Bexhill to Hastings Link Road
Best and Final Funding Bid
Traffic Survey Report

East Sussex County Council
County Hall
St Anne's Crescent
Lewes
East Sussex
Bexhill to Hastings 
Link Road 

Best and Final 
Funding Bid 

Traffic Survey Report 

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1 Introduction

1.1.1 This Traffic Survey Report describes the survey data assembled and used in the building of the Bexhill Hastings Link Road highway and public transport models.

1.1.2 A SATURN highway model and VISUM public transport model for the Scheme were built and validated in 2004. The highway model was updated in line with the VaDMA guidance issued in September 2005.

1.1.3 Further surveys were undertaken in May 2011 and used to carry out a present year validation for the highway model.

1.1.4 This Traffic Survey Report describes the data used to build and update the SATURN highway model and the VISUM public transport model.
2 Manual Classified Counts for 2004 Validation

2.1.1 East Sussex County Council provided data for junction and link counts across the modelled area for surveys that had been carried out from 2002 onwards. Count data used to build and validate the previous SATURN model was also retained for sites where more recent counts had not been undertaken. Counts undertaken at the A21/A28/A2100 Baldslow junction in October 2005 were supplied by Hyder.

2.1.2 Table 2.1 below shows the number of classified link and junction counts, and ATC data was used by year. There were a total of 74 junction counts, 16 link counts and 41 ATC used in the model building and validation process. Of these, 18 junctions were retained for validation.

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2.1.3 Appendix A contains a list of all the count data and details the location of the counts, the date and type of survey, which time periods the count covered and whether it was used for calibration or validation.

2.1.4 Each of the counts were converted to an average September 2004 weekday for use in the traffic model building process using Automatic Traffic Counter (ATC) data from the permanent ATC located on the A259 at Glyne Gap. If data for the day of survey was not available at this location, factors were calculated using the permanent ATC on the A259 on Bexhill’s De La Warr Road

2.1.5 Count conversion factors were calculated separately for each modelled period and ranged from 0.85 to 1.57, with over 90% of the factors calculated lying between 0.9 and 1.1

2.1.6 The single day classified link and junction counts will be accurate to within 10% for the total count and the ATC data to within 5% at the 95% confidence interval using DMRB Volume 12 accuracy rates. Figure 2.1 shows the location and year of the count sites, and Figure 2.2 shows the observed data converted to September 2004 at the validation locations.
2.1 Location of Count Sites

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Figure: 2.1

BEXHILL TO HASTINGS LINK ROAD

Key

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3 Automatic Traffic Count Data for 2004 Validation

3.1.1 Permanent Automatic Traffic Counter (ATC) sites are located on the A259 at Glyne Gap and Bexhill De La Warr Road. The Glyne Gap site has been recording data continuously from July 1998 and the De La Warr Road site in Bexhill from January 1996.

3.1.2 Data from these sites were used to convert all the junction and link counts to a common base of Sept 2004 for use in matrix building and validation. September 2004 was chosen as it was the only neutral month in 2004 for which full data was available.

3.1.3 There are also permanent ATCs located on the A259 at Bachelors Bump east of Hastings and at Barnhorn west of Bexhill. Figure 2.1 shows the location of the four A259 ATCs.

3.1.4 Data from the ATC site at Glyne Gap was also used to confirm the modelled hours. Figure 3.1 shows the daily profile of flows at this location for the modelled base of September 2004. As with the previous model, the am peak is represented by the hour between 0800 and 0900. Similarly the interpeak model is for an average hour between 1000 and 1600. The PM peak model has been revised to assess an average hour between 1600 and 1800 as the ATC revealed little difference in flow levels of the two hours.

Figure 3-1: Glyne Gap ATC Daily Flow Profile September 2004

3.1.5 Figure 3.2 shows how flows vary across weekdays in the modelled base of September 2004. Comparison of the average daily flow during the week show Friday had the highest flow of the week while Monday is the lowest with approximately 3% (800) difference between the two days. Figure 3.3 shows the
monthly variation in flows using data from 2004 and 2005. The ATC counters did not collect data for a number of complete months over the last two years so these months have not been included. The analysis suggested that the flow starts off low at the beginning of the year then gradually builds up during the year and reach the peak at around September then reduces again when approaching November and December.

3.1.6 The ATC data at Glyne Gap in 2005 shows that the highest eastbound hourly flow occurred on a Wednesday in July between 1700 and 1800. The highest westbound flow occurred on a Wednesday in September between 0800 and 0900. 12 hour flows in August 2005 are an average of 24,269 on a Saturday and 21,132 on a Sunday which are both lower than the average 12 hour flows on weekdays in September 2004.
Figure 3-2: Glyne Gap ATC Weekday Flow Profile September 2004

Figure 3-3: Glyne Gap ATC Monthly Flow Profile for 2004 and 2005
4 Roadside Interview Surveys for 2004 Validation

4.1.1 Five Roadside Interview Surveys (RSI’s) were used to build the matrices for the updated SATURN model. These created a north-south screenline between Bexhill and Hastings through Glyne Gap. Three of the sites were London Area Transport Survey (LATS) data, and the remaining two undertaken by East Sussex County Council. Figure 4.1 shows the location of each of the sites.

4.1.2 Surveys at the three LATS sites were undertaken in May 2002. The A271 site was surveyed in the eastbound direction and the B2096 and A259 Glyne Gap sites were surveyed in the westbound direction. The A271 and B2096 sites were surveyed using postcards whereas the Glyne Gap surveys were interview surveys. The surveys were undertaken between 06:00 and 22:00.

4.1.3 East Sussex undertook an additional RSI at Glyne Gap in April 2004 in the eastbound direction and also surveyed Crowhurst Road in June 2005 in the westbound direction. Both of these surveys were interview surveys. The surveys were undertaken between 07:00 and 19:00.

4.1.4 Table 4.1 below shows a comparison of the sample rate achieved at each site and the rate required for the sample to be accurate to 5% within a 95% confidence interval. The Glyne Gap westbound survey is just outside the required sample rate but all other survey locations achieved the required sample rate.

4.1.5 Appendix B contains tables showing the expansion factors used to multiply up interview data to the full classified counts at each site.

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</tr>
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<td>B2096 33%</td>
<td>32%</td>
</tr>
<tr>
<td>A259 Glyne Gap westbound 9%</td>
<td>10%</td>
</tr>
<tr>
<td>A259 Glyne Gap eastbound 18%</td>
<td>11%</td>
</tr>
<tr>
<td>Crowhurst Road 84%</td>
<td>54%</td>
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</table>
4.1.6 Figures 4.2 through to 4.4 are am peak, interpeak and pm peak desire line diagrams using the RSI survey data and splitting the study area into six sectors. These show that the majority of interviewed trips have an origin or destination within Hastings or Bexhill.