoided.		
	Foxhollow, Bar Hill	significant observed adverse	The installation of noise	Significant observed effect		

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text				CCC Reason for Text Amendment	Highways England's Response
		effects	insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	would be avoided.		
	1-6 Catchall Farm Cottages 13, Cambridge	significant observed adverse effect	3m absorptive barrier for Catchall Farm properties	There would be noise reductions at these location, with the scheme, and further mitigation will be introduced.		
	Crouchfield Villa and Westdene at Hackers Fruit Farm, Huntingdon Road, Lolworth	significant observed adverse effect	3m absorptive barrier for Crouchfield Villa and Westdene – Hackers Fruit Farm, Huntingdon Road			
	Rhadegund	significant	3m			

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text				CCC Reason for Text Amendment	Highways England's Response
	Cottages, Huntingdon Road, Cambridge	observed adverse effect	reflective barrier for Rhadegund Cottages, Huntingdon Road			
	Hill Farm Cottages	significant observed adverse effect	4m reflective barrier for Hill Farm Cottages.	Significant observed effect would be avoided.		
	10 dwellings on Lone Tree Avenue	significant observed adverse effect	The installation of noise insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	Significant observed effect would be avoided.		
	30 residential dwellings at	significant observed adverse effect	The installation of noise insulation	Significant observed effect would be		

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text				CCC Reason for Text Amendment	Highways England's Response
	Blackwell Caravan Park		would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	avoided.		
Noise: 9.4.47	<p>Text amended: "The impacts at Stewart Close on the western edge of Brampton and at the Western edge of RAF Brampton are identified as minor adverse. No specific mitigation has been proposed by the Applicant in these areas. The local authorities would expect the Applicant to monitor noise levels in these locations to ensure that should they become major adverse impacts the necessary mitigation is provided."</p> <p>Text added: The Applicant's response to the ExA's Q1.10.8 (Response to ExA's First Written Questions, Report 10: Noise and Vibration (document reference EX/37)), confirms that Highways England will add an additional requirement to the draft DCO to secure permanent noise mitigation. The new requirement secures the details of the noise mitigation for the scheme, reflecting the measures set out in the Environmental Statement.</p>				<p>Highways England's response to the ExA's Q1.10.8 in <i>Response to ExA's First Written Questions, Report 10: Noise and Vibration</i> (Applicant reference HE/A14/EX/37, PINS reference REP2-011)), confirms that Highways England will add an additional requirement to the draft DCO to secure permanent noise mitigation. The new requirement secures the details of the noise mitigation for the scheme, reflecting the measures set out in the <i>ES</i> (Applicant reference 6.1, PINS reference APP-331 – APP-352).</p>	<p>Requirement 12 to the draft DCO will also secure the further mitigation identified in the position statement submitted at deadline 8 of the examination timetable (Applicant reference HE/A14/EX/129).</p>

Joint LIR Submission Version 2 (REP8-011) Reference	Joint LIR Submission Version 2 (REP8-011) Reference – Amended Text	CCC Reason for Text Amendment	Highways England's Response
Legacy: 11.1.43	Text added: <i>“As part of the commitment to support wider legacy objectives, Highways England have commissioned further technical assessment work to look into the possibility of including additional off-site flood attenuation using the borrow pit voids. However they have indicated that If any works were to be taken further on this, they would be progressed independently of the current application as those works are not necessary to address any impacts resulting from the current application”.</i>	New information from Highways England.	Highways England will be undertaking a feasibility study into the viability and effectiveness of using Borrow Pits to provide mitigation of pre-existing flooding.

2.3 Written Representation on Local Traffic

- 2.3.1 At Deadline 8, on 02 September 2015 Cambridgeshire County Council submitted a *Written Representation on Local Traffic* (REP8-010) to be read in conjunction with the *Joint LIR submission version 2* (REP8-011).
- 2.3.2 A response to the key issues identified in the Written Representation on Local Traffic was submitted in Highways England's interim response at Deadline 9, on 10 September 2015 (Applicant reference HE/A14/EX/146 and PINS reference REP9-021).
- 2.3.3 Highways England has carried out a full review of the Written Representation on Local Traffic and has no further comments.
- 2.3.4 Table 2-3 below is therefore a direct extract of table 2-3 from Highways England's interim response submitted at Deadline 9.

Table 2-3: Key Issues identified in the Cambridgeshire County Council's Written Representation on Local Traffic

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
2.1.6	<p><i>In consequence, the CHARM3A + LIT traffic model alone potentially underrepresents the amount of traffic using alternative routes to avoid the A14. This manifests as traffic using local roads to join the A14 closer to Cambridge, and as traffic making alternative route choices. The view of the County Council is that CHARM3A + LIT + S2 is more representative of local road changes resulting from the Scheme. However, since the method in Sensitivity Test 2 manipulated speed flow curves rather than changing journey time coding, it is accepted as being a sensitivity test.</i></p>	<p>The recorded journey times on the A14 between Huntingdon and Cambridge are variable, as observed in TomTom data collected for the development of the CHARM2 traffic model. Highways England accepts that there are a number of days when the journey times along this section of the A14 are as slow as those in the sensitivity test.</p> <p>Highways England considers that the Core forecasts are the most representative of the changes on the A14 and on local roads and reflect the validated Base Year model. There is no evidence that the model systemically underestimates trips on the local road network: the mainline A14 demonstrates good validation against the criteria set out in WebTAG unit M3.1 and does not indicate that flows on this are overstated (and thus by inference that flows on alternative routes are understated). The validation of alternative routes does vary in some locations and in some cases modelled flows may be lower than observed values; however, there is not a systemic underrepresentation of traffic volumes.</p> <p>However, Highways England have agreed with the County Council that CHARM3A + LIT + S2 forecasts should be used as the baseline against which any future monitoring is compared.</p>
2.1.7	<p><i>The County Council remains concerned over the matter of apparent growth in trips into and out of Cambridge City Centre. It</i></p>	<p>The modelled routing patterns in the validated Base Year model are consistent with the Roadside Interview Surveys (RSIs) undertaken on the Cambridge cordon</p>

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
	<p><i>appears that there is insufficient congestion and delay within the model. This appears to allow some traffic to route through central Cambridge in preference to using outer orbital roads such as the M11. This is counterintuitive based on local knowledge and experience. The County Council has satisfied itself that this appears to be a feature of the model, rather than a real predicted change.</i></p>	<p>in 2013. There is no evidence in the traffic model that any strategic traffic routes through Cambridge in the Base Year or in the modelled Forecast Years.</p> <p>The predicted traffic growth within Cambridge city is consistent with current guidance and national datasets (National Trip End Model version 6.2) provided by the DfT. It is noted that these national datasets were produced in 2011 and are based on historical trends. It should be noted that the traffic modelling undertaken does not include any mitigation measures that may come forward with proposed developments in the city nor does it include representation of smarter travel measures or public transport incentives that may be proposed by these developments. The traffic model also does not include mitigation schemes that may be proposed by the city and county council as part of its 'City Deal'.</p> <p>The model shows that trips with one end in Cambridge and one end outside of Cambridge use the strategic road network to the maximum sensible extent to select the most appropriate radial route into or out of the city to make the trip. Though the distance through central Cambridge might be shorter, these trips avoid routeing through central Cambridge.</p> <p>Some local trips (for example from the Cambridge Science Park to the airport) are modelled as using the strategic road network as part of their trip in the Base Year which is consistent with the evidence from the 2013 RSIs.</p>

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
		<p>In the Base Year and the Forecast Year Do Minimum, there are some local trips between the south of Cambridge city and the north of Cambridge city which do route through the centre of Cambridge. A proportion of these trips route on the M11 and A14 in the Forecast Year Do Something, to take advantage of the A14 improvement.</p>
2.1.8	<p><i>With respect to validation, this remains a concern in respect of the local road network.</i></p> <p><i>However, the County Council is satisfied that the routing changes post A14 are plausible and the proportionate change reasonable. Less reliance should, however, be placed on the exact quantum of change in areas with weak validation.</i></p>	<p>Highways England considers that the CHARM3a + LIT traffic model demonstrates good validation against the criteria in WebTAG Unit M3.1 as detailed in section 3 of the <i>Local Traffic Impact Report (LTIR)</i> (Applicant reference HE/A14/EX/73, PINS reference REP6-002).</p> <p>Highways England agrees with the County Council's assessment that the routing post A14 is both plausible and proportionate on the local road network.</p> <p>Highways England considers that the modelling exercise undertaken is aligned with both the strategic nature of the proposed scheme and DfT guidance and the modelling is therefore robust</p>
3.1.2 & 3.1.3	<p><i>This amply demonstrates that the impact of congestion on the A14 influences traffic movements well outside the immediate corridor. In all cases, traffic is using more minor or unclassified roads with the aim of joining the existing A14 at a point closer to Cambridge. In 2001-2003 the DfT made available £4.5m of funding to provide traffic calming in villages along the A14</i></p>	<p>Highways England agrees that one of the consequences of congestion on the A14 is that traffic uses more minor or unclassified roads with the aim of joining the A14 at a point closer to Cambridge. It is a benefit of the scheme that the improvements are expected to reassign this essentially local traffic to more appropriate roads. It would be expected that the local highway authority would support these changes and, possibly, undertake complementary actions to</p>

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
	<p><i>Huntingdon to Cambridge corridor in recognition of this accepted problem.</i></p> <p><i>It is not, therefore, at all unexpected that with the construction of the new A14, traffic reverts to using more direct routes to access the Strategic Road Network at the earliest opportunity. This is only possible due to the Scheme, so the impact of these changes is an impact of the scheme. Although, this traffic may originally have been on less appropriate routes, communities along the revised route will perceive the change in traffic adversely. This is not a reason to change the scheme, or a reason why the scheme should not proceed, only that in some locations these impacts may require mitigation.</i></p>	<p>reinforce use of the more appropriate route. It would not be appropriate for Highways England to be providing mitigation for an increase in traffic flow on these roads when it is the result of a transfer of local traffic from a less appropriate road. It is possible that such mitigation may be counterproductive in that it may result in reassignment back to the less appropriate road.</p>
5.1.5	<p><i>Further, none of the existing junctions such as the Bar Hill, South Roundabout, have been subject to baseline modelling. The Council accepts, although it has had only limited opportunity to scrutinise the technical work that Highways England has demonstrated that existing junctions perform satisfactorily. However, in the absence of base year assessment the calibration and validation of the junctions is at large. The Council requested Highways England to provide base year models, but these were not forthcoming. As part of detailed design, the Council will be looking</i></p>	<p>The scheme includes significant remodelling of the Bar Hill junction and, as this junction has been specifically designed to accommodate the forecast traffic flows, no assessment has been undertaken for the existing junction layout (paragraph 7.9.14 <i>Transport Assessment</i> (Applicant reference document 7.2, PINS reference APP-756).</p> <p>Junctions which are new or substantially remodelled as a consequence of the proposals cannot benefit from this base year validation exercise.</p>

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
	<p><i>for base year models to validate the future year assessment of existing junctions impacted by the Scheme.</i></p>	
<p>6.1.4</p>	<p><i>Highways England has agreed to the principle of monitoring, and indeed in its response (REP4-011 at 3.4.60) to the County Council's written representation (REP3-006) proposed a number of locations at junctions. However, the Council on behalf of all the local authorities would request a binding commitment in the DCO in the form of a Section 106 Agreement. The commitment should be to monitoring, and if the monitoring demonstrates an adverse impact due to the A14 that mitigation will be funded by Highways England.</i></p>	<p>Highways England recognises that the proposals will result in changes in traffic flow on some local roads. In a large number of cases there is a reduction in traffic as a result of the A14 scheme. However, Highways England accepts that there are some cases where there is an adverse impact. This is a consequence of the redistribution of traffic across the road network as a result of capacity improvements provided by the A14 scheme.</p> <p>However, an adverse impact cannot just be measured as an increase in traffic flow on a single road. For example, it is a benefit of the scheme in cases where one local road has experienced an increase in traffic and a less suitable one has experienced a comparable reduction in traffic. It would not be the responsibility of Highways England to mitigate the increase in traffic on the more suitable road.</p> <p>Both Highways England and the County Council have agreed in the Statement of Common Ground that a Section 106 agreement is not the appropriate instrument by which any monitoring obligation is entered into and have also agreed that the draft legal agreement with CCC on de-trunking will be amended to cover the principle of traffic monitoring and the mechanics of how the monitoring would be carried out.</p>

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
7.2.6	<p><i>If public consultation was carried out to the required standards (appended to this representation), the impact on other communities considered, and the cost met by Highways England, the Council would not object to closure of The Avenue. The Avenue is a road of poor standard, and the projected increase of traffic on it would be a concern. In fact, an increase in traffic on both Dry Drayton Road and The Avenue would be concern due to low standard.</i></p>	<p>The Avenue is part of the local highway network. A connection between the Avenue and the proposed Local Access Road is part of the proposals and results in significant benefits for some trips. If the local highway authority wish to close this link in future account would need to be taken of the reassignment of traffic as this may have adverse consequences for Dry Drayton.</p>
7.2.7	<p><i>The Council considers that neither Madingley nor Dry Drayton can be considered in isolation. It is clear that part of the demand to travel though these villages is due to lack of connectivity at Girton and M11 junction 13. Limiting the connection between the LAR and The Avenue to left in/left out or closure of The Avenue would reduce some impacts of the scheme and maintain the status quo. To achieve significant benefits in Madingley would require more drastic measures, such as more road closures, that would have a significant impact on connectivity in the local area. There are no realistic alternative routes to travel between the corridors due to limited connections at Girton and M11 Junction 13.</i></p>	<p>The scheme as proposed by Highways England confers a benefit on trips using the Avenue, by providing an all-access junction with the Local Access Road. The current left-in, left-out arrangement at the northern end of the Avenue is necessitated by the road layout and the joining of the route onto the A14 slip road which is one-way in the northwest bound direction. The design of the Local Access Road is such that all movements can be catered for giving improved access towards Cambridge. The current designs are an improvement on the <i>status quo</i>.</p> <p>Highways England is not promoting the closure of The Avenue. Such a closure would need to be carefully considered in terms of the impacts on residents of Dry Drayton village. Ultimately, either closure or maintenance of existing arrangements would be a decision to be made by the Local Highway Authority.</p>
Appendix D: Systra Technical Note 1.2.7	<p><i>Cambridgeshire County Council also requested a Sensitivity Test of the impacts of the scheme with greater levels of</i></p>	<p>When Systra use the term 'average', this refers to the mean. The median is another definition of average which may be more representative of typical</p>

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
	<p><i>congestion within the CHARM 3A model along the existing A14 route. The aim of this Sensitivity Test was to reflect the 'average' journey times along the A14 between Huntingdon and Cambridge rather than the quicker 'median' journey times assumed in the CHARM 3A LIT scenario.</i></p>	<p>conditions. On the A14, the median journey time between Cambridge and Huntingdon is quicker than the mean journey time, particularly during the AM peak period in the eastbound direction.</p>
<p>Appendix D: Systra Technical Note Table 2</p>	<p><i>(Table 2: Area 2 North Traffic Flow Changes)</i></p>	<p>The figures for Count 2.7 'Mill Common Link' in Table 2 are incorrect. The difference between the 2014 Base and the 2035 DS+ must be the same as the difference between the 2035 DM and 2035 DS+ as the link does not exist in either the Base Year or DM and thus the flow in both scenarios is zero.</p>
<p>Appendix D: Systra Technical Note 2.3.5</p>	<p><i>Traffic volumes within Godmanchester are predicted to be significantly reduced by the introduction of the Huntingdon Southern Bypass scheme. In the PM peak period on the A1198 between 450-550 pcus are removed in both directions as a result of capacity on the A14 being made free for local traffic and strategic traffic in turn being forecast to use the A14 Bypass. The adaptation of Mill Common Link also helps reduce the amount of local traffic using The Avenue and Cambridge Road.</i></p>	<p>The reductions in traffic in Godmanchester are not solely attributable to the provision of the new Huntingdon Southern Bypass. In addition to the new bypass traffic reductions in Godmanchester are also (and in a greater part) a result of the removal of the viaduct over the East Coast Mainline and the provision of new local links into Huntingdon that this facilitates. Were the Huntingdon Southern Bypass to be constructed and the viaduct to remain it is likely that Godmanchester would experience little to no relief in traffic.</p>
<p>Appendix D: Systra Technical Note 2.12.4</p>	<p><i>The flows on the A1307 Huntingdon Road are predicted to increase by around 390 to 450 vehicles. Within the model this impact is the result of the increased accessibility of this route due to congestion relief cause by the Huntingdon Southern Bypass scheme.</i></p>	<p>The increase quoted is on a small part of Huntingdon Road. It is not so much caused by the Huntingdon Southern Bypass as by the provision of the new Local Access Road and connections to it which provide the increased accessibility that has been noted. .</p>

Paragraph Reference	CCC Written Representation on Local Traffic	Highways England's Response
	<p><i>However, this may not occur in reality due to the levels of congestion that already occur along this route which are not fully represented in the CHARM transport modelling.</i></p>	<p>Significant congestion is not expected on the Local Access Road or on this section of Huntingdon Road, nor is it forecast by the traffic modelling.</p> <p>Highways England believes that the traffic model is robust, demonstrating good validation on the outer Cambridge cordon.</p>