

1. Introduction

- 1.1 At the hearing on Matter 6 – Implementation and Monitoring on 4 December 2014, the Inspector asked East Sussex County Council as Highway Authority to provide a written summary of the expected traffic conditions that will arise once the Bexhill Hastings Link Road and, subject to the outcome of the current planning application, the Queensway Gateway Road is completed. This request was made with specific regards to any modelled/ anticipated percentage increase, or changes, in traffic arising from completion of the Link Road and from the Queensway gateway Road.
- 1.2 This note will set out the traffic impacts associated with the Bexhill Hastings Link Road and, based upon an assumption that planning permission is granted, the Queensway Gateway Road. With the potential changes to traffic flows along its length, this note also sets out the various improvements that are being brought forward to manage and maintain traffic flow along The Ridge.

2. The Ridge

- 2.1 The Ridge is an important distributor road and local road that links Battle and Ore across the northern edge of Hastings.
- 2.2 The western section of the road (A2100 The Ridge West) has junctions with both Queensway and Battle Road which provide principal access points into employment and housing areas in the north-west of the Borough, and via Queensway will connect with the Bexhill Hastings Link Road. The road, via Junction Road, meets the A21 Hastings to London road slightly further east at Baldslow.
- 2.3 From its junction with Harrow Lane, the road becomes the B2093. The eastern end of the road is predominantly urban with a number of junctions along its length which serve the residential areas in the north and west of Hastings. The Ridge also provides access to the Conquest Hospital and local schools.

3. Current and proposed major transport schemes

- 3.1 The introduction of the following schemes will influence traffic conditions on The Ridge:

Bexhill Hastings Link Road

- 3.2 The Bexhill Hastings Link Road will form a 5 km long road from its junction with the A259 in Bexhill to the B2092 Queensway in Hastings.

- 3.3 The BHLR will support economic growth and regeneration in the Bexhill and Hastings area by opening up access to land in both Rother District and Hastings Borough which has been allocated for housing, business developments and employment opportunities, including:
- construction of 1200-2000 new homes
 - a new 50,000 square metre business park
 - jobs and regeneration amounting to £1 billion over 25 years.
- 3.4 The road (BHLR) received final funding approval from Government in 2012 and construction commenced in 2013. The road will be open to traffic in summer 2015.

Queensway Gateway Road

- 3.5 The Queensway Gateway Road would provide for a new link between Queensway and the A21 south of The Ridge and directly unlocks the employment space on allocated sites LRA7 – Land at the junction of the Ridge West and Queensway, and LRA8 – Land at Whitworth Road and land at North Queensway – as identified in the Hastings Planning Strategy and allocated in the submission version Development Management Plan. It will also provide much improved connectivity for a further 75,500sqm of employment space in North Bexhill/North Hastings along the A259/A21 growth corridor to Kent, London and beyond via the A21 as identified in the South East Local Enterprise Partnership’s Strategic Economic Plan (SEP) and Eastbourne, Brighton and Gatwick via the A259/A27.
- 3.6 The road would be a single carriageway road with a roundabout at either end and central roundabout which will provide access into the employment allocations contained in the Development Management Plan. Complementary to the submitted scheme is the proposed closure of Junction Road at both its current junction with The Ridge and the A21 Sedlescombe Road as well as the proposed closure of the northern end of Maplehurst Road with the A28.
- 3.7 In view of the employment driver for the Queensway Gateway Road, Seachange Sussex – the Economic Regeneration company for East Sussex – are the applicants for the scheme which is now subject of a planning application. Subject to securing the necessary planning permission, construction is expected to commence in 2015.

4. Transport Modelling Outputs

- 4.1 The traffic model of Bexhill and Hastings was developed by consultants, Mott MacDonald, for East Sussex County Council and updated most recently in August 2011 for the Bexhill Hastings Link Road (BHLR) Best and Final Funding Bid submitted to the Department for Transport. The BHLR traffic model consists of a highway model and a public transport model.
- 4.2 In the evidence given at the Bexhill Hastings Link Road CPO Public Inquiry in November 2009 and as an integral part of the information submitted as part of the Best and Final Funding Bid in 2011, it was acknowledged /highlighted that whilst there was expected to be an increase in traffic on The Ridge with the opening of the Bexhill Hastings Link Road and the planned quantum of development in the planning strategies of both Rother District and Hastings

Borough Councils, this could be accommodated with the implementation of appropriate mitigation measures on The Ridge. This evidence and information was accepted by the Inquiry Inspector, Mr C Tipping, and the Department for Transport when final funding approval for the Link Road was given in 2012.

4.3 For the purposes of this note, the highway model has been used to identify the traffic impacts on The Ridge in two scenarios:

- With Link Road but without Queensway Gateway Road
- With Link Road and Queensway Gateway Road

4.4 The tables in the two scenarios below set out the modelling outputs for:

- 2011 (model base year)
- 2015 (the opening date for the Bexhill Hastings Link Road) and
- 2028 (the end of the Local Plan period)

at three locations along The Ridge:

- between the junctions with Queensway and Junction Road
- between the junctions with Harrow Lane and Conquest Hospital
- near Grange Road

4.6 The modelling outputs have taken into account the quantum of development as set in the adopted Hastings Local Plan, adopted Rother Local Plan as well as background traffic growth “natural traffic growth” factors derived from the Department for Transport’s Trip End Model Presentation Program – TEMPRO). For the 2015 scenario, the development assumptions are those from the Bexhill Hastings Link Road Best and Final Funding Bid (BAFFB) for both with and without Queensway Gateway Road¹. For the 2028 scenario, as all planned development was seen as reasonable foreseeable at the time the BAFFB was submitted, TEMPRO 6.2 was used to provide growth factors from 2015 to 2028 to determine the 2028 traffic levels. For this modelling exercise, the following development has also been added into the model:

- 130 homes and 28,000sqm (70% B1, 10% B2 and 20% B8) west of the Link Road
- 1,300 homes and 22,000sqm B1 east of the Link Road
- 600 houses in North Bexhill

¹ <http://www.eastsussex.gov.uk/roadsandtransport/bexhillhastingslinkroad/bestandfinalfundingbids.htm> -

The Ridge West – between junctions with Queensway and Junction Road

	Annual Average Daily Traffic		Difference
	With Link Road but without Queensway Gateway Road	With Link Road and Queensway Gateway Road	
2011 (Model base year)	21,000	21,000	n/a
2015 (opening of BHLR)	27,000	19,700	-7,300 (-27%)
2028 (end of Plan period)	29,200	22,300	-6,900 (-23.6%)

The Ridge East – between junctions with Harrow Lane and Conquest Hospital

	Annual Average Daily Traffic		Difference
	With Link Road but without Queensway Gateway Road	With Link Road and Queensway Gateway Road	
2011 (Model base year)	17,800	17,800	n/a
2015 (opening of BHLR)	24,440	22,900	-1,540 (-6%)
2028 (end of Plan period)	26,200	25,800	-400 (-1.5%)

The Ridge near Grange Road

	Annual Average Daily Traffic		Difference
	With Link Road but without Queensway Gateway Road	With Link Road and Queensway Gateway Road	
2011 (Model base year)	12,300	12,300	n/a
2015 (opening of BHLR)	18,000	17,400	-600 (-3%)
2028 (end of Plan period)	19,600	19,400	-200 (-1%)

5. Improving traffic conditions along The Ridge

5.1 From the modelling outputs above, it is anticipated that traffic flows are due to increase on The Ridge with the opening of the Bexhill Hastings Link Road and will change again with the potential introduction of the Queensway Gateway Road, subject to planning permission being granted. The modelling identifies that in both 2015 and 2028 there would be a reduction in traffic flows at all three locations along The Ridge, and significantly on the section between

the junctions with Queensway and Junction Road (27% in 2015 and 23.6% in 2028), in the 'with Link Road/with Queensway Gateway Road' scenario compared to the 'with Link Road/without Queensway Road' scenario.

- 5.2 However, and as acknowledged at the Link Road CPO Public Inquiry managing and maintaining traffic flow along The Ridge as well as enabling traffic from the various side roads as identified in section 4.2 to safely and conveniently access The Ridge is necessary with the predicted changes in traffic flows.
- 5.3 A range of improvements are proposed along The Ridge to help achieve this as set out below. Indeed as mentioned at the Hearing session, a number of these measures are a prerequisite of the granting of permission for the BHLR and are required to be implemented prior to the opening of the Link Road itself.

Bexhill Hastings Link Road Complementary Measures

- 5.4 As set down in section 4.2, at the Link Road CPO Public Inquiry and in the Best and Final Funding bid submission, it was highlighted that it was expected there would be an increase in traffic on The Ridge with the opening of the Bexhill Hastings Link Road and when taking into account the planned quantum of development, however it was accepted that this could be accommodated with appropriate mitigation measures on The Ridge
- 5.5 Accordingly, as a specific condition of the Bexhill Hastings Link Road planning permission, the County Council was required to develop a Complementary Highway Improvement Plan (CHIP). Following an initial assessment, the following complementary measures along The Ridge were identified:
- The introduction of a larger roundabout than at present at the Queensway/The Ridge junction;
 - Minor improvements to the approaches to the existing roundabout at the Harrow Lane/The Ridge junction; and
 - Localised rationalisation of on street parking around Sandrock Bends.
- 5.6 These schemes have been designed to ensure that they will be able to accommodate the additional traffic demands placed upon them arising from the opening of the Bexhill Hastings Link Road and the quantum of development planned in the Bexhill and Hastings area over the life of their respective Local Plan periods as well as taking into account the potential opening of the Queensway Gateway Road.
- 5.7 The schemes are currently at an advanced and detailed design stage and will be implemented by the Highway authority (ESCC) before the Bexhill Hastings Link Road opens in summer 2015.

Queensway Gateway Road complementary measures

- 5.8 As highlighted in section 3.6, complementary to the overall scheme and strategy for transport infrastructure measures is the proposed closure of Junction Road at both its current junction with The Ridge and the A21 Sedlescombe Road as well as the proposed closure of the northern end of Maplehurst Road with the A28.
- 5.9 As highlighted in paragraph 5.1 above, from the traffic modelling outputs carried out and detailed above, the introduction of the Queensway Gateway Road, would affect traffic flows on The Ridge by reducing traffic flows on The Ridge West, in particular between its junctions with Queensway and Junction Road by 27% in 2015 and 23.6% in 2028, when compared to the scenario without the Gateway Road.
- 5.10 At present, the existing junction of The Ridge and Junction Road is an acknowledged local constraint on the highway network. The narrow alignment of The Ridge at this location, with no ability to physically accommodate right turning traffic wanting to access Junction Road without disrupting the straight on flow of traffic creates queuing, particularly at peak times, and interrupts the overall flow of traffic along The Ridge. In addition, visibility for traffic wanting to turn left and right out of Junction Road onto The Ridge is less than adequate at present and these movements out from the junction again can impact on overall traffic flow along The Ridge.
- 5.11 Whilst the closure of Junction Road/The Ridge junction will result in traffic wanting to access the A21 to and from The Ridge having to take a more circuitous route via the Queensway Gateway Road and Queensway, this measure will have the significant benefit of improving overall traffic flow on this section of The Ridge and removing the current queuing problem created by right turning traffic at The Ridge/Junction Road junction.

Bexhill/Hastings Transport Capacity Assessment and The Ridge Movement and Access Study

Transport Capacity Assessment

- 5.12 In 2011, the County Council, Hastings Borough Council and Rother District Council appointed Mott MacDonald to undertake a series of studies to carry out an assessment of traffic conditions in Bexhill and Hastings for 2028.
- 5.13 The assessments, using the Bexhill and Hastings transport model referred to in section 4.1, were undertaken specifically as part of the close joint working between Authorities to inform the Local Plan processes for Hastings Borough Council and Rother District Council and specifically to provide an assessment of the levels and broad distribution of development in the respective Local Plan Core/Planning Strategies.
- 5.14 The modelling looked at the impacts on the transport network of three different development scenarios with and without the Bexhill Hastings Link Road, as well as with other

complementary infrastructure, in place. The conclusions of the study results were summarised in the 'Hastings and Rother Local Plans – Transport Capacity Assessment' statement produced by the County Council (examination library reference HBC/DMP/57) as part of the evidence base considered in the Examinations of the Hastings and Rother Local Plan's.

- 5.15 Specifically the studies identified those junctions on the transport network which would be at or exceeding their capacity in 2028 with the delivery of the proposed quantum of development in the Bexhill and Hastings area. On The Ridge corridor, the modelling identified that the following junctions would be at over capacity on one or more of their arms:
- A2100 The Ridge/Queensway
 - A2100 The Ridge/Junction Road
 - A2100 Maplehurst Road
 - B2093/Harrow Lane
 - B2093/Chowns Hill
 - A259/B2093

The Ridge Corridor Movement and Access Study

- 5.16 Since the Hastings Planning Strategy examination, further detailed capacity assessments have been undertaken on the junctions on The Ridge identified in the transport capacity assessment as the first in a series of corridor studies. The corridor study has taken a holistic view and also considered the movement and access for pedestrians, cyclists and public transport users along and across the corridor.
- 5.17 In the Proposals and Recommendations study of this document it identifies, and as highlighted in sections 5.4 – 5.11 above, that of those junctions identified for further assessment in the Transport Capacity Assessment document:
- the junctions of the A2100 The Ridge/Queensway and B2093 Harrow Lane are being considered as part of the Link Road Complementary measures;
 - there are proposals to address capacity issues at the junctions of the A2100 The Ridge/Junction Road with its closure and A2100/Maplehurst Road with its closure of the northern end as part of the complementary measures associated with the delivery of the Queensway Gateway Road.
- 5.18 In addition, the study highlights that the junction with Chowns Hill had already been considered separately and identified that no further improvements were required. Further, and whilst not identified as at or over capacity in the Transport Capacity Assessment, the junctions of Hillside Road and Elphinstone Road had also been investigated and that any improvements to improve access from these roads would have a detrimental impact on the traffic flow along The Ridge. Therefore no improvements were proposed in respect of these particular junctions. Of the remaining junctions identified in the Transport Capacity Assessment, the study recommended that improvements could be made to the traffic signals at the A259 Rye Road to improve the overall capacity of the junction.

6. Conclusion

- 6.1 With the opening of the Bexhill Hastings Link Road and, subject to the granting of necessary planning permission, the opening of the Queensway Gateway Road, and taking account of the planned quantum of development set out in the adopted Hastings Local Planning Strategy and the adopted Rother Local Plan Core Strategy and background traffic growth (natural growth in traffic to 2028), there will be changes to traffic movements in the north and west of Hastings which will result in an increase in traffic flows along The Ridge corridor.
- 6.2 From the particular modelling undertaken in support of the Bexhill Hastings Link Road, and accepted at the CPO Public Inquiry, this identified that the level of planned development in Bexhill and Hastings and changes in traffic flows could be accommodated on The Ridge with the implementation of appropriate mitigation measures which manage and maintain traffic flows along The Ridge as well as enabling traffic from the various side roads to access The Ridge more safely and conveniently.
- 6.3 In addition, the further modelling undertaken to inform this note has identifies that in the 'with Link Road/with Queensway Gateway Road' scenario there would be a reduction in traffic flows on The Ridge compared to the 'with Link Road/without Queensway Gateway Road' scenario, with significant reductions in both 2015 and 2028 on the section of The Ridge between the junctions with Queensway and Junction Road.
- 6.4 To continue to manage and maintain traffic flows along The Ridge, a range of improvements are proposed to be delivered:
- improvements to the Queensway junction by provision of a larger roundabout and improvements to the existing mini roundabout at the Harrow Lane junction as part of the Bexhill Hastings Link Road complementary measures
 - the potential closure of Junction Road junction with The Ridge and the closure of the northern end of Maplehurst Road which will alleviate rat running traffic from the A21/A28 as part of the proposed Queensway Gateway Road complementary measures; and
 - improvements to the traffic signals at the Rye Road junction.
- 6.5 In summary, the planned growth in Bexhill and Hastings and the subsequent changes in traffic patterns along The Ridge can be accommodated with the proposed package of Bexhill Hastings Link Road complementary measures for the road and does not represent any justification in relation to the National Planning Policy Framework's consideration of 'severe' traffic impact to restrict the proposed level of growth in Hastings and Rother. In addition, should the Queensway Gateway Road scheme, along with potential closure of Junction Road and the northern end of Maplehurst Road, come forward it is expected that there will be reductions in traffic flow on The Ridge particularly the section between Queensway and Junction Road.