

1. The review process and methodology behind the formulation of the intended programme of speed limit proposals

1.1. As the project has evolved, the review has formed three key distinct stages.

Stage one was the identification and review of all the routes leading to the initial recommendations being made.

Stage two was to check the collision rate against the collision rate threshold for each section of route where a recommended change to speed limit was identified. Mean traffic speeds were also assessed to determine whether traffic speeds were already appropriate or additional measures are required to obtain the appropriate mean traffic speeds.

This data allowed priorities to be established which form the basis of the proposed implementation programme.

Stage three will be to progress the programme of speed limit proposals through to implementation.

2. Stage 1

2.1. Initial scoping work was undertaken to enable a programme of investigations to be established. All the routes, divided into manageable sections, within their respective District/Borough areas were identified. As a result a total of 292 routes, adding up to approximately 1255km of designated 'A' and 'B' class roads, were logged Countywide.

2.2. A traffic light system for route prioritisation was adopted as follows:

Red: High priority routes where initial recommended changes to the speed limit were identified.

Amber: Medium priority routes ~ network of roads to be assessed as a second priority by the County Council in the future, but the majority of the network is likely to be assessed as 'no change proposed to existing speed limits'.

Green: Low priority routes ~ assessed to have no issues and unlikely to result in any recommended speed limit changes.

2.3. To ensure that the routes with the most pressing problems were dealt with first, personal injury accident record data for the countywide rural main road network was used to ratified route priorities. Accident data was carefully examined and the individual routes driven by officers to enable recommended speed limit changes to be formulated.

- 2.4. Table 2.5 below summaries the 'red' priority routes where recommendations had been identified for each area is as follows:
- 2.5. **Table summarising the 'red' priority routes where speed limit changes have been recommended by area**

AREA	DISTRICT/ BOROUGH	NUMBER OF 'RED' ROUTES	NUMBER OF INDIVIDUAL SECTIONS OF SPEED LIMIT CHANGES
East	Winchester	12	23
	East Hants	10	23
West	New Forest	13	30
	Test Valley	10	22
North	Basingstoke	6	19
	Hart	5	11
	Rushmoor	1	1
South*	Fareham	2	2
	Gosport	2	2
	Eastleigh	2	3
	Havant	2	4
TOTAL		65	140

*In view of the largely urban characteristics of the area, such as Gosport, Havant and Fareham which forms part of Portsmouth conurbation, the majority of routes are subject to speed limits lower than the National Speed Limit. Hence only 8 routes (2 in each of the Borough areas) have been identified where changes to the speed limit were initially recommended.

- 2.6. The total length of sections of routes where speed limit changes were initially recommended was approximately 180km, which equates to approximately 14% of the entire 'A' and 'B' road network. This indicated that the speed limits on 86% of the whole of the 'A' and 'B' road network are set at an appropriate level, reflecting the general characteristics of the road and its environment.

3. Stage 2

- 3.1. In order to determine if each of the 140 recommended sections of route met the collision rate threshold and mean traffic speeds were at an appropriate level or additional measures to reduce traffic speeds were required, the following data needed to be obtained:

number of personal injury accidents;
traffic flows; and
traffic speeds.

- 3.2. Accident data for each specific section of route was collated by the Safety Engineering Team. The Traffic Monitoring Group provided any existing relevant traffic volume and speed data. An extensive programme of traffic data collection was undertaken where no data was available.

- 3.3. The 140 'red' priority routes where changes to the speed limit have been recommended have been prioritised by the use of the collision rate per 100 million vehicle kilometres.
- 3.4. The DfT recommended collision rate threshold (injury accident threshold for upper tier roads, which reflects expected levels associated with a road carrying a given level of traffic and an appropriate balance between safety and mobility), is 35. Higher speed limits may be considered acceptable where the accident rate is below this threshold and lower speed limits may be considered where the accident rate is above this threshold.
- 3.5. The table in Appendix 2 details the county-wide listing of the 140 sections of 'A' and 'B' class routes which have been prioritised by the collision rate in descending order.
- 3.6 In the table the collision rate has been colour coded as follows:
- Red** - Collision rate greater than 35 per 100 million vehicle kilometres.
 - Orange** - Collision rate between 30 and 35 per 100 million vehicle kilometres.
 - Yellow** - Collision rate below 30 per 100 million vehicle kilometres.
- 3.7. Some very short sections of route have a relatively high collision rate and are linked to other recommended sections of route. These have been moved down the listing in order to keep the relevant sections together. Conversely, some sections of route which have a low collision rate but are connected with either a more extensive section of speed limit change, adjoin another section of route or for route continuity purposes have been moved up the listing as appropriate.
- 3.8 The other key component is to align a proposed speed limit so that the original mean speed driven on the road is at or below the new posted speed limit for that road. Where mean traffic speeds are above the proposed speed limit consideration will need to be given to providing additional traffic management measures to bring traffic speeds in line with the proposed speed limit.
- 3.9 Table 3.10 below summarises the number of recommended routes that are above or below the DfT collision rate threshold. Those below the threshold are divided into two categories where the collision rate is between 30-35, and those below 30. The table further breaks down the number of routes where mean traffic speeds are acceptable, marginally over or greater than the recommended change to the speed limit.

3.10. Table summarising collision rates and mean traffic speed categories

Collision Rate	Number of recommended routes	Column 1	Column 2	Column 3	Column 4
		Number of routes where mean traffic speeds are acceptable (Note 1)	Number of routes where mean traffic speeds are marginal higher than recommended limit		Number of routes where mean traffic speeds are greater than recommended limit (Note 2)
			Within 1 mph range*	Within 2 or 3 mph range#	
>35	59 (42%)	26	5	5	23
>30 - <35	15 (11%)	7	0	1	7
<30	66 (47%)	36	4	2	24
TOTAL	140(100%)	69 (49%)	9 (6%)	8 (6%)	54 (39%)

* mean traffic speeds within the ranges 30-31, 40-41, 50-51 mph where the recommended speed limit is 30, 40 and 50 mph respectively

mean traffic speeds within the ranges 41-42, 51-53 mph where the recommended speed limit is 40 and 50 mph respectively

Notes

Note 1: Mean traffic speeds recorded at or below the recommended speed limit and therefore no additional traffic management measures are required to support the recommended speed limit changes.

Note 2: Mean traffic speeds greater than the recommended limit. Additional traffic management measures are required to lower traffic speeds to an acceptable level or other options to be explored – see paragraph 4.9 below

4. **Formulation of Proposed Implementation Programme**

- 4.1 There are 59 sections of 'A' and 'B' class roads in Hampshire where the collision rate is greater than the DfT threshold of 35. Therefore these are regarded as the highest priority schemes to be developed into a comprehensive programme of speed limit proposals.
- 4.2 Five of these sections mentioned above are recommended to be signed as advisory maximum speed limits. Four of these are maximum 40 mph limits, and one is maximum 30 mph limit. The type of signing used, with an extract from Traffic Signs Manual Chapter 4, explaining the usage of these signs is provided in Appendix 4. These signs do not require a Traffic Regulation Order (TRO).
- 4.3 Three of the advisory maximum 40 mph limits are stand alone schemes whilst the other two are proposed within other recommended speed limit changes.
- 4.4 It is therefore proposed to implement all five advisory maximum speed limits at the earliest opportunity.

- 4.5 From the 59 routes identified, six schemes have already been implemented or are being progressed as speed limit proposals by the Traffic Management Group. Three are currently being progressed and three have already been implemented.
- 4.6 A further 26 of the identified routes (column 1 in table 3.10) have mean speeds which appear to be acceptable and would not require any additional traffic management measures to control traffic speeds further.
- 4.7 Five sections (column 2 in table 3.10) have mean traffic speeds within 1 mph of the recommended speed limit. The proposed speed limit changes for these sections should gain the support of the Police without requiring additional traffic management measures.
- 4.8 There are five sections of route (column 3 of table 3.10) where mean traffic speeds are within 2 or 3 mph of the recommended speed limit which will need some minor traffic management measures to bring mean traffic speeds down to an acceptable level to support the recommended speed limit changes. These could take the form of enhanced speed limit signing, ie yellow backing boards on terminal and repeater signs, together with speed limit roundels painted on the road surface where appropriate.
- 4.9 Of the 23 sections of route (table 3.10, column 4) where mean traffic speeds are substantially greater than the recommended limit, two are to be signed as advisory maximum speed limits and three are already being progressed by the Traffic Management Group. The remaining 18 will need to be considered further with the following options being available:
- (i) Consider additional Traffic Management measures, possibly extensive, to be implemented in conjunction with the proposed speed limit to bring about mean traffic speeds which are acceptable. These may take the form of:
 - (a) Lines – roundels painted on road, edge lines to visually narrow the road.
 - (b) Coloured surfacing – used to form ‘gateway’ features, highlight ‘SLOW’ and speed limit roundel road markings and create ‘virtual’ road humps.
 - (c) Traffic islands – physically deflect the path and restrict the speed of traffic.
 - (d) Signs – yellow/grey backing boards around signs, also electronic vehicle activated signs to supplement existing warning signs.
 - (e) Other physical traffic calming features - build-outs, chicanes and pinch points. These change the physical character of the road thus encouraging drivers to comply with the speed limit.

- (ii) Progress the speed limit without the support of the Police. This is felt to be a 'last resort' bearing in mind that this is a casualty reduction led programme and support/enforcement from the Police is considered essential.
- (iii) Consider a slightly higher speed limit to reflect more accurately the mean traffic speeds. This approach would still result in a lower speed limit proposal being progressed without the need for additional traffic management measures, which could be both prohibitive and unwelcomed by local residents. Whilst the proposed speed limit change would not be as low as that recommended, the revised recommendation should still help reduce the severity and number of accidents.
- (iv) Progress additional traffic management measures in the first instance as in (i) above, re-assess traffic speeds/accident statistics then reconsider the recommended speed limit. Repeating the speed checks after the measures have been implemented should assist the justification of a lower speed limit.
- (v) Do nothing. However, bearing in mind that the collision rate is above the DfT threshold, this is not considered to be a viable option.

4.10. Currently it is felt that of the remaining 18 sections of route where mean traffic speeds are higher than the recommended change to the speed limit:

- (i) Seven sections of route could be considered for additional traffic management measures, relatively extensive, to accompany a reduced speed limit, to bring about mean traffic speeds which are acceptable (Option i).
- (ii) Six sections of route to be considered with a higher speed limit than that initially recommended. The majority of these are where the existing speed limit is the National Speed Limit and a 40 mph limit has initially been recommended. Mean traffic speeds are such that a 50 mph speed limit, which would still result in a reduced speed limit being proposed, is more appropriate (Option iii).
- (iii) Five sections of route to be progressed in the first instance by introducing traffic management measures. Traffic speeds/ accident statistics to be reassessed then reconsider the recommended speed limit (Option iv).

4.11. Therefore none of the 59 sections of route where the collision rate is higher than DfT threshold of 35 would have a 'do nothing' option (Option v).

- 4.12. Where sections of recommended speed limit changes along the same route have been moved up of down the listing, to keep the relevant sections together, the total number of sections of route in the proposed main programme is 69. Those sections along the same route would be progressed as a single speed limit proposal. Therefore the proposed main programme would consist of 48 speed limit proposals.
- 4.13 The 15 sections of route where the collision rate is between 30 and 35 per 100 million vehicle kilometres could form a Reserve Programme listing to be progressed at a later date, when resources permit, as follows:
- (i) seven of the 15 routes have mean speeds which appear to be acceptable and would not require any additional traffic management measures to control traffic speeds further.
 - (ii) Three sections of route could be considered for additional traffic management measures, some relatively extensive to accompany a reduced speed limit, to bring about mean traffic speeds which are acceptable (Option i).
 - (iii) Two sections of route to be considered with a higher speed limit (still resulting in a reduction of the existing speed limit).
 - (iv) Three sections of route to be progressed in the first instance by introducing traffic management measures. Traffic speeds/ accident statistics to be reassessed then reconsider the recommended speed limit (Option iv).
- 4.14 A number of the 15 sections of recommended changes to the speed limits in the proposed reserve programme are along the same route, and where appropriate these would be combined as single proposed speed limit scheme. Also some sections of recommended speed limit changes along the same route have been moved up of down the listing, to keep the relevant sections together. Consequently the proposed reserve programme would feature a total of 10 schemes.

5. **Stage 3**

- 5.1. The intended programme of speed limit proposals anticipated to be implemented during the 2012/13 and 2013/14 programme years is detailed in Appendix 5. These schemes will be developed into Traffic Regulation Order proposals and progressed subject to the usual statutory consultation process.
- 5.2. This programme has been prioritised on the basis primarily of road safety. Individual schemes have been ranked using a combination of accident severity and the length of proposed scheme in descending order.