

## B4221/B4215 Strategic Issues, July 2004

### EXECUTIVE SUMMARY

**Our aim:** To address problems of volume, weight and speed of traffic on the B4221

**Relevant actions by Local Authorities to date:**

Gloucestershire County Council – B4221/B4215 Route Safety Study  
- *This was largely confined to accident rates/hazards. It failed to address the strategic issues of volume, speed & weight of traffic*

Establishment of some speed limits/mobile cameras/puffin crossing

**B4221 Action Group research using Gloucestershire County Council's data shows:**

The **injury accident rate** on the B4221/B4215 is higher than County norms for A roads and it is far in excess of rates on equivalent B roads

**Traffic volumes** on the B4221/B4215 are in excess of those carried by neighbouring A roads

A considerable % of this traffic consists of HGVs using the roads as **a through route**

**Traffic growth** is likely to be in excess of Local Authority targets

**Speeding** over the whole route is endemic

The B4221 and B4215 are classified in Gloucestershire County Structure Plan as roads of 'only local importance'. The Plan states that measures will be introduced to prevent and discourage heavy lorries from using unsuitable roads.

We therefore question the validity of LTP1, which identifies the B4221/B4215 as a principal means of access to the Forest of Dean and having a 'residual role as a through route'.

**We call upon the Highways Department to comply with the framework policies, particularly its own structure plan and treat the B4221/B4215 as a route of no more than local importance and to manage the traffic on it accordingly.**

## **B4221/B4215: Strategic Issues - Quantification, July 2004**

- references:
- a. B4221/B4215 Through Route Road Safety Study: B4221 Action Group's Submission, 7 October 2002
  - b. Gloucestershire County Council B4215/B4221 Route Safety Study, Feasibility Study October 2003, issued 7 November 2003
  - c. Halcrow's Technical Note: Gorsley Road Side Surveys, 3 July 2003

### **Introduction and Summary**

1. In December 2001 we issued a report entitled "Road Traffic Problems on the B4221" (on our web site [www.b4221actiongroup.co.uk](http://www.b4221actiongroup.co.uk)). After a meeting to discuss the report, Gloucestershire and Herefordshire Local Authorities (LAs) undertook to fund a through route Safety Study. Much of our submission to the study (reference a.) was seen as raising so-called "strategic issues", which were never clearly defined, although several requests for clarification were made. In November 2003, when the report on the Safety Study was issued, it became clear that these issues were the volume, weight and speed of traffic on the route and the amount of through traffic - the issues that we consider comprise the major hazards on the route. The report largely confined itself to an analysis of accident rates and potentially hazardous conditions along the route.

2. Our submission to the study also included our analysis of the volume of through traffic. We found that 45% of all traffic and 60% of lorries were through traffic. In response the LA contracted Halcrow to study this problem; their report was issued in March 2003 but was inconclusive. Subsequently the local authority commissioned a roadside survey just south of junction 3 on the M50 and this was carried out in April 2003. Halcrow was tasked to write a Technical Note on the survey; their interpretation of the data was that "only 19% (of drivers) are using an inappropriate route and should arguably be using the M5 and other signed through routes". However, the actual figures in the Note were consistent with our findings (see paras 12 to 18 and appendix C).

3. After 3 years of campaigning we have been unable to reach agreement with the LA on quantifying the problems. This report includes our analysis of official figures on volume, speed and weight of traffic and of the volume of through traffic on the B4221/B4215. In some cases the problems are worse than local people thought. We include a critique of the reports so far issued by the LA and we also address the LA's policy towards the B4221/B4215.

4. Peter Bungard, Director of Environment, GCC, has acknowledged that our campaign has brought the B4221/B4215 to the forefront of the authority's mind. The Authority has installed traffic lights at the Newent Crossroads, a Pelican Crossing near Picklenash School, introduced a 40 mph speed limit through Highleadon, arranged for mobile speed cameras to patrol the route under a partnership scheme and improved signing along the route. But they have not delivered effective solutions that directly implement any aspect of our strategy for alleviating the problems (see para 29).

5. The LA sees the B4221/B4215 as the best route across the West of Severn Corridor to the M50 and a through lorry route. The only deterrents to an upgrade of the road may be resistance among local people and our campaign. Just over half the respondents to our recent perception survey (also on our web site [www.b4221actiongroup.co.uk](http://www.b4221actiongroup.co.uk)) said they would support the move of junction 3 on the M50 to the B4215. The LA is considering this possibility and has asked the Highways Agency for their views. Apart from that, the Authority is unwilling to do anything that would divert traffic from this road to others in the area. It is also unwilling to consider weight limits but the LA has

expressed a willingness to discuss speed and safety issues which this report also addresses. At this point we are not convinced that LTP2 will address the problems and even if it does, LTP2 covers work from 2006 to 2012.

6. This report is an update of a previous draft dated January 2004 and includes a reworking of our critique of Halcrow's Technical Note on volumes of through traffic.

## Details

### Accident Rates

7. According to the Safety Study (reference b.), the injury accident rate on the B4221/B4215 is higher than the county norm for A roads.

Section of B4215/B4221	Accident Rate	County Norm for Accidents on A Roads
1. B4215 (A40 - Golf course; 1.05 miles)	28	27
2. B4215 (Golf course - start of 30 limit on Newent bypass; 6.5 miles)	33	
3. B4215/B4221 (30 limit along Ross Road; .45 miles)	56	
4. B4221 (50 limit near Bradfords Lane - M50; 3.25 miles)	42	

8. The reference reports that there were 78 injury accidents on the route in the 4½ years from Jan 1998 - June 2002 inclusive (para 2.1 of reference b.); these included fatalities and serious injuries. The report doesn't say that there were a further 71 damage-only accidents on the Gloucestershire section of the route. The Road Safety Unit assumes that only 20% of damage accidents are reported so the actual number could have been much higher.

9. The rate of accidents on the B4221/B4215 is three times as many as on a comparable B Road the B4070 (see appendix A.). In October 2003 there was a fatal accident on the B4221 near Christchurch, Gorsley. This is the first fatality on the B4221 for a long time and may be an indication that the route is becoming more dangerous.

### Growth in Traffic Volume

10. In our submission we showed that, in 2000, the route was carrying volumes of traffic comparable to, and more than, those of the A40 and the A417, as follows:

<b>B4215</b>	<b>A40 east of Huntley</b>	<b>A417 (south)</b>
11600	14000	7900
<b>B4221</b>	<b>A40 west of Huntley</b>	<b>A417 (north)</b>
6400	4900	4500

11. There is some evidence that over the last 5 years overall traffic volume has been growing at about 2% per annum. Local authority targets for traffic growth would be exceeded if this rate is sustained over periods of 10 and 15 years (see appendix B for details).

## Volume of Through Traffic

12. We analysed traffic flows at junctions along the route and concluded that the volume of through traffic as 45% overall rising to 60% for lorries (reference a.). We define local traffic as that to and from areas off the B4221/B4215 between Highnam and Junction 3 on the M50 and this includes vehicles visiting for business and/or social purposes. In our view all other traffic is through traffic.

13. The local authority commissioned a roadside survey to investigate the volume of through traffic and Halcrow issued a Technical Note on the data gathered. The actual figures given in the report are higher than our assessment:

Volumes of Through Traffic - Tables 3.4 & 3.5			
	Action Group's Submission	Halcrow's Report	
		Data as Collected	+ 550 'missing' local trips
Percentage of Total Volume	45%	56%	43%
Percentage of Lorries over 7.5 tonnes (MGV & HGV)	60%	72%	

14. However, in its **interpretation** of the data, Halcrow used a much wider definition of local traffic than we did; for example it included traffic to and from Ross-on-Wye. Halcrow also defined significant volumes of non-local traffic from other areas of the county as 'semi-local' and excluded this from its estimate of through traffic. It explained away a significant difference of 550 trips in the counts of westbound vehicles as 'local traffic' trying to avoid the survey point. It also failed to account for the reduction of in lorry traffic on the route on the day of the survey. On this basis the report concluded that "of all the vehicles passing through the interview site, it can be said that only 19% are using an inappropriate route, and should arguably being (sic) using the M5 and other signed through-routes".

15. In our view, categorising traffic as 'semi-local' legitimises rat running and is an attempt to minimise the problem of through traffic on the B4215/B4221.

16. The missing trips referred to a discrepancy between westbound manual and automatic traffic counts. We accept the discrepancy but offer a different explanation. While we agree that some local drivers avoided the survey, most of the difference between the two counts was in the afternoon, peaking between 5 pm and 6 pm. This is consistent with "non-local" commuters who had passed through the survey in the morning and avoided it on their return in the afternoon. Our detailed analysis is at appendix C.

17. In addition, the survey recorded only 281 lorries in both directions, normally this would be up to 430 (see appendix C). If 149 lorries could avoid the route altogether on the day of the survey, it might well be because they were not 'local'. This was not mentioned in the report or taken into account in the estimates of through vehicles.

## Lorries

18. Comparison of the 24 hour per day volumes of lorries over 7.5T (details from appendix A LTP) is as follows:

<b>B4215</b>	<b>A40 east of Huntley</b>	<b>A417 (south)</b>
790-600	1340	310
<b>B4221</b>	<b>A40 west of Huntley</b>	<b>A417 (north)</b>
430-380	460	250

The B4215 carries 59% - 45% of the volume of lorries on the A40 east of Huntley and over double the number of lorries on the A417 (south). The B4221 carries almost as many lorries as the A40 between Huntley and Ross-on-Wye and almost double the number on the A417 (north). The B4221/B4215 is clearly the route of choice for lorries travelling via the West of Severn Corridor.

19. We accept the Authority's analysis that lorry traffic on the B4221/B4215 has fallen by about 2% per year over the last 8 years. However, since the volume of through lorries, as we define the term, remains at around 60%, and 150 lorries found it easy to avoid the route on the day of the survey, there is clearly potential for further significant reductions. However, that would be inconsistent with LA policy for the route.

## Speeds

20. Tube surveys carried out at various points along the route for periods of several days each show that speeding is endemic (details are at appendix D). During these surveys:

a. around a thousand vehicles were exceeding the speed limit by 15 mph and 400 to 500 by at least 20 mph at most points along the route. This figure increases dramatically at the Newent bypass where the limit is 50 mph; over 9,000 vehicles were doing at least 65 mph and nearly 8,000 were doing 70 mph and more. The accident rate for the Ross Road, Newent, is the highest along the route (see para 12).

b. over 2,000 vehicles were travelling at 50 to 56 mph through Kilcot rising to nearly 3,500 along the straight through Gorsley, in both locations the limit is 40 mph. Nearly 1,500 were travelling at between 56 and 90 mph through Gorsley. This stretch of the route has the second highest accident rate(see para 12). This is the first time that official speed statistics have reflected the experience of people in these villages.

21. The high incidence of speeding where the route is straight shows what the effect of upgrading the road could be. It justifies our strategy of no improvements to the road that could encourage or generate more traffic.

## Policy Issues

22. The Local Authority sees the B4221/B4215 as one of several main roads in the West of Severn Corridor, on a par with the A40, A48 and A417. The LA's policy is not to do anything that will hinder use of the B4221/B4215 as "a main road" or "a major distributor road". The Authority sees

this as the best route across the West of Severn Corridor and a through lorry route. On the one hand the Authority claims that it tries to maintain a balance in traffic levels between the main roads in this area. On the other, it does not actively manage traffic in the area and allows drivers to use the route of their choice.

23. In contrast, the County Structure Plan shows that the B4215/B4221 is a road of no more than local importance. The definitive map (see appendix E) shows roads described as “Motorways, Primary Routes, and other roads of more than local importance”. Newent is shown in splendid isolation with no links to the county road network indicating that the route is of more than local importance.

24. The Highways Agency’s signing policy is that traffic between the M50 and Gloucester should use the A417. However, both Gloucestershire and Herefordshire Authority’s road signs direct traffic between Leominster and Gloucester via the B4215 which joins the A417 at Trumpet Corner in Herefordshire.

25. The Freight Transport policy in the structure plan (Policy MR.12) states that “Heavy lorries will be encouraged to use appropriate routes, and measures will be introduced to prevent and discourage such lorries from using unsuitable roads.” If the B4215/B4221 is a road of no more than local importance we fail to see how its current use as a **through** lorry route can be justified and we fail to see how showing the B4221/B4215 as a lorry route in LTP1 is consistent with the Structure Plan. We accept the B4221/B4215 as a lorry **access** route to business and industrial premises on or near the road.

26. The LA is pursuing long term government accident reduction targets and the council will receive a cash award if they are met; officials hope that members will allocate this extra money to highways. This means that the LA are reluctant to divert traffic from a route with a relatively low accident rate, eg the B4221/B4215, to one with a higher accident rate, eg the A40 west of Huntley.

27. According to LTP1 Target “HT1 - By 2010, average daily traffic volumes on the County’s road network to increase by no more than 20%, compared with 1996 levels. By 2006 the increase over 1996 to be no more than 15%.” So the 10 and 15 year targets are no more than 15% and 20% respectively. We have shown that the average annual growth on this route between 1998/9 and 2003 may be about 2% per annum and would exceed the targets if sustained.

### **What We Want**

28. As we said in our original report issued in December 2001, our strategy for dealing with the problems, i.e. the “strategic issues” on the route is:

- a. Effective traffic calming
- b. Reduction in volume, weight and speed of traffic
- c. Avoidance of any improvements that might generate or encourage more traffic
- d. In the longer term, an alternative route to the M50

The local authorities of Gloucestershire and Herefordshire have told us they accept the strategy because it is so close to their own.

29. We take the view that measures that go **at least some way to implementing our strategy or parts of it** will alleviate the problems. At the very least a balance must be achieved between the interests of road users and the communities along the B4221. While we recognise the rights of those who wish to use the road and need to use it, we want road users to recognise and respect the rights of those in our communities to enjoy peace and quiet in their homes and the need to ensure the safety of our children, pedestrians, schools and other road users.

## **Conclusions**

30. We have long maintained that the volume, speed and type of traffic on the B4215/B4221 constitutes the major hazard on the B4215/B4221 (reference a.). This is confirmed by the accident rate which is higher than for A roads. We fear that the situation could deteriorate to the point where the only remedy would be to upgrade the route. We accept visiting traffic for business and industrial purposes, we accept lorry access to local business premises. With those provisos, we call upon the Local Authority to comply with framework policies, particularly its own structure plan, treat the B4215/B4221 as a route of no more than local importance and manage the traffic on it accordingly.

Brian Collier, for the B4221 Action Group

**Accident Rates**

1. Over the eight year period from June 1995 and June 2003 there were about 3 times the number of accidents on the B4215/B4221 than on the B4070 a similar road (see table below).

Road Traffic Accidents June 1995 to June 2003				
	B4221	B4215	Totals	B4070
Fatal	0	6	0	2
Serious Injury	4	9	13	6
Slight Injury	27	111	138	44
Damage	28	110	138	37
	59	236	<b>295</b>	<b>89</b>

**Growth of Traffic Volumes**

1. The limited data in the table below suggests an annual growth in traffic volume along the route of about 2%. This exceeds the local authority's 15 and 10 year targets of 20% and 25% respectively (see Appendix A LTP1) which average 1.5% and 1.3% per annum. Traffic growth rates are normally based on 24 hour volumes in the working week. We have little comparative data on 24 hour volumes over the last few years but the table gives details of 12 hour volumes available to us.

B4221/B4215: Growth in Traffic Volumes									
Location	Dec 1998	Nov 1999	Apr 2000	Jun 2000	Apr 2002	Oct 2002	Apr 2003	Sep 2003	Annual % Inc
Highnam (A40)			10846						
Highnam (Golf Course)						10482			
Rudford area		8224				9199			<b>4</b>
Newent East of Gloucester Street				8583		9147			<b>2.9</b>
South of Newent By-Pass			6425	7067					
Newent Crossroads			5883			6071			<b>1.3</b>
Picklenash School, Newent									
Kilcot Village	4606					5026		5866	<b>2.3</b>
Gorsley (Christchurch area)									
Gorsley (M50 area)			4328		4782				<b>5.2</b>

### Through Traffic: Our Critique of Halcrow's Technical Note on the Roadside Survey

1. The table below compares through traffic volumes as we calculated them and according to the data in Halcrow's Technical Note. For comparison we show the totals counting traffic from Ross-on-Wye as local traffic, as the Note did, and as through traffic. The figures are broadly consistent even including Ross-on-Wye in the local category.

Volumes of Through Traffic			
	Action Group's Submission	Halcrow's Technical Note - Tables 3.4 & 3.5	
		Including Ross-on-Wye as local (Zones 8 to 16)	Excluding Ross-on-Wye (Zones 7 to 16)
Percentage of Total Volume	45%	41%	56%
Percentage of Lorries over 7.5 tonnes (MGV & HGV)	60%	57%	72%

2. The Technical Note assumed "550 missing trips" were local vehicles avoiding the survey. The survey involved a Manual Traffic Count (MTC), adjacent to Gorsley Goff School, and an Automatic Traffic Count (ATC) adjacent to Christchurch, Gorsley. The authors of the technical note point out that there were 549 more westbound trips passed the ATC at Christchurch than passed the MTC at Gorsley Goffs. In other words 549 westbound vehicles "disappeared" between Christchurch and Gorsley Goffs (see the table below).

Time Period	Eastbound			Westbound		
	MTC	ATC	Diff	MTC	ATC	Diff
0700-0800	309	359	-50	186	169	17
0800-0900	363	366	-3	188	193	-5
0900-1000	194	216	-22	123	146	-23
1000-1100	148	178	-30	116	137	-21
1100-1200	153	156	-3	142	120	22
1200-1300	148	155	-7	143	155	-12
1300-1400	182	146	36	106	147	-41
1400-1500	167	131	36	109	176	-67
1500-1600	191	161	30	142	220	-78
1600-1700	183	183	0	197	323	-126
1700-1800	213	207	6	187	320	-133
1800-1900	166	171	-5	165	247	-82
Totals	2417	2429	-12	1804	2353	<b>-549</b>

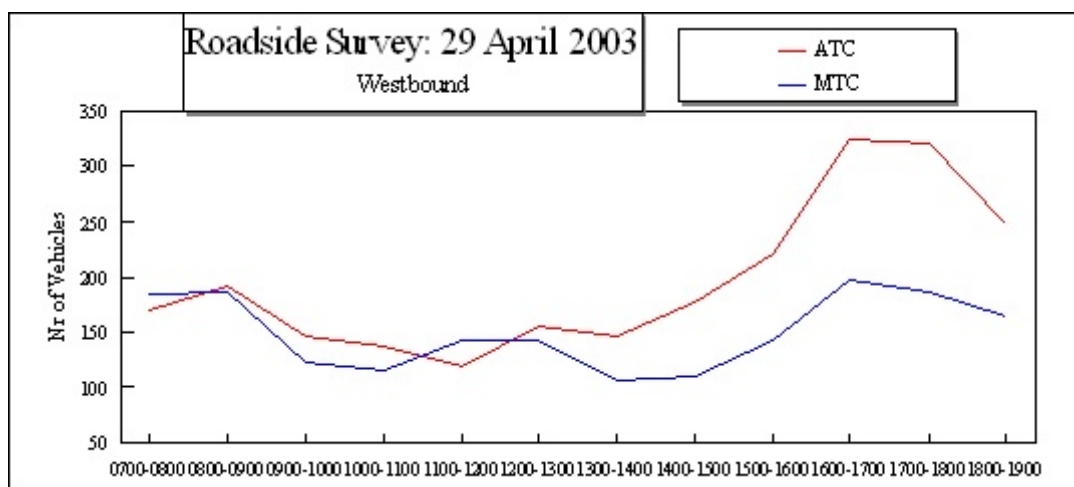
Halcrow assumes that the discrepancy represents the number of local drivers avoiding the survey; we believe this is too simplistic.

3. These minus figures are excess trips at one point or the other, as shown in the table below.

	1 Eastbound Excess At MTC (Into Gorsley area from the west)	2 Eastbound Excess At ATC (From Gorsley area towards Newent)	3 Westbound Excess At MTC (Towards M50 from Gorsley)	4 Westbound Excess At ATC (From Newent direction)
0700-0800		50	17	
0800-0900		3		5
0900-1000		22		23
1000-1100		30		21
1100-1200		3	22	
1200-1300		7		12
<b>Morning totals</b>		<b>115</b>	<b>39</b>	<b>61</b>
1300-1400	36			41
1400-1500	36			67
1500-1600	30			78
1600-1700				126
1700-1800	6			133
1800-1900		5		82
<b>Afternoon totals</b>	<b>108</b>	<b>5</b>	<b>0</b>	<b>527</b>

4. The morning easterly figures (column 2) are consistent with traffic from the Gorsley area joining the easterly flow towards Newent/Gloucester and/or the avoidance of the survey by traffic from the west. The afternoon figures in column 1 indicate trips into the Gorsley area from the west. Column 3 shows 39 more westbound trips recorded at the MTC than the ATC in the morning, which is indicative of local traffic from the Gorsley area travelling towards the M50/Ross. In the same period, the 61 additional westbound trips at the ATC (column 4) are consistent with traffic from the Newent direction going to Gorsley and/or avoiding the survey. These 61 trips could have been by either local or non-local vehicles. So far the figures are consistent with trips to and from the Gorsley area and a low level of avoidance of the survey, possibly in both directions.

5. Between 1 pm and 7 pm the picture changes dramatically with 527 more westerly trips recorded at the ATC than the MTC; peaking at 259 between 4 pm and 6 pm (see also the graph below).



6. Since there is no apparent reason for either visits to Gorsley or local survey avoidance to be at a higher level in the afternoon than earlier in the day, the majority of the 527 missing trips could be seen as through traffic. In the LA's terms these trips could include semi-local traffic. Further, the

continual increase in the ATC count through the afternoon, peaking in the “rush hour”, looks much more like through drivers avoiding the survey on their westerly return journey having already passed through it once in the morning on their outward easterly journey.

7. The ATC records a total of 281 lorries in both directions on the day of the survey. Lorry counts on dates before and after the survey show that this is about the daily number normally travelling on this route (see table below).

B4221: Lorry Volumes			
Location	Apr 2002	Apr 2003	Sep 2003
Gorsley (Christchurch)		281	430
Gorsley (M50)	413		

The fact that about 150 lorries could avoid the route altogether on the day of the survey suggests they were through traffic. This has not been mentioned in the report or taken into account in the estimates of through vehicles.

8. These factors strongly suggest that the conclusion that through traffic amounted to only 19% of the total cannot be upheld and is a considerable understatement.

## Speeds

1. Since October 2002 data on traffic speeds has become available from tube surveys carried out at various points along the route. Tube surveys give far more insight into what is happening on the road than manual speed checks.

B4221/B4215: Speeds Over 4 to 6 day Periods							
Location	Limit	Period	Number of Vehicles travelling at		Period	Number of Vehicles travelling at	
			Limit +15mph	Limit +20mph & more		Limit +10-16mph	Limit +16-50mph
Highnam	30 mph	Oct 2002	552	443			
SE of Rudford	50 mph	Oct 2002	1093	519			
W of Tibberton Junction	50 mph	Oct 2002	1323	472			
South of Newent By-Pass	50 mph	Oct 2002	9383	7836			
Picklenash School, Newent	30 mph	Oct 2002	1290	440			
Kilcot Village	40 mph	Oct 2002	958	495	Sep 2003	2168	544
Gorsley	40 mph				Sep 2003	3421	1546

2. One of the problems with the data is that speed ranges are not consistent from survey to survey neither are the periods over which they are carried out. Standardisation would enable more objective comparisons to be drawn. None the less, it is evident from these figures that substantial numbers of vehicles are exceeding the speed limit by wide and dangerous margins all along the route. It is also evident that the problem is particularly severe where the road is straight, i.e. the Newent bypass and through Kilcot and Gorsley. It is also evident that at Highnam, where the volume of traffic is at its highest and where there is a speed camera, the number of vehicles speeding is the lowest along the whole route. This more than justifies the deployment of speed cameras.

