

Comments on Atkins Report of 20th Mar

1/ It was perfectly obvious from the beginning that accident and casualty data for only 1,2 or even 3 years, for the streets of one small city could never be statistically significant – so why has so much time and money been spend analysing the data?

2/ Having stated that the data is **not** statistically significant, does the report **go on to draw conclusions from it?**

3/ The Executive Summary is **consistently skewed in favour of the scheme:**

a/ No mention of the **12% fall in traffic** in most of the zones (others not measured), instead “*firm conclusions on traffic volume effects cannot be reached*”! Why “*firm*” when so much else is nebulous and unreliable? Is the 12% fall not the best indication they have? Further, as set out below, the chart of anticipated consequences explicitly included diverting through traffic away from the area!

b/ No mention of the **much better national results despite only a 1% fall** in traffic

c/ It endorses the utter nonsense of installing 20mph signs where average speeds were little different from that, to “*support the low driving speeds adopted previously*” !!!!! Is it any wonder that the scheme had so little effect on (average) speeds – though speeds on some roads fell, and on many others, actually rose?

d/ The “*fewer casualties since the implementation of the scheme*” are statistically insignificant as the fall was **well within random variations.**

e/ “*The occurrence of both KSI casualties and KSI accidents has actually increased in PCC against a national falling trend*” fails to mention how **much faster the national figures fell, or for that matter, how much more important increases in K and SI are than falls in All, 80% of which are slight injuries.**

f/ “*A detailed examination of the accident causation factors did not show any noteworthy change in patterns, in particular those related to inappropriate speeds and aggressive driving. This indicates that the scheme may not have had a significant effect on influencing the contribution of these factors in accident occurrence*” is a convoluted, weasel worded way of saying “**Nothing to indicate that the scheme/lower speeds had any effect on accident causation.**

g/ “*The scheme is generally supported by the residents who responded*” – **not according to the chart in PCC’s 13th May presentation – well under 50% were impressed.**

h/ “*Experience from London and Hull suggests that significant safety benefits can be obtained by implementing a targeted area-wide implementation of 20 mph zones in combination with 20 mph speed limit signs, depending on the character and function of each road in the area*” is a weasel-worded way of saying that this signs-only scheme is a waste of time compared to schemes that have enforcement and traffic calming etc.

i/ “*the implementation of the 20 mph Speed Limit scheme has been associated with modest casualty reductions*” – **ignores the fact that the changes in all casualties are well within random chance, and also ignores the fact that KSI rose substantially, especially compared to national falls.**

j/ “*where average speeds were well in excess of 20 mph before the introduction of the scheme, there have been significant reductions in average speeds but not to below 20 mph*” **fails to mention that at 59 sites speeds rose and at many others did not change.**

• “*Traffic volume data on PCC cordon/strategic roads*” implies an assumption that drivers who avoid the 20mph area would divert only to cordon/strategic routes, rather than over the wider area or indeed to other cities such as Southampton or Chichester instead.

DfT Circular 1/06 states that: ‘*Successful 20 mph zones and 20 mph speed limits should be generally self-enforcing. Traffic authorities should take account of the level of police enforcement required before installing either of these measures. 20 mph speed limits are unlikely to be complied with on roads where vehicle speeds are substantially higher than this and, unless such limits are accompanied by the introduction of traffic calming measures, police forces may find it difficult to routinely enforce the 20 mph limit.*

‘*Research into 20 mph speed limits carried out by TRL (Mackie, 1998) showed that, where speed limits alone were introduced, reductions of only about 1 mph in ‘before’ speeds were achieved. 20 mph speed limits are, therefore, only suitable in areas where vehicle speeds are already low (the Department of Transport would suggest where mean vehicle speeds are 24 mph or below), or where additional traffic calming measures are planned as part of the strategy.*’

As this was well known and advised by the DfT, why was this scheme implemented?

it is noted that the PCC scheme does not comply with this advice, but the advice is not related to any statutory requirement” means in English that PCC disregarded DfT advice and went ahead anyway, because it was advice and not law!

In 2004, PCC carried out a Traffic Calming Review which divided the city into ten potential **20 mph Zone**.... Council agreed to implement two 20 mph Zones per year over a five year period at a cost of approximately £200,000 per area or £2 million..... to address the high number of randomly located person injury accidents.... Whilst consultation on the first 20 mph Zone was being undertaken, a triple fatality led to the need to react swiftly to public demand for the speeds on one of the city’s routes to be lowered. An experimental **20 mph Speed Limit** scheme was therefore installed.” Another example, like the Firearms Act and Dangerous Dogs Act, of knee-jerk legislation implemented not on the basis of science or analysis, but because “*something must be done*”. The result – higher KSI after implementation than before!

At last I understand why this scheme was implemented, in defiance of DfT advice and common knowledge, not least amongst police – that it was a waste of time and money. It was politicians’ reaction to “something must be done” aka “I must be seen to be doing something, if I am to keep my seat at the next local election”.

“There was some uncertainty about the possible impact of the initiative on traffic volumes on surrounding roads but traffic migration to cordon roads from 20 mph speed limit roads was expected to be limited.”

“Limited migration of through traffic to strategic routes to avoid 20 mph limits” and Less through traffic in residential areas” in the block diagram titled **Figure 1.2 - Anticipated causal chain of impacts**.

While not certain, it was more than likely that some drivers would avoid the 20mph area, partly because they dislike driving or riding at that speed, partly because slower speeds there meant that it could be quicker to drive around. Indeed the chart of anticipated outcomes explicitly includes diverting through traffic away from the area! **But the idea that this displaced traffic would travel only on cordon roads rather than take quite different routes, or avoid Portsmouth altogether, is illogical.** That traffic fell 12% in the first year, in those areas measured, but fell nationally only by 1% strongly implies significant traffic diversion. Accidents being accidents, those drivers had their share of accidents elsewhere, meaning that the scheme did not cut accidents but just moved them elsewhere. **This is why it is essential that accident and casualties be compared relative to traffic volume – which this report and PCC have signally – and arguably significantly – failed to do.** Indeed Ms. Gill stated unequivocally in an email to me, that traffic volume was irrelevant.

The amount of local publicity in favour of the scheme makes the subjective opinions of those exposed to the propaganda worthless. It is in effect the authorities opinions, reflected back by people who know no better.

I have reviewed the significance of the speed changes in previous correspondence, and may cut and paste it here. But essentially average speeds changed by only 1mph or so, while some fell significantly and others rose significantly. That the report highlights the falls but almost ignores the increases tells us all we need to know.

Figure 3.1 shows the variation in speed changes at the monitored sites in the six PCC sectors, it shows that there is more often a reduction in speeds at the monitored sites. In fact the variations are much more even-handed than the unquantified statement implies (always be wary of unquantified statements, usually a method of implying without actually lying, that a something is better than it really is.)

Also, what the report totally fails to mention, is that as most drivers drive at safe speeds most of the time, measures which result in them driving more slowly than they previously thought safe are likely to cut accidents by less than the additional accidents resulting from driving faster than drivers previously thought safe. In other words, the risk/speed graph is bound to be asymmetric.

“Therefore it is possible, but not certain, that the 1.3 mph overall reduction in average speeds in Portsmouth may have been due to the implementation of the 20 mph scheme” means that it is far from certain, due to the small number of measurements, was even due to the scheme, rather than random chance. At the higher speed sites, the link is made, but even then the link from speed to accidents, in such small numbers, cannot remotely be reliable. In any case, what is the point of lower speeds if KSI rises?

This traffic volume data was received from PCC for the cordon roads (those on the boundary of the 20 mph speed limit scheme). This was analysed in order to assess whether any traffic migration had taken place”

This relies on the assumption that diverted traffic would divert only to those roads, rather than the wider area or indeed stay away from Portsmouth altogether.

“The average reduction in traffic (3%) on PCC cordon roads is therefore greater than the national reduction (1%) and as such it is likely that there was no traffic migration “ Well, that’s one interpretation. But let’s look at the logic. Other things being equal, we would expect traffic on cordon roads to follow the national trend and fall 1%. But it fell 3%. Why? Well, traffic migration from the 20mph zone to the cordon roads clearly could not account for it. But traffic that avoided both the 20mph zone and the area around it might well explain it. Also, we have to be careful about % comparisons – potentially misleading without sight of the traffic numbers. It would be reasonable to assume that traffic on cordon through routes would be

substantially higher than in the confined 20mp streets. That being the case, a 3% fall on the cordon roads might well match a 12% fall within the 20mph area – implying that traffic avoiding both the 20mph area and its cordon roads – and perhaps Portsmouth altogether – could explain both falls.

In other words the statement made appears to be seriously flawed – not least because traffic migration was a target of the scheme!

There is no problem over earlier “implementation” on some roads – the signs remained covered until the scheme started

Some results: table 5.1 and text, none adjusted for traffic

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KSI accidents up 8% from 18.3 to 19.9 down 5% (built up)

SLT accidents down 25% from 145.3 to 109.0

All accidents down 21% from 163.7 to 129.4

KSI casualties up 6% from 18.7 to 19.9 down 12%

SLT casualties down 25 % from 164.3 to 122.5

KSI pedestrian UP 38% down 6.1%

All Pedestrian down 16% down 13%

All casualties down 22% from 183.0 to 142.4 down 14%

Note that most of these numbers are noticeably different from those in Table A4, also used by Gill at the Brake Conference – yet they should be the same. Table A4 is duplicated!

No separate K and SI numbers are given, anywhere. Why?

Who cares about the number of vehicles?

“Causation factors

A detailed investigation of the accident causation factors, as recorded on STATS19 forms and taking into consideration both probability A and B contributory factors⁸, indicated that there was generally no significant change in the proportion of all accident severities influenced by speed related contributory factors in the 20 mph PCC sectors.”

The tests showed that the observed changes in the PCC sectors were not statistically significant at both the 90% and 95% confidence levels. Therefore the observed changes may have been due to the random occurrence of accidents and thus not attributable to the implementation of the 20 mph scheme.

From the trend analysis, there is no clear evidence to suggest that the implementation of the 20mph signing scheme has had an impact on accident trends in Portsmouth.

A detailed examination of the accident causation factors did not show any noteworthy change in patterns, in particular those related to inappropriate speeds and aggressive driving. This indicates that the scheme may not have had a significant effect on influencing the contribution of these factors in accident occurrence.

It is therefore not possible to demonstrate directly that the 20 mph speed limit implementation has had a statistically significant effect on accidents or casualties.

Previous research⁹ has suggested average speed reductions of about 1mph (as observed in Portsmouth) result in accident reductions of about 5%, for roads with similar traffic flows (TRL 421 AGAIN!). The confidence limits associated with the two year's after data in Portsmouth are larger than this. The occurrence of both KSI casualties and KSI accidents has actually increased in PCC against a national falling trend. Again these changes are not statistically significant. Data was not available to demonstrate if the lack of KSI reduction (!!! Actually a real INCREASE!) was due to increased exposure (mileage) of vulnerable user groups.

(Why increased exposure with 12% less traffic? Except cyclists hurting themselves?)

