

Traffic Signs Manual

CHAPTER

7

**The Design of Traffic Signs
2018**

Traffic Signs Manual

Chapter 7

The Design of Traffic Signs

Department for Transport

Department for Infrastructure (Northern Ireland)

Transport Scotland

Welsh Government

Traffic Signs Manual

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1.1 Overview

1.1.1. The Traffic Signs Manual (the Manual) offers advice to traffic authorities and their contractors, designers and managing agents in the United Kingdom, on the use of traffic signs and road markings on the highway network. Mandatory requirements are set out in the Traffic Signs Regulations and General Directions 2016 (as amended) (TSRGD). In Northern Ireland the relevant legislation is the Traffic Signs Regulations (Northern Ireland) 1997 (as amended). Whilst the Manual can assist with complying with the mandatory requirements, it cannot provide a definitive legal interpretation, nor can it override them. This remains the prerogative of the courts or parking adjudicators in relation to the appearance and use of specific traffic signs, road markings etc. at specific locations.

1.1.2. The advice is given to assist authorities in the discharge of their duties under section 122 of the Road Traffic Regulation Act 1984 and Part 2 of the Traffic Management Act 2004 in England and under Part 1 of the Roads (Scotland) Act 1984. Subject to compliance with the Directions, which are mandatory (see [1.3.2](#) and [1.3.3](#)), it is for traffic authorities to determine what signing is necessary to meet those duties.

1.1.3. The Manual applies to the United Kingdom. References to “the national authority” should therefore be interpreted as referring to the Secretary of State for Transport, the Department for Infrastructure (Northern Ireland), the Scottish Government or the Welsh Government as appropriate. Any reference to the “Department” is a reference to the Department for Transport or the appropriate national authority for Northern Ireland, Scotland or Wales as described above.

1.1.4. This chapter of the Manual describes how sign faces are designed. It does not cover the methods by which signs are constructed and mounted. It deals with those signs which are designed for a specific requirement or location such as the directional informatory signs in Schedule 12 to the Regulations and signs relating to the control of on-street waiting, loading and parking in Schedules 4 and 5.

1.1.5. Section 2 of this chapter sets out the basic design rules applicable to all rectangular signs. Sections 3 to 11 deal with directional informatory signs, section 12 certain regulatory signs (mainly time plates), section 13 signs for service areas and sections 14 to 16 other sign design matters.

1.1.6. The design rules contained in this chapter apply to new and replacement signs erected on all types of public highway. Where signs are to be provided in accordance with the current Traffic Signs (Welsh and English Language Provisions) Regulations and General Directions, reference should be made to section 16, and any further guidance needed sought from the Welsh Government.

1.1.7. Occasionally a sign that is not prescribed by the Regulations may be authorised by the national authority for placing on a public highway.

1.1.8. Reference should be made to the appropriate chapter for the use, size and siting of signs (e.g. Chapter 4 for warning signs). For basic sign face layout, including the choice of destinations, in respect of directional signs, reference should be made to Local Transport Note (LTN) 1/94 ‘The Design and Use of Directional Informatory Signs’, available at:

www.gov.uk/government/collections/local-transport-notes

1.1.9. In order to achieve the safe and efficient operation of a highway network, it is essential that all signing provided is necessary, clear and unambiguous, and gives its message to road users at the appropriate time. The message must be quickly and easily understood at the point it is needed; neither too soon that the information might be forgotten, nor too late for the safe performance of any necessary manoeuvre.

1.2 Definitions

1.2.1. In the Manual, the word “must” is used to indicate a legal requirement of the Traffic Signs Regulations and General Directions (or other legislation) that must be complied with. The word “should” indicates a course of action that is recommended and represents good practice. The word “may” generally indicates a permissible action, or an option that requires consideration depending on the circumstances.

1.2.2. Section 64 of the Road Traffic Regulation Act 1984 defines a traffic sign as “any object or device (whether fixed or portable) for conveying to traffic on roads or any specified class of traffic, warnings, information, requirements, restrictions or prohibitions of any description ... and any line or mark on the road for so conveying such warnings, information, requirements, restrictions or prohibitions” and stipulates that these signs be “specified by regulations made by the national authority, or authorised by the national authority”. The types of signs and carriageway markings and their appropriate use are prescribed in TSRGD.

1.2.3. “Signing” includes not only traffic signs mounted on supports (and other structures such as gantries, bridges, railings, etc) but also carriageway markings, beacons, studs, bollards, traffic signals, matrix signals and other devices prescribed in TSRGD.

1.3 References

1.3.1. Any reference to the “Regulations” or the “Directions” is a reference to the Traffic Signs Regulations and General Directions 2016, applicable to England, Scotland and Wales. Reference to a diagram number or to a Schedule is a reference to a diagram or Schedule in those Regulations.

1.3.2. In Northern Ireland, the relevant legislation is the Traffic Signs Regulations (Northern Ireland) 1997 as amended. Diagram numbering occasionally differs in these Regulations and references to Schedules do not apply to Northern Ireland. The design of road markings, meanings and permitted variants are generally similar but can vary; where the Northern Ireland Regulations apply, the designer is advised to read them in conjunction with the Manual.

1.3.3. Not all road markings referred to in the text are included in the Northern Ireland Regulations. References to directions are not applicable in Northern Ireland and, where these are referred to, advice should be sought from the Department for Infrastructure’s Headquarters.

1.4 Format

1.4.1. Any reference to a “Chapter” is a reference to a Chapter of the Traffic Signs Manual, and any reference to a “section”, unless otherwise stated, is a reference to a section within a chapter of the Manual. Where more detailed background information might be helpful, reference is made to Standards and Advice Notes in the Design Manual for Roads and Bridges, available from TSO or at:

www.standardsforhighways.co.uk/dmr/b

1.4.2. References to Schedules, Parts, items and paragraphs within TSRGD are shown in an abbreviated format. In this system, “Schedule” is shortened to “S” and “Part” is indicated by

the second number without a prefix. The final element, variously “item” or “paragraph” is also denoted by a number without a prefix. This is illustrated in the following examples:

“Schedule 9, Part 6, item 25” becomes “S9-6-25”

“Schedule 11, Part 6, paragraph 3” becomes “S11-6-3”

“Schedule 12, Part 2” becomes “S12-2”

1.4.3. The numbering system contained in the Manual utilises three levels comprising sections, sub-headings and numbered paragraphs. Internal references are in **bold blue**.

1.5 Using TSRGD Schedule 12

1.5.1. Step-by-step instructions on how TSRGD provides for a typical directional sign are given in **Appendix G**. The illustrated example is a map-type advance direction sign but the same principles may be applied to any directional informatory sign.

1.6 Working drawings

1.6.1. Working drawings for signs prescribed by the Regulations are available at:

www.gov.uk/government/collections/traffic-signs-signals-and-road-markings

1.6.2. Workings drawings for Welsh and English bilingual signs are available at:

www.traffic-wales.com/traffic_signs.aspx

2.1 Alphabets

2.1.1. The alphanumeric characters used on traffic signs are from a specially designed alphabet known as the Transport alphabet. There are two versions: Transport Medium for white characters on a dark green, green, blue, brown, red or black background (S17-1); Transport Heavy for black characters on a white, yellow or orange background (S17-2). Route numbers on dark green background signs are yellow and are from the Transport Medium alphabet. Some signs have an orange background and in most cases the characters are black from the Transport Heavy alphabet, but in diagrams 2714 (S11-2-59) and 2715 (S11-2-60) white Transport Medium characters are generally used. Transport Heavy characters use a slightly thicker stroke width than Transport Medium characters.

2.1.2. Light-coloured surfaces, especially when illuminated, irradiate into adjacent darker ones. Thus white characters on a dark background appear thicker than their actual size, whereas black characters on a light background appear thinner. The use of the medium alphabet for white and yellow legends, and the heavy alphabet for black legends compensates for this effect and ensures optimum legibility.

2.1.3. Most route numbers on motorway signs are from an enlarged Motorway alphabet. Again there are two versions: the standard Motorway alphabet for white characters on permanent blue background signs (S17-3); and the Motorway Black alphabet for black characters on temporary yellow background signs (S17-4).

2.1.4. The four alphabets are shown on working drawing numbers TM 1, TM 2, TM 3 (TM being Transport Medium), TH 1, TH 2, TH 3 (TH being Transport Heavy), MW 1 (MW being Motorway White) and MB 1 (MB being Motorway Black). These working drawings are available at:

www.gov.uk/government/collections/traffic-signs-signals-and-road-markings

2.2 Tiles, x-heights and stroke widths

2.2.1. To ensure correct letter spacing when forming a word, the characters in each alphabet are placed on imaginary tiles. The tiles vary in width, according to the size of the character, and have a fixed height which ensures correct line spacing. All design spaces are measured to the edge of the tiles and not to the actual characters, unless special rules state otherwise. Tile outlines must not appear on the finished sign.

2.2.2. The size of an alphabet is specified in terms of its x-height. This is the height of the lower case letter “x”, and is the same for both the Transport Medium and Heavy alphabets. The unit of measurement when designing a sign is the stroke width (sw) which is one quarter of the x-height and is not necessarily equivalent to the width of any given character. The dimensions shown in all figures in this chapter are given in stroke widths unless otherwise stated.

2.2.3. The tile height for any alphabet is twice the x-height (i.e. 8 sw). Thus for an x-height of 250 mm the tile height is 500 mm. For the two motorway alphabets, where there are no lower case letters, the units of measurement are still x-heights and stroke widths. Thus if the x-height of the main sign is 300 mm the tile height for both the Transport Medium and Motorway alphabets is 600 mm.

2.2.4. **Figure 2-1** shows how the characters from the various alphabets are placed on the tiles. It can be seen that the lower case letters without ascenders or descenders are centred vertically

on the tiles, leaving an equal gap of 2 sw top and bottom. The capital letters and numerals from the Transport alphabets are 5.6 sw high, with a gap to the top of the tile of 0.4 sw. The characters in the Motorway alphabet are 8 sw high and vertically fill the tile.

2.3 Words and horizontal spacing

2.3.1. Words are formed by butting the letter tiles together. The tile widths, listed in the Schedule 17 working drawings, have been designed to ensure the correct spacing of the letters. However, for certain combinations of letters the tile widths have to be adjusted and these special tile widths are also shown on the working drawings.

2.3.2. The spacing between two words on the same line is 2.5 sw. Some signs indicate distances (e.g. 100 yards) or time of day (e.g. 8.30 am). Where abbreviations are used for the unit of measurement the normal word spacing of 2.5 sw is reduced. Where dates are abbreviated, such as “15 Sept” or “Feb 33”, the spacing remains at 2.5 sw. **Figure 2-2** shows the appropriate horizontal spacing between different elements of the sign and for abbreviated legends. Where two symbols are placed side by side the horizontal spacing is generally 2.5 sw (as for words). However, for certain symbols the horizontal spacing is increased to 4 sw. Further guidance on symbol spacing is given in section **14**.

2.4 Abbreviations

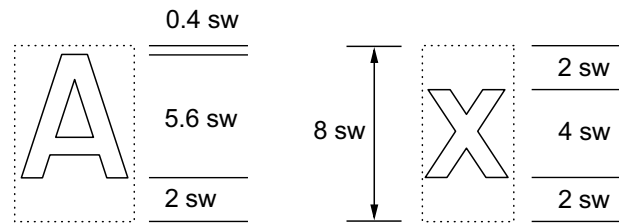
2.4.1. In some cases it may be desirable to abbreviate place names. An apostrophe is normally used to indicate where letters have been omitted. Generally, an abbreviated word should not use more than one apostrophe. Where the lower case letter “b”, “h”, “k” or “l” follows an apostrophe there should be a space of 0.5 sw between the apostrophe and that letter. Certain abbreviations, such as “Mkt” for “Market” do not use apostrophes. Where a word is expressed as a single letter it is followed by a full stop (this is to ensure that it is linked to the next part of the name without the two capital letters, such as M and K in M. Keynes, being too close together). Where the single letter is the last character of a name which is not followed by a route number or mileage on the same line (e.g. Tunbridge W) the full stop can be omitted. For other abbreviations full stops are generally not used. Examples of abbreviated place names, together with appropriate horizontal spacings, are shown in **Figure 2-3**. Certain names are hyphenated (e.g. Ross-on-Wye) and the correct horizontal spacing for these is also shown.

2.5 Basic sign design

2.5.1. As a general rule, the x-height on any one sign should be the same for all legends. However, there are some designs where more than one x-height is used and in such cases the dimensions given in stroke widths will be based on the main x-height unless stated otherwise.

2.5.2. Dimensions are measured to the tile outlines and not to the actual letter. This also applies to any symbol shown with an outline tile or grid.

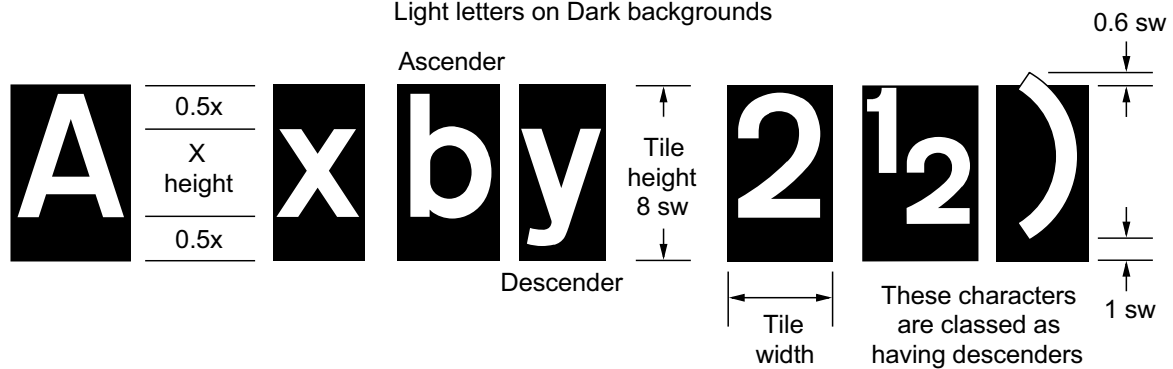
2.5.3. The simplest sign is the supplementary plate as illustrated in **Figure 2-4**. Where the legend is on two lines, the letter tiles are butted together vertically as shown. There may be some designs where it is necessary to insert a vertical space between the tiles. **Figure 2-5** illustrates diagram 501 (S2-6-1) where a 2 sw gap has been introduced between “GIVE WAY” and “50 yards”. This is because the legend is considered to have two distinct messages. The first, “GIVE WAY”, gives an instruction and the second “50 yards” tells the driver when to carry out that instruction. The 2 sw vertical space helps to separate the two parts of the message and make the sign easier to read. Correct vertical spacing is important; it is the sign designer’s equivalent of punctuation.



4 sw = x-height

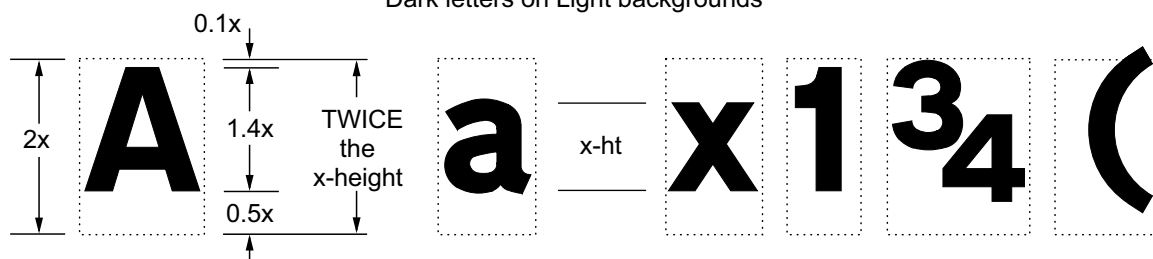
TRANSPORT MEDIUM

Light letters on Dark backgrounds



TRANSPORT HEAVY

Dark letters on Light backgrounds



ROUTE NUMBERS USED ON MOTORWAY SIGNS

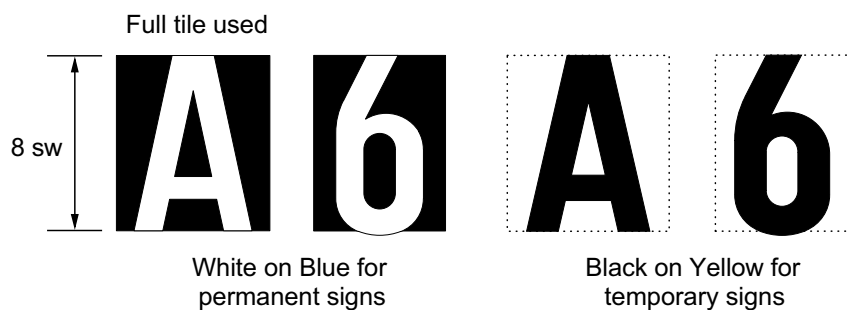
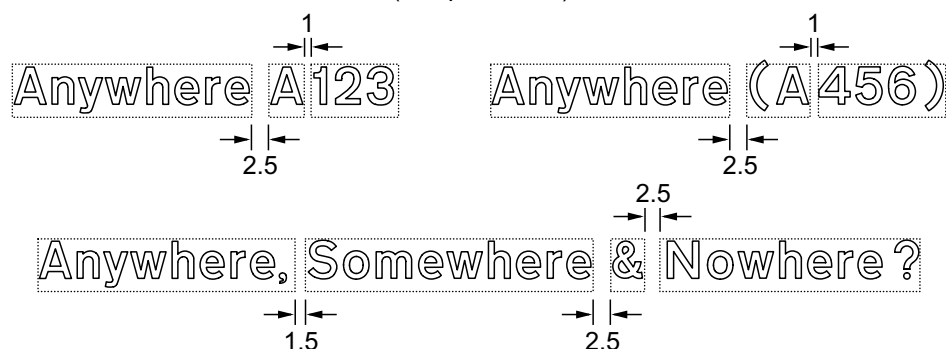
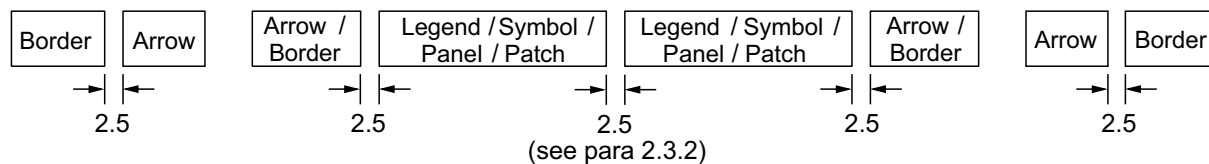


Figure 2-1



Normal horizontal spacing rule

400 yards
 2 miles
 Junction 21
 2 weeks
 20 minutes
 24 September
 15 Sept
 Summer 2024
 August 40
 Jan 2024
 Feb 40
 March 2024
 £9 million

400 yards
 2 miles
 Junction 21
 2 weeks
 20 minutes
 24 September
 15 Sept
 Summer 2024
 August 40
 Jan 2024
 Feb 40
 March 2024
 £9 million

2.5 sw spacing

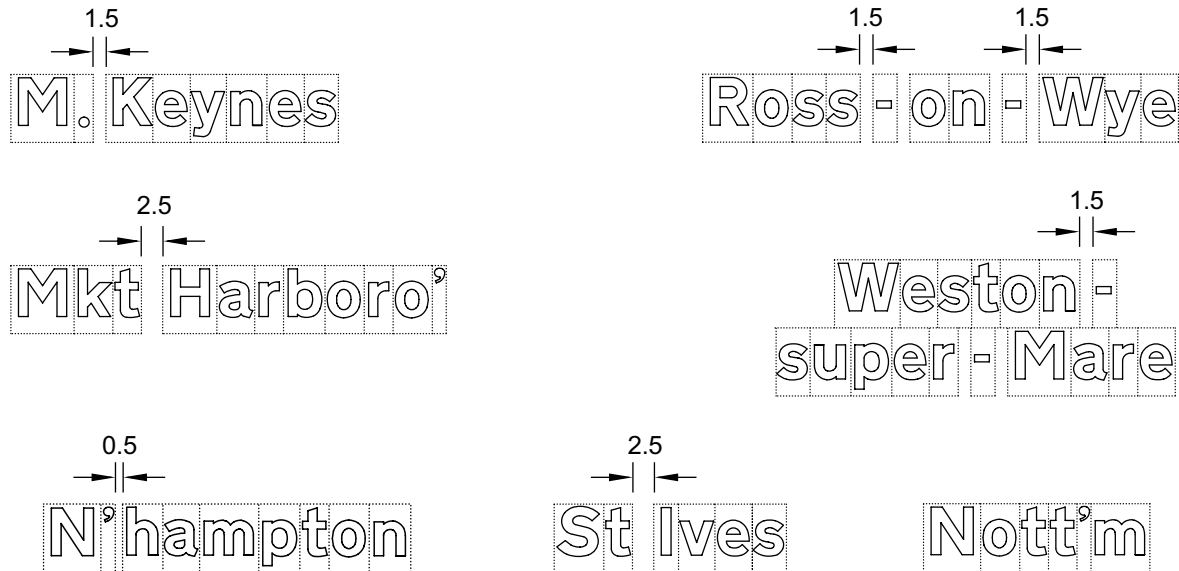
1m	1 m	200 yds	200 yds
J 6A	J 6A	8.30 am	8.30 am
£25m	£25m	40 mins	40 mins
B & B	B & B		

1 sw spacing

0.5 sw spacing

1.5 sw spacing

Figure 2-2



Special spacing which applies when an apostrophe is followed by lower case letters
“b”, “h”, “k”, or “l”

Figure 2-3

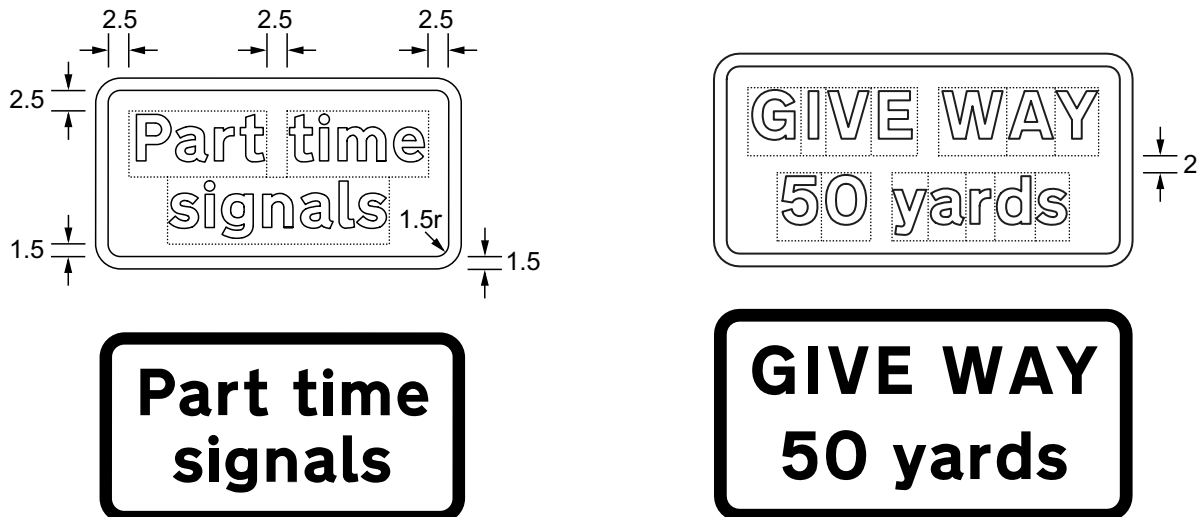


Figure 2-4

Figure 2-5

2.5.4. A standard border width of 1.5 sw is used for most prescribed signs. Where a different border width is used the inside corner radius of the main sign will generally be equal to that border width.

2.5.5. Where the legend is in lower case letters, only the first word of each message will commence with a capital letter. Capital letters are used at the beginning of each word only where the words form a proper name. Examples are shown in [Figure 2-6](#).

2.5.6. [Figure 2-7](#) shows the design of diagram 865 (S11-2-86) where all letters are in block capitals. The appearance of the sign is improved by centring the legend vertically on the sign and this is achieved by adopting the dimensions shown.

2.5.7. Where the legend is on two or more lines each line is centred horizontally on the sign. Special rules apply to directional signs; these are covered in [section 3](#).



Figure 2-6

2.5.8. Some signs are divided into more than one panel, such as diagram 618.3B (S8-2-1) illustrated in [Figure 2-8](#). The dividing border between each panel has the same width and corner radii as the main sign border. The exception to this is the stack-type direction sign which has special design rules (see section 4). The decision to provide more than one panel is based on the need to separate distinct parcels of information.

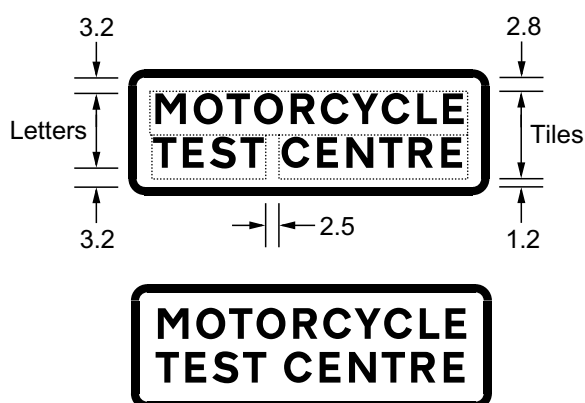


Figure 2-7

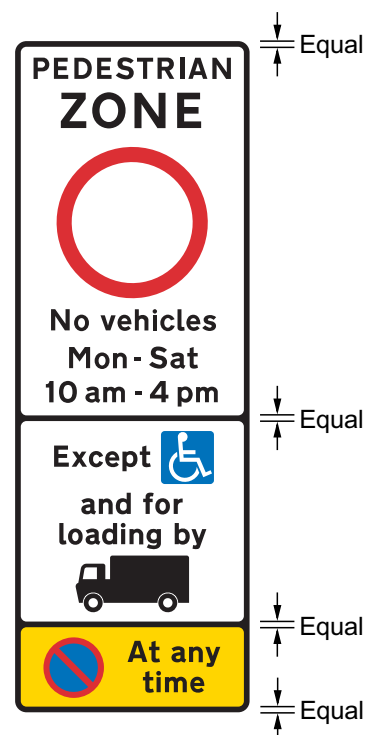


Figure 2-8

2.5.9. The overall size of a sign is determined by the chosen x-height. This will depend on the type of sign and, in most cases, the 85th percentile speed of vehicles using the road. There is a range of standard x-heights from 15 mm (for some waiting restriction time plates not intended to be read from moving vehicles) to 400 mm (for motorway signs). Some signs have specific x-heights prescribed by the Regulations. However, many signs, particularly directional informatory signs, have only minimum and maximum sizes given. In theory, any intermediate value could be used, but it is recommended that the main x-height should be to the nearest 5 mm. The table of x-heights for directional signs in [Appendix E](#) lists the standard sizes of 50, 60, 75, 100, 125, 150, 200, 250, 300 and 400 mm. Intermediate x-heights may be used where

this would have siting advantages (e.g. spanning a footway) without compromising the target value and legibility of the sign.

2.6 Rounding of sign sizes

2.6.1. With the use of computers in the design and manufacture of traffic sign faces it is not always necessary to round the overall size of a particular sign to “convenient” dimensions. However, where it is considered advantageous to round the size of a sign the following guidelines should be used.

2.6.2. The amount of rounding is based on the main x-height of the sign. The overall size of the sign should be rounded up to the nearest Z mm where Z is calculated by taking 5% of the x-height and then rounding up to the nearest 5 mm. Thus for a sign with 150 mm x-height, Z would equal 5% of 150 mm which is 7.5 mm and this would be rounded up to 10 mm. The overall size of the sign, in this case, would be rounded up to the nearest 10 mm. **Table 2-1** gives the value of Z for each standard x-height.

Table 2-1 Rounding of sign sizes

x-height mm	<100	100	125	150	200	250	300	400
Z mm	5	5	10	10	10	15	15	20

2.6.3. The rounding described in **2.6.2** is applied by increasing the space between the sign border and the elements that make up the sign by equal amounts top and bottom, and both sides. Where a sign comprises more than one panel (see **2.5.8**) the rounding of the vertical dimension may be split equally between each panel or applied to the top and bottom borders only, as for other signs.

2.6.4. In some cases it may be desirable to round either the vertical or horizontal overall dimension by varying the x-height (see **2.5.9**). This method would be appropriate where the sign is being manufactured by computer methods.

2.6.5. It is recommended that the actual x-height of a sign be recorded by the sign owner, to enable appropriately sized patches or repairs to be carried out in the future.

3 DIRECTIONAL INFORMATORY SIGNS – GENERAL PRINCIPLES

3.1 Types of directional signs

3.1.1. Directional informative signs can be categorised as follows:

- a) Advance Direction Signs – those signs giving route information in respect of a junction ahead.
- b) Direction Signs – those signs placed at a junction and pointing along specific routes.
- c) Route Confirmatory Signs – those signs placed after a junction giving confirmation as to the route being followed and, in most cases, destinations that can be reached, together with the appropriate distances.

3.1.2. Advance direction signs can be either post mounted or gantry mounted. They are sited on the approach to the junctions indicated to give drivers adequate advance warning. There are three types of post mounted signs: map-type, stack-type and dedicated lane signs. An example of each is illustrated in [Figure 3-1](#). Gantry mounted signs are generally used for grade separated junctions. There are two distinctive designs; one for junctions without lane drops and one for junctions with lane drops. It is vitally important that the correct design is used for the two different types of junction. An example of each design is illustrated in [Figure 3-2](#).

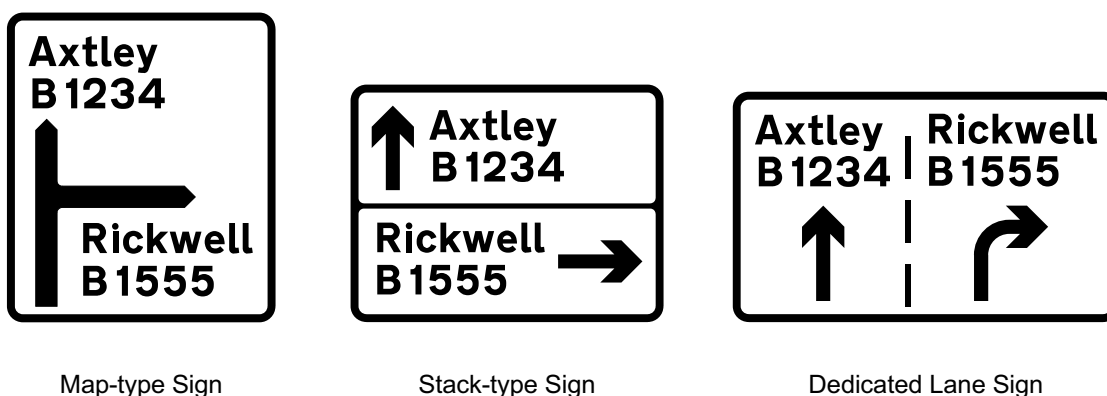
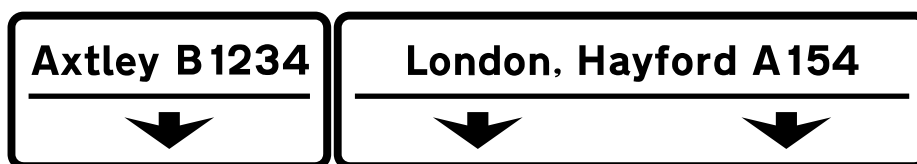


Figure 3-1



Advance Direction Sign for Junction without Lane Drop



Advance Direction Sign for Junction with Lane Drop
(also used as a Route Confirmatory Sign)

Figure 3-2

3.1.3. Direction signs must not be confused with advance direction signs. Direction signs are placed at the junction and point along the route shown on the sign. The most common type of direction sign is the flag-type sign with the chevron end. An example is illustrated in [Figure 3-3](#). Where the exit from a junction is at an acute angle, a flag-type sign may not be suitable. In such cases a rectangular sign with an inclined arrow may be used. This should not be confused with the stack-type advance direction sign which it resembles. One common use of the rectangular sign is on the nose of an exit slip road at a grade separated junction. An example of a rectangular direction sign is illustrated in [Figure 3-4](#). A third type of direction sign is the modern version of the traditional fingerpost (diagram 2141, S12-28-7). This should be used only on minor rural roads where traffic speeds are low. This type of sign, an example of which is illustrated in [Figure 3-5](#), is not permitted to be erected on trunk, principal (“A” numbered) or classified “B” numbered roads.

3.1.4. Route confirmatory signs are generally placed after junctions where the advance direction signs do not give distances to the various destinations. A route confirmatory sign will normally show the route number, destinations reached and the distances to those destinations. In some cases it is appropriate to give information relating to another route that can be reached at a junction ahead. At grade separated junctions with gantry mounted signs, overhead signs may be provided beyond the nose of the exit slip road. Although they will not include distances, they are referred to as route confirmatory signs (see [Figure 3-2](#)). Examples of the various types of post mounted route confirmatory signs are illustrated in [Figure 3-6](#).

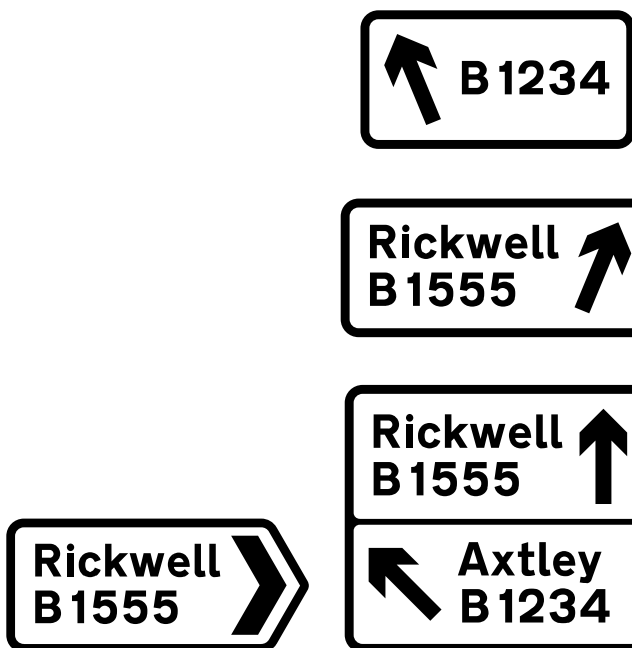


Figure 3-3

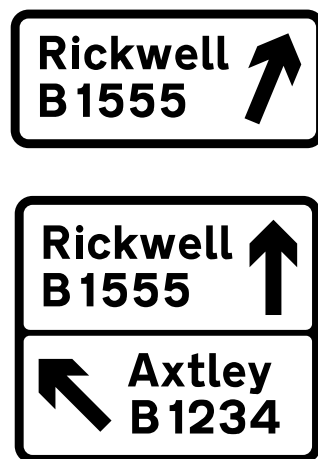


Figure 3-4

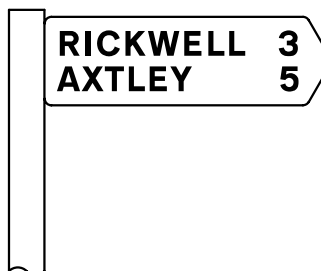


Figure 3-5

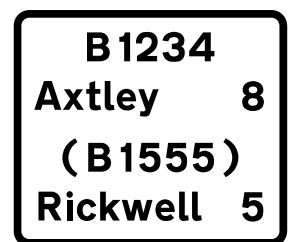
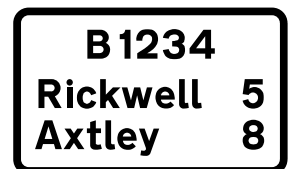
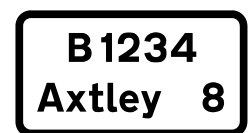


Figure 3-6

3.1.5. Destinations are generally in lower case letters with initial capitals, exceptions being regional destinations, fingerposts and pedestrian signs.

3.2 Basic principles of colour coding

3.2.1. Colour coding is one of the most important aspects of directional sign design. Since 1964 blue backgrounds have been used on motorway signs, dark green backgrounds on primary routes and white backgrounds on other roads (non-primary routes). The Traffic Signs Regulations and General Directions 1994 extended this colour coding to panels and patches which indicate the status of routes reached directly or indirectly from a junction ahead.

3.2.2. The layout in [Figure 3-7](#) shows a typical highway network comprising primary and non-primary routes. The signing of the network using the colour coding rules is illustrated by the five advance direction signs (labelled A to E inclusive).

3.2.3. Sign A is placed on the primary route and therefore has a dark green background with a white border. Although Longchurch is reached by travelling along a non-primary route (B1144), it is shown directly on the dark green background of sign A. This is because at this location the route to Longchurch continues along the primary route. Note that the route number (B1144) is not shown on a white patch. Route number patches are used only to indicate routes of a higher status (i.e. blue motorway patches on white and dark green background signs, and dark green patches on white background signs). As the A123 is a non-primary route, the place names and route numbers are shown on white panels. Had the B1255 been a primary route then the bracketed route number would be on a dark green patch on the white panel. It should be noted that the white panel indicates the status of the route and not that of the destination. Dorfield, for example, could be a primary destination.

3.2.4. Sign B shows the same junction as viewed from the non-primary route. The dark green panel indicating the primary route to Lampton also includes Longchurch. The same principle applies as for sign A. It is not appropriate to place Longchurch (B1144) on the main white background of the sign outside the dark green panel. There is no significance in the fact that a stack-type sign is illustrated here, whereas sign A on the primary route is a map-type sign. The type of sign used will be the most suitable for the approach to the junction. Note that all white background directional signs (other than Ministry of Defence signs) have black borders. The use of blue borders on local signs was discontinued in 1994 and all blue-bordered signs must have been removed by 2015.

3.2.5. Sign C shows the sign at the previous junction on the A123. As this is a junction between two non-primary routes the use of dark green panels is not appropriate. However the sign does indicate that the primary route A11 can be reached at a junction further ahead and therefore the route number is shown on a dark green patch. This is similar to the current practice of signing routes to motorways by using blue motorway number patches. Had the A123 been a primary route from its junction with the A11 to Hopford then the route number A123 (unbracketed) would also be shown on a dark green patch. Longchurch is not indicated at this junction, but if it were the route number would not be on a dark green patch since the B1144 is not a primary route (see Dorfield on sign E). Dark green patches are used only to indicate those routes that have primary status. Although the B1144 is reached by travelling along the primary route (A11), it is itself a non-primary route and therefore a dark green patch is not appropriate.

3.2.6. Sign D shows that some situations can arise where all destinations are shown on panels. In the same way that Longchurch is shown on a dark green panel on sign B, Dorfield is also shown on a dark green panel although the A123 is a non-primary route. A dark green panel shows all destinations that can be reached by turning directly onto a primary route. As explained in [3.2.2](#), white patches are not used and therefore it is not appropriate to use white patches on dark green panels.

3.2.7. Sign E indicating a junction between two non-primary routes demonstrates that other non-primary routes ahead (in this case A123) do not have their route numbers on dark green patches even though they are reached by travelling along a length of primary route. Sign E also demonstrates the use of a route number (B1144) not directly associated with a place name. The background colour of direction signs (e.g. flag-type signs) at a junction will be appropriate to the route indicated. Green or white panels are not used except where two directions are indicated on rectangular signs at junctions (see sign A in [Figure 3-8](#)). Route number patches are used in the same manner as on advance direction signs. Where a rectangular direction sign, showing

a route number only, is used to indicate an exit slip road leading directly to a non-primary route from a primary route, the background colour should be white, not green with a white route number panel or patch.

3.2.8. LTN 1/94 gives more detailed information on the principles of directional signing (see 1.1.8).

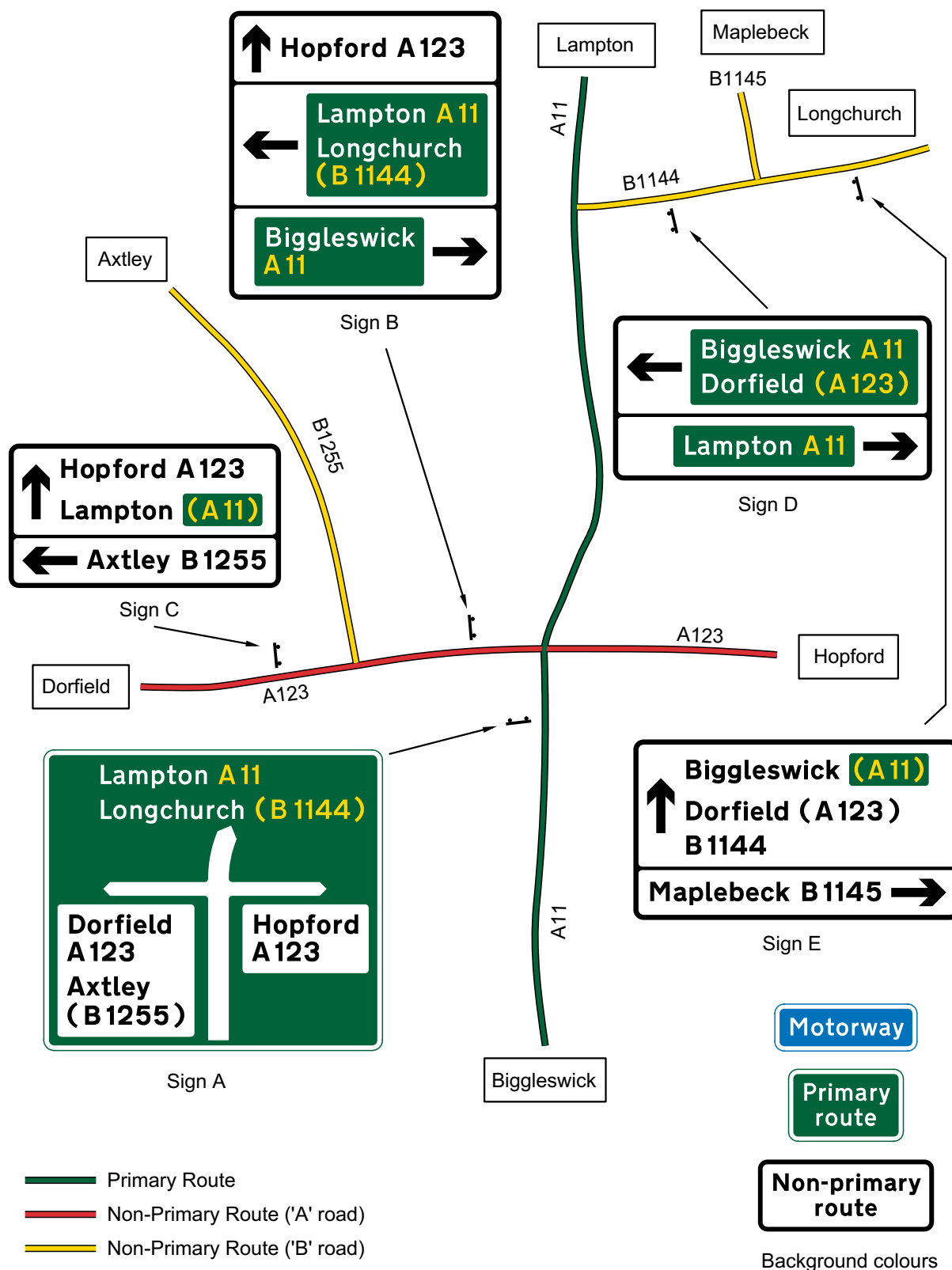


Figure 3-7

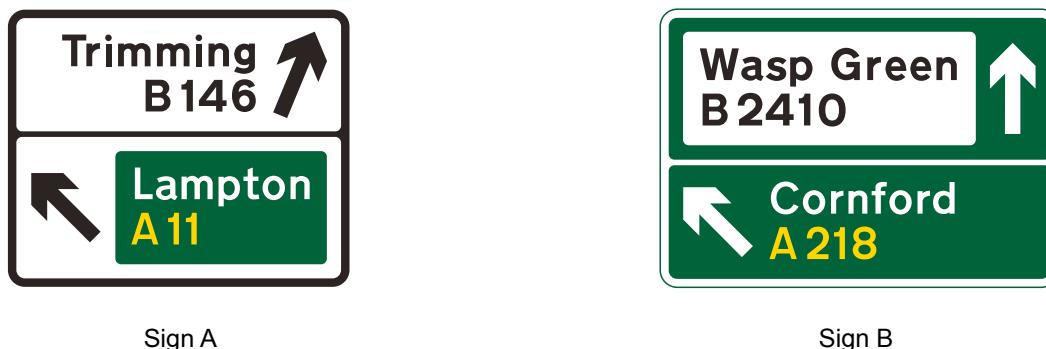


Figure 3-8

3.3 Design of panels and patches

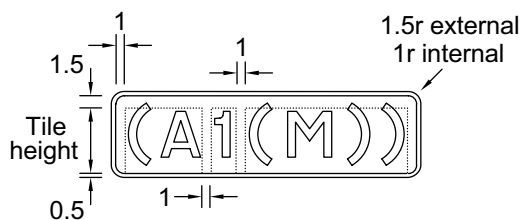
3.3.1. Panels are designed in a similar manner to the basic sign described in section 2 in that the space between tiles and the inside border or edge is the same. Borders, which are always white, are used when a dark coloured panel is placed on a dark coloured background (e.g. a blue motorway panel on a dark green primary route sign). Where a border is applied this will be 0.5 sw wide with an internal corner radius of 1 sw (note that the radius is not equal to the border width). When a border is not required the corner radius of the panel is 1 sw. Panels are not placed on other panels (e.g. a brown tourist panel is not placed on a green or white destination panel). Two separate panels would be placed one above the other.

3.3.2. The Ministry of Defence (MoD) panel differs from the others as it has a 1 sw border which is coloured red. This border is always applied to the panel, which has a white background. When the panel is placed on a dark background, a 0.5 sw white edge (equivalent to the border on other panels) is added to the outside of the red border.

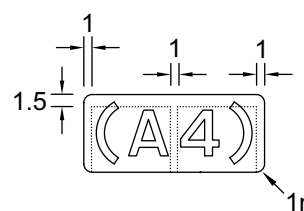
3.3.3. On map-type signs it is sometimes possible to tuck the route symbol into the legend block, in order to reduce the overall size of the sign. This can be accommodated by providing a cut-out in one of the corners of the panel. When a cut-out is provided this should be sufficient to accommodate the route symbol. It should not be extended to provide the minimum 2.5 sw horizontal gap to the letter tiles of the lower line, unless this is necessary to provide space for the route symbol. In most cases the cut-out will be in the bottom right hand corner, as shown in [Figure 3-9](#) (see [5.4.3](#)).

3.3.4. Patches are similar to panels but have reduced space between the tiles and the inside border or edge. The corner radii remain the same as for panels. A patch may contain more than one route number on the same line. A second line should not be used and therefore it is not appropriate to provide a cut-out as for panels. A white border is provided when a dark coloured patch is placed on a dark coloured background. Patches may be placed on panels.

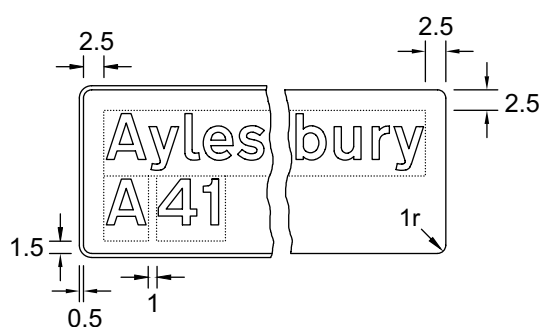
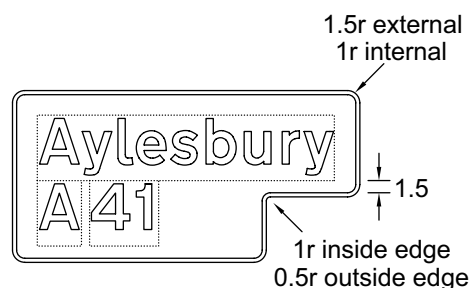
3.3.5. [Figure 3-9](#) shows in detail the design of patches and panels.



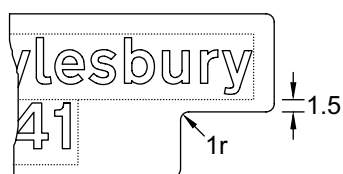
Route Number Patch (with border)



Route Number Patch (without border)


All Panels other than MoD
(with and without border)


Bordered Panel with Cut-out



Borderless Panel with Cut-out

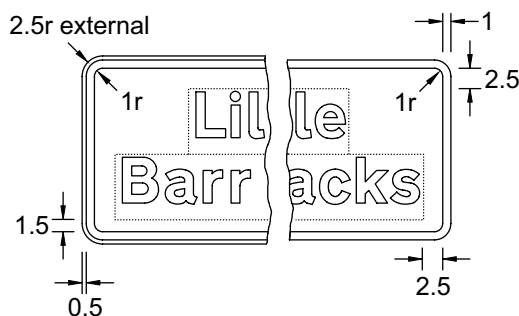

MoD Panel (main border red)
(with and without white edge)

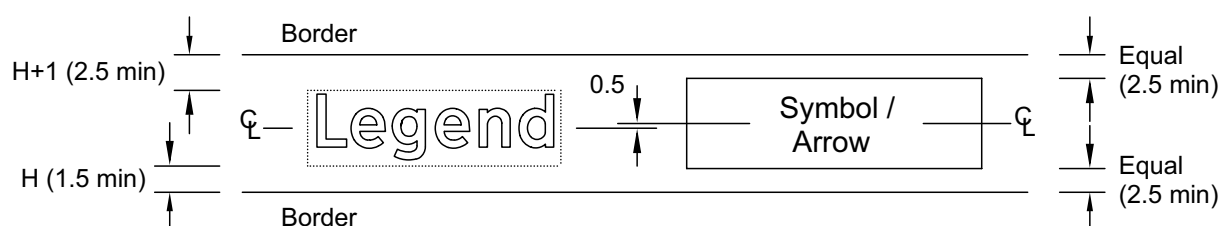
Figure 3-9

3.4 Warning and regulatory symbol sizes

3.4.1. The sizes of symbols that may be incorporated on directional signs are prescribed by S12-20. If two or more symbols from S12-20 are included in a sign and there is any difference in the size of the symbols as provided for in the relevant diagrams, the size of all the symbols used on the sign must be that of the largest (S12-19-6).

3.5 Vertical positioning of symbols and patches alongside tiles

3.5.1. The general rule, as illustrated in [Figure 3-10](#), is that a symbol is centred vertically alongside the tiles of a legend and then moved upwards by 0.5 sw. On a simple sign this has the effect of centring the symbol vertically between the top and bottom borders whilst maintaining the correct vertical spacing for the legend tiles. The minimum vertical space between the symbol and the sign borders is 2.5 sw. On signs where close proximity to a border may not be a consideration, this rule has the effect of producing a more balanced appearance by taking account of the space on the tiles beneath the baseline of the letters.



GENERAL RULE FOR PLACING SYMBOL/ARROW ALONGSIDE TILES



SINGLE LINE LEGEND
(symbol positioned as above)



TWO LINE LEGEND
(symbol positioned as above)

Figure 3-10

3.5.2. When a patched route number is placed alongside a single line legend the rule given in [3.3.5](#) does not apply. The tiles of both the place name and route number must align vertically. If the legend block is adjacent to both the top and bottom border of a sign or edge of a panel, then the patch will be centred on the sign or panel with a minimum vertical gap of 2.5 sw. An example is shown in [Figure 3-11](#). When a patched route number is placed alongside a two line legend it is treated the same as a symbol in terms of vertical alignment. An example is shown in [Figure 3-12](#).

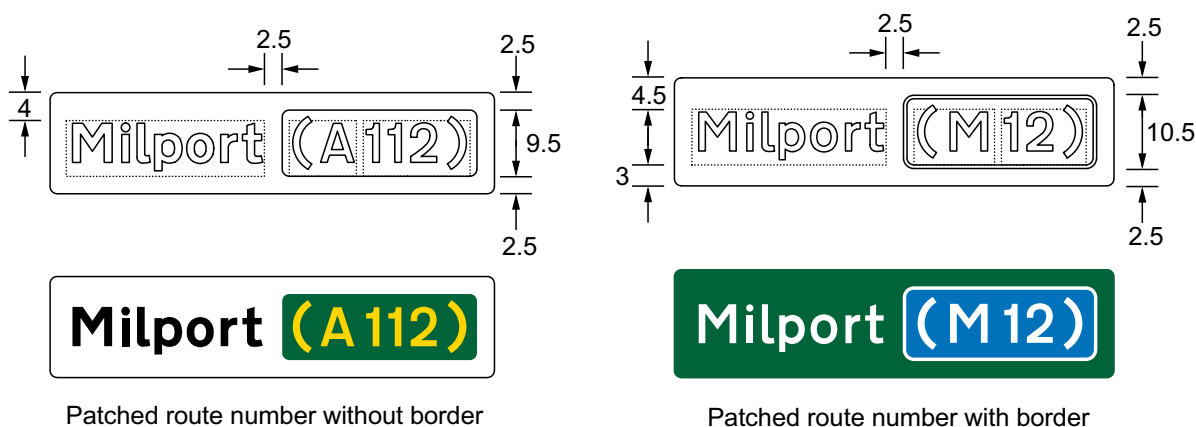


Figure 3-11

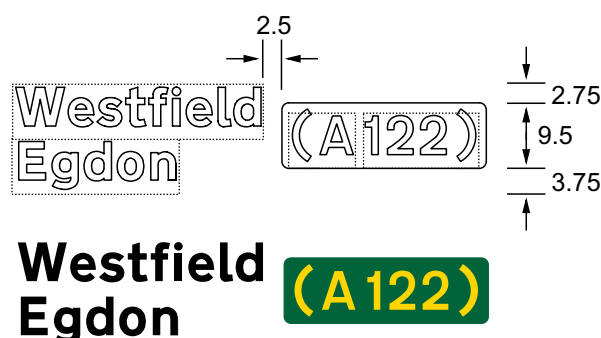


Figure 3-12

3.6 More than one route number on the same line

3.6.1. Figure 3-13 shows the most likely combinations of route numbers on the same line. A patched route number should not be placed inside brackets with other unpatched number. The correct and incorrect ways of dealing with this situation are shown in Figure 3-14.

3.7 Destination blocks

3.7.1. A place name and its associated route number (if any) is referred to as a block. A block can be a single line legend with the route number to the right of the place name. Alternatively, the route number may be positioned below the place name and ranged left. For certain sign designs the route number may be ranged right and details of this are covered in the relevant sections below (see examples in Figure 3-15). Two or more place names may be associated with the same route number. The route number may be placed alongside the place names to the right and positioned vertically as described below, but where the names occupy three or more lines the route number should always be positioned below the names and ranged left or right as appropriate. A single name such as “Market Harborough” may be on two lines which are centred horizontally. Other destinations in the block will be ranged left with the longest line (i.e. “Harborough” in the example given). A block may contain a patched route number and / or a symbol. Where a block has more than one line of legend the vertical space between each line is known as “line spacing”. Figure 3-16 shows the various combinations of line spacing, together with examples.

3.7.2. Where a non-patched bracketed route number is placed below the legend, line spacing is always 0.5 sw whether the legend has a descender or not.

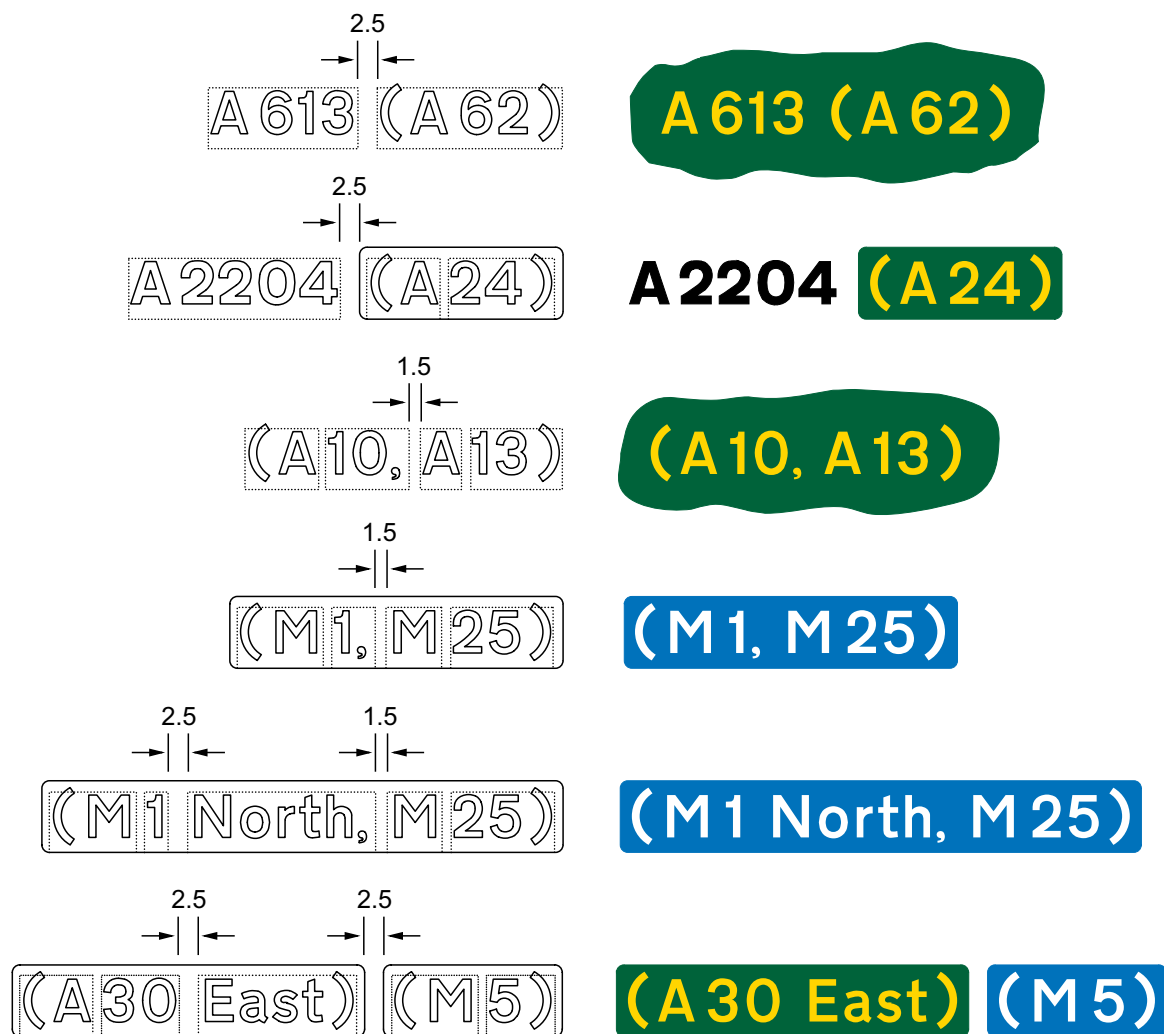


Figure 3-13

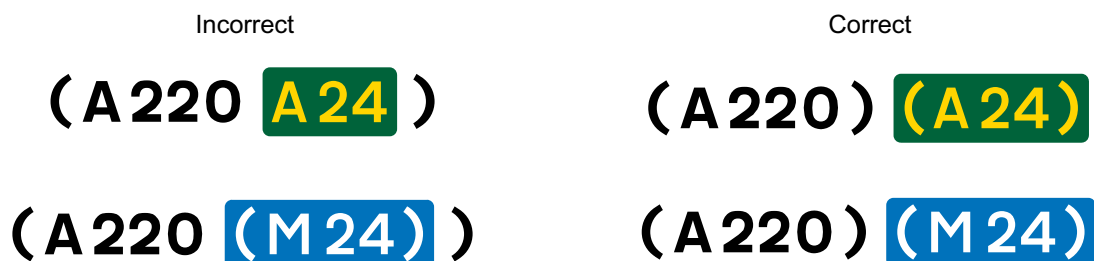


Figure 3-14

3.7.3. Where a patch or symbol is placed below a tiled legend, line spacing is increased to 1 sw when the legend has a descender. However, where the descender tile is to the left or right of the patch or symbol by a horizontal distance not less than 2.5 sw, the standard vertical gap of 0.5 sw can be used. For a patch this horizontal distance of 2.5 sw is measured from the outside vertical face, ignoring the radius on the corners. In the case of a symbol, judgement will be required in ascertaining the point from where the measurement is made (this may not necessarily be the edge of the symbol tile).

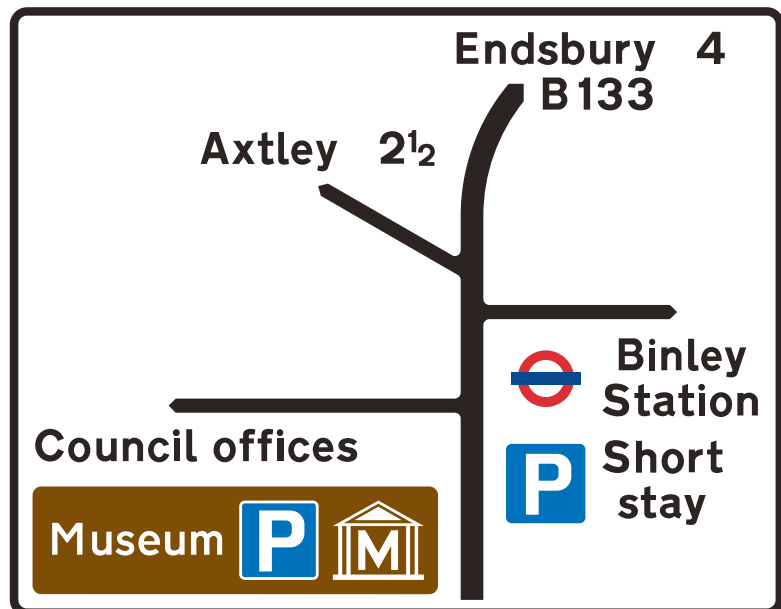
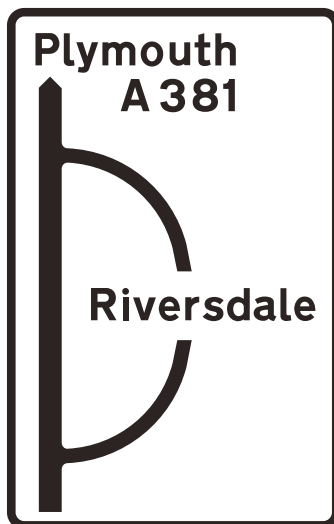
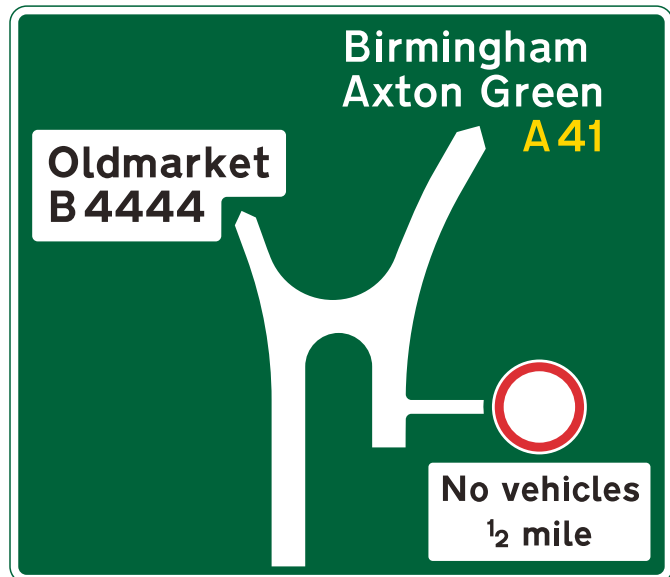
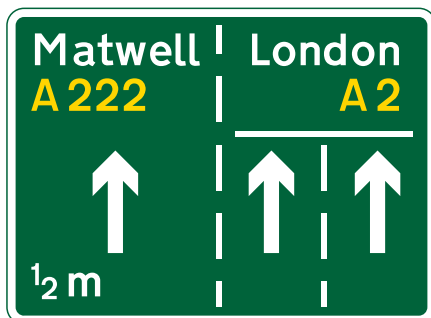
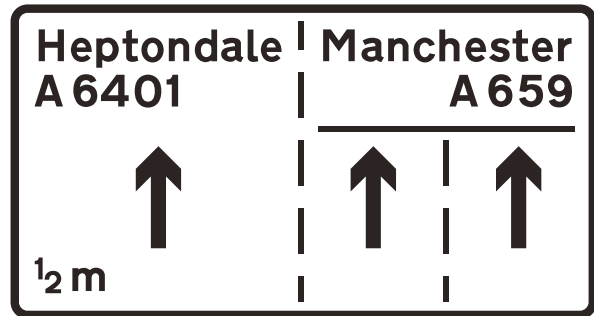
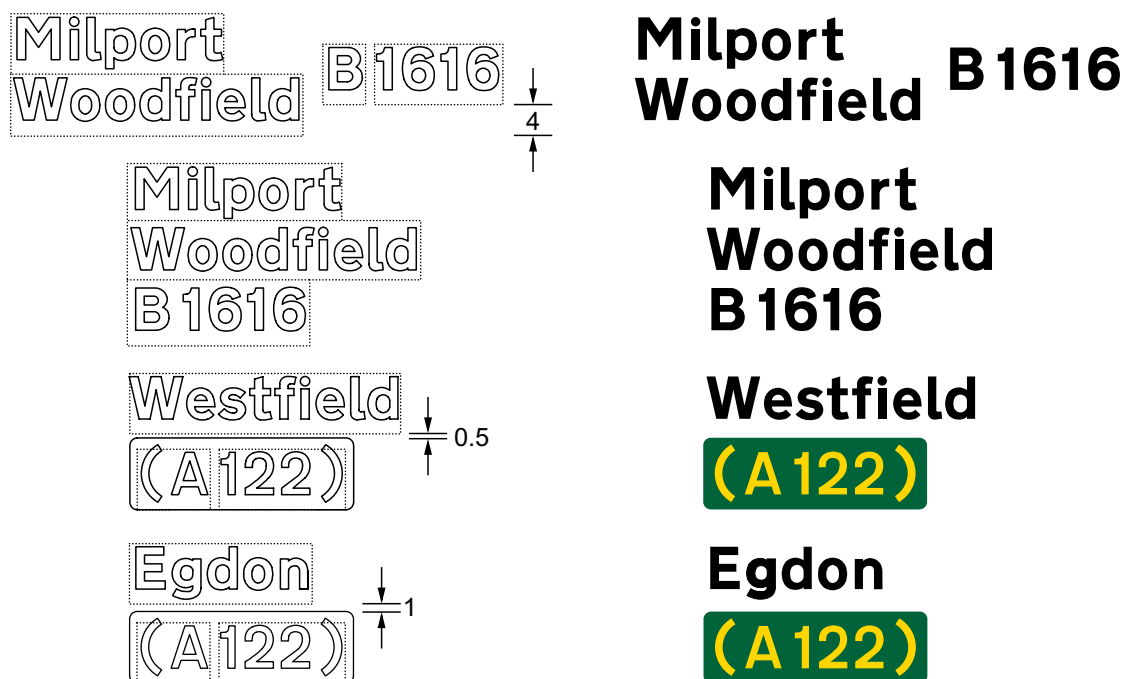
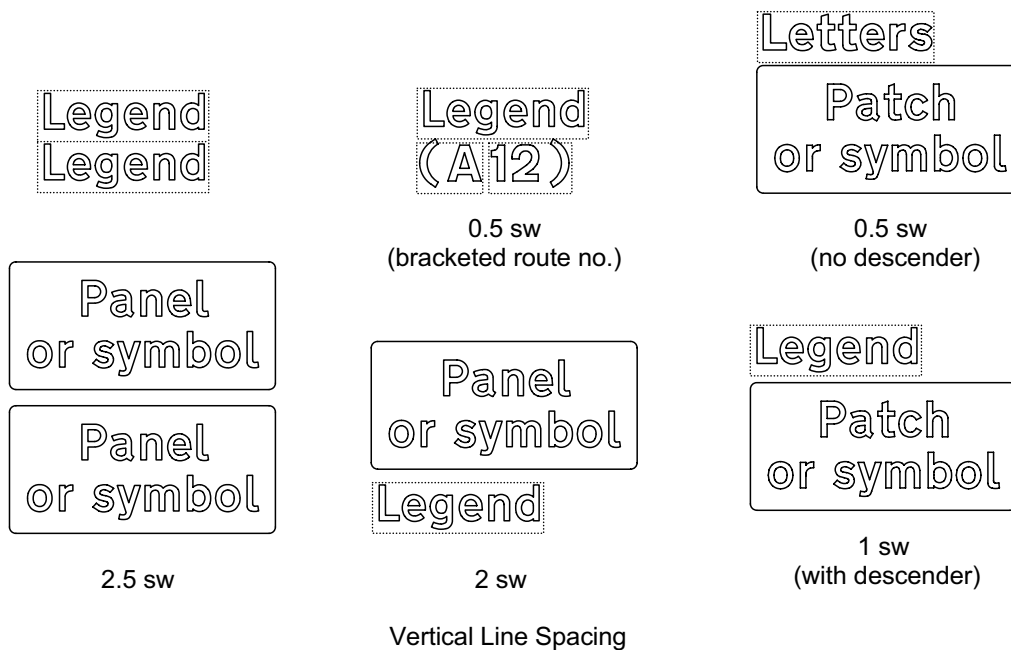
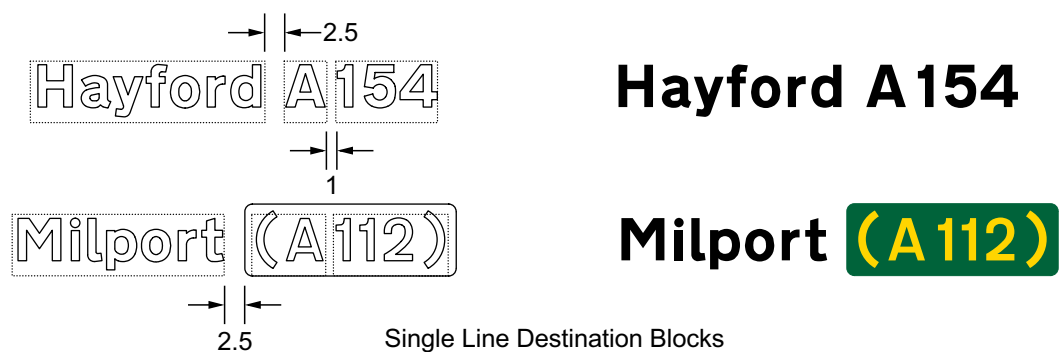


Figure 3-15



Examples of Line Spacing

Figure 3-16

3.7.4. More than one destination block may be associated with the same route. The additional blocks will generally have different route numbers which will be bracketed. Facilities such as railway stations, hospitals, council offices etc. should be grouped together as a separate block and should not form part of the destination / route number block. There may also be instances where a village on a main route is not included with the primary destination and is shown below the route number. Again this forms a separate block. Tourist attraction, MoD, lorry route and parking place panels also are treated as separate blocks. All blocks associated with the same routes are grouped together and ranged left with a vertical gap between each block. This gap is known as “block spacing”. **Figure 3-17** shows the various combinations of block spacing, together with examples. Block spacing for destinations associated with different routes on map-type signs is dealt with in **5.6**.

3.7.5. Where a patch or panel has a border the vertical gaps for both line and block spacing are measured to the outside edge of that border.

3.7.6. Where a line of legend has a patched route number which does not overlap any tiled legend above or below, it may be possible to use the appropriate line or block spacing for the adjacent tiled legends. There should be a horizontal space of at least 6 sw between the beginning of the left hand edge of the patch and the end of the line above or below. Examples are shown in **Figure 3-18**.

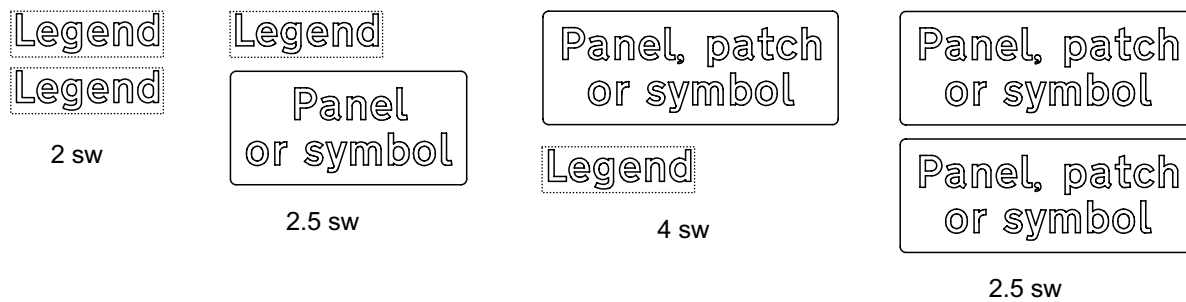
3.7.7. Where a single block contains more than one destination and at least one of the destinations is on two lines, a vertical gap, similar to block spacing, is introduced between each destination to avoid any confusion. An example is illustrated in **Figure 3-19**.

3.7.8. An aircraft symbol denoting an airport may be positioned alongside a place name. The same vertical positioning rules apply as for other symbols. As this symbol is likely to appear in a list of place names forming a destination block, line spacing for the individual place names and route number is adjusted, as shown in **Figure 3-20**.

3.7.9. Where a sign contains several blocks associated with the same route, the clarity of the sign may be improved by increasing the block spacing by 2 sw. This is particularly applicable to tourist attraction signs where long names might lead to sign overload. An example is shown in **Figure 3-21**.

3.8 Two or more destinations with symbols to the left of the legend

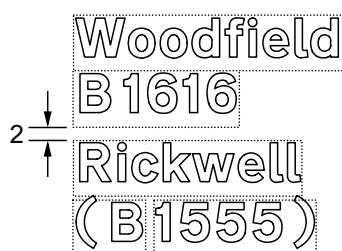
3.8.1. Where two or more destinations each contain a symbol to the left of the place name or facility, the appearance of the sign can be improved by centring the symbols above each other and ranging the tiled destinations to the left. An example is shown in **Figure 3-22**.



Vertical Block Spacing



Hayford A154
Axtley (A123)
Milport (A112)
Westfield (A122)
Rickwell (B1555)

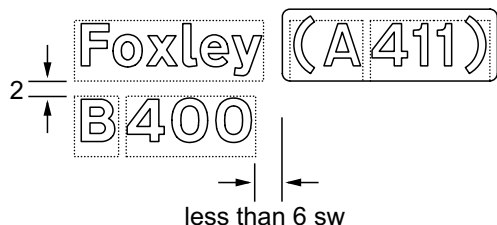


Woodfield
B1616
Rickwell
(B1555)



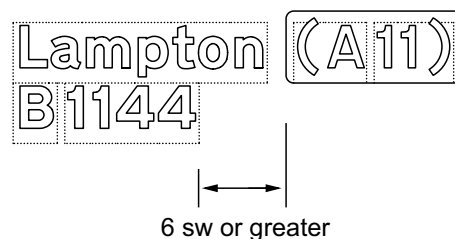
Examples of Block Spacing

Figure 3-17



Foxley (A411)
B400

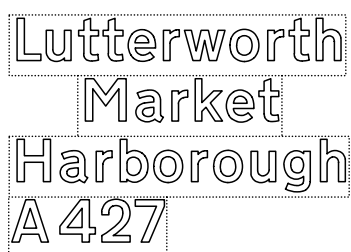
Line spacing measured from patch to legend below (see figure 3-16)



Lampton (A11)
B1144

Line spacing measured from legend to legend below (see figure 3-16)

Figure 3-18



Block with name on two lines - normal line spacing (not appropriate in this case)



"Lutterworth Market" or "Market Harborough"?



Special line spacing (applies where the block contains at least two place names and one name is on two lines)



"Lutterworth" and "Market Harborough"

Figure 3-19



Figure 3-20



BLOCK SPACING = 2 sw (normal spacing)

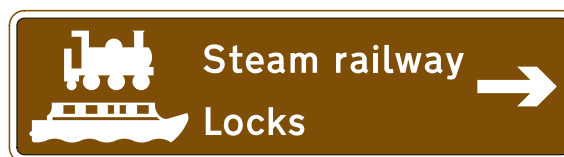


BLOCK SPACING = 4 sw

Figure 3-21



Normal horizontal spacing rules



Preferred design

Figure 3-22

3.9 Distances

3.9.1. A destination (including any symbol to the right of the place name) may be followed by the appropriate mileage on the same line. The minimum horizontal gap is 7 sw measured between the distance and the place name on the same line, on the line immediately above or on the line immediately below. This is illustrated in [Figure 3-23](#). For the design of certain signs where distances are expressed as “x miles”, “x yards” or “x yds” see [14.2.2](#).

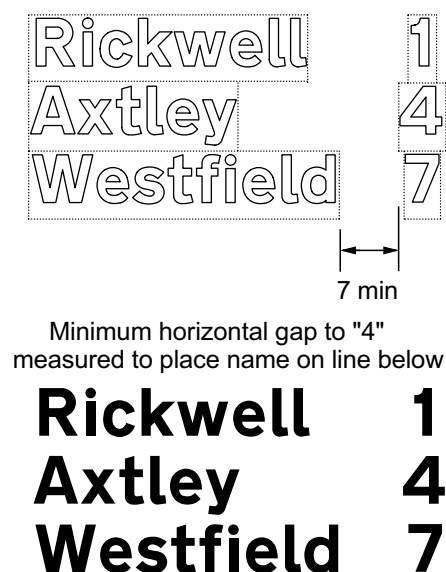
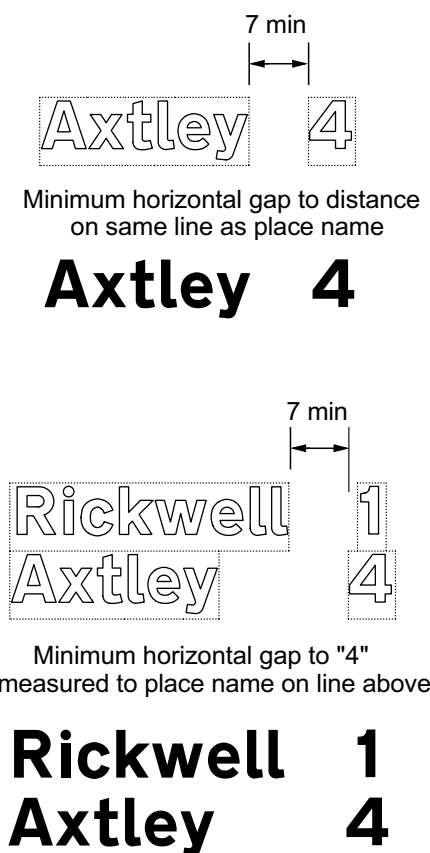


Figure 3-23

3.9.2. Where distances are shown on successive lines they are arranged to form columns, as shown in [Figure 3-24](#). The tens and units columns are aligned horizontally so that no tiles on the same line overlap. Where there are three numerals (e.g. 101) the columns should be equally spaced as far as possible. Where a distance is less than 1 mile and the distance immediately below does not include a fraction, special rules are used, as shown in [Figure 3-25](#).

3.9.3. Fractions, to the nearest quarter of a mile, may be used for distances less than three miles. Distances over 3 miles must be rounded to the nearest mile. On motorway route confirmatory signs all distances must be to the nearest mile. See [Appendix A](#) for more guidance on permitted expressions of distance.

3.9.4. Where a destination contains both a distance and a route number, the latter must be placed on a separate line beneath the place name. The distance should be aligned vertically with the place name (except where shown otherwise in [Figure 4-12](#)). Where a place name containing more than one word is shown on two lines, any distance should be centred vertically on the two lines.

3.9.5. The distance to the junction ahead may be added to any advance direction sign, but is only appropriate for grade separated junctions and other high speed situations. Design details are covered in the sections dealing with map-type signs (see sections [5](#) & [10](#)), dedicated lane advance direction signs (see section [6](#)) and gantry mounted signs (see sections [9](#) & [10](#)).

3.10 Indication of alternative routes

3.10.1. S12-3-2 permits the use on certain signs of a legend indicating an alternative route or a route avoiding a certain feature. The “alternative route” legend has an x-height that is 80% of the main x-height used on the sign. This requires special vertical spacing below the “alternative route” legend to take account of the reduced tile size. [Figure 3-26](#) details the various vertical spaces that should be used. These are 0.5 sw greater than the standard spacing.

3.10.2. It should be noted that the first letter of the first word of the “alternative route” legend is in lower case. As shown in [Figure 3-26](#), the legend is ranged left below the destination to which it applies. Where the “alternative route” legend is on two or more lines each line is centred horizontally and the resulting block ranged left.

3.11 Junction and place name panels

3.11.1. A junction name, in a separate sign panel, as shown in [Figure 3-27](#), may be added at the top of a primary or non-primary advance direction sign with a type A background prescribed by S12-2-2 or S12-2-3. A sign may carry only one name; this must have the same x-height as the main legend. The name must be in capital letters (S12-3-7) and may be on one or more lines.

3.11.2. The tiles are positioned on the sign panel so that the capital letters are equidistant from the top border and bottom panel divider. This is achieved by placing the tiles in the normal position (2.5 sw to the top border and 1.5 sw to the panel divider) and then lowering them by 0.3 sw (see [2.5.6](#)).

3.11.3. The panel divider has a width and an internal corner radius of 1.5 sw.

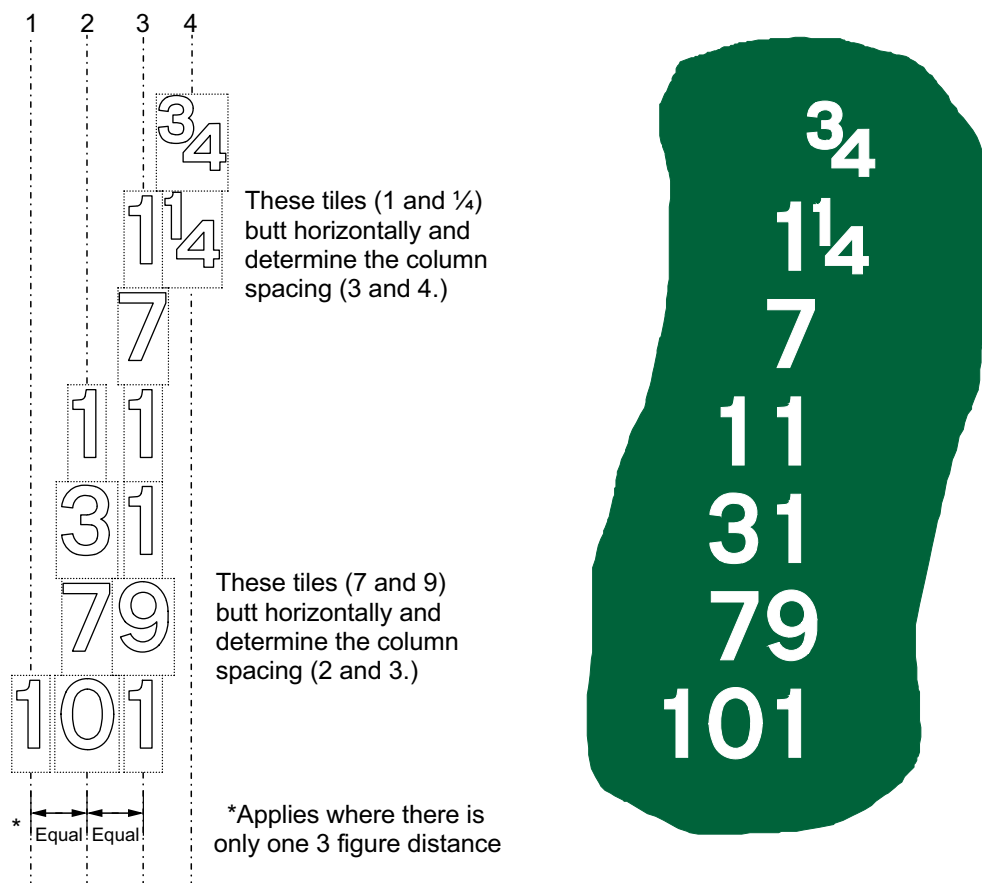


Figure 3-24

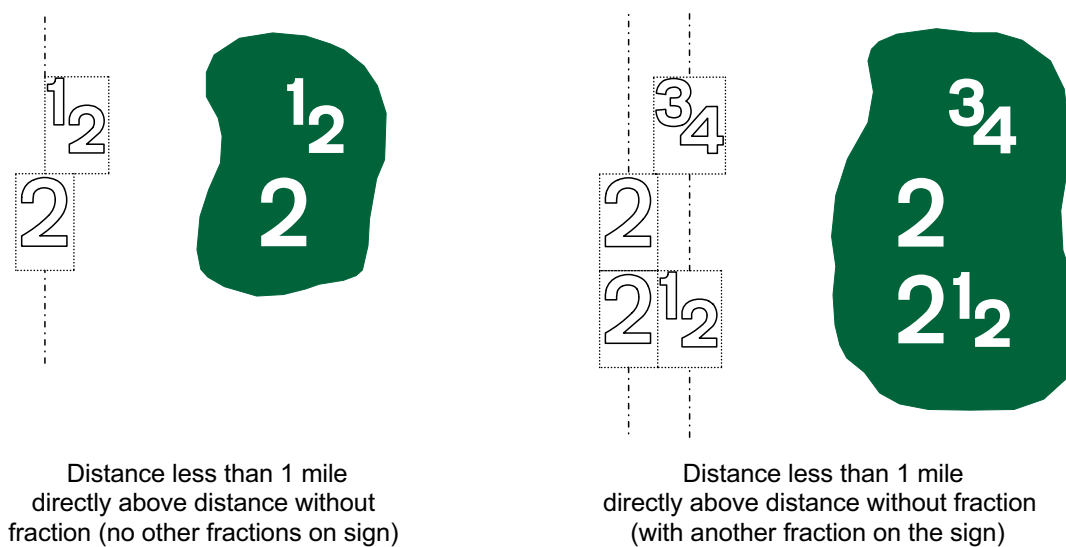
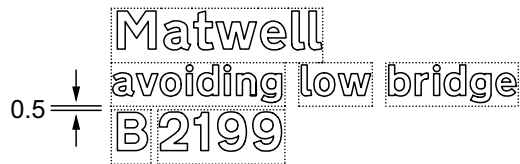
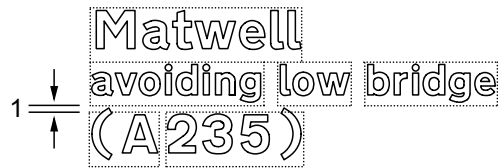


Figure 3-25



Matwell
avoiding low bridge
B 2199



Matwell
avoiding low bridge
(A235)

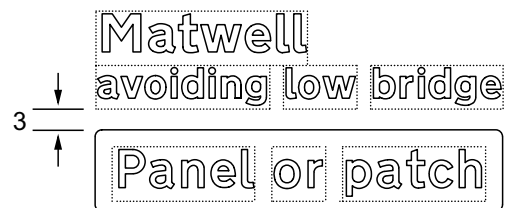


Matwell
avoiding low bridge
(A221)

Line Spacing (normal spacing plus 0.5 sw)

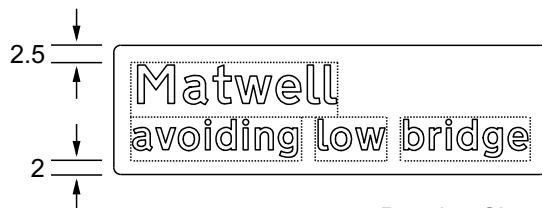


Matwell
avoiding low bridge
Catling B 2199



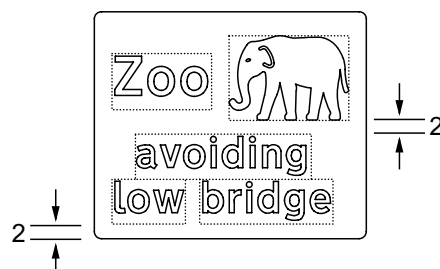
Matwell
avoiding low bridge
Panel or patch

Block Spacing (normal spacing plus 0.5 sw)



Matwell
avoiding low bridge

Panel or Sign (normal spacing plus 0.5 sw)



Tourist Panel with symbol

Figure 3-26

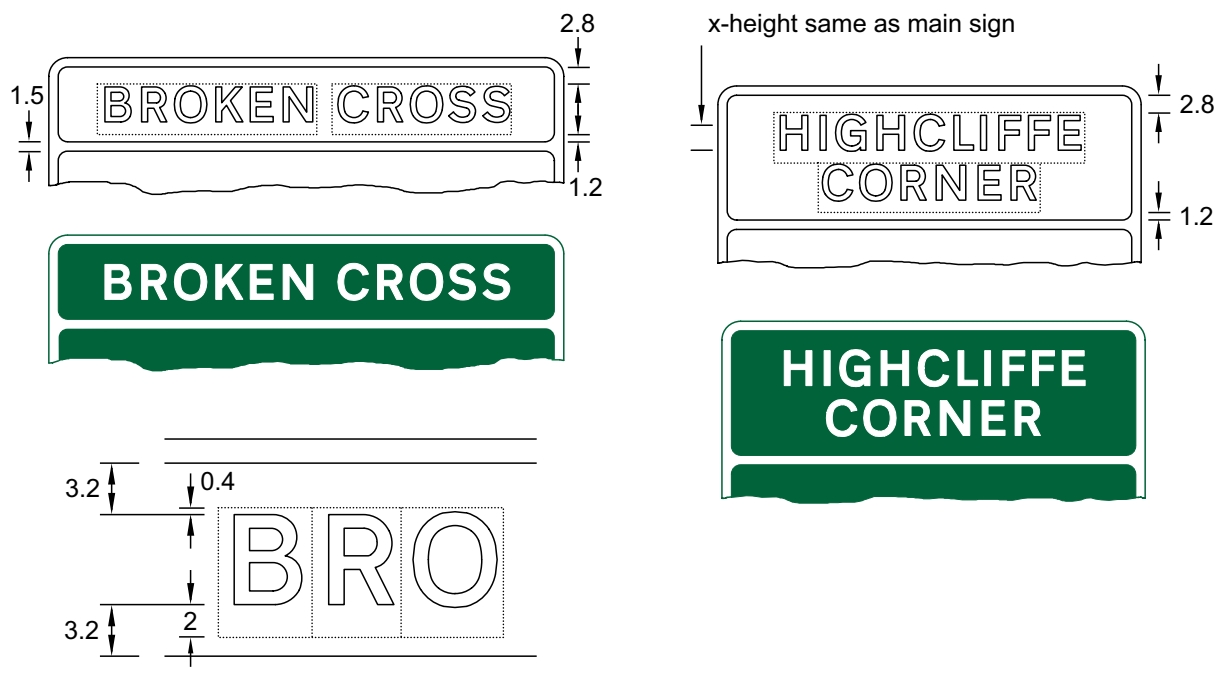


Figure 3-27

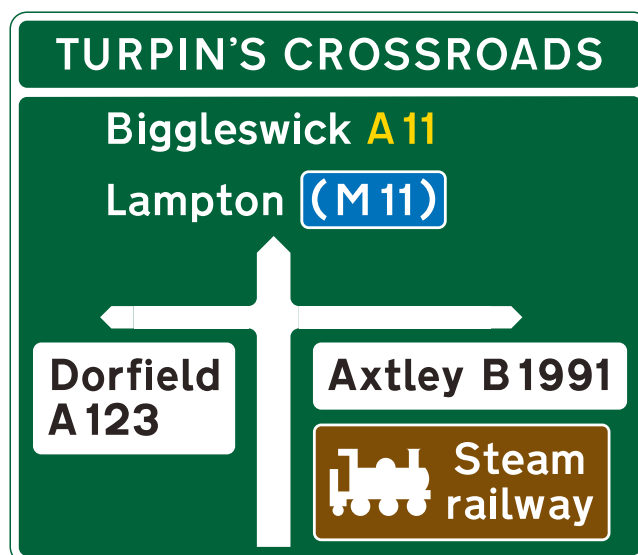


Figure 3-28

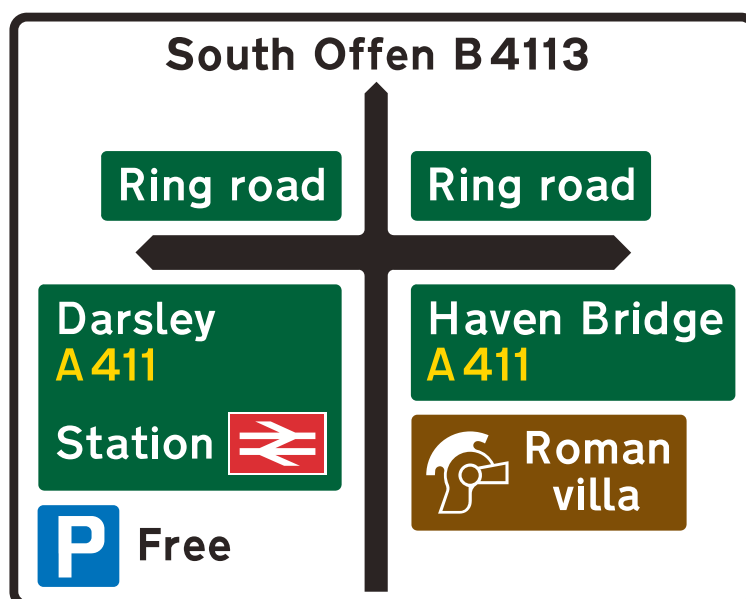


Figure 3-29

3.12 Brown tourist and leisure facility signing

3.12.1. A “tourist destination” is defined as:

a permanently established attraction or facility (other than a leisure facility) which—

- a) attracts or is used by visitors to an area;
- b) is open to the public without prior booking during its normal opening hours; and
- c) is recognised as a tourist attraction or facility by the appropriate national promoter of tourism.

3.12.2. The “national promoter of tourism” is defined as:

- a) in relation to England, the British Tourist Authority;
- b) in relation to Scotland, VisitScotland; and
- c) in relation to Wales, Welsh Ministers.

The Authority that currently promotes tourism in England uses the trading name “VisitEngland”. Welsh Ministers currently promote tourism in Wales using the branding “Visit Wales”.

3.12.3. Leisure facilities, which may be signed on a brown background, are indicated by the words “(Leisure facility)” in the description of the relevant symbol in S12-14, 15, 16 and 18. Unlike tourist destinations, they do not require recognition by the appropriate national promoter of tourism, whether or not the symbol is used on the sign.

3.12.4. In Northern Ireland the provision of tourist signs is managed using a joint Department for Infrastructure / Tourism Northern Ireland tourist signing policy. Only tourist destinations deemed eligible by Tourism Northern Ireland will be considered for tourist signing. In undertaking its roads related functions, the Department for Infrastructure has a key role in the design and provision of signs. It is also responsible for road network stewardship and therefore has a final arbiter role in terms of the provision of such signs. Reference should be made to the policy guidance publication ‘The signing of tourist attractions and facilities’.

3.12.5. More examples of complete brown tourist and leisure facility signs are in [Appendix F](#).

3.13 Use of brown panels indicating tourist destinations or leisure facilities

3.13.1. Whilst the Regulations permit the integration of brown tourist attraction panels into direction and advance direction signs, it might be cheaper and more efficient to place tourist information on a second sign. In [Figure 3-28](#) the inclusion of the tourist panel has resulted in wasted space under the “Dorfield” panel. On the other hand, in [Figure 3-29](#) removal of the tourist panel would not reduce the overall sign area. Where a separate tourist attraction sign is provided, such as [Figure 3-30](#), this should be sited at a convenient interval after the main sign. It is recommended that this segregation of information is maintained at the junction by providing a separate tourist attraction direction sign, such as [Figure 3-31](#).



Figure 3-30



Figure 3-31

3.13.2. The phrase “historic market town” or other descriptive phrase, at 80% x-height, may be added to any place name on a tourist destination sign or panel (S12-3-3).

3.14 Boundary signs

3.14.1. Boundary signs to diagram 2404 (S11-2-83) may now incorporate photographic or other images showing an item of local interest. See examples in **Figure 3-32**. Whenever such signing is proposed, careful consideration should be given to what can be recognised from a moving vehicle, and how the image performs in all lighting conditions. More effective images are likely to be those depicting landmarks, buildings or structures that are distinctive for the area, city or town. Photographs showing generic features such as natural scenery or historic buildings are less likely to create an instant association with a particular place. Subliminal advertising must be avoided.

3.14.2. The regulations allow the signing of historic county boundaries, although these may not be placed as a substitute for administrative boundaries, which remain prescribed. Photographs are not permitted to mark the boundary of an historic or ceremonial county.



Figure 3-32

4 STACK-TYPE ADVANCE DIRECTION SIGNS

4.1 General design considerations

4.1.1. Stack-type signs are intended for use only at simple junctions and should not indicate more than three directions as the sign would then become difficult to read. Where four or more directions are to be signed a map-type sign should be used. Stack-type signs may supplement map-type signs (i.e. where there are two advance direction signs on the approach to a junction and the first is a map-type sign, the second may be a stack-type sign).

4.1.2. There is some flexibility in the design of a stack-type sign and [Figure 11-8](#) illustrates alternative layouts for the same junction. By careful arrangement of the panels the overall size of the sign can be minimised. In some cases, however, the smallest sign may not necessarily be the clearest and therefore should not be the automatic choice for a particular location.

4.1.3. More examples of complete stack-type signs are in [Appendix F](#).

4.2 Design of a simple stack-type sign

4.2.1. The simplest type of stack-type sign is one that indicates a single route, as shown in [Figure 4-1](#). The legend tiles will normally be 2.5 sw from the top border and 1.5 sw from the bottom border, in accordance with the basic sign design rules (see [Figure 2-4](#)). Where the vertical dimension of the arrow determines the height of the sign, the legend is positioned so that the gap to the top border is greater than the gap to the bottom border by 1 sw. The arrow is always centred vertically on the sign, with a minimum gap of 2.5 sw to the top and bottom borders. [Figure 4-2](#) shows the design of a sign with a legend panel. Both the arrow and the panel are centred vertically on the sign. [Figure 4-3](#) shows how a stack-type sign is designed to accommodate a single line legend with a patched route number. This follows design principles similar to those shown in [Figure 3-11](#).

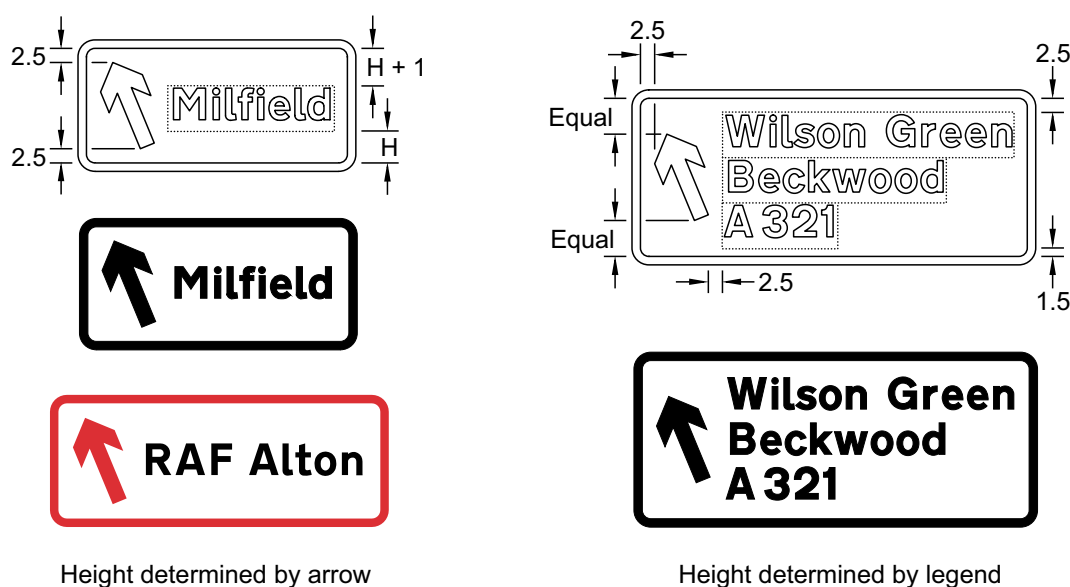


Figure 4-1

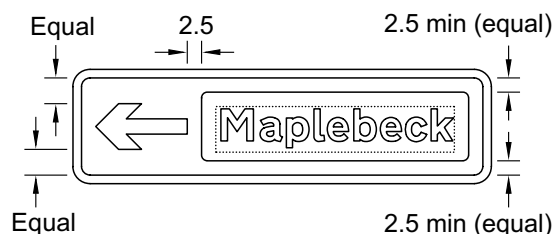


Figure 4-2

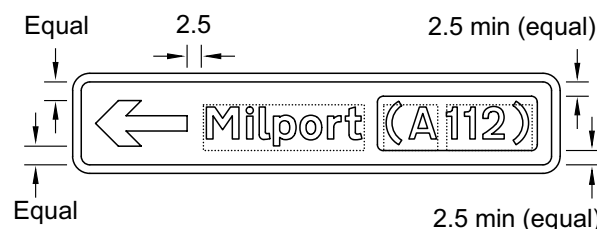


Figure 4-3

4.2.2. The design of the arrow (S12-5-1) is shown in [Figure 4-4](#). The length of 16 sw is reduced to 14 sw, by shortening the shaft, when a vertical arrow is used with a single line legend (tiles or panel). If the single line contains a symbol with a height greater than 14 sw, or the panel height exceeds 14 sw (because the panel includes a symbol), then a 16 sw arrow should be used.

4.2.3. The colour of the arrow is determined by the background colour of the sign (see S12-5-1). On MoD panels, the arrow is red.

4.2.4. [Figure 4-5](#) shows how the arrow may be inclined to suit the direction being indicated. Arrows may be vertical or horizontal or at any angle between in increments of 22.5°. Arrows shown in broken outline are used only in special circumstances. A special arrow may be used to indicate U-turns (e.g. at a roundabout on a dual carriageway, see section [14](#)).

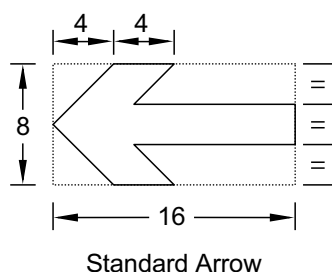


Figure 4-4

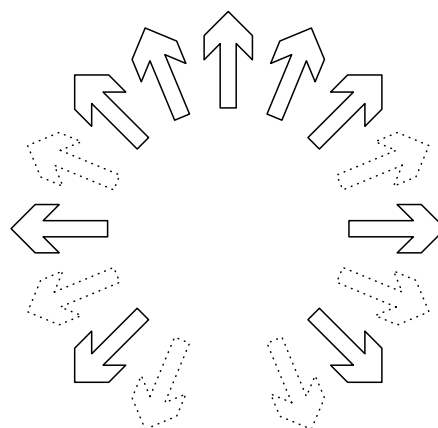


Figure 4-5

Where a sign has more than one directional panel, as shown in [Figure 4-6](#), the arrows should indicate the general direction of the individual route and ideally be at least 45° apart. Most junction layouts can be signed using the arrows shown with a continuous outline in [Figure 4-5](#). A vertical arrow should normally be placed on the left hand side of an advance direction sign. It may be placed on the right hand side of a rectangular direction sign. Further guidance is given in LTN 1/94 (see [1.1.8](#)).

4.2.5. [Figure 4-7](#) shows the design of signs which include both tiled and panelled legends. The tiles or panel will be 2.5 sw from the top border, with a space to the bottom border of 1.5 sw for tiles and 2.5 sw for a panel. All destination blocks (tiles, panels and patches) are ranged left irrespective of the direction in which the arrow points.

4.2.6. Route number patches and symbols are treated the same as panels in determining the height of the sign. Symbols (other than warning triangles and regulatory roundels) are generally positioned at the opposite end of the legend to the arrow. In the case of the “P” parking symbol, this should always be placed to the left of its associated legend unless this is the name or

description of a tourist attraction or leisure facility. The “P” symbol should then be placed between the legend and the tourist attraction symbol (if any). Where there is no tourist attraction symbol, the “P” symbol should then be placed in accordance with the normal rules for symbols (i.e. at the opposite end of the tourist attraction name to the arrow). Where the aircraft symbol is used to denote an airport, this would generally be placed to the right of the airport name. Where the airport name is the same as the place name destination along the same route, the aircraft symbol may be used on its own on a separate line ranged left. For some sign face designs it may be appropriate to centre a symbol above or below its associated legend (e.g. lorry or ferry symbol).



This sign may reflect the true layout of the junction, but the two arrows are only 22.5° apart



This arrangement is preferred as the two arrows are 45° apart and give clearer indication of the turning movements at the junction ahead

Figure 4-6

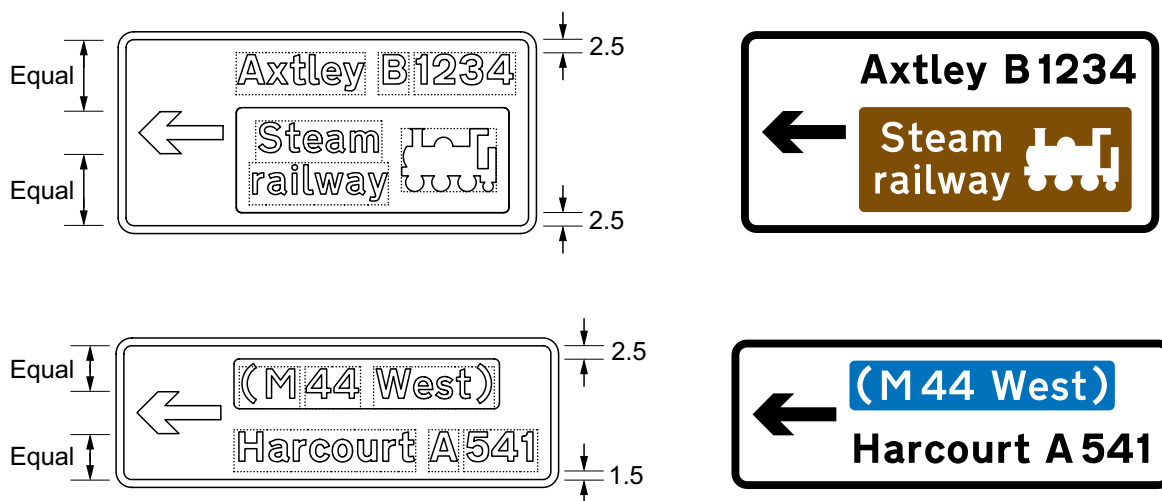


Figure 4-7

4.2.7. Many symbols have a directional element to their design. If the arrow is pointing ahead or left (at any angle) the symbol should face left, otherwise the symbol should face right. The aircraft symbol may be rotated to point in the same direction as the arrow, except that the symbol must never point below the horizontal. Where the arrow inclines downwards the aircraft symbol should be horizontal, facing left or right as appropriate. **Figure 4-8** shows how an inclined aircraft symbol is positioned alongside a tiled legend.

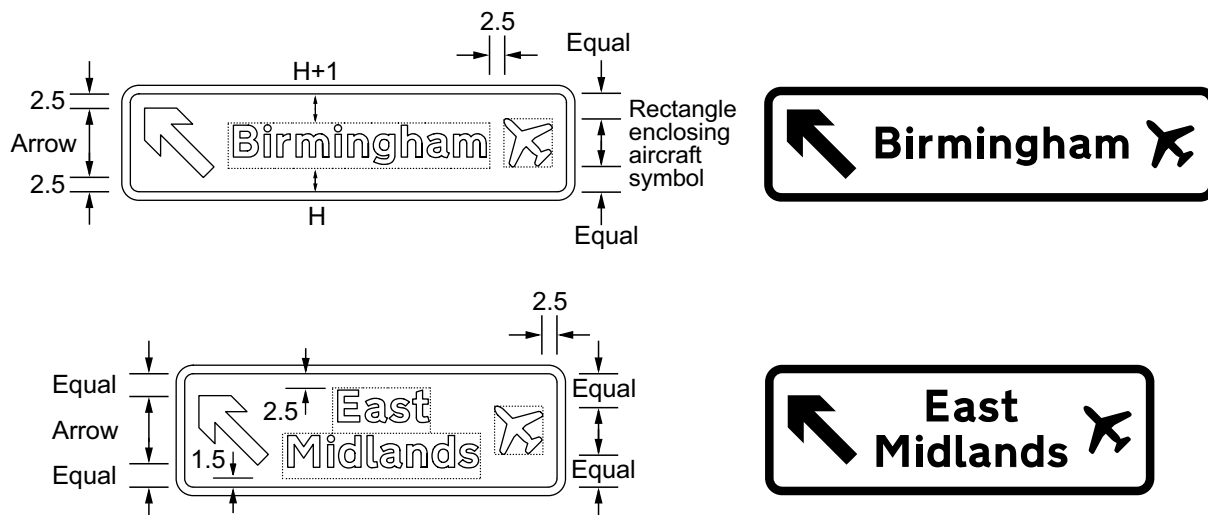


Figure 4-8

4.3 Complex stack-type sign design

4.3.1. The design of a stack-type sign is shown in [Figure 4-9](#) and is in the form of a working drawing.

4.3.2. The sign comprises two sections as described in [2.5.8](#). These are the junction name at the top and the directional information given below. The general rule is that a divider separating different elements of the sign will have the same width as the sign border (usually 1.5 sw). However, on a stack-type directional sign all routes indicated are considered to be one sign element. Therefore the dividers between the different routes have a reduced width of 1 sw. The junction name is a different element and therefore has a divider 1.5 sw wide. The corner radii are equal to the width of the divider to which they relate (as shown in [Figure 4-9](#)). Design of the junction name panel is described in [3.11](#).

4.3.3. The general order in which directions are indicated is as follows:-

- Ahead destination with vertical arrow on left hand side of destination block.
- Destinations to the left with the arrow to the left of the destination block. Where more than one left turn is shown the order from top to bottom is anti-clockwise.
- Destinations to the right with the arrow to the right of the destination block. Where more than one right turn is shown the order from top to bottom is clockwise.

4.3.4. In some cases the order in which the various directions are shown, as set out in [4.3.3](#), may be varied to produce a more balanced sign layout. For example a two-panel sign might have one arrow pointing downwards at 45° to the left and the other arrow pointing upwards at 45° to the right. Showing the right turn above the left turn would, in this case, improve the appearance of the sign, as shown in [Figure 4-10](#). In rare cases where the order of destinations might lead to an association with direction of travel on a dual carriageway, a map-type sign may be more appropriate.

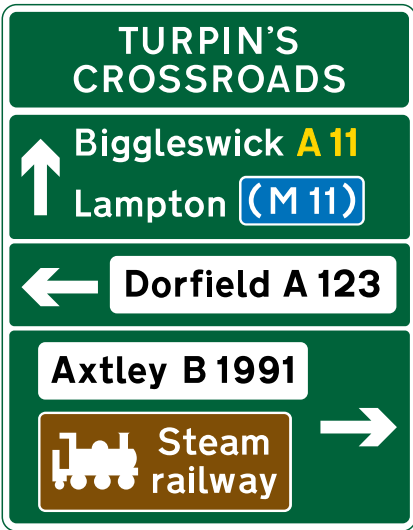
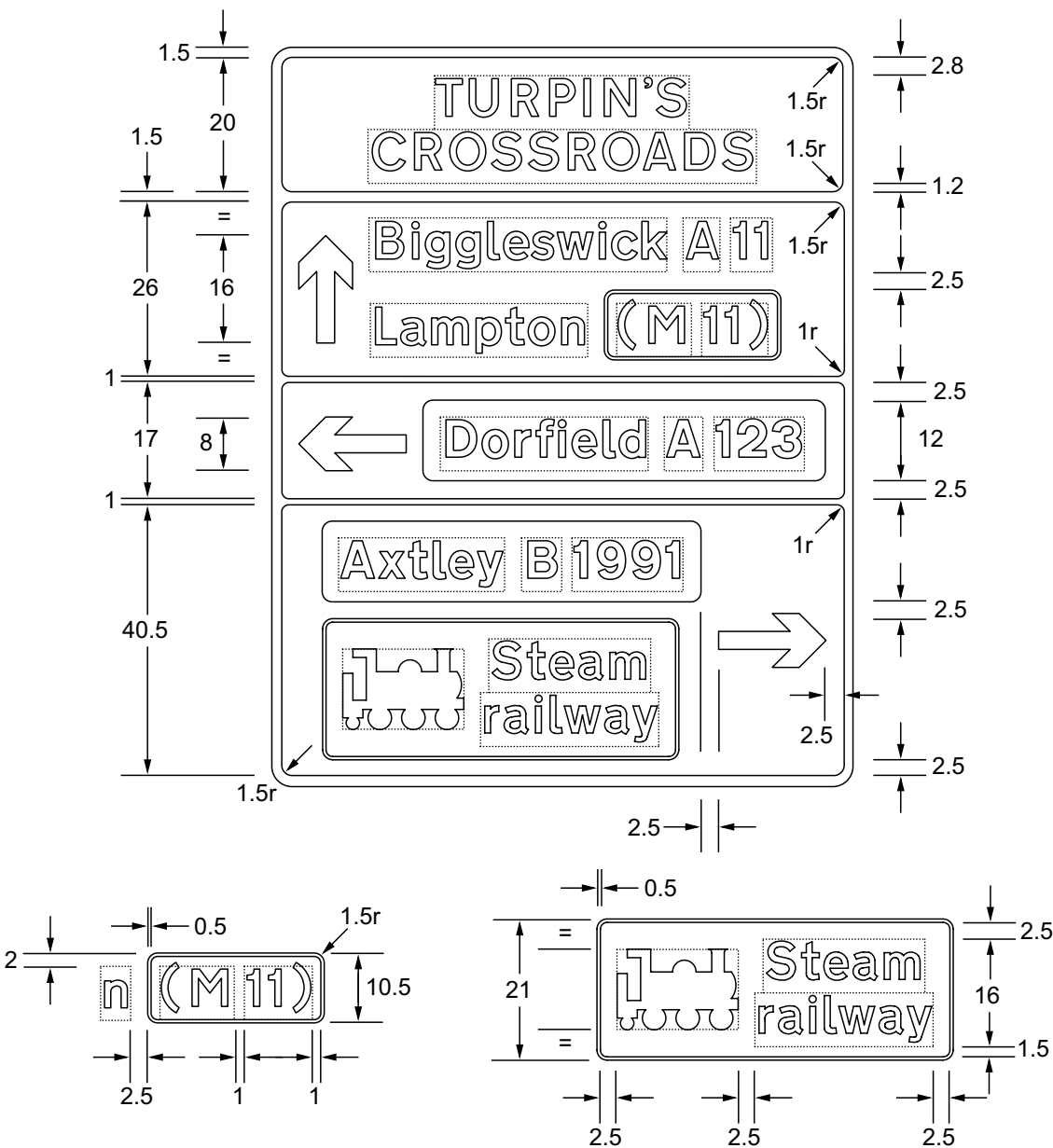


Figure 4-9

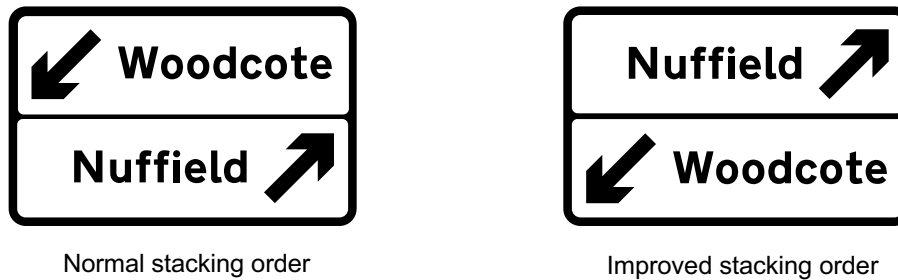


Figure 4-10

4.3.5. For the design of the sign illustrated in [Figure 4-9](#) the points to consider are:-

- “Biggleswick” and “Lampton” are two different blocks, being associated with different route numbers. As the “M11” patch is directly below the “A11” tiles, the appropriate block spacing of 2.5 sw is chosen (see [3.7.4](#)) and this is measured to the outside border of the patch. The “M11” patch rather than the tiled legend “Lampton” determines the space to the lower panel divider. The arrow is centred vertically on the sign panel.
- The width of the sign is determined by the left turn destination. The ahead destinations are ranged left and positioned on the left hand side of the sign panel so that the vertical arrow is 2.5 sw from the left hand border. The right turn destinations are ranged left and positioned on the right hand side of the sign panel so that the horizontal arrow is 2.5 sw from the right hand border.

4.3.6. [Figure 4-11](#) illustrates additional features to consider when designing stack-type signs. These are:-

- Where distances are shown in a list of destinations they are centred above each other. The minimum horizontal space between any place name (or route number) and a distance on either the same line, the line immediately above or the line immediately below is 7 sw. As the “(A1(M))” patch is in this case a destination rather than a route number (i.e. it has no associated place name), a distance may be shown on the same line. Where a destination includes a place name, a route number and a distance, the route number must be shown on a separate line, e.g. “Millington Green (A 4011)”. Mileage tiles on adjacent lines may overlap horizontally (e.g. “10” and “2½”). Where more than one distance is 10 miles or greater, the “tens” column is centred in the same way as the “units” column. This may result in a gap between some tiles making up a distance of two figures. The “3” in the lower sign panel is shown as being on the same centre line as the numerals in the upper sign panel. This is optional, and is recommended only where the shortest horizontal space between the destination and distance in any one sign panel does not extend too far beyond 7 sw. The effect on the overall appearance of the sign should be the deciding factor. See [3.9](#) for use of distances.
- Fractions are not used for distances greater than 3 miles (see [3.9.3](#)).
- Destinations are generally ranged left. However, where a destination of two or more words, such as “Millington Green”, is placed on two lines, these are centred horizontally.
- Where a motorway number is in the form “A1(M)”, the gap between the last numeral and the bracket before the “M” is 1 sw. When this motorway number is bracketed (i.e. “(A1(M))”) the tiles of the two adjacent closing brackets are butted together.
- The “g” tile of “Elkington” is horizontally within 2.5 sw of the “(A 41)” patch and hence the vertical gap (line spacing) is 1 sw (see [3.7.3](#)).

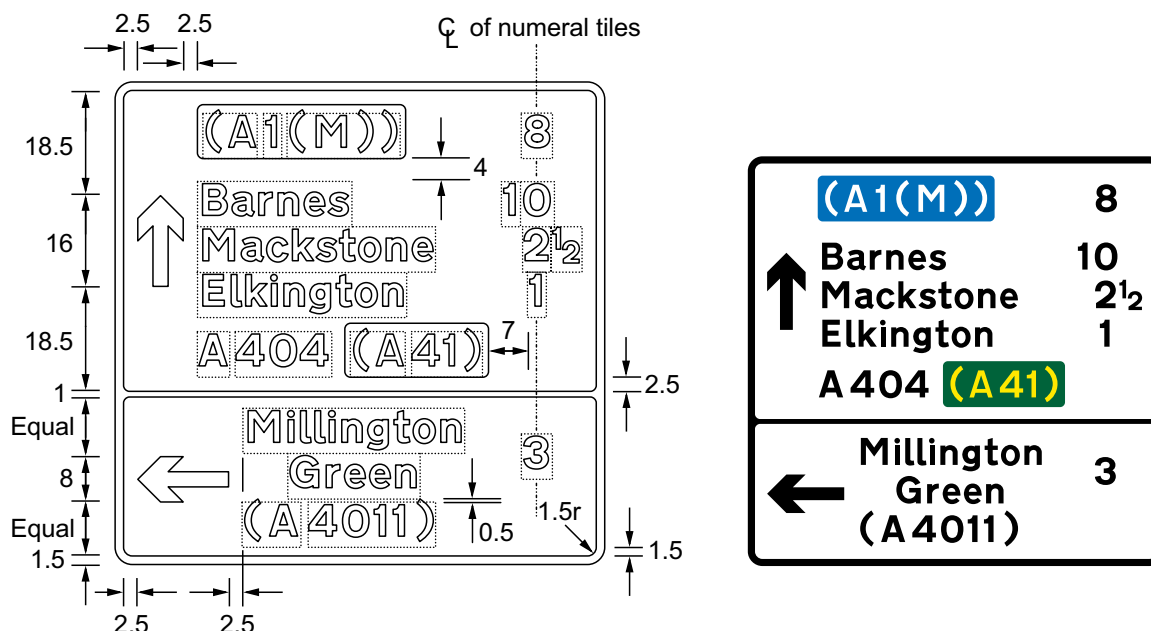


Figure 4-11

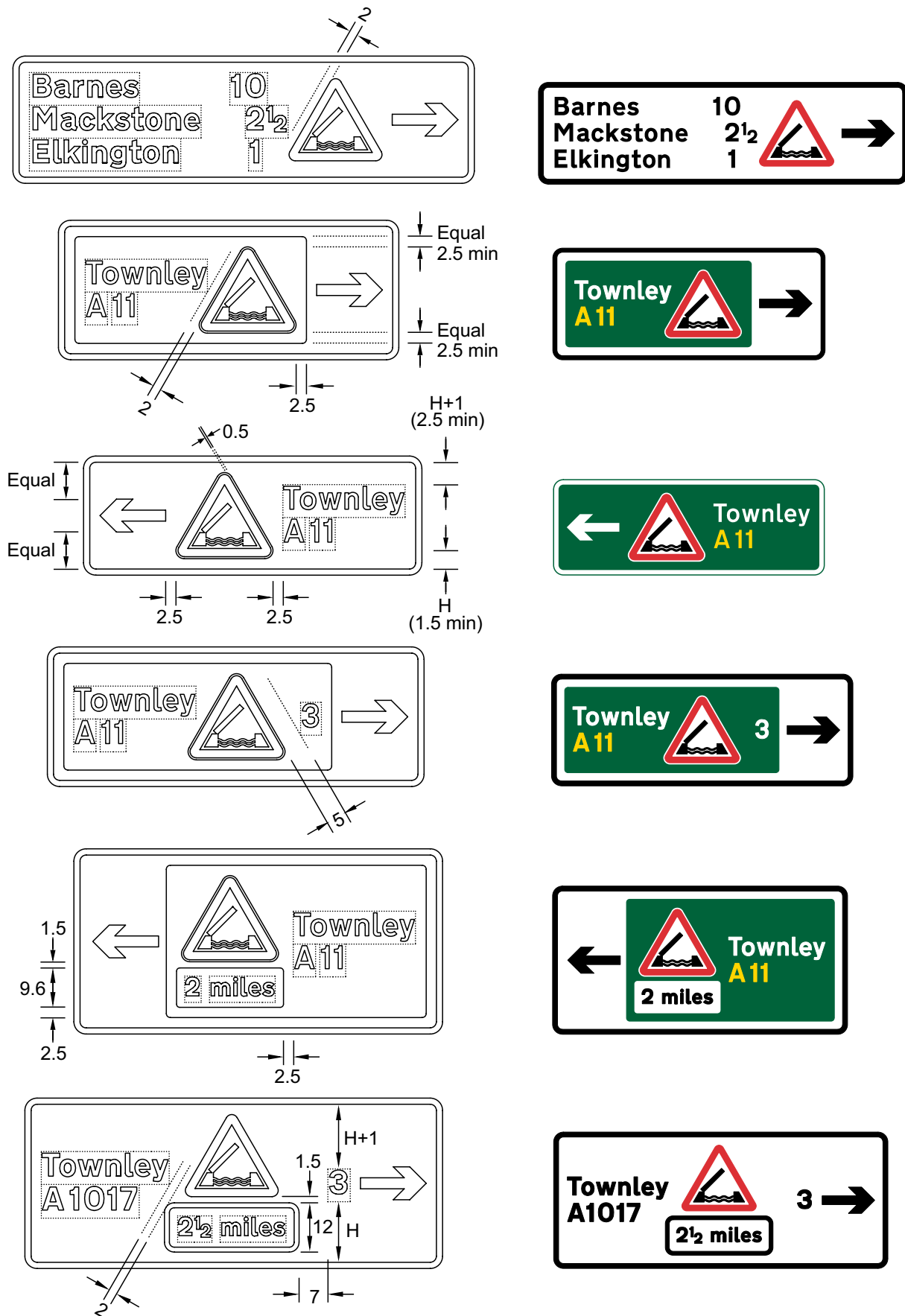
4.4 Triangular warning symbols on stack-type signs

4.4.1. Figure 4-12 shows how triangular warning symbols prescribed in the S12-20 sign table are added to stack-type signs. The triangle is always placed on the same side of the legend as the arrow. Where the sign has a dark green, blue or brown background, a white edge is added to the outside of the triangle. The heights of the triangles (excluding any white edges) are specified in the Regulations (see 3.4). A distance plate (S12-20-44) may be added below the triangle, as shown in Figure 4-12. The plate is designed as a normal sign and then reduced to 80% of its size. Thus if the x-height of the main sign is 100 mm, the x-height of the plate will be 80 mm. Where the plate is placed on a dark green, blue or brown background the border is omitted, the corner radii remaining at 1.5 sw based on the plate x-height (i.e. 1.2 sw based on the x-height of the main sign).

4.4.2. Where a destination is shown on a panel, the warning triangle is also included in that panel.

4.4.3. Where a destination is indicated to the right, any distance is generally placed to the right of the warning triangle. However, where more than one destination is shown, the clarity of the sign is improved by placing the distances to the left of the triangle, as shown in the top diagram of Figure 4-12.

4.4.4. On some stack-type signs it may be desirable to show two warning triangles as shown in Figure 4-13. Where these would normally have different heights (see 3.4), the larger height must be used for both triangles (S12-19-6 requires that two or more symbols must be of the same size as the largest symbol). Where the two hazards occur together, any distance plate should be centred horizontally beneath the two triangles. Where two triangular symbols indicate hazards at different locations, any distance plate should be associated with the appropriate sign. Where this would result in the two triangles being further apart than 6 stroke widths it is strongly recommended that the triangles be omitted from the sign and separate signing used to indicate the hazards.



Distance plates are designed as normal signs and then reduced to 80% of their size.
All dimensions are in stroke widths based on the main x-height.

Figure 4-12

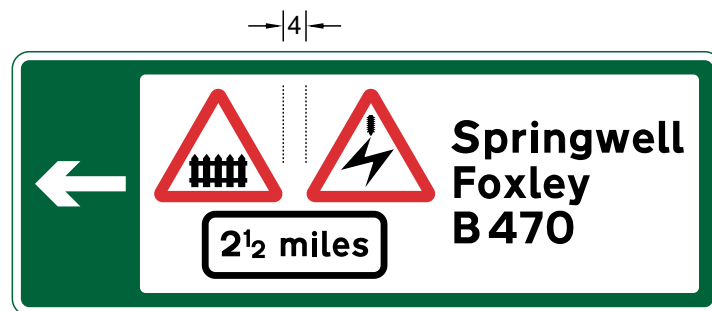


Figure 4-13

4.4.5. The dimensions relating to the various gaps apply equally to plates with and without borders and to triangles with and without white edges. The gap is measured to the outside of any border or edge provided.

4.5 Regulatory signs on stack-type signs

4.5.1. [Figure 4-14](#) and [Figure 4-15](#) show how regulatory roundel symbols prescribed in S12-20 are added to stack-type signs. It should be noted that certain symbols are prescribed for use only on map-type signs (S12-19-10). The roundel is always placed on the same side of the legend as the arrow. Where the sign has a dark green, blue or brown background a white edge is added to the outside of the roundel. The diameters of the roundels (excluding any white edges) are specified in the Regulations (see [3.4](#)). A plate (S12-20-44) indicating the distance from the junction to the restriction should always be used unless the restriction indicated commences at the junction. The design of the plate is the same as described for distance plates in [4.4.1](#). Where the plate is placed on a dark green, blue or brown background the border is omitted.

4.5.2. Where a destination is shown on a panel, the roundel and any plate is also included in that panel.

4.5.3. [Figure 4-15](#) includes the alternative route message, the design of which is detailed in [3.10](#).

4.5.4. Two roundels may be shown in a similar manner as described for warning triangles in [4.4.4](#). An example is shown in [Figure 4-16](#).

4.5.5. Where a destination is indicated to the right, any distance is generally placed to the right of the regulatory roundel. However, where more than one destination is shown, the clarity of the sign is improved by placing the distances between the place names and the roundel, as shown in [Figure 4-15](#).

4.5.6. The dimensions relating to the various gaps apply equally to plates with and without borders and to roundels with and without white edges. The gap is measured to the outside of any border or edge provided.

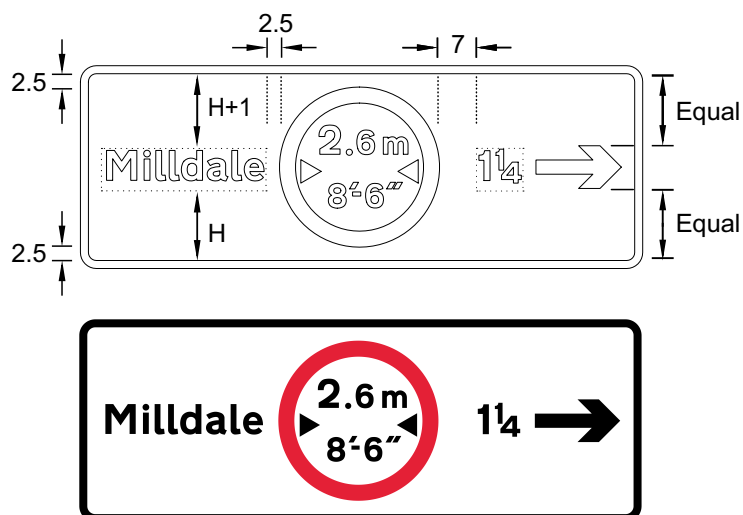
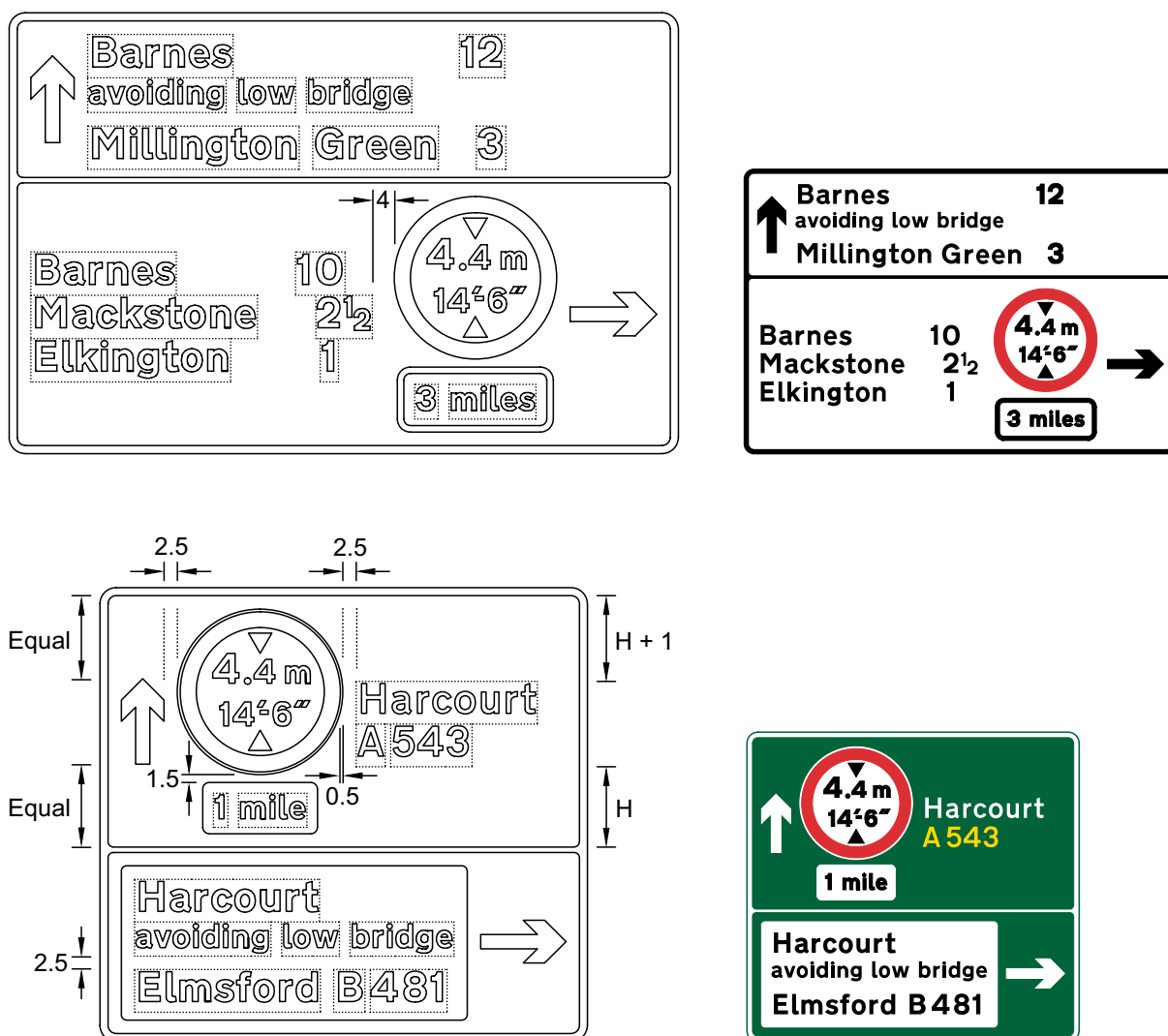


Figure 4-14



All dimensions are in stroke widths based on the main x-height

NOTE

"1 mile" and "avoiding low bridge" have an x-height equal to 80% of the main x-height. The "1 mile" plate is designed in accordance with the normal design rules appropriate to its reduced x-height.

Figure 4-15

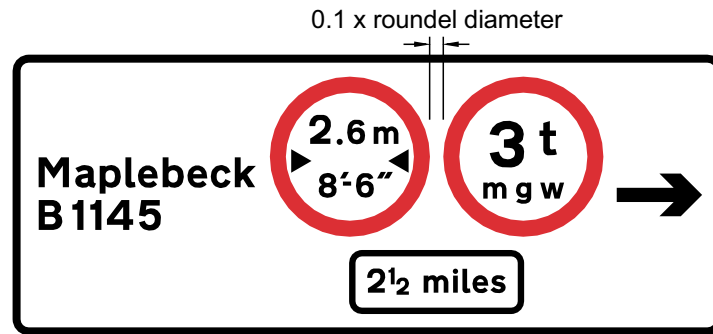


Figure 4-16

4.6 Regulatory and warning symbols associated with the same destination

4.6.1. There may be occasions where it is required to show both a regulatory and a triangular warning symbol on the same directional panel. An example is shown in [Figure 4-17](#). The diameter of the roundel and the height of the triangle must both be the same, based on the size of the larger sign as listed in the Regulations (see [3.4](#)).

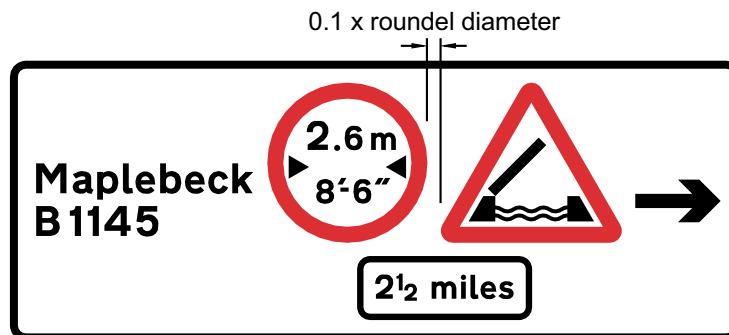


Figure 4-17

5.1 General design considerations

5.1.1. The geometric layout of the junction will, in general, determine the design of a map-type sign, but there is flexibility in adjusting the shape of the route symbol and in the positioning of destination blocks and panels. Some designs may be more pleasing in appearance or more economical than others and in many cases can improve the clarity of the sign. Route symbols are prescribed by the S12-7-1 basic symbol that may be varied to indicate the junction layout and S12-7-2 to 11 show symbols for specific use. The Regulations permit map-type signs that relate entirely to tourist/leisure destinations or to lorry routes (using white symbols), or MoD establishments (using red symbols). See [Figure 11-9](#) to [Figure 11-13](#) for illustrations of alternative layouts for a selection of signs.

5.1.2. More examples of complete map-type signs are in [Appendix F](#).

5.2 Width of route arms

5.2.1. The width of each route arm on map-type signs is related to the status of the route and is specified in the Regulations in S12-7. 6 sw must be used for primary routes and motorways, and 4 sw or 2.5 sw for non-primary routes. 4 sw should generally be used for numbered routes and other roads of traffic importance. 2.5 sw should be used to indicate minor rural roads or local urban roads that are not intended for through traffic. An example of a sign showing various route arm widths is shown in [Figure 5-1](#). A special width of 5 sw is used for all routes indicated on a grade separated junction advance direction sign (see [Figure 5-11](#)). A width of 5 sw is also used for the approach arm on the special map-type roundabout sign located on the exit slip road at a grade separated junction (see [Figure 5-24](#)).

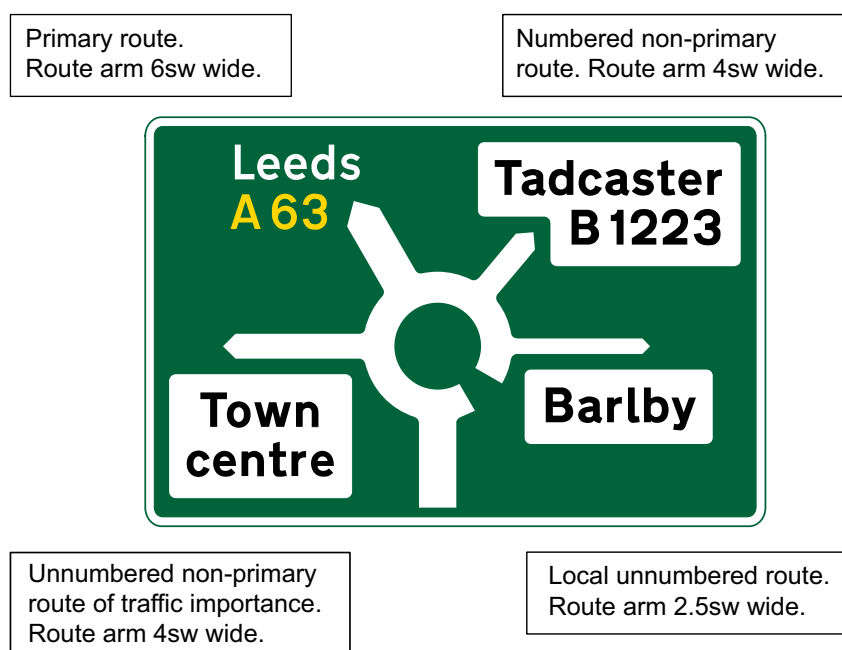


Figure 5-1

5.3 Vertical and horizontal route arms

5.3.1. The appropriate spacings between different types of legend (tiles or panels) and the vertical and horizontal route arms are shown in **Figure 5-2**. The horizontal gaps measured to the vertical route arm are minimum values. The exact dimension will depend on the overall design of a particular sign.

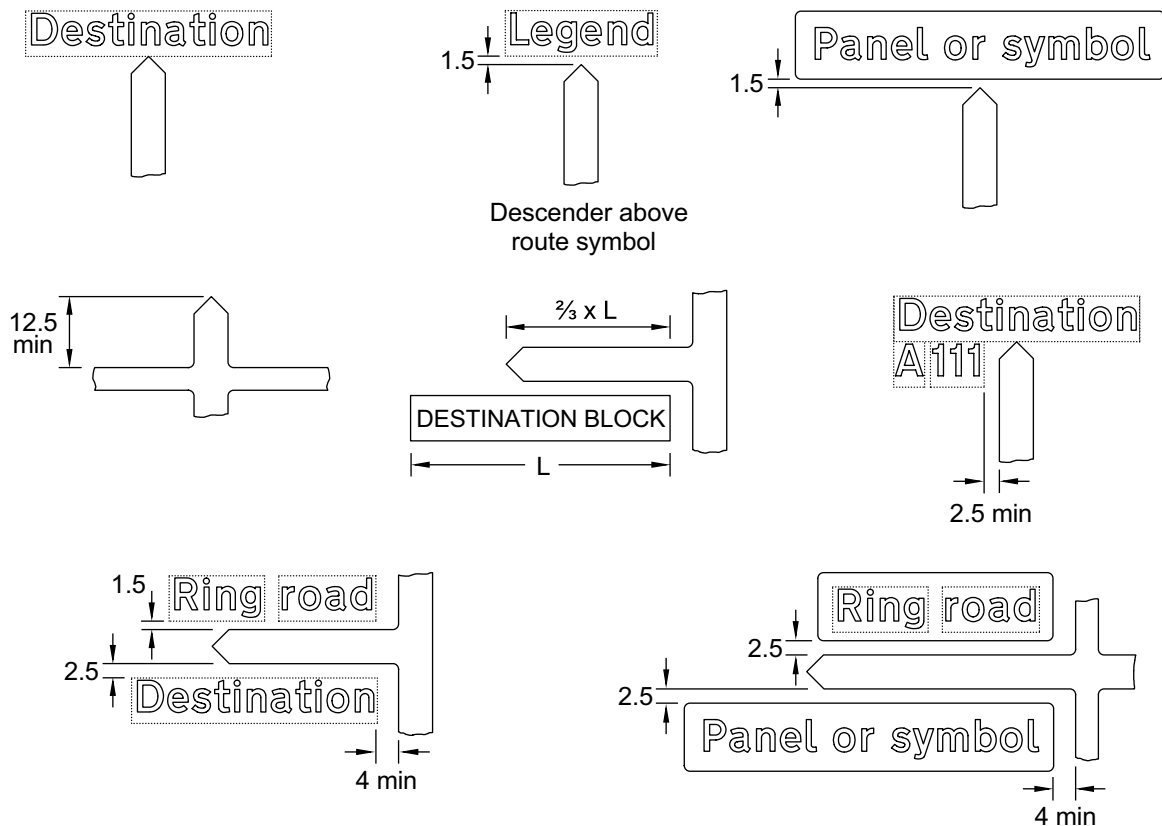


Figure 5-2

5.3.2. Where a tiled legend with a descender is placed over a vertical route arm, the vertical gap can be reduced to zero when the descender tile is at least 2.5 sw horizontally from the nearest vertical face of the arm. This also applies where there is a patch or symbol on the same line as the tiled legend.

5.3.3. The minimum length of a vertical route arm is 12.5 sw. This is to ensure the correct spacing between the forward destination and the horizontal route arm (see **5.7.5**).

5.3.4. The horizontal route arm extends to a point two thirds along the length of the destination block (tiles or panel) as shown in **Figure 5-2**. The measurement should be based on the longest block associated with a particular direction, but see **5.9.10**, **5.16.4**, **5.17.4** and **11.4.7** for exceptions.

5.3.5. Where a map-type sign indicates destinations both to the left and to the right, the vertical route symbol will generally be in the central part of the sign. The associated destination block will be centred horizontally above the route symbol. Where destinations are indicated to the left or to the right, but not in both directions, the vertical route symbol will be placed adjacent to the appropriate side border. **Figure 5-3** shows the appropriate dimensions for positioning the route symbol and the associated forward destination block. When the route symbol is on the right hand side of the sign, it may be possible to tuck the symbol into a multi-line legend as shown.

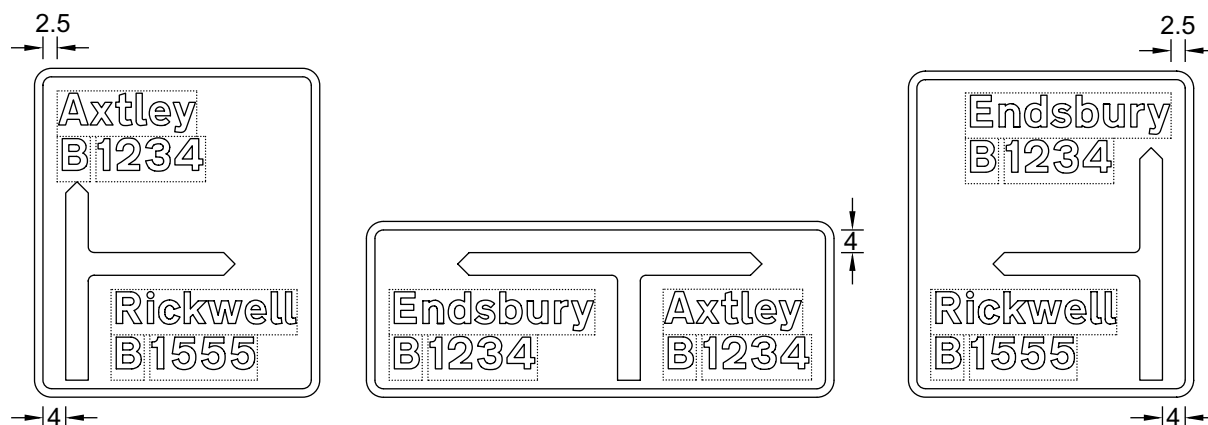


Figure 5-3

5.4 Inclined route arms

5.4.1. In most cases the vertical or horizontal space between an inclined route arm and any type of legend is 2.5 sw. This is reduced to 1.5 sw when a tiled legend is placed directly above the route arm. Examples are given in [Figure 5-4](#).

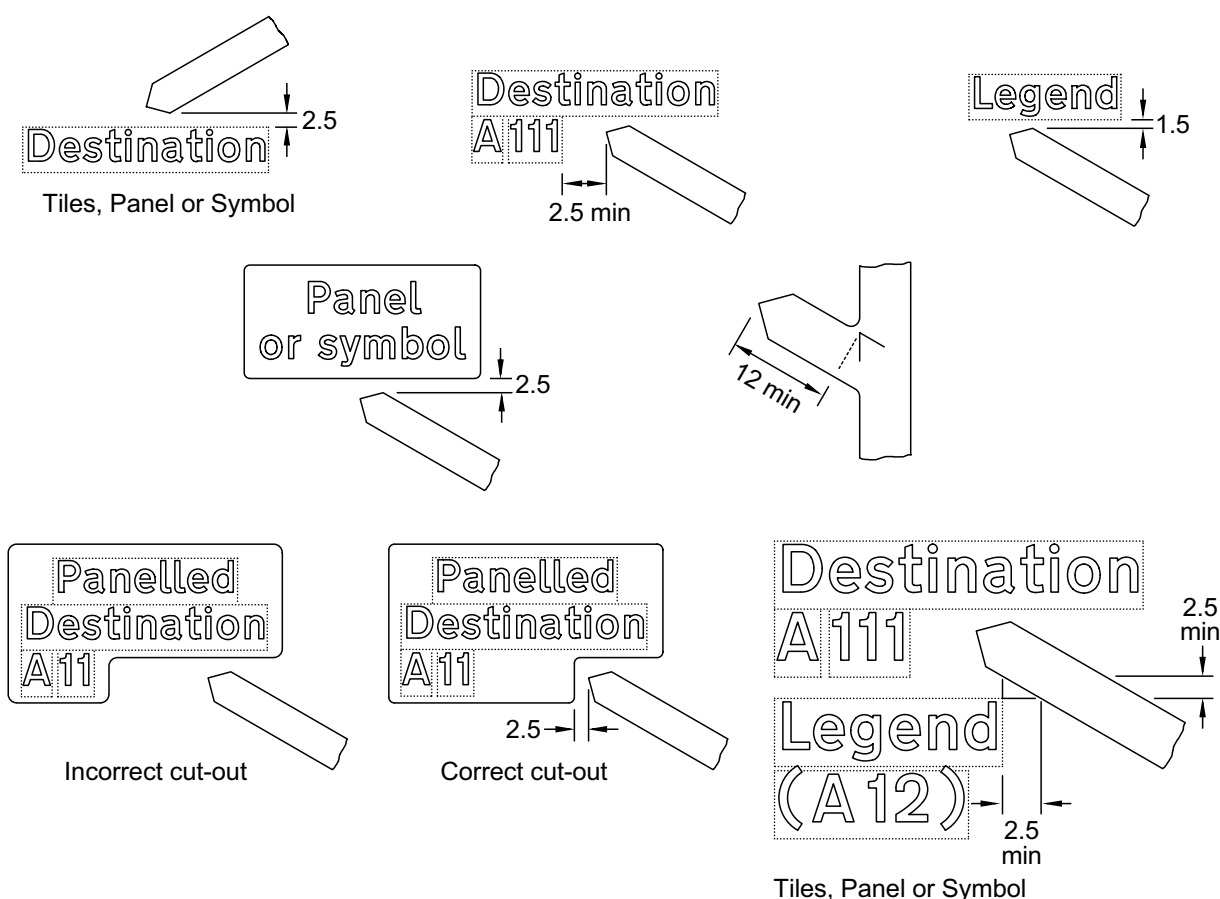


Figure 5-4

5.4.2. With some arrangements it may be possible to tuck the route arm into the legend. For an upward pointing route arm less than 15° from the vertical, the dimensions associated with a vertical arm may be adopted.

5.4.3. Where a panel has a cut-out, this must only be sufficient to allow the route arm to tuck in. The outer edge of the panel will not necessarily follow the outline of the tiled legend.

5.4.4. The minimum length of route arm is 12 sw measured along the shortest side, as shown in [Figure 5-4](#). This does not apply to the side arm of the grade separated junction symbol, which has a minimum length of 24 sw measured along the centre line (see [Figure 5-11](#)).

5.5 Design of route symbol stubs

5.5.1. Where no destinations are indicated in a particular direction, a stub replaces the full length route arm (S12-7-6). The length of the stub is generally equal to its width, which in turn will depend on the status of the route (see [5.2.1](#)). [Figure 5-5](#) details the dimensions of the stub and includes the relevant spacing to legend and border. See [5.19.1](#) for the design of stubs which include the “no through road” symbol.

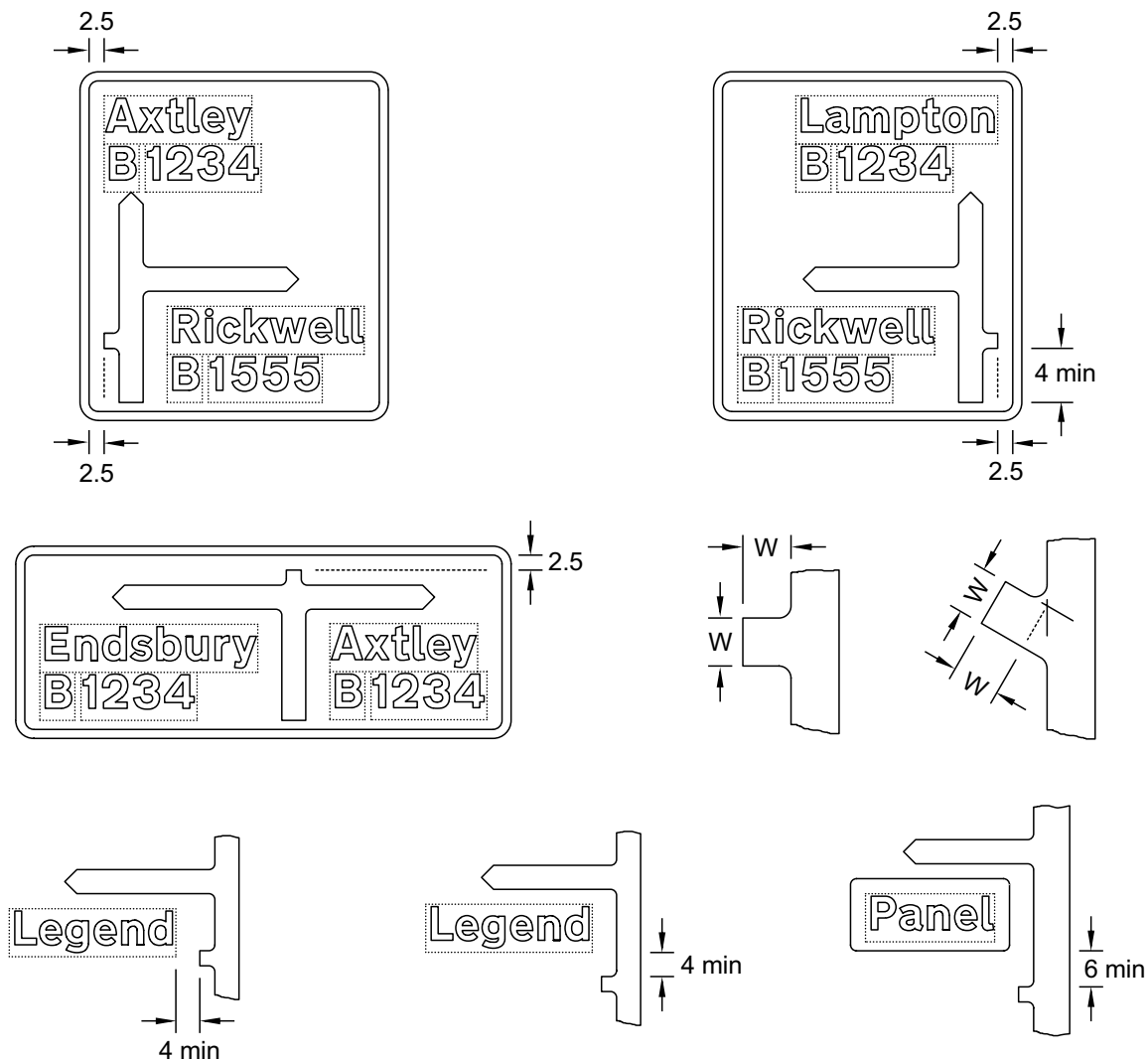


Figure 5-5

5.6 Unrelated blocks

5.6.1. On a map-type sign, destinations associated with different routes leading from a junction ahead are known as unrelated blocks. It is important that these blocks are properly positioned on the sign so that there is no confusion in associating each block with the correct route symbol.

5.6.2. Where one block is directly above another, the vertical space between them should be a minimum of 12 sw. If the upper block is a panel or contains a patch or symbol on the bottom line, then the vertical space is increased to 14 sw. This is to take account of the 2 sw space at the bottom of a tiled legend (i.e. when the upper block is tiled, the actual space between the lower block and the bottom of the letters of the upper block, ignoring descenders, is 14 sw).

5.6.3. Where two blocks are alongside each other, the horizontal space between them should be a minimum of 12 sw for all types of legend.

5.6.4. Where a block is above and to one side of another block, it should be positioned as shown in **Figure 5-6**.

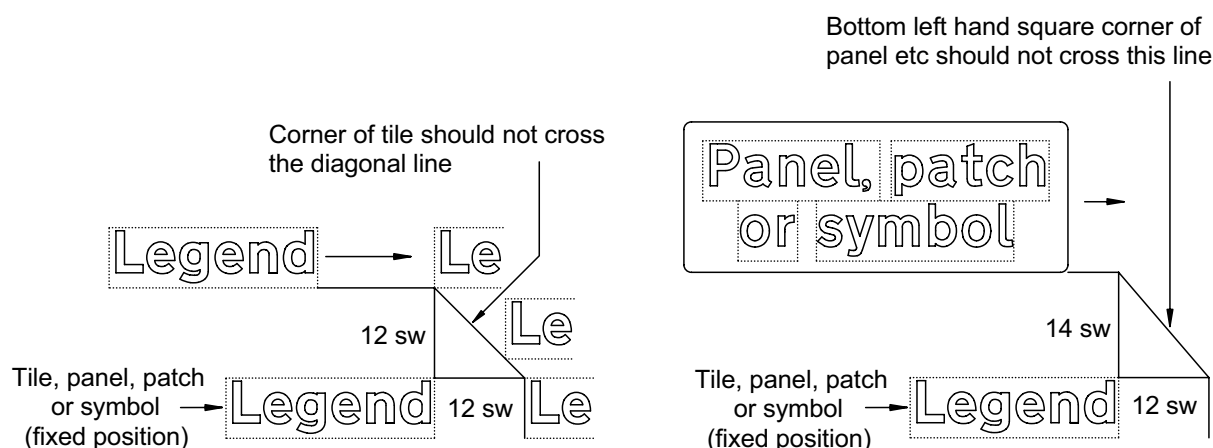


Figure 5-6

5.7 Design of a map-type advance direction sign

5.7.1. The design of a complete map-type sign is shown in **Figure 5-7**, in the form of a working drawing.

5.7.2. The base of the approach arm of the route symbol for all map-type signs is 1.5 sw from the bottom border. Where the approach arm is curved (e.g. junction on a bend), there should be a vertical section, with a minimum length equal to the width of the arm, before the start of the curve.

5.7.3. Where two route arms join, there is a fillet of 1 sw radius.

5.7.4. The horizontal route arm extends to a point two thirds along the length of the legend block, as shown in **Figure 5-2**. The measurement is always based on the longest block associated with a particular direction. Where a particular route has no associated destinations, the route arm is either replaced by a square ended stub that has a length equal to its width (see **Figure 5-5**) or, if appropriate, shown as a “no through road” (see **5.19.1**).

5.7.5. The minimum vertical distance between the horizontal route arm and the forward legend above is 12 sw for tiles and 14 sw for panels, patches and symbols. The gap is larger for panels than for tiles, to take account of the 2 sw space between the letters and the bottom of the tiles. For simplicity, the minimum length of the forward arm should be taken as 12.5 sw. This gives 14 sw between the horizontal route arm and any panel or patch above (12.5 sw route arm length plus 1.5 sw gap from the route arm to the panel). Where tiles are placed directly on the route arm, the vertical distance will be 12.5 sw rather than 12 sw. However, some designs allow a line of legend to be placed alongside the vertical route arm (see **Figure 5-8**). In this case the minimum distance of 12 sw between legend tiles and horizontal route arm should be used.

5.7.6. For the design of the sign illustrated in **Figure 5-7** the points to consider are:

- “Biggleswick” and “Lampton” are two different blocks, being associated with different route numbers. As the “M11” patch is directly below the “A11” tiles, the appropriate block spacing of 2.5 sw is chosen, measured to the outside border of the patch.
- The width of the sign and the position of the vertical route arm are both determined by the left and right turn destinations.

- c) The longest ahead destination is centred horizontally over the vertical route arm and the other destination ranged left. (Note: all destinations associated with the same route are generally ranged left.) The centring rule applies only where there are side destinations both to the left and to the right (see 5.3.5).

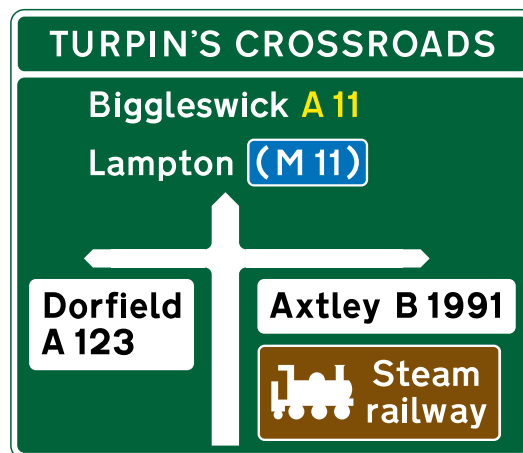
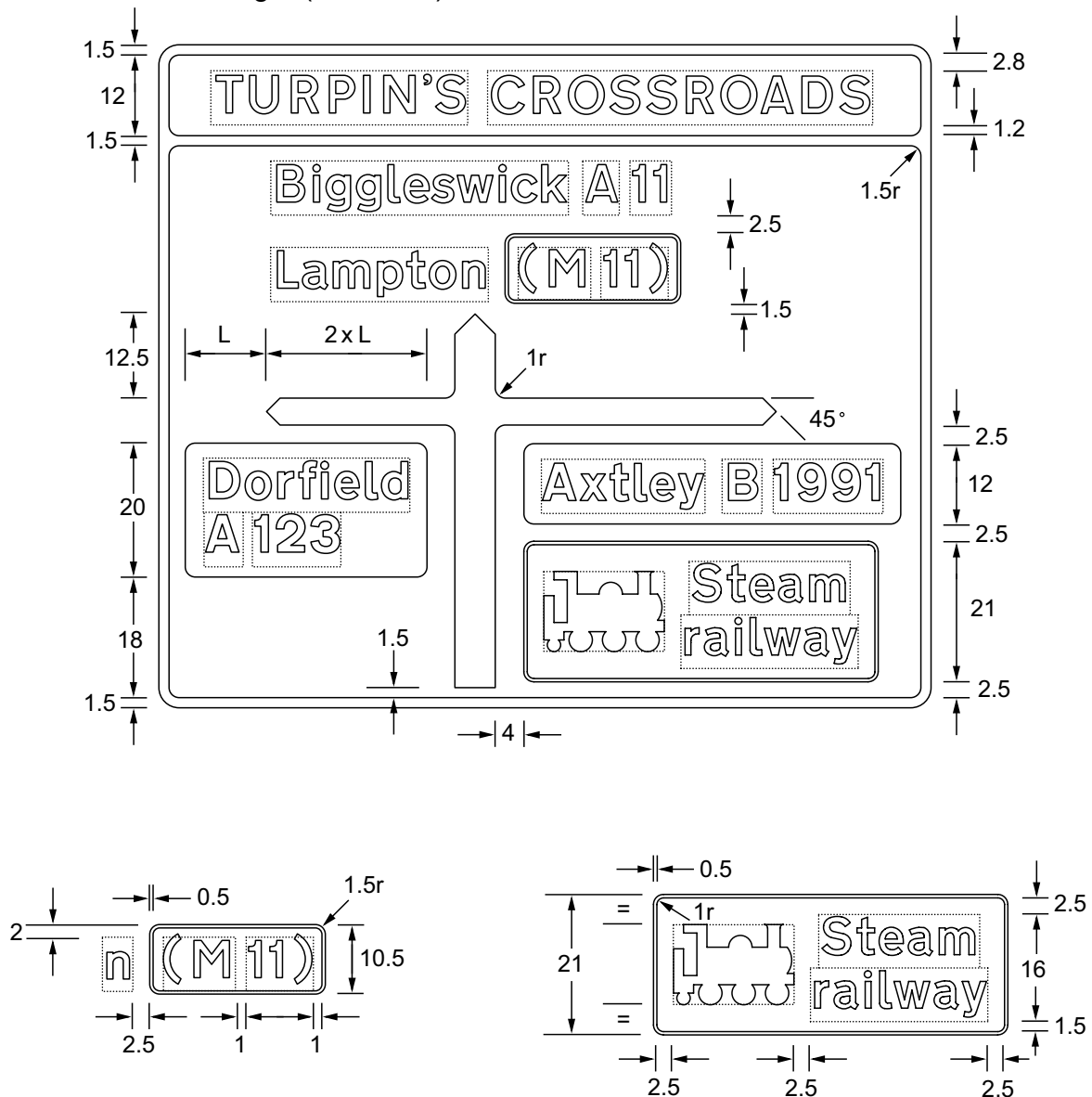


Figure 5-7

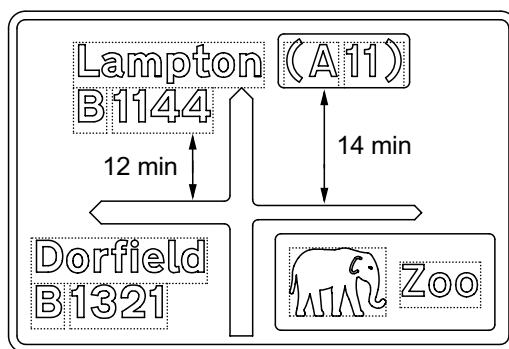


Figure 5-8

- d) As the “M11” patch is within 2.5 sw horizontally of the right hand edge of the vertical route arm, it is placed 1.5 sw above the point of the arm. Had the patch been more than 2.5 sw from the arm, it would have been possible to have extended the arm to touch the tiles above. However, it would not have been possible to lower the legend block to touch the symbol (thus reducing the overall height of the sign) since the resulting gap between the “M11” patch and the horizontal route arm would then be less than 14 sw.
- e) The pointed end of the right hand route arm will be two thirds along the “Axtley” panel, which is the longest destination associated with the right turn.
- f) The side turn route arms are both 4 sw wide because they indicate numbered non-primary routes.
- g) a junction name (as shown) or a place name may be added at the top of the sign in accordance with 3.11. Where there is more than one sign on the approach to a junction, it is sufficient to provide the name on the first sign only.

5.7.7. Figure 5-9 illustrates the additional design features to consider when designing a sign. The following should be noted:

- a) The symbol for the through route is curved to reflect the alignment of the junction. This enables the inclined route arm to tuck into the legend block. The “Springwell, Foxley” block, with the route number “B 470” repositioned alongside to the right, could have been placed over the route symbol, but this would have increased the overall height of the sign. The design as shown in **Figure 5-9** is not only more economical but also emphasises the change in direction at the junction. With this type of layout it is important that the ahead destination block is not too close to the bottom of the sign. It is better for this block to be positioned higher than any other blocks on the sign.
- b) “London (A 4)” is a separate block and the appropriate vertical space to the “Springwell” block is 4 sw (patch with tiles below). However, had the place name in the “London” block been longer, so that the left hand edge of the patch was horizontally 6 sw or more to the right of “Springwell”, it would have been possible to have reduced the block spacing to 2 sw (tiles with tiles below) in accordance with 3.7.6.

5.7.8. The layout of the route symbols should reflect the actual road layout at the junction. However, in many situations it will be appropriate to simplify the design. For example, where the side arm is, in reality, 94° to the vertical it is better to show this as 90° on the sign. Complicated junctions should be indicated on the sign in a manner which can be easily understood by the road user.

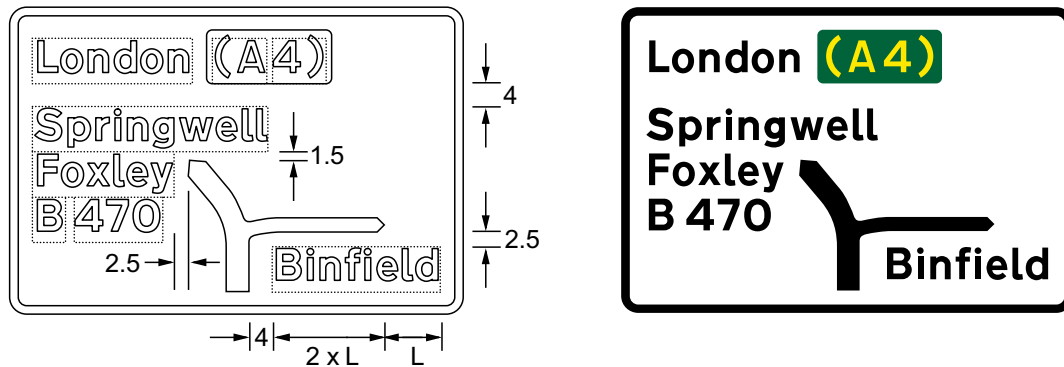


Figure 5-9

5.8 Major-minor priority junctions on dual carriageway roads

5.8.1. **Figure 5-10** shows various designs for route symbols indicating crossroads and staggered junctions on dual carriageways. One half of the staggered junction symbol can be used to indicate a single turning either to the left or to the right.

5.9 Design of map-type signs for grade separated junctions on all-purpose roads

5.9.1. **Figure 5-11** shows 2 signs that follow the general principles for map-type signs, but contain special features which are detailed below.

5.9.2. The route symbol (S12-7-9) is always 5 sw wide (both arms) irrespective of the status of the routes indicated.

5.9.3. The intersection point of the vertical arm and the lower edge of the side arm is 7 sw measured from the bottom of the vertical arm. The side arm is inclined at 60° to the vertical. Although permitted by the Regulations, there should be no changes to the overall shape of the symbol unless there are exceptional circumstances.

5.9.4. The minimum length of the side arm is 24 sw measured along its centre line from the left hand edge of the vertical arm. The vertical arm is always 4 sw from the right hand border, unless it incorporates a triangular warning sign or regulatory sign roundel (see 5.16.6).

5.9.5. Where advance direction signs do not include any forward destinations (see diagram A in **Figure 5-11**), the highest parts of the forward and side arm route symbols are always at the same level.

5.9.6. The side destination blocks may extend to the bottom of the sign, as shown in diagram B in **Figure 5-11**. Note that the legend “Woodfield” is more than 1.5 sw above the route arm. It is not appropriate to move the arm vertically to close this gap.

5.9.7. Where a sign includes forward destinations, as shown in diagram B in **Figure 5-11**, it should be designed so that the forward destination blocks are not further to the left than the side destination blocks. To achieve this it may be necessary to extend the length of the side arm.

5.9.8. The minimum vertical distance between the side destination block(s) and the forward destination block(s) is 12 sw. This is increased to 14 sw when the bottom line of the forward destination block is a panel or contains a patch or symbol directly above the top line of the side destination block (see 5.6.2).

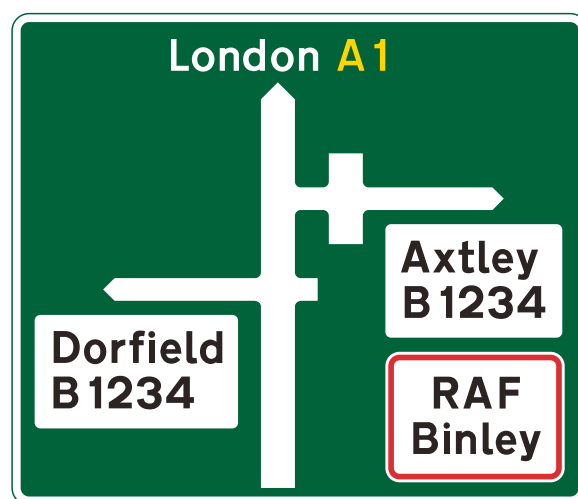
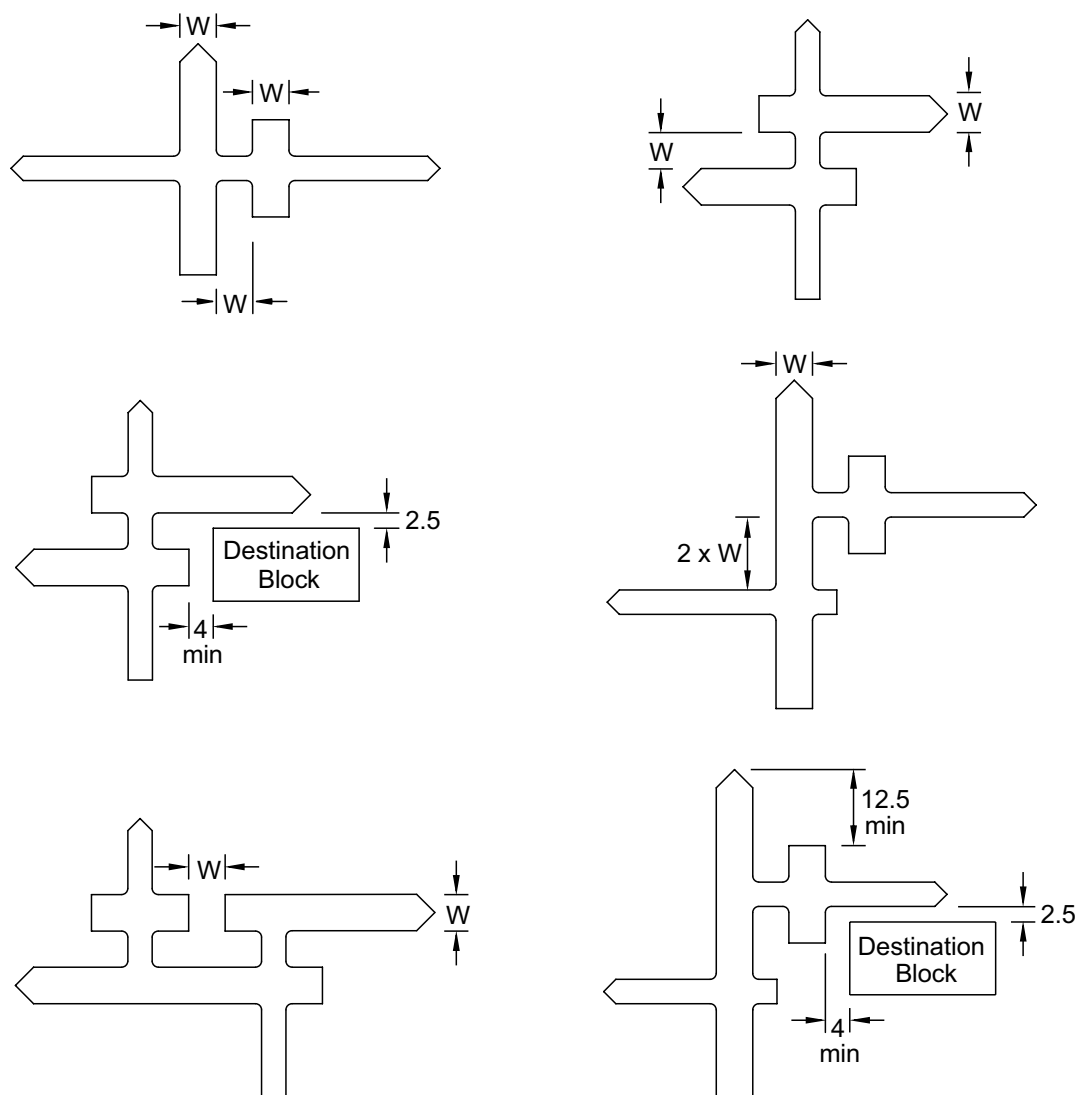


Figure 5-10

5.9.9. A junction name may be added to the top of the sign in accordance with 3.11. It is sufficient to provide the name on the first advance direction sign only. It is recommended that a place name is not substituted for the junction name unless this is also the name of the junction.

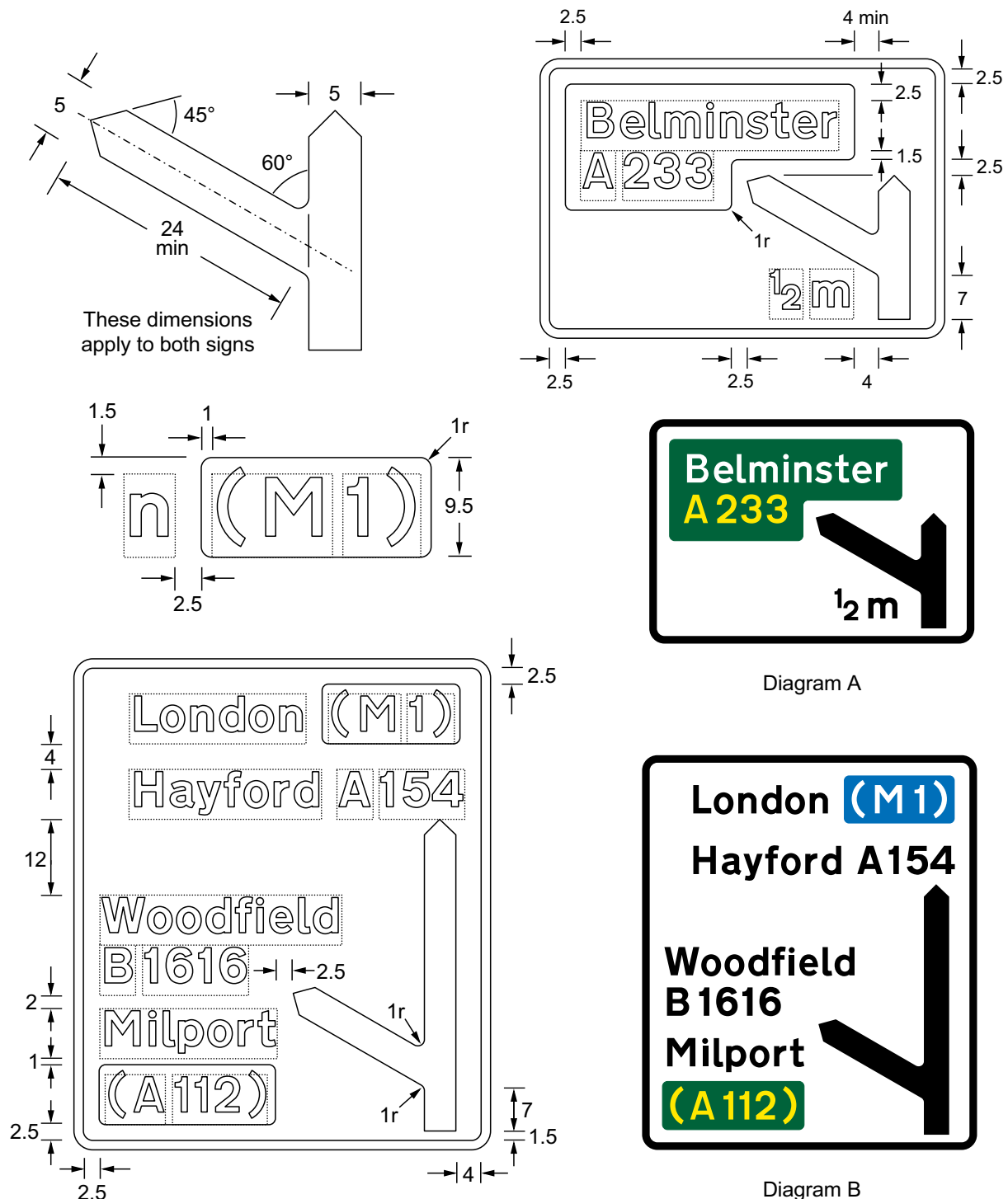
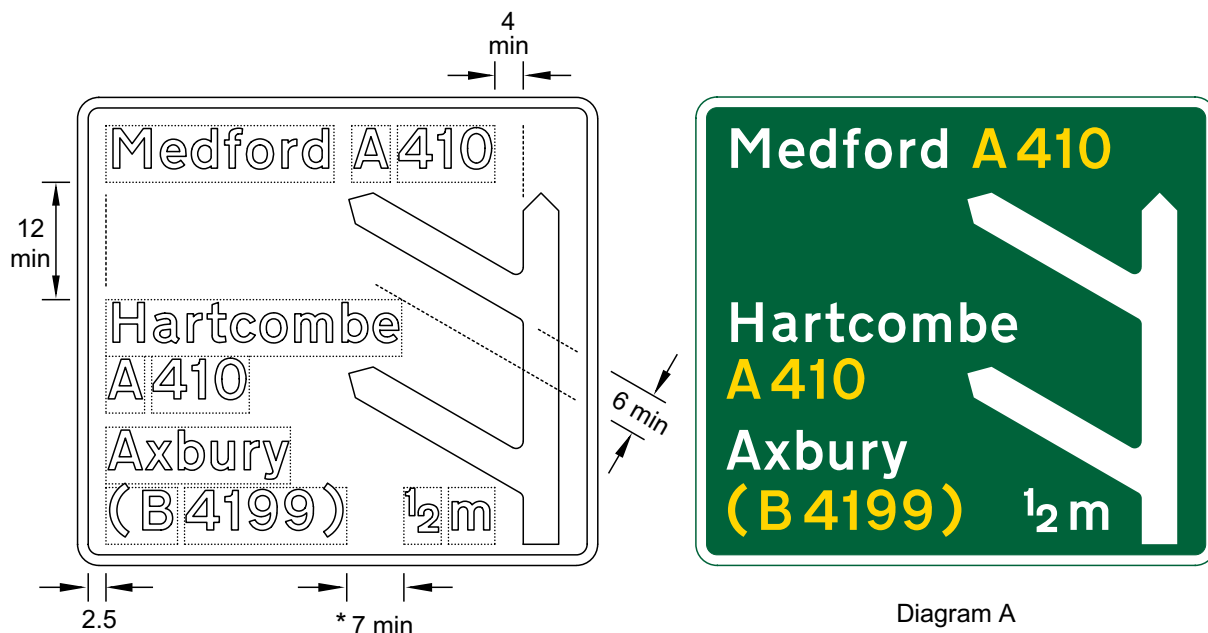


Figure 5-11

5.9.10. The distance to the junction, as shown in diagram A in Figure 5-11, may be 2 m, $1\frac{3}{4}$ m, $1\frac{2}{3}$ m, $1\frac{1}{2}$ m, $1\frac{1}{3}$ m, $1\frac{1}{4}$ m, 1 m, $\frac{3}{4}$ m, $\frac{2}{3}$ m, $\frac{1}{2}$ m or $\frac{1}{3}$ m (see 3.9.3). Any other distance will require special authorisation. Where a side destination is placed alongside the distance to the junction, there should be a minimum horizontal gap of 7 sw (see Figure 5-12). Distances to destinations should not be shown on grade separated junction signs as they could be confused with distances to the junction. Mileages are normally shown on route confirmatory signs provided after the junction. They may also be shown on advance direction signs on exit slip roads. The distance to the junction may be added to diagram B in Figure 5-11 where this is not the final advance direction sign.



* This dimension applies when destination block is alongside as shown or is less than 2 sw above the top of the distance tiles.

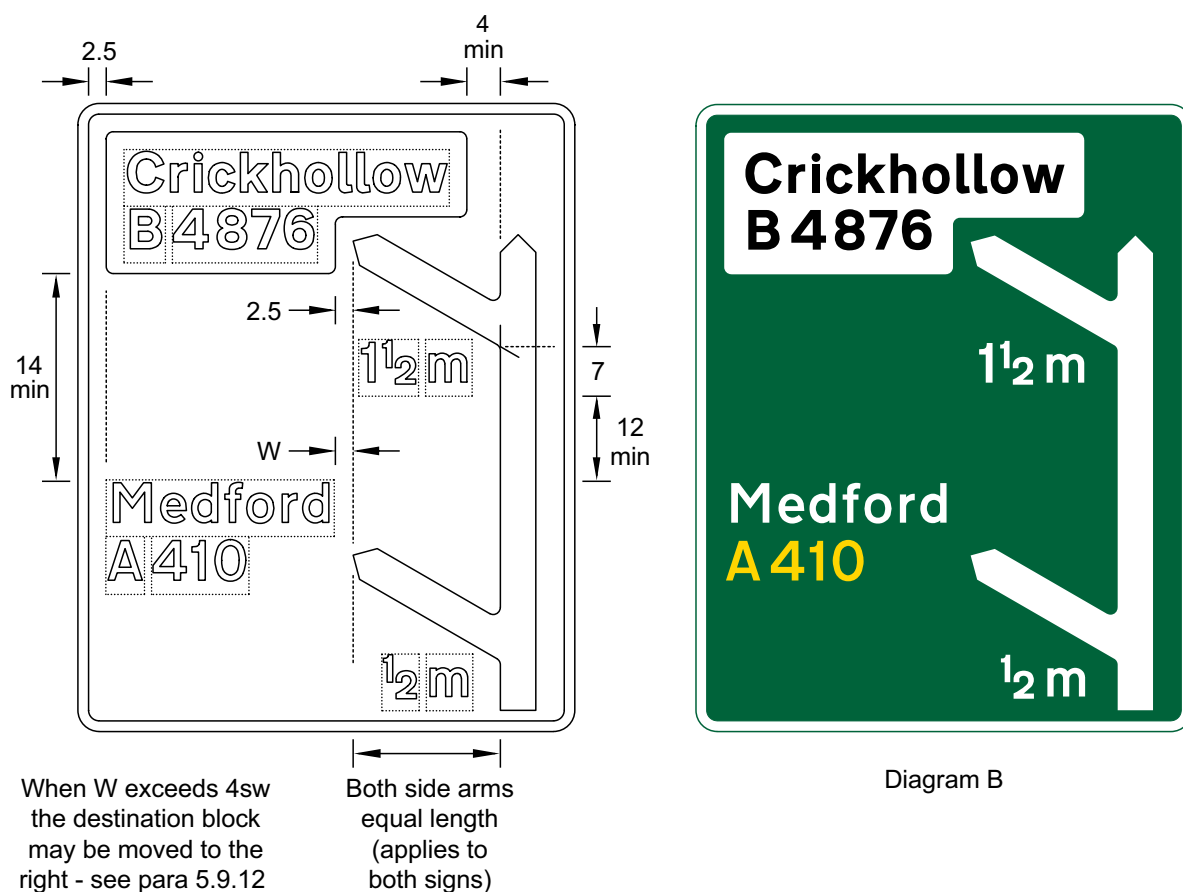


Figure 5-12

5.9.11. The distance to the junction may be included on advance direction signs on high speed roads. For example, on a busy dual carriageway where the numbered route turns left (or right) at a roundabout and drivers need to be in the correct lane, the $\frac{1}{2}$ mile roundabout ahead warning sign could be replaced by a map-type roundabout sign with the $\frac{1}{2}$ mile distance (this might be preferable in some situations to a dedicated lane sign and triangular warning signs).

5.9.12. Some junction layouts have two consecutive exit slip roads. It is possible that the two junctions are so close together that it is not practicable to sign each one separately. In this case a sign showing the distance to each junction is used. The additional design details for grade separated junction signs with two side arms are shown in diagrams A and B in **Figure 5-12**. Both side arms should be the same length and, where possible, all destination blocks should be ranged left. Where a block ranged left would be spaced more than 4 sw horizontally from its associated route arm, the block may be moved to the right to ensure that it is still associated with the arm. These signs should not include forward destinations. The final advance direction sign for the first exit slip road should be to diagram B in **Figure 5-11** (or primary route equivalent), with forward destinations that include those places reached by leaving at the second exit.

5.10 Map-type signs for normal roundabouts

5.10.1. **Figure 5-13** shows the basic design of the route symbol (S12-7-2) and the appropriate gaps to the sign borders. The roundabout itself always has a width of 5 sw, whatever the status of the routes at the junction. The approach and exit arms follow the normal design rules, except that the minimum length of any exit arm is 12 sw. The minimum length of the approach arm is 8.5 sw (there is no maximum length).

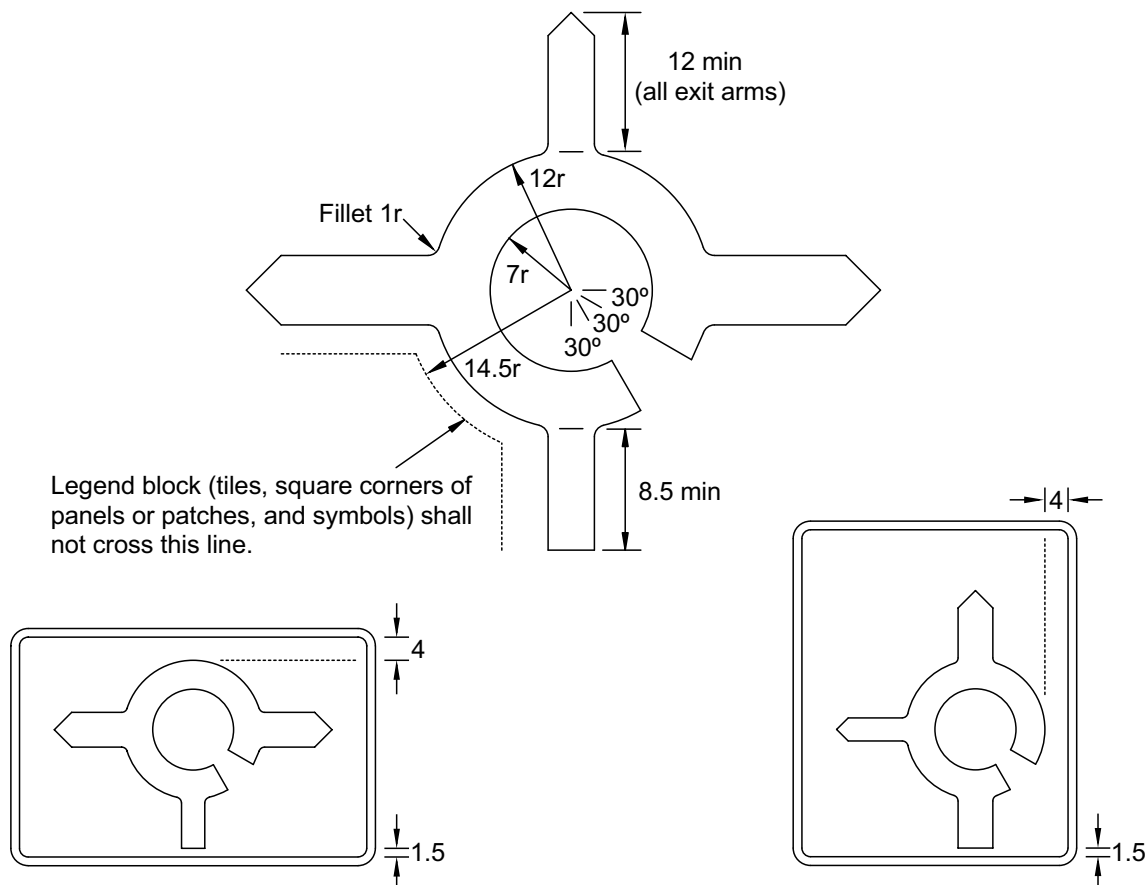


Figure 5-13

5.10.2. Where the right turn arm is below the horizontal, the cut-out in the roundabout symbol has to be adjusted. An example is shown in **Figure 5-14**. The recommended minimum angle for the cut-out is 25° . It may be necessary to move the approach arm to the left, as shown in **Figure 5-15**. The purpose of the cut-out is to emphasise that all traffic must travel in a clockwise direction.

5.10.3. Where a roundabout is offset from the main direction of travel, it may be appropriate to show a curved approach arm on the advance direction sign. An example is shown in **Figure 5-16**.

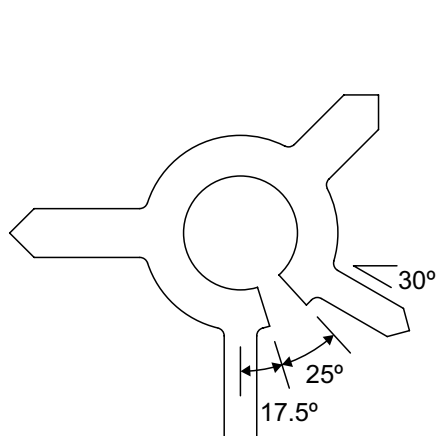


Figure 5-14

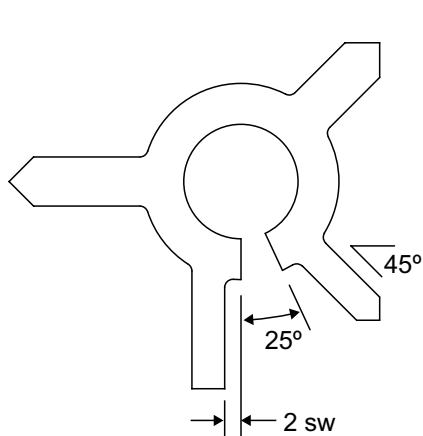


Figure 5-15

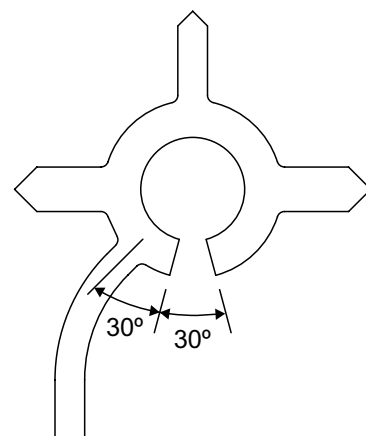


Figure 5-16

5.10.4. Where two normal roundabouts are close together, or form a single junction, a special symbol is used. This is shown in [Figure 5-17](#), together with typical variations in layout. It should be noted that the two roundabout symbols never touch each other and that the connector between them is always 5 sw wide, irrespective of the status of the various routes at the junction. The connector may be lengthened should this reflect the actual road geometry more accurately.

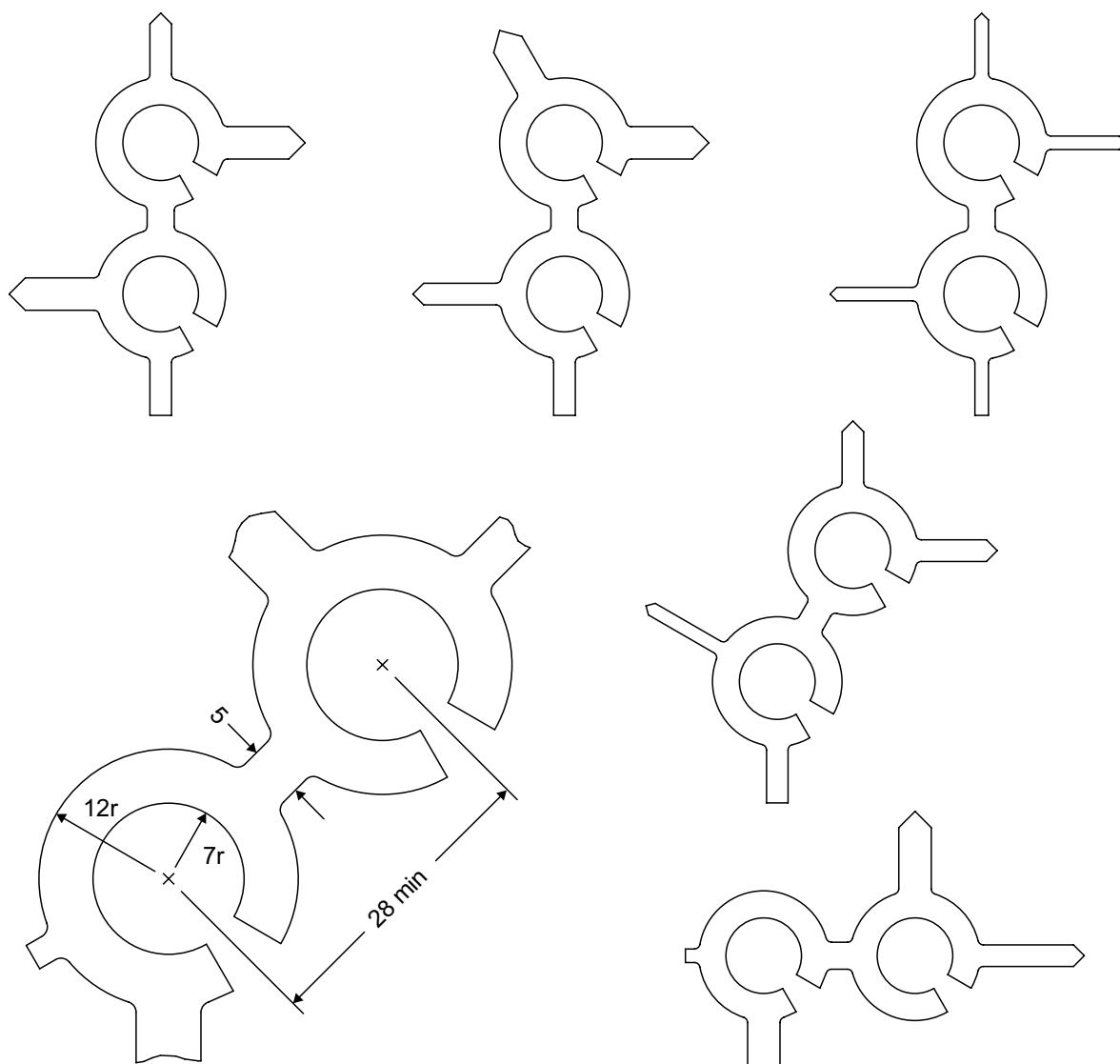


Figure 5-17

5.11 Map-type signs for roundabouts with priority left turn lanes

5.11.1. **Figure 5-18** shows the basic design of the route symbol (S12-7-3) which should be used where a priority lane is segregated from the roundabout either by ghost markings or by a solid island. The symbol design remains the same for both diverge / merge and lane drop / lane gain situations. The width of the priority lane is always 2.5 sw, regardless of the status of the route. The remainder of the roundabout symbol is designed in accordance with the details given in **5.10.1** and **5.10.2**.

5.11.2. The basic design is applicable to left turn route arms that are angled between 30° above the horizontal and 30° below the horizontal, as shown in **Figure 5-19**. Where the arm is inclined at a greater angle, the design has to be adjusted. **Figure 5-20** shows that with the arm pointing downwards at 45° , the radius of the priority lane has to be reduced to 7.5 sw. The gap between the lane and the roundabout is increased from the normal 2 sw. **Figure 5-21** shows that with the arm pointing upwards at 60° , the priority lane can be accommodated by offsetting the roundabout symbol to the right. However, in this case it may be necessary to adjust the design of the symbol should it not reflect the actual road geometry.

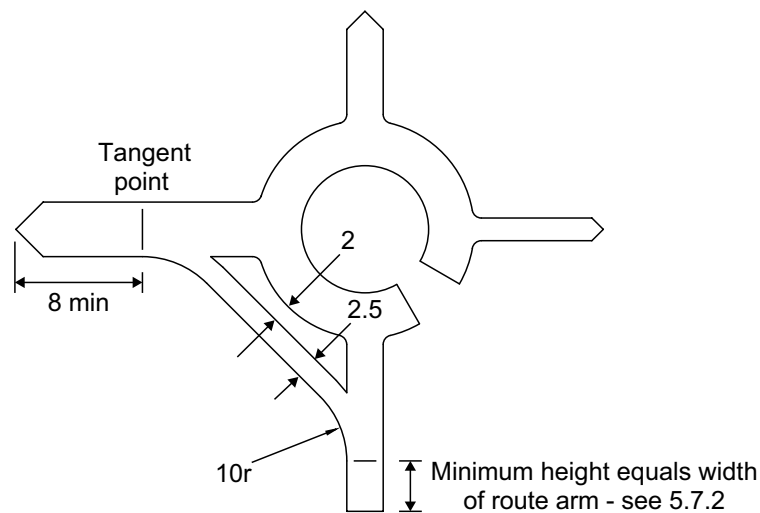


Figure 5-18

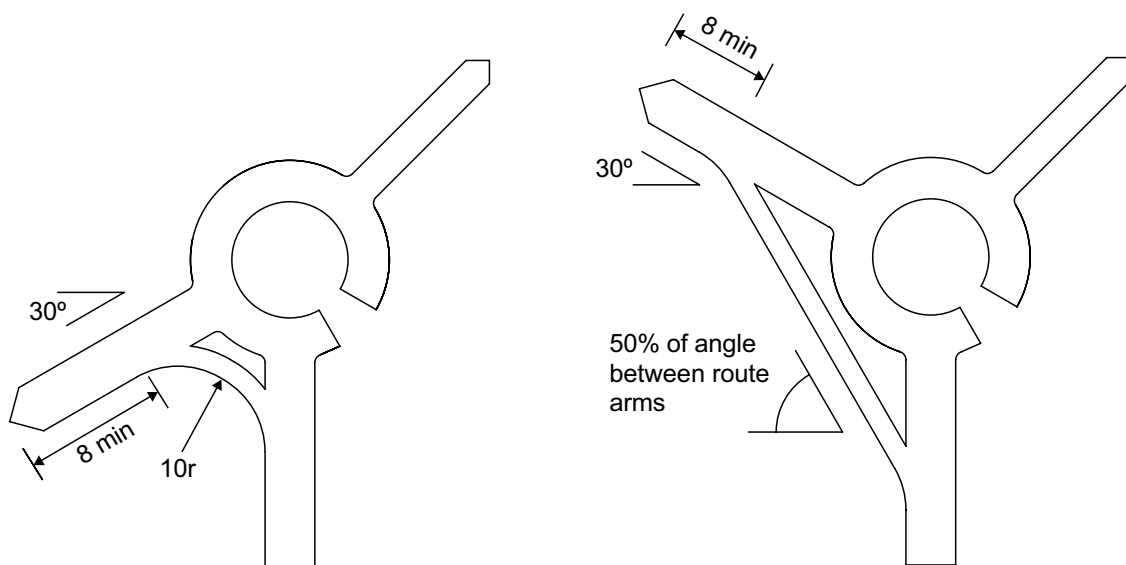


Figure 5-19

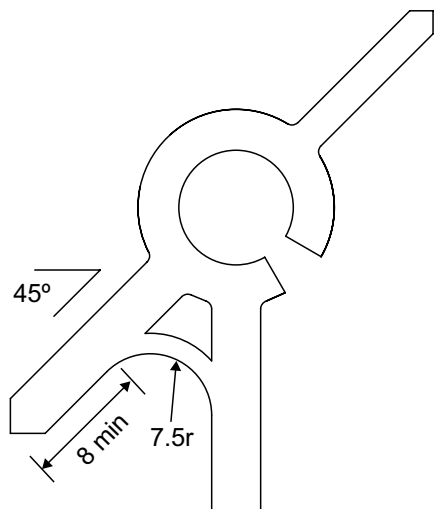


Figure 5-20

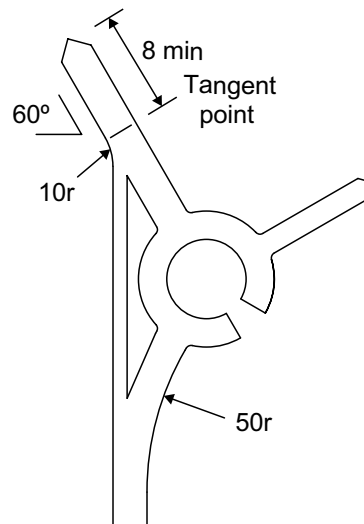


Figure 5-21

5.12 Map-type signs for roundabouts at grade separated junctions

5.12.1. Figure 5-22 shows the basic design of the route symbol when approaching from the side road. This is a permitted variant of the basic roundabout symbol (S12-7-2). All route arms and stubs have a thickness appropriate to the route indicated. The design can be adjusted to suit the circumstances, such as indicating an additional exit from the roundabout. The oval roundabout and side arms can be rotated, as shown in Figure 5-23, if this best illustrates the true layout of the junction.

5.12.2. Figure 5-24 shows the basic design of the route symbol (S12-7-10) when approaching from the exit slip road of either a motorway or an all-purpose road. The approach arm and stubs opposite are always 5 sw wide regardless of the status of the route (this is consistent with the map-type advance direction signs on the main carriageway which also have a width of 5 sw – see 5.9.2). The side arms have a width appropriate to the status of the route indicated. It is possible to adjust the design to suit the circumstances; an example is shown in Figure 5-25. Some grade separated junctions on three levels have slip roads on two major routes, with an interconnecting roundabout. The design of the roundabout symbol is shown in Figure 5-26.

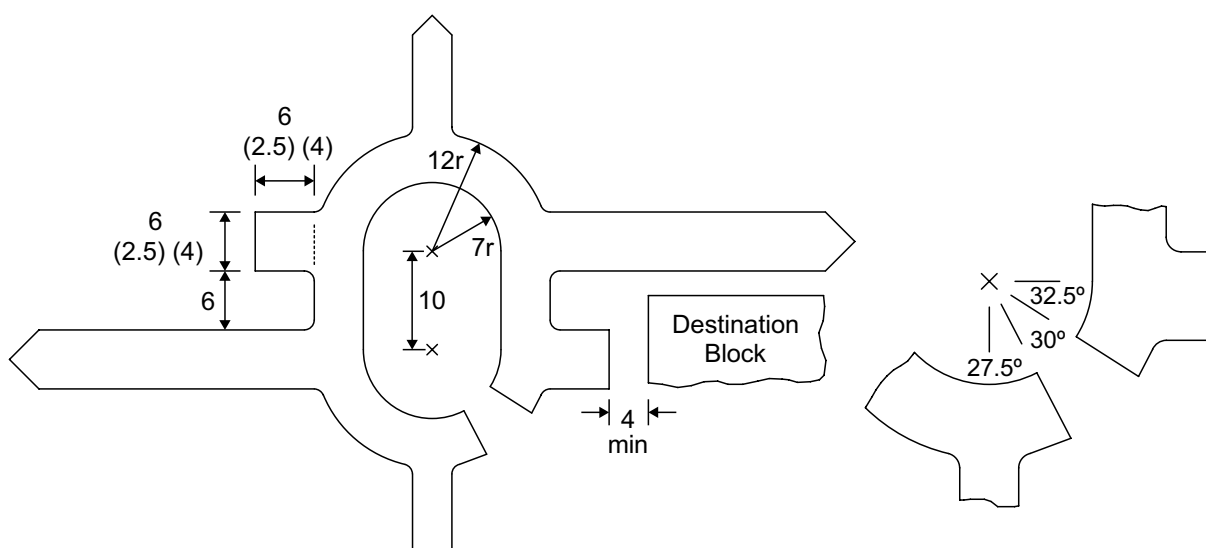


Figure 5-22

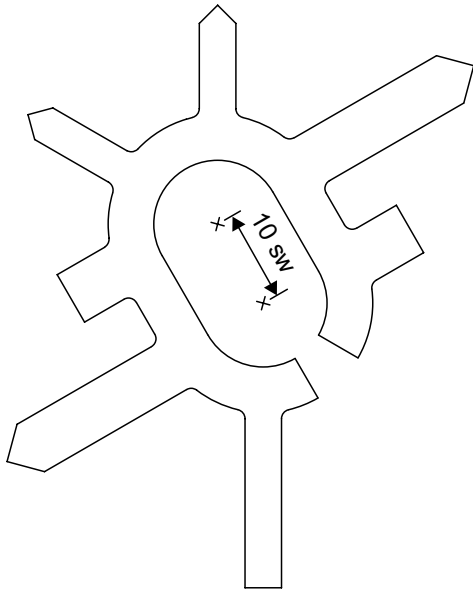


Figure 5-23

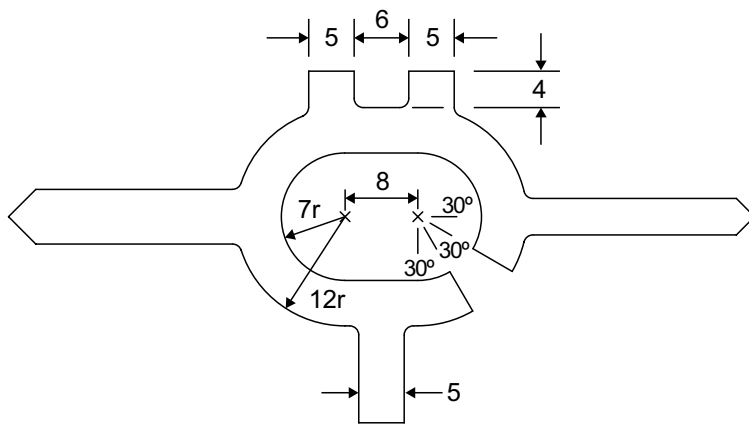
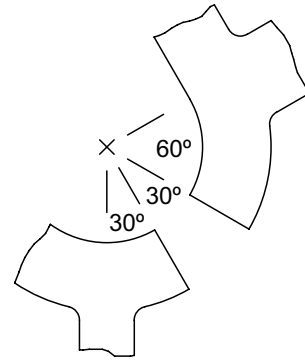


Figure 5-24

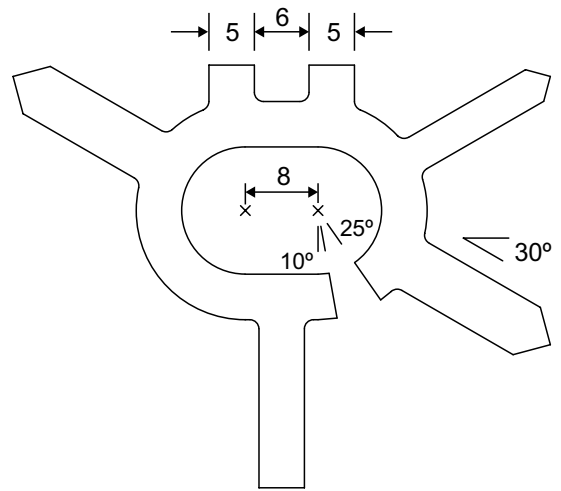


Figure 5-25

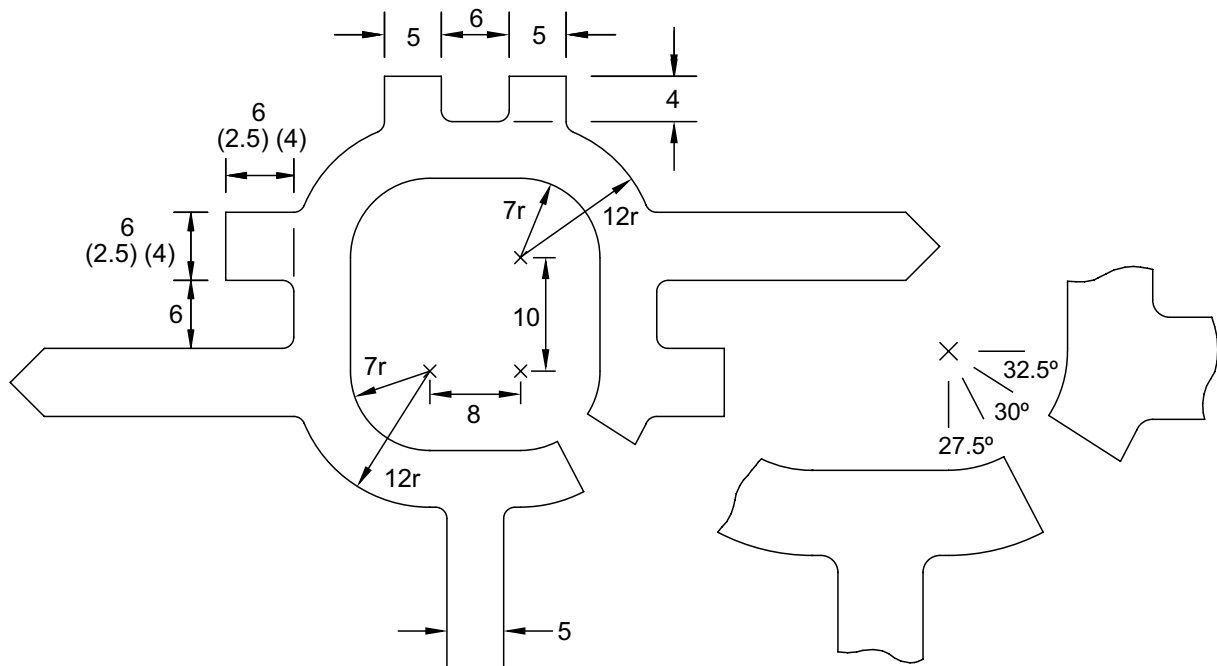


Figure 5-26

5.13 Map-type signs for mini-roundabouts

5.13.1. **Figure 5-27** shows the design of the route symbol for a single mini-roundabout on a non-primary route (S12-7-4, type A). Note that, unlike the normal roundabout, there is no cut-out in the symbol. The design is used when all arms, including the approach arm, have a width of either 4 sw or 2.5 sw. **Figure 5-28** shows the equivalent design for a primary route (S12-7-4, type B) where at least one arm, which could be the approach arm, has a width of 6 sw (the larger diameters take account of the wider route arms). The Regulations do not permit the mini-roundabout sign shown in diagram 611.1 (S9-2-6) to be used as a symbol on map-type signs.

5.13.2. **Figure 5-29** shows the design of the route symbol for a double mini-roundabout on a non-primary route. The connector between the two roundabouts is always 4 sw wide, even if all route arms have a width of 2.5 sw. The orientation of the symbol can be varied to suit the circumstances.

5.13.3. **Figure 5-30** shows the design of the route symbol for a double mini-roundabout on a primary route. The connector between the two roundabouts is always 6 sw wide, even if all route arms leading off the second roundabout have a width less than 6 sw. The orientation of the symbol can be varied to suit the circumstances.

5.13.4. Any legend should not come closer than 2.5 sw to the roundabout symbol, as for normal roundabouts (see **Figure 5-13**).

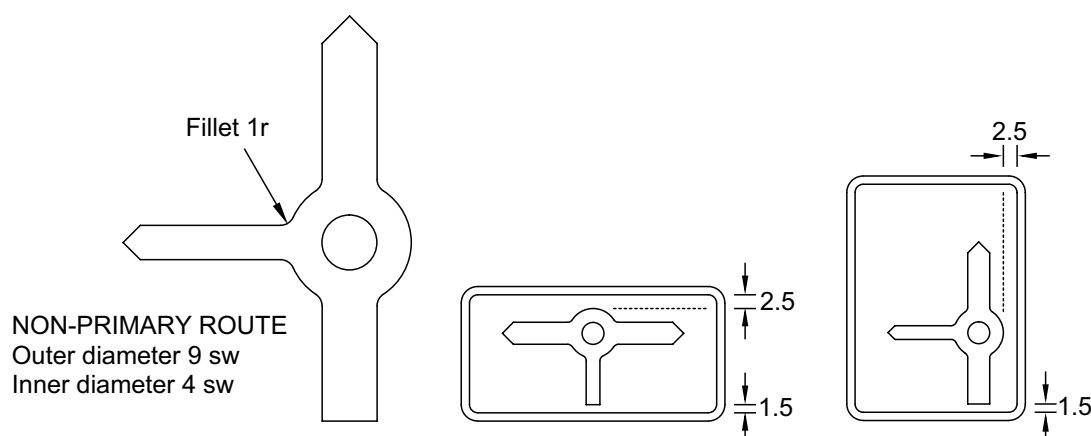


Figure 5-27

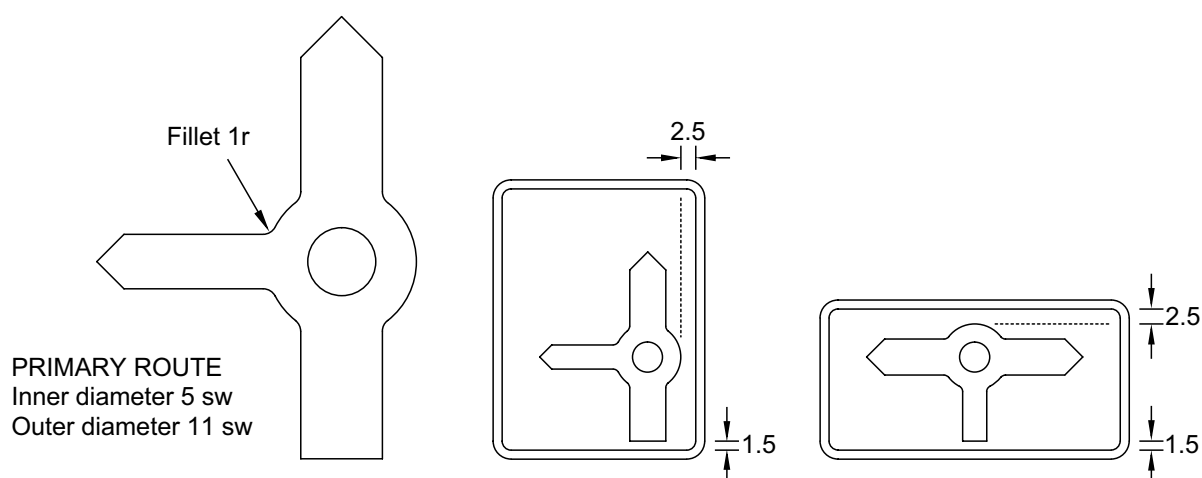


Figure 5-28

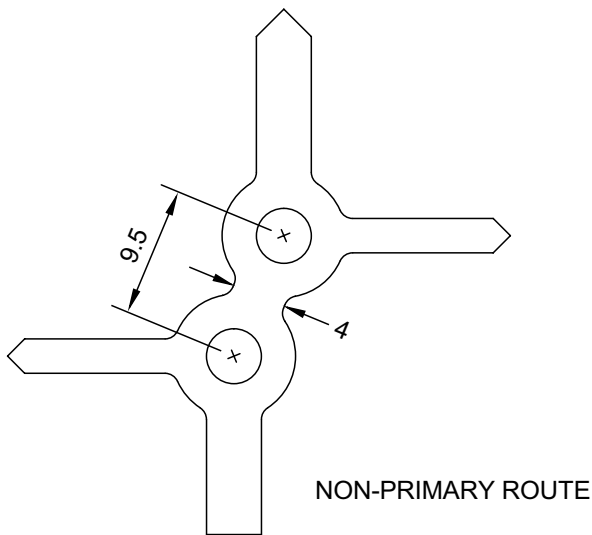


Figure 5-29

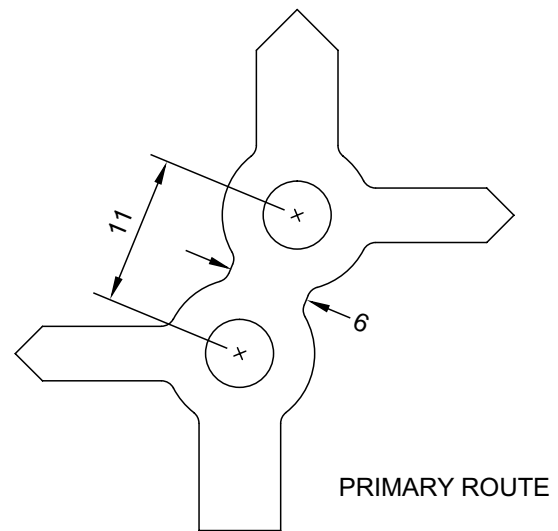


Figure 5-30

5.14 Map-type signs for irregularly shaped roundabouts and gyratory systems

5.14.1. Figure 5-31 gives examples of map-type signs for junctions where the normal roundabout symbol does not reflect the actual road layout. For gyratory systems it is usually more appropriate to use a symbol width relating to the status of the route through the junction (permitted variant of S12-7-1), rather than the special width of 5 sw. For irregularly shaped roundabouts the symbol width of 5 sw will be appropriate in most cases (permitted variant of S12-7-2).

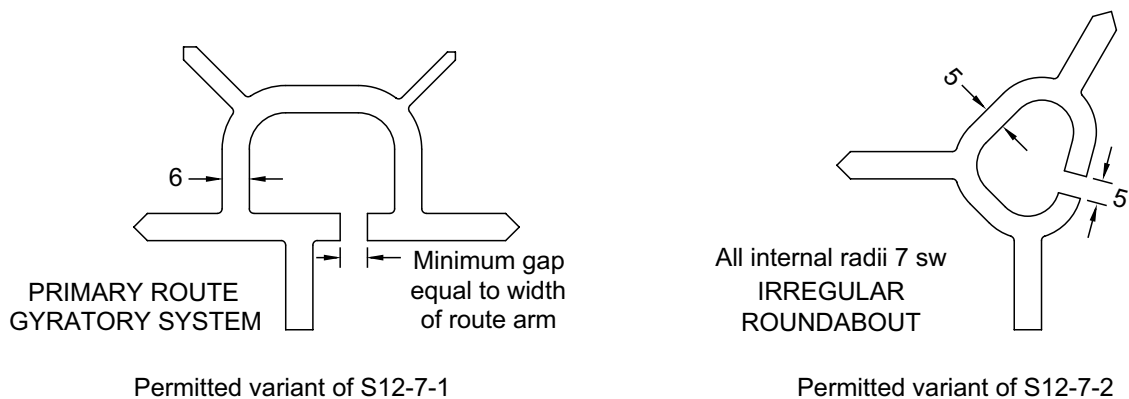
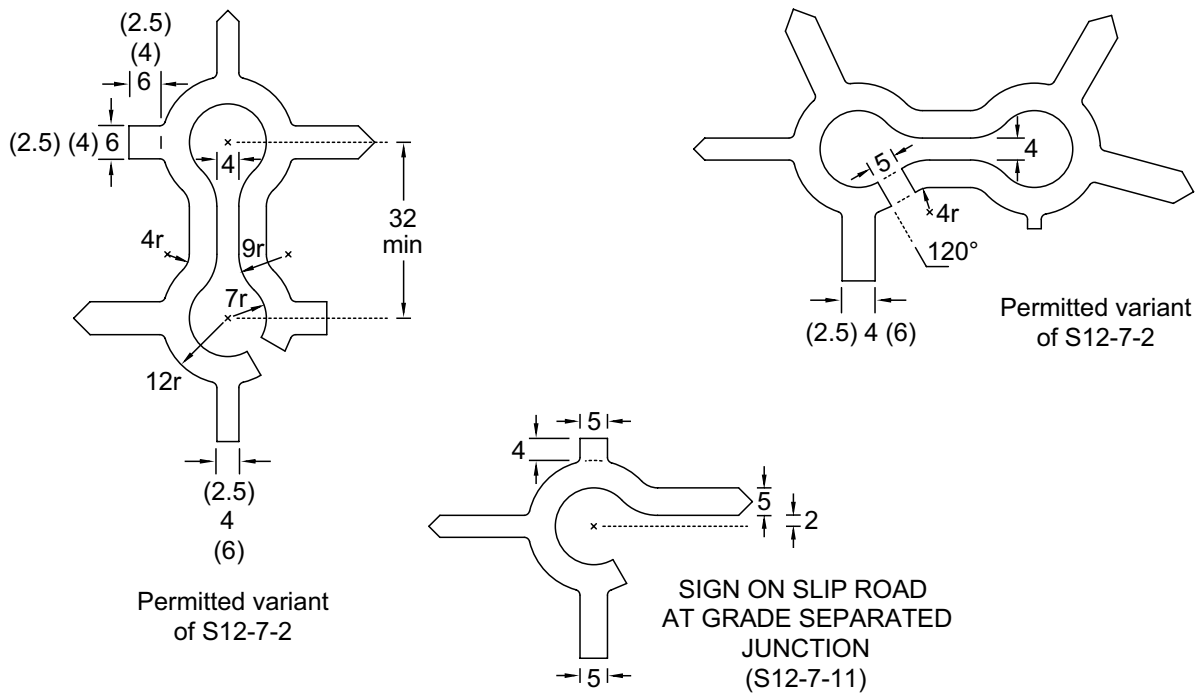


Figure 5-31

5.14.2. A special type of roundabout is the dumb-bell. This is where two adjacent roundabouts are joined to form a gyratory system. They are likely to be used where (a) a bridge between the two roundabouts precludes the construction of a single large roundabout (some grade separated junctions are purposely designed like this to economise on the provision of structures), or (b) traffic congestion between two roundabouts can be eased by the formation of a gyratory system.

5.14.3. The design of the map-type symbols for dumb-bell roundabouts is shown in Figure 5-32. Where the route is through the two partial roundabouts, the complete road layout is shown (permitted variant of S12-7-2). However, in the case of an exit slip road at a grade separated junction where there are limited turning movements (i.e. a single left turn and a single right turn) a simplified symbol, as shown in Figure 5-32, may be used (S12-7-11). It should be noted that for this simplified symbol the width of the right turn route arm is 5 sw, irrespective of the status of the route. Simplified symbols, showing only the first part of the junction, may also be used where an advance direction sign is provided between the two partial roundabouts.

**Figure 5-32**

5.14.4. On dual carriageways where there are no gaps in the central reservation, it may be necessary to make a U-turn at a roundabout in order to reach a particular destination. A special map-type symbol may be used (permitted variant of S12-7-2); the design of this is shown in **Figure 5-33**. This sign would replace the standard map-type advance direction sign for a roundabout junction (see **5.10**) and would include destinations not associated with the U-turn. As an alternative, a standard map-type sign could be provided, with the U-turn destination shown on a separate stack-type sign incorporating the special U-turn arrow (see **14.6**). Where the U-turn is associated with a traffic regulation order, a sign to diagram 2010.1 (S12-28-5) should be used in conjunction with a separately-sited standard map-type advance direction sign for a roundabout junction (see **5.10**).

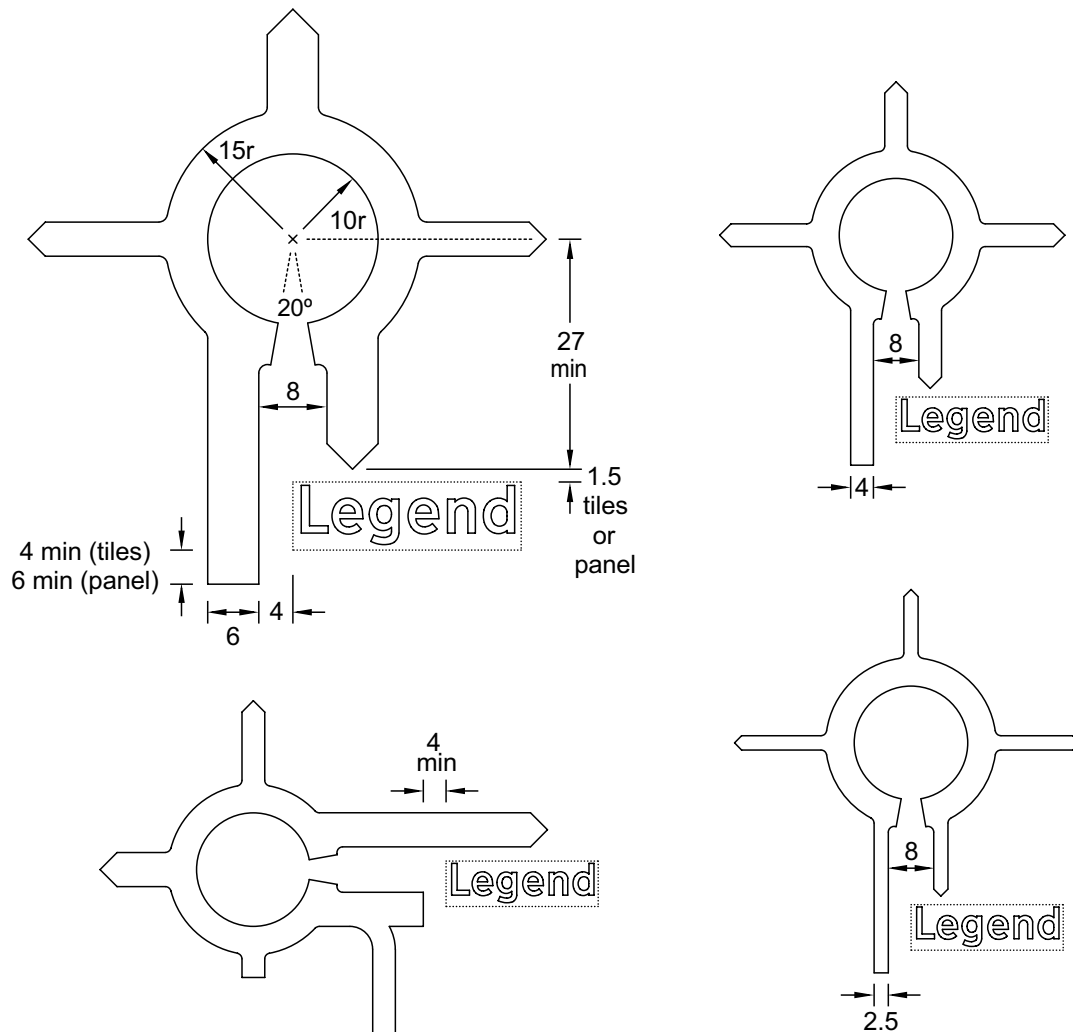


Figure 5-33

5.15 Symbols (other than triangular warning and regulatory roundel symbols) on map-type signs

5.15.1. Where a permitted Schedule 12 symbol is placed alongside a tiled legend beneath a horizontal route arm, it should normally be positioned at the opposite end to the point of the route arm. In the case of the “P” parking symbol, this will always be placed to the left of its associated legend unless this is the name or description of a tourist destination or leisure facility. The special rules given in 4.2.6 then apply. Where the aircraft symbol is used, this should generally be placed to the right of the airport name. The position of other symbols may be varied, but only where this would improve the overall appearance of the sign.

5.15.2. Symbols associated with route arms which are not horizontal should be positioned adjacent to any associated legend in a manner which produces the best sign layout. In most cases the symbol will be placed to the right of the legend. The “P” parking symbol and the aircraft symbol should be positioned as described in 5.15.1.

5.15.3. Some symbols may be centred below the legend tiles. This is the case with the ferry symbol as illustrated in diagrams A and B in Figure 5-34. The lorry symbol when used on a black panel is always centred horizontally on any legend above (see diagram C in Figure 5-34). The panel will be ranged left with any other blocks associated with the same route symbol.

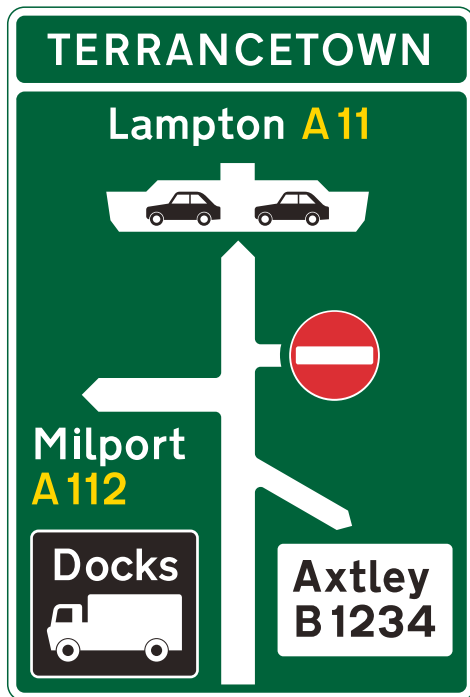


Diagram A

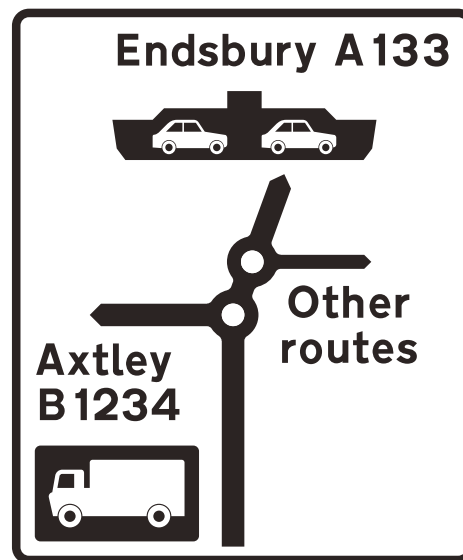


Diagram B

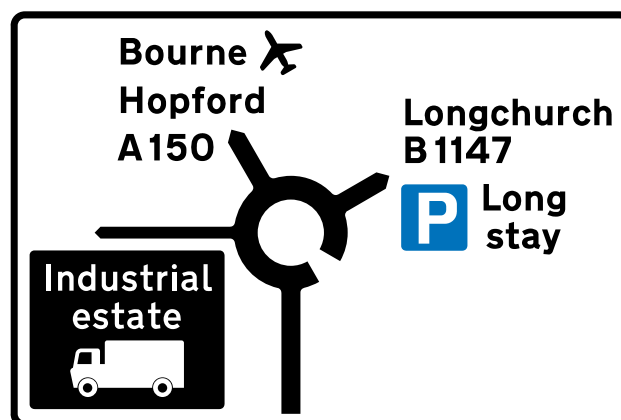
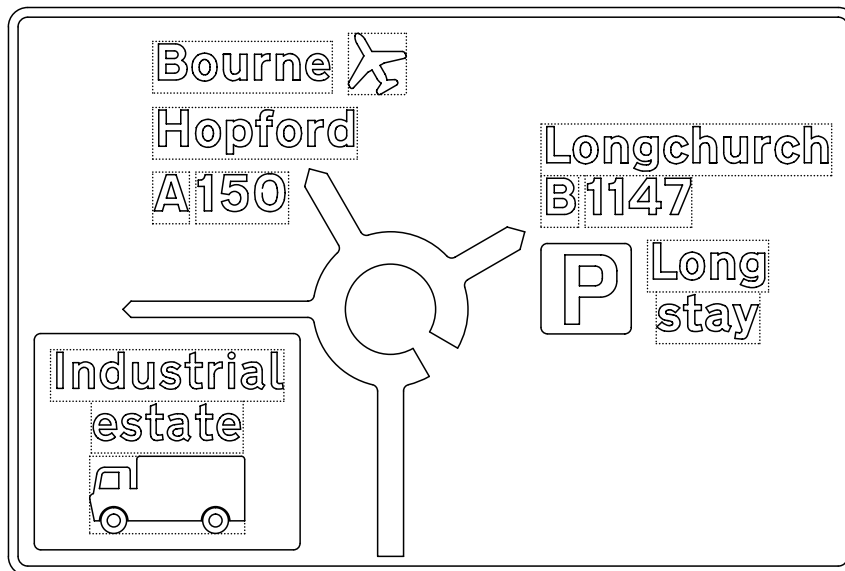


Diagram C

Figure 5-34

5.15.4. Those symbols which have a directional element to their design should face either left or right to accord with the general direction of the associated route arm. Where the route arm is vertical the symbol should face left. The aircraft symbol is normally rotated to point in the same direction as the route arm, except that the symbol must never point below the horizontal.

5.15.5. An example of the use of symbols on a map-type sign is illustrated in diagram C in [Figure 5-34](#).

5.16 Triangular warning symbols on map-type signs (horizontal and vertical arms)

5.16.1. [Figure 5-35](#) shows how triangular warning symbols prescribed in S12-20 are added to the horizontal and vertical route arms of map-type signs. Where the sign has a dark green, blue or brown background a white edge (0.5 sw wide) is added to the outside of the triangle.

5.16.2. The heights of the triangles (excluding any white edges) are specified in S12-20 (see [3.4](#)). The position of the triangle, as shown in [Figure 5-35](#), remains the same regardless of the triangle height and width of route symbol.

5.16.3. A warning sign may include a distance plate (S12-20-44). This is designed as a normal sign and then reduced to 80% of its size. Where the border is omitted (i.e. white panel on a dark green, blue or brown background) the corner radii do not change. These remain at 1.5 sw based on the plate x-height (i.e. 1.2 sw based on the x-height of the main sign).

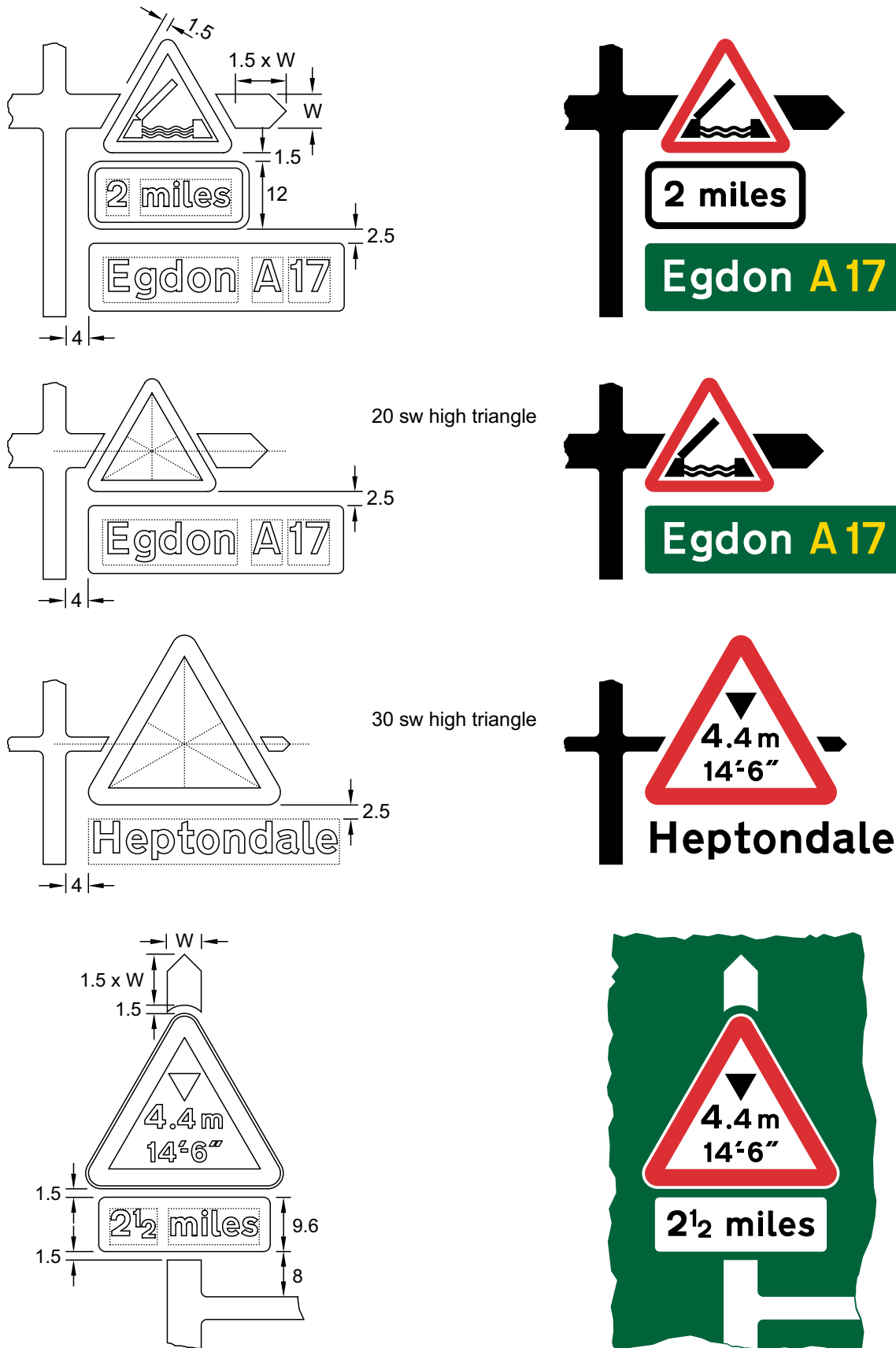
5.16.4. It may not always be possible to determine the length of the horizontal route arm in accordance with [5.3.4](#). The dimensions shown will fix the minimum length of the arm. However, where the legend block has a long place name, the arm should be extended as appropriate. The horizontal position of the triangle may be adjusted in this case, provided the dimensions shown in [Figure 5-35](#) are treated as minimum values. The arm should not extend beyond the length of the legend block. Where this is likely to occur, the legend block should be moved away from the vertical route arm.

5.16.5. Where two triangular symbols are used to indicate different hazards along the same route they are placed side by side. Where these would normally have different heights (see [3.4](#)), the larger height must be used for both triangles (S12-19-6). When the triangular symbols are placed on a vertical route arm, one of the triangles is centred horizontally on the arm as shown in [Figure 5-36](#) (see also [11.4.6](#)). Any distance plate associated with two hazards that occur at the same location is offset as shown in [Figure 5-36](#). Where two triangular symbols on the same route arm indicate hazards at different locations, any distance plate should be associated with the appropriate sign. Where this would result in the two triangles being further apart than 6 sw, it is strongly recommended that the triangles be omitted from the sign and separate signing used to indicate the hazards.

5.16.6. The minimum distance between any triangle or plate and any sign border is 2.5 sw.

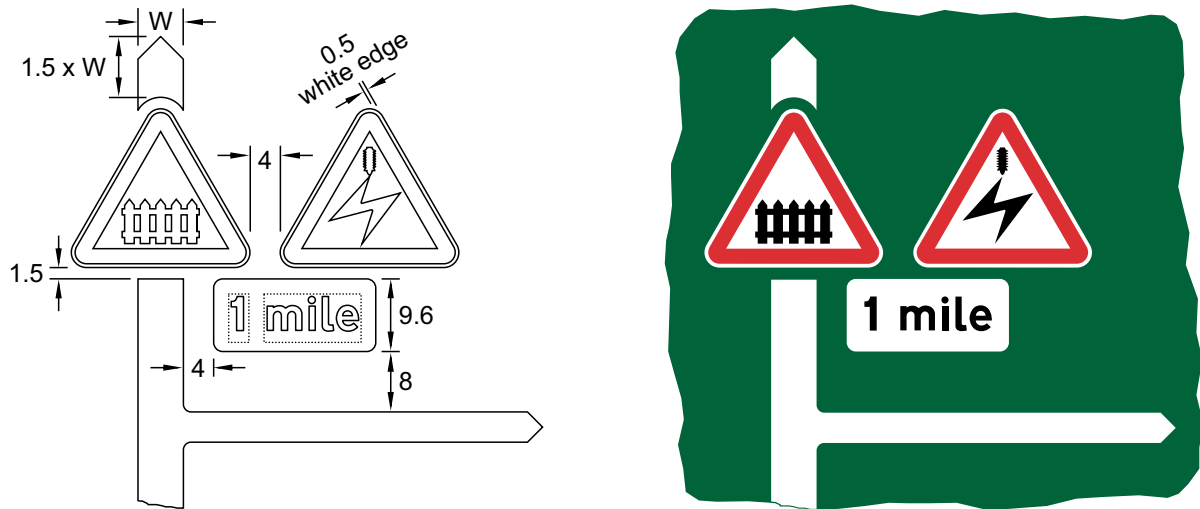
5.16.7. The minimum distance between the top of a triangle on the side arm and any unrelated legend above should be 14 sw for a panel, patch or symbol, 12.5 sw for a reduced x-height legend ("alternative route" etc, see [3.10.1](#)), and 12 sw for any legend at the main x-height (see also [5.16.8](#)).

5.16.8. The dimensions relating to the various gaps apply equally to plates with and without borders and to triangles with and without white edges. The gap is measured to the outside of any border or edge provided.



Distance plates are designed as normal signs and then reduced to 80% of their size.
All dimensions are in stroke widths based on the main x-height.

Figure 5-35



Distance plates are designed as normal signs and then reduced to 80% of their size.

All dimensions are in stroke widths based on the main x-height.

Figure 5-36

5.17 Regulatory symbols on map-type signs (horizontal and vertical arms)

5.17.1. **Figure 5-37** shows how a regulatory roundel symbol prescribed in the S12-20 is added to the horizontal route arm of a map-type sign. The figure also demonstrates the use of the “alternative route” message. A plate (S12-20-44) indicating the distance from the junction to the restriction should always be used unless the restriction indicated commences at the junction. The gap of 2 sw immediately above the tip of the forward route arm is reduced to 0.5 sw when the arm is vertical or within 15° of the vertical (i.e. the gap is 0.5 sw greater than the standard gap – see [3.10.1](#), [5.3.1](#), [5.4.1](#), [5.4.2](#) and [5.17.6](#)).

5.17.2. Some regulatory symbols, with or without supplementary plates, may be added to vertical route arms in a manner similar to triangular warning symbols. The design of the plates is the same as for those used with warning triangles. Examples are illustrated in **Figure 5-38**.

5.17.3. Where a regulatory symbol is placed on a dark green, blue or brown background, a white edge is added, similar to the white edge on the triangular warning symbol.

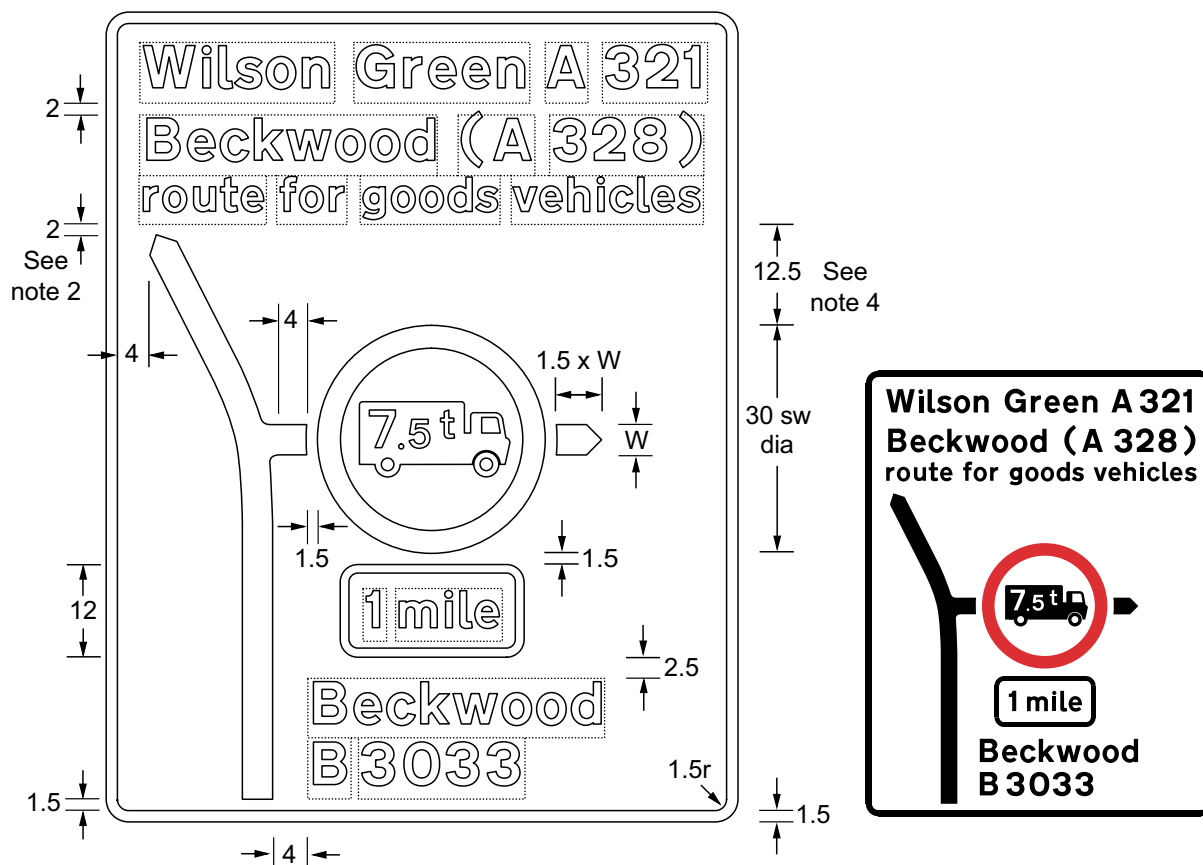
5.17.4. As with triangular warning symbols, it may not always be possible to determine the length of the horizontal route arm in accordance with [5.3.4](#). The dimensions shown will fix the minimum length of the arm. However, where the legend block has a long place name, the arm should be extended as appropriate. The horizontal position of the roundel may be adjusted in this case, provided the dimensions shown in **Figure 5-37** are treated as minimum values. The arm should not extend beyond the length of the legend block. Where this is likely to occur, the legend block should be moved away from the vertical route arm.

5.17.5. The diameter of the roundel, in stroke widths, varies according to the type of prohibition indicated (see [3.4](#)).

5.17.6. The alternative route message shown in **Figure 5-37** has an x-height 80% of the main x-height. To compensate for the smaller tiles, any vertical space directly below the legend is increased by 0.5 sw, based on the main x-height. Thus the normal vertical space above the inclined route arm is increased from 1.5 sw to 2 sw (see [3.10.1](#)).

5.17.7. Where one of the following symbols are used on a map-type sign, the route arm is replaced by a stub with a curved end (permitted variant of S12-7-6). This has the effect of removing that section of the route arm beyond the symbol. The symbols are:

- “no right turn” or “no left turn”,
- “no entry”,
- “all vehicles prohibited”,
- “motor vehicles prohibited” or
- any version of “bus only” or “tram only”

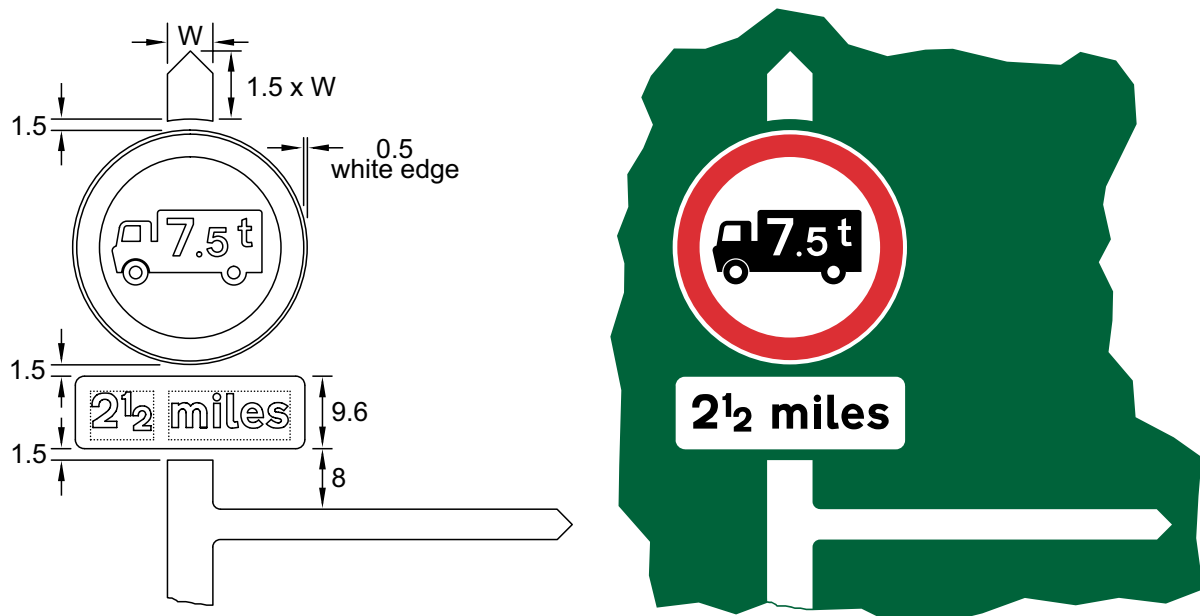


NOTES

1. "route for goods vehicles" is 80% of the main x-height.
2. This dimension is reduced to 0.5 sw when the route arm is vertical or within 15° of the vertical.
3. "1 mile" supplementary plate designed as a normal sign, but 80% of the size of the main sign x-height / stroke width (12 sw height shown is for main sign x-height - i.e. 0.8 x 15 sw).
4. This dimension is varied to 14 sw when measured to a panel, patch or symbol, and varied to 12 sw when measured to a tiled legend at the main x-height.
5. All dimensions are in stroke widths based on main x-height.

Figure 5-37

5.17.8. The banned turn signs are always placed on the arm of the junction into which traffic may not turn, and not on the approach arm. The “all vehicles prohibited” symbol (S12-20-22) includes a supplementary plate which must not be omitted. It may include a distance, as shown in [Figure 5-39](#). The vertical space between the “No vehicles” legend (or as varied) and any distance is 2 sw, based on the x-height of the plate.



Distance plates are designed as normal signs and then reduced to 80% of their size.

All dimensions are in stroke widths based on the main x-height.

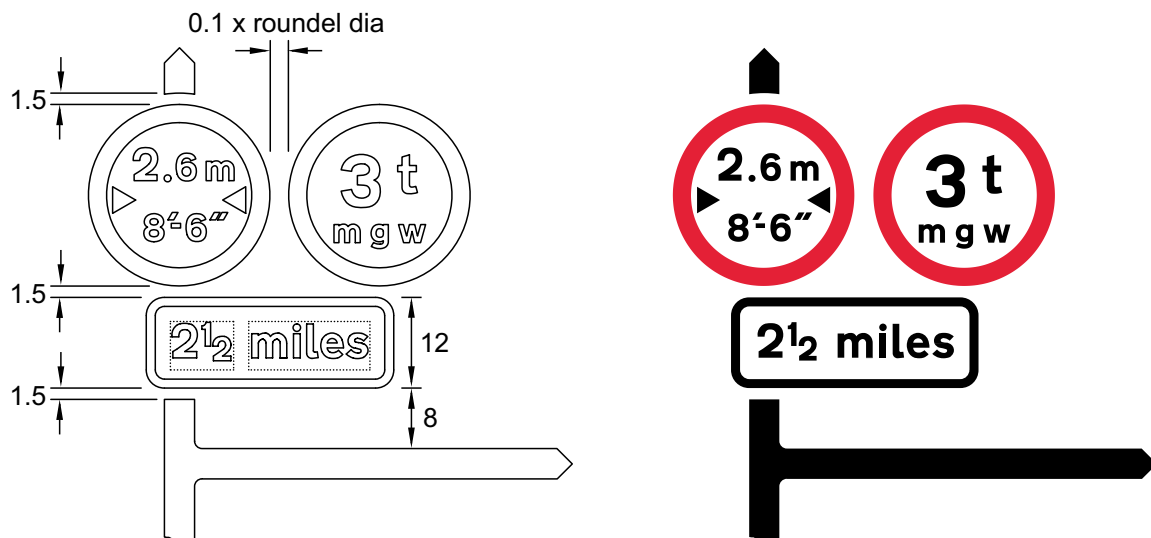


Figure 5-38

5.17.9. The minimum distance between any roundel or plate and any sign border is 2.5 sw.

5.17.10. The dimensions relating to the various gaps apply equally to plates with and without borders and to roundels with and without white edges. The gap is measured to the outside of any border or edge provided.

5.18 Warning and regulatory symbols on map-type signs (inclined route arms)

5.18.1. Figure 5-40 shows triangular warning symbols added to route arms inclined at 30° above the horizontal. Where a distance plate is added, care has to be taken to shape the cut line through the arm. This will vary according to the length of the plate and the size of triangle. The cut-out radius of 4 sw (3 sw for a plate without a border) applies only where the arm intersects both the triangle and the plate. In other circumstances a curved cut-out in the arm will be offset by 1.5 sw from either the corner of the triangle or plate as appropriate.

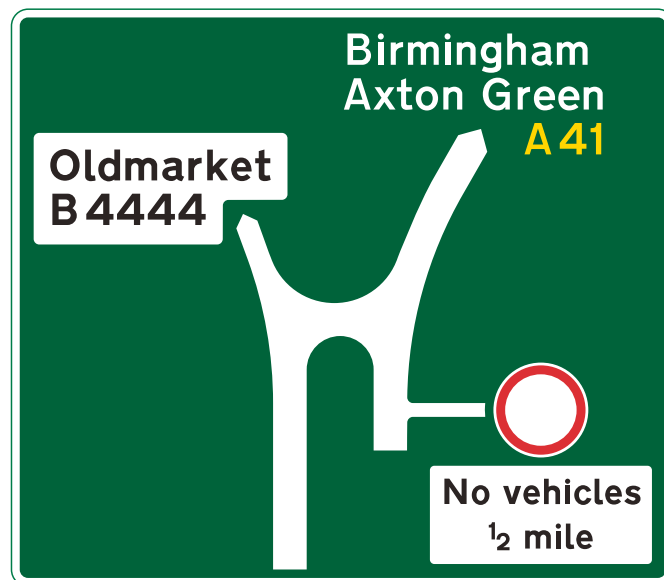
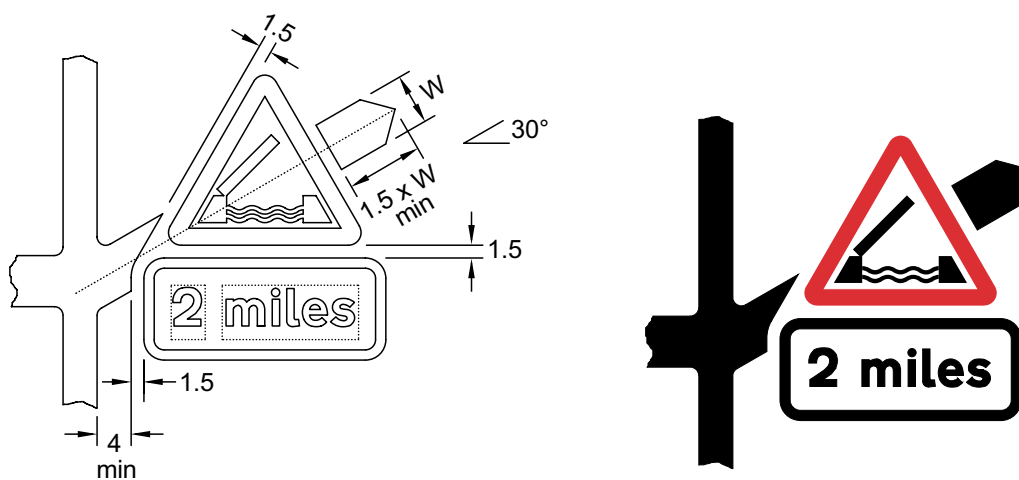


Figure 5-39



Distance plates are designed as normal signs and then reduced to 80% of their size.
All dimensions are in stroke widths based on the main x-height.

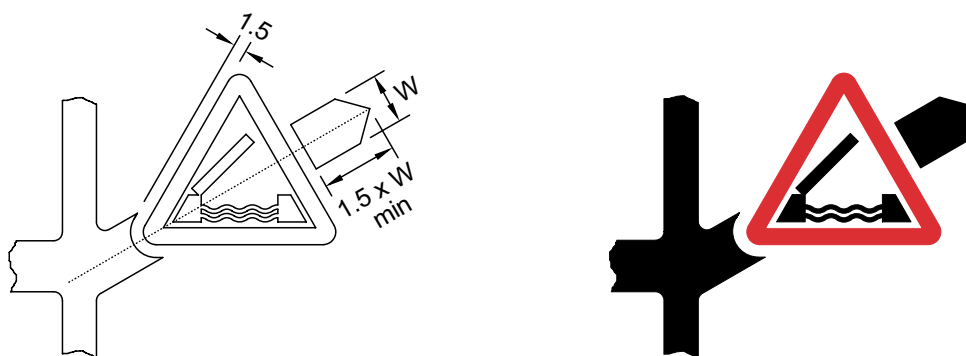
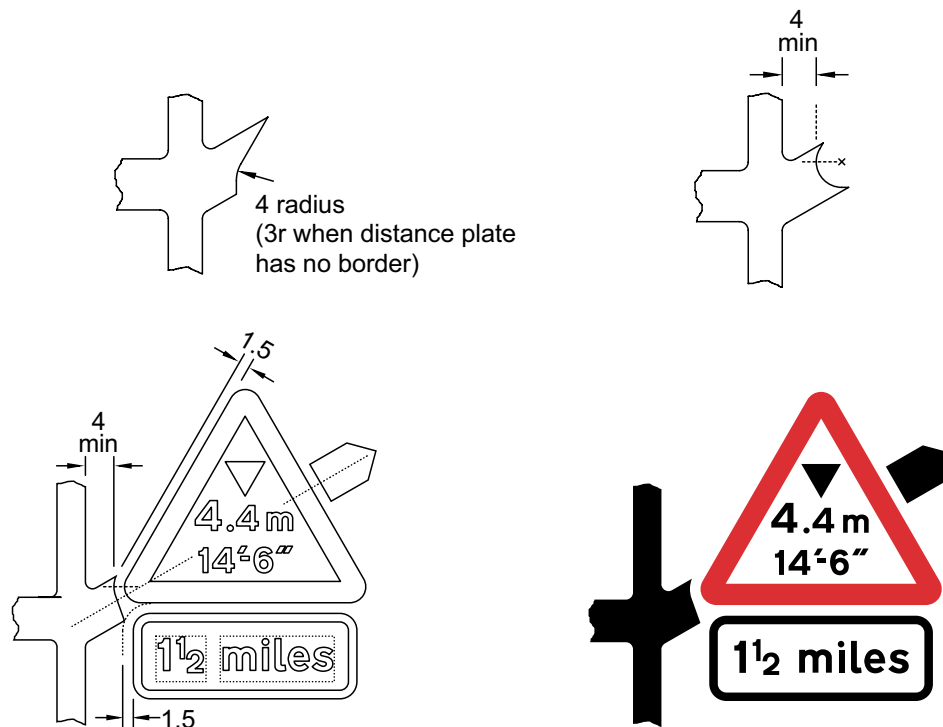


Figure 5-40



Distance plates are designed as normal signs and then reduced to 80% of their size.
All dimensions are in stroke widths based on the main x-height.

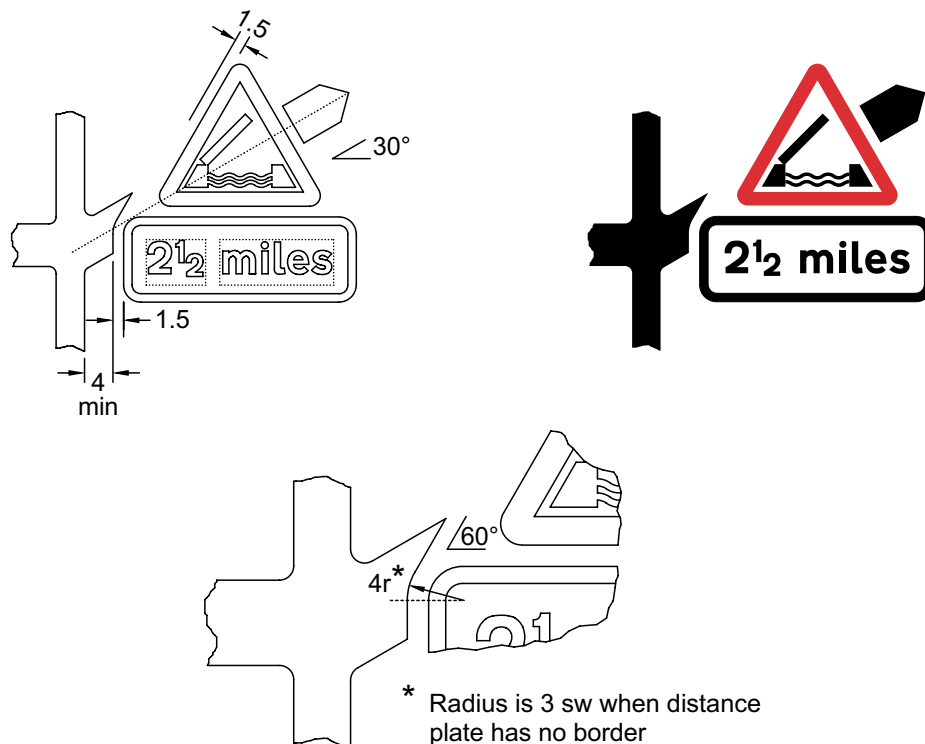
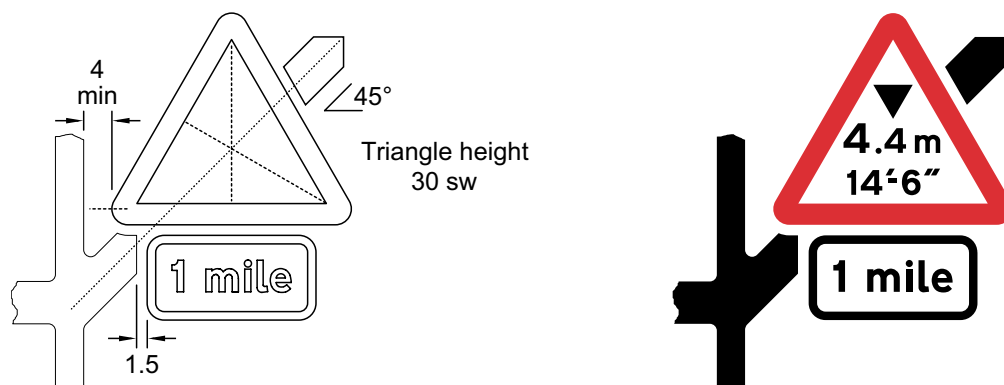


Figure 5-40 (continued)

5.18.2. [Figure 5-41](#) and [Figure 5-42](#) show triangular warning symbols added to route arms inclined at 45° and 60° above the horizontal respectively. [Figure 5-43](#) shows other examples of inclined arms, including those with two triangles.

5.18.3. Single regulatory symbols without plates will generally fit without complication into a route arm inclined at any angle. The roundel should be no closer than 4 sw to any vertical route arm. [Figure 5-44](#) and [Figure 5-45](#) show various layouts for single and twin roundels with distance plates. Where the plate has more than one line of legend (e.g. an exception

plate) or where an exception plate and a distance plate are used together, the roundel position might need to be adjusted (see 5.18.3). In the case of the single roundel on a 30° arm, the plate should be placed as close to the roundel as possible without going below the minimum dimensions shown. Design details shown in Figure 5-43 for the single triangular symbol with the “2 miles” plate also apply to roundels in a similar situation.



Distance plates are designed as normal signs and then reduced to 80% of their size.
All dimensions are in stroke widths based on the main x-height.

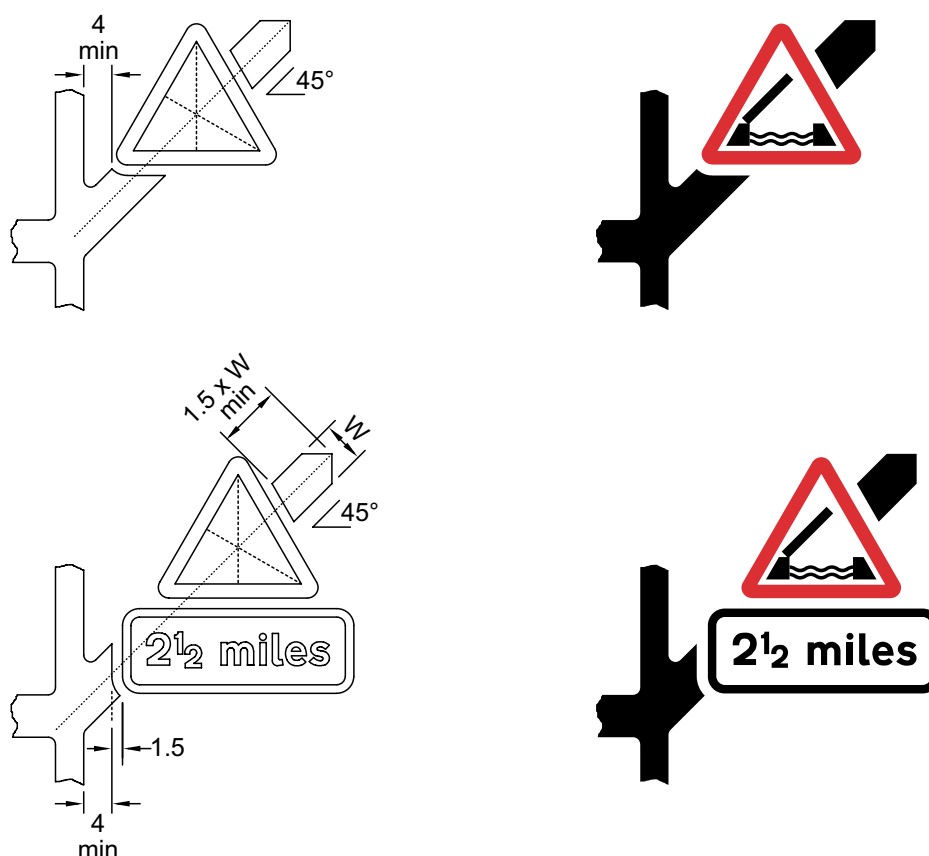
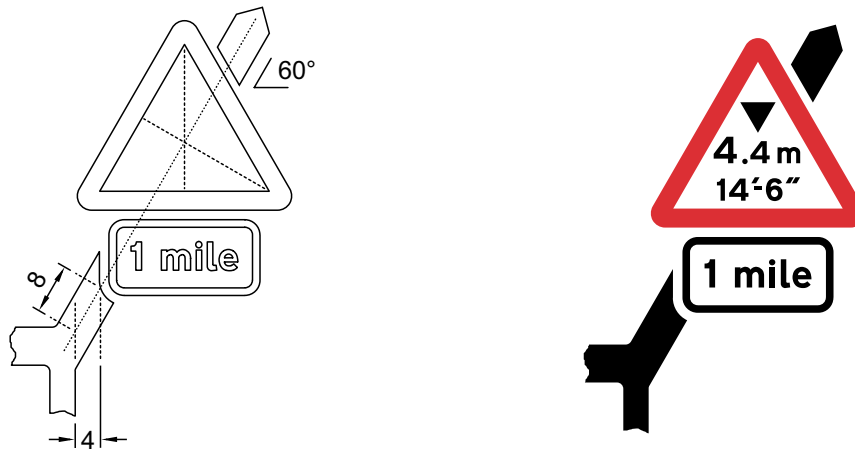


Figure 5-41

5.18.4. Figure 5-40 to Figure 5-45 cover the most common situations of placing roundels and triangles on inclined arms. The design details shown should be used as appropriate in other situations (e.g. where a supplementary plate has more than one line of legend). Some flexibility may be required, the overriding consideration being that the final layout should produce a balanced design avoiding odd-shaped cut-outs in the route arms.



Distance plates are designed as normal signs and then reduced to 80% of their size.

All dimensions are in stroke widths based on the main x-height.

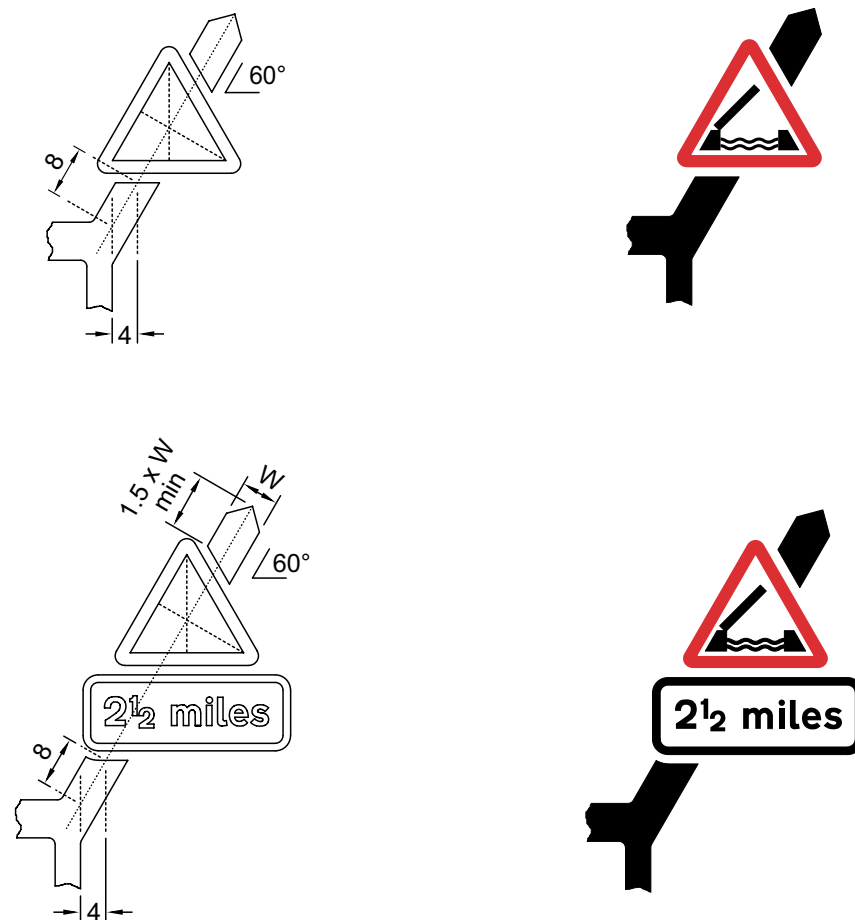


Figure 5-42

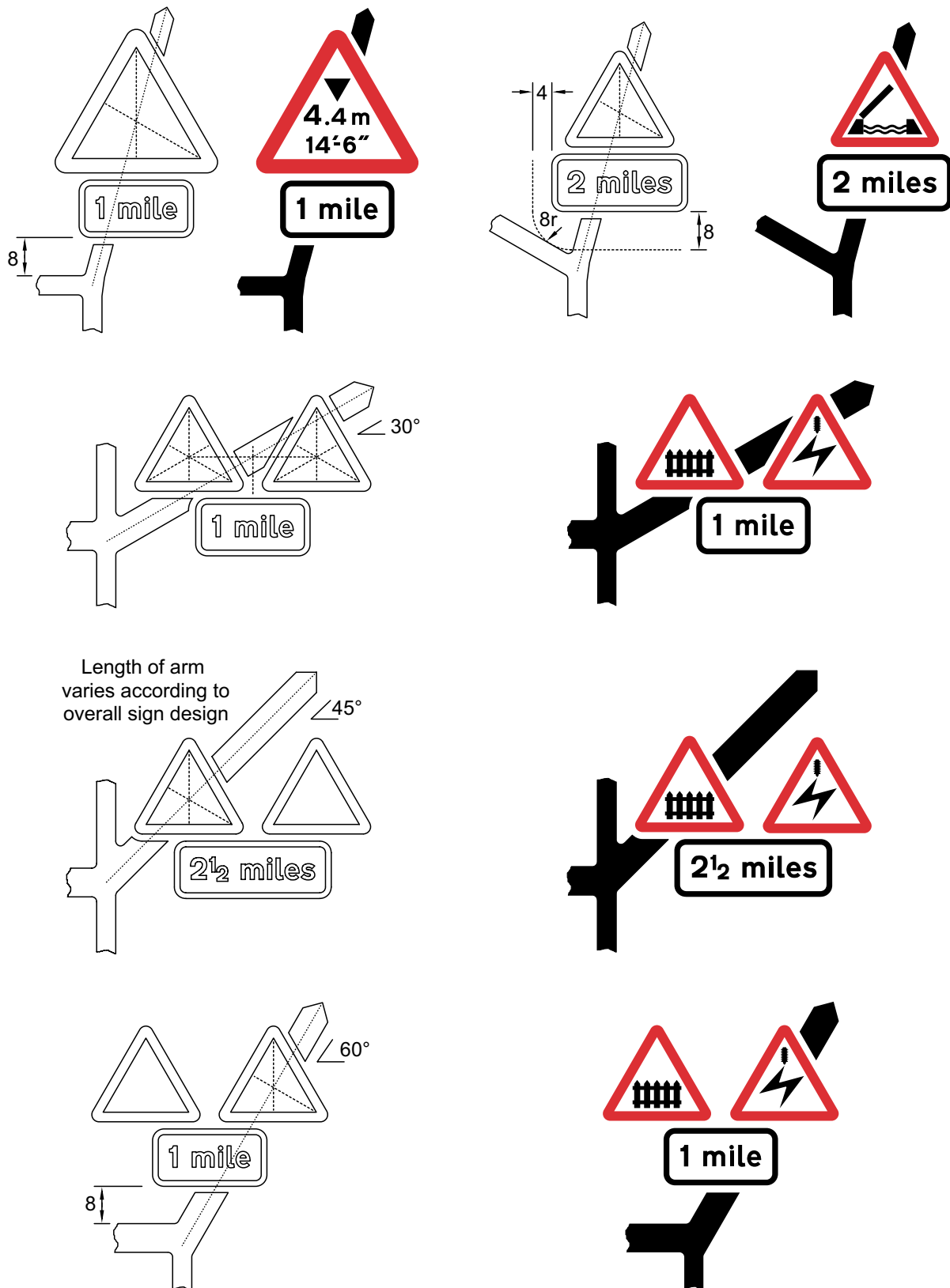
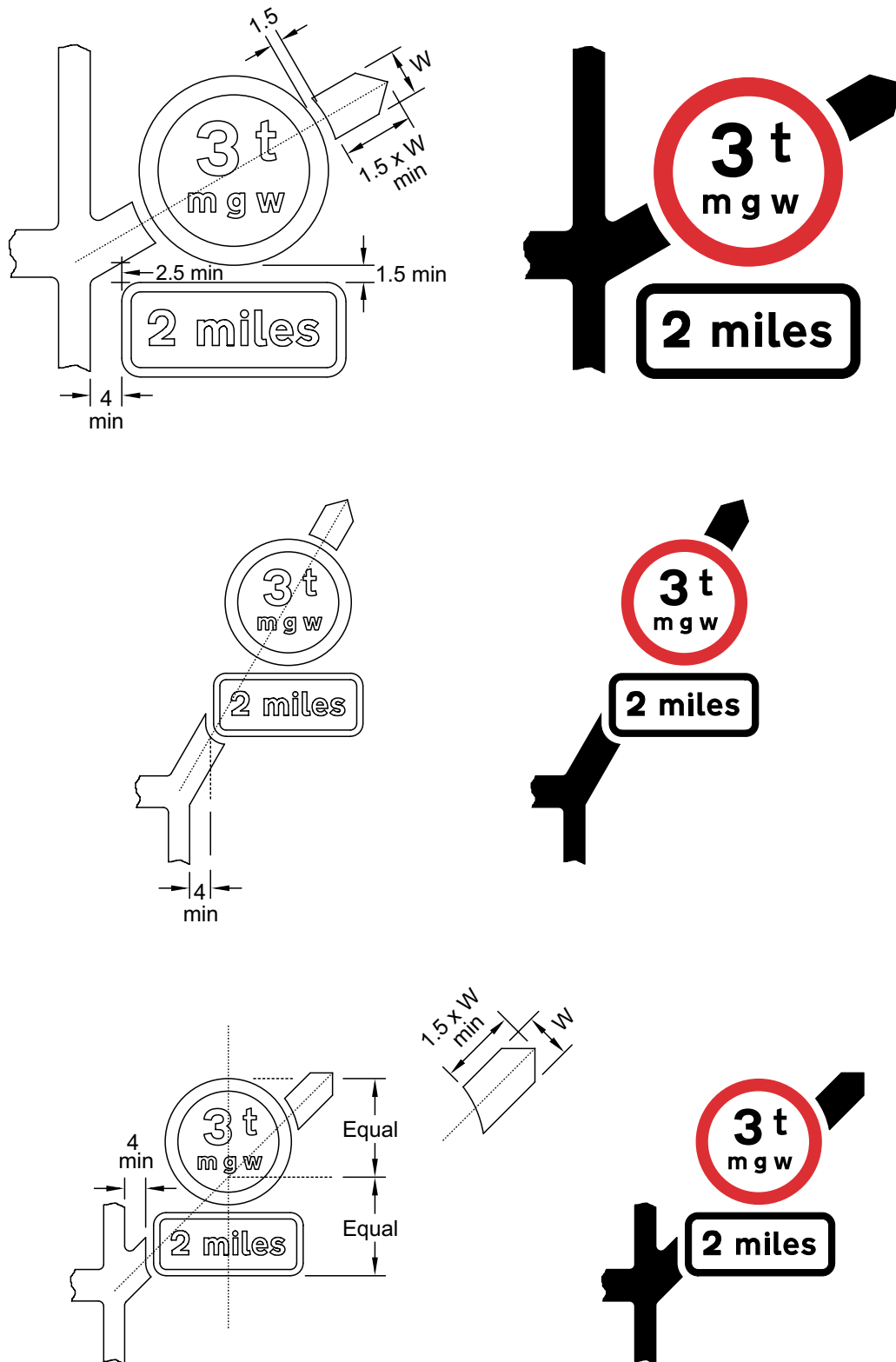
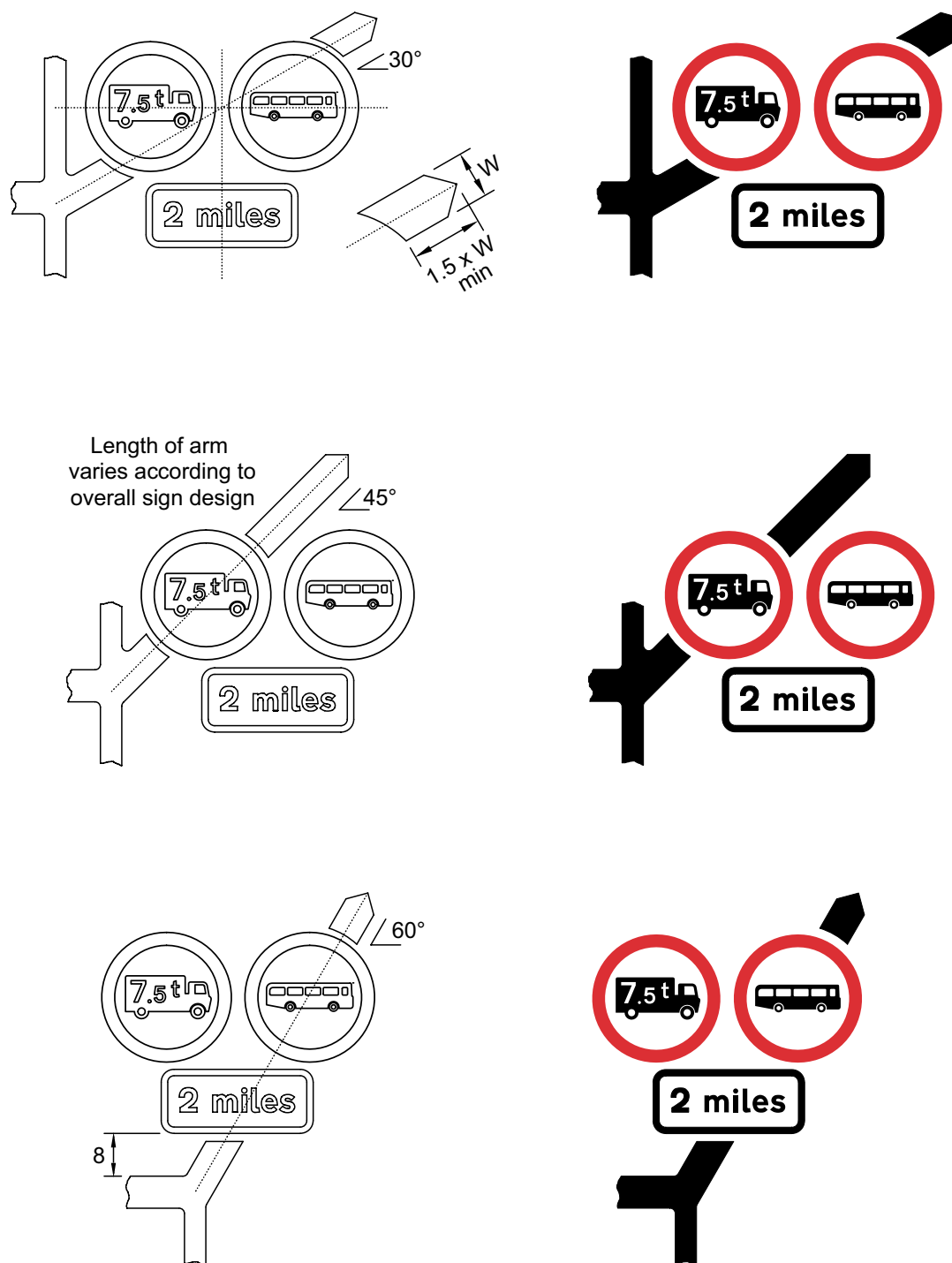


Figure 5-43



Distance plates are designed as normal signs and then reduced to 80% of their size.
All dimensions are in stroke widths based on the main x-height.

Figure 5-44



Distance plates are designed as normal signs and then reduced to 80% of their size.

All dimensions are in stroke widths based on the main x-height.

Figure 5-45

5.19 Regulatory and warning symbols associated with the same destination

5.19.1. There may be occasions when it is required to show both a regulatory and a triangular warning symbol on the same destination panel. The horizontal space between the two signs is the same as for stack-type signs, as shown in [Figure 4-17](#). The diameter of the roundel and the height of the triangle must both be the same (S12-19-6), based on the size of the larger sign (see [3.4](#)). The positioning of the signs on the route arm symbol should be based on the design rules for two triangles or two roundels as shown in [Figure 5-37](#), [Figure 5-39](#), [Figure 5-43](#) and

Figure 5-45. When the route arm symbol is horizontal, the centre line of the arm should pass through the centre of the roundel and not the centroid of the triangle.

5.20 No through road symbol on map-type signs

5.20.1. A stub with a “no-through road” symbol may be added to the route arm of a map-type sign. This is prescribed by S11-2-7 for signs with a dark background and by S12-7-8 for signs with a white background. The width of the stub must always be 2.5 sw, even though the route indicated may have a higher status (e.g. a short two-way section of road forming part of a one-way system). When the red bar is placed on a white background sign, a gap is provided between the bar and the stub. However, should the red bar be placed on a dark green, blue or brown background sign, the stub is extended to form a border around the bar. **Figure 5-46** shows the detailed design of the red bar and stub.

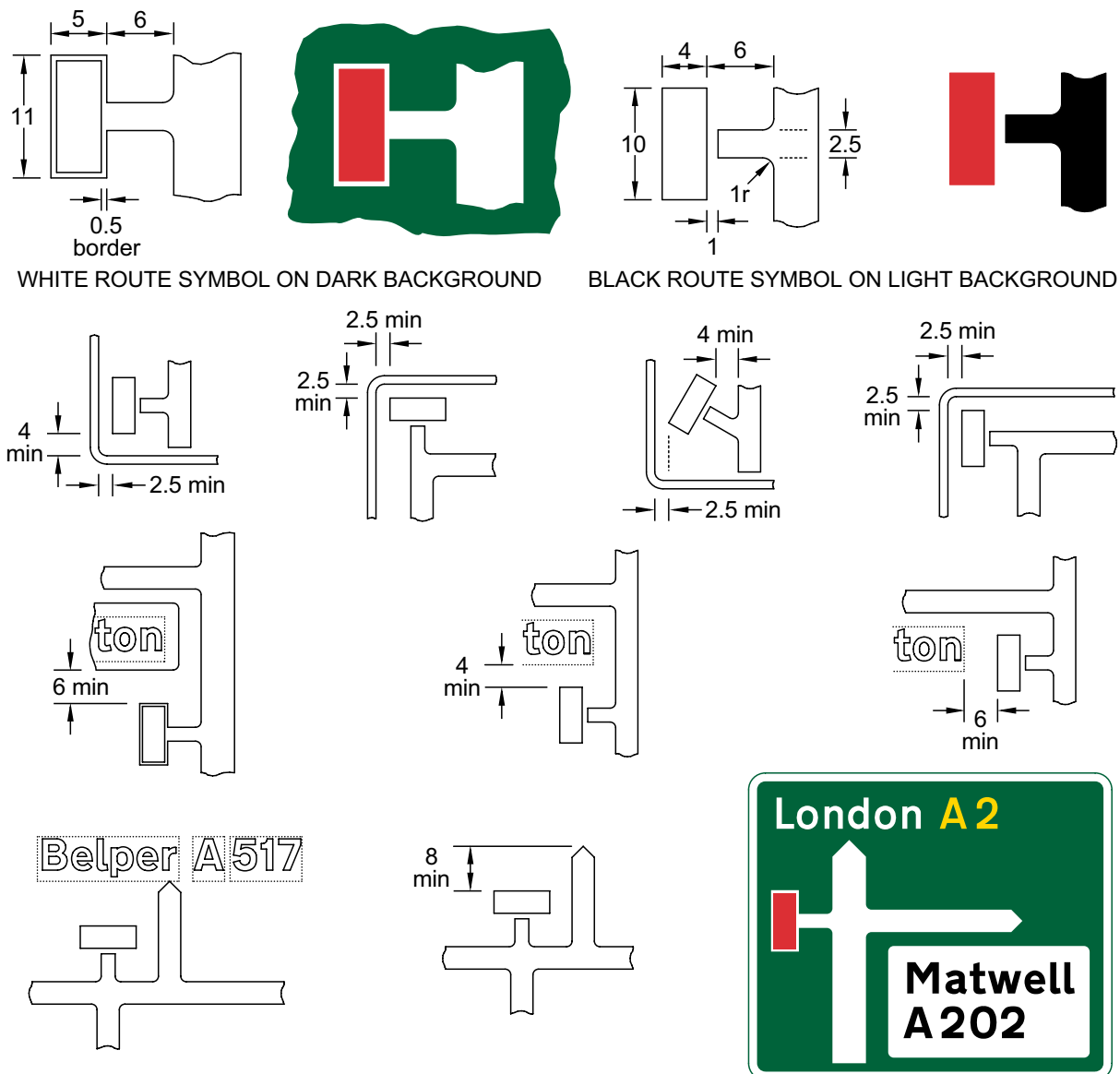


Figure 5-46

5.21 By-passed community symbol

5.21.1. **Figure 5-47** and **Figure 5-48** show examples of the map-type advance direction signs which may be used to indicate by-passed communities, using the route symbol prescribed in S12-7-5. These signs would normally be provided as an alternative to conventional advance direction signs and are therefore applicable to local unnumbered routes leading into the town or

village. The purpose of the sign is to indicate to drivers that the route through the town or village leads back to the main route on which they are travelling.

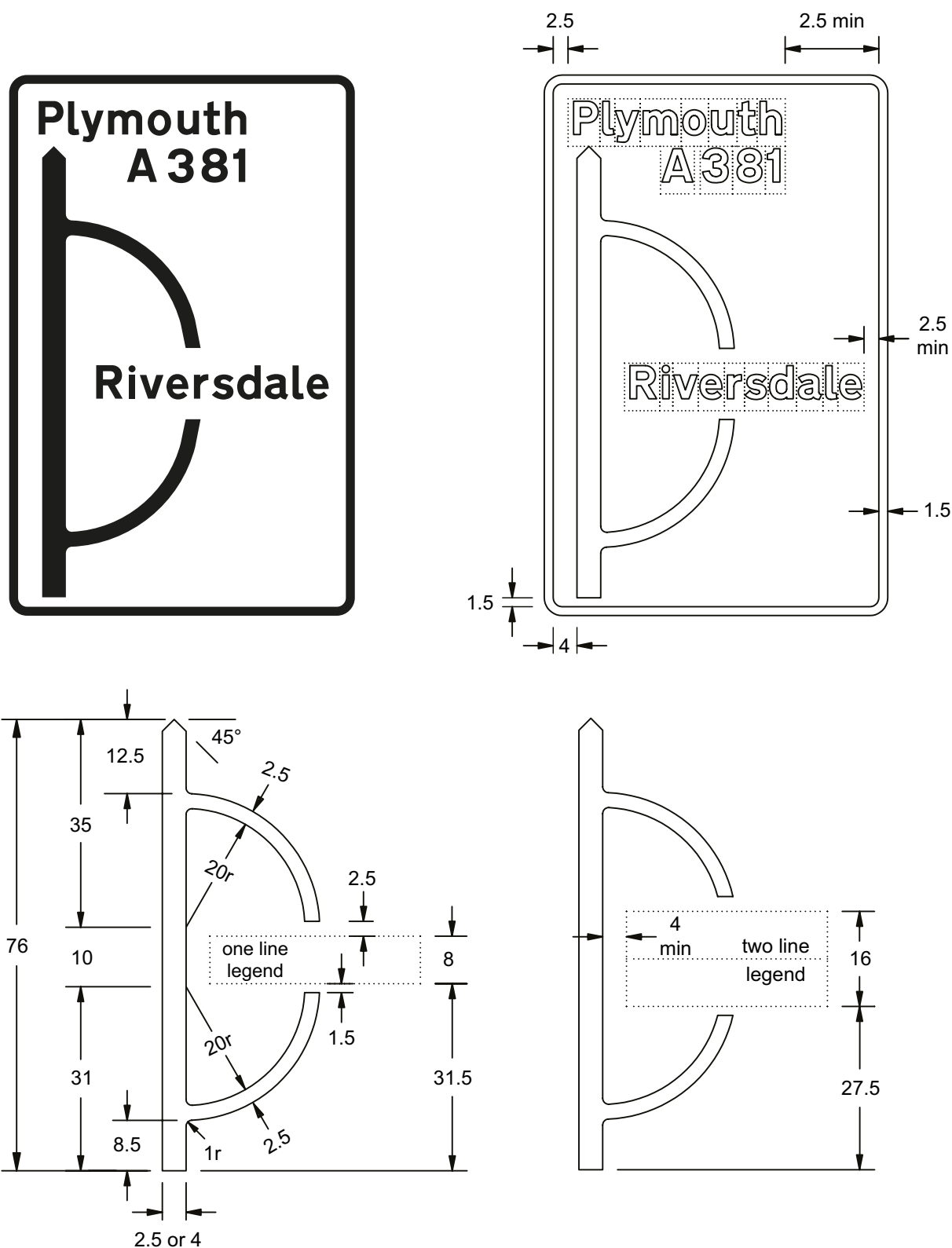


Figure 5-47

5.21.2. By-passed community signs are usually associated with a break during a journey rather than being the final destination sought by the driver.

5.21.3. By-passed community signs are not intended to be used for destinations that are signed as primary destinations because of their strategic traffic importance.



6.1 General design rules

6.1.1. **Figure 6-1** shows the design of a sign for an at-grade junction where the right hand lane is for use by right turning traffic only. Such a sign may also be used on the exit slip road of a grade separated junction. The arrows, lane line symbols, horizontal bars and their colour variations are prescribed by S12-5-3. The Regulations permit the symbols prescribed by S12-5-3 to 7 to be used on signs for car parks (black symbols), tourist/leisure destinations (white symbols), lorry routes (white symbols) and MOD establishments (red symbols).

6.1.2. **Figure 6-2** shows a main carriageway advance direction sign on the approach to a grade separated junction with a lane drop; the arrows and symbols are prescribed by S12-5-4. **Figure 6-3** is the final advance direction sign used at lane drop junctions; the arrows and symbols are prescribed by S12-5-6, type A. **Figure 6-4** shows an advance sign where lanes diverge in a Y pattern; the arrows and symbols are prescribed by S12-5-6, type B. Such a sign might be appropriate where lanes divide on a slip road, leading to different destinations

6.1.3. For all signs covered in this section, the longer 18 sw arrow replaces the standard 16 sw length. The width of the arrow head remains at 8 sw. The tops of arrows are always aligned vertically. The curved arrow in **Figure 6-1** is reversed when indicating a left turn lane. Where two or more lanes lead to the same destination, a horizontal bar must be used as shown. This also applies to multiple left and right turn lanes. The horizontal bar must be omitted where only one lane leads to a particular destination. In this case, the gap between legend and arrow head is generally 1.5 sw for tiles and 2.5 sw for panels, patches and symbols. The gap may be increased to produce a balanced design (e.g. by aligning the destination blocks, as shown in **Figure 6-2**). However, this increased gap is not recommended for signs with chevron markings (see **Figure 6-3**) where this would increase the width of the sign.

6.1.4. The arrows, including any left or right turn arrows, are centred horizontally in their respective lanes (in the case of the curved arrow it is the full 14 sw width that is centred). This does not necessarily apply to the inclined arrows shown in **Figure 6-3** and **Figure 6-4**, where the positions are chosen to give a balanced appearance. Lanes leading to the same destination should have equal width. The widest lane on the sign should not be greater than twice the width of the narrowest lane. If necessary, the width of the narrow lanes should be increased and the legend centred accordingly. Any horizontal bar should extend to a point 2.5 sw from any vertical border or lane line.

6.1.5. The lane lines are always positioned vertically so that the top of a line is 1 sw above the top of a vertical arrow head, whether the sign has horizontal bars or not.

6.1.6. Where a lane line is truncated at the top of the sign (as in **Figure 6-2**) the minimum length of line should be 3 sw. Where this cannot be achieved, the line should be omitted, as shown in **Figure 6-1**. The minimum gap between the lane line and the top border is 1.5 sw.

6.1.7. Where a sign incorporates the chevron markings shown in **Figure 6-3** and **Figure 6-4**, it may be necessary to adjust the vertical position of the chevrons if there are three or more lines of legend. In most cases the solution is to move the chevron markings upwards by one lane line module of 12 sw, as illustrated in **Figure 6-5**. The Regulations do not permit the shape of the chevron symbol to be varied, i.e. additional chevrons must not be added to symbol.

6.1.8. Route numbers on separate lines may be ranged right to emphasize that they are associated with right hand lanes, as shown in **Figure 6-2**. However, individual destinations should always be ranged left as illustrated in **Figure 6-6**.

6.1.9. The distance to the junction, as shown in **Figure 6-2**, may be 2 m, $1\frac{3}{4}$ m, $1\frac{2}{3}$ m, $1\frac{1}{2}$ m, $1\frac{1}{3}$ m, $1\frac{1}{4}$ m, 1 m, $\frac{3}{4}$ m, $\frac{2}{3}$ m, $\frac{1}{2}$ m or $\frac{1}{3}$ m. Any other distance will require special authorisation. Distances to destinations should not normally be included on dedicated lane signs.

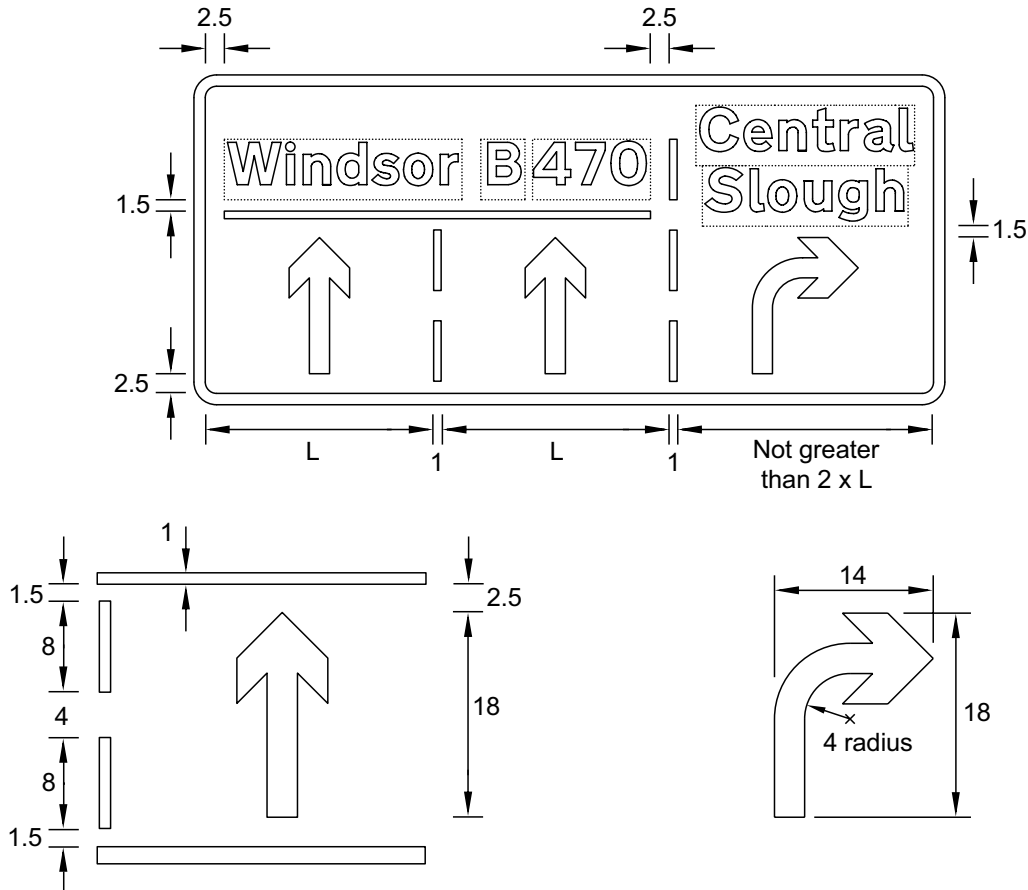


Figure 6-1

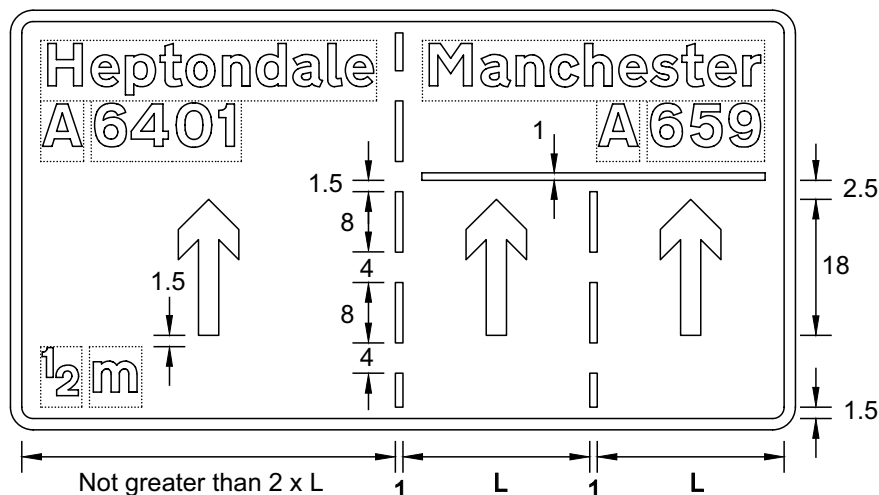


Figure 6-2

6.1.10. A junction name or a place name may be added to the top of the sign (see **3.11**). However, where there is more than one sign on the approach to the junction, it is sufficient to provide the name on the first sign only.

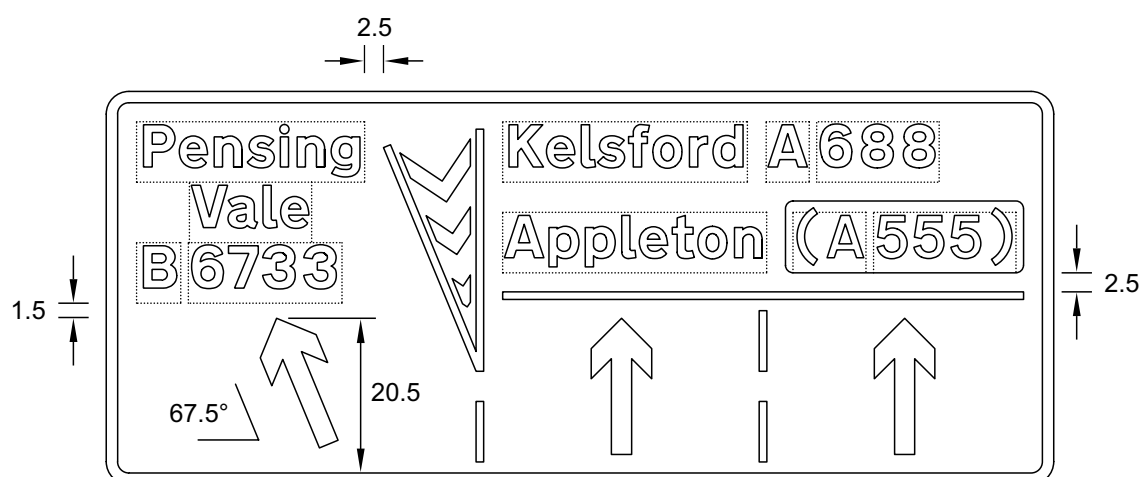
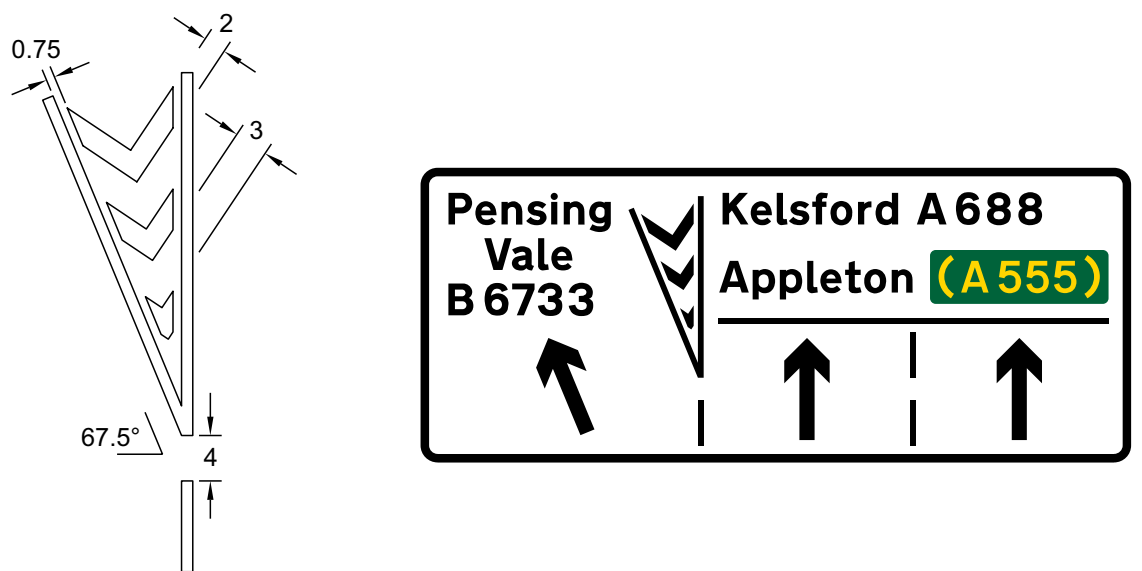


Figure 6-3

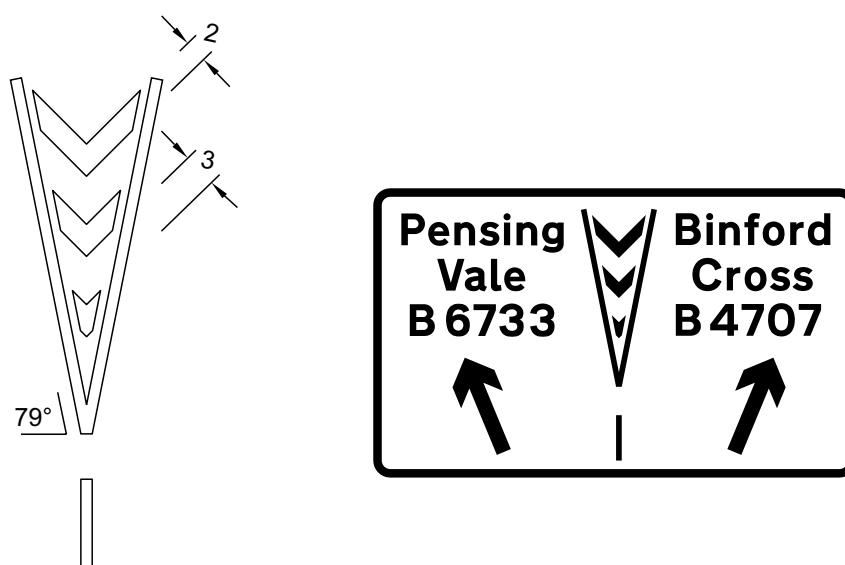


Figure 6-4

6.1.11. Permitted symbols from Schedule 12 may be added to the signs in the same way that they are added to stack-type and map-type signs (see 6.2 for warning and regulatory symbols on dedicated lane advance direction signs). Generally the symbol is placed to the right of the legend for left turn and ahead lanes, and to the left of the legend for right turn lanes. The symbol may be centred below the legend if this results in a more compact sign. The “P” parking symbol

is always placed to the left of its associated legend unless this is the name or description of a tourist destination or leisure facility. The special rules given in 4.2.6 then apply. Where the aircraft symbol is used, this should generally be placed to the right of the airport name. Where the airport name is the same as the place name destination along the same route, the aircraft symbol may be used on its own on a separate line ranged left. Symbols with a directional element should face either left or right as appropriate. For ahead destinations, the symbol should face left, except for the aircraft symbol which should point vertically upwards. Where the arrow is inclined at 22.5° on a sign shown in Figure 6-3 or Figure 6-4, any aircraft symbol associated with that direction should also be inclined at 22.5° to the vertical. Examples of the use of symbols are given in Figure 6-7.

6.1.12. More examples of complete dedicated lane advance direction signs are in Appendix F.

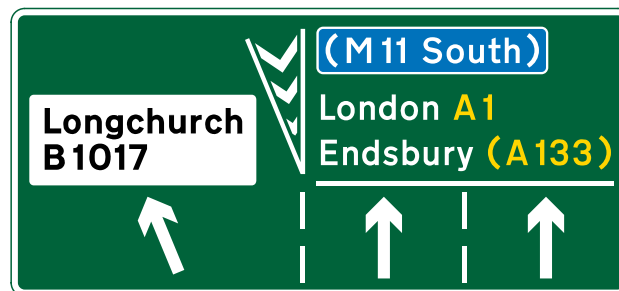
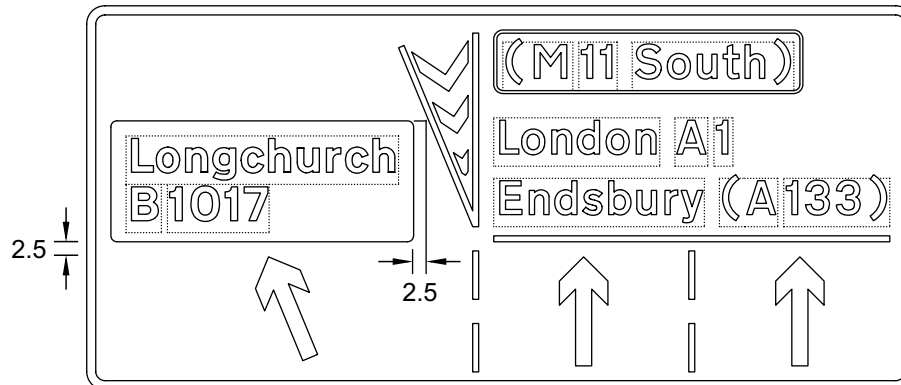


Figure 6-5

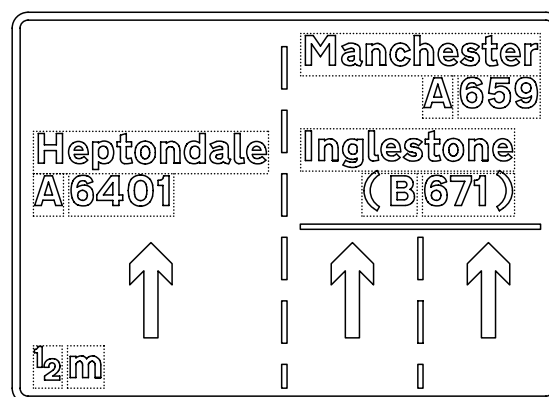


Figure 6-6

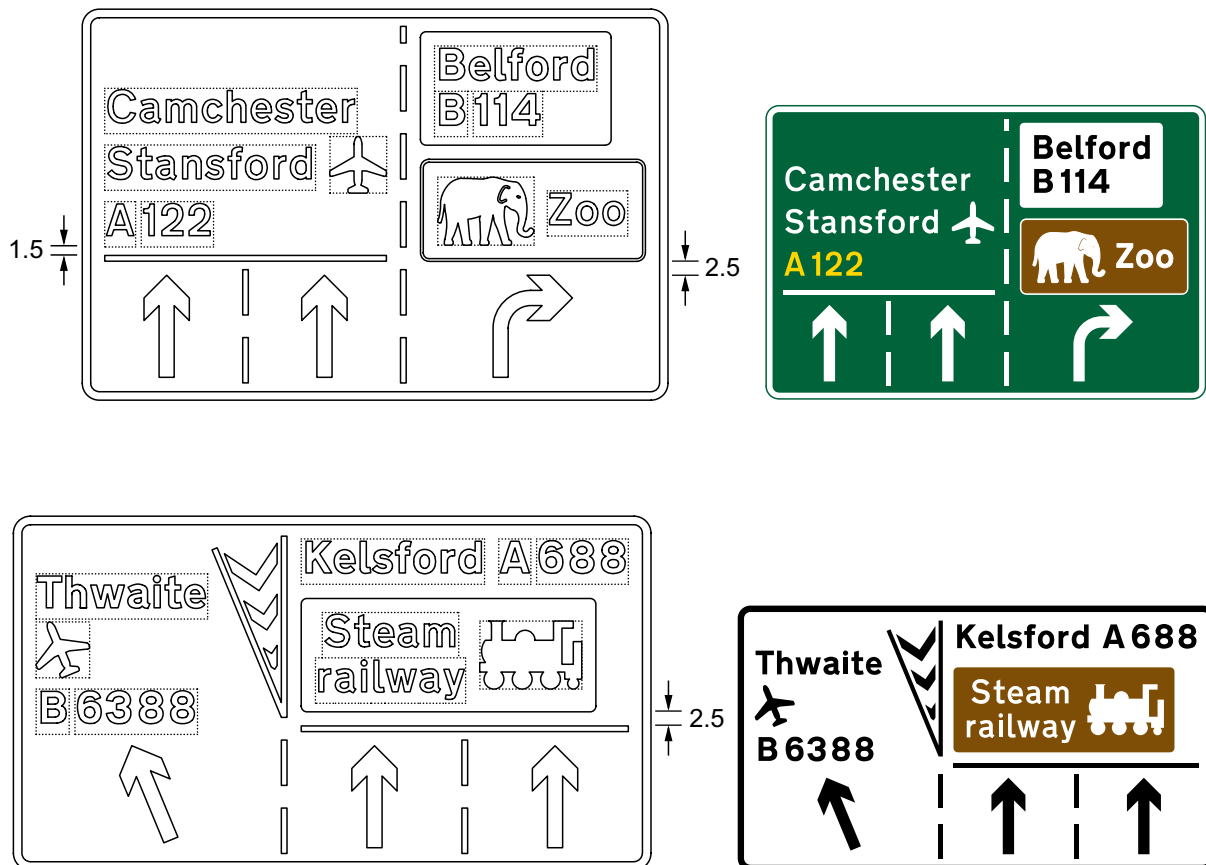


Figure 6-7

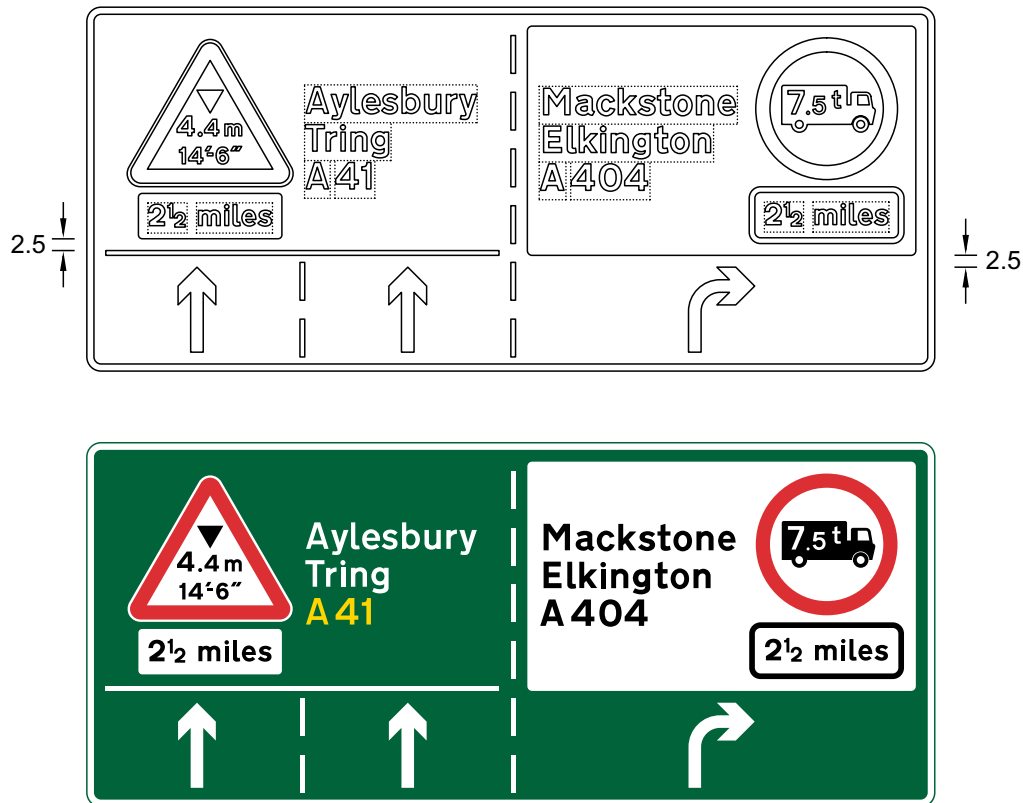
6.2 Warning and regulatory symbols on dedicated lane advance direction signs

6.2.1. The design rules are basically the same as those for stack-type signs (see 4.4 to 4.6), except that the arrows are below the legend blocks. A plate indicating the distance from the junction to the restriction should always be used with a regulatory symbol unless the restriction indicated commences at the junction. Distance plates may also be added below triangular warning symbols.

6.2.2. Any triangle or roundel should be placed to the left of the destination when the route indicated is either ahead or to the left. When the route is to the right, the triangle or roundel should be placed to the right of the destination. An example is shown in Figure 6-8. It should be noted that the addition of a triangle or roundel to a single lane destination can make the sign extremely wide. In Figure 6-8 it was necessary to increase the width of the two left hand lanes to ensure that the wide single lane is not greater than twice the width of the narrowest lane (see Figure 6-2). The use of more than one triangle or roundel associated with the same destination is therefore not recommended.

6.2.3. The vertical distance between any triangle, roundel or plate and any arrow or horizontal bar below should be a minimum of 2.5 sw, as shown in Figure 6-8.

6.2.4. Where the sign includes the “alternative route” legend, the design rules set out in 3.10 should be used.



Distance plates are designed as normal signs and then reduced to 80% of their size.

All dimensions are in stroke widths based on the main x-height.

Figure 6-8

6.3 Shared lane advance direction signs

6.3.1. The signs in [Figure 6-9](#) (diagram A) indicate that the centre lane may be used for either of two routes. This lane is referred to as a 'shared lane' and the blocks containing the destinations it leads to are stacked above each other. This form of sign is prescribed in S12-5-5. It is usual to place uppermost the block for the left lane, but this may not apply to complex situations such as those involving more than one shared lane. Destination blocks that apply to two or more lanes always have a horizontal bar immediately below. When it is necessary to place a block for a single lane above another destination, a horizontal bar is used under it. This may be of particular benefit in grade separated situations to provide consistency of destination position with subsequent signs. Other examples of shared lane signs are shown in diagram B in [Figure 6-9](#).

6.3.2. All arrows are the same height and point the same way, normally ahead. Double-headed arrows are not used. The module of the marks and gaps forming the vertical lane lines starts at the bottom of the sign, as usual. This same module using the same origin continues upwards, even where part of the line is removed for an intervening destination block. Disjointed elements of the same lane line align with each other. A horizontal bar is separated from a text block below it by 4 sw. This increases to 4.5 sw for a bar above a panel or patch. A truncated lane line mark may be needed below a horizontal bar or above a destination block, but it is omitted if its length would be less than 3 sw.

6.3.3. Lanes below a horizontal bar should be of a similar width, but it is not always possible for them to be the same width without causing the sign to be wider than necessary, as shown in the motorway sign in diagram B in [Figure 6-9](#).

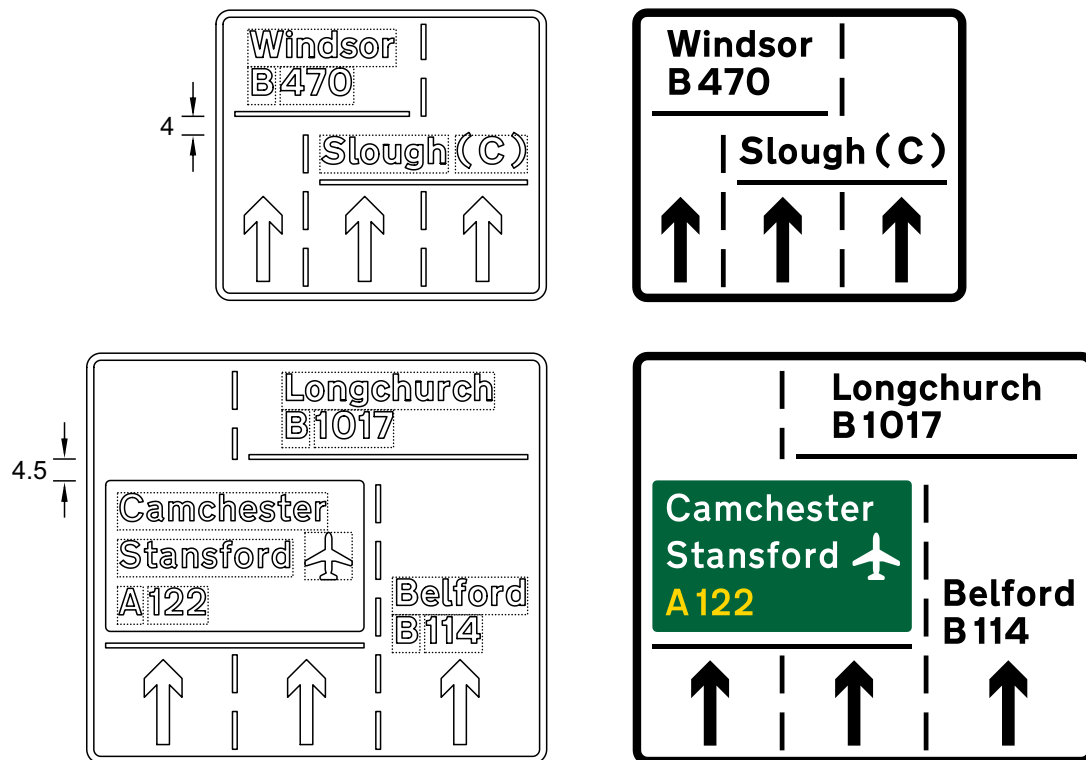


Diagram A

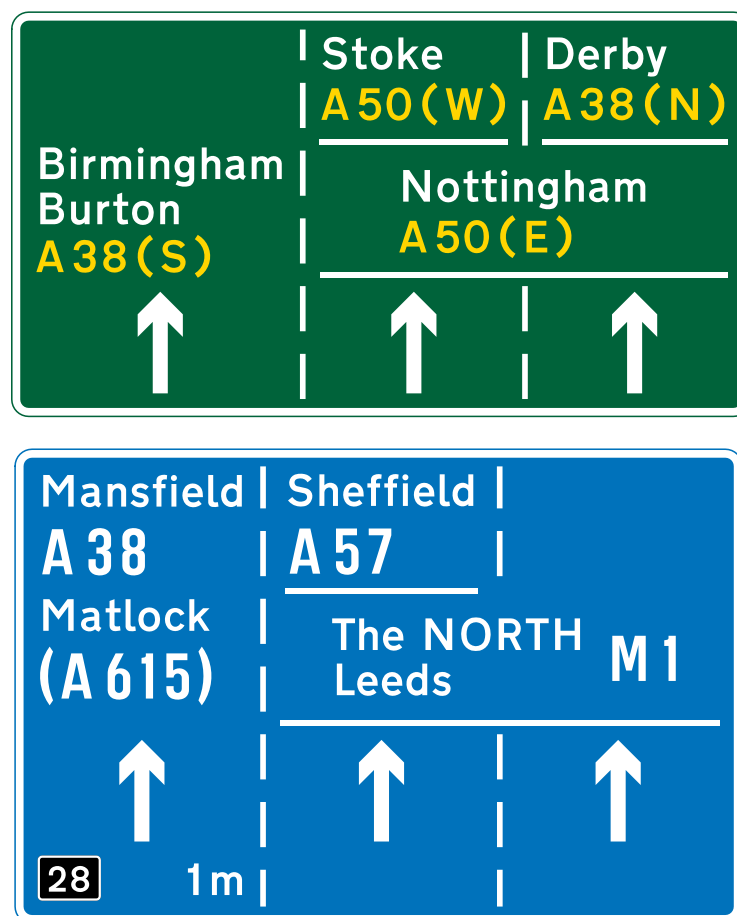


Diagram B

Figure 6-9

6.4 Lane gain advance direction signs

6.4.1. Where the road widens and an additional lane commences a significant distance beyond, a sign of the form shown in [Figure 6-10](#) may be used. The height of the sign is dependent upon the width of the gained lane, so its destination needs to be kept as narrow as possible by stacking vertically any route numbers or symbols and abbreviating any long name if possible. The vertical lane line marks and gaps have the same relationship with the arrow heads as on other dedicated lane signs: the top of a full height mark is 1 sw above the top of the arrows.

6.4.2. Lane gain advance direction signs may have shared lanes, as shown in [Figure 6-11](#).

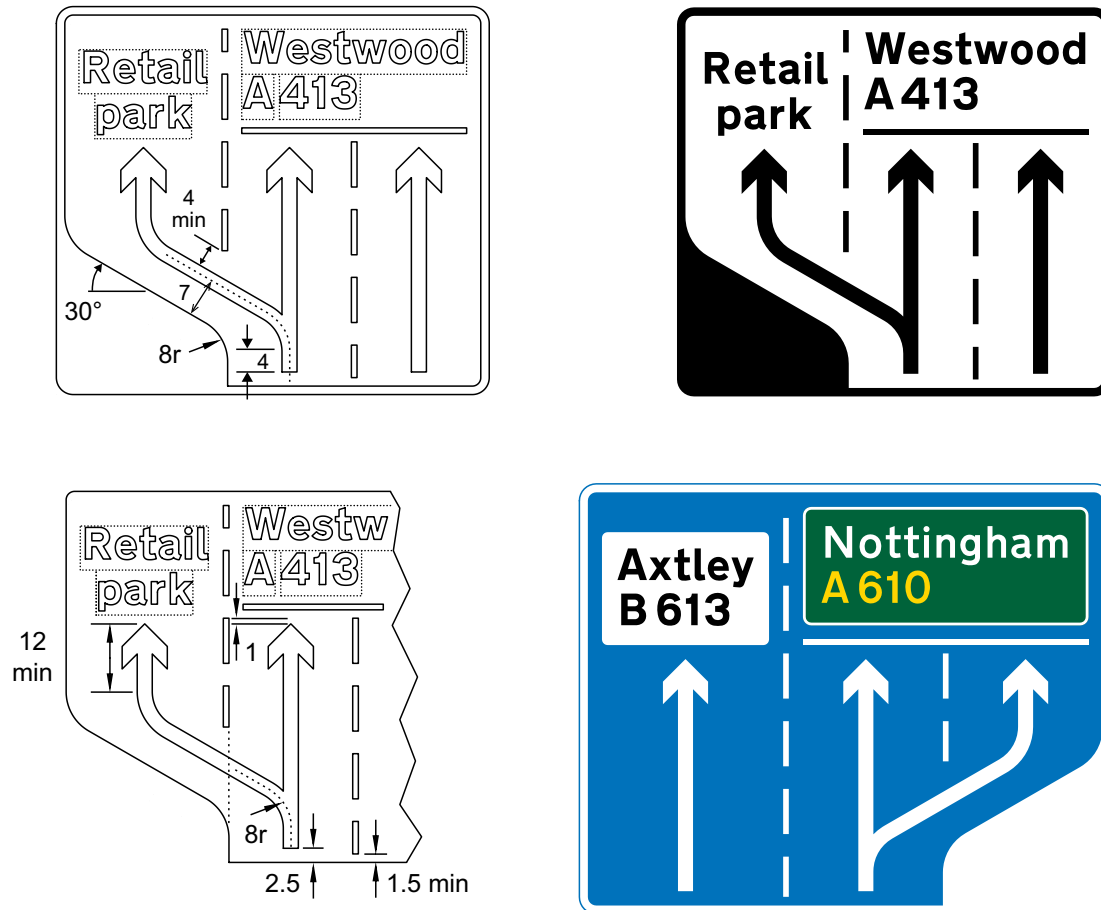


Figure 6-10



Figure 6-11

6.5 ‘Tiger tail’ signs

6.5.1. Diagrams 2904.2 (S12-28-1) and 2017.1 (S12-28-2) prescribe signs for use on motorways and other grade separated roads where there are two points at which traffic may leave the “main line”. These signs are referred to as “tiger tails” after the representation of them on the chevron road markings that they are used in conjunction with. They are designed in accordance with DfT working drawing S12-28-1 (P2904.2) and with the principles in 6.4.1, with the exception that the angle of 30° is changed to 45°. A dropped lane may be shared, as in the example in [Figure 6-12](#).

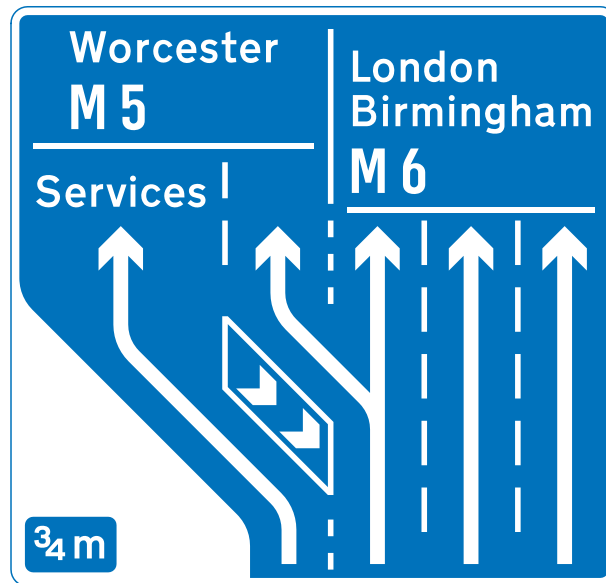


Figure 6-12

6.6 ‘Y arrow’ signs

6.6.1. Signs incorporating a “Y arrow” are prescribed in S12-5-7 for use on motorways and in other high-speed situations where a lane divides to reach different routes. The bifurcating lane may be in the centre of the carriageway, in contrast to the sign described in 6.4.1. Another difference is that “Y arrow” signs usually only show route numbers, as full destinations would be too wide for this format. The horizontal bar is omitted where a single lane leads to a route. Two examples are shown in [Figure 6-13](#).

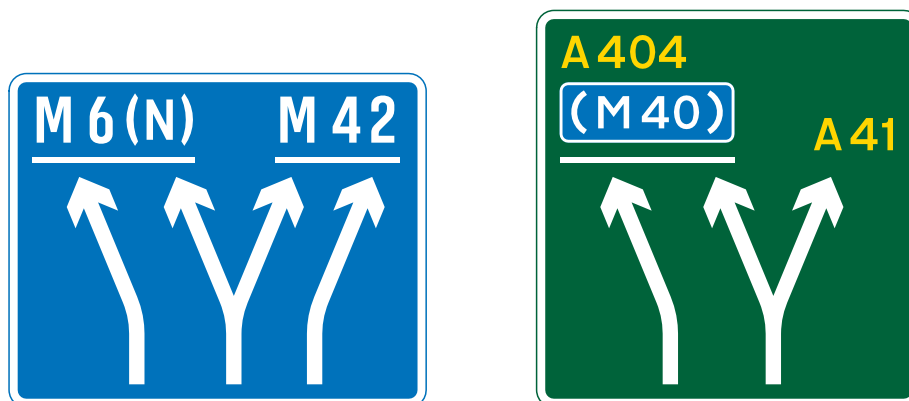


Figure 6-13

7.1 Flag-type direction signs

7.1.1. The background colour of the sign must be appropriate to the status or type of route indicated. Tourist/leisure facility panels and route number patches, but not blue, dark green or white destination panels, may be added to flag-type signs (S12-8-2). The design of blue background signs indicating the start of a motorway or motorway slip road is covered in [10.2](#). Signs that indicate only tourist destinations or leisure facilities should have a brown background. Signs indicating lorry routes should have a black background, signs indicating cycle routes should have a blue background and signs which indicate MoD establishments should have a white background with a red border and chevron. The regulations permit cycle route signs to be brown when indicating tourist destinations or leisure facilities.

7.1.2. [Figure 7-1](#) shows the basic design of flag-type signs. The width of the chevron is determined from the overall height of the sign and should be in accordance with the table. Vertical positioning and layout of the legend is the same as for stack-type signs (see [section 4](#) for stack-type signs and [section 3](#) for general rules).

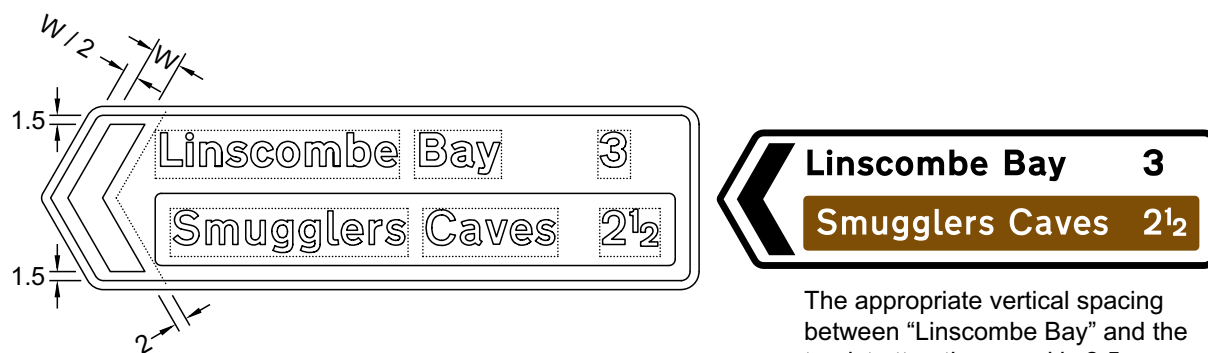
7.1.3. No part of any legend should cross a line offset from the chevron by 2 sw. With some designs it may be possible to tuck the legend into the chevron, as shown in [Figure 7-1](#). However, where two signs are mounted back-to-back they need to be the same length. This can be achieved by not tucking the legend into the chevron.

7.1.4. The rules relating to distances are described in [3.9](#).

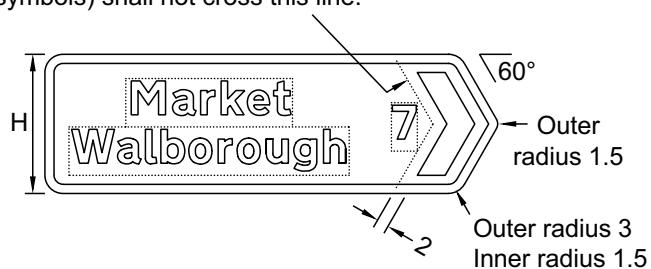
7.1.5. Pedestrian signs (S12-2-9) may be in any contrasting colours. The border, chevron or both may be omitted. The pointed end of the pedestrian flag-type sign may be of any shape. These signs may indicate public footpaths and bridleways (S12-3-1, entry 3 in column (3)). The legends on pedestrian signs may be in capital letters (S12-3-3).

7.1.6. The design rules for positioning symbols on direction signs are generally the same as for other signs, as shown in [Figure 3-10](#) (see [7.2](#) for warning and regulatory symbols on flag-type signs). Generally the symbol should be placed at the opposite end to the chevron. The symbol may be centred below the legend if this results in a more compact sign. The “P” parking symbol is always placed to the left of its associated legend unless this is the name or description of a tourist destination or leisure facility. The special rules given in [4.2.6](#) then apply. Where the aircraft symbol is used, this should generally be placed to the right of the airport name, whether the sign points to the left or to the right. Where the airport name is the same as the place name destination along the same route, the aircraft symbol may be used on its own on a separate line ranged left. Symbols with a directional element should face either left or right as appropriate. The aircraft symbol should always be horizontal, pointing left or right as appropriate. Examples of the use of symbols are given in [Figure 7-2](#).

7.1.7. More examples of complete direction signs are in [Appendix F](#).



Legend block (tiles, square corners of panels or patches, and symbols) shall not cross this line.



The appropriate vertical spacing between "Linscombe Bay" and the tourist attraction panel is 2.5 sw (block spacing) (see para 3.7.3)

HEIGHT OF SIGN H sw	WIDTH OF CHEVRON W sw
< 19	3
19 to < 27	4
27 to < 35	5
35 to < 43	6
43 to < 51	7
51 to < 59	8

Where the height exceeds 59 sw it is recommended that two or more smaller signs are used

Figure 7-1

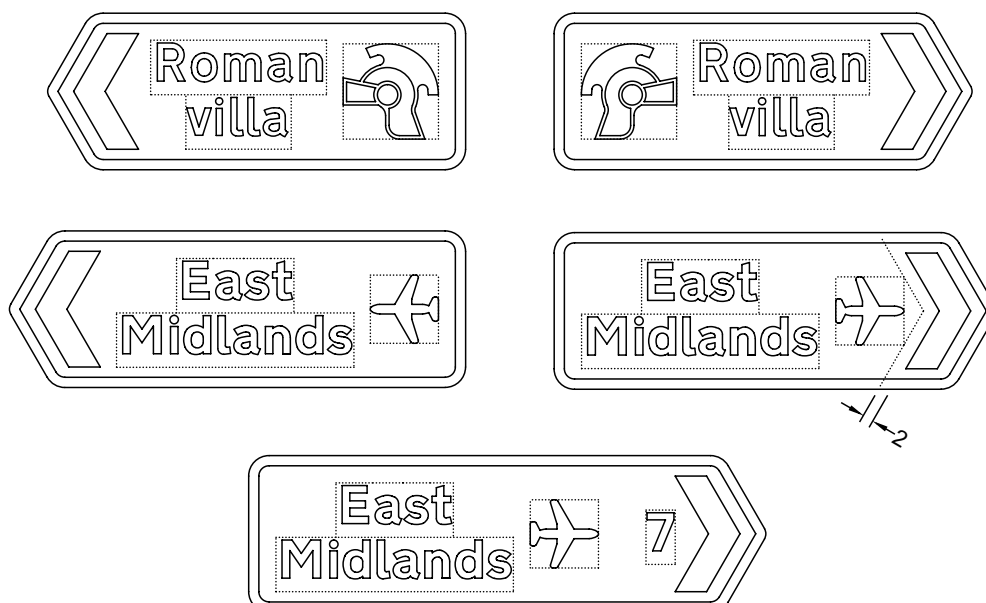


Figure 7-2

7.2 Warning and regulatory symbols on flag-type signs

7.2.1. The design rules for placing triangles and roundels adjacent to chevrons on flag-type signs are shown in [Figure 7-3](#). The triangle or roundel is always placed on the same side of the legend as the chevron. Where the sign has a dark green or brown background a white edge is added to the outside of the triangle or roundel. The prescribed sizes for the triangles or roundels (excluding any white edges) are given in S12-20 (see [3.4](#)).

7.2.2. Distance plates (S12-20-44) may be added below the triangles or roundels, as shown in [Figure 7-3](#). The plate is designed as a normal sign and then reduced to 80% of its size. Thus if the x-height of the main sign is 100 mm, the x-height of the plate will be 80 mm. Where the plate is placed on a dark green or brown background the border is omitted, the corner radii remaining at 1.5 sw based on the plate x-height (i.e. 1.2 sw based on the x-height of the main sign). The plate should not cross a line offset from the chevron by 2 sw. A plate indicating the distance from the junction to the restriction should always be used unless the restriction indicated commences close to the junction.

7.2.3. Where a destination is indicated to the right, any distance is generally placed to the right of the warning or regulatory symbol. However, where more than one destination is shown, the clarity of the sign is improved, as for stack-type advance direction signs, by placing the distances between the place names and the warning triangle or regulatory roundel (see [Figure 4-12](#) and [Figure 4-15](#) for stack-type sign examples).

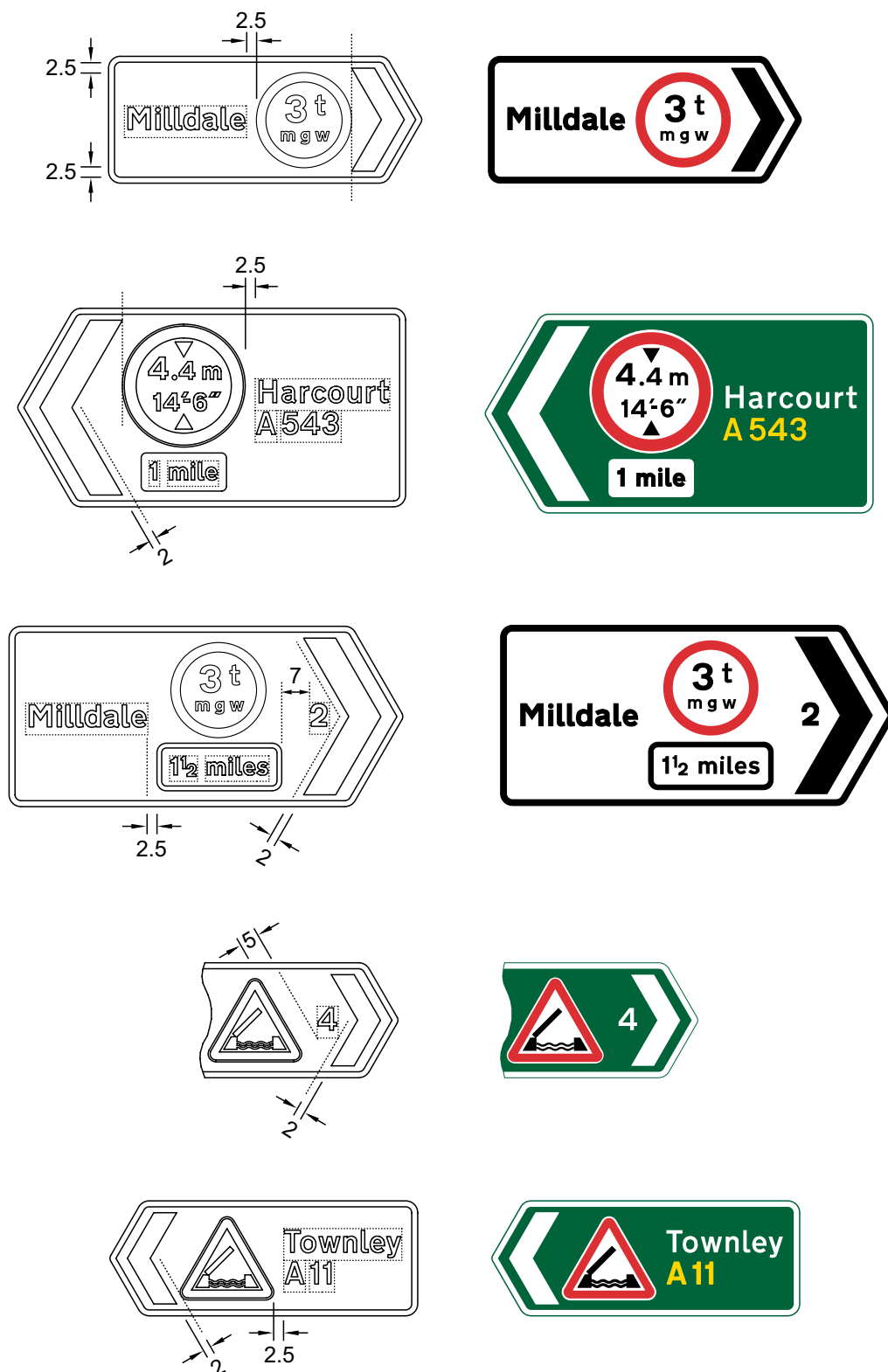
7.2.4. Two triangles or roundels, or one of each, may be included on a flag-type sign. The design details are similar to those for stack-type advance direction signs (see [Figure 4-13](#), [Figure 4-16](#) and [Figure 4-17](#)).

7.2.5. The dimensions relating to the various gaps apply equally to plates with and without borders and to triangles with and without white edges. The gap is measured to the outside of any border or edge provided.

7.3 Rectangular direction signs

7.3.1. The design of these signs is basically the same as for advance direction stack-type signs. See [Figure 3-4](#), [Figure 3-8](#) and [3.2.7](#). The ahead arrow, however, should be placed to the right of the destinations when traffic passes to the right of the sign to follow the route indicated. The sign should be located on the nose dividing the routes indicated. Where the sign shows a single direction sign (diagram A in [Figure 7-4](#)), these are treated the same as flag-type signs and should not have blue, dark green or white destination panels. The signs will have destination panels if the routes are not of the same status (diagram B in [Figure 7-4](#)). Diagram C in [Figure 7-4](#) shows signs where the routes are of the same status.

7.3.2. At grade separated junctions the direction signs on the nose of the exit slip roads should show route numbers only. The arrow should normally be inclined at 22.5° to the vertical. However, at some locations an angle of 45° might be more appropriate. Examples are shown in [Figure 7-5](#).



NOTES

1. The distance plates have an x-height equal to 80% of the main x-height and are designed in accordance with the normal design rules appropriate to the reduced x-height. Where a plate has an increased width (e.g. 2½ miles) it should not cross the line shown offset from the chevron by 2sw.
2. Dimensions shown are in stroke widths based on the main x-height.

Figure 7-3



Diagram A



Diagram B

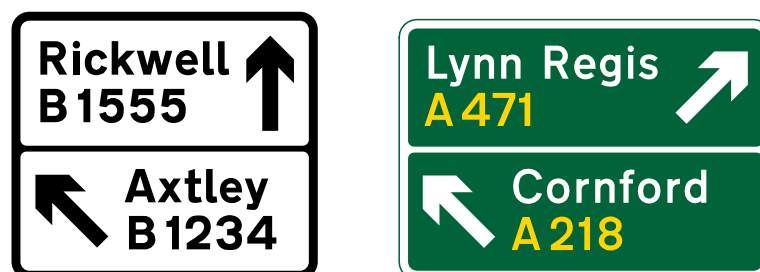


Diagram C

Figure 7-4

7.4 Traditional fingerposts

7.4.1. The traditional fingerpost (diagram 2142, S12-28-7) as shown in [Figure 7-6](#) must be used only where all roads at a junction are minor routes. Schedule 1 defines a minor route as a road which has not been assigned a number prefixed by A, B or M. Fingerposts are most suited to rural locations where traffic speeds are low. Existing fingerposts of historical interest may be retained on any class of road. On classified roads, they will normally supplement the modern signs (see Traffic Advisory Leaflet (TAL) 6/05 'Traditional Direction Signs').

7.4.2. The sign uses Transport Heavy capital letters, with an x-height between 40 mm and 60 mm. Lower case letters with an initial capital may be used as an alternative, but not on a sign that has other place names all in capitals. Where lower case letters are used, the recommended minimum x-height is 50 mm. The letters are always black on a white background. Signs using letter styles to replicate pre-1960s fingerposts may be specially authorised on request.

7.4.3. The sign may be based on the flag-type direction sign without the border and chevron, or may be square ended. Where the sign has a pointed end it is recommended that the angle should be between 120° and 90°. The corners of the sign may be either radiused or square. The legend may be either flush with the sign plate or raised above the surface of the plate. A narrow black border may be added to the sign.

7.4.4. The sign should generally be mounted on a single post at the appropriate end of the plate. This is particularly important where the "pointing" end of the sign is square. A finial may be added to the post.

7.4.5. Ideally all fingerpost signs on minor roads in a particular area should be to the same design, and traffic authorities are recommended to adopt a single consistent style throughout, matching wherever possible any surviving pre-war examples.

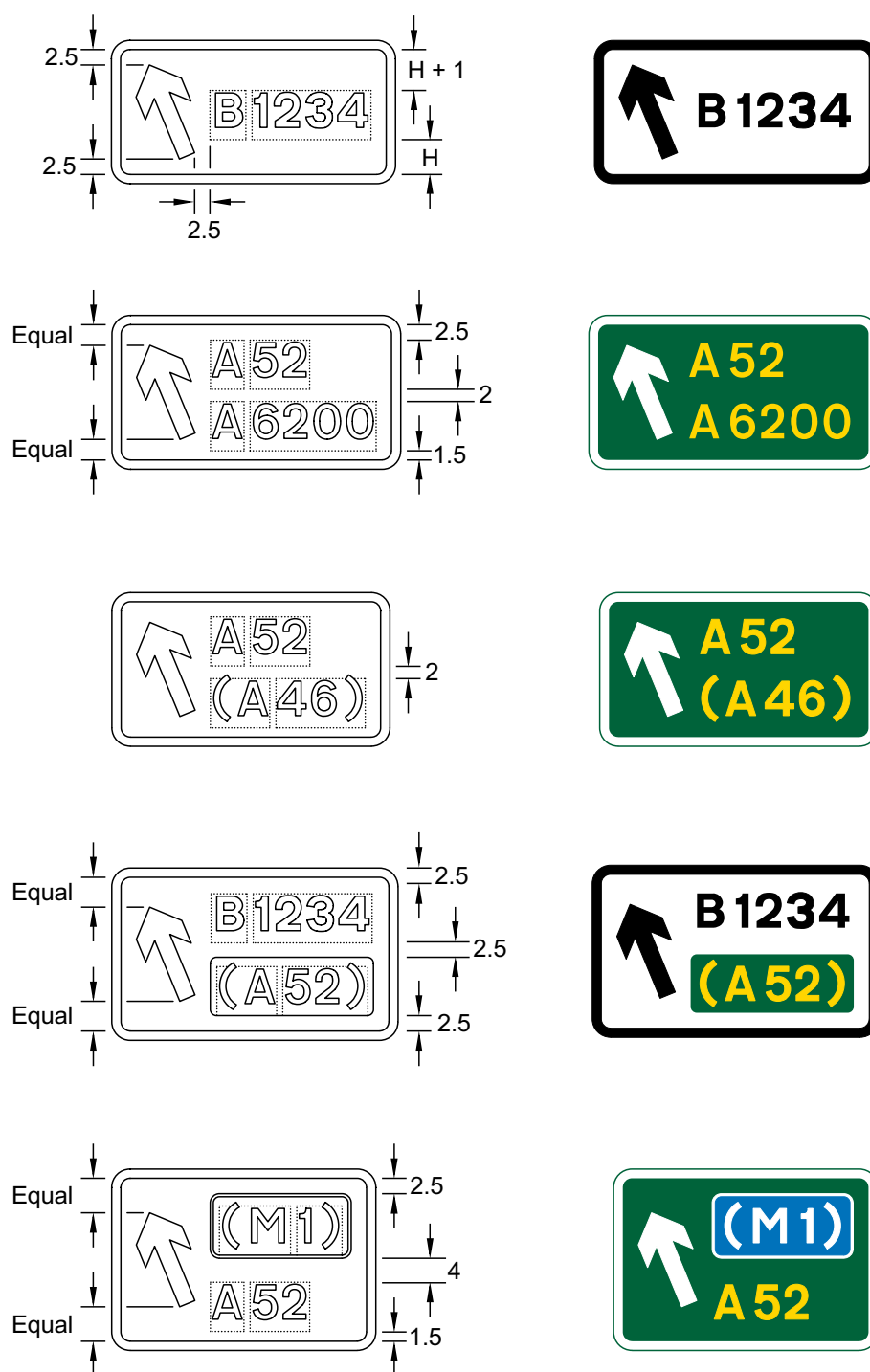


Figure 7-5

8.1 Route confirmatory signs indicating a single route

8.1.1. The design of route confirmatory signs for various combinations of tiles and patches is shown in [Figure 8-1](#). Design rules relating to the use of distances are covered in [3.9](#). Regional destinations (see [Appendix C](#)) are centred horizontally on the sign and may overlap a distance tile on the line below. Regional destinations are always in capital letters (other than “The”).

8.1.2. Where destinations are reached by turning onto another route, they are shown unbracketed along with other destinations in mileage order.

8.1.3. The aircraft symbol may be used alongside and to the right of an airport name in accordance with the general rules on the positioning of symbols. The symbol should be vertical, with gaps to any line above or below being the same as for a route number patch. Where the airport name is the same as a place name destination on the sign, the aircraft symbol may be used on its own on a separate line only if it is quite clear which airport is being signed. Examples are shown in [Figure 8-2](#).

8.1.4. More examples of complete stack-type signs are in [Appendix F](#).

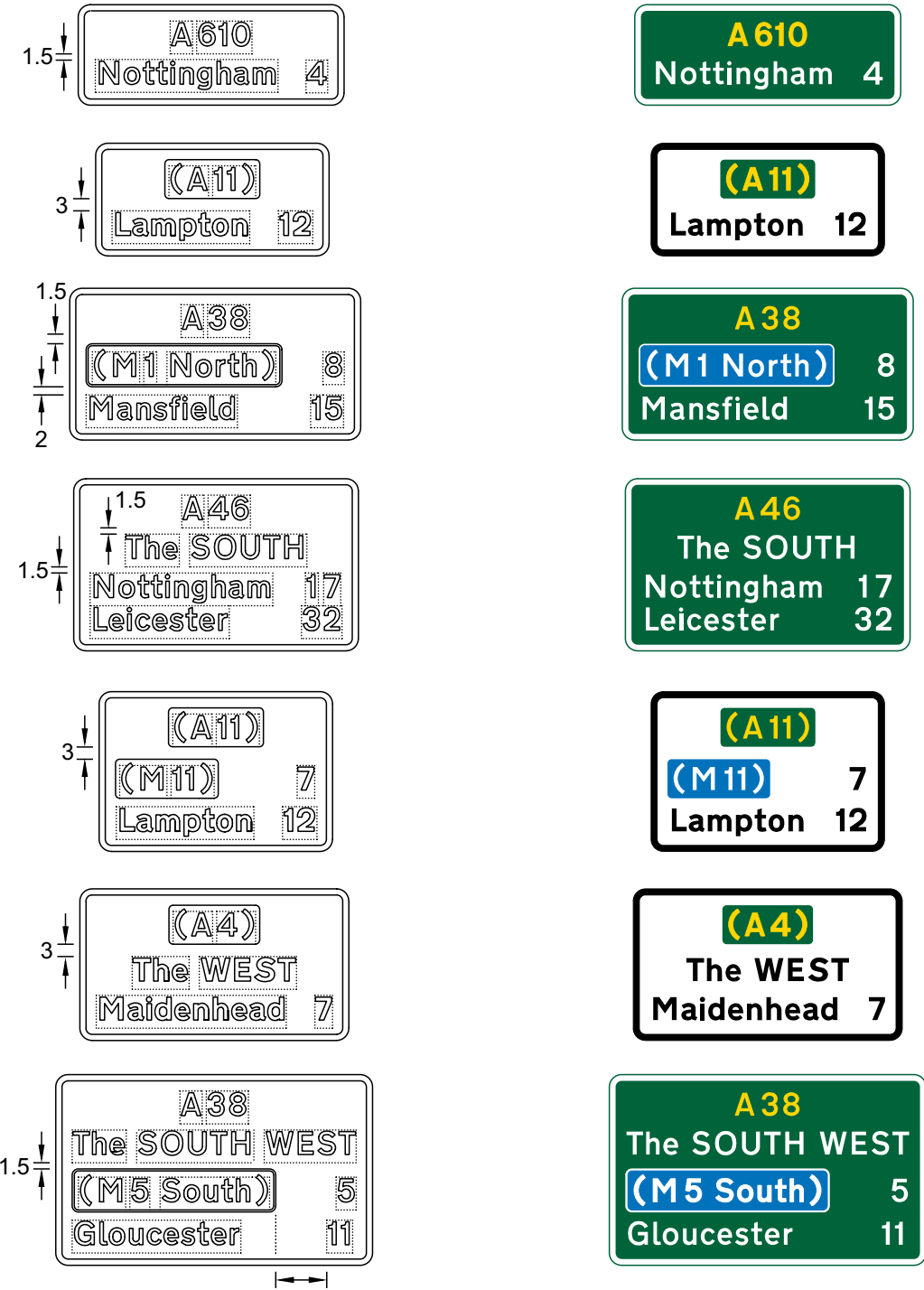
8.2 Route confirmatory signs indicating two routes

8.2.1. Where destinations are reached by turning onto another route they can be listed separately, as shown in [Figure 8-3](#). This type of sign would be used where the junction is reached before the next destination on the existing route. In the case of a primary route sign which includes local destinations, the sign would be used where the junction is reached before the next primary destination. Where a primary destination on the present route is reached before the junction, a sign with a single route number, as shown in [Figure 8-1](#), is more appropriate.

8.2.2. The second route number may be placed at the top of the sign, as shown in the example “B4040 (A 41)” (see [Figure 8-4](#)). This is appropriate when all destinations on the sign are located on the bracketed route. However, for economy of space, this sign may also be used in the circumstances described in [8.2.2](#), although no indication is given as to which route applies to which destination. In the example, “Potten End” and “Gaddesden” could well be local destinations on the B 4040 which then joins the A 41 leading to “Aylesbury”. Signs of this design are helpful to drivers navigating by route numbers.

8.2.3. The appropriate spacings for various combinations of tiles and patches are shown in [Figure 8-4](#). Other dimensions and design rules are as described in [8.1.1](#) to [8.2.1](#).

8.2.4. Route numbers are centred horizontally on the signs. Where two route numbers are side by side, the line may be longer than the destination lines. In such cases, the route numbers will determine the width of the sign. The destination lines should be lengthened accordingly by increasing the gaps between the place names and the distances.



Greater than 7 sw as width of sign is determined by the regional destination

Figure 8-1

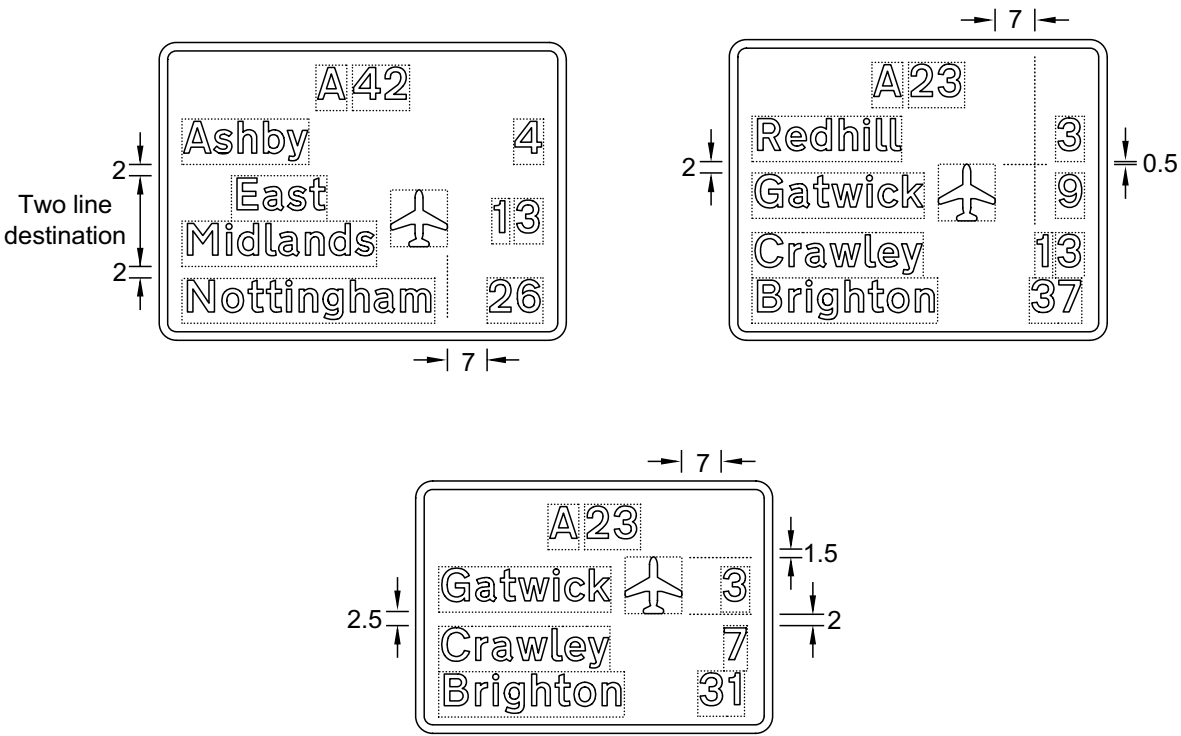


Figure 8-2

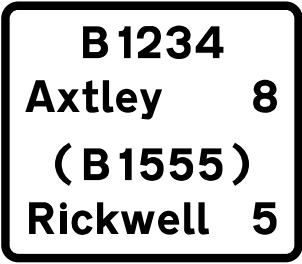


Figure 8-3

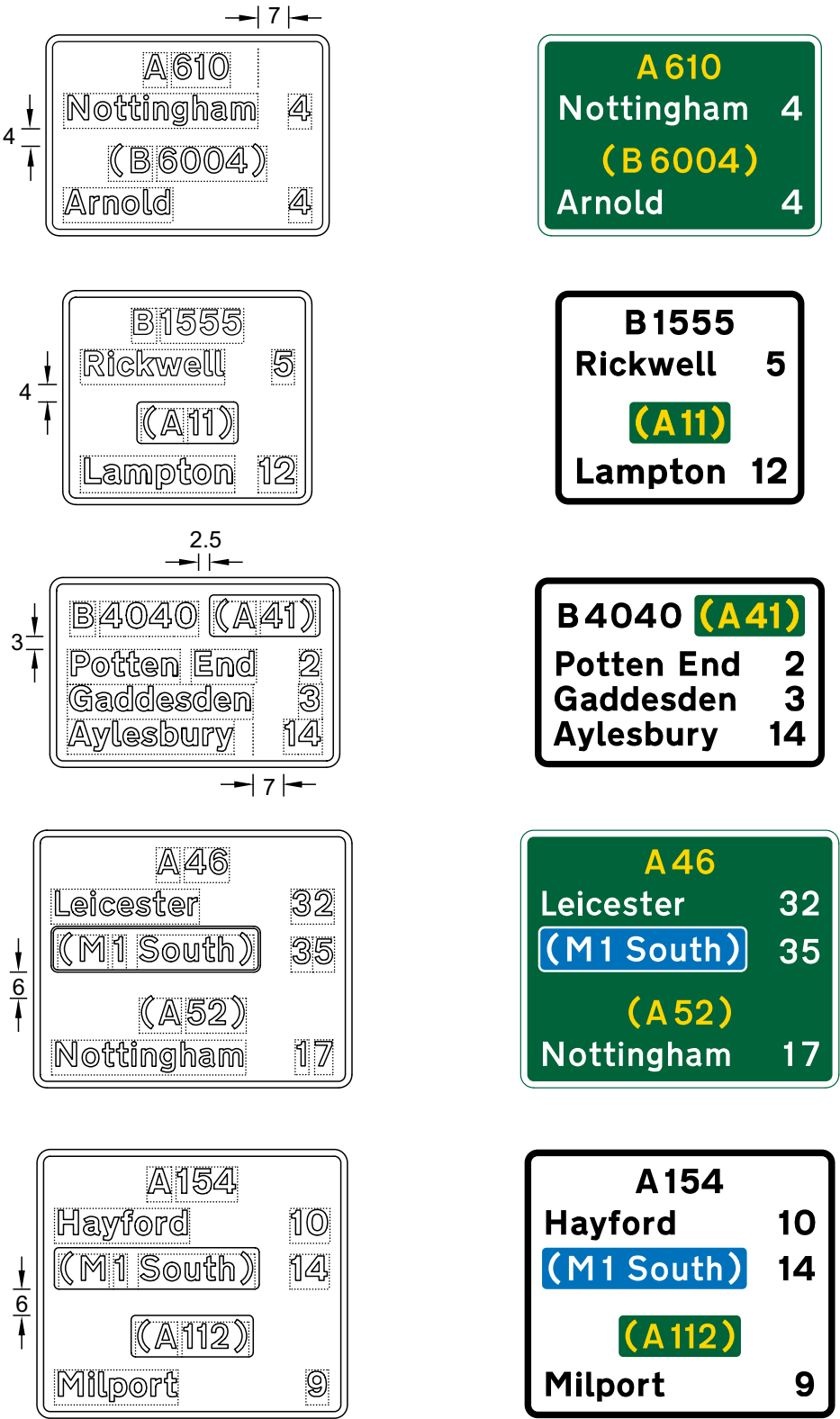


Figure 8-4

9.1 General

9.1.1. There are two designs of gantry signs: one for non-lane drop junctions and one for lane drop junctions (see 3.1.2). Both are shown in Figure 9-1. On lane drop signs, the Regulations also permit the downward pointing arrows to be on separate signs (S12-5-8, entry 3 in column 5) as shown in Figure 9-2. The design of the downward pointing arrow used on the lane drop sign is shown in Figure 9-3.

9.1.2. Both types of sign can include more than one destination on the same line. A comma is used to separate two place names in the same block (e.g. Leicester, Nottingham). A comma is also used where there are two blocks on the same line (e.g. Rickwell (B1555), Axtley B1234). Note that the horizontal gap is increased for block spacing. Where the first block ends with a patched route number or symbol a comma is not used, but the horizontal gap is increased to 4 sw.

9.1.3. The non-lane drop sign is similar in design to a stack-type sign with regard to the positioning of the arrows. The assembly comprises two signs, one above the other. The lower sign should normally be centred over the main carriageway. The upper sign is offset to the left by the dimensions shown, so that the inclined arrow is not directly above the lower sign. Where the upper sign is much longer than the lower sign, the assembly should be arranged so that the arrow on the lower sign is not directly below the upper sign. In some cases it may be necessary to shorten the upper sign by stacking the destinations vertically. Where the main carriageway bends to the right, both arrows may be turned through 22.5° in a clockwise direction (the angle between the two arrows remaining at 45°). The length of the arrow is generally 16 sw, but this is reduced to 14 sw for a vertical arrow alongside a single line legend. The distance to the junction may be added as shown in Figure 9-1 and Figure 9-7.

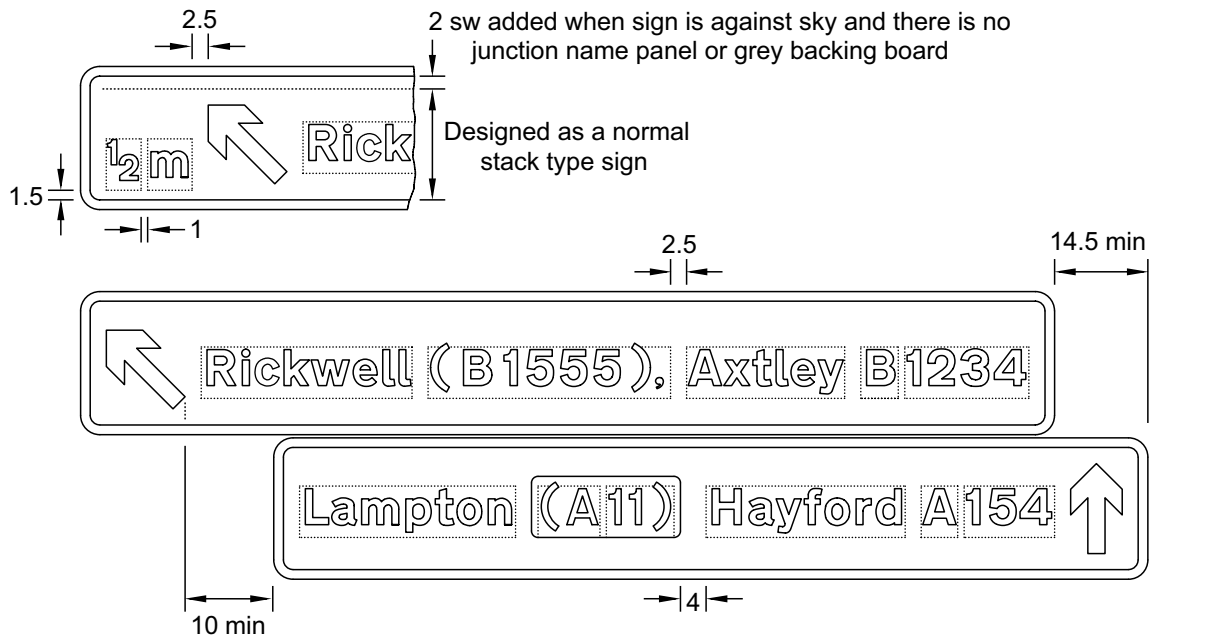
9.1.4. The downward pointing arrows on the lane drop sign should be centred over the traffic lanes to which they apply. In some cases it may be necessary to extend the width of the sign to cover the appropriate lanes (see Figure 9-4). When this is done, the horizontal spacing rules do not change, except that the gaps to the side borders are increased (the legend being centred horizontally on the sign). Where the downward pointing arrows are included in the main sign, the horizontal bar is always positioned 2.5 sw from each side border (i.e. it may extend beyond the legend above). The sign should cover at least three-quarters of the width of any lane to which it applies. Where the legend is in a panel (see 9.1.10 and Figure 9-6) the panel is not extended when the width of the main sign is extended. Where a single lane is indicated, the width of the sign may be greater than the lane width. In this case the sign may extend over part of the adjoining lane, but by no more than a quarter of a lane width. The sign may also be extended over any adjoining hard strip or verge. Abbreviated place names may be used to reduce the width of the sign. Any reduction in x-height in order to produce a smaller sign is strongly deprecated, because service to drivers is then markedly reduced. This can have significant road safety implications, and causes particular problems to older drivers, who tend to have slower reactions and less acute eyesight.

9.1.5. The distance to the junction may be added to a lane drop sign, as shown in Figure 9-1.

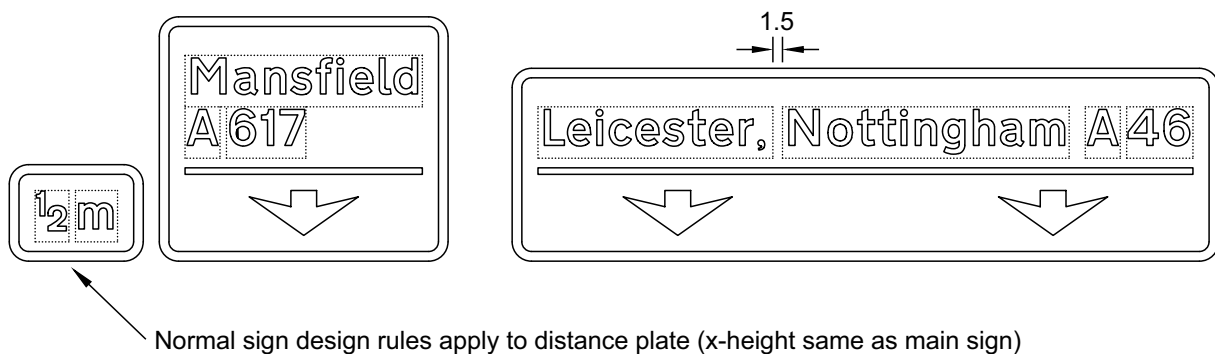
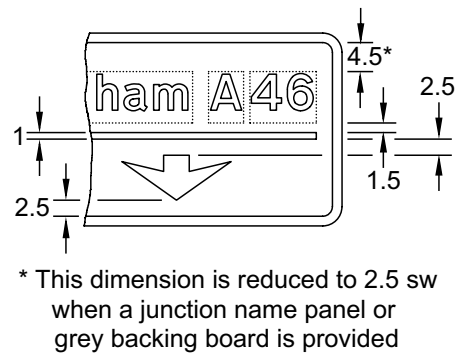
9.1.6. The Regulations permit symbols prescribed by S12-11 to be included on these signs. For non-lane drop signs they are treated the same as stack-type signs, particularly the aircraft

symbol which points in the same direction as the arrow. For lane drop signs, the symbols face left except for the aircraft symbol which should point upwards.

9.1.7. Both types of sign may include the junction name panel at the top of the assembly as shown in **Figure 9-5**. It is sufficient to provide the name on the first advance direction sign only. It is recommended that a place name is not substituted for the junction name unless this is also the name of the junction. The distance to the junction may be shown as a separate sign in a similar manner to a sign assembly that does not include a junction name.



NON LANE DROP JUNCTION



LANE DROP JUNCTION

Figure 9-1

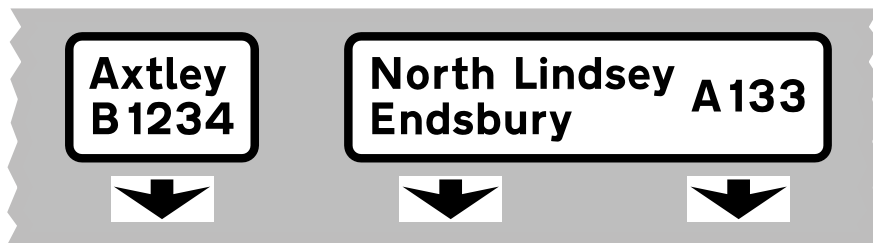


Figure 9-2

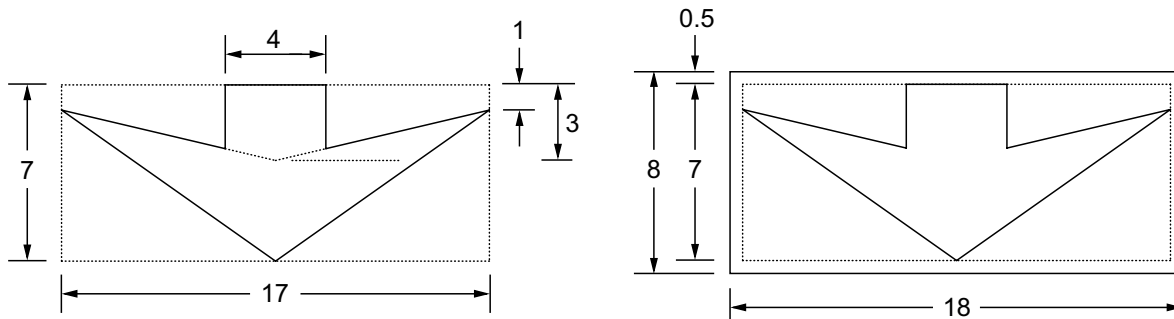


Figure 9-3

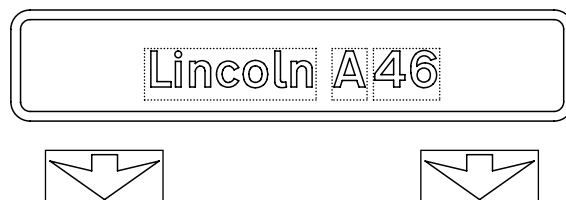
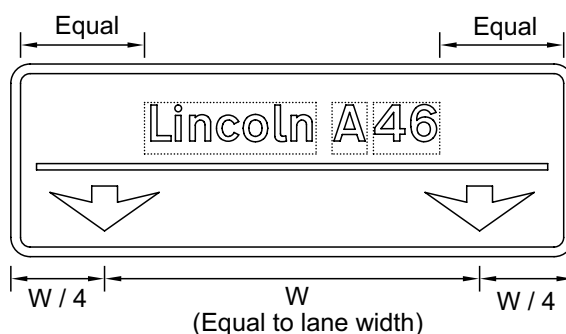
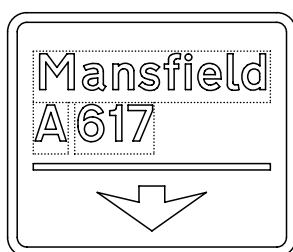


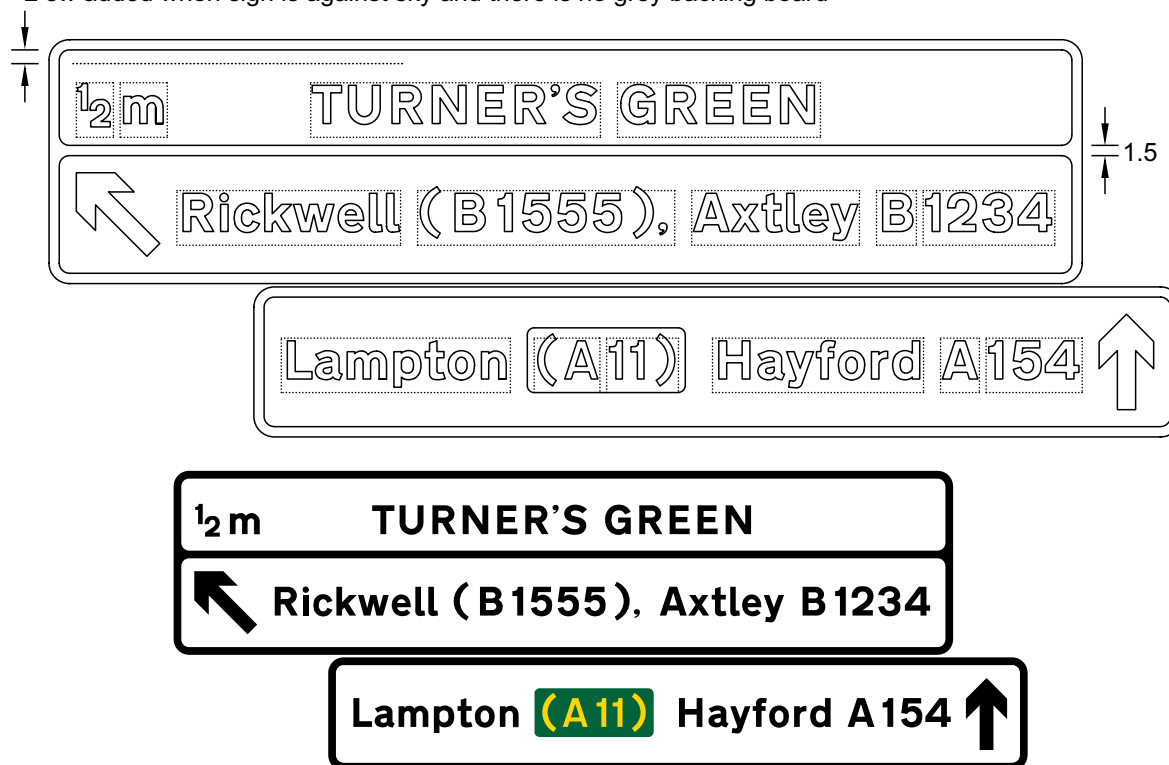
Figure 9-4

9.1.8. The last point at which a driver can read the lower part of an overhead sign is described by a sight line from the bottom of the sign inclined at 10° below the horizontal. The sign should be mounted so that no part of the gantry structure, including any luminaires, obstructs this sight line.

9.1.9. Where the sign assembly is set against an open sky, when viewed from any point between the minimum clear visibility distance and the 10° sight line referred to in 9.1.7, an extra 2 sw height is added to the top of the sign without adjusting the position of the legend or arrows (see Figure 9-1). This provision is not necessary when there is a grey backing board at the top of the sign. Where a junction name is provided, the 2 sw adjustment is made to that part of the sign, as shown in Figure 9-5.

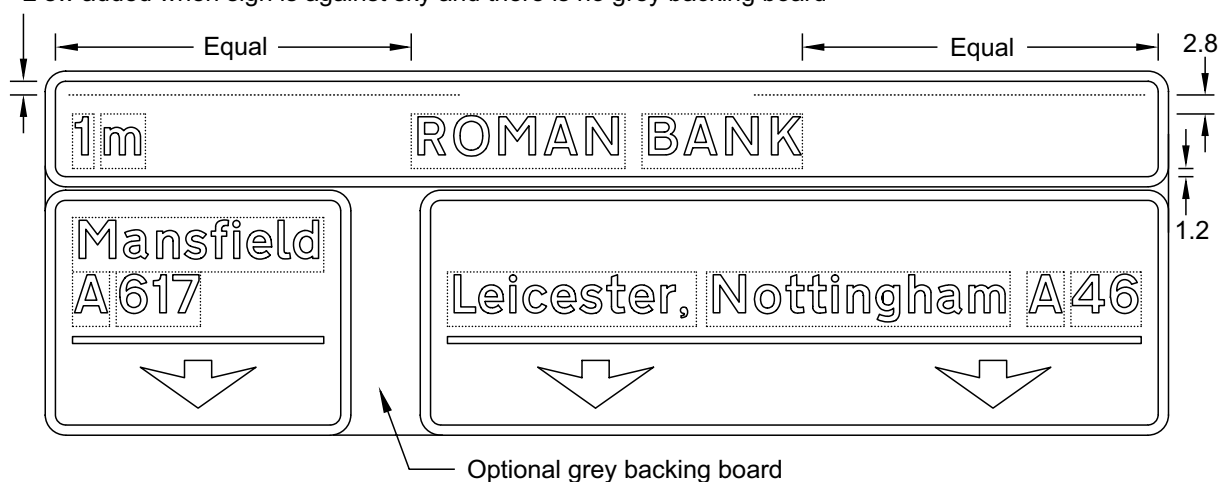
9.1.10. All types of panels (as appropriate) may be used on overhead signs. For example a tourist panel might be used where there is no space for a verge mounted tourist sign. Figure 9-6 shows the design details for the inclusion of panels on gantry mounted signs.

2 sw added when sign is against sky and there is no grey backing board



NON LANE DROP JUNCTION

2 sw added when sign is against sky and there is no grey backing board



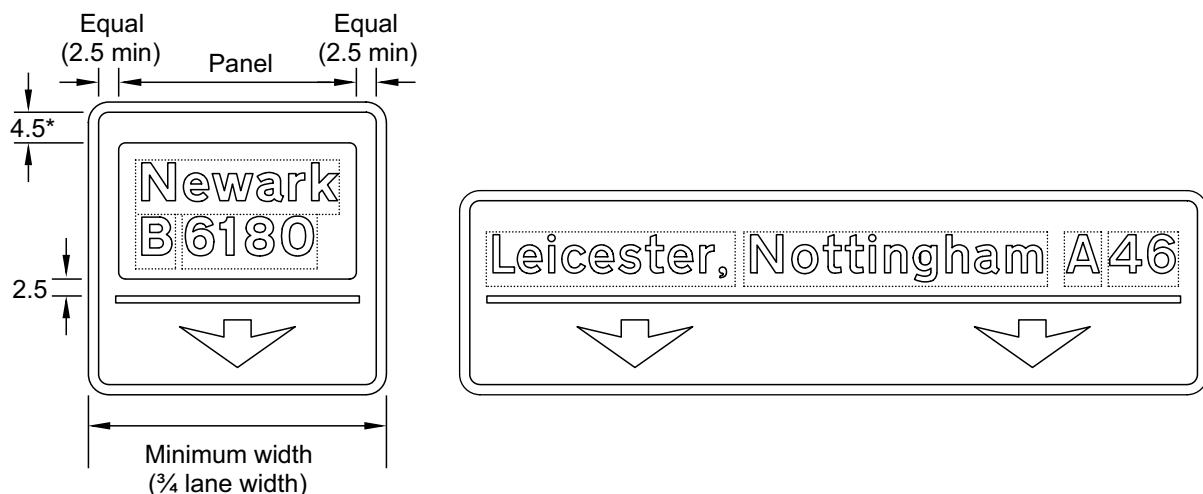
LANE DROP JUNCTION

Figure 9-5

2 sw added when sign is against sky and there is no junction name panel or grey backing board



NON LANE DROP JUNCTION



* This dimension is reduced to 2.5 sw when a junction name panel or grey backing board is provided



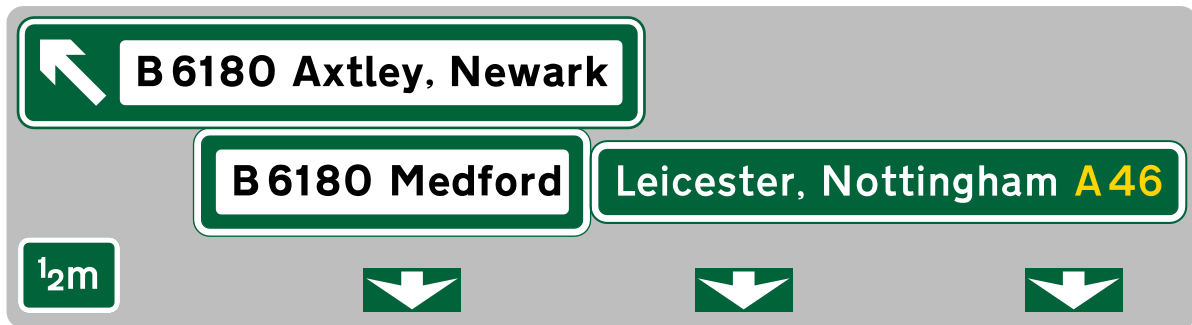
LANE DROP JUNCTION

Figure 9-6

9.1.11. On a primary route, where the exit slip road leads directly to a non-primary route only, a white panel is used for the non-primary destination block. Where the slip road leads directly to both a primary and a non-primary route, a white panel is not used.

9.1.12. On a non-primary route where the exit slip road leads directly to both a primary route and a non-primary route, the primary destination block is shown in a dark green panel.

9.1.13. On a non-motorway route (most likely a primary route) where the exits are non-primary routes, the primary route is shown in a dark green panel whilst the non-primary route exits are shown in a white panel. See **Figure 9-7**.



A non-lane drop exit, followed immediately by a lane drop

Figure 9-7

9.1.14. Although not prohibited by the Regulations, it is recommended that distances to destinations and the symbols prescribed by S12-20 are not used on overhead signs unless there are special circumstances. Warning of a prohibition or hazard should normally be given by a sign to diagram 818.4 (S12-28-22) or 818.5 (S12-28-23) as appropriate.

9.1.15. More detailed guidance for the use of directional signs at motorway and all-purpose trunk road grade separated junctions can be found in 'Interim Advice Note 144/16' available at:

www.standardsforhighways.co.uk/ha/standards/ians

9.1.16. More examples of complete gantry mounted signs on all-purpose roads are in **Appendix F**.

10.1 Motorway panels and junction numbers

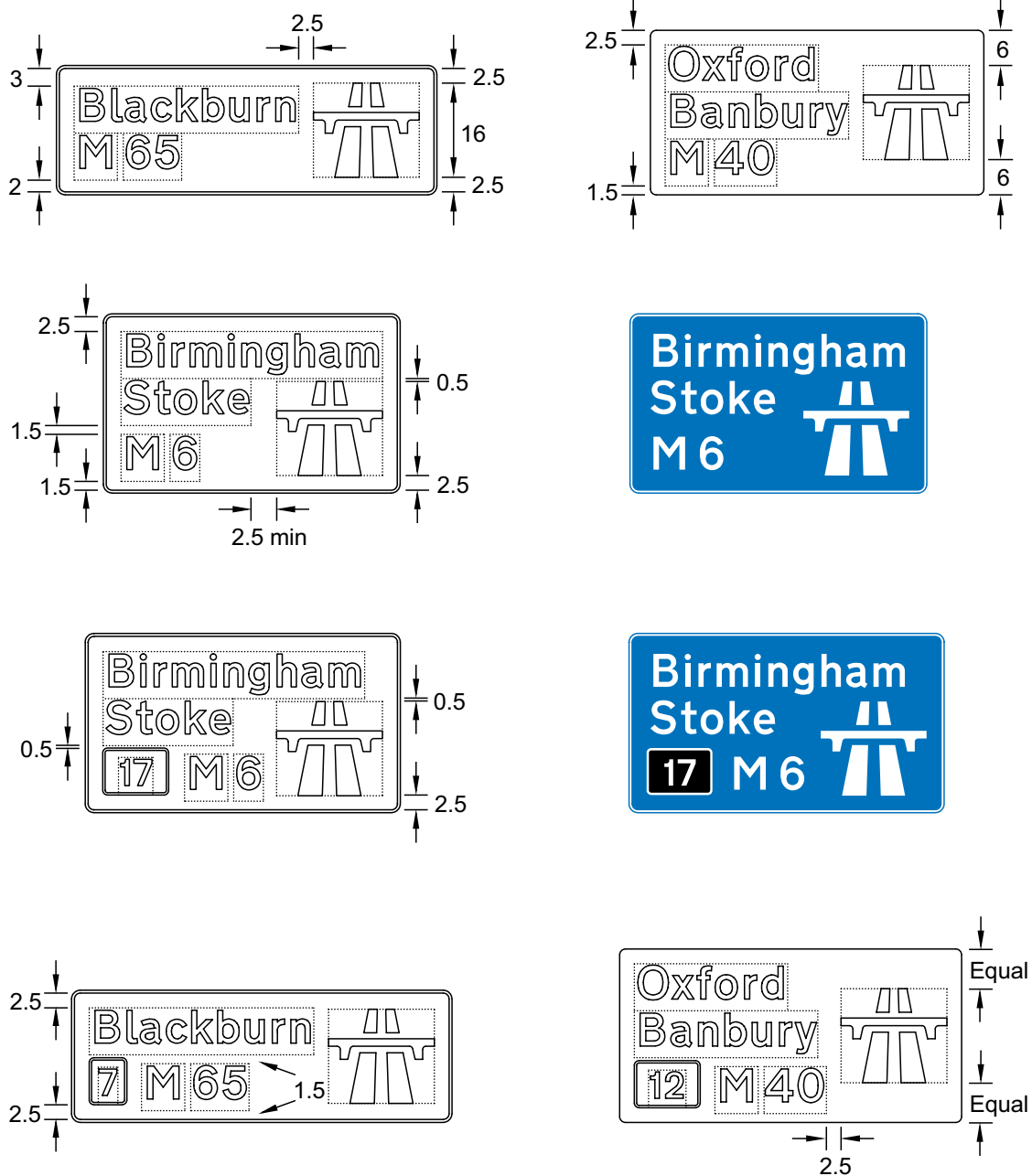
10.1.1. [Figure 10-1](#) shows the various designs of motorway panels (S12-9-1) used on advance direction signs on all-purpose roads. Motorway panels are used only where the route indicated has motorway status. A blue motorway route number patch should be used where the motorway is reached by an all-purpose road leading from the junction.

10.1.2. The background colour of a motorway panel is blue. A white border is added when the panel is placed on a dark green background sign (see [3.2.8](#)). The motorway number is in the Transport Medium alphabet and not the enlarged Motorway alphabet. The inclusion of the junction number on the panel is optional. Distances to destinations must not be included on a blue motorway panel.

10.1.3. Where the motorway panel contains three or more lines of legend, it may be possible to tuck in the motorway symbol beneath the upper lines of legend; otherwise the symbol should be placed alongside the legend and centred vertically on the panel.

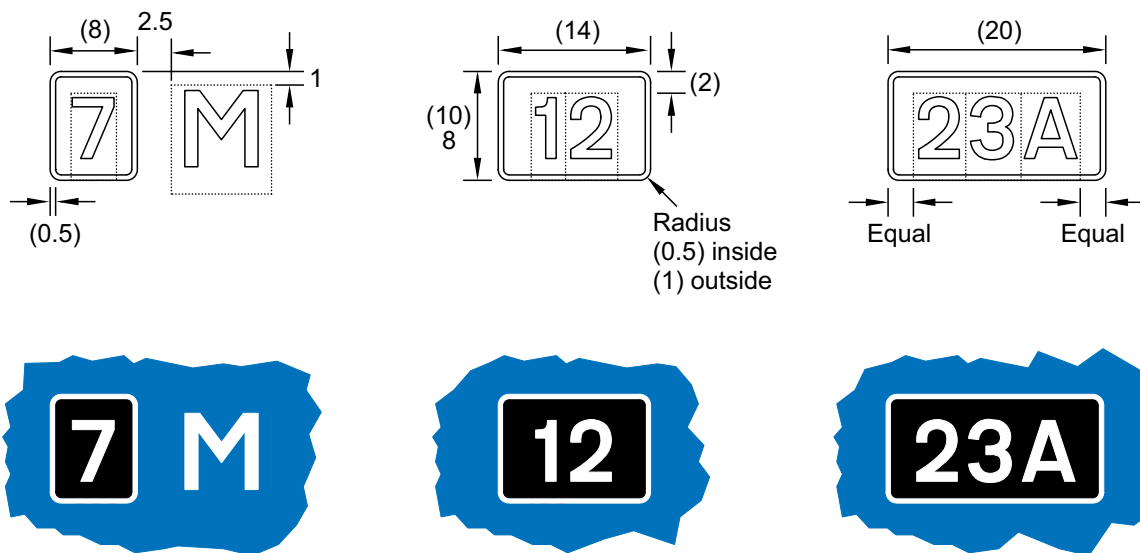
10.1.4. The design of the junction number patch is the same as that used on an advance direction sign on the main carriageway of a motorway. The junction number is white on a black background, and the patch has a white border. The characters are from the Transport Medium alphabet. The x-height of the junction number is 80% of the x-height of the main sign (this also applies to signs on the main carriageways of motorways). The design of the junction number patch is shown in [Figure 10-2](#). There are three fixed widths according to the number of characters making up the junction number. The patch is aligned vertically so that the characters forming the junction number are centred on the characters (not tiles) forming the motorway number.

10.1.5. More examples of complete motorway signs are in [Appendix F](#).



All dimensions are in stroke widths based on the main x-height

Figure 10-1



Unbracketed dimensions are in stroke widths based on x-height of main sign. Bracketed dimensions are in stroke widths based on x-height of junction number which is 80% of main x-height.

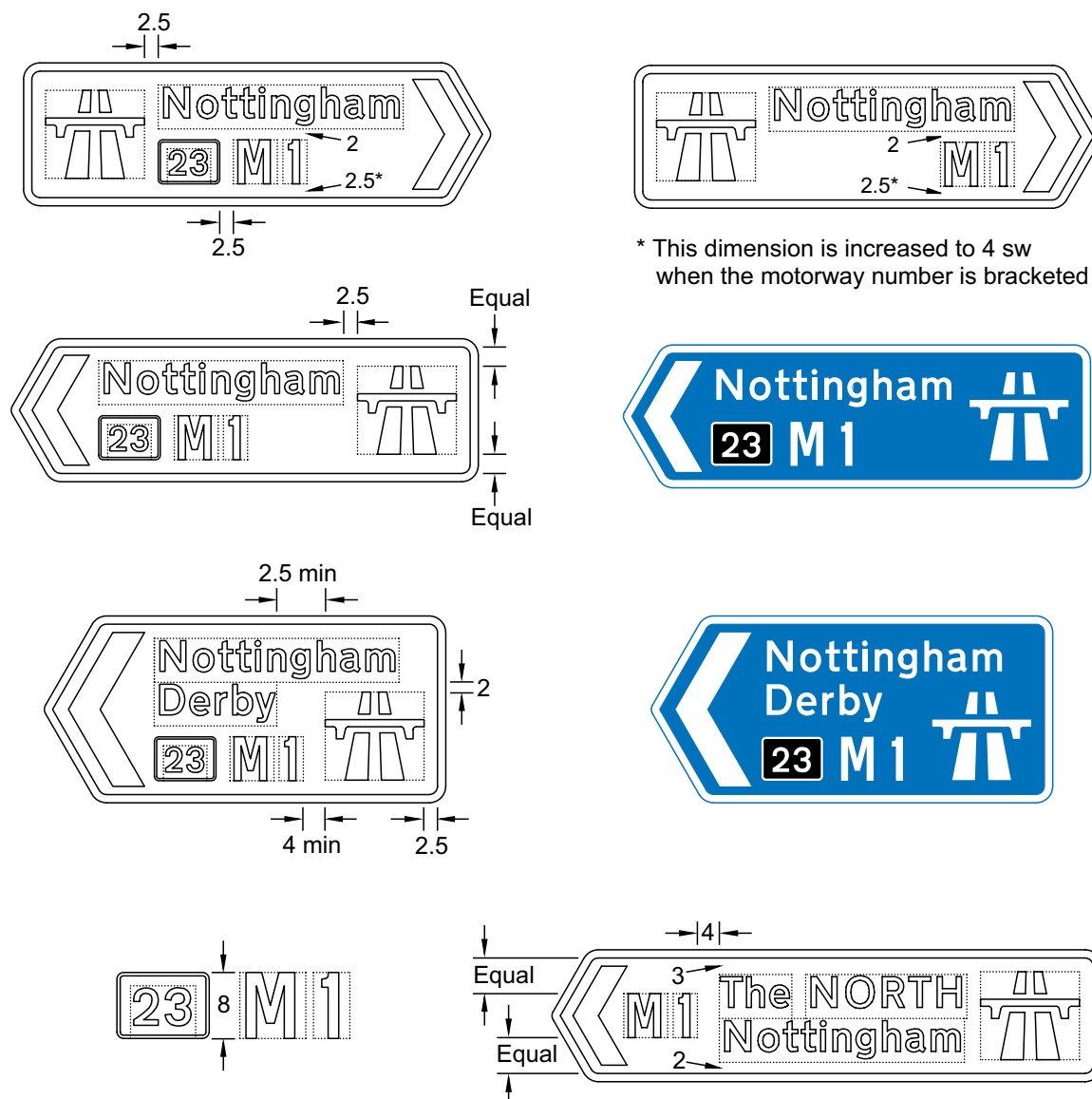
Figure 10-2

10.2 Direction signs indicating routes with motorway status

10.2.1. Figure 10-3 shows the most common designs of direction signs indicating the start of a motorway or motorway slip road. They are located at major / minor priority junctions and at exits from roundabouts. Distances to destinations should not be included on these signs. The rectangular signs shown in Figure 10-4 are for use at free flow grade separated junctions. They are situated on the nose of a motorway slip road leaving the main carriageway of an all-purpose road. Rectangular direction signs should not normally include any destinations. However, a compass point may be added to the motorway number. Compass points may also be added to flag-type signs. Examples are shown in Figure 10-5. The compass point tile includes brackets and additional space on the left hand side to ensure correct spacing. Flag-type and rectangular signs must be used only where the sign points along a route which has motorway status.

10.2.2. The signs should always include the motorway symbol as detailed at S12-11-1. The motorway number is in the enlarged Motorway alphabet. Where full-size brackets are used, the gap from the tiles to the top or bottom border is increased from 2.5 sw to 4 sw. This does not apply to the smaller compass point brackets as shown in Figure 10-5. The addition of the junction number is optional. Where used, the junction number patch is aligned vertically with the motorway number alongside, as shown in Figure 10-3. The design of the junction number patch is as detailed in 10.1.4 and Figure 10-2.

10.2.3. The motorway symbol has a height of 16 sw and should be positioned at least 2.5 sw from any border. Figure 10-3 shows that it may be possible to tuck in the symbol on a flag-type sign that has three or more lines of legend. The symbol is always positioned at the opposite end to the chevron.



All dimensions are in stroke widths based on the main x-height

Figure 10-3

10.2.4. Where flag-type signs are to be used to direct traffic around a large roundabout or gyratory system on an all-purpose road to an exit has motorway status, these must have a background colour appropriate to the road on which they are placed (e.g. dark green on a primary route). This is because the actual route indicated (the roundabout etc.) does not have motorway status. The motorway number, in brackets, is shown on a blue patch, together with any appropriate destination placed directly on the dark green or white background of the sign. The junction number, the motorway symbol and distances to destinations are not included on these signs. The advance direction signs on the approach to the roundabout or gyratory system will, however, show the full motorway panel with the motorway symbol when indicating the motorway exit from the roundabout or gyratory. Where the roundabout has motorway status (e.g. it forms part of a junction between two motorways), the flag-type signs shown in [Figure 10-3](#) may be used to direct traffic around the circulatory carriageway.

10.2.5. Other design rules detailed in [7.1.2](#) and [7.1.3](#) apply to all motorway flag-type signs.

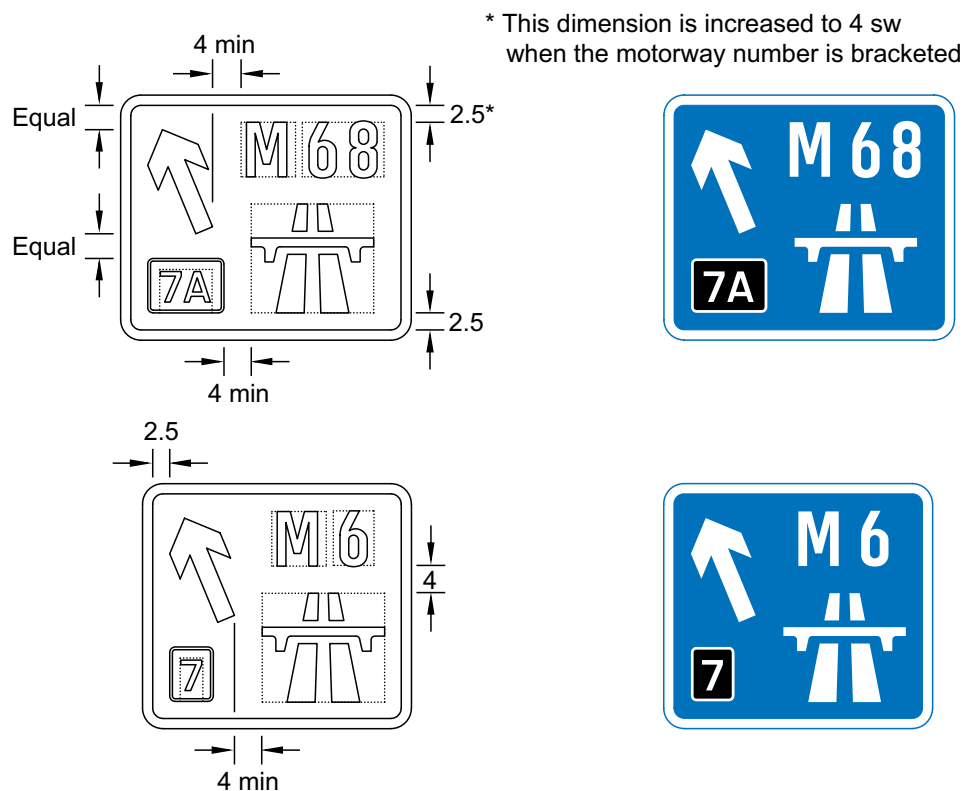


Figure 10-4

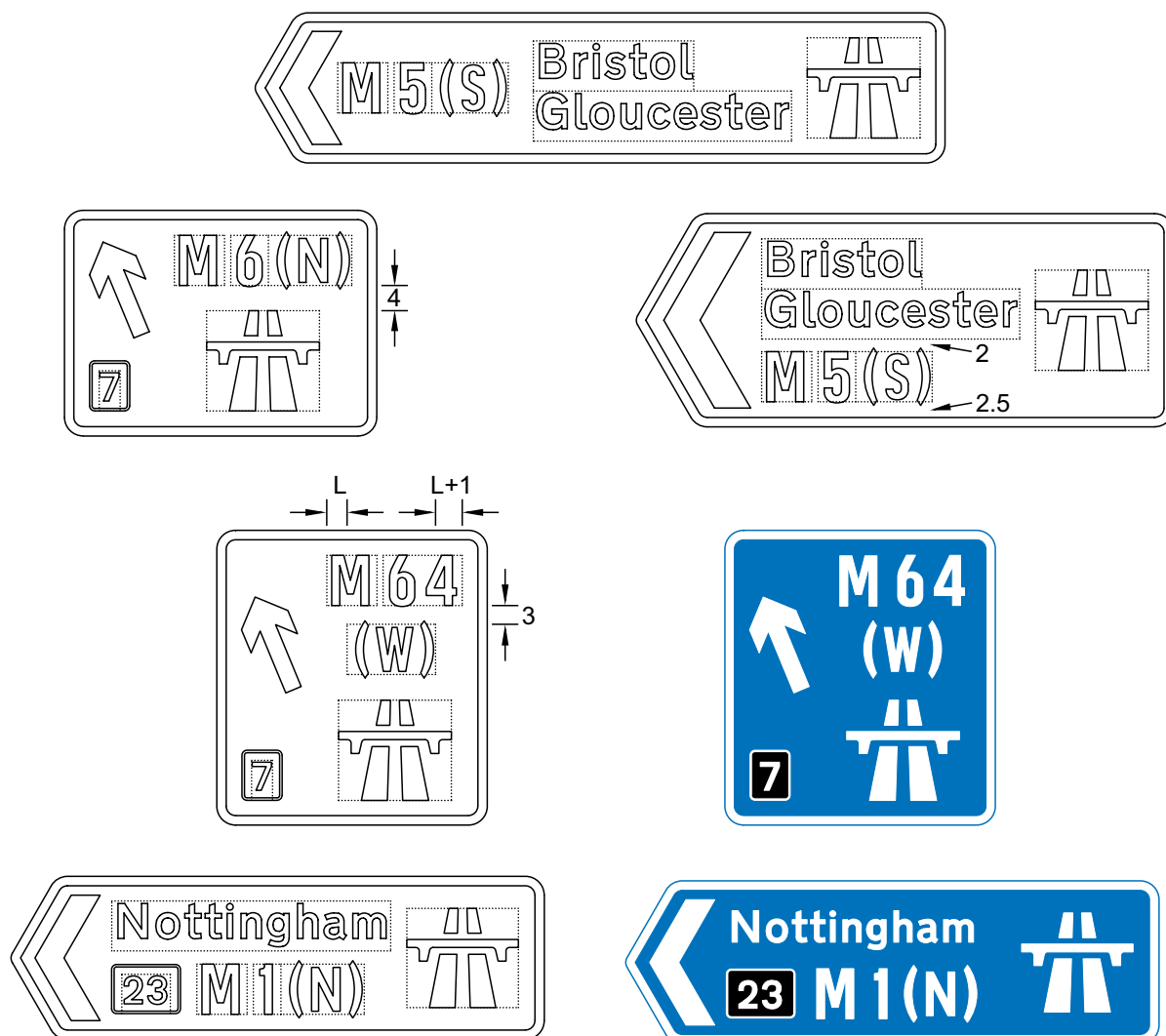


Figure 10-5

10.3 General design rules for signs on motorways

10.3.1. **Figure 10-6** shows examples of the various types of advance direction signs on the main carriageway of a motorway. These signs must not have a top panel with a junction name; the junction is identified by the black junction number patch. Apart from a sign at the end of the motorway, destination panels must not be included on the signs (S12-8-3).

10.3.2. The signs shown in **Figure 10-6** generally follow the same design rules as those for signs on all-purpose roads (see sections 5, 6 and 9). However, motorway signs differ in that they use the Motorway alphabet for route numbers (except as detailed in 10.3.6 to 10.3.8). Spacing rules for the Motorway alphabet are shown in **Figure 10-7**. It should be noted that, for vertical alignment, the Motorway alphabet is treated in the same way as a panel, patch or symbol when placed alongside a destination in the Transport Medium alphabet. The Motorway tiles are positioned level with the Transport Medium tiles and then raised by 0.5 sw. Not only does this produce a balanced appearance, it ensures that for a single line legend the Motorway characters are centred vertically between the top and bottom borders of a gantry sign. The vertical gap between the Motorway tiles and any arrow, horizontal bar or border should be at least 2.5 sw. This gap should be at least 4 sw where full size brackets (not compass point brackets) are used.

10.3.3. Special rules apply for vertical block spacing. Where the place name and route number are on the same line in each block, the vertical block spacing is 4 sw. However, this dimension is increased where the lower block has the place name and route number on different lines. As line spacing between the place name and route number is set at 2 sw, it is important that they are seen to be in the same block. In this case, block spacing is increased to 5 sw measured from the route number in the upper block, or 4.5 sw measured from the place name in the upper block, as appropriate. Where the lower block does not have an associated route number (e.g. “Services”) the same increased block spacing rules apply.

10.3.4. Where destinations are shown in the left hand sign panel (or panels) of a gantry mounted sign (see **Figure 10-6**, diagrams C, F and G), the route number is placed to the left of the associated place name (see Bedford and Ampthill example in **Figure 10-7**).

10.3.5. **Figure 10-8** shows spacings appropriate to the design of map-type signs. The junction number should normally appear in the bottom left hand corner of the sign. Exceptionally, it may be placed in the top left hand corner (see 11.4.5). **Figure 10-9** shows the arrangement for two separate exits being shown on the same sign where two junctions are very close together. Both side arms should be the same length, and, where possible, all destination blocks should be ranged left. Where a block ranged left would be spaced more than 4 sw horizontally from its associated route arm, the block may be moved to the right to ensure that it is still associated with the arm. This type of sign should not include a forward destination. The final advance direction sign at the first junction should be to the standard design with the second exit destinations being included with the forward destinations. The junction number for the first exit only should appear on this sign and should be placed in the bottom left hand corner.



Motorway junction ahead, identified by the number shown on a black background, leading to the destination and route shown. The number of lanes on the motorway remains the same through the junction.

Diagram A



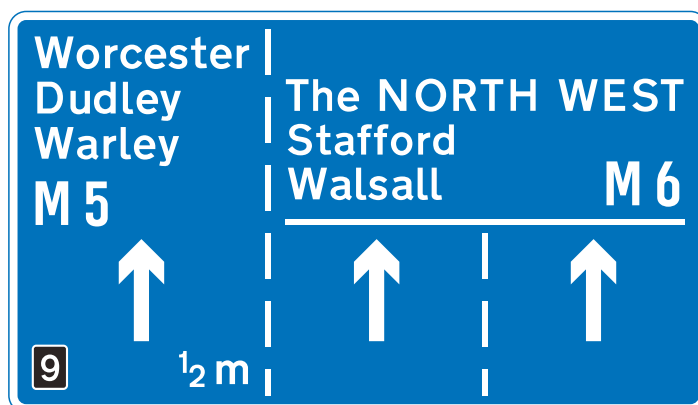
Motorway junction, identified by the number shown on a black background, leading to the destinations and routes shown and with an indication of the destinations reached by remaining on the motorway. The number of lanes on the motorway remains the same through the junction.

Diagram B



Motorway junction ahead, identified by the number shown on a black background, leading to the destinations and routes shown and with an indication of the destinations reached by remaining on the motorway. The number of lanes on the motorway remains the same through the junction (Gantry-mounted sign)

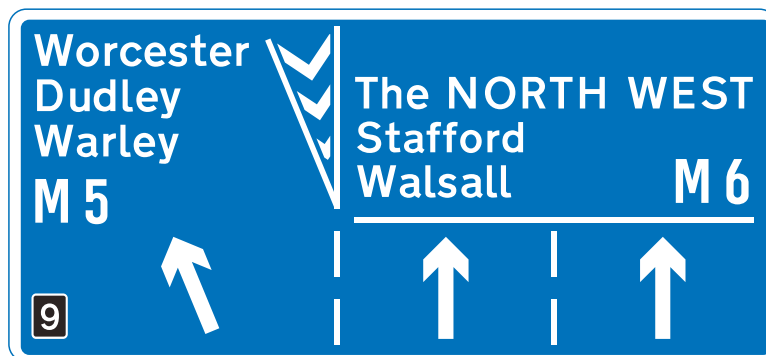
Diagram C



Motorway junction ahead, identified by the number shown on a black background, where the left hand lane of a motorway leads to another motorway and the other two lanes continue along the main motorway route.

Diagram D

Figure 10-6



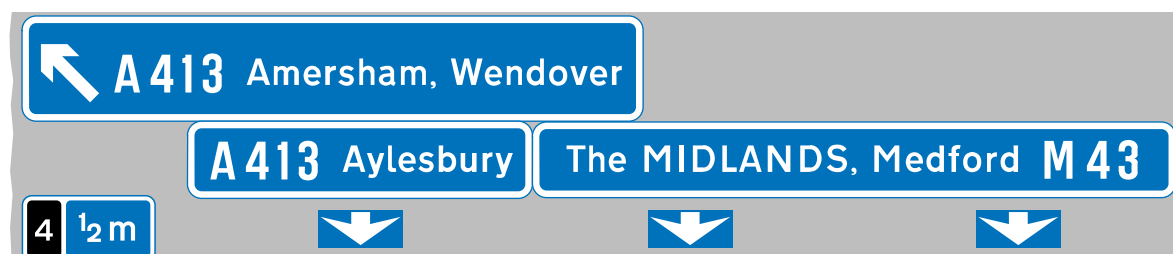
Motorway junction, identified by the number shown on a black background, where the left hand lane of a motorway leads to another motorway and the other two lanes continue along the main motorway route.

Diagram E



Motorway junction ahead, or directions at motorway junction when distance omitted, identified by the number shown on a black background, where the left hand lane leads to the route and destination shown and the other two lanes continue along the main motorway route to the destinations shown (Gantry-mounted sign).

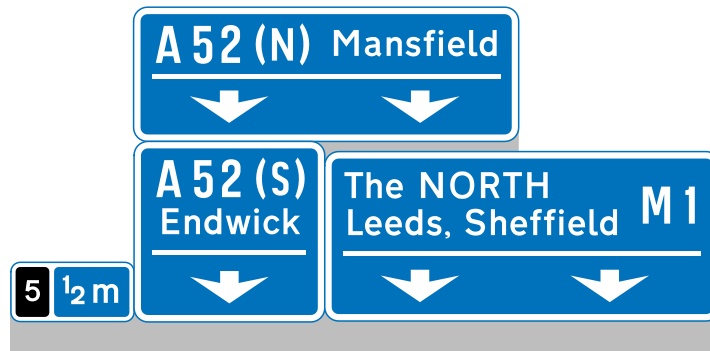
Diagram F



Two motorway exits ahead in quick succession, identified by the junction number shown on a black background, leading to the destinations and routes shown. The number of lanes remains the same through the first exit. At the second exit the left hand lane leads to the route and destination shown over that lane on the lower part of the sign and the other two lanes continue along the main motorway route. (Gantry-mounted sign).

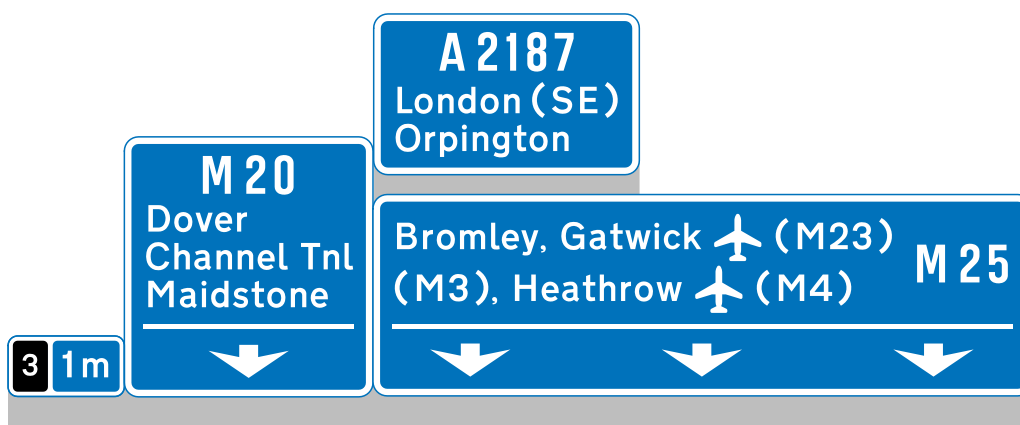
Diagram G

Figure 10-6 (continued)



Shared lane stack type sign with arrows in the top panel. Motorway junction ahead, or directions at motorway junction when distance omitted, identified by the number shown on a black background, where the left hand lane leads to the route and destination shown. (Gantry-mounted sign).

Diagram H



Shared lane stack type sign with no arrow in the top panel. Motorway junction ahead, or directions at motorway junction when distance omitted, identified by the number shown on a black background, where the left hand lane leads to the route and destination shown and the other three lanes continue along the main motorway route to the destinations shown. (Gantry-mounted sign).

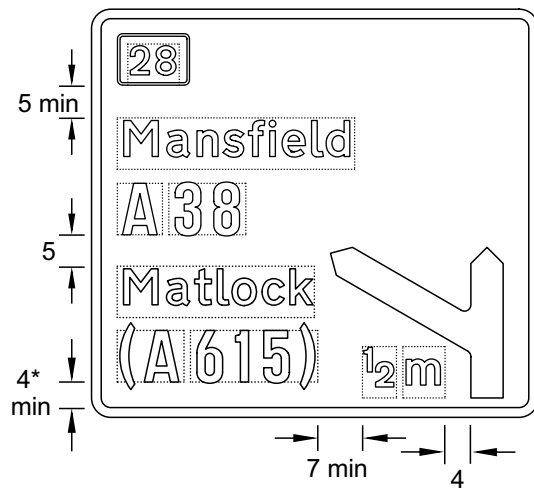
Diagram I

Figure 10-6 (continued)

10.3.6. Advance direction signs on exit slip roads (see diagrams A to D in [Figure 10-10](#)), and the map-type terminal roundabout sign on the main carriageway (see diagram E in [Figure 10-10](#)) do not use the Motorway alphabet because destinations on the all-purpose routes are shown in panels of the appropriate colour and hence the Transport alphabet is used. Where a motorway terminates at a grade separated junction, the advance direction signs will be designed in the same way as for intermediate junctions. Panels are not used, and route numbers are in the Motorway alphabet (see diagram F in [Figure 10-10](#)). The map-type roundabout signs shown in [Figure 10-10](#), diagrams G and H are used where a roundabout connects two motorways. Motorway numbers on these signs are shown in the Motorway alphabet and coloured panels are used only if the signs indicate, additionally, a route that is not a motorway.



Figure 10-7



* This dimension is reduced to 2.5 sw min when the route number is unbracketed

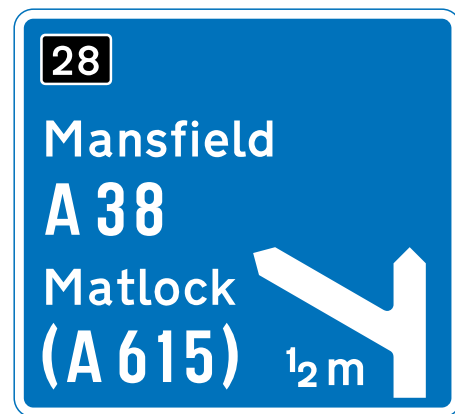
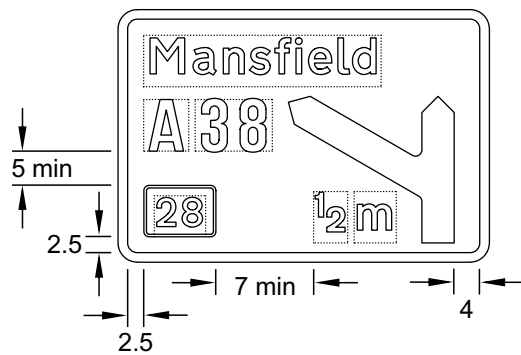


Figure 10-8

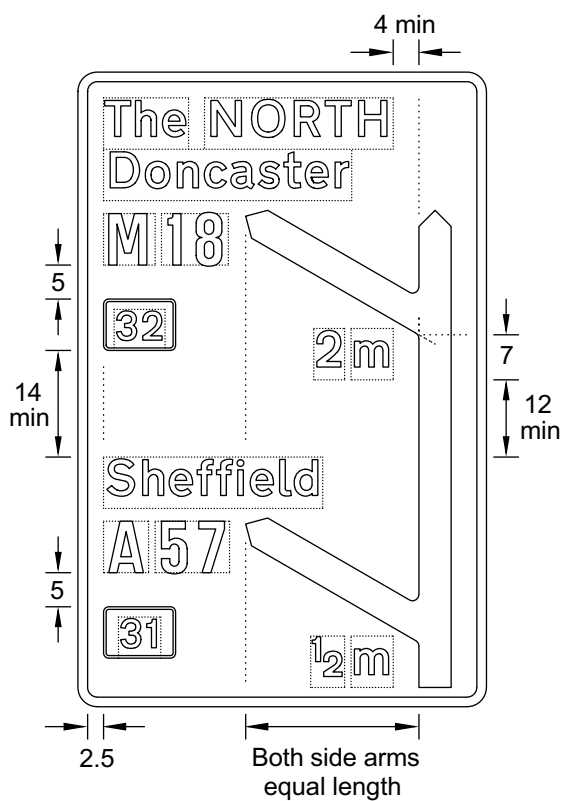
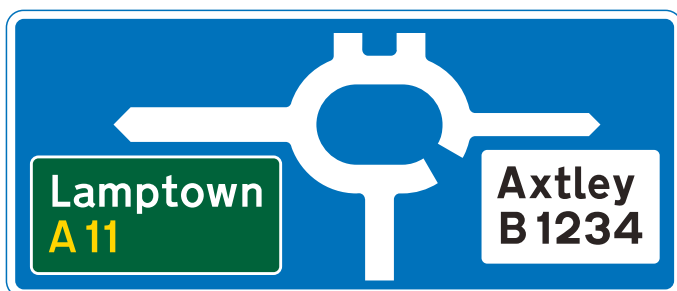


Figure 10-9



Roundabout ahead leading from a motorway exit slip road to a primary and a non-primary route.

Diagram A



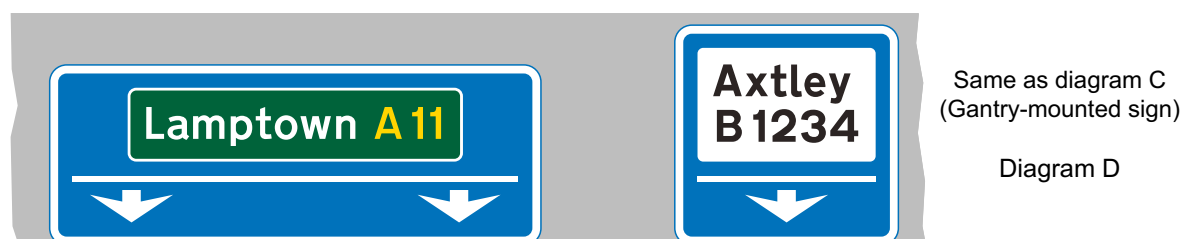
Junction ahead leading from a motorway exit slip road to a primary and a non-primary route.

Diagram B



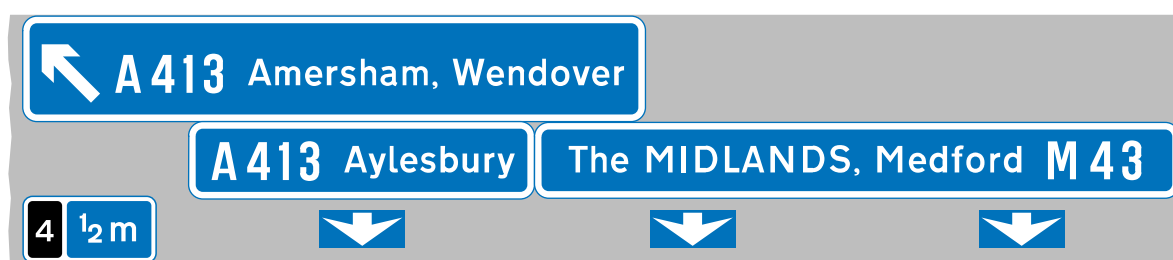
The two left hand lanes of a motorway exit slip road lead to a primary route and the right hand lane leads to a non-primary route at a junction ahead.

Diagram C



Same as diagram C
(Gantry-mounted sign)

Diagram D



Two motorway exits ahead in quick succession, identified by the junction number shown on a black background, leading to the destinations and routes shown. The number of lanes remains the same through the first exit. At the second exit the left hand lane leads to the route and destination shown over that lane on the lower part of the sign and the other two lanes continue along the main motorway route. (Gantry-mounted sign).

Diagram E

Figure 10-10



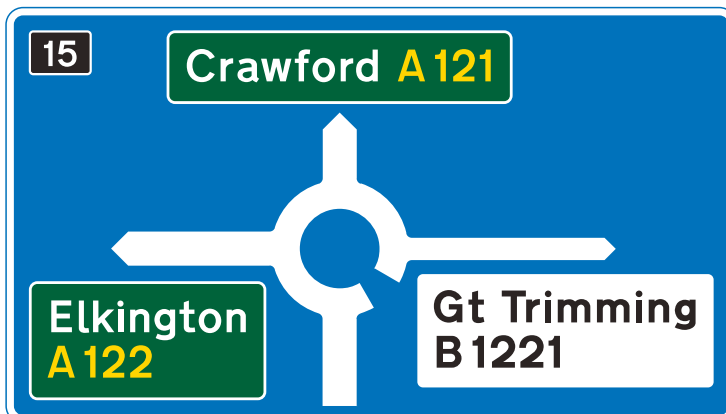
ADS where the motorway terminates
at a grade separated junction

Diagram F



Motorway junction ahead, or directions at motorway junction when distance omitted, identified by the number shown on a black background, where the left hand lane leads to the route and destination shown and the other two lanes continue along the main motorway route to the destinations shown (Gantry-mounted sign).

Diagram G



Termination of a motorway at a
roundabout ahead leading to two
primary routes and a non-primary route

Diagram H

Figure 10-10 (continued)

10.3.7. On map-type advance direction signs on the main carriageway, the forward destinations do not normally include the motorway numbers. However, where the number of another motorway that can be reached from a junction ahead is shown in brackets, the characters should be from the Transport Medium alphabet and not the Motorway alphabet (see regulation 5 paragraphs (6) and (8)).

10.3.8. On gantry-mounted signs, bracketed route numbers may be in either the Motorway or Transport Medium alphabet as appropriate. The general rule is that where the number is directly associated with an unbracketed number the Motorway alphabet should be used, as illustrated in [Figure 10-11](#), diagram A. Where the bracketed route number follows a place name or is a destination in its own right, the Transport Medium alphabet should be used as shown in [Figure 10-11](#), diagram B.



Diagram A

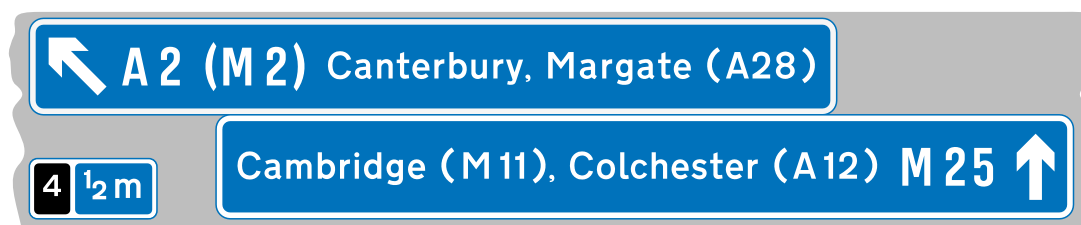


Diagram B

Figure 10-11

10.3.9. A combined junction number and distance plate (in Transport Medium alphabet) may be provided on sign gantries. The design of this plate is shown in diagram A in [Figure 10-12](#). Where space is limited, the junction number may be placed above the distance plate as shown in diagram B in [Figure 10-12](#).

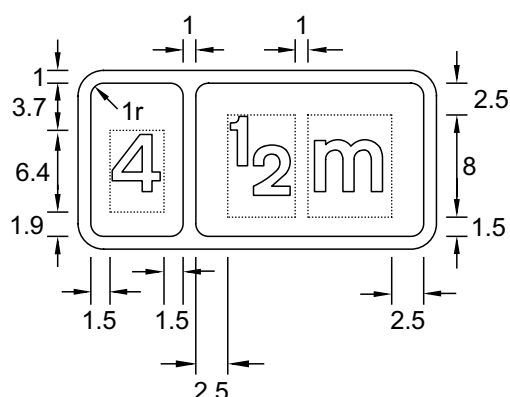


Diagram A

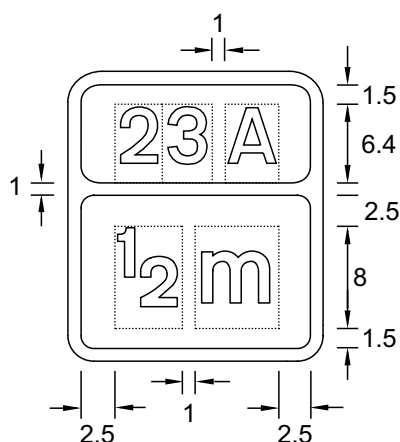


Diagram B

**Figure 10-12**

10.3.10. Where gantry signs indicate dedicated lanes (see examples in [Figure 10-6](#)), the downward pointing arrow may be shown on a blue patch placed directly on the gantry structure (i.e. separate from the main sign) or incorporated within the main sign together with a horizontal bar. The design of these signs follow the rules set out in section 9 (see [Figure 10-13](#) for the design of the arrow on a blue patch). A gantry sign on a slip road normally incorporates the downward pointing arrows within the main sign as shown in [Figure 10-10](#), diagram D.

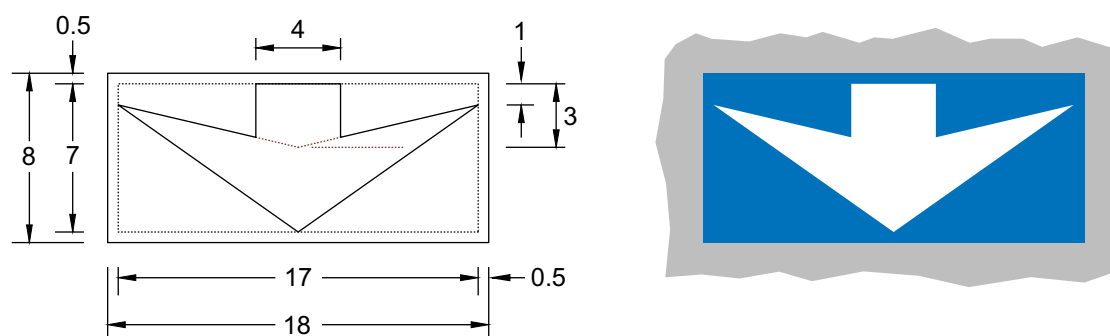


Figure 10-13

10.3.11. The symbols prescribed by S12-11 that may be shown on the blue motorway advance direction signs are the aircraft, railway station, ferry, diversion route (see section 11) and hospital A & E (including not 24 hrs) symbols. Blue motorway flag-type signs may incorporate the aircraft and diversion route symbols. Any appropriate symbol may be included on all-purpose road destination panels on signs such as those located on exit slip roads and on the approach to a terminal roundabout.

10.3.12. Warning and regulatory symbols prescribed by S12-20 may only be incorporated on motorway signs placed on an exit slip road or those indicating the termination of the main carriageway way of the motorway (S12-19-5(a)). The design rules are the same as those for all-purpose roads. In this case, the motorway signs will incorporate primary or non-primary route panels as appropriate.

10.3.13. The design of rectangular direction signs located on the nose of an exit slip road is shown in [Figure 10-14](#). The signs may incorporate more than one route number. Brackets are used where the route indicated does not lead directly from the junction at the end of the slip road. Where an exit from the motorway leads additionally to a motorway service area, the legend “Services” may be included on the sign.

10.3.14. More detailed guidance for the design and use of directional signs at motorway and all-purpose trunk road at grade and compact grade separated junctions can be found in Interim Advice Note 144/16 and 145/16 available at:

www.standardsforhighways.co.uk/ha/standards/ians/index.htm

10.4 Route confirmatory signs on motorways

10.4.1. The design of route confirmatory signs is similar to those on all-purpose roads as described in section 8. [Figure 10-15](#) shows the appropriate design rules to accommodate the Motorway alphabet used for the route numbers. As for other motorway signs, where the motorway number at the top of the sign is bracketed, the gap to the top border is increased to 4 sw. Whilst the Regulations require that all distances of $\frac{1}{2}$ mile or more but less than 3 miles must be expressed to the nearest $\frac{1}{4}$ mile, this is unlikely to apply to motorway signs as the distances shown are likely to be 3 miles or more. Distances over 3 miles must be expressed to the nearest mile.

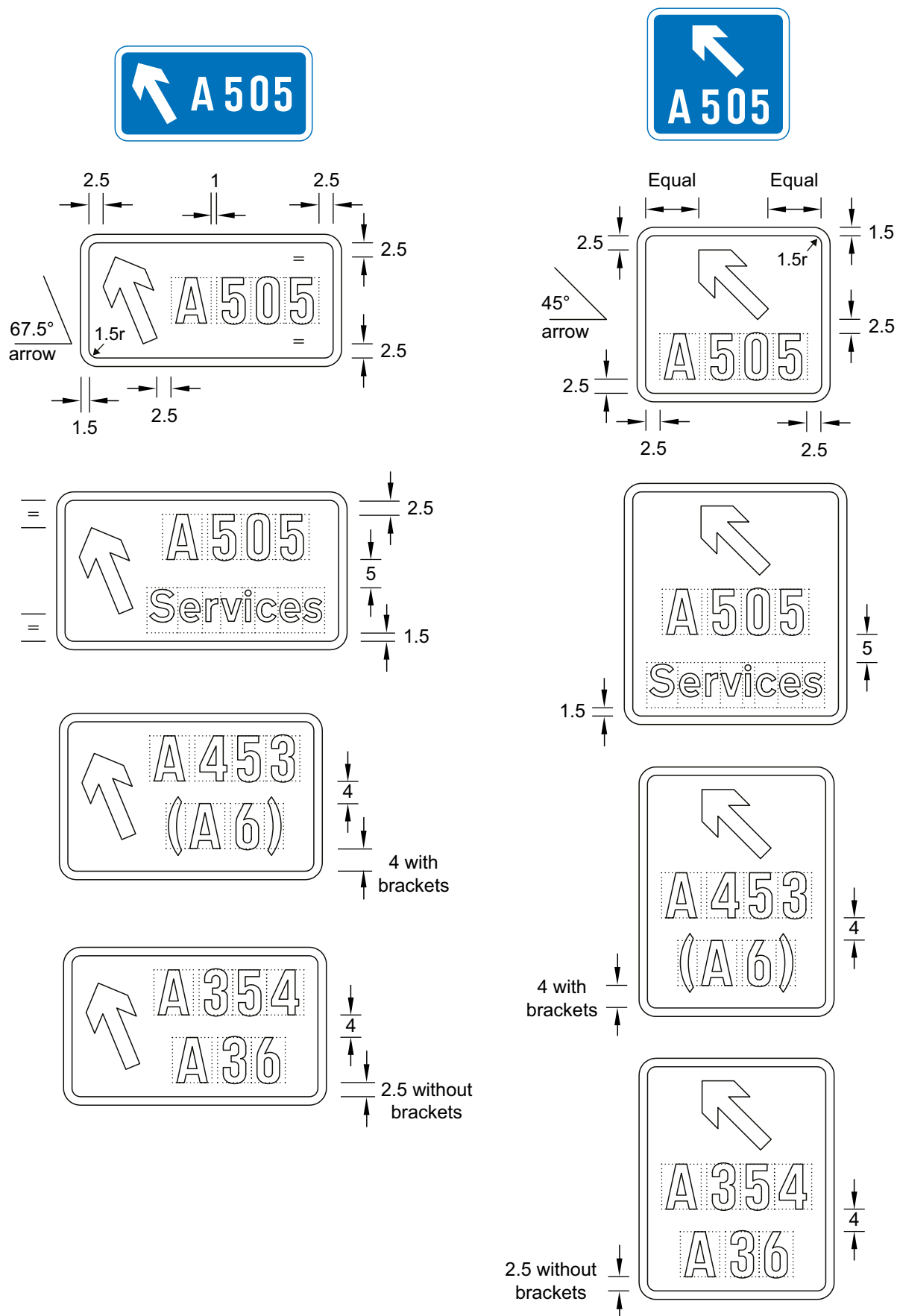
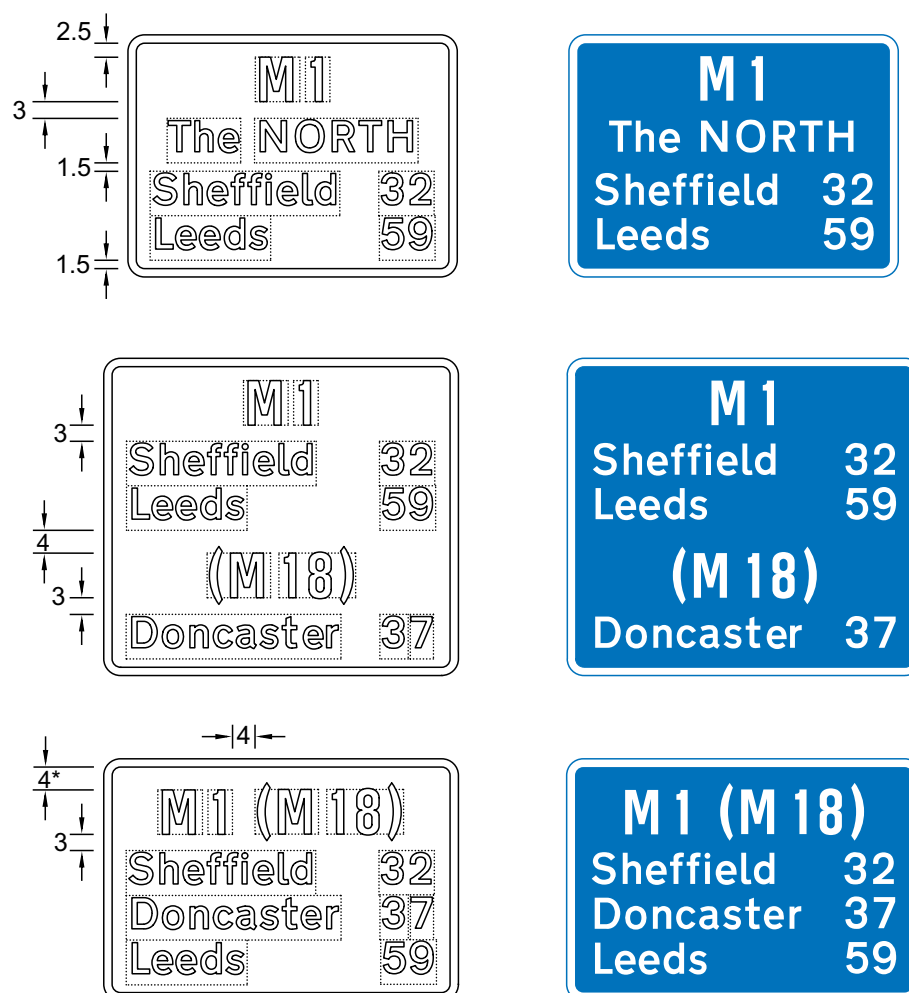


Figure 10-14



* The dimension of 4 sw applies when the motorway number is bracketed

Figure 10-15

10.5 Parking places

10.5.1. The sign with a white background showing only parking place destinations (S12-2-4 type A, see [Figure 10-16](#)) may be placed on a motorway. The main use of this sign would be to indicate Park and Ride facilities (S12-11-24), but there might be other uses such as indicating car parks reached from an urban motorway.

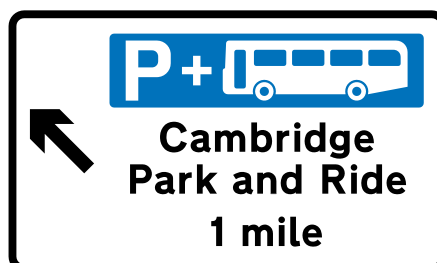


Figure 10-16

11.1 Cancelled route numbers

11.1.1. S12-3-4, entry 4 permits superseded route numbers with red cancellation bars to be shown on directional signs. **Figure 11-1** shows the design of the bar and **Figure 11-2** shows the appropriate vertical and horizontal spaces to adjacent legends and symbols. Unlike the “no through road” symbol (see **Figure 5-45**), the red bar does not have a white border when placed on a dark background.

11.1.2. In the case of the “Cambridge - Newmarket” example in **Figure 11-3**, the vertical block spacing to “Ely” is increased from 2 sw to 4 sw. This is because “Newmarket” is placed above its associated route numbers and the red bar necessitates a line spacing of 1.5 sw as shown. The increased block spacing ensures that the A14 route number is associated with “Cambridge” and “Newmarket”. Where route numbers are on the same line as their associated destinations, the standard block spacing of 2 sw is appropriate as shown in the “Corby - Leicester” example.

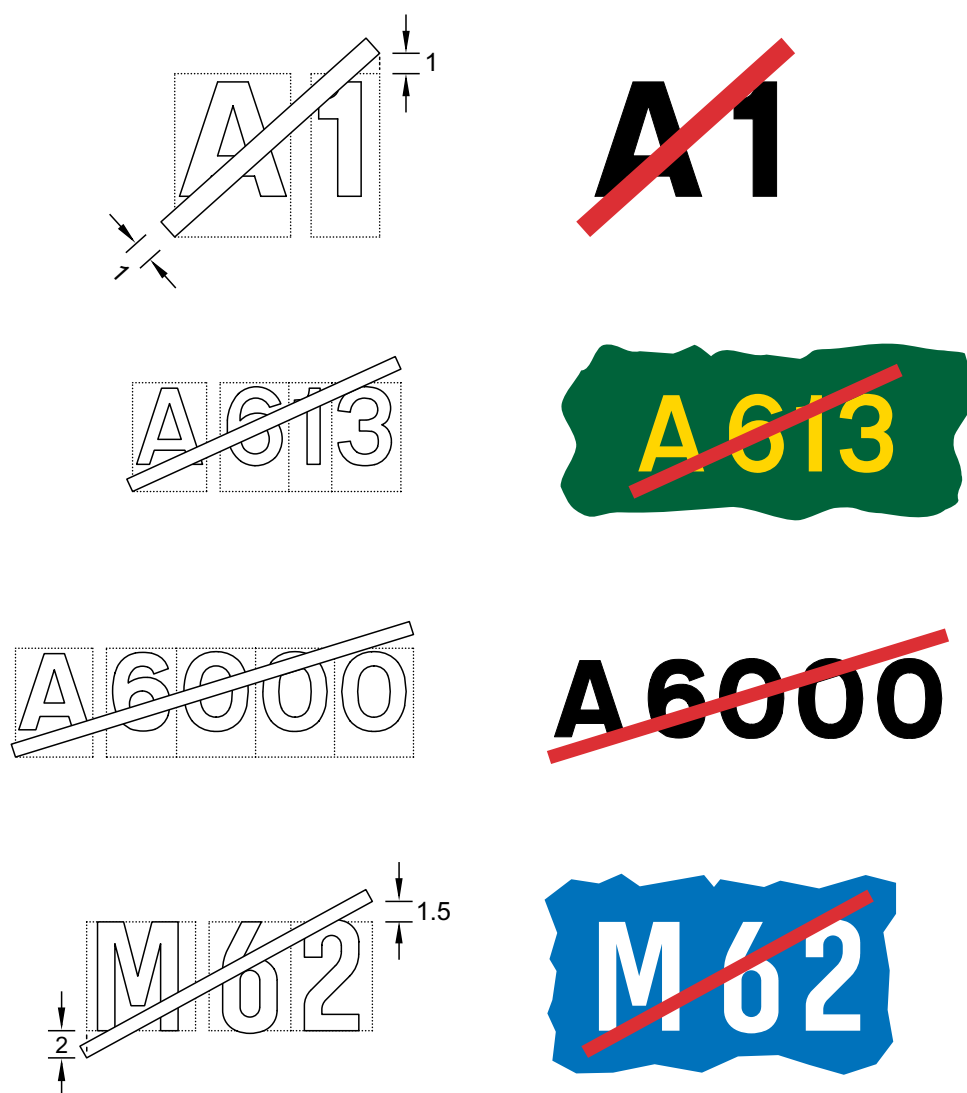


Figure 11-1

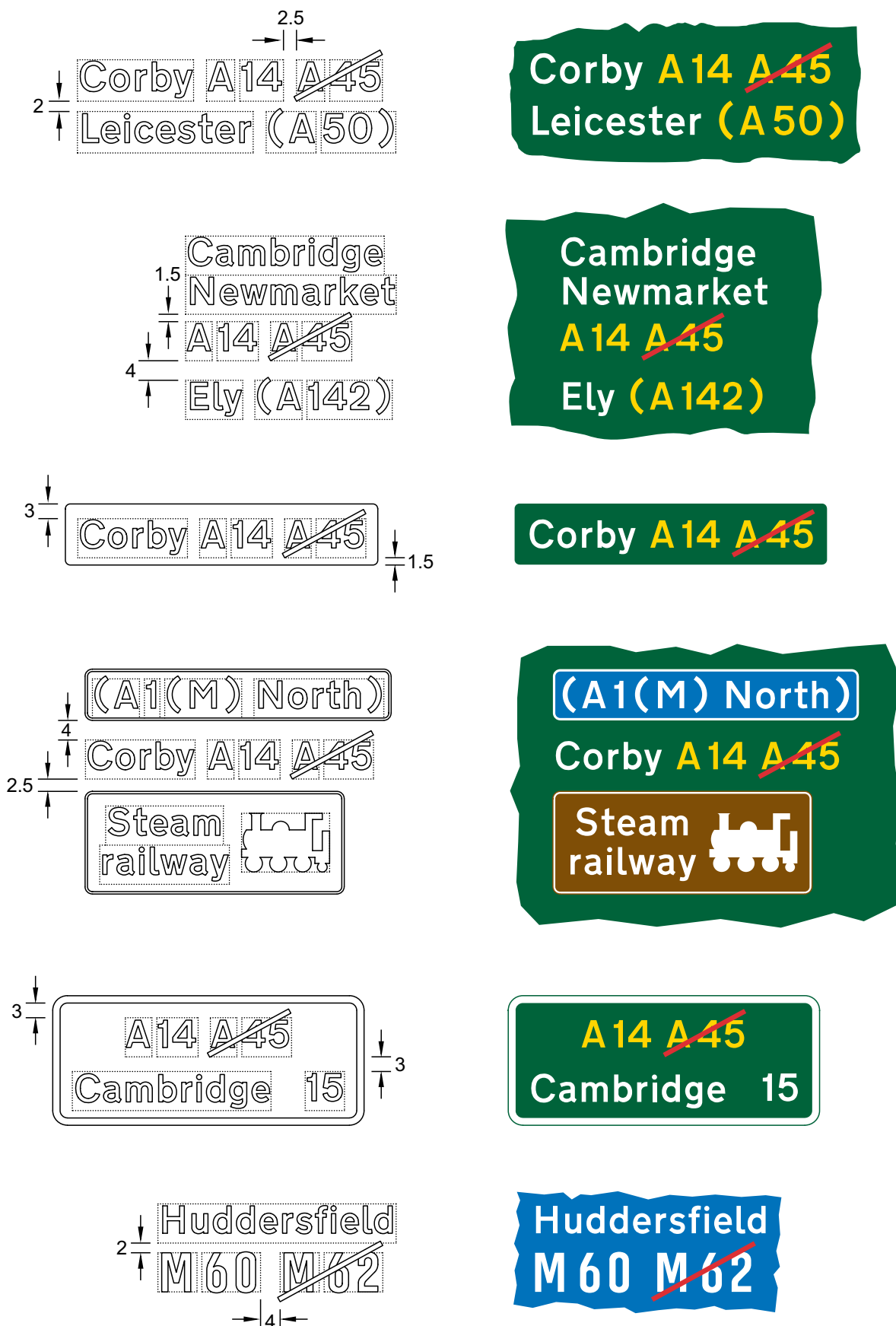


Figure 11-2

11.1.3. As an alternative to the cancellation bar, a separate temporary black on yellow sign may be provided indicating the change in route number. This can be mounted either on its own or beneath a permanent advance direction sign. An example is illustrated in [Figure 11-3](#). This sign must not be retained for more than two years (see Schedule 13 General Direction 16).

A14 previously A45

Figure 11-3

11.2 Diversion route symbols

11.2.1. S12-11-13 prescribes the symbols that may be added to permanent directional informatory signs to indicate a route to be followed when a motorway or high standard all-purpose road is closed during an emergency or during major maintenance or construction works. The design of these symbols is shown on working drawing S 56 (see 1.6). **Figure 11-4** and **Figure 11-5** show how the symbols are added to the destination blocks on the permanent signs. It should be noted that the symbol is always on a yellow patch whatever the background colour of the main sign. The symbol should always be associated with the route number of the road to be followed until the road or motorway to which the road user is returning is shown on the signs. The symbol should then be associated with this route number. The symbol may be shown on a destination panel, but never on a dark green or blue route number patch. The symbol should be placed to the right of or below the appropriate route number.

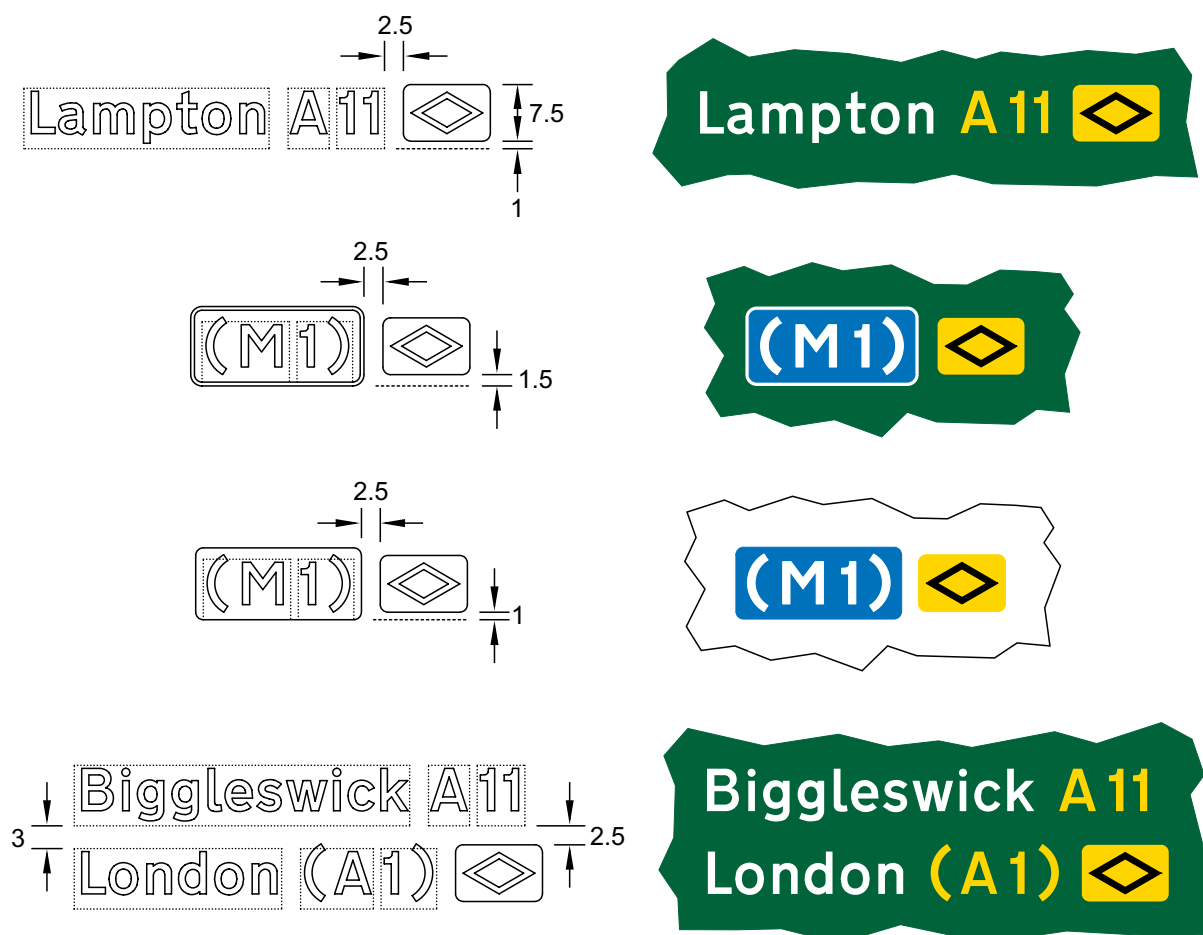


Figure 11-4

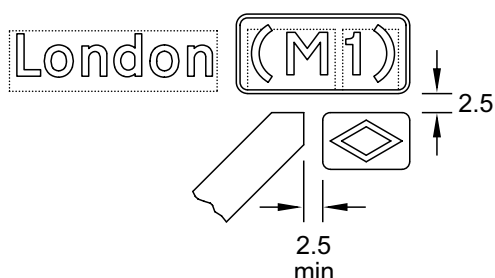
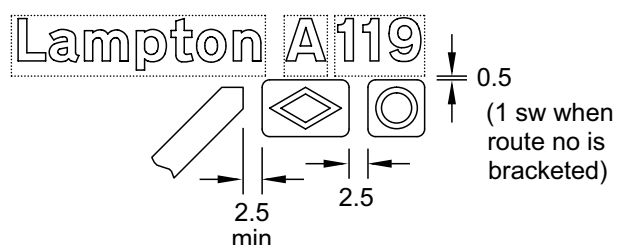
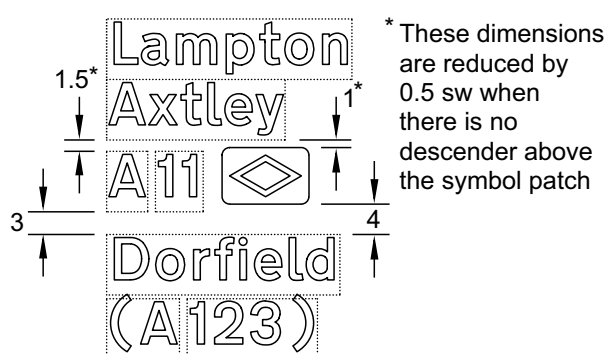
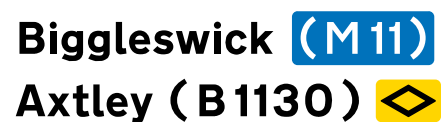


Figure 11-5

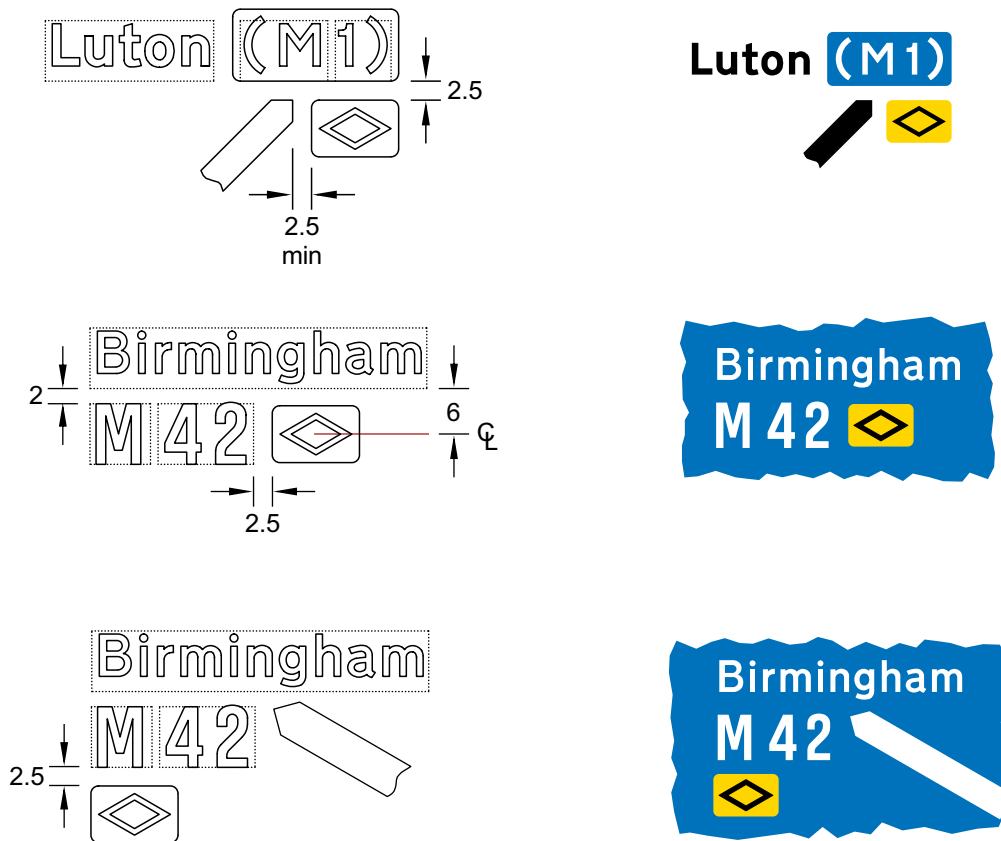


Figure 11-5 (continued)

11.2.2. Where separate signs are used to indicate symbolic diversion routes, these should follow the design details shown in [Figure 11-6](#).

11.3 Alterations to existing signs

11.3.1. Existing signs sometimes need to be altered to take account of the opening to traffic of a new road, or other changes to the highway network such as reclassification. These alterations can take the form of new or deleted destinations, changes to route numbers etc. To save the cost of providing a completely new replacement sign, it is often possible to modify an existing sign by the application of cover plates. In no circumstances may smaller x-heights or sub-standard spacings be used to accommodate alterations.

11.3.2. Care should be taken to ensure that the sign face materials used to manufacture a cover plate match as far as is possible the materials used for the manufacture of the original sign. Problems that are likely to occur are mis-matched colours and mis-matched retroreflective properties. It is not uncommon to recognise a plated sign at night by a highly reflective “panel” on what is otherwise a relatively dark sign. Such methods of sign modification should be avoided, as they give unwarranted emphasis to a particular section of the sign. Where the intention is to remove the plates at a future date, they should be affixed to the sign in a manner that does not cause damage to the original sign face (other than the drilling of holes).

11.3.3. Where future changes are anticipated, it may be possible to design a sign with these changes in mind. However, the initial design of the sign should follow the design rules detailed in this chapter.

11.3.4. Where a sign is altered by the application of plates, and the sign had not previously been designed to take account of the specific changes, care must be taken to ensure that the modified sign still accords with the design rules, particularly with respect to block spacing. On map-type signs it is important that the minimum space for unrelated blocks is maintained.

Where a place name is removed from a list of destinations, a single line cover plate should not be used if this produces an artificial gap in the list. In this case a complete cover plate containing the retained place names should be provided for the entire destination block. Where additional place names are added, it may be necessary to use abbreviations (see 2.4). Examples of the correct and incorrect use of cover plates are shown in Figure 11-7, which also illustrates, for comparison purposes, the alternative solution of providing a complete new sign.

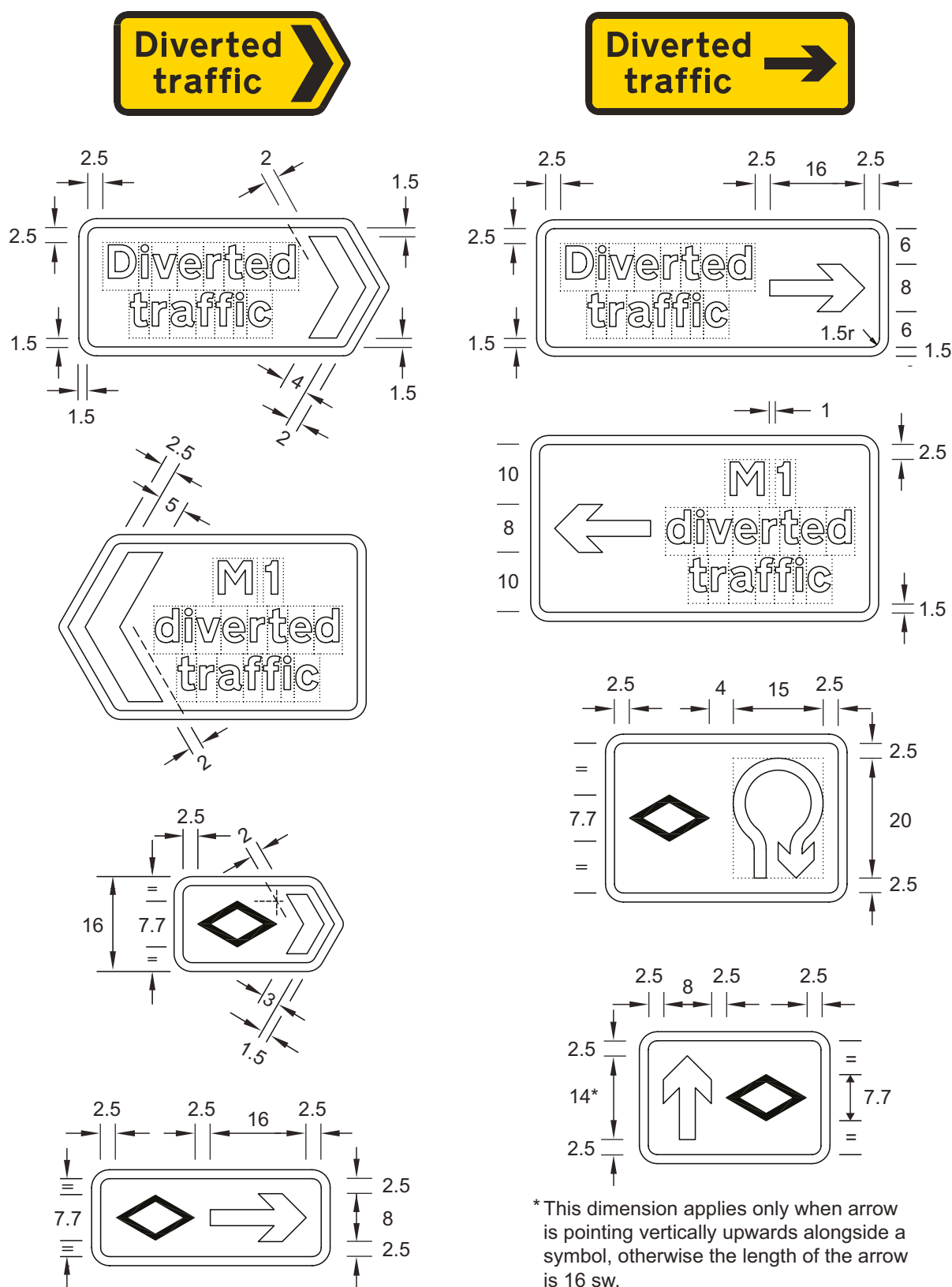


Figure 11-6

11.3.5. Where a satisfactory sign cannot be produced by modifying the existing sign, and where the provision of a new replacement sign is ruled out on the grounds of cost, consideration should be given to the provision of a separately mounted supplementary sign showing the new information. Minor modifications may still need to be made to the existing sign. A new sign, replacing both the existing and supplementary signs, can be provided at a future date when funds permit or as part of a maintenance programme. Where there is likely to be a series of changes to a particular sign brought about by the progressive opening of a new road, consideration should be given to the provision of supplementary signs and minor modifications to the existing sign, with a view to providing a new sign once all the changes have taken place.

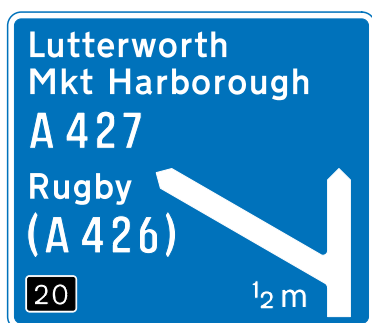
11.4 General design considerations

11.4.1. By following the design rules for directional informatory signs covered in sections 3 to 11, it is possible to produce different layouts for the same sign. [Figure 11-8](#) to [Figure 11-14](#) show some examples, described below in more detail.

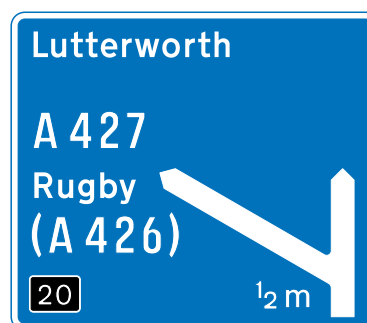
11.4.2. [Figure 11-8](#) is a stack-type sign showing a simple crossroads where the side roads enter at an angle. Only one destination and route number is shown for each direction. Sign 1A is the smallest of the group, but is a little cluttered as there are two lines for each directional panel. The panels are stacked in the conventional order, that is left turn above right turn. Sign 1B differs only in that the right turn is shown above the left turn. This sign is easier to understand, as the pattern of the arrows emphasizes the junction layout. Sign 1C improves the clarity of the sign further by placing the route numbers alongside the place names. The arrows now determine the height of each directional panel, creating additional space between the legends and the panel dividers / sign borders. This extra space makes the sign easier to read. This sign, being wider than sign 1B, may be more suited to footway mounting where sufficient width is required between the posts to allow the passage of pedestrians with wheelchairs or prams. As the ahead destination determines the width of the sign, by placing this on two lines (sign 1D), the sign width can be reduced slightly where verge or footway width is limited. This modification of the design is at the expense of a taller and larger sign. Finally, sign 1E demonstrates a poor design. This is the largest sign in the group and the arrangement of route numbers does nothing to improve the appearance of the sign.

11.4.3. [Figure 11-9](#) is a map-type sign showing the same junction as [Figure 11-8](#), except that the A11 has primary route status in this example. The sign therefore demonstrates the use of coloured panels. Sign 2A shows the conventional layout. The “Dorfield” panel has the route number ranged right to allow the route arm to tuck into the destination block. The vertical separation of the two side destinations (“Axtley” and “Dorfield”) helps to emphasize the junction layout. Sign 2B has about the same area as sign 2A. The panel positions in sign 2B emphasize the crossroads even further. There is no doubt that “Axtley” is to the left and “Dorfield” to the right. With this arrangement it is not possible to tuck the right turn route arm into the “Dorfield” panel and therefore the route number is ranged left. If the height of the sign were increased, the right turn in sign 2B could be designed as for sign 2A. This would reduce the width of the sign, but the left and right destination panels would be out of balance (“Dorfield” being closer to the vertical route arm than “Axtley”). Sign 2C reduces the sign area to a minimum. However, the short approach arm and the position of the side destination panels do not adequately illustrate the junction layout. Although a space saver, this sign design is not recommended. Sign 2D is similar to sign 2A except that the right turn destination panel is positioned below the route arm. Because the route arm is angled upwards, it tends to dissociate itself from the destination panel. However, the design does work, and because the right turn panel is higher than the left turn panel the nature of the crossroads is still clear. Had the left turn been at 90°, the “Axtley” panel in sign 2D would have been higher on the sign and the junction layout would be much clearer.

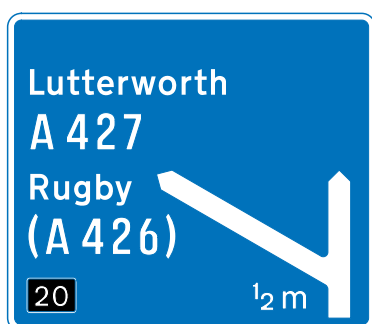
with the “Dorfield” panel positioned as in sign 2A. Destination blocks should not generally be placed beneath a route arm that angles upwards by more than 30° to the horizontal.



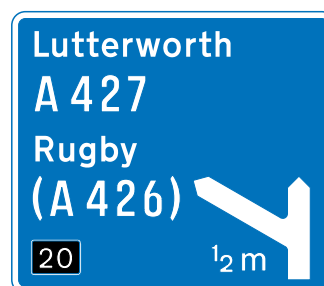
Existing sign



Incorrect plating



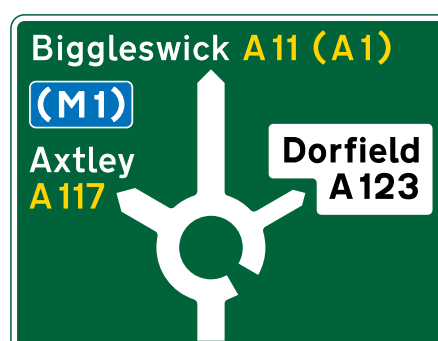
Correct plating



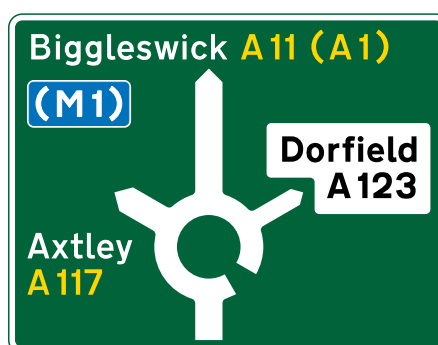
New sign



Existing sign



Incorrect plating

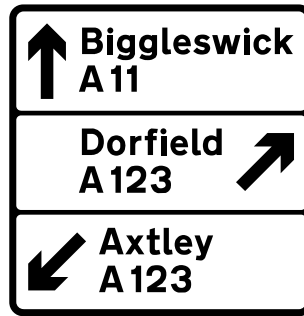


Correct plating

Figure 11-7



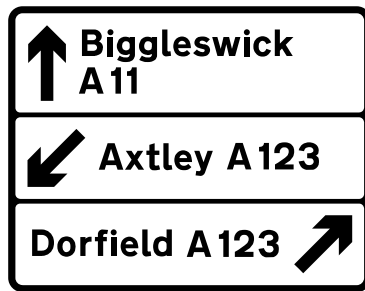
Sign 1A



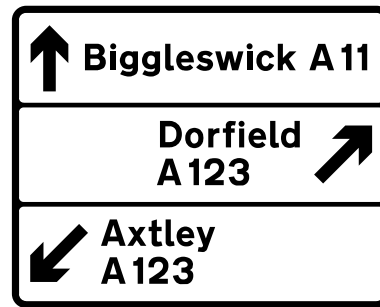
Sign 1B



Sign 1C

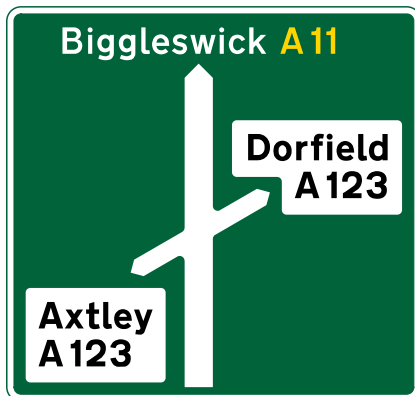


Sign 1D



Sign 1E

Figure 11-8



Sign 2A



Sign 2B



Sign 2C



Sign 2D

Figure 11-9

11.4.4. **Figure 11-10** shows a roundabout with two upward pointing side arms. Sign 3A shows the conventional design. Sign 3B allows the right turn arm to tuck into the destination block, resulting in a slight reduction of the overall sign area. It should be noted that the sign height has

been increased to maintain the correct vertical block spacing between the forward destination and the “Dorfield” panel.

11.4.5. Figure 11-11 shows a final advance direction sign on a motorway. Sign 4A is the conventional design with the junction number in the bottom left hand corner. By moving the junction number to the top left hand corner, as shown on sign 4B, and lowering the side destination block, the height of the sign (and hence overall area) can be substantially reduced. However, this was only possible because the horizontal length of the forward destination was very short. Signs 4C and 4D demonstrate that with a longer length of forward destination, the smaller sign is the one with the junction number at the bottom. Another consideration is the length of the bottom line of the side destination. Although this can be positioned close to the bottom border, as shown on sign 4B, this may not be possible when the distance to the junction is added. Also, as one mile and ½ mile advance direction signs do not normally show a forward destination, there would be no saving on the height of the sign by placing the junction number at the top.



Figure 11-10

11.4.6. The design rules in previous sections show how triangular warning or regulatory roundel symbols are added to direction and advance direction signs. The more complex the information given within the triangle or roundel, the larger it needs to be, relative to the main sign, to ensure that it is still legible to drivers (see 3.4). Where this results in very large signs with significant amounts of blank space, consideration should be given to placing the warning / regulatory information on separate signs, and not integrating it into the main direction and advance direction signs. Where an advance direction sign incorporates two triangles or roundels, care must be taken to minimise wasted space. **Figure 11-12** shows a sign for a three-way junction where the ahead route has a level crossing with electrified overhead cables. The design of sign 5A assumes that the left hand triangle should be placed on the vertical route arm. However, this results in an overlarge sign. By placing the right hand triangle on the vertical arm, as shown in sign 5B, a more efficient design is achieved. Depending on the number of destinations shown, and the length of the place name blocks, it may be possible to reduce the area of the sign face further by using a stack-type sign as shown in sign 5C.



Sign 4A



Sign 4B



Sign 4C

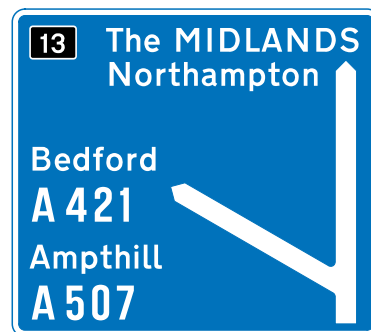
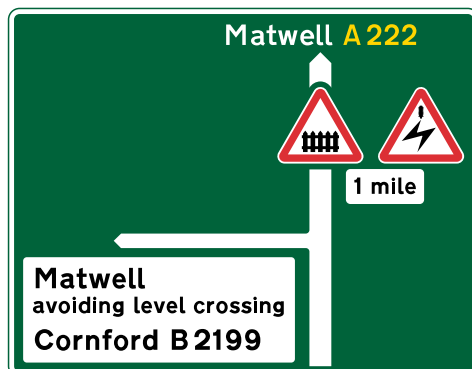
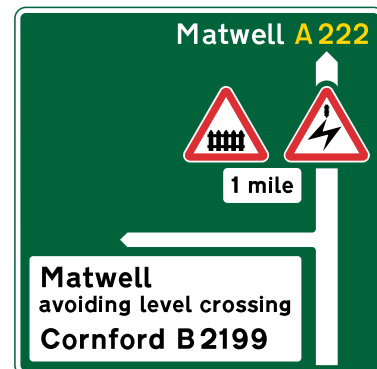
Sign 4D
Area 7% larger than Sign 4C

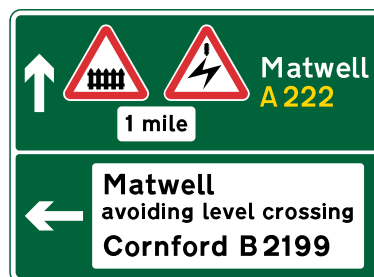
Figure 11-11



Sign 5A



Sign 5B

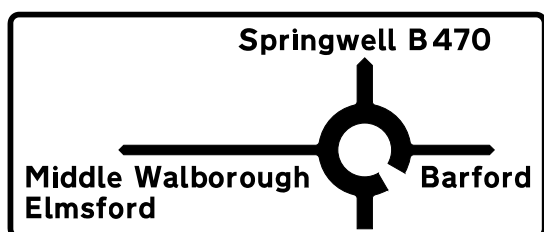


Sign 5C

Figure 11-12

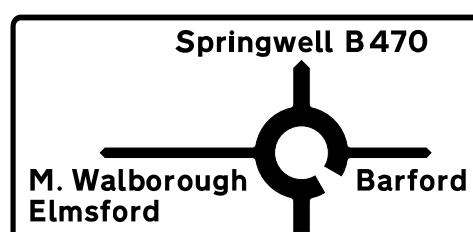
11.4.7. Place names with two or more words lend themselves to alternative layouts.

Figure 11-13 shows an example of a map-type roundabout sign with the destination “Middle Walborough” indicated along an unnumbered non-primary route. On sign 6A “Middle Walborough” is on a single line; this results in a very large sign which is wasteful of space. In the example, the destination to the right has a relatively short name (Barford) and, with the extremely long left turn arm, the complete map-type route symbol looks out of balance. The total area of the sign can be reduced by 12% by abbreviating “Middle Walborough” to “M. Walborough” as shown on sign 6B. One problem here is that should there be another destination with a similar name, such as “Market Walborough”, not too far away and not indicated on the sign, confusion could arise. It is generally better to avoid using abbreviations, and to place the name on two lines as shown on sign 6C. The width of the sign is reduced further, although the height is increased, resulting in a sign that has the same area as sign 6B. However, in addition to showing the place name in full, sign 6C has a more balanced route symbol layout, and the reduced width will help to overcome any siting difficulties. As this is a roundabout junction, “Walborough”, being on the second line, tucks under the route symbol. This is a contributory factor to the reduction in sign width. If “Middle Walborough” was the only destination to be signed to the left, the omission of “Elmsford” would not affect the size of signs 6A and 6B, as the height is determined by the minimum length of the approach arm (see 5.9.12). However, the height of sign 6C would be the same as 6A and 6B, resulting in a total sign area equal to 76% of that for sign 6A. The difference between signs 6C and 6D is in the length of the left turn route arm. On sign 6C the two-thirds rule (see 5.3.4) is applied to the longest part of the block (i.e. “Walborough”). This results in the arm almost passing the first part of the name (“Middle”). The passing effect would be further exaggerated had the place name been “Old Walborough” on two lines. On sign 6D, the appearance of the route arm is improved by applying the two-thirds rule to “Middle” rather than to “Walborough”. There may be other situations where applying the two-thirds rule to the line of legend immediately below the route arm improves the appearance of the sign.



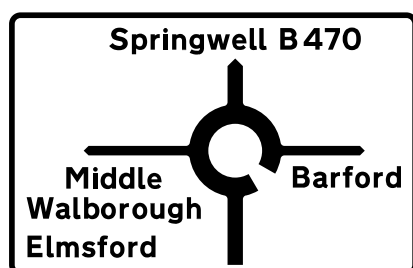
AREA = 100%
(100% without Elmsford)

Sign 6A



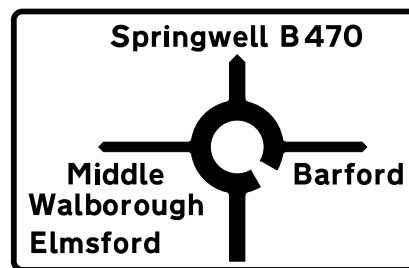
AREA = 88%
(88% without Elmsford)

Sign 6B



AREA = 88%
(76% without Elmsford)

Sign 6C



Sign 6D

Figure 11-13

11.4.8. An error commonly seen on both panelled advance direction signs and flag-type direction signs is the inefficient layout of multi-part names. **Figure 11-14** shows a flag-type direction sign indicating a business park, with a three word name. The most economical design for this particular example is to place the destination on two lines, but the difference in area between signs 7A and 7B shows that substantial savings can be made by choosing the appropriate pairing of words. Sign 7A is likely to be used only where it is to be mounted on a backing board with another flag sign of a similar length. Using flag signs of similar length produces a more balanced assembly of signs. Placing the destination on three lines, as shown on sign 7C, increases the height of the sign with only a marginal saving in the overall length. Although the legend block is shorter than that on sign 7B, the chevron takes up more horizontal space because it has increased height and width. The gap between the chevron and the border of the pointing end of the sign is also increased. (See **Figure 7-1** for chevron sizes.) The most efficient layout in any particular case will of course depend upon the relative lengths of the words involved.



Figure 11-14

11.5 Working drawings for directional informatory signs

11.5.1. The directional informatory signs in S12-28 are covered by working drawings. The brown leisure facility signs in this part are prescribed separately because in some cases the symbols are a larger size than shown in S12-14.

12.1 Introduction

12.1.1. The design of regulatory roundel signs is covered by a series of working drawings (see working drawings for Schedules 2, 3, 4 and 5). This section deals with those signs that are designed to be used with specific traffic regulation orders. The most common type of sign is the waiting and/or loading restriction time plate.

12.1.2. The following rules cover some of the designs permitted by the Regulations. Further design details can be found on the working drawings.

12.1.3. The design rules in this section supplement those given in section 2. Particular attention is drawn to 2.3.2 and Figure 2-2 which deal with horizontal spacing of abbreviated words.

12.1.4. The Transport Heavy alphabet is used, all characters being black. Signs, or parts of signs, indicating waiting restrictions and the prohibition of stopping have yellow backgrounds. Those signs, or parts of signs, indicating no loading or types of parking, such as pay and display, have white backgrounds

12.2 Time of day

12.2.1. Times are expressed in hours and minutes and as either “am” or “pm”. The 24 hour clock is not used. Where the sign indicates a 24 hour restriction or prohibition, the time period is either omitted or expressed as “At any time” (or “at any time”). S18-1 lists the permitted expressions of time periods, days and dates.

12.2.2. A time period is shown as a start and end time separated by a hyphen. Where both the start and end times are whole hours, minutes are not shown (e.g. 8 am). However, where the start time for a particular period is not immediately followed by “am” or “pm” and either the start or end time shows minutes (e.g. 7.30) then the other time should also show minutes even though this may be zero (e.g. 9.00). Examples of time periods are “7.30 - 9.00 am”, “7 - 9 am”, “7 am - 6 pm” and “7 am - 6.30 pm”. Examples of combinations that are not recommended are “7 - 9.30 am” and “7.30 - 9 am”. Where two time periods are shown on the same sign, one period may be expressed in hours only and the other in hours and minutes as appropriate.

12.2.3. If the time period covers only “am” or “pm”, but not both, then “am” or “pm”, as appropriate, should be shown only against the end time.

12.2.4. 12 noon and 12 midnight should be expressed as “Noon” (or “Midday”) and “Midnight” (or “M’night”) respectively. Where a time period applies on every day of the week and spans midnight, it should be expressed as a single period such as “8 pm - 6 am”. Where the time period does not apply on every day of the week, it can be expressed as two separate time periods, the first commencing at midnight and the second ending at midnight. An alternative is to use a single time period with the words “next day” at the end. An example is “8 pm - 6 am next day”.

12.2.5. Figure 12-1 shows the various combinations of time periods and the appropriate horizontal spacing. Where more than one time period is shown, the tiles of each are butted vertically. On some signs a single time period may be shown on two lines.

1.5 1.5 1.5 1.5
 8 am - 6 pm 8 - 9 am

1.5 1.5
 8 am - 6.30 pm

1.5
 4.30 - 6.30 pm

1.5
 Midnight - 7 am
 7.30 pm - Midnight
 1.5

7.30 am -
 6.30 pm

Varies according to
 overall width of sign

8 pm - 6 am next day

9.30 pm - 2.5
 5.30 am next day

9.30 pm -
 5.30 am next day

Figure 12-1

12.3 Day of the week

12.3.1. Should the restriction or prohibition apply for a single day, or a specified time period applies for one particular day, it is recommended that the name of the day appear in full (e.g. Saturday). Where a period is expressed as a number of consecutive days, the start and end days should be abbreviated and separated by a hyphen. Should the period be only two consecutive days, the hyphen may be replaced by an ampersand (&). A list of abbreviations and the appropriate horizontal spacing is shown in [Figure 12-2](#).



Figure 12-2

12.4 Time of year

12.4.1. Where the restriction or prohibition applies for only part of the year, the appropriate dates are added to the sign. These can be expressed as specific dates, or months only, to accord with the traffic regulation order. Expressions such as “Term time” (to reflect school periods) are not permitted, but where a named day such as “Good Friday” is consistent throughout the country and familiar to road users, this may be used. References to bank or public holidays are permitted by the Regulations.

12.4.2. **Figure 12-3** gives a list of abbreviations and shows the appropriate horizontal spaces when setting out a date and a date period.

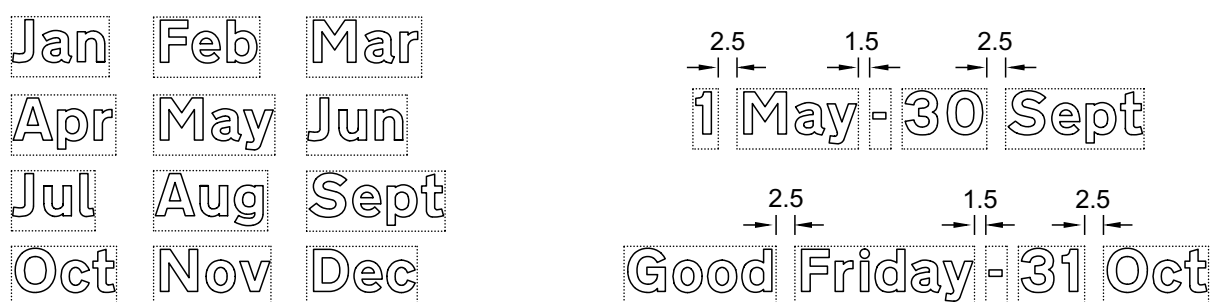


Figure 12-3

12.5 Combining times, days and dates

12.5.1. The sequence of setting out the above information on the sign is, from top to bottom: “days”, “times” and “dates”. Each line is centred horizontally and the vertical gap between each element is shown in **Figure 12-4** which also shows how to combine time periods.



Figure 12-4

12.6 Supplementary legends

12.6.1. Some time plates may have supplementary legends such as “except taxis” and “on school entrance markings”. These legends are generally placed below the day / time / date legend and separated vertically from the line above by 1 sw. An example is given in [Figure 12-5](#).

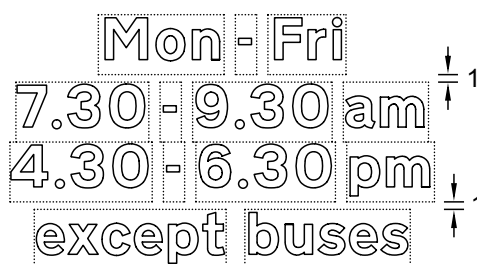


Figure 12-5

12.7 Model layouts for waiting, stopping and loading prohibition time plates

12.7.1. [Figure 12-6](#) sets out basic models for waiting, stopping or loading prohibition time plates. The roundel for a waiting prohibition is prescribed in S4-3. A diameter of 8 sw is generally used where the time plate is used in conjunction with yellow road markings. Time plates that are not used with road markings (e.g. in a restricted parking zone) have a larger roundel size of 20 sw diameter. For the design of signs with the larger roundel, reference should be made to the working drawings, but the basic rules above for setting out time periods still apply (see also [12.7.2](#)). The roundel for the prohibition of stopping is also prescribed by S4-3 and is always accompanied by the legend “No stopping” except on the “stopping prohibited on verge or footway” sign (S4-3-6).”

12.7.2. Waiting prohibitions sometimes apply only to goods or commercial vehicles; the roundel and appropriate symbols are prescribed by S4-3-3. Where the prohibition applies only to goods vehicles, the lorry symbol is placed alongside the “no waiting” roundel. A lorry together with a bus symbol denotes that the prohibition applies to commercial vehicles. Where the prohibition applies to public service vehicles only, the bus symbol alone is used with the “no waiting” roundel. Typical examples are shown in [Figure 12-7](#).

12.7.3. In some cases, it may be possible to reduce the sign height by placing the “no waiting” roundel to the side of the time period. Design details are shown in [Figure 12-8](#).

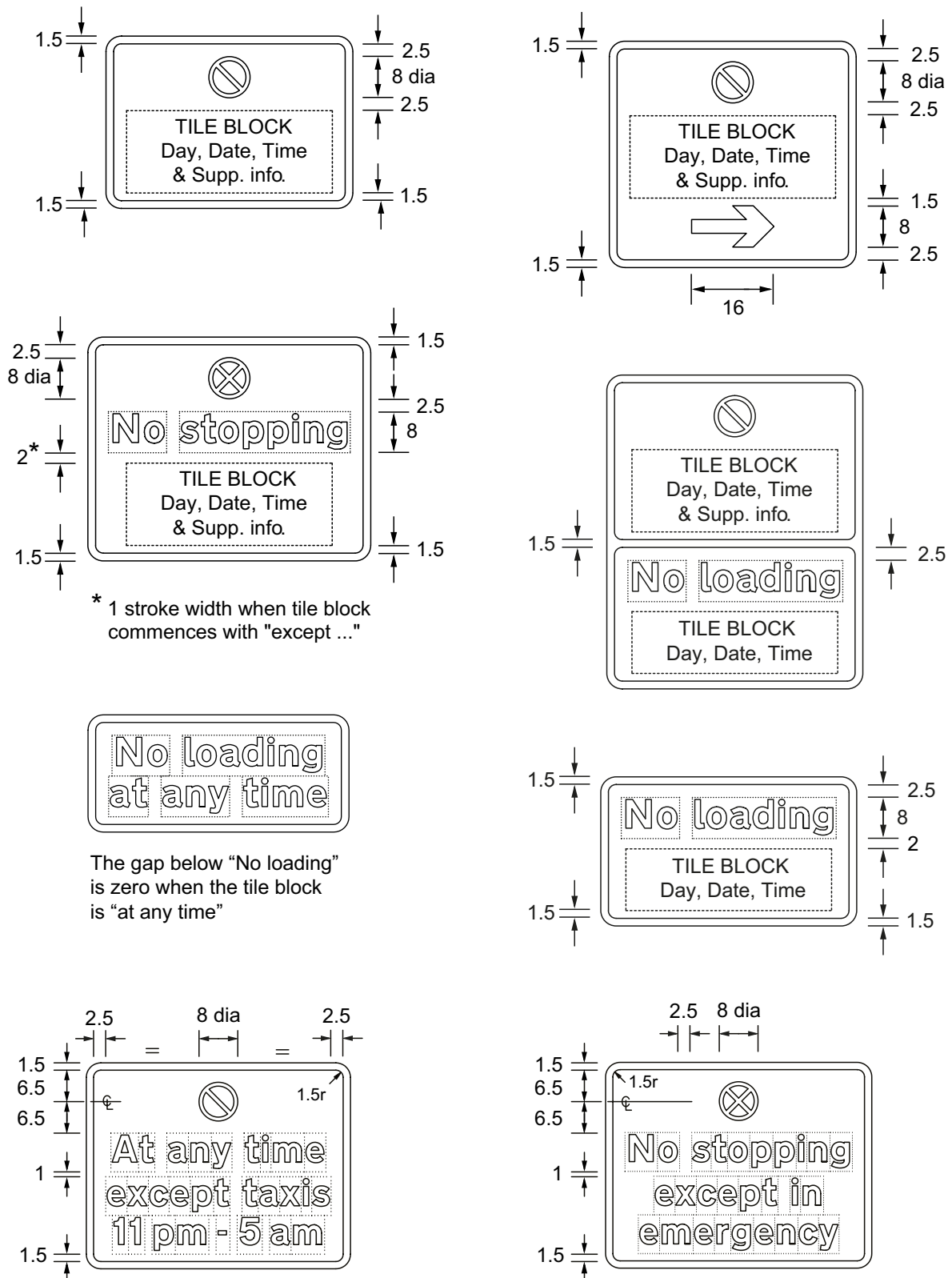


Figure 12-6

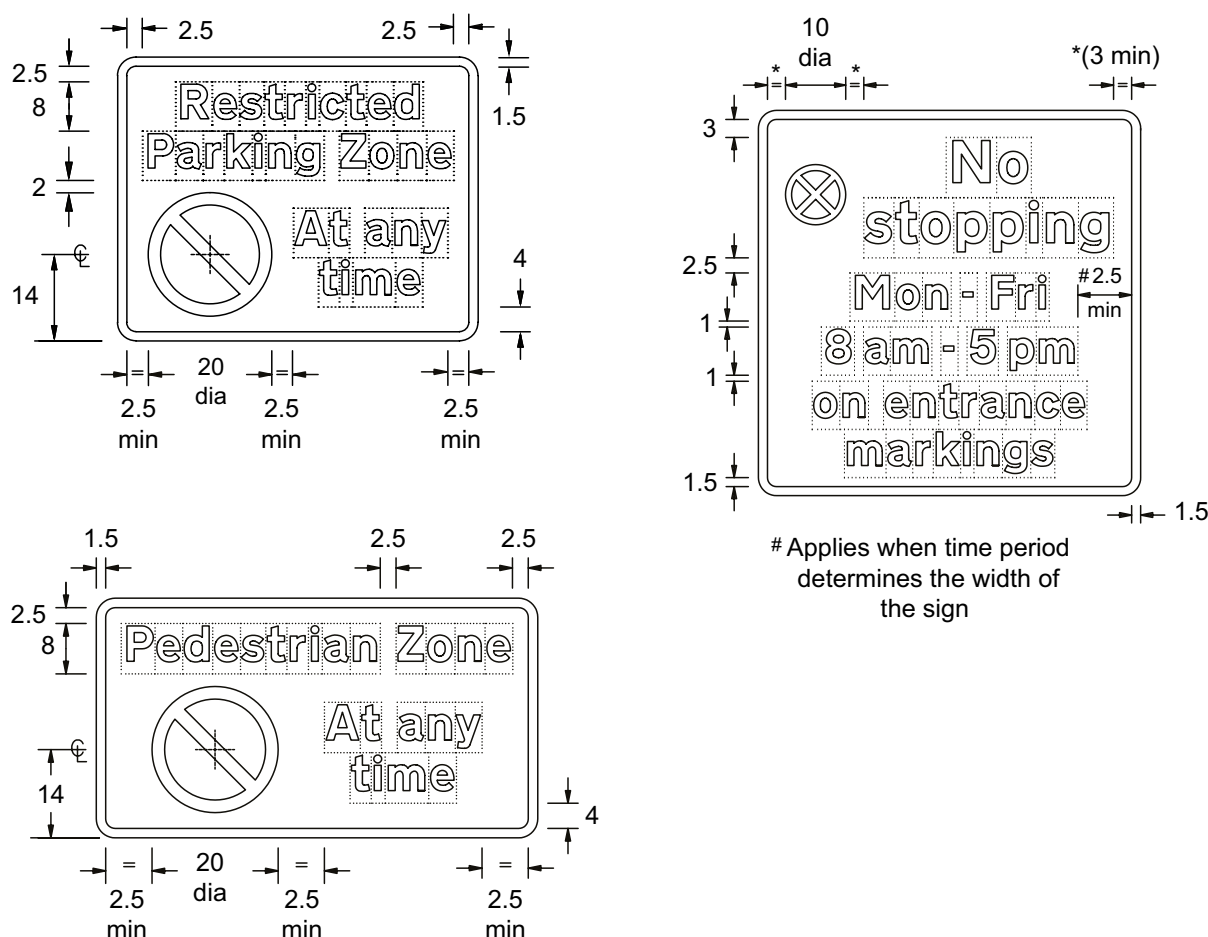
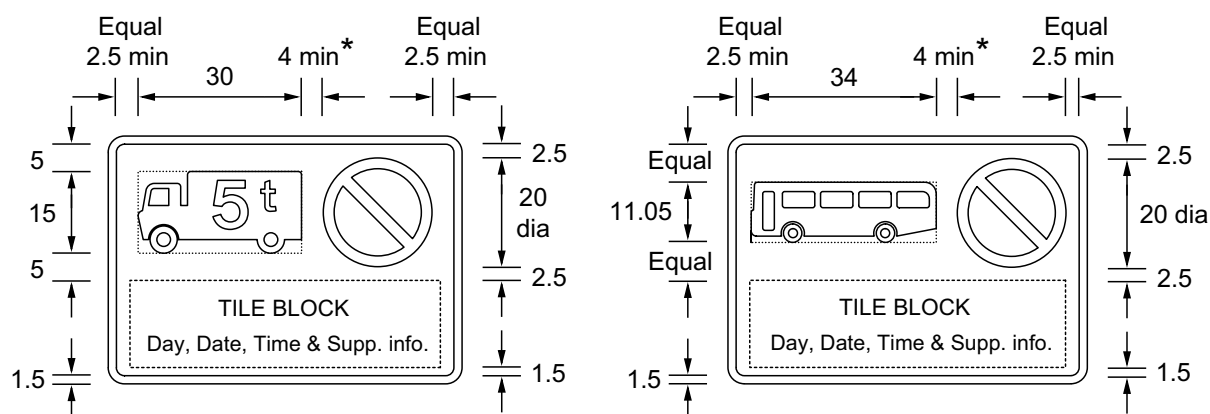


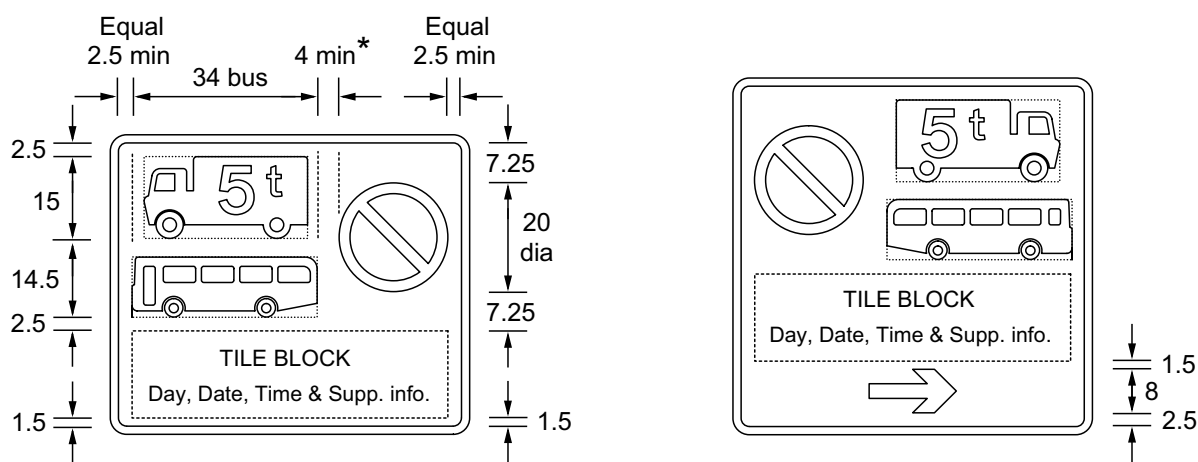
Figure 12-6 (continued)

12.8 Model layouts for limited waiting time plates

12.8.1. Limited waiting time plates use the "P" parking symbol prescribed by S4-4-2. The size is 20 sw square. **Figure 12-9** sets out the basic model for the sign design which may be combined with waiting prohibition plates as shown in **Figure 12-10**. The maximum duration that parking is permitted, or the period during which a return is prohibited may be shown as hours or minutes: "minutes" may be abbreviated to "mins"; "hours" will generally be shown in full.

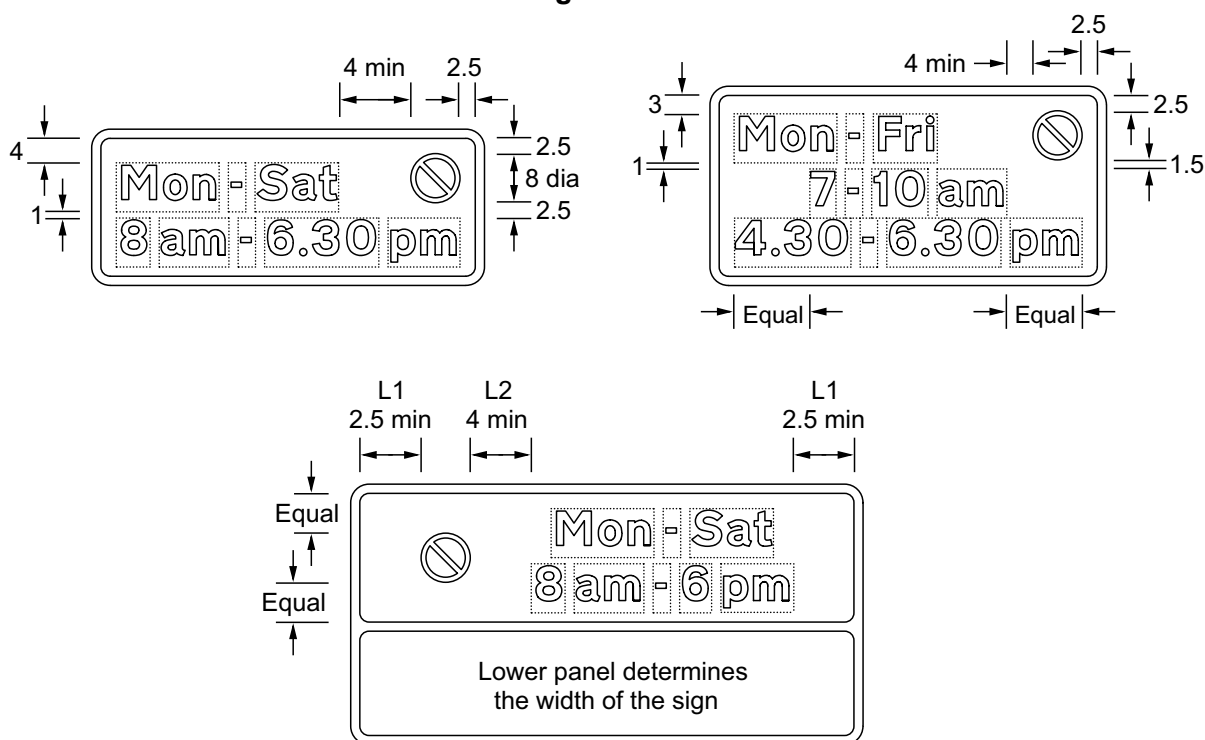


* This dimension is equal to the gap between symbols and the side borders when these are greater than 4 stroke widths



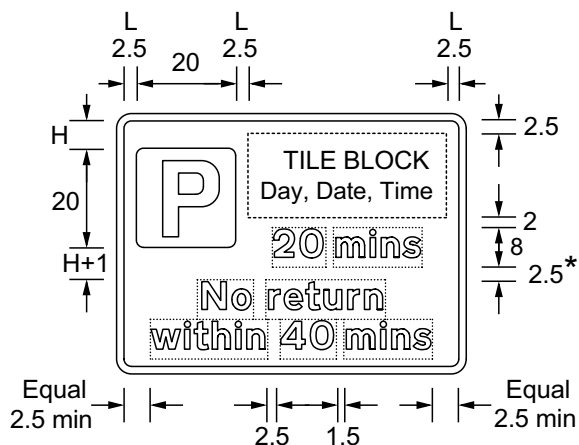
Symbols are reversed as shown when a right-pointing arrow is added to the sign

Figure 12-7

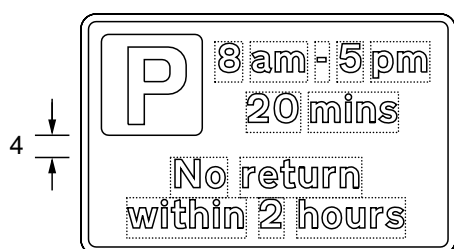


When $L1 + L2 + L1$ is equal to or greater than 12 stroke widths, $L1$ should always equal $L2$

Figure 12-8



When bottom line determines the width of the sign the value of L is increased from 2.5 stroke widths maintaining equal spacing at the top of the sign



The space below the "P" symbol to the legend below is 4 sw when the TILE block alongside is a single line (i.e. the height of the block and "20 mins" is less the height of the "P") or where the "20 mins" is below the "P" and centred on the width of the sign.

* This dimension is reduced to 2 stroke widths when the upper block (20 mins in the example) is centred horizontally over the "No return" block

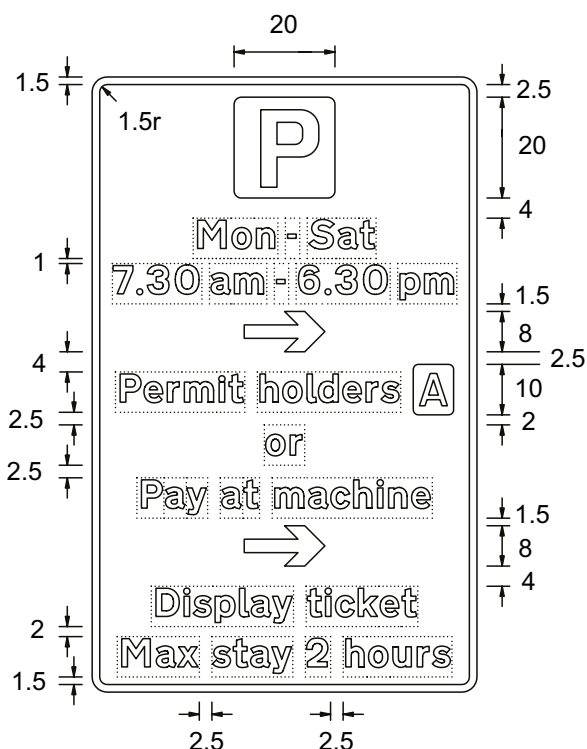
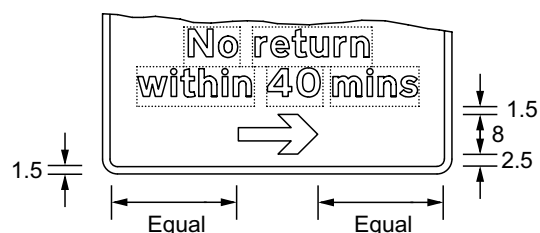


Figure 12-9



Figure 12-10

13 SERVICE AREA SIGNS

13.1 Motorway service area signs

13.1.1. Blue background signs with white legend as shown in **Figure 13-1** are for use on all-purpose roads to direct traffic to off-line motorway service areas. The legend “Services” must be included on the sign or it may be varied to “Rest area”, or a geographical name and “services” or “rest area”.



Figure 13-1

13.1.2. S12-22 permits motorway service area and motorway truckstop signs to display placeholders that contain the corporate logo of a franchise operating on the site. The design of this sign is illustrated in **Figure 13-2** and a working drawing (S12-24) is also available.

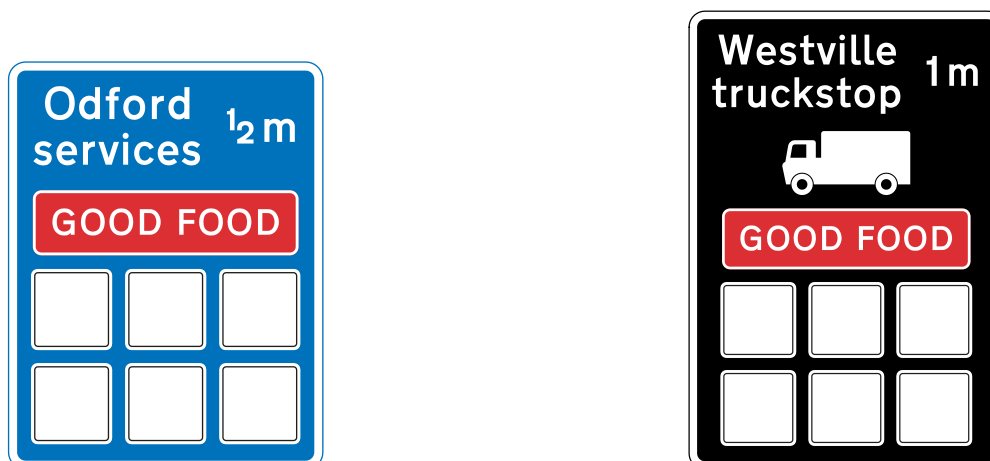


Figure 13-2

13.1.3. Signs indicating motorway and all-purpose road services which are for lorries only (i.e. truckstops) must have a black background (S12-22-3).

13.1.4. More detailed design guidance is available in the publication ‘Guide to the Signing of Roadside Facilities for Motorists on the Strategic Road Network in England’ available at:

www.gov.uk/government/publications/roadside-facilities-signing-for-motorists-in-england

In Northern Ireland reference should be made to the policy guidance publication ‘The signing of service areas and local facilities in by-passed communities’.

13.1.5. Diagrams 2917 and 2917.1 (see **Figure 13-3**) are used for indicating the availability of motorway service areas ahead with the distances and names of operators shown.



Diagram 2917 (S12-26-2)

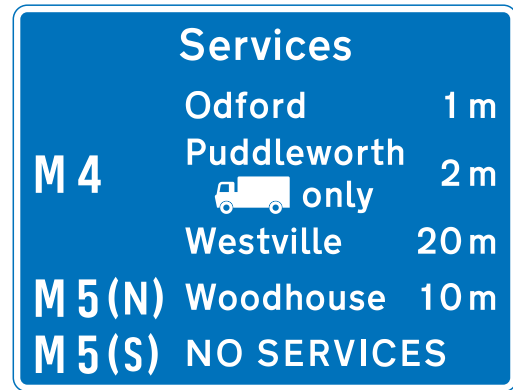


Diagram 2917.1 (S12-26-1)

Figure 13-3

13.1.6. Signs to diagram 2330 and 2918.1 in [Figure 13-4](#) can be used (on all-purpose roads and motorways respectively) to indicate where no services are available on a motorway.



Diagram 2330 (S12-26-5)



Diagram 2918.1 (S12-26-4)

Figure 13-4

13.2 Non-motorway service areas

13.2.1. Black-on-white signs (S12-22) as shown in [Figure 13-5](#) are used for indicating services on a primary or non-primary route, other than a motorway service area, where fuel, parking, refreshments and toilets are available at least between 8 am and 8 pm on every day except Christmas Day, Boxing Day and New Year's Day.

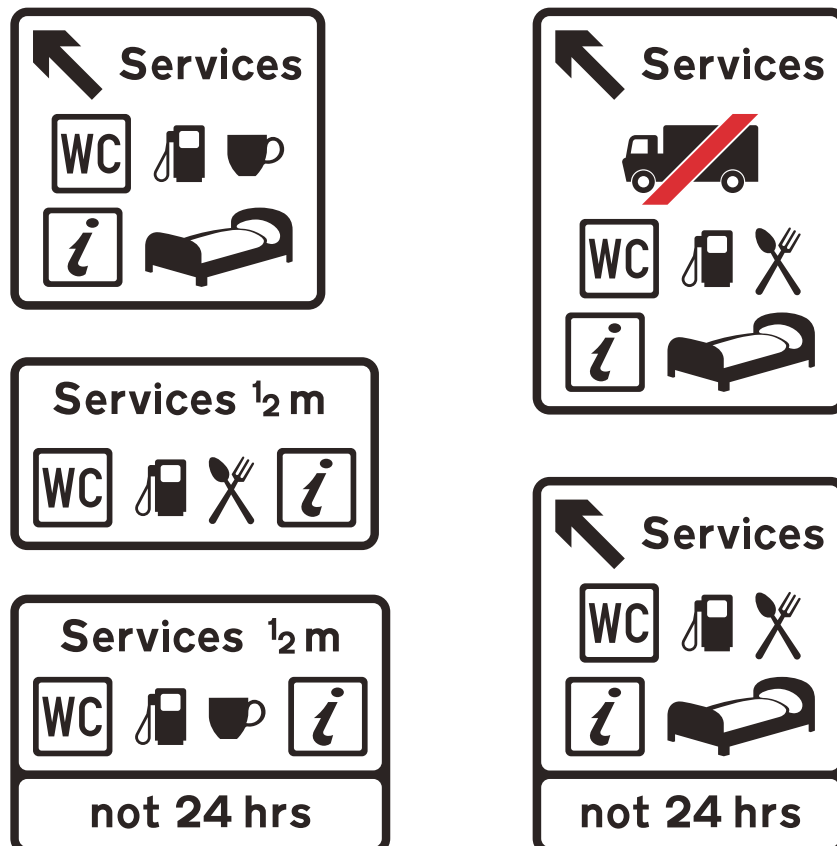


Figure 13-5

13.2.2. Signs to diagrams 2308.1 and 2309.1 in **Figure 13-6** are used to indicate the availability of facilities at various premises during normal shop opening hours, and avoid possible confusion over the meaning of the expression “services”.

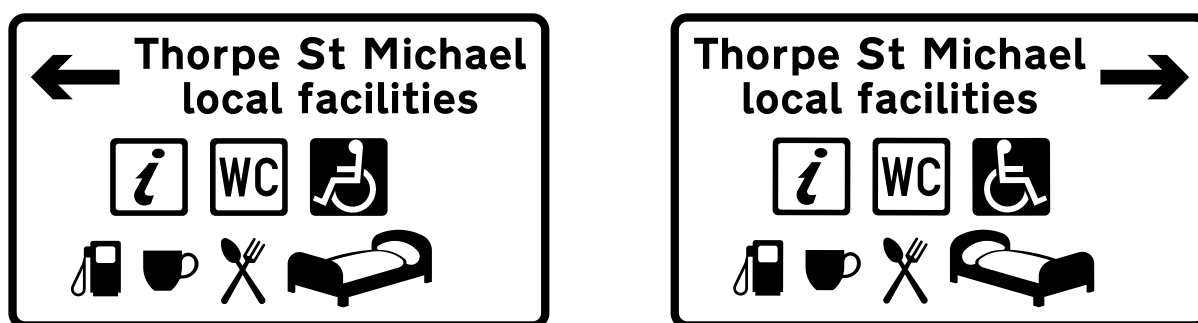


Diagram 2308.1 (S12-26-6)



Diagram 2309.1 (S12-26-7)

Figure 13-6

13.3 Truckstops

13.3.1. White on black signs (S12-22) as shown in **Figure 13-7** are used for indicating either a motorway truckstop where parking, refreshments, toilets and fuel are available 24 hours a day throughout the year, or a non-motorway truckstop where parking, refreshments and toilets are available, and fuel may be available, at least between 8 am and 8 pm on every day except Christmas Day, Boxing Day and New Year's Day.



Figure 13-7

14 MISCELLANEOUS DESIGN DETAILS

14.1 General

14.1.1. Sometimes it is necessary to design a sign to suit a particular requirement. This section describes the standard design details that should be used.

14.2 Distances

14.2.1. S18-3 permits distances less than $\frac{1}{2}$ mile to be expressed as fractions of a mile ($\frac{1}{2}$ or $\frac{1}{4}$ as appropriate) or in yards to nearest 10 yards. The latter is appropriate for pedestrian signs and for any directional sign indicating car parks, tourist destinations, leisure facilities and local facilities (e.g. recycling centre) and may be expressed in the form “x yards”, “x yds” or “X YARDS”, the latter generally being used only on those signs that have capital letters throughout. A distance in yards should normally be centred horizontally below the destination with a vertical gap, as shown in **Figure 14-1**. It is recommended that only one destination is shown on this type of sign. However, **Figure 14-1** shows the correct vertical spacing where more than one destination is included.

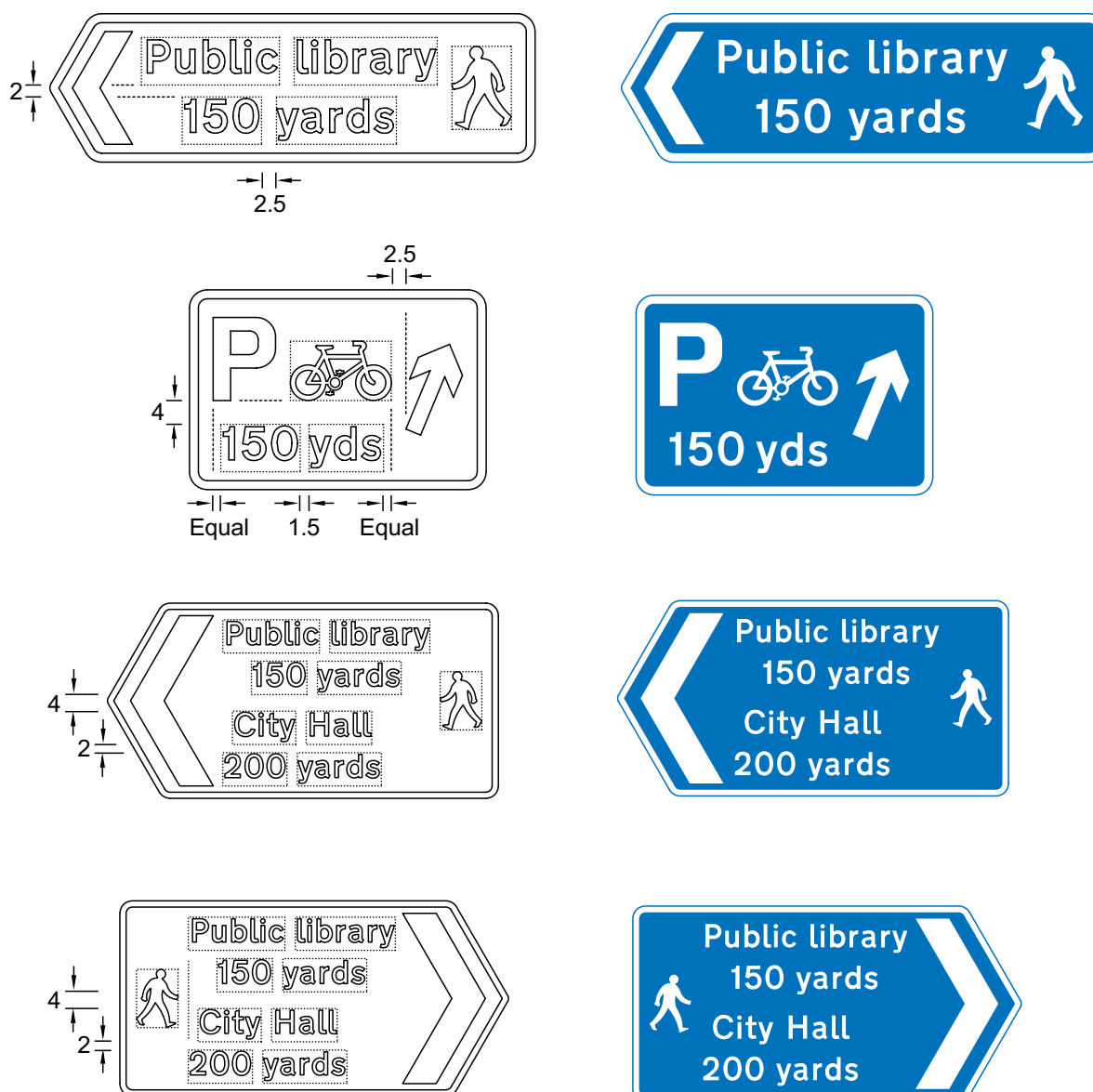


Figure 14-1

14.2.2. Exceptionally, a distance expressed in yards may be placed alongside the destination as shown in **Figure 14-2**. Unless shown otherwise on a working drawing, the distance should always be to the right of the destination when placed on the same line. As the units of measurement (e.g. “yds”) are included, the horizontal gap between the place name and the distance is reduced from the standard 7 sw to 4 sw. Where two or more destinations are shown on the same sign, the distances are generally aligned in columns as shown in the “Museum - River” example (note that the gap between “1” and “7” is the same as that between “7” and “0” in “170 yds”).

14.2.3. Generally, for pedestrian signs, the stacking order of destinations is nearest first. The Regulations require that distances over $\frac{1}{2}$ mile or more but less than 3 miles must be expressed to the nearest $\frac{1}{4}$ mile with the fractions $\frac{3}{4}$, $\frac{1}{2}$ and $\frac{1}{4}$ being used (see **3.9.3**). **Figure 14-2** includes an example of a sign where distances are expressed in both yards and miles. This is most likely to occur on public footpath signs. The abbreviation “m” is used for miles. The first distance to be shown in miles is centred beneath the distance in yards on the line immediately above. Subsequent distances in miles will have the unit numerals aligned in a column. Thus in the example, the “2” is centred beneath the “1”.

14.2.4. Where fractions of miles are used with whole miles (as in the example), it is not practicable to position the “m”s in a column. However, where two or more adjacent lines contain either whole miles or fractions (but not a mixture of both), the “m”s on those lines should be aligned in columns, with the smallest gap to an adjacent numeral tile being 1 sw. Where a public footpath sign shows all distances as miles, the “m” is omitted and the minimum horizontal gap to the place name increased to the standard 7 sw.

14.2.5. Metric distances are not permitted by the Regulations, and must not be used.

14.3 Adding arrows beneath destinations

14.3.1. The design rules for regulatory signs in respect of horizontal arrows beneath tiled legends also apply to other signs (i.e. the vertical gap is 1.5 sw). Where the arrow is directly below a symbol the vertical gap is 2.5 sw (see **Figure 14-3**).

14.4 Lane gain signs

14.4.1. The number of arrows on the lane gain signs diagrams 873 & 874 (S11-2-14) shown may be varied to suit the circumstances. This is a straightforward process for the signs on the main carriageway where the arrow heads are vertical. Each additional arrow (straight or curved) increases the width of the sign by 13 sw, as detailed on the working drawings. However, the signs mounted on the entry slip roads have arrow heads angled at 45°. This complicates the addition or deletion of arrows. **Figure 14-4** shows the basic design rules which apply in this case. The minimum length of any straight arrow is 16 sw. Other design details (e.g. lane line dimensions) can be found on the working drawings.

14.4.2. The minimum length of arrow (straight or curved) should be increased where this would improve the appearance of the sign. For example, a very short arrow may be lost on a sign that also contains several long arrows.

14.4.3. Lane gain signs must not be modified for use as rectangular lane merge signs. Triangular warning signs to diagrams 508.1 and 509.1 (S2-2-5 & 6) should be used where traffic merges need to be signed (see Chapter 4). In situations where it is considered that a rectangular sign might be of benefit, special authorisation must be sought.

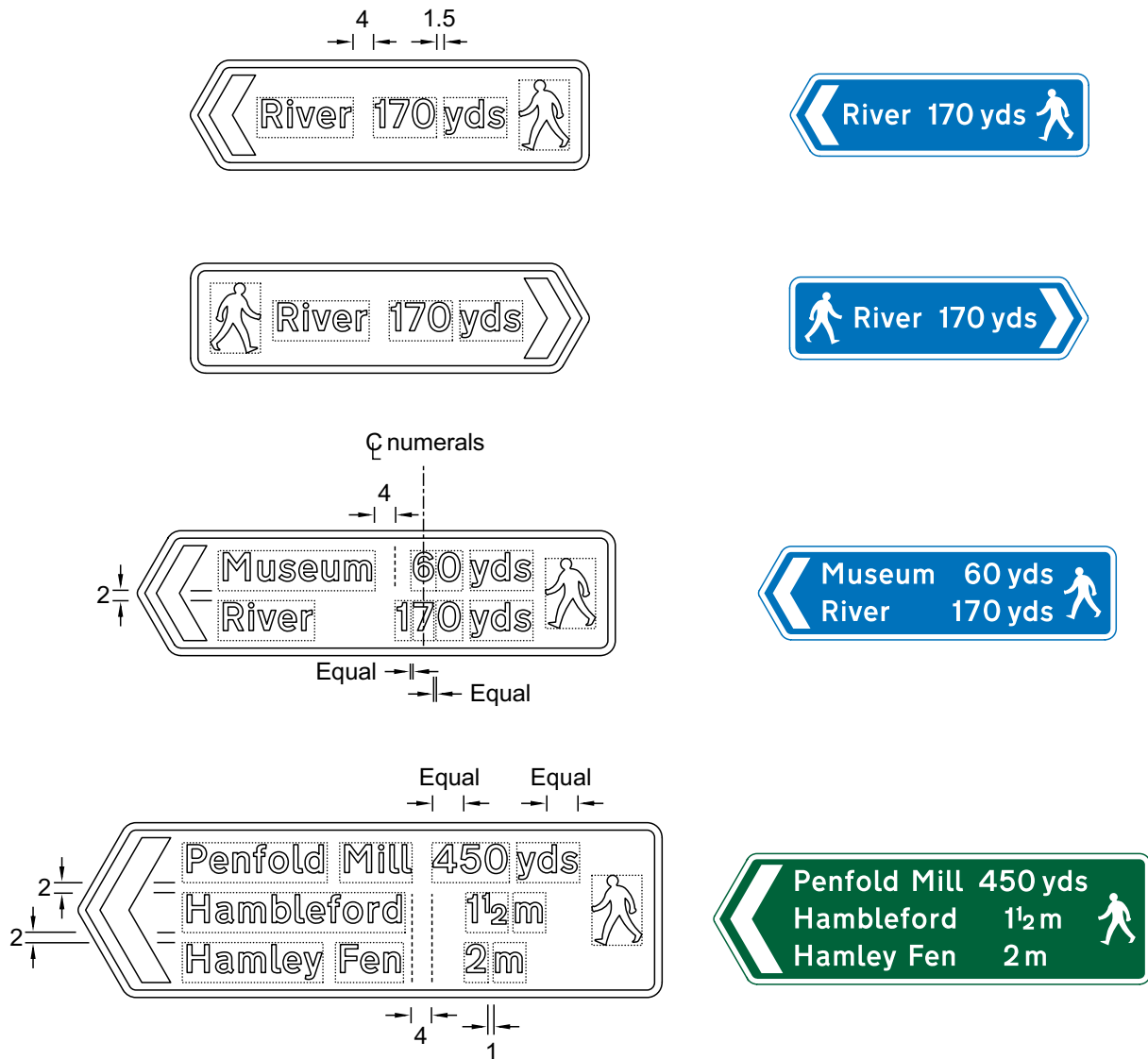


Figure 14-2

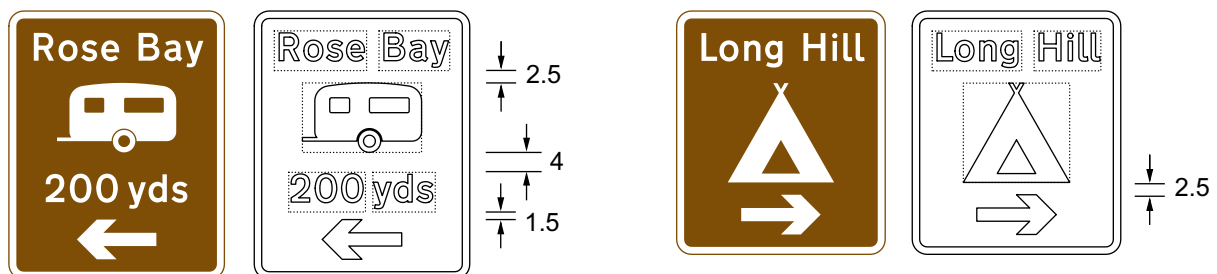
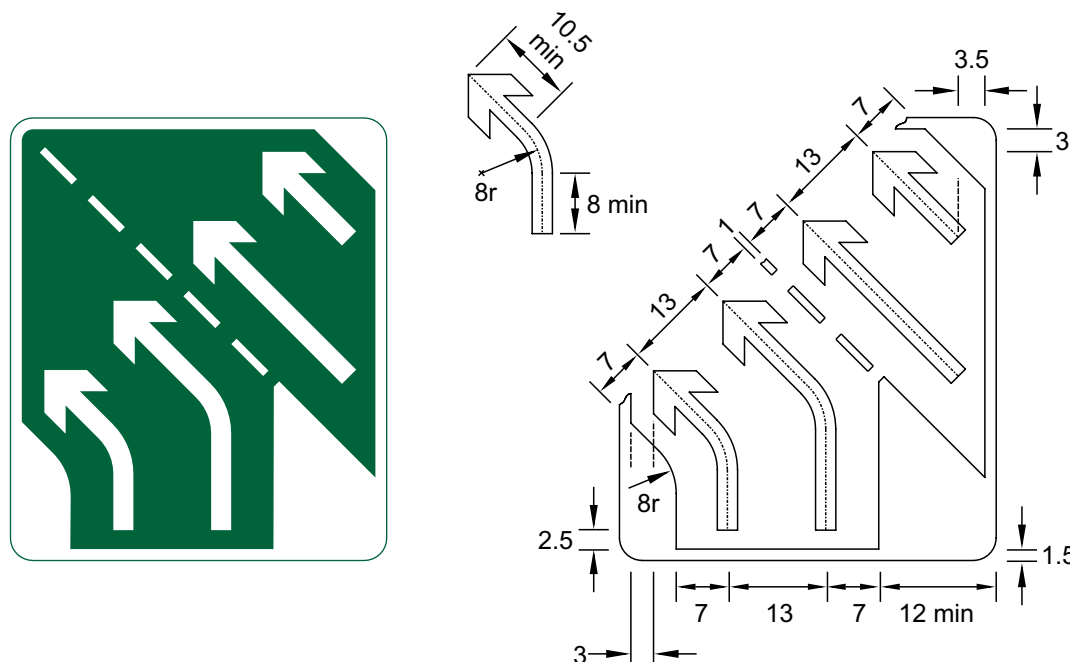


Figure 14-3

14.5 Stack-type signs with supplementary messages at reduced x-height

14.5.1. Where a supplementary message at 80% of the main x-height is used on a stack-type sign, the vertical position of the legend tiles relative to the arrow is determined as shown in [Figure 14-5](#). It should be noted that the design takes account of the rules described in [3.10.1](#) and illustrated in [Figure 3-26](#). The design rules illustrated in [Figure 3-12](#) do not apply in this case.



All dimensions are in stroke widths
based on the main x-height

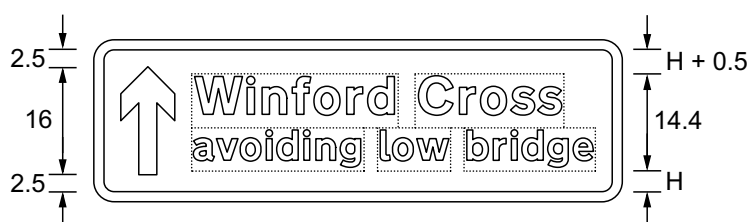


Figure 14-5

14.6 U-turn arrow on a stack-type sign

14.6.1. Figure 5-33 illustrates the design of a map-type sign that includes a destination reached by making a U-turn at a roundabout. This type of sign would generally be used on a dual carriageway where there are no gaps in the central reservation at side road junctions. An alternative to a map-type sign is a stack-type sign with the U-turn arrow prescribed by S12-5-2, the design of which is shown in **Figure 14-6**. It should be noted that the arrow is always placed to the right of the legend. The gap between the legend tiles and the arrow is increased from the standard value of 2.5 sw to 4 sw. This is because the tiles are adjacent to the arrow shaft and not the arrow head. The gap of 4 sw also applies when a symbol, panel or patch is adjacent to

the arrow. This sign should indicate the U-turn only. Other directions at the junction should be shown on a separate advance direction sign.

14.6.2. Any symbol that has a directional element to its design should face to the right when used with a U-turn arrow. The aircraft symbol, which generally points in the same direction as an arrow, should be horizontal and must not point downwards. Symbols should normally be placed on the left hand side of the sign, except for the aircraft symbol, which is generally placed to the right of the airport name. A symbol may also be centred beneath the associated destination where this results in a more efficient layout, taking account of the height of the U-turn arrow. An example is shown in **Figure 14-6**.

14.6.3. Triangular warning and regulatory roundel symbols may be included on U-turn signs and should follow the same design rules as for other stack-type signs. However, the horizontal gap between the triangle or roundel and the arrow should be increased from 2.5 sw to 4 sw. A U-turn sign may include an alternative route message and should be designed in accordance with **Figure 14-5**.

14.6.4. As a U-turn sign generally indicates the same road that it is located on, panels indicating a different status of route are not normally used (but see **14.6.5**). However, the sign may include a bracketed route number patch as shown in **Figure 14-6**.

14.6.5. There may be certain junction layouts where a U-turn at a roundabout does not lead back to the same route (e.g. an urban one-way system, or a grade separated junction). A map-type sign may be more appropriate in this situation, but a separate U-turn sign could be provided if necessary. If the status of the route changes, a panel should be used.

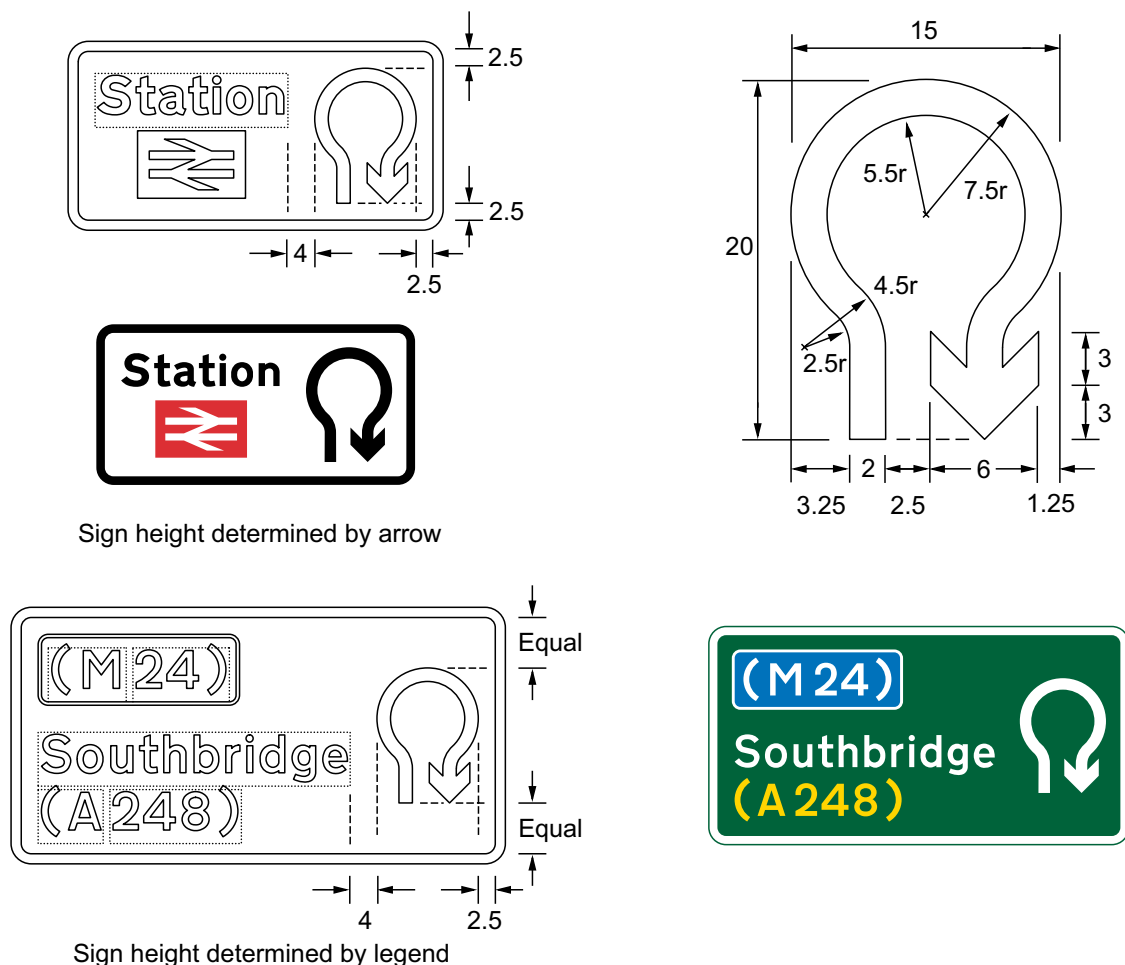


Figure 14-6

14.7 Size and spacing of symbols

14.7.1. The sizes of symbols when used on directional informatory signs are specified in the various Parts in Schedule 12. On certain signs, more than one symbol may be placed on one line. Alternatively, two symbols, one above the other, may be associated with the same legend. In both these circumstances, the standard sizes for the symbols may produce an out of balance pictorial representation. A good example is the car and lorry symbols, where the car symbol is actually the larger of the two. The Regulations permit the size of the vehicle symbols prescribed by S12-11-27 to 32 to be varied in size when two or more of those symbols are used in combination with each other. The general rule is that where two symbols appear out of balance, one should be increased in size and the other reduced. An example is shown in **Figure 14-7**. To leave one symbol the same size could result in the other symbol (which has either been increased or reduced in size) being out of balance with other elements of the sign and inappropriate for the size of x-height being used.

14.7.2. Where two or more symbols, other than those referred to in **14.7.3**, are placed on the same line are shown (see **Figure 14-8**), the symbol sizes shown must not be changed. This applies also where only one of the symbols referred to in **14.7.3** is used in combination with another symbol (e.g. the cycle and the pedestrian symbols). Tourist destination and leisure facility symbols have fixed sizes which must not be changed.

14.7.3. The horizontal gap between symbols on the same line is generally 2.5 sw. However, the appearance of the sign can sometimes be improved by increasing this value to 4 sw. There are no fixed rules regarding symbol spacing, except those shown on the working drawings. Where the spacing of particular symbols is not covered by the drawings, designers should use their discretion in deciding whether the horizontal gap should be increased to 4 sw. The aim is to ensure that the symbols on the sign in question are clearly discernible as separate entities when viewed from a distance, and avoid a cluttered appearance.

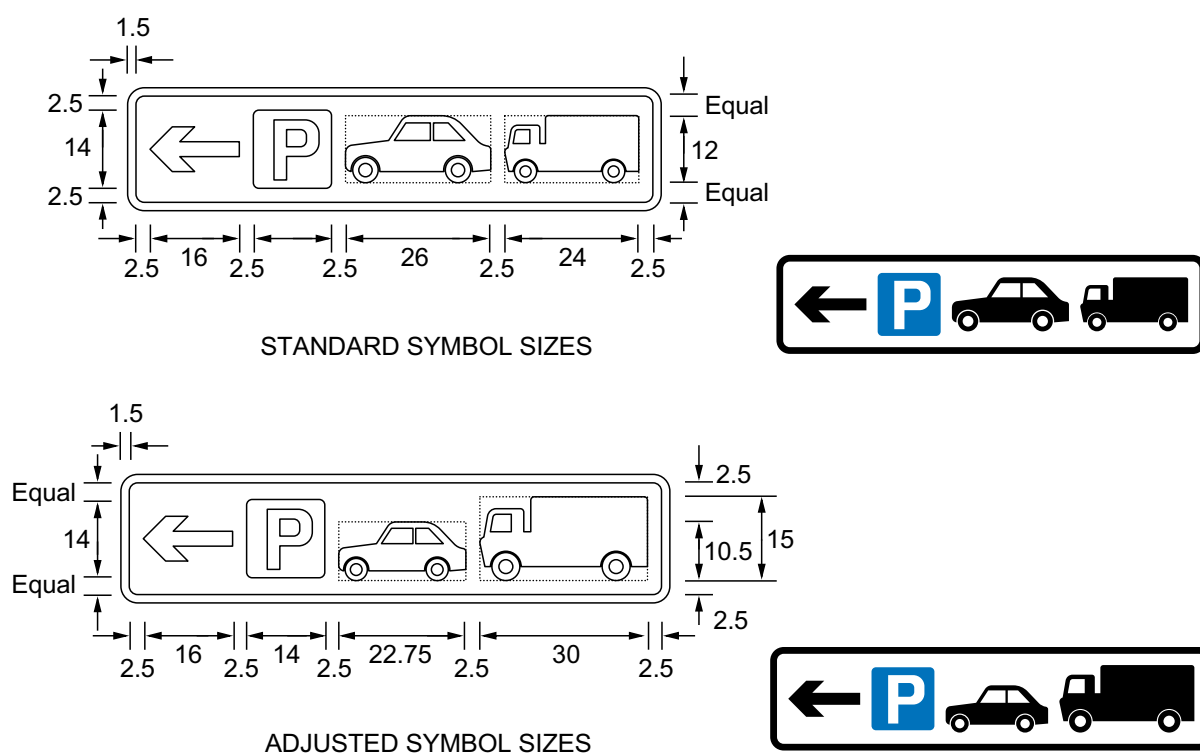


Figure 14-7



Figure 14-8

14.8 Journey times on cycle route signs

14.8.1. In order to encourage 'modal shift' over short distances, journey times may be shown on cycle route signs. Cycle signs can show distance or times – but not both as the sign becomes confusing. Some examples are shown in [Figure 14-9](#).

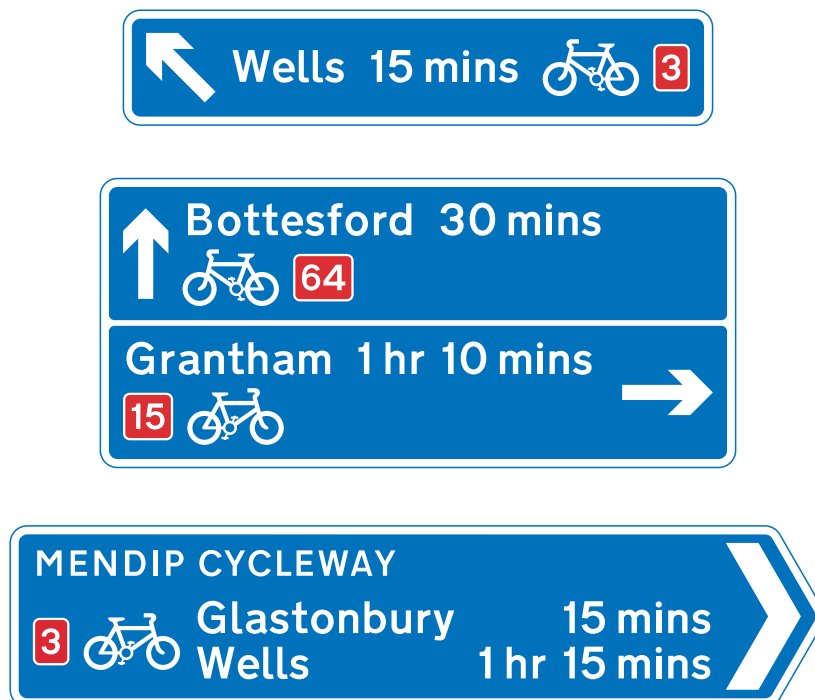


Figure 14-9

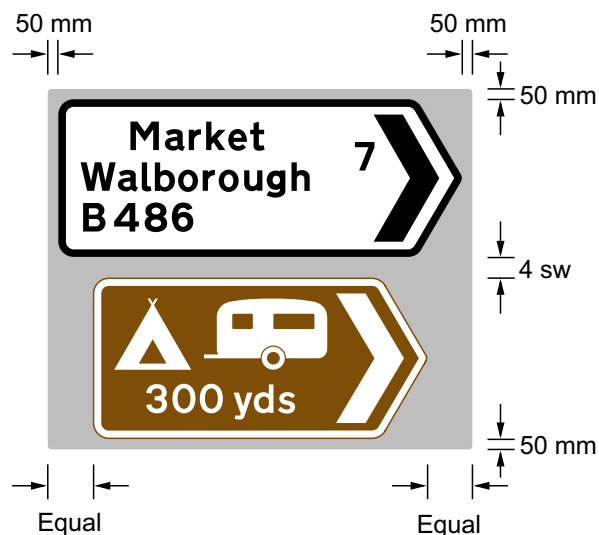
14.9 Use of backing boards

14.9.1. To improve conspicuity against a complex or dark background, a sign may be mounted on either a grey or a yellow backing board (direction 9(6)). This board must not be provided with an additional black border. White backing boards are not permitted. No legend may be applied directly to a backing board. Under no circumstances must striped or chequered backing boards be used. Where a yellow board is used, this should not have the appearance of an additional sign border. The minimum width of any yellow area on a single rectangular sign should therefore be 6 sw. In the case of the chevron sign shown in diagram 515 (S2-6-3), the width of the yellow area should not be less than half the horizontal width of the white chevron. Triangular yellow borders and circular backing boards producing a bullseye effect are not permitted (direction 9(8)).

14.9.2. Yellow backing boards, particularly if they use fluorescent material, can be very effective in drawing attention to signs mounted in deep shadow, for example below overhanging trees.

14.9.3. There are, however, disadvantages to the use of backing boards. A grey board can deprive triangular and circular signs of a primary recognition aid, their distinctive silhouettes. Yellow backing boards can be environmentally intrusive, and their over-use could eventually devalue their attention-attracting benefits. A less garish way of increasing a sign's conspicuity may be simply to provide a standard sign of larger size. Not only will this be more noticeable than a smaller sign, but it will also improve legibility and hence reading distance, which a yellow backing board cannot.

14.9.4. Grey backing boards can be used to mount an assembly of signs. The minimum space between any sign and the edge of the backing board should be 50 mm. The minimum space between any two signs should be 4 sw, or 100 mm where the signs do not have worded legends (except supplementary plates, see [Figure 14-12](#)). Where there are more than two signs, the spaces between each of the signs should be equal. Signs of different lengths should be centred horizontally on the backing board. Two flag-type signs pointing in opposite directions should normally be mounted side by side, but where site constraints require that one sign should be mounted above the other, the assembly may look more balanced if the shorter sign is positioned slightly off-centre (see [Figure 14-10](#)). The various elements of the signs shown in [Figure 14-11](#) may have the borders touching, but not overlapping. Directional signs should not be mounted on yellow backing boards. This is needlessly visually intrusive, and if increased conspicuity is necessary, this is more usefully achieved by using a larger x-height for the sign.



Dimensions shown are minimum values

Figure 14-10

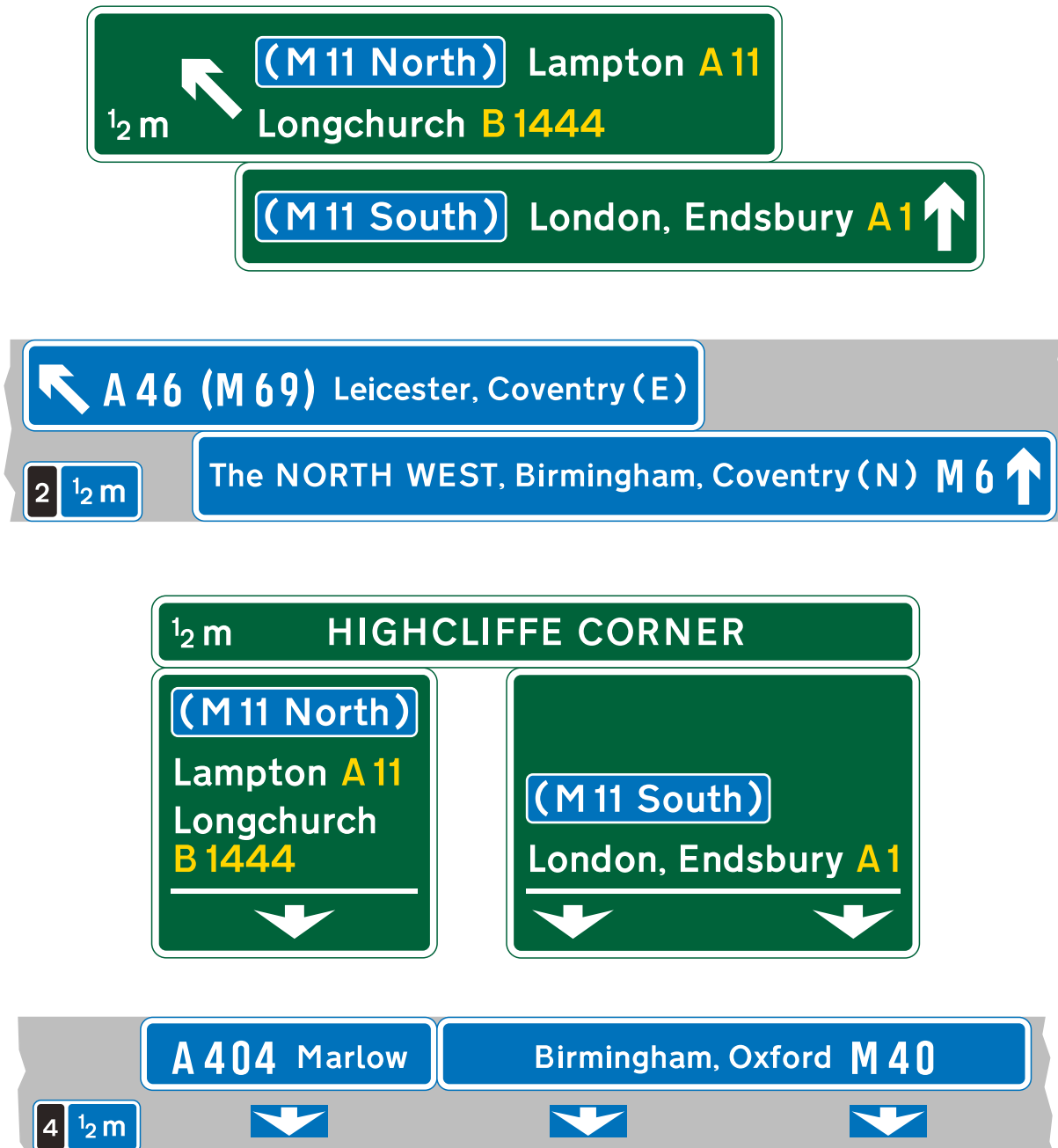


Figure 14-11

14.9.5. The minimum recommended dimensions for mounting triangular signs and roundels on grey or yellow backing boards are shown in [Figure 14-12](#). Where the supplementary plate is wider than the sign, the space between the vertical edge of the plate and the edge of the backing board should match the space below the plate, i.e. $0.075 H$ or $0.075 D$ as appropriate. Where the width of the plate is equal to or greater than the minimum width of backing board required for the sign, the backing board can be flush with the plate at the sides and bottom. Where triangular and roundel signs are mounted one above the other, the vertical space between them should equal one sixth of the height or diameter of the larger sign.

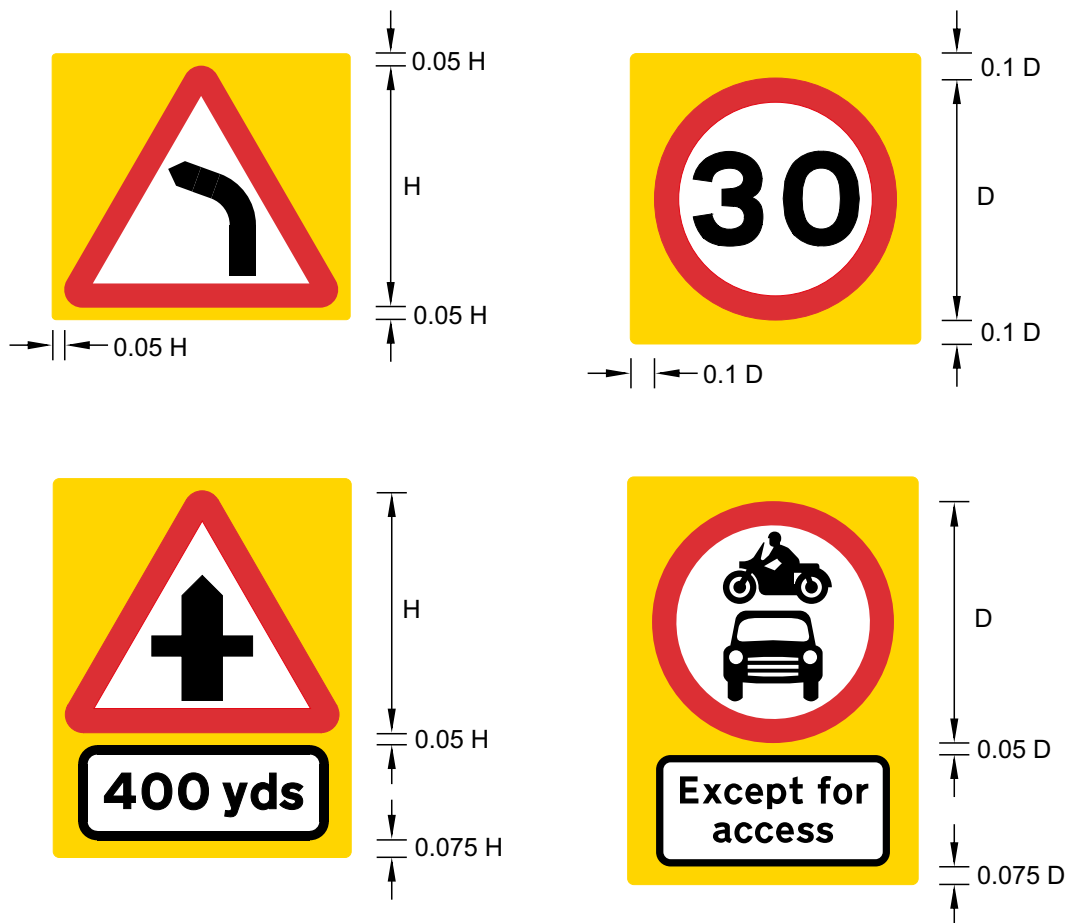


Figure 14-12

14.9.6. Where a speed limit roundel to diagram 670 (S10-2-1) or 671 (S10-2-2) is mounted on a grey or yellow backing board with the speed camera repeater sign to diagram 878 (S11-2-63) as shown in [Figure 14-13](#), special design rules apply. These rules are explained in Chapter 3.



Figure 14-13

15.1 General

15.1.1. Gaelic is a language which is indigenous to Scotland and a recognised aspect of Scotland's heritage and current cultural life. The use of Gaelic is not compulsory on all signs and it is for Councils, as local roads authorities, to determine their own policies on the use of Gaelic destinations on signs on local roads. However, where Gaelic legends are to be used, the guidance contained hereafter must be followed. An example of a Scottish Gaelic sign is shown in **Figure 15-1**.



Figure 15-1

15.2 Trunk road bilingual signing policy

15.2.1. The trunk road bilingual signing policy is consistent with the aims and objectives of the Scottish Government's Gaelic Language Plan – to enhance the status of Gaelic and encourage its use. Details of the Plan can be accessed at:

www.scotland.gov.uk/Publications/2010/07/06161418/0

15.3 Statutory provisions

15.3.1. A Scottish Gaelic alphabet is provided for use in Scotland only, on certain directional signs prescribed by Schedule 12. The appropriate provisions are regulation 5(16), S12-3-4, S12-8-5, S12-25-2 and S12-27-3.

15.3.2. Place names may also be shown in Scottish Gaelic on boundary signs prescribed by Schedule 11 together with the following phrases preceding the place name:

- "Welcome to"
- "County of"
- "Welcome to the County of", or similar phrase
- "City of"
- "Welcome to City of"

15.3.3. In certain circumstances, e.g. on motorway signs, the use of Gaelic will continue to require site-specific special sign authorisation from Scottish Ministers.

15.4 Gaelic forms and spelling

15.4.1. Gaelic forms and spellings of place-names can be problematic. Ainmean-Àite na h-Alba (AÀA) – Gaelic Place-Names of Scotland – is the national advisory partnership for Gaelic place-names in Scotland and should be consulted when Gaelic place-names are to be used on

traffic signs. The purpose of AAA is to determine authoritative forms of Gaelic place-names for maps, signs and general use. They draw on the expertise of their partner organisations, local knowledge and historical sources to agree authoritative forms of Gaelic place-names and apply consistent orthology of Gaelic in place-names. Further information on AAA can be found at:

www.gaelicplacenames.org

15.5 Design requirements

15.5.1. The following design guidance applies to bilingual traffic signs but it is recommended you contact Transport Scotland to ensure compliance.

- a) For primary route directional signs with dark green backgrounds and tourist signs with brown backgrounds, the Gaelic destination will be formed of yellow letters in the Transport Medium alphabet (S17-9), placed above the English destination which will be in white.
- b) For non-primary route directional signs with white backgrounds the Gaelic destination will be formed of dark green letters in the Transport Heavy alphabet (S17-10), placed above the English destination which will be in black.
- c) Where the Gaelic and English spellings of the destination are identical, the English can be omitted.
- d) Where there is no Gaelic form of a place-name, no Gaelic translation of the English form should be used on the sign.
- e) Where a capital letter in a Gaelic legend contains an accent and that legend occupies the top line of a sign, the normal 2.5 stroke width spacing between the top of the tile and the border will be increased to 3 stroke widths.
- f) In a bilingual pair of destinations (i.e. the same destination in Gaelic and English) the top edge of the English tile will normally butt against the lower edge of the Gaelic tile. This bilingual pair of destinations can be considered as a single destination block and can share an associated route number.
- g) Further matched bilingual pair blocks should normally be vertically separated from the block above by a gap of 2 stroke widths between the bottom of the upper tile and the top of the lower tile. Where any capital letter in the Gaelic legend contains an accent, the gap between tiles should be increased to 3 stroke widths.

15.5.2. Further guidance on the use of Scottish Gaelic on traffic signs is available from Transport Scotland.

16.1 Order of languages

16.1.1. All new and replacement traffic signs require the Welsh language to be placed above (or occasionally to the left of) the English equivalent.

16.2 Directional signs

16.2.1. Bilingual pairs, that is the Welsh and English equivalents of a single destination name and each referred to as a block, should appear with the tiles butting, one below the other, with each block of legend ranged from the left.

16.2.2. To reduce sign size it might be necessary to rearrange a long destination made up of several words (in either language) onto two or more lines. In this case the legends are centred for each language to form a larger block of legend. The two blocks of legend are then ranged left.

16.2.3. Each bilingual pair of names and each single language name should be separated vertically from any other pair of bilingual names or single language name by 4 sw.

16.2.4. When designing signs for new schemes, circumstances will arise when place names on a sign at a junction are monolingual. Under normal circumstances these destinations would be butted together but if there are only two names they could be taken to be a bilingual pair of names, especially if there are no mileages associated with them. To avoid confusion, consideration should be given to using the 4 sw space between the two destinations.

This principle should also be applied when designing signs as part of a sign replacement scheme. All signs in the immediate vicinity of the replacement scheme should be reviewed.

16.3 Other signs and plates

16.3.1. On informatory and regulatory signs and supplementary plates, the legends are all centred and the two languages are separated vertically by 3 sw. Other spacing requirements in some cases differ from those shown in this chapter, and are shown on the working drawings (see [16.6](#)).

16.4 Letter height

16.4.1. The x-height of the sign should be relevant to the speed of traffic approaching the sign as set out in Appendices D and E. It should not be reduced to accommodate both languages.

16.5 Authorisation of bilingual signs

16.5.1. A limited number of bilingual traffic signs are prescribed by the Traffic Signs (Welsh and English Language Provisions) Regulations and General Directions 1985. These signs are mainly supplementary plates for warning signs, some regulatory signs and a few road works signs.

16.5.2. Any bilingual sign not covered by these Regulations must be authorised by the Welsh Government. This includes all direction signs and road markings.

16.6 Working drawings

16.6.1. Working drawings of bilingual signs for Wales can be downloaded from:

www.traffic-wales.com/traffic_signs

16.6.2. More information regarding sign design and authorisation is available from the Welsh Government.

Table A1 (Schedule 18 Part 3)

Description	Actual Distance		
	≥ 3 miles	≥ ½ mile & < 3 miles	< ½ mile
Supplementary plates to warning and regulatory signs	Whole numbers to the nearest mile followed by "miles" Used mainly when preceded by "For" or "for"	Distance to the nearest ¼ mile (using ¼, ½, ¾ as appropriate) followed by "miles" or "mile"	Distance to the nearest 10 yards followed by "yards" or "yds" Distance to the nearest ¼ mile (using "¼ mile" or "½ mile" as appropriate)
TSRGD Schedules 8 and 11 where a distance may be added or varied	Whole numbers to the nearest mile followed by "miles"	Distance to the nearest ¼ mile (using ¼, ½, ¾ as appropriate) followed by "miles" or "mile"	Distance to the nearest 10 yards followed by "yards" or "yds" Distance to the nearest ¼ mile (using "¼ mile" or "½ mile" as appropriate)
Distance to junction on map-type, dedicated lane and overhead advance direction signs, and to an exit leading to services	Not applicable	"2", "1¾", "1⅔", "1½", "1⅓", "1¼", "1", "¾", "⅔" or "½" followed by "m"	"⅓ m"
Distance alongside a destination (other than advance direction signs on motorways)	Whole numbers to the nearest mile Note: On a pedestrian sign "m" follows the distance where the sign also includes a distance in yards	Distance to the nearest ¼ mile (using ¼, ½, ¾ as appropriate) Note: On a pedestrian sign "m" follows the distance where the sign also includes a distance in yards	Distance to the nearest ¼ mile (using ¼ or ½ as appropriate) Additionally on pedestrian signs: Distance to the nearest 10 yards followed by "yards" or "yds"; where "¼" or "½" is used on a sign that also includes a distance in yards it is followed by "m"
Distance below a destination (other than advance direction signs on motorways)	Whole numbers to the nearest mile followed by "miles"	Distance to the nearest ¼ mile (using ¼, ½, ¾ as appropriate) followed by "miles" or "mile"	Distance to the nearest 10 yards followed by "yards" or "yds" Distance to the nearest ¼ mile (using "¼ mile" or "½ mile" as appropriate)
Local facility, car park, leisure facility and tourist destination signs	Whole numbers to the nearest mile followed by "miles" Note: "m" may be used where the sign also includes a distance in yards	Distance to the nearest ¼ mile (using ¼, ½, ¾ as appropriate) followed by "miles" or "mile" Note: "m" may be used where the sign also includes a distance in yards	Distance to the nearest 10 yards followed by "yards" or "yds" Distance to the nearest ¼ mile (using "¼ mile" or "½ mile" as appropriate)

APPENDIX B TSRGD 2016 SCHEDULE 12 (DIRECTIONAL SIGNS) STRUCTURE EXPLAINED

Table B1

Part	Description
1	Sets out the provisions applying to Parts 2 to 20.
2	Prescribes the background colour and the range of x-heights for each type of sign and includes both rectangular and flag-type signs. Rectangular signs may be combined to create the overhead signs comprising more than one sign (e.g. diagram 2020 prescribed in TSRGD 2002). The sign with a white background showing only parking place destinations may be placed on a motorway. In this case, the main use of this sign would be to indicate Park and Ride facilities, but there might be other uses such as indicating car parks reached from an urban motorway. The smallest size of primary route sign has been reduced so that it is the same as that for the non-primary route sign. The x-height is determined by the nature of the road and speed of traffic, not the status of the route. Permitted variants allow cycle route signs to be brown when indicating tourist destinations and that pedestrian signs may be of any colour. For pedestrian signs, the border and chevron may be varied. The pointed end of the pedestrian flag-type sign may be of any shape.
3	Prescribes the legends which may be included on directional signs in Part 2. Many of these were previously prescribed by Schedule 16 or item 4 of the table below the diagrams in TSRGD 2002. Most of these are no longer associated with specific signs. The flexibility of this Part permits, where appropriate:- <ul style="list-style-type: none"> • The phrase “historic market town” or its variant, at 80% x-height, to be added to any place name on a tourist destination sign or panel. • The distance to a junction ahead to be added to any sign as appropriate. • Junction numbers to be added to primary and non-primary route signs.
4	Sets out the provisions applicable to Part 5.
5	Prescribes arrows and lane marking symbols that may be incorporated into rectangular signs. This Part covers stack-type signs, dedicated lane signs and overhead signs. Verge mounted dedicated lane signs may now be used, where appropriate, for tourist destination, lorry route and MOD signs. Overhead signs may comprise upward pointing arrows for use where there is no lane drop, or downward pointing arrows to indicate specific lanes. These were previously prescribed in diagram 2020 and 2021 respectively in TSRGD 2002. Overhead signs with downward pointing arrows may be mounted one above the other, and overlap where a particular lane may be used to reach more than one route. There are new verge mounted signs for dedicated lanes where:- <ul style="list-style-type: none"> • a lane is used to reach more than one route. These are referred to as “shared lanes” and may be used on the approach to a junction or on a large roundabout or gyratory system where there are dedicated lanes. • separate traffic lanes diverge to the left and to the right. This layout might be used on an exit slip road or connecting road that leads to two separate routes. • a lane divides into two indicated by a “Y” arrow. This layout might be used on an exit slip road or connecting road that leads to two separate routes. It might also be used on the approach to an exit from a gyratory system.
6	Sets out the provisions applicable to Part 7.
7	Prescribes route symbols for map-type advance direction signs. The symbol which indicates a junction in the form of a crossroads may be varied to indicate the actual junction layout such as a staggered crossroads on a dual carriageway as shown in diagram 2008 in TSRGD 2002. There are special symbols for roundabouts, grade separated junctions, and “no through roads”. Map-type signs may now be used, where appropriate, for lorry route and MOD signs. Either 4sw or 2.5sw may be used for non-primary routes, whether or not the road has a route number (i.e. 4sw may now be used for local roads if it produces a more balanced design).
8	Sets out the provisions applicable to Part 9.

Part	Description
9	Prescribes panels previously prescribed in TSRGD 2002 Schedule 16 items 21 (motorway), 22 (primary route), 23 (non-primary route), 24 (tourist attraction), 25 (lorry route), 26 (MOD establishment), 27 (route for cyclists) and 35 (services). The lorry route panel may be varied to indicate a truckstop and used in a similar manner to the “services” panel. The character sizes are now prescribed in stroke widths rather than millimetres to ensure the overall sign has the correct proportions. The type of sign on which the panels may be incorporated are specified in column (4). All types of panel (as appropriate) may now be used on overhead signs. For example a tourist panel might be used where there is no space for a verge mounted tourist sign. The restriction on using panels on motorway signs (other than on slip roads and at the termination of the main carriageway) still applies.
10	Sets out the provisions applying to Parts 11 and 12.
11	Prescribes the various symbols, other than those for tourist destinations, which may be incorporated on the directional signs specified in column (4). The hospital “A&E” symbol is now permitted on motorway signs. Experience has shown that the Park and Ride symbol was too large, particularly when incorporated on signs other than those previously prescribed in TSRGD 2002 diagrams 2503 and 2504. The size of this symbol has now been reduced so that the “P” is the same size as that for the parking place symbol. New symbols that have been prescribed are the congestion charging zone symbol and the police station symbol. The electric vehicle recharging point symbol may be used in combination with a parking place symbol.
12	Prescribes the legends that may be used with the parking place symbols and includes the variant of the “P” symbol that indicates the total number of parking spaces.
13	Sets out the provisions applying to Parts 14 to 18.
14 to 18	Prescribe symbols for tourist and leisure destinations. These replicate Schedule 14 in TSRGD 2002. New symbols include previously “approved” symbols shown on the “AT” series of working drawings and a symbol indicating a sports centre in Wales. Symbols indicating tourist destinations in England now require the approval of VisitEngland. For this reason, leisure facilities that do not require this approval have been defined separately and this is indicated in the descriptions in column 2 of the tables where appropriate
19	Sets out the provisions applying to Part 20.
20	Prescribes warning and regulatory symbols that may be incorporated on directional signs. Included for the first time are “time” and “exception” supplementary plates. An exception plate, for example, could be used with a “no entry” sign to indicate a bus only route. Because the symbol size is now prescribed, a permitted variant ensures that two symbols side by side are the same height.
21	Sets out the provisions applying to Part 22.
22	Prescribes the background colour and the range of x-heights for each type of services sign and includes both rectangular and flag-type signs. Prescribed for the first time are signs for motorway rest areas and for truckstops on motorways and all-purpose roads. Truckstop signs have a black background with legend in white and, on all-purpose roads, replace the “lorries only” signs with a white background. A permitted variant of the rectangular motorway sign allows the legend “Services” or “Rest area” to be added to the direction sign on the nose of an exit slip road (previously diagrams 2910 and 2910.1 in TSRGD 2002).
23	Sets out the provisions applying to Part 24.
24	Prescribes the symbols that may be incorporated on advance signs for services. Service area and truckstop signs on motorways may now include corporate logos of franchisees operating on the site, in which case any panel showing the site operator’s name shall be incorporated within the main sign rather than placed on top of the sign.
25	Sets out the provisions applying to Part 26.
26	Prescribes complete services signs that cannot be produced using the sign elements in Parts 22 and 24. The sign indicating the availability of services on a motorway and previously prescribed by diagram 2917 in TSRGD 2002 has been retained. There is now a new version of this sign which replaces the service area operators’ names with geographical names. This new sign may also indicate truckstops, using the white lorry symbol. Part 26 also prescribes the local facilities signs previously prescribed by diagrams 2308.1 and 2309.1 in TSRGD 2002.
27	Sets out the provisions applying to Part 28.

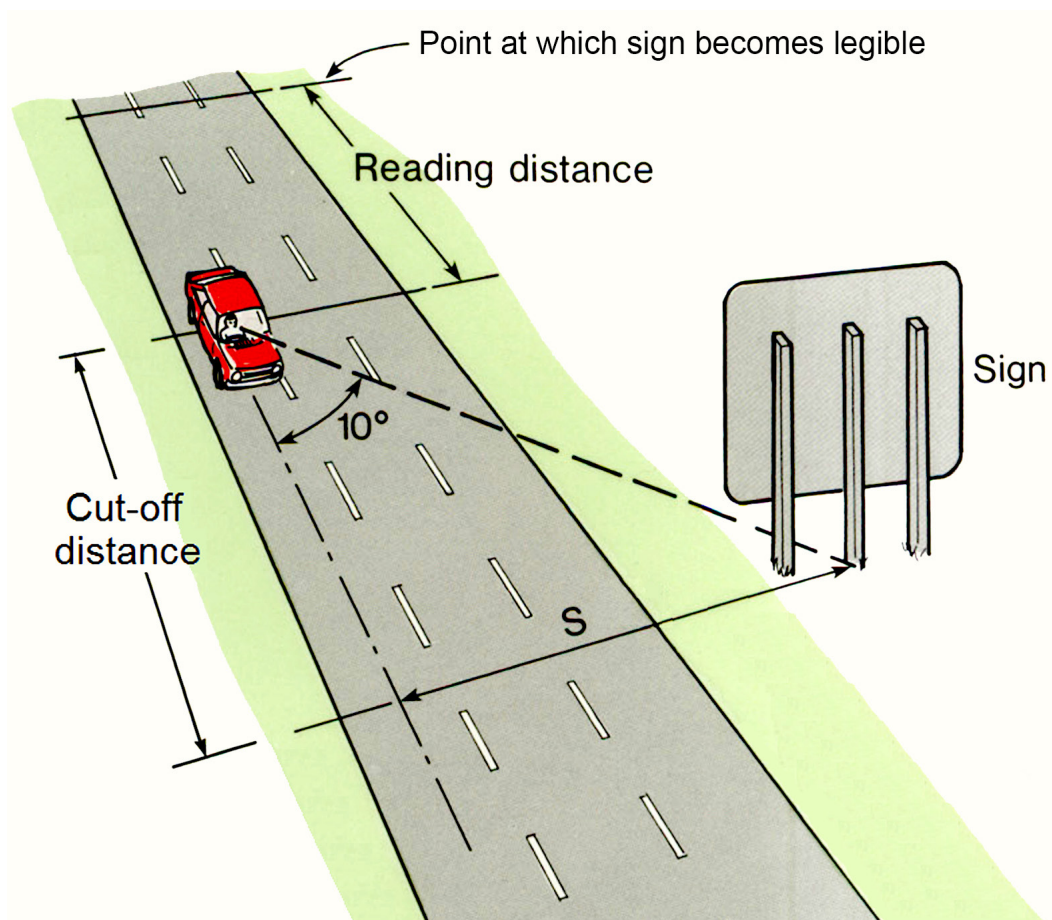
Part	Description
28	Prescribes complete signs that cannot be produced using any of the other Parts in the Schedule. These include new signs previously authorised for “tiger tail” junctions, where the left hand lane at a grade separated junction leads directly to the exit slip road and the adjacent lane may be used either to exit the junction or continue along the main line. There are versions of these signs for motorways and primary routes. Another new sign is a dedicated lane sign to indicate a road layout where a single lane divides into two separate lanes. This sign would be used on the approach to a junction or on a large roundabout or gyratory system in advance of the point where the number of lanes increase. The map-type sign previously prescribed as diagram 2601.2 in TSRGD 2002 may now be varied for use at any road/cycle route layout. For safety reasons it is recommended that this sign is not used to indicate a cycle crossing on an exit slip road close to the main carriageway of a high speed dual carriageway road. Other signs in Part 28 were previously prescribed in TSRGD 2002.
29	The Schedule 12 General Directions. Sets out sign specific directions.

The NORTH
The SOUTH
The WEST
The NORTH WEST
The NORTH EAST
The SOUTH WEST
The LAKES
The MIDLANDS
NORTH WALES
SOUTH WALES
SCOTLAND

Notes

1. Regional destinations shall always appear in the format shown above.
2. The compass point destination “The NORTH EAST” may be used as a substitute for “The NORTH” when the destination “The NORTH WEST” appears on the same sign and is associated with a different route leading from the junction. “The NORTH EAST” shall appear on subsequent route confirmatory signs until “The NORTH” appears on the advance direction signs in place of “The NORTH EAST”. The destination “The NORTH EAST” shall not be used in any other circumstances. In general, “The NORTH WEST” refers to that part of England to the west of the Pennines, and “The NORTH” to that part of England to the east of the Pennines.

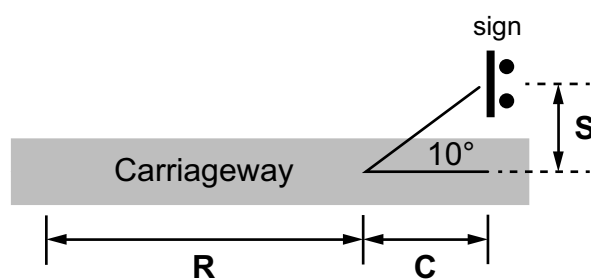
APPENDIX D DETERMINATION OF X-HEIGHT



S = Off-set Distance

C = Cut-off Distance

R = Reading Distance



Notes

Definitions

“C” is the distance from the sign where a driver is expected to stop reading the sign – i.e. the point where a driver would turn his/her head through 10° or more.

$$C = S \times \cotangent 10^\circ = S \times 5.7$$

“S” is the off-set distance from the centre of the driving lane to the centre of the sign. On dual carriageways this is measured from the centre of the right-hand-most lane.

“R” is the distance travelled when reading the sign.

$$R = \text{Reading Time} \times \text{Speed}$$

Reading time = 2 + (N/3) seconds (where N is the number of words or destinations on the sign.)

When N equals 6, reading time is 4 seconds. This is taken to be the maximum desirable time for reading the sign. It allows for scanning the sign twice to assimilate the information. It should be remembered that the sign may be obscured for part of the time by high vehicles and that the driver still needs to pay attention to the road ahead. Because 4 seconds is taken as the maximum time to be allowed for reading the sign, the number of destinations should not exceed six.

The x-height of the sign depends on the distance the driver is from the sign when the driver starts to read it. It is taken that, on average, at a distance of 60 metres the x-height should be 100 mm (it is proportional so that at a distance of 30 metres the x-height would need to be 50 mm)

Worked Example

Single carriageway 8 metres wide (lane width 4 metres)

85 percentile speed 50 mph (22 metres per second)

Sign 2 metres wide and 1 metre from edge of carriageway

$$S = 2 \text{ [centre of lane]} + 1 \text{ [verge width]} + 1 \text{ [half sign width]}$$

$$S = 4 \text{ metres}$$

$$C = S \times 5.7 = 4 \times 5.7 = 22.8 \text{ metres, say } 23 \text{ metres}$$

$$R = \text{reading time} \times \text{speed} = 4 \times 22 = 88 \text{ metres}$$

$$\text{Total distance from sign} = R + C = 88 + 23 = 111 \text{ metres}$$

$$\text{Required x-height} = (100/60) \times 111 = 185 \text{ mm}$$

This is site-specific and is more accurate than the table in [Appendix E](#) and in LTN 1/94 (see [1.1.8](#)).

APPENDIX E DIRECTIONAL SIGNS – TABLE OF X-HEIGHTS AND SITING DISTANCES

	1	2	Advance Direction Signs				Direction Signs		Route Confirmatory Signs	
			3	4	5	6	7	8	9	10
			x-height	Minimum clear visibility distance of sign	ONE SIGN Distance of sign from junction	TWO SIGNS Distance between 1st and 2nd sign	x-height	Minimum clear visibility distance of sign	x-height	Minimum clear visibility distance of sign
	85 percentile approach speeds of private cars	Examples of typical roads for which Column 1 may apply	mm	m	m	m	mm	m	mm	m
1	Up to 20 mph	Very narrow and urban roads	75 (60)	45 (35)	20	–	60 (50)	35 (30)	Not normally needed	
2	21 to 30 mph	Urban and rural roads of local character	100 (75)	60 (45)	45	45	75 (60)	45 (35)	75 (60)	45 (35)
3	31 to 40 mph	Urban and rural single 2-lane roads	125 (100)	75 (60)	90	50	100 (75)	60 (45)	100 (75)	60 (45)
4	41 to 50 mph	High standard rural single roads. Urban all-purpose dual carriageway roads	150 (125)	105	90-150	70	125 (100) (150)	75 (60) (105)	125 (100)	75 (60)
5	51 to 60 mph	Dual carriageway and wide single carriageway roads	200 (150)	135	150-225	100	150 (125) (200)	105 (75) (135)	150 (125)	105 (75)
6	61 to 70 mph	High standard all-purpose dual carriageway roads. Motorways with a speed limit less than 70 mph	250 (200)	180	225-300 See also Note 1	100	200 (150) (250)	135 (105) (180)	200 (150) (250)	135 (105) (180)
7	70 mph speed limit	Motorways and all-purpose grade separated dual carriageway roads	300 (250) (400)	180 (180) (240)	See Note 1	See Note 1	300 (250) (400)	180 (180) (240)	300 (250) (400)	180 (180) (240)

Notes

A more accurate method for determining the correct x-height, which takes account of the complexity of the sign is described in Appendix D above.

1. For grade separated junctions two or three advance direction signs are provided. These are located at the start of the diverging lane, 1/2 (1/3) mile from the junction and additionally for motorways and some all-purpose roads 1 (2/3) mile from the junction. Where two signs are required at each of these locations (e.g. the second sign may show tourist attractions) the distance between the two signs shall be in the range 100-400 metres. The first sign at each location shall be sited at the standard distance from the junction. A second sign shall not normally be provided at the start of the diverging lane.

2. In columns 3, 7 and 9, the smaller x-heights shown in brackets are the minimum letter sizes to be used where site space is limited or there are special amenity considerations. As x-heights

are variable, intermediate sizes, generally to the nearest 5mm, may be used. The aim should be to provide the largest x-height possible for a particular site. Where an intermediate x-height is used the minimum clear visibility distance may be interpolated if necessary (see note 3). Where two advance direction signs are provided they should normally be in the same x-height.

3. In columns 4, 8 and 10, the clear visibility distances indicated are minimum values. Greater distances should be provided wherever possible.

4. In columns 7 and 8 for categories 4 to 6 the larger bracketed sizes are for direction signs located on the noses of diverging lanes.

5. In category 7, the larger bracketed sizes apply to post mounted signs on motorways with four or more lanes per carriageway.

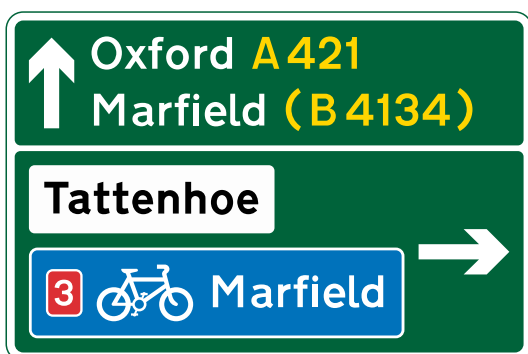
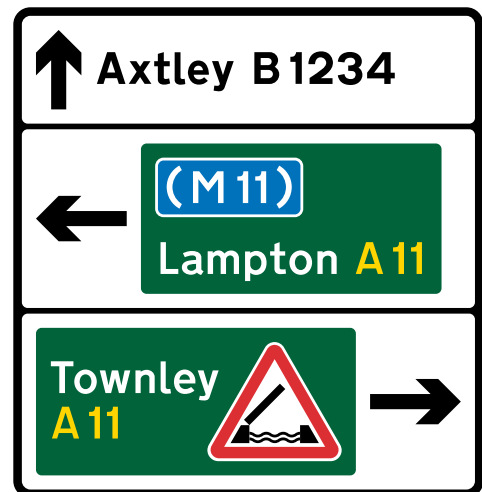
6. The dimensions in this table apply to all types of legend.

7. In columns 5 and 6 the distances shown are for guidance only and are not to be taken as being precise. In certain circumstances where one or more signs are provided it may be appropriate to increase the distances given; e.g. on an urban road where the advance direction sign shows destinations associated with dedicated lanes that commence well before the junction. Where two signs are provided, the second sign should be sited in accordance with column 5.

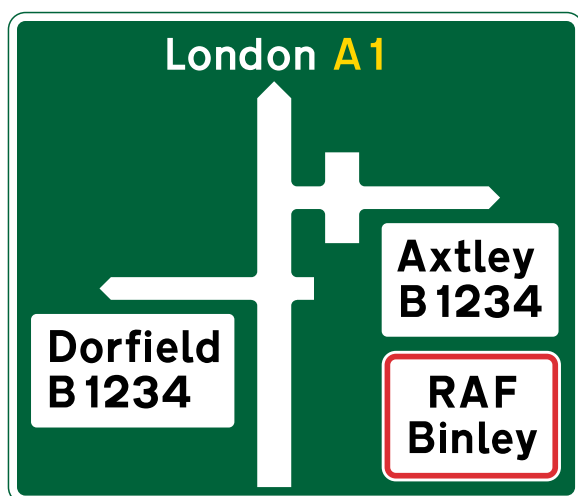
8. Where two junctions are closer together than the siting distance plus visibility distance they should generally be signed as one junction.

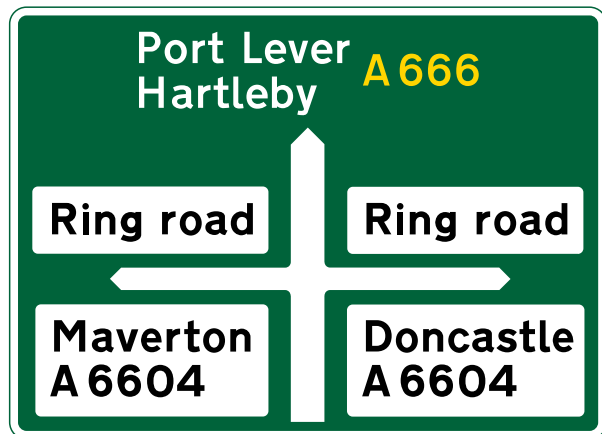
APPENDIX F EXAMPLES OF COMPLETE DIRECTIONAL SIGNS

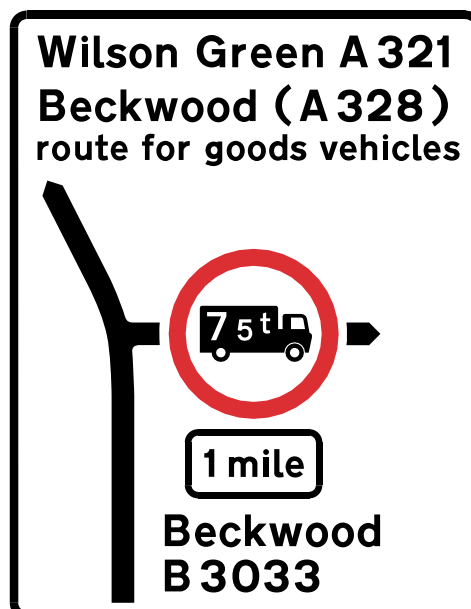
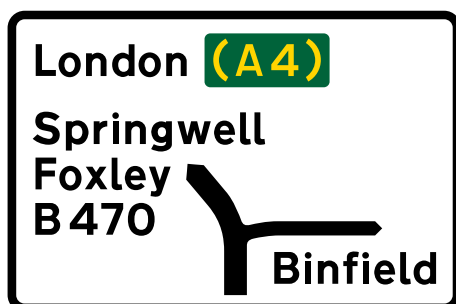
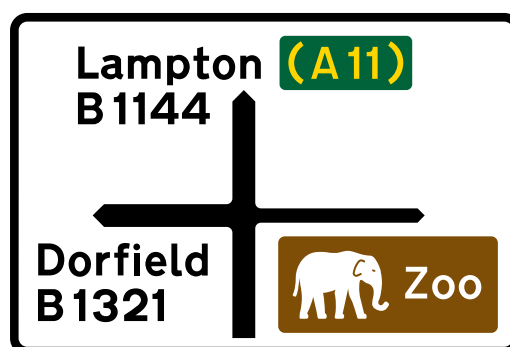
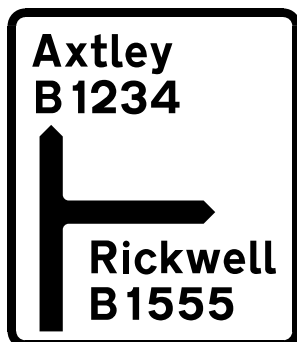
Stack-Type Advance Direction Signs

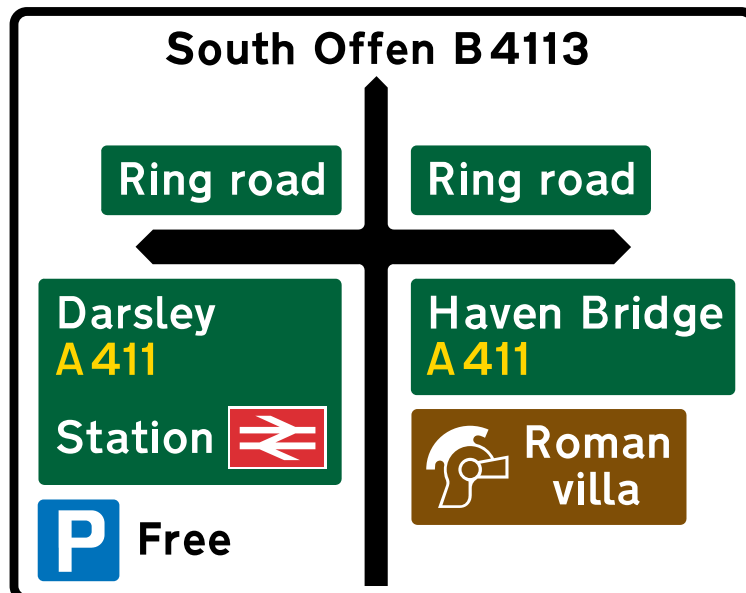
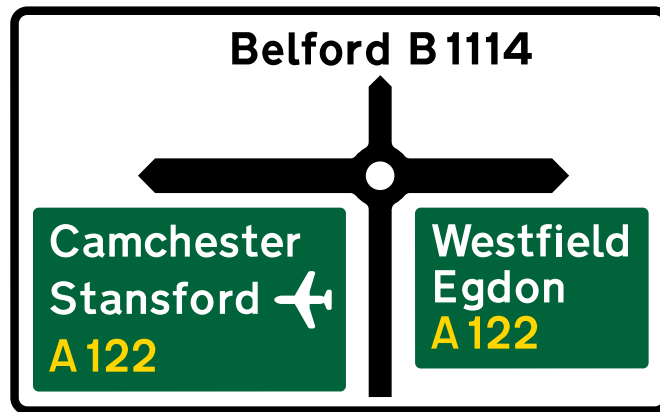


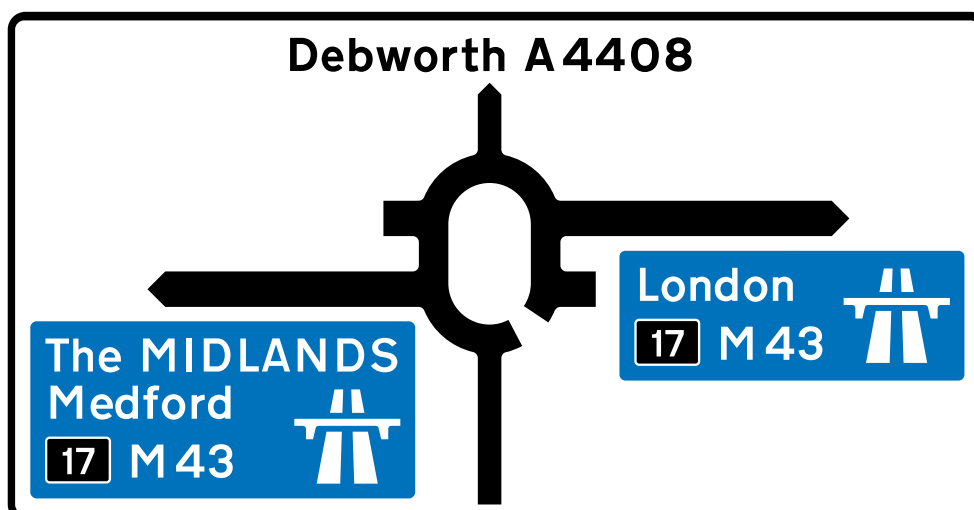
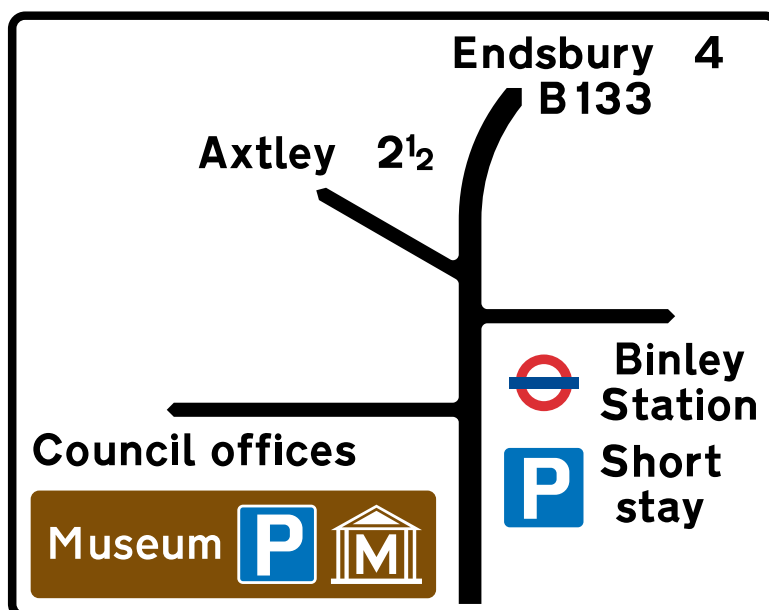
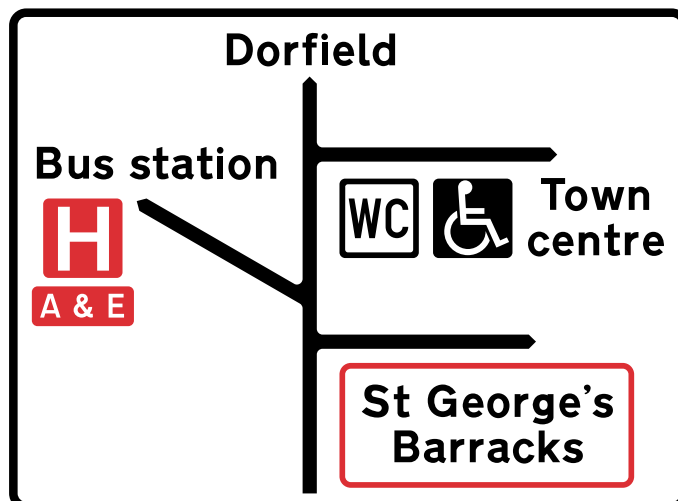
Map-Type Advance Direction Signs

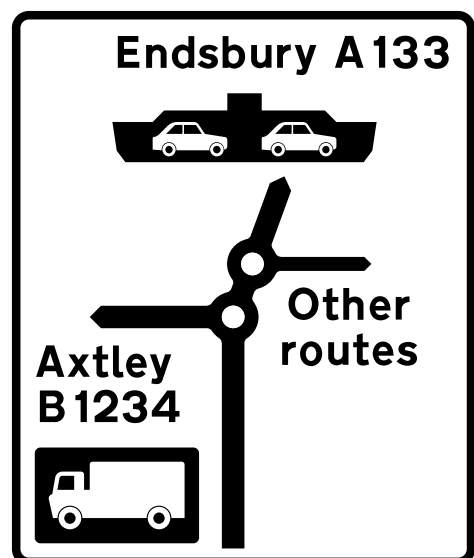
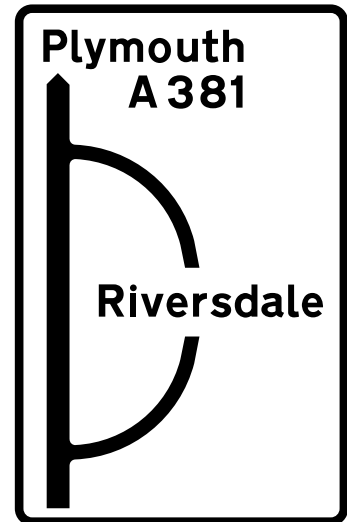
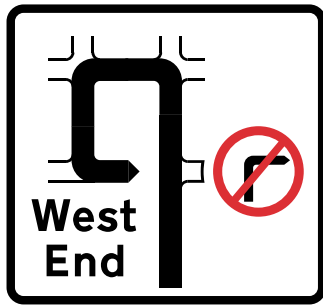




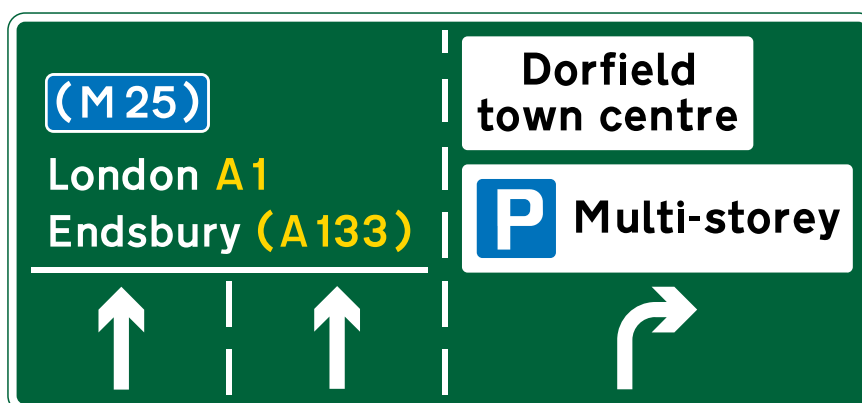
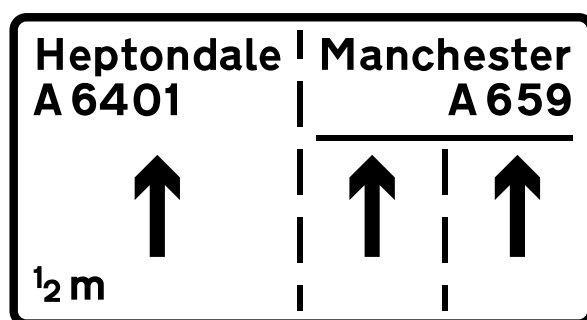
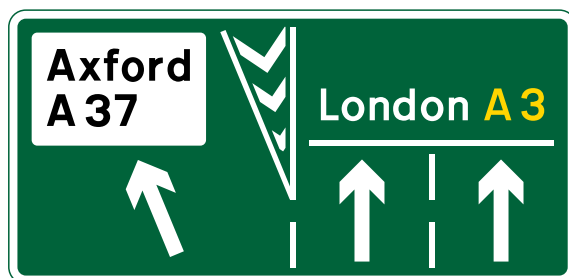
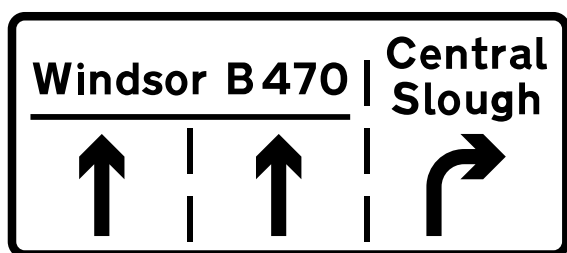




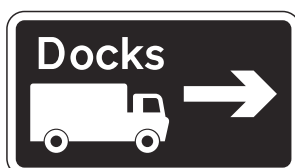
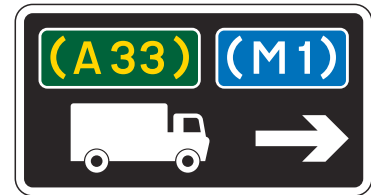
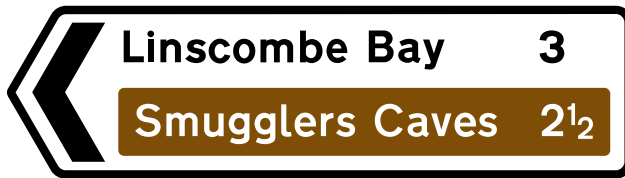




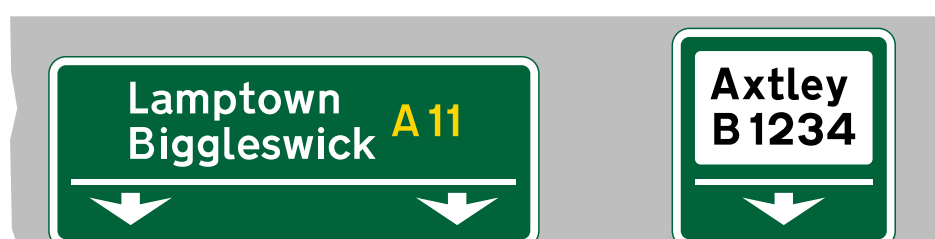
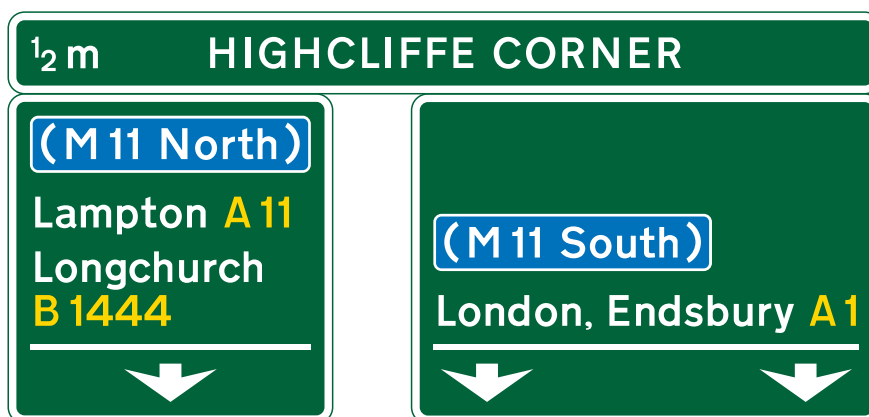
Dedicated Lane Advance Direction Signs



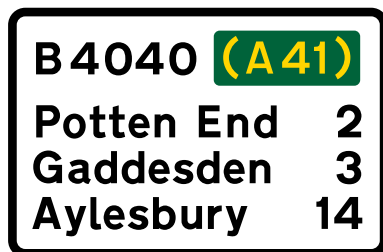
Direction Signs



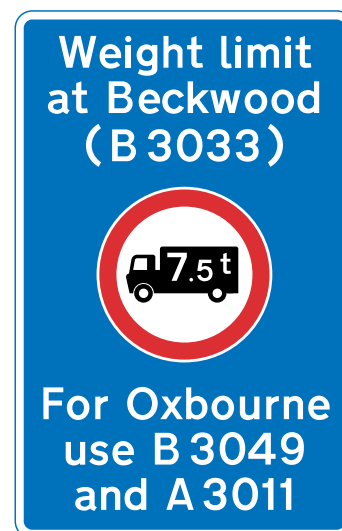
Gantry Mounted Signs on All-Purpose Roads



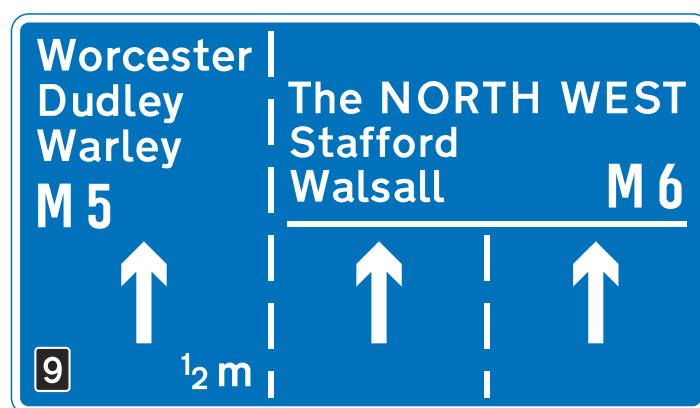
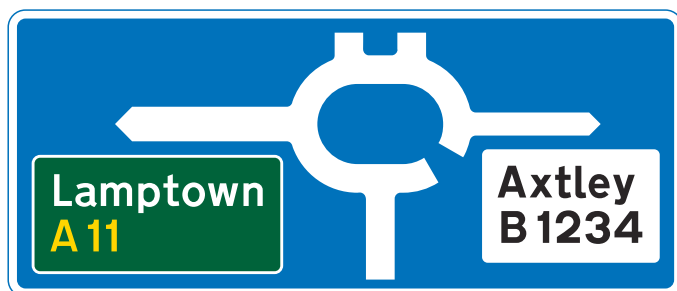
Route Confirmatory Signs on All-Purpose Roads



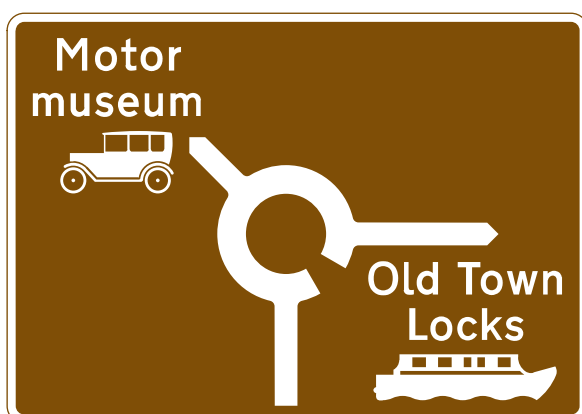
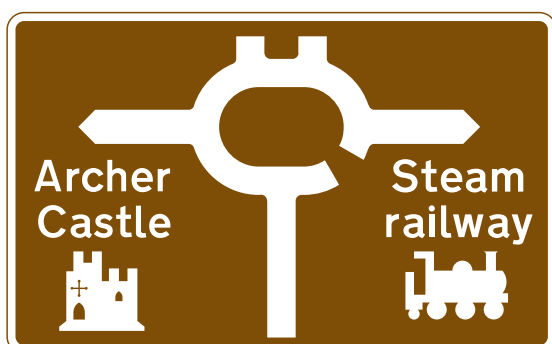
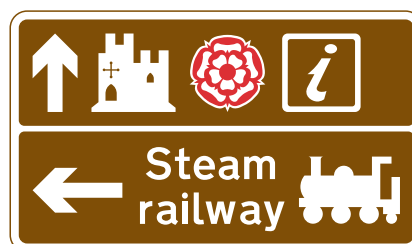
Directional Informatory Signs – Miscellaneous



Motorway Signing



Brown tourist and leisure facility signing



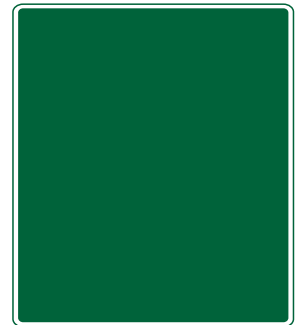
The following example illustrates how TSRGD works and how to ensure that a proposed sign is prescribed.

OBJECTIVE

Produce a sign with staggered junctions ahead between a primary route leading to a car ferry, a primary route which is the recommended route for goods vehicles to take to the docks, a non-primary route and a road to which entry is prohibited, in the village, town or suburb whose name is indicated at the top of the sign.

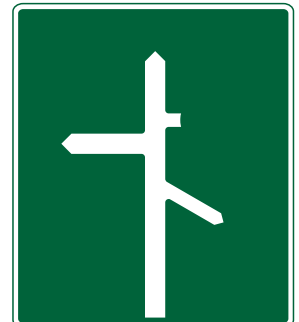
STEP 1

- Open a copy of TSRGD 2016.
- Go to S12-1 and S12-2. Blank canvas.
- Select Item 2 (primary route) and choose your x-height.



STEP 2

- Go to S12-7.
- Add a route symbol. This is a variant of S12-7-1 (i.e. “Vary shape, colour and route arm widths”).
- The stub with the curved end (to accommodate the “no entry” symbol) is a permitted variant of S12-7-6.



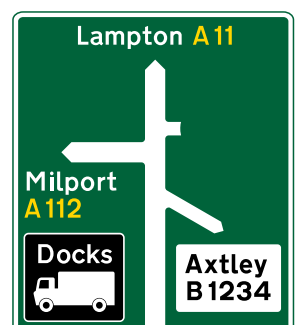
STEP 3

- Go to S12-3 to add primary route destinations.
- The main Regulations and Schedule 17 specify the form and colour of the letters. The colour of route numbers is specified in S12-3.



STEP 4

- Go to S12-9.
- White non-primary route panel is S12-9-3 varied as appropriate.
- Lorry route panel is S12-9-5 varied as appropriate.



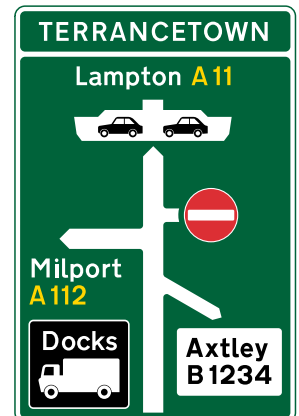
STEP 5

- Go to S12-11 and S12-20. Add symbols.
- Ferry symbol is S12-11-11 varied as appropriate.
- “No entry” symbol is S12-20-21.



STEP 6

- Go to S12-3-7.
- Add junction name / place name.



A & E symbol *see* hospital

A road *see* primary route

abbreviations 1.4.2; Fig 2-2; **2.4**; 12.1.3

 dates 2.3.2; 12.4.2; Fig 12-3

 place names 2.4.1; Fig 2-3; 6.4.1; 9.1.4; 11.3.4; 11.4.7; Fig 11-13

 measurements 2.3.2; 14.2.3

 time periods 12.3.1; Fig 12-2; 12.8.1

ADS *see* advance direction signs

advance direction signs 3.1.1; 3.1.2; Fig 3-1; Fig 3-2; Fig 3-7; 3.2.3–3.2.8; 3.13.1; 4.1; 5.1; 6.1; 11.1.3; 11.4.8; App A; App C; App E; App F; *see also* direction signs; flag-type direction signs; map-type direction signs; stack-type direction signs; route confirmatory signs

 arrows 4.2.4; Fig 4-6; Fig 4-7

 borders 3.2.4

 by-passes 5.21.1; Fig 5-47; Fig 5-48

 dedicated lane 3.1.2; Fig 3-1; 6.1; 6.2; App F

 distances 3.1.4; 3.9.5; 5.9.10; 5.9.11; 5.9.12; Fig 5-11; 11.4.5

 junctions 3.11.1; Fig 3-27; 4.1.1; 10.1.4; 10.3.5; 10.3.6

 lane diverge 6.1.2; Fig 6-4

 lane drop 3.1.2; Fig 3-2; 6.1.2; Fig 6-2; Fig 6-3

 lane gain 6.4; Fig 6-10

 motorway 10.1.1; 10.3.1; Fig 10-6; 10.3.5; 11.4.5

 overhead 3.1.2; 9.1.7

 regulatory roundels 6.2; 7.2.3; Fig 4-12; Fig 4-15; 11.4.6

 roundabouts 5.10.3; Fig 5-16; 5.14.3; 5.14.4; 10.2.4

 shared lane 6.3; Fig 6-9; 6.4.2; Fig 6-11

 symbols 6.2; 10.3.1; 11.4.6; Fig 11-2

 U-turn 14.6.1

aircraft symbol 3.7.8; 4.2.6; 4.2.7; Fig 4-8; 5.15.1; 5.15.4; 6.1.11; 7.1.6; 8.1.3; 9.1.6; 10.3.11; 14.6.2

airport 3.7.8; 4.2.6; 5.15.1; 6.1.11; 7.1.6; 8.1.3; 14.6.2

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