

Glyne Gap Development Assessment

January 2012
East Sussex County Council

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Content

Chapter	Title	Page
1.	Introduction	1
2.	Development Assessment	2
2.1	Traffic generated by additional housing _____	2
3.	Conclusions	7

Tables

Table 2.1:	TRICS Trip Generation Rates _____	4
Table 2.2:	Percentage of traffic travelling through Glyne Gap _____	5
Table 2.3:	Additional AM Peak Housing Eastbound Delays _____	5
Table 2.4:	Additional AM Peak Housing Westbound Delays _____	6
Table 2.5:	Additional PM Peak Housing Eastbound Delays _____	6
Table 2.6:	Additional PM Peak Housing Westbound Delays _____	6

Figures

Figure 2.1:	Bexhill Ward Areas _____	3
Figure 2.2:	Hastings Ward Areas _____	4

1. Introduction

This report follows on from the Glyne Gap Capacity Assessment Report and considers the impact of additional traffic in future years on the delays at Glyne Gap. The A259 through Glyne Gap is the critical part of the network linking the two towns of Bexhill and Hastings. The amount of traffic on Glyne Gap due to additional development in different parts of Bexhill and Hastings is calculated and presented together with examples of the impact on delays through Glyne Gap as a result of different development options.

2. Development Assessment

2.1 **Traffic generated by additional housing**

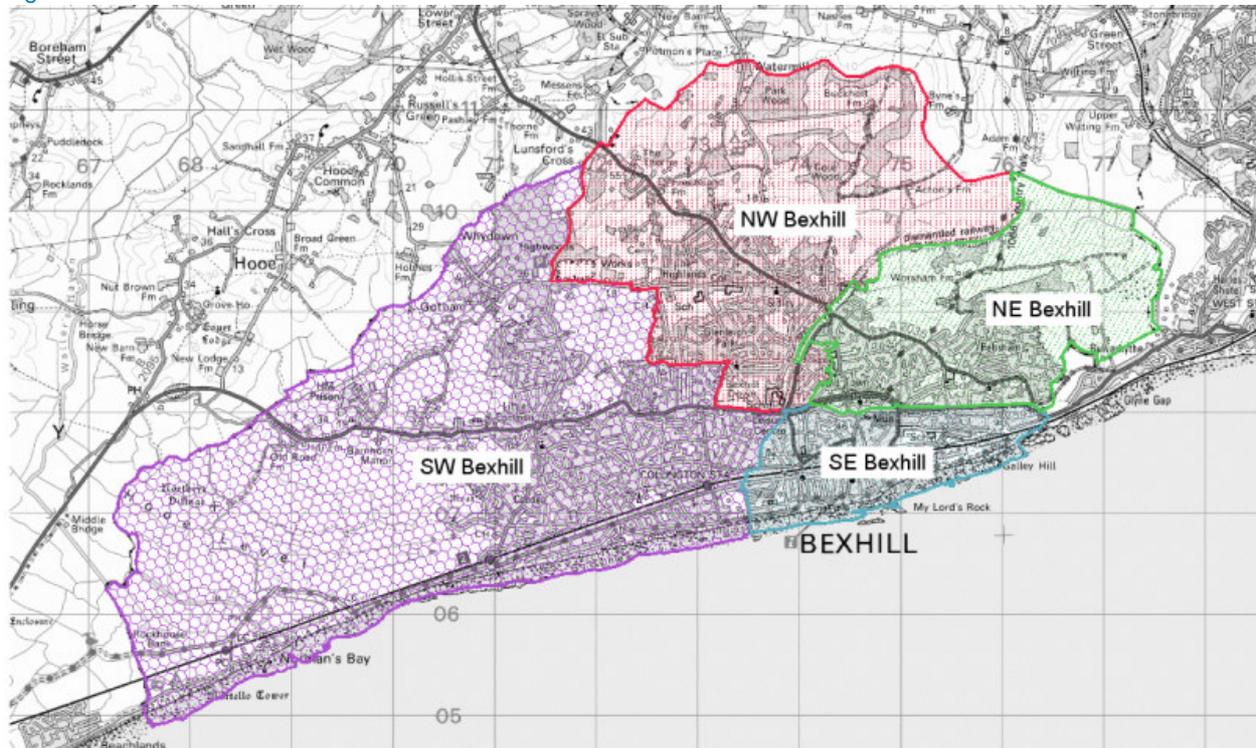
Potential new housing development in the four distinct areas of Bexhill and Hastings as shown on the Figures 2.1 and 2.2 below (taken from *Assignment Model Report August 2011*), has been translated into increased flows along Glyne Gap. The calculation was done using:

- the trip rates for mixed private housing as reported in Table 3.3 of *Traffic Forecasting Report July 2011* and reproduced as Table 2.1 below, and
- trip distributions taken from an assignment of 2028 Do Something traffic onto a 2028 Do Minimum network.

For the ward areas encompassing zones the NE Bexhill, N Bexhill, and W Bexhill developments, trip distributions for those zones are consistent with those presented at Bexhill Hastings Link Road Public Inquiry and used in the recent Best And Final Funding Bid modelling work. As individual housing sites are developed, development specific transport assessments may give rise to different trip distributions. The impact of these developments on other parts of the local network will need to be separately addressed.

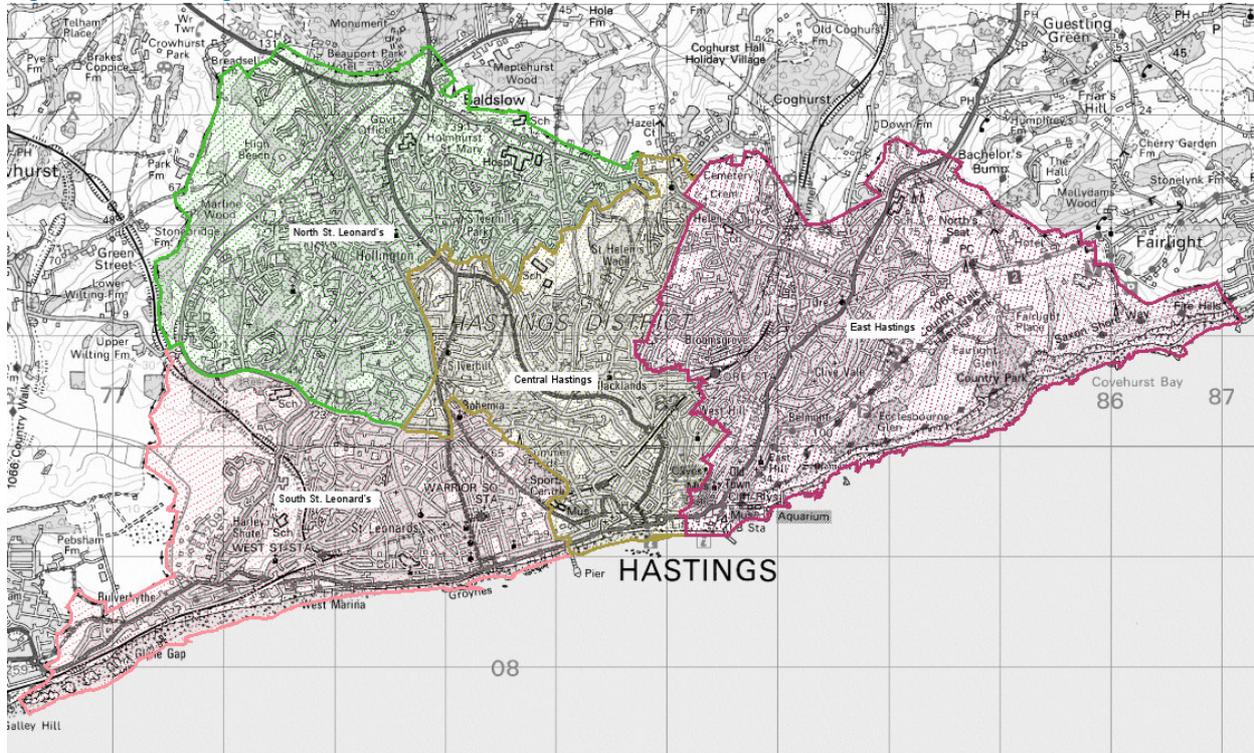
A separate Excel based calculation tool is supplied to enable easy analysis of possible impacts of different scales and locations of developments on traffic volume on A259 Glyne Gap.

Figure 2.1: Bexhill Ward Areas



Source: BHLR BAFFB Assignment Model Report August 2011

Figure 2.2: Hastings Ward Areas



Source: BHLR BAFFB Assignment Model Report August 2011

Table 2.1: TRICS Trip Generation Rates

TRICS Land Use Category	Rate	AM Peak		PM Peak	
		In	Out	In	Out
Mixed Private Housing	Per dwelling	0.12	0.44	0.37	0.18

Source: BHLR BAFFB Forecast Report September 2011

Table 2.2 below summarises the percentage of origin and destinations for each ward area that travel through Glyne Gap.

Table 2.2: Percentage of traffic travelling through Glyne Gap

Ward Area	% of AM Peak traffic from ward area through Glyne Gap	% of AM Peak traffic to ward area through Glyne Gap	% of PM Peak traffic from ward area through Glyne Gap	% of PM Peak traffic to ward area through Glyne Gap
SE Bexhill	4%	11%	6%	11%
NE Bexhill	18%	13%	24%	16%
NW Bexhill	14%	17%	21%	16%
SW Bexhill	9%	15%	6%	7%
South St Leonards	8%	9%	10%	11%
North St Leonards	4%	5%	6%	5%
Central Hastings	6%	5%	5%	2%
East Hastings	3%	3%	2%	4%

Tables 2.3 to 2.6 below show worked examples using the calculation tool of the additional delays with the proposed housing numbers in the three main potential development areas in Bexhill and for a potential number of houses in the South St Leonards area east of Harley Shute Road, by direction and time period.

Total delay in 2028, including delay due to background traffic growth is also included. The delay due to background traffic growth is taken from Table 5.3 of the Glyne Gap Capacity Assessment Report (GGCA). Trips from NE and N Bexhill are assumed to approach Ravenside roundabout southbound on A2036, whereas trips from W Bexhill are assumed to approach Ravenside roundabout eastbound on the A259. The calculation of additional traffic, and consequently additional delays, travelling through Glyne Gap as a result of the developments is based on the average ward area distributions given in Table 2.2 above.

Table 2.3: Additional AM Peak Housing Eastbound Delays

New housing in Bexhill	No of New Houses	Route	Delay without housing (from Table 5.3 of GGCA)	Additional Delay due to Housing	Total Eastbound Delay (secs per vehicle)
NE Bexhill	1125	A2036	430	134	564
N Bexhill	360	A2036	430	34	464
W Bexhill	225	A259	415	9	424
South St Leonards	1326	A259/A2036	415 / 430	9 / 8	424 / 438

Table 2.4: Additional AM Peak Housing Westbound Delays

New housing in Bexhill	No of New Houses	Route	Delay without housing (from Table 5.3 of GGCA)	Additional Delay due to Housing	Total Westbound Delay (secs per vehicle)
NE Bexhill	1125	A2036	210	16	226
N Bexhill	360	A2036	210	7	217
W Bexhill	225	A259	210	4	214
South St Leonards	1326	A259	210	48	258

Table 2.5: Additional PM Peak Housing Eastbound Delays

New housing in Bexhill	No of New Houses	Route	Delay without housing (from Table 5.3 of GGCA)	Additional Delay due to Housing	Total Eastbound Delay (secs per vehicle)
NE Bexhill	1125	A2036	436	70	506
N Bexhill	360	A2036	436	20	456
W Bexhill	225	A259	919	2	921
South St Leonards	1326	A259/A2036	919 / 436	30 / 25	949 / 461

Table 2.6: Additional PM Peak Housing Westbound Delays

New housing in Bexhill	No of New Houses	Route	Delay without housing (from Table 5.3 of GGCA)	Additional Delay due to Housing	Total Westbound Delay (secs per vehicle)
NE Bexhill	1125	A2036	780	63	843
N Bexhill	360	A2036	780	21	801
W Bexhill	225	A259	780	6	786
South St Leonards	1326	A259	780	23	803

3. Conclusions

This report summarises the additional levels of traffic on the A259 through Glyne Gap as a result of additional housing in eight different ward areas within Bexhill and Hastings. The distribution of traffic is taken from the existing Bexhill Hastings Link Road highway assignment model, but only the impact on Glyne Gap is considered. The impact of the additional traffic in terms of additional delays is also summarised.

The worked examples show that a development of 1125 houses in North East Bexhill would have a substantial impact on delays through Glyne Gap, and a smaller development of only 225 houses in West Bexhill would have a smaller impact on delays through Glyne Gap.