OP INQ [redacted] 72

Technical Note 03: S23 and S24

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Project:	The Proposed Network Rail (Suffolk Level Crossing Reduction) Order
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Date:	May 2018

1.1 I have prepared this technical note following receipt of traffic survey evidence submitted by Network Rail (NR) in relation to the Inquiry being held into the "The Proposed Network Rail (Suffolk Level Crossing Reduction) Order".

1.2 The technical note deals with the proposed closure of crossings S23 and S24. At paragraph 5.1.2 of the Rebuttal Proof of Evidence of Susan Tilbrook (ST) prepared in relation to S23 (reference NR/32/4/1), ST states that:

"A pedestrian is likely to be on the Higham Road section of the route (from the southern end of Footpath 01 Higham to the junction of Higham Road with the A14 slip road) for 7.5 minutes (based on a distance of 480m) during which time they could expect to be passed by 9 vehicles based on the traffic count data as set out at paragraph 2.14.41 of my proof NR32/1".

1.3 The traffic count data referred to by ST provided a single traffic volume for a 24 hour period rather than an hourly breakdown.

1.4 My observations on Higham Road were that traffic volumes seemed to peak during the weekday work commuter periods during which time it might be expected that higher volumes of traffic would pass a pedestrian walking in Higham Road.

1.5 In Table 1 below I provide an hourly profile of average weekday and average weekend traffic volumes as follows:

- Weekday – the average of traffic surveys undertaken between Monday 27th June 2016 and Friday 1st July 2016 inclusive;
- Weekend – the averge of traffic surveys undertaken on Saturday 25th June 2016 and Sunday 26th June 2016.

1.6 The traffic volumes are stated as "two-way". This is the sum of northbound and southbound traffic volumes.

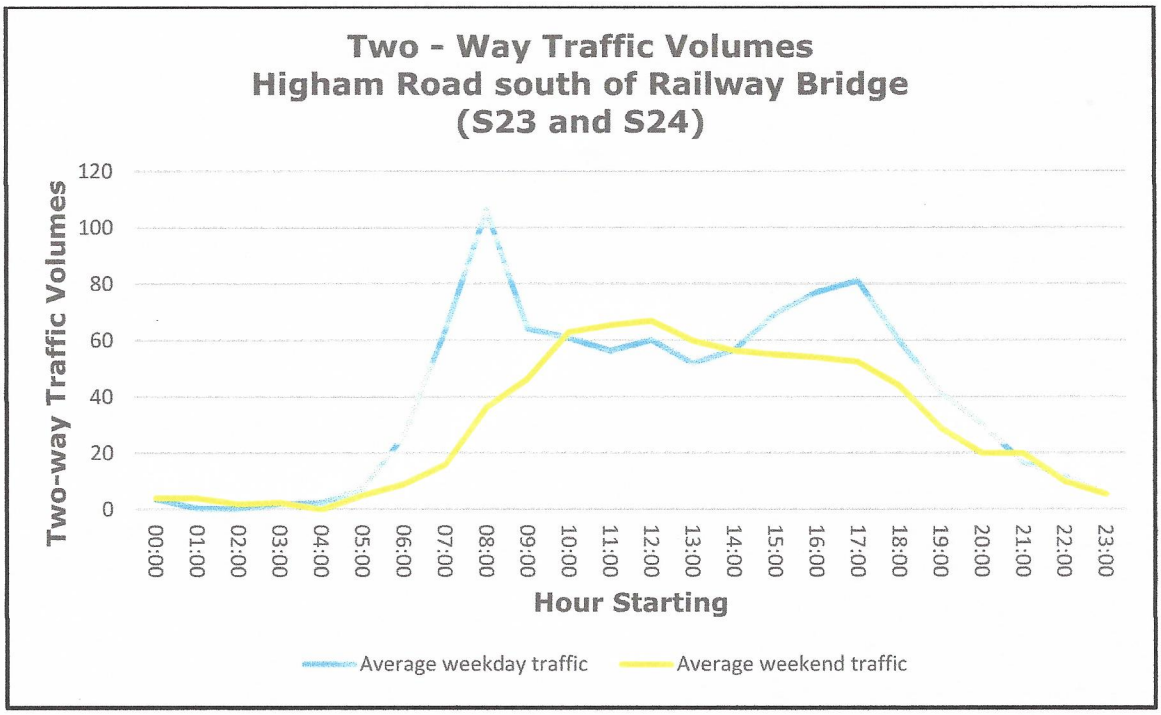
Time starting	Two-way					
	Week-day	Weekend	One vehicle every *x* minutes. Week-day	One vehicle every *x* minutes. Week-day	No. of vehicles passing pedestrian in 7.5 minutes	No. of vehicles passing pedestrian in 7.5 minutes
			Weekdays	Weekends	Weekdays	Weekends
00:00	4	4	16.7	15.0	0	1
01:00	0	4	0.0	15.0	0	1
02:00	0	2	0.0	30.0	0	0
03:00	2	3	30.0	24.0	0	0
04:00	2	0	25.0	0.0	0	0
05:00	7	5	8.1	12.0	1	1
06:00	26	9	2.3	6.7	3	1
07:00	63	16	0.9	3.8	8	2
08:00	106	37	0.6	1.6	13	5
09:00	64	47	0.9	1.3	8	6
10:00	61	63	1.0	1.0	8	8
11:00	56	66	1.1	0.9	7	8
12:00	60	67	1.0	0.9	8	8
13:00	52	60	1.2	1.0	6	8
14:00	57	57	1.1	1.1	7	7
15:00	69	55	0.9	1.1	9	7
16:00	77	54	0.8	1.1	10	7
17:00	81	53	0.7	1.1	10	7
18:00	60	44	1.0	1.4	7	6
19:00	41	29	1.4	2.1	5	4
20:00	30	20	2.0	3.0	4	3
21:00	17	20	3.6	3.0	2	3
22:00	12	10	5.2	6.0	1	1
23:00	5	6	11.1	10.9	1	1
TOTAL	**954**	**728**				

Table 1 - Hourly profile of average weekday and average weekend traffic volumes on Higham Road.

1.7 Table 1 shows that there are distinct peaks of traffic during the morning and evening weekday commuter peak hours with a morning peak hour occurring at 08:00 and an evening peak hour occurring at 17:00. These peaks do not occur at the weekend indicating to me that the weekday peak hours are related to people travelling to and from places of work or education.

1.8 I have calculated what this equates to in terms of the number of vehicles per "x minutes" and shown this in Table 1. This shows that during the morning weekday peak hour (starting from 08:00) a pedestrian walking in Higham Road could expect to encounter a vehicle every 0.6 minutes (or 36 seconds). During this same period, during a 7.5 minute walk, Table 1 shows that a pedestrian walking in the road could expect to encounter 13 vehicles. The traffic speed data provided by NR shows that these 13 vehicles could be expected to be travelling at between 37mph and 40mph (recorded 85th percentile speeds).

1.9 I have presented the traffic survey data on the graph below to illustrate the weekday peak hours.



1.10 The blue line on the graph above shows a sharp peak during the peak weekday morning commuter hour and a lower peak during the peak evening weekday commuter period. This is a typical commuter traffic pattern. The high morning peak reflects the fact that many people are required to arrive at work by a certain time and so are on the road at a similar time. In contrast people are more flexible with when they finish work hence the lower intensity of the evening peak traffic volumes but the longer time period during which traffic volumes are raised.

1.11 In comparison to the weekday traffic movements, the red line on the graph above shows a gradual increase in traffic volumes over the course of the morning with the highest volumes between the hours of 10:00 and 12:00. This is a typical leisure user traffic pattern.