

METRIC EDITION OF THE UK HIGHWAY CODE

Introduction

The following is produced for the UKMA, and is a suggested all metric edition of the UK Highway Code. This version, incorporating suggested 'hard' conversion of current laws and standards, including speed limits, and with all Imperial measurements or equivalents removed, is considered to be the target, although it is recognised that a 'softer' version may be necessary in the more immediate future. In particular, should speed limits and other values enshrined in legislation not be converted, then an interim version will be necessary.

It should be noted that this proposed all-metric edition of the Highway Code is based upon the March 2007 draft of the new version, which is scheduled to be issued late September 2007. An all metric version, as proposed by the UKMA, would therefore be issued either as a supplement to this new edition, or else as a completely new edition in the future. It is hoped that any new all-metric edition of the Highway Code can be co-ordinated with the UKMA's efforts to have the UK's traffic signs, including legislative changes, converted to SI in time for the 2012 Olympics.

Principles and Methodology

The proposed DfT draft of the new Highway Code incorporates dual measurements throughout, including speed limits and other legislated Imperial values. The following principles appear to have been followed by the DfT in this new edition:

1. Where the measurements are in the first case Imperial (and always with metric conversions in parentheses), this would appear to be because they are enshrined in legislation (primarily speed limits), or connected with speeds (such as braking distances). The direct 'soft' conversions to metric values (accurate to the nearest integer) are shown in parentheses. (Note: this includes the tables on braking distances from Imperial speeds).
2. Where the measurements are metric only, and the values are subject to legislation (e.g. vehicle weights), only metric values are shown, albeit often with incorrect symbols (e.g. 'T' instead of 't').
3. Where the measurements are in the first case metric, and not subject to legislation (primarily warning and information signs), direct Imperial equivalents are shown in parentheses.

A table is shown in the Annex (page 134) showing precise conversion factors between metric and Imperial, accurate to two decimal places, although this would appear to be quite academic and somewhat pedantic.

The above principles would appear to indicate that a positive move towards metric on UK roads has been made in this new edition of the Highway Code. This is an opportunity to maintain this momentum, and it is hoped the proposed all-metric Highway Code will help to continue that momentum.

With the above observations in mind, the following principles have been used in creating this all-metric Highway Code:

1. Where the measurements are in the first case Imperial, and almost certainly enshrined in legislation (primarily speed limits), or connected with speeds, such as braking distances, practical, rounded metric equivalents are given, with no Imperial conversions. Some adjustments have been proposed to reflect metric's greater precision in setting speed limits, as well as some realities that reflect greatly improved vehicle dynamics since many of these speed limits were set. References to 'car lengths' in braking distances and elsewhere have been removed.
2. Where the measurements are in the first case metric, with Imperial equivalents in parentheses, the Imperial equivalents have been removed.
3. Where metric measurements are incorporated in both text and tables, the Highway Code often shows them as a numerical value followed by the unit written out in full. This is contrary to preferred metric practice, and the proper metric symbol has been substituted (e.g.12 tonnes..... is changedto 12 t.....).

In regards to graphics, in general these follow those shown in the Highway Code and in real life, although a few inaccuracies are inevitable, especially given the limitations inherent in the relatively simple drawing tools available in Microsoft Office. It is trusted that such inaccuracies do not detract from the message.

In regards to fonts, the DfT 'Transport' and 'Motorway' fonts have been used as appropriate, although they do not seem to reproduce as well as other fonts when scaled in Cut and Paste operations, except at large magnifications. If the scaled fonts look a little ragged, then this is because of the limited capabilities inherent in the simple graphics tools available in 'Office'.

Notes:

1. Page numbers and Clause numbers refer to the page numbers and clause numbers as shown on the Draft version of the new Highway Code issued March 2007.
2. Quoted text, together with the proposed changes and revisions, is shown in **Albertville** font, which appears to be, or at least is very close to, the font used in the new Highway Code.
3. The Highway Code has consistently rounded 60 mph to 95 km/h, although the correct conversion rounds to 96 km/h.

Detailed revisions and changes to be made:

<u>Page No and Clause No.</u>	<u>Change this:</u>	<u>To this:</u>
P 15, Cl 36:	... of 4 mph (6 km/h)...	... of 6 km/h...
P 15, Cl 36:	... of 8 mph (12 km/h)....	...of 12 km/h...
P 15, Cl 39:	... than 4 mph (6 km/h)...	... than 6 km/h...
P 16, Cl 41:	... to 8 mph (12 km/h)....	...to 12 km/h...
P 29, Cl 92:	... of 20 metres (or 20.5 metres where...	...of 20 m (or 20.5 m where...
P 29, Cl 95:	...35 microgrammes/ 100 millilitres of breath... ..more than 80 milligrammes/ 100 millilitres of blood.	...35 µg/ 100 ml of breath... ..more than 80 mg / 100 ml of blood.
P 31, Cl 99:	... less than 50 metres (approx 162 feet).	... less than 50 m.
P 32, Cl 99 (Table):	References in column 1: ... up to 1.35 metres in height... ... over 1.35 metres (approx 4ft 5 ins) in height...	... up to 1.35 m in height... ... over 1.35 m in height...
P 36, Cl 112:	... hours of 11.30 pm and 7.00 am...	... hours of 23.30 and 07.00...
P 37, Cl 113:	... of 30 mph (48 km/h)...	... of 50 km/h...

Page 26, Table Speed Limits:

Existing Table:

Speed Limits	Built up Areas*	Single carriage-ways	Dual Carriage-ways	Motorways
Type of vehicle	mph (km/h)	mph (km/h)	mph (km/h)	mph (km/h)
Cars and motorcycles (including car derived vans up to 2 tonnes in laden weight)	30 (48)	60 (95)	70 (112)	70 (112)
Cars towing caravans or trailers (including car derived vans and motorcycles)	30 (48)	50 (80)	60 (95)	60 (95)
Buses and coaches (not exceeding 12 metres in length)	30 (48)	50 (80)	60 (95)	70 (112)
Goods vehicles (not exceeding 7.5 tonnes maximum laden weight)	30 (48)	50 (80)	60 (95)	70[†] (112)
Goods vehicles (exceeding 7.5 tonnes maximum laden weight)	30 (48)	40 (64)	50 (80)	60 (95)

* The 30 mph limit applies to all traffic.....unless signs show otherwise.
[†] 60 mph (95 km/h) if articulated or towing a trailer.

(Note: There is an inconsistency here in that the maximum speed on motorways for Goods vehicles exceeding 7.5 t unladen weight is shown as 60 mph, yet such vehicles are physically governed to a maximum of 56 mph.)

Replace with the following Table:

Speed Limits	Built up Areas*	Single carriage-ways	Dual Carriage-ways	Motorways
Type of vehicle	km/h	km/h	km/h	km/h
Cars and motorcycles (including car derived vans up to 2 t in laden weight)	50	100	120	120
Cars towing caravans or trailers (including car derived vans and motorcycles)	50	80	100	100
Buses and coaches (not exceeding 12 m in overall length)	50	80	100	110
Goods vehicles (not exceeding 7.5 t maximum laden weight)	50	80	100	110[†]
Goods vehicles (exceeding 7.5 t maximum laden weight)	50	70	80	90

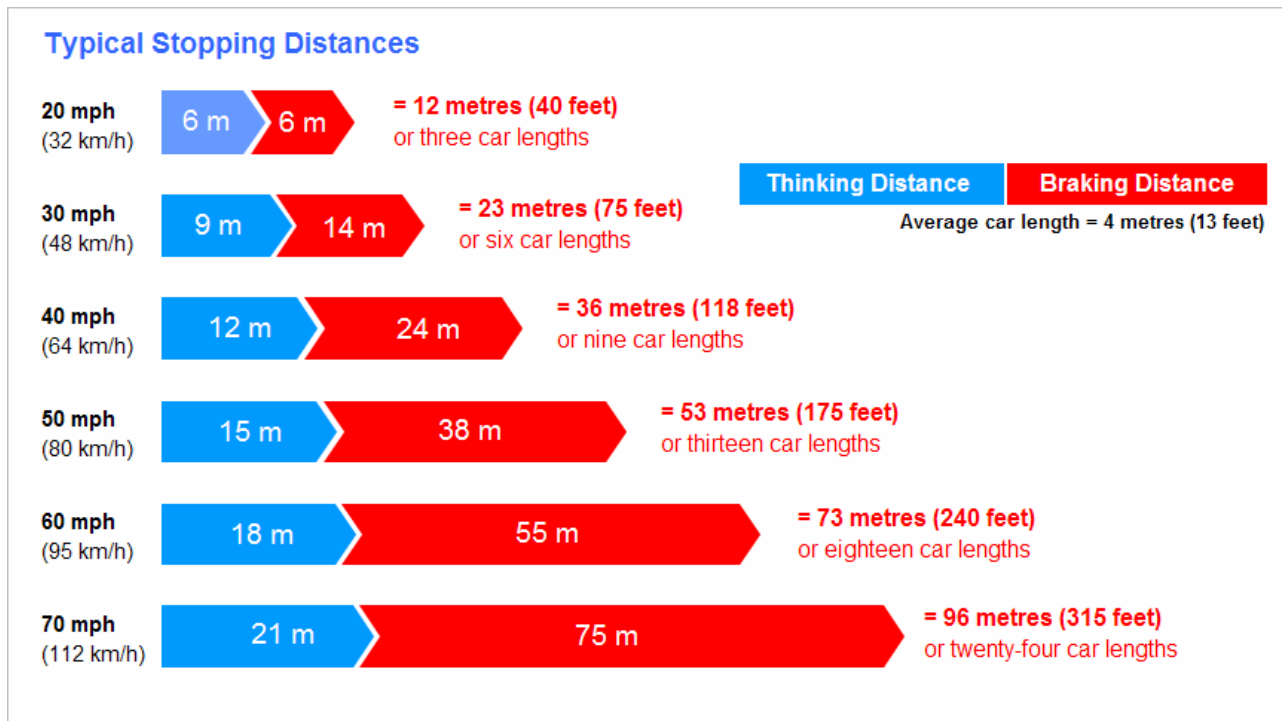
* The 50 km/h limit applies to all traffic.....unless signs show otherwise.
[†] 100 km/h if articulated or towing a trailer.

Author's note: Some discretionary licence has been taken in the above Table, as follows:

- Motorway speed limit for buses, and for goods vehicles not exceeding 7.5 t unladen weight – currently 70 mph (112 km/h) on motorways, suggest this could be set to 110 km/h (only cars and motorcycles would be limited to 120 km/h).
- Goods vehicles exceeding 7.5 t unladen weight – currently 40 mph (64 km/h) on single carriageway roads, suggest this could be raised to 70 km/h (most big trucks ignore this law anyway and usually travel at their maximum speed of 90 km/h wherever possible).
- Goods vehicles exceeding 7.5 t unladen weight – currently 60 mph (96 km/h) on motorways, suggest reducing this to 90 km/h, which is their legal and physically governed maximum speed.

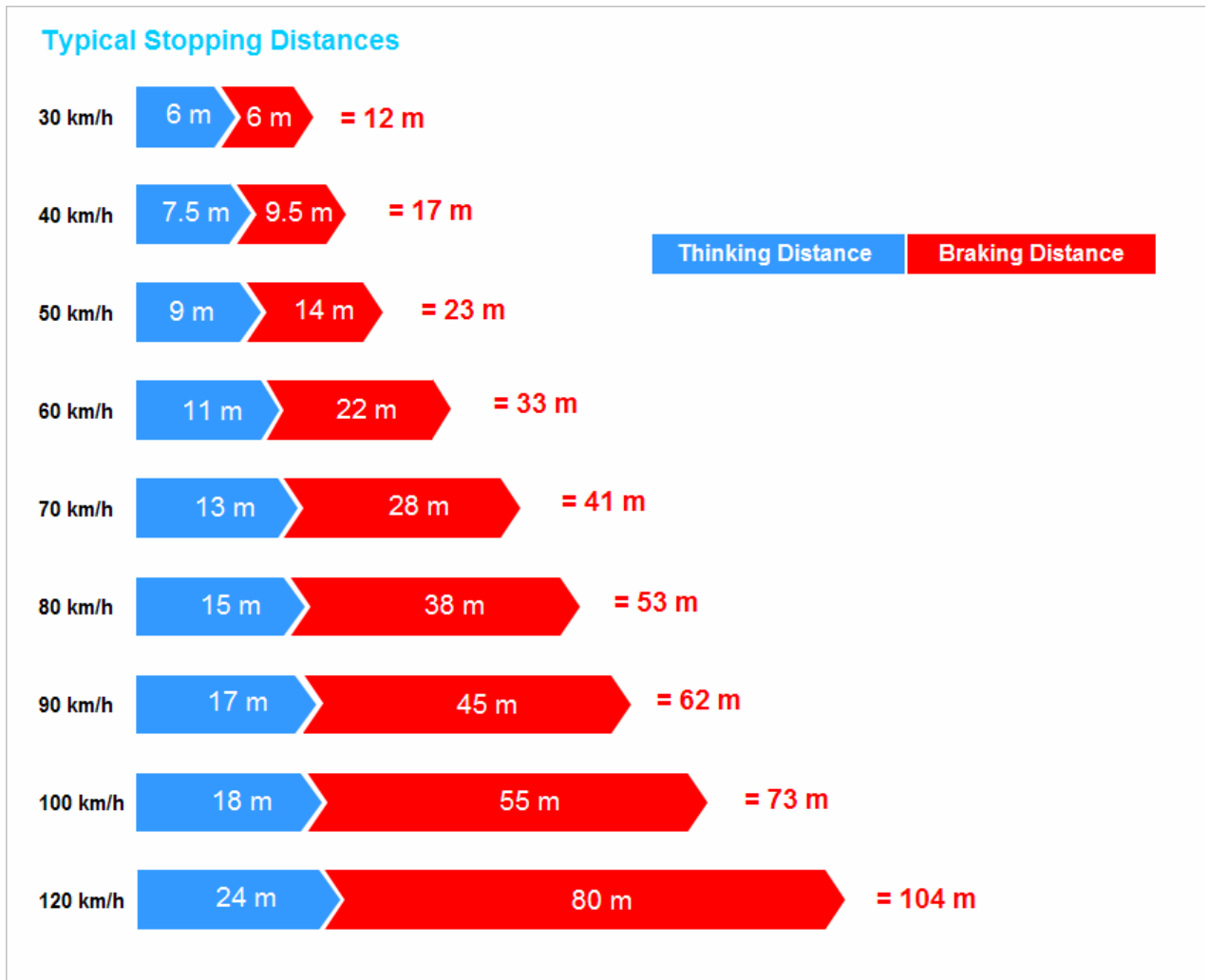
Pages 42-43, Clause 126: Stopping Distances.

Existing Table:



(Note: This table has been compressed horizontally in order to fit on one page. In the Highway Code, it is spread over two pages.)

Replace with the following Table



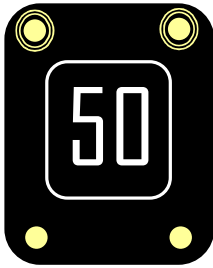
(Note: This table has been compressed horizontally in order to fit on one page. In the Highway Code, it would be spread over two pages.)

<u>Page No and Clause No.</u>	<u>Change this:</u>	<u>To this:</u>
P 42, Stopping Distances:	... at least a 5-metre gap...	... at least a 5-m gap...
P 43, Cl 129:	... travelling at 10 mph (16 km/h) or...	... travelling at 16 km/h or...
Note: there might be a case for rounding this to 20 km/h.		
P 71, Cl 207:	At 40 mph (64 km/h) your... At 20 mph (32 km/h) there...	At 60 km/h, your... At 30 km/h there...
P 74, Cl 220:	... speed of 8 mph (12 km/h). ... exceeds 50 mph (80 km/h) they...	... speed of 12 km/h. ... exceeds 80 km/h they...
P 76, Cl 226:	... more than 100 metres (328 feet).	... more than 100 m.
P 83, Cl 246:	... over 7.5 tonnes (including...	... over 7.5 t (including...
P 83, Cl 249:	... than 30 mph (48 km/h).	... than 50 km/h.
P 83, Cl 250:	... of 30 mph (48 km/h) or ... least 10 metres (32 feet) away...	... than 50 km/h or less... ... least 10 m away...
P85, Cl 253:	... under 50 cc, cyclists..	... under 50 cm ³ (50 cc), cyclists..
P87, Cl 261:	... exceed 70 mph (112 km/h), or...	... exceed 120 km/h, or...
P87-88, Cl 265:	... exceeding 3.5 tonnes, but not exceeding 7.5 tonnes.. ... exceeding 7.5 tonnes. ... exceeding 7.5 tonnes constructed... ... exceeding 7.5 tonnes which...	... exceeding 3.5 t, but not exceeding 7.5 t... ... exceeding 7.5 t. ... exceeding 7.5 t constructed... ... exceeding 7.5 t which...
P90, Cl 273:	... 50 mph may feel like 30 mph.	... 80 km/h may feel like 50
P91, Cl 274:	... at least 47 metres (147 feet) behind...	... at least 47 m behind...
P 97, Cl 292:	... usually 5 metres (16 feet 6 inches) but...	... usually 5 m but...
P 101, Cl 307:	... normally 5.8 metres above... ... lower than 5.8 metres,...	... normally 5.8 m above... ... lower than 5.8 m,...

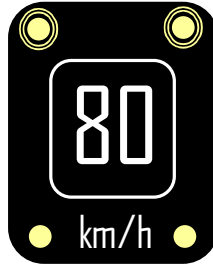
Note: No Imperial equivalents are given in this clause.

Page 102: Light signals controlling traffic:

Replace this:



With this:



The km/h could be permanent.

Pages 106-115: Traffic Signs.

The following signs will need amending as follows:

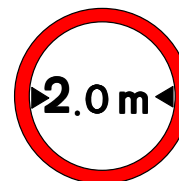
Replace this:

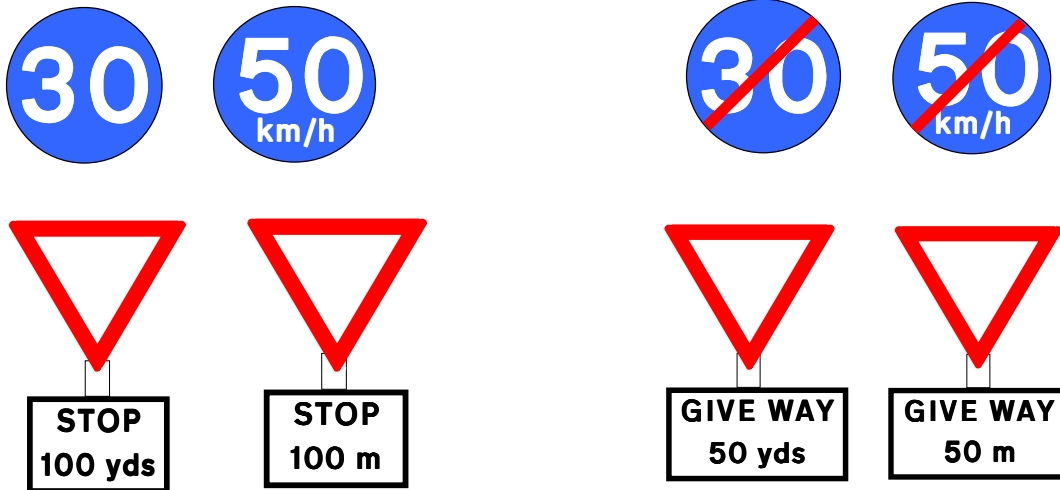
With this:



Replace this:

With this:





Note: In most of these signs, yards and metres have been treated as essentially equal, although there is of course a 10% difference between them. It is assumed that this is within the realms of sufficient accuracy for the purposes of these signs. At some point, they may need repositioning to account for the difference, but it is not felt to be immediately essential. Any repositioning would be done when the signs needed replacing for other reasons.

Replace this:



With this:



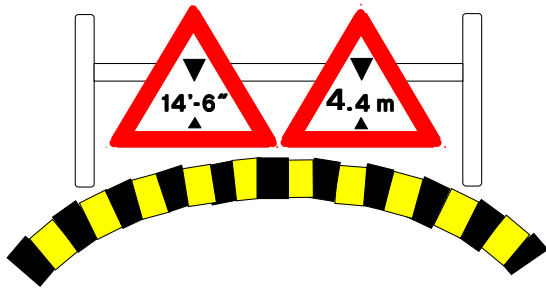
Replace this:



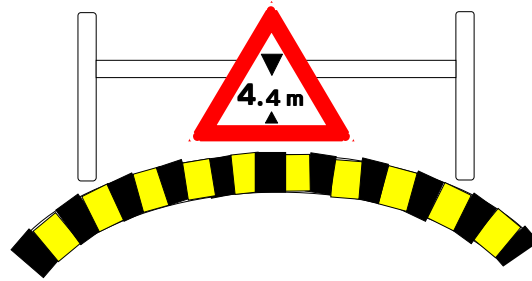
With this:



Replace this:

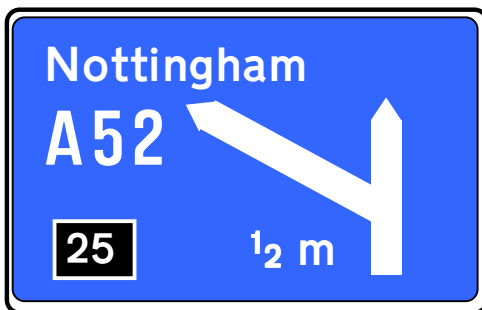


With this:

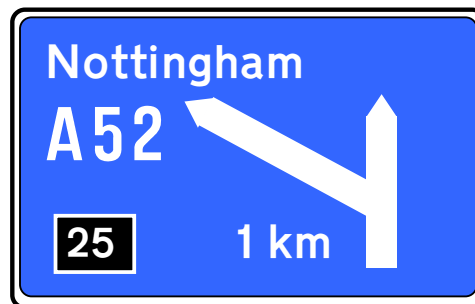


Note regarding distances to motorway exits, etc: When Canada converted to metric road signs, it was agreed at the outset that on freeway (motorway) signs, miles and fractions of a mile would be converted to whole kilometres, notwithstanding the slight inaccuracies that would result. If there was likely to be any confusion (e.g. where there was a 'double' exit, with one exit ramp at say 800 m and the next exit ramp at 1000 m), then metres would be used rather than kilometres. On no account were fractions of a kilometre to be used (i.e. 1200 m, rather than 1.2 km).

Replace this:

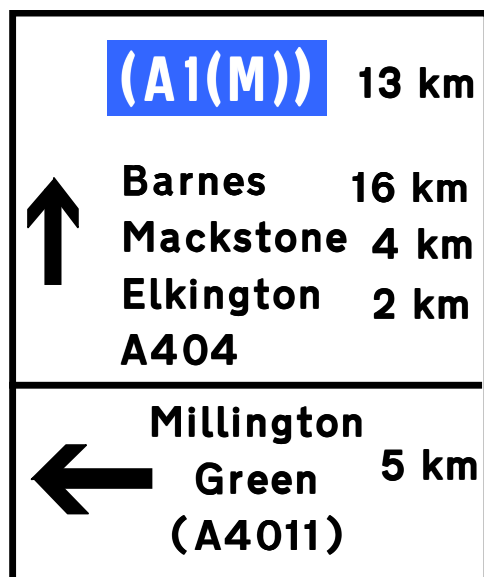
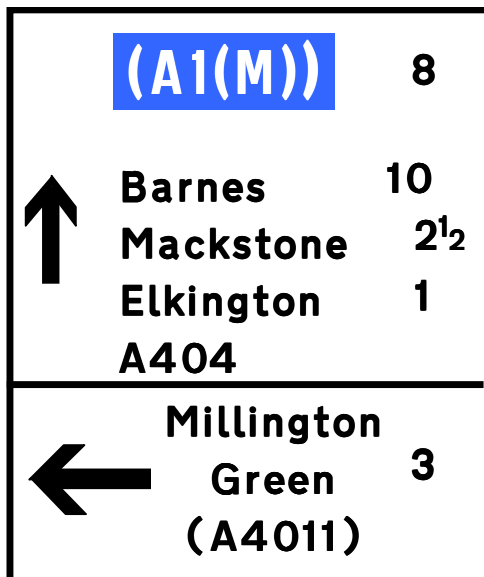
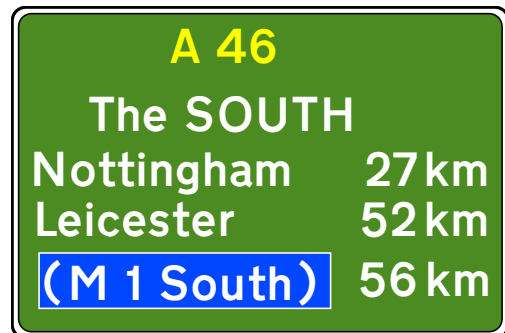
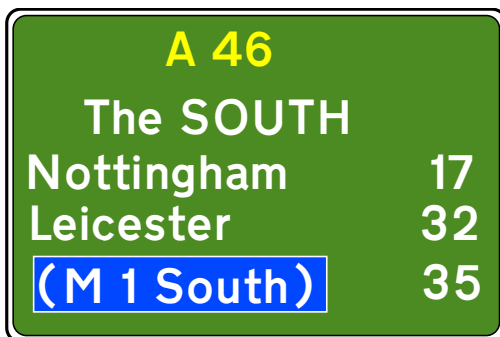


With this:



Replace this:

With this:

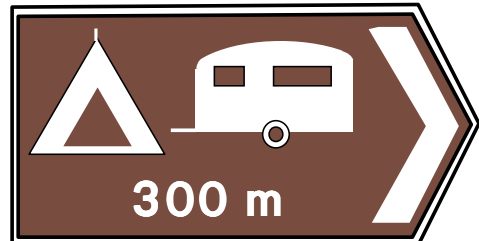
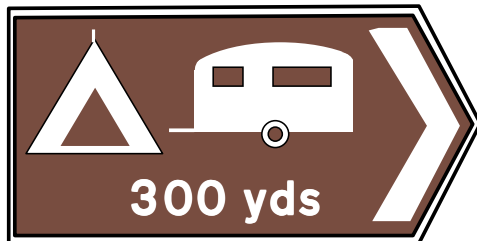


See Page 18 for alternative metric versions of these signs showing alternative km positions.

Replace this:



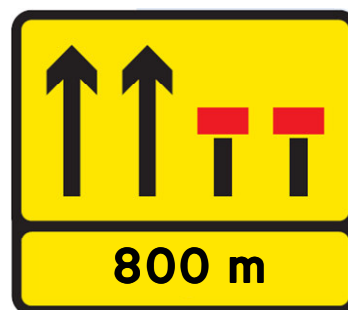
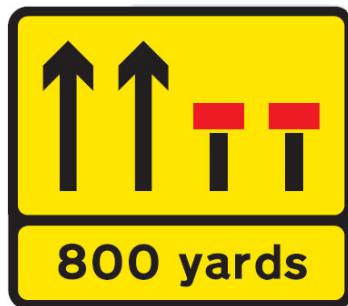
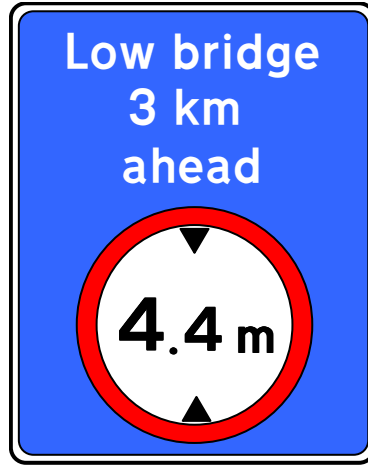
With this:



Replace this:



With this:



Replace this:



With this:



Road works
1 mile ahead



Road works
2 km ahead



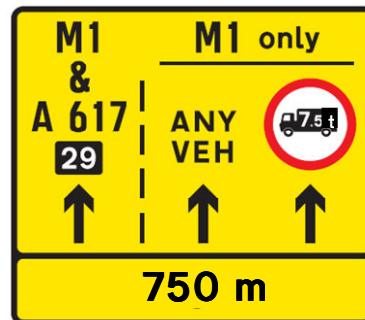
'Countdown' markers at exit from motorway (each bar represents 100 yards to the exit). Green-backed markers may be used on primary routes and white-backed markers with black bars on other routes. At approaches to concealed level crossings white-backed markers with red bars may be used. Although these will be erected at equal distances the bars do not represent 100 yard intervals.



'Countdown' markers at exit from motorway (each bar represents 100 m to the exit). Green-backed markers may be used on primary routes and white-backed markers with black bars on other routes. At approaches to concealed level crossings white-backed markers with red bars may be used. Although these will be erected at equal distances the bars do not represent 100-m intervals.

Replace this:

With this:



Replace this:

With this:

Vehicle markings

Large goods vehicle rear markings

Motor vehicles over 7500 kilograms maximum gross weight and trailers over 3500 kilograms maximum gross weight

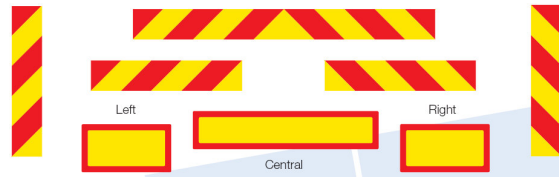


The vertical markings are also required to be fitted to builders' skips placed in the road, commercial vehicles or combinations longer than 13 metres (optional on combinations between 11 and 13 metres)

Vehicle markings

Large goods vehicle rear markings

Motor vehicles over 7500 kg maximum gross weight and trailers over 3500 kg maximum gross weight



The vertical markings are also required to be fitted to builders' skips placed in the road, commercial vehicles or combinations longer than 13 m optional on combinations between 11 and 13 m

P 120

...exceeding 31 mph (50 km/h).

...exceeding 50 km/h.

...restricted to 28 mph (45 km/h).

...restricted to 45 km/h.

The following are alternative metric distance signs showing alternative km positions. Note that this layout is based upon NOT having to replace any of the existing words or numerals on any existing sign, with the exception of course of the actual distances, which are assumed to be covered with a self adhesive stick-on.

In this way, costs are minimised. The ‘A46’ and ‘M1’ signs below, for example, would incur a material cost (the cost of new adhesive stick-on labels) of no more than about £5-10, to which must be added the costs of a crew to travel to the sign and apply the new values to the existing sign. The ‘A1 (M)’ sign might cost in the order of £8-15 for materials. These costs are based on large volume orders, not for ‘one-off’ orders.

A 46	
The SOUTH	km
Nottingham	27
Leicester	52
(M 1 South)	56

M1	
The NORTH	km
Sheffield	51
Leeds	94

	(A1(M))	km
		13
↑	Barnes	16
	Mackstone	4
	Elkington	2
	A404	
<hr/>		
←	Millington	km
	Green	5
	(A4011)	