

Cycle Network Signing

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About Sustrans

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1. Signing of cycle networks

1.1. Introduction

This information has been prepared to provide assistance for people involved with signing cycle and shared use routes and links within a cycle network. In particular, it offers guidance on

- The recommended standard of signs
- The signs required and where they should be located
- The monitoring and maintenance of signs
- Sign posts and sign board details

This information is based on Sustrans' extensive experience with developing the National Cycle Network and statutory regulations and guidance.

1.2. Signing of cycle networks

One of the key requirements in developing safe and attractive places to cycle is comprehensive direction signing that links paths, tracks, lanes and roads together that make up the network. The attractiveness and utility of any network to potential users will, in part, depend on the quality, coherence, consistency and frequency of the signs. Inadequate, missing or misleading signage is the main concern expressed by users on a network. Visitors and local residents should be able to follow all routes in any direction, without needing a map.

Signing advertises the presence of cyclists to other road users and advises them that there is an alternative to using the car. Cohesive and continuous signing of a route or network gives first-time users a good impression of the area, and encourages further exploration.

Signing should be appropriate to the user and the location. Too many signs or signs that are too large may add little or nothing to the cycling experience but clutter views and streetscapes. Cycle path surface painting is a useful alternative to post-mounted signing and usually only one or the other is required.

1.3. Health and Safety

Good signing of a cycle route can enhance the safety of the cyclist using the route. Signs will warn the user of hidden dangers that are not otherwise perceptible. Obvious dangers need not normally be signed.

Signs should help cyclists to safely get from the start of their journey to the desired destination while riding their bicycle, while steering cyclists away from dangerous areas.

Signposts too close to a path or signs overhanging a route can form obstacles for cyclists and must be avoided.

1.4. Legal information

Signs (called diagrams) for cycle routes on highways are included in the DfT Traffic Signs Regulations & General Directions (TSRGD) 2002 (for England, Wales, Scotland and the Isle of Man), the Traffic Signs Regulations (Northern Ireland) 1997 and the DfT Traffic Signs Manual (for England, Wales, Scotland and Northern Ireland) – together subsequently referred to as “Highway Sign Regulations”. Amendments to TSRGD were published in 2011 along with the results of a major review of traffic signs in *Signing the Way*. A full revision of TSRGD is expected in 2015.

TSRGD applies to all public highways (which includes public footpaths and bridleways as well as roads) - to quote Traffic Signs Manual Chapter 1: “1.18 The use on Public highways of non-prescribed signs which have not been authorised by, or on behalf of, the Secretary of State, is illegal and Authorities who so use unauthorised signs act beyond their powers. Additionally, an unauthorised sign in the highway is an obstruction. The possible consequences of erecting or permitting the erection of obstructions may be severe and those responsible could lay themselves open to a claim for damages; for example if the obstruction is the cause of accident or of injury in a collision or if the unauthorised sign injuriously affects a fronting property by blocking light or impairing visual amenity.”

Usually only signs included in statutory guidance are permitted for use on cycle routes on the public highway however DfT approval can be obtained for using alternative signs for particular locations (the Transport Directorate in Scotland and Transport Wales for Wales will do this in their areas). Some local authorities depart from statutory guidance without obtaining DfT approval on the grounds of safety, using common sense and being specific to local situations.

Traffic regulation orders (referred to as “TRO”) are sometimes required to implement signs on highways (generally where vehicle restrictions are imposed). These are issued by highway authorities. TROs can be “permanent”, “temporary” (usually up to 18 months, e.g. for construction works) or “experimental” (where the public response to the effects of the order needs to be evaluated). The London Cycling Design Standards (see references) have more information on this procedure.

Off-highway, i.e. along canals, in parks or crossing private land, in principle any sign may be used with the approval of the land owner. This gives the opportunity to use standard highway signs or variations or other types of signs like mileposts, local maps etc. Anybody who has approval from the land owner may put up signs away from highways.

2. Direction Signs

2.1. Direction signs

It is essential that at frequent locations along any cycle route signs advertise key destinations and distances. Ideally, two main destinations should be given, directing the cyclist to locations close by or to major destinations within a reasonable cycling distance. Typically, these will be the next village and town. In larger urban areas signs should point to known landmarks, which may be parks, squares, public spaces or even pubs or cinemas (see section 2.5).

Consistency and clarity in the choice of destination is important. The London Cycle Design Standard includes a list of destinations signs normally point too, and setting up such a list is encouraged for other dense areas as well.

Cycling distances should be measured accurately along each leg of the network, and to defined points (e.g. “Hyde Park” is an area over 1½ miles wide by ¾ miles long and not suitable, whereas “Speaker’s Corner” is a defined location). Where distances are measured to “town centre”, then a defined landmark (e.g. the main town square or the town hall or railway station) must be determined and consistently used. Points where distances are measured to must be reached by a continuously signed cycle route.

2.2. Types of direction signs

TSRGD gives the following key diagrams for cycle routes:



Figure 1: Diagram 2601.1 and 2601.1A (with direction arrow used before junctions)

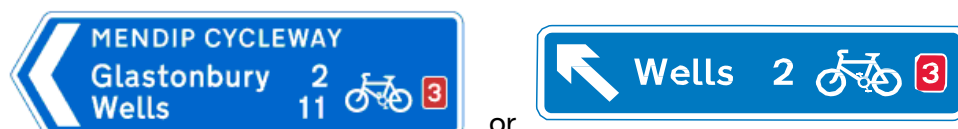


Figure 2: Diagram 2602.1 and 2602.1A (with or without text used at junctions), also alternatives of 2602.1B and 2602.1C with times in place of distances.



Figure 3: Diagram 2602.2 (confirmation sign along routes)

All these signs can be adapted to suit various situations by using arrows pointing in all directions, adding pedestrian and horse symbols for shared use routes, and displaying multiple route numbers. If a particular route has a name (e.g. Mendip Cycleway) then this can be added to diagram 2602.1 together with the NCN route number and destinations. Specific trail symbols (EuroVelo routes, Avenue Verte etc) can be added to the signs, however they (technically) require DfT authorisation when used on the highway (many have been done without).

Only the relevant symbols are used for each route, and they appear in the following order (starting at the “arrow-end” or the left of each sign – see examples below):

(arrow end of sign) – Equestrian – Cycle – NCN Route number – Pedestrian – (flat end of sign)



Figure 4: Examples of direction signs

The sign text can go in line or above the symbols on the sign.

Where cycle routes follow highways and to reduce sign clutter, cycle route signs can also be added to other highway signs as in the following examples. This type of sign is used instead of diagrams 2601.1, 2602.1 and 2602.2.



Figure 5: Diagram 2105.1 and diagram 2106.1



Figure 6: Examples of direction signing incorporated into motor vehicle signs¹

¹ The DfT Traffic Advisory Leaflet 6/05 requires that "Modern signs or symbols, for instance for tourist attractions or cycle routes, must not be added to fingerpost signs, as they ... detract from their authentic appearance." This motion is also supported by the Campaign for the Protection of Rural England (CPRE). The CPRE however agrees that erecting an additional fingerpost specifically for cycle signs would produce "sign clutter" and therefore advocates alternative signposts such as those shown in section 4.7.

All these signs can be used for equestrian, cycle and pedestrian (or combined) routes and should include a National Cycle Network (NCN) route number where applicable.

2.3. Road markings

This method of signing is often overlooked, yet most cyclists and drivers spend much of their time focused on the surface in front of them. Direction arrows used together with cycle symbols can be usefully employed. On Bodmin Moor, where the Council is not permitted to erect sign poles, a system of signing the National Route using carriageway markings was authorised by the Department for Transport. A similar system is also in use in parts of London (see section 6.4 of the London Cycling Design Standard).



Figure 7: Examples of direction signing using road markings

Road markings on highways are classified as “traffic signs” and therefore also fall under the same traffic regulations as traffic signs, when used on highways. This also means that they may only be applied by the responsible Highway Authority or their approved contractors. Coloured surfacing that is often used for cycle lanes (typically green and red) is not a traffic sign and therefore does not fall under the TSRGD.

An increasing number of local authorities have been using the painted cycle symbol (Diag 1057) to demarcate a cycle route along a road and sometimes to alert drivers to the likely presence of cyclists. Guidance on these is contained in the London Cycling Design Standards. Strictly speaking, each 1057 should be used in conjunction with the 967 sign, otherwise they need authorization from DfT. Use of 1057s is best described as a means to mark the presence of a cycle route; any sense that they are a warning to motorists should be purely incidental as the function of the 1057 is to guide cyclists.

Carriageway markings may also be useful for guiding cyclists through complex junctions and residential streets in urban areas (see section 3).



Figure 8: Carriageway marking to guide cyclists through junction area

Surface markings can also reduce both sign clutter and vandalism, and can fit in well with designed urban settings (see picture below).



Figure 9: Cycle symbol incorporated into feature surface

Care must be taken where road markings are located, so that they are not parked upon, covered by street markets or are obstructed. Snow covers road markings until paths are cleared. Some types of road marking are not very effective at night, however most cycling is done during daytime.

2.4. National Cycle Network route numbers

The National Cycle Network consists of national and regional routes, indicated by route numbers between 1 and 999 and red (national) and blue (regional) backgrounds. Where two routes meet and follow a shared alignment, the common stretch is signed with the number of the more important route, normally the lower national number. The higher number can be signed with the number in brackets. This is similar to the road network approach to numbering.



Figure 10: Route sign where route 22 joins route 2 (core route) for a short section.

Signs on link routes pointing towards a National Cycle Network route should also carry the route number in brackets.

2.5. EuroVelo

EuroVelo is a European Cyclists' Federation (ECF) project to develop a network of high quality cycle routes linking all countries in Europe. It can be used by long distance cycle tourists as well as local people making daily journeys. Sustrans is the EuroVelo coordinator for the UK. National Cycle routes that are also European cycle network routes (EuroVelo routes) should carry the European route symbol or number in front of (and in addition to) the national route number. For EuroVelo signing guidance go to: http://www.ecf.com/wp-content/uploads/2011/10/EuroVelo_Signage-Manual.pdf



Figure 11: Example of EuroVelo route symbol and use on direction sign

2.6. Destinations

Destination signs typically include one to three lines of text. This can be either one line displaying a particular route name (e.g. Wem Brook Trail) followed by one or two destinations along the route, or up to three destinations along the route without a route name. Route names are printed in upper case letters for signs located on the named route, and with lower case letters for signs pointing towards a named route. It is important that all destinations indicated on the sign can actually be reached along continuously signed cycle routes, and that the indicated destination text does not change until the destination is reached.



Figure 12: Signposting towards local streets from cycle route in park

In urban areas prominent locations (e.g. “George Elliot Hospital” or “Cathedral”) or districts (e.g. “Digbeth” or “City Centre”) are indicated. It is useful to indicate street names on links from a route that does not otherwise provide mapped orientation points (e.g. parks or canals – see example above).

In rural areas, destinations would typically be the next village and the next town (e.g. “Great Ness” and “Shrewsbury”). On long-distance routes used by tourists occasionally the endpoint of the route may be indicated (e.g. “Lands End”). Distances to particular points of importance may also be given (e.g. “Severn Bridge”).



Figure 13: Short and long-distance destinations on rural signpost

Distances are given in full miles for any distance greater than 3 miles. Half and quarter fractions are used for distances under 3 miles (eg 1½ or 2¼). Recent changes in TSRGD have permitted use of times instead of mileages on signs. This was in response to feedback that non-cyclists tend to overestimate how long it takes to cycle a trip, but at present there is no evidence on whether use of times actually increases the level of use of a route. A number of issues need to be considered before deciding to use times, for example use of timings approximated for, say, a family cycling the route will overestimate the time for faster commuter cyclists.

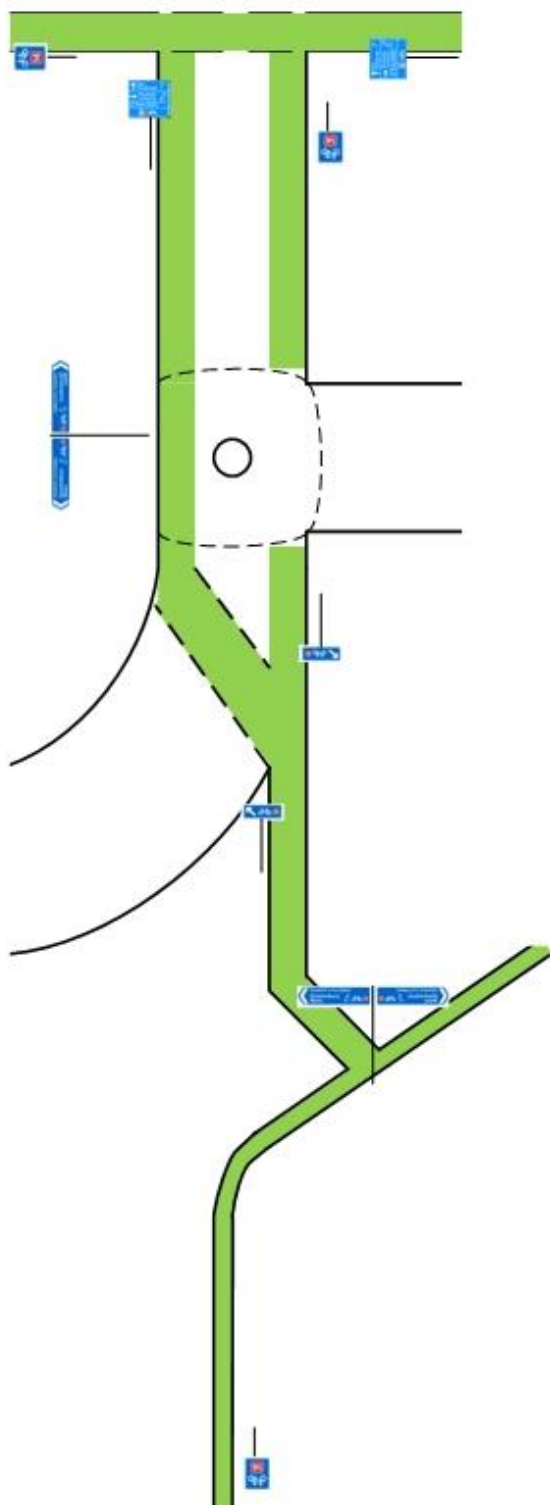
2.7. Sign locations

It is particularly important that the public know which way to turn at any junction along routes. Along all routes, care must be taken to ensure that satisfactory signing is useful for travelling in any direction along a route, and there should also be signs indicating directions for those cyclists joining a route.

The frequency and location of signs should take account of the ability of cyclists to follow the route should any one sign go missing. Care should be taken to locate all signs so that they are clearly visible and legible to approaching cyclists, who can then prepare to make the appropriate manoeuvre. Signs must be free from obstruction by foliage or parked vehicles (unlike in the picture below). Hanging baskets or large parked vehicles (and waiting buses) might also obstruct signs.



Figure 14: Overhanging vegetation obscures sign.



In busy urban areas, direction signs are required at every junction where turning is required, indicating the direction the cyclist should take across the junction. Advance warning should be given to allow the cyclist to get into position and indicate to other road users. Confirmation signs are often required after the junction (typically diagram 2602.2) to indicate that the correct turn was taken.

For quieter urban areas typically diagram 2602.1 is used at junctions.

Where a route changes direction but there is no junction, diagram 2601.1 is usefully employed to confirm this direction to the cyclist.

In rural areas, using either diagram 2602.1 or 2601.1 once at a junction is often sufficient, particularly where there is little opportunity to take wrong turns.

Confirmation sign diagram 2602.2 is normally only used on stretches of road where there is potential for the cyclist to take a wrong turn or where there has not been a sign for a long distance (say every 5 – 10 minutes cycling). The visual impact of the sign in the landscape should also be carefully considered.



Figure 15: Confirmation sign in rural lane

Where routes follow main roads with only minor road junctions the use of diagrams 2602.1, 2601.1 or 2602.2 immediately after the junction is often

sufficient, as long as cyclists can see this sign before they reach the junction area. This has the additional advantage that the sign can be seen by cyclists approaching the junction from any direction (see figure below). A sign before the junction is not necessarily required unless turning is required.



Figure 16: This direction sign is sufficient to guide cyclists across the junction. The sign also establishes that cyclists are permitted users for the path.

Too many signs contribute to clutter, too few and cyclists get lost. Sign clutter is not only a particular problem of urban areas, but signs can also obstruct scenic views in the countryside.

The opportunity should be taken to rationalise existing signing in the process of putting up cycle network signs. Wherever practicable, new cycle directions should be incorporated into existing street signs or fixed to existing utility poles.



Figure 17: Shared use of signpost, and example of sign clutter that should be tidied up.

2.8. Tourism signs

Cycle signs have a blue background while tourism signs for motorists have a brown background². Wherever possible, the two may be combined (see figure 18).

² This is not technically true as the TSRGD provide for sign diagram 2608 (brown background) which is a direction sign similar to diagram 2602.1. It is a pedestrian / cycle direction sign to a tourist attraction. Sustrans however promotes that all cycle direction signs have a blue background to distinguish them.



Figure 18: Cycle direction signs on blue background can be incorporated onto brown tourist signs for motorists.

In cases where a route also has a well known name e.g. Granite Way, Camel Trail etc, the route name can be added to signage to help preserve its local or best-known identity and encourage local community “ownership” of the route. (see figure 18).

As well as adding the name of the route to directional and tourism signage, route names can be added to ranger signage for way marking. An example of way marking signage is currently in use to identify the Pilgrims Way trail between Winchester and Canterbury (see right).



2.9. Information boards, mileposts and combined route signs

As well as formal direction signs, there will be other opportunities for marking the route such as mileposts and information boards. Some local authorities and county councils have used gateway signs on cycle routes, e.g. “National Cycle Network: Welcome to Suffolk”.

Sign diagram 2602.1 is used to direct cyclists to shops, pubs, toilets or information centres.



Figure 19: Diagram 2602.1 with tourist information for cyclists

Map-based information boards may be placed at key access points to traffic-free networks, to help people appreciate what opportunities they have and to familiarise themselves with the locality. These boards should be positioned to face the direction of travel. Weatherproof leaflet holders may also be provided. Where cyclists share a waymarked trail with other users (equestrians, walkers etc), signs can be combined to eliminate duplication and sign clutter.



Figure 20: Map-based information. Sign shared with National Byway.

2.10. Finials

Finials are the decorative features added to the top of direction signs. They are often disc shaped, but others can be produced. The most commonly found finials are those identifying the routes as National Cycle Network and promoting the Millennium Commission Project's, or more recently Big Lottery's, funding (see Figures 20a and 20b).



Figure 20a



Figure 20b

Finials installed on the National Cycle Network should be a similar disc shape (unless you really want something else) with “National Cycle Network” around the perimeter of each side, and with the Sustrans logo in white on a blue background in the centre. Where routes have been funded by local authorities or other bodies, finials are a good opportunity to promote their involvement by adding their logo (white on blue) to one side of the finial in place of the Sustrans logo.

Finials are typically made of aluminium and are fixed to a pole by two screws on the collar. Collars can be square or round to match different pole designs. The full diameter of a finial is 300mm, and the diameter of the central circle into which the Sustrans or other logo is inserted is 185mm. The full diameter of the collar is 120mm, and the diameter of the hole into which the pole is inserted is 78mm. the depth of the hole which fits over the pole is 90mm. The white lettering should be painted on, or added by another permanent transfer arrangement. Plastic alternatives are available, which are cheaper but less durable.

Connect2 Project

In cases where finials are erected to identify new NCN routes that have been created through the Connect2 scheme, “National Cycle Network” should appear around the perimeter each side, with the Sustrans logo in white on a blue background in the centre on one side, and the Big Lottery logo on the other side. (See also Technical Information Note 27 “National Cycle Network – Signing and Route Branding” for further details).

Welsh language versions of both logos are available.



3. Other cycle signs

3.1. Shared pedestrian and cycle paths

There are many instances where cyclists and pedestrians share routes where motorised vehicles are not permitted. In most cases it is sufficient to indicate traffic free cycle routes simply by using cycle specific blue direction signs (as shown in section 2). Only where cycle routes follow what might be otherwise mistaken as a highway or footway it might be necessary to put up a sign indicating shared or sole use by pedestrians and / or cyclists as appropriate³.

Diagram 955 is used at the start of a route for use by cyclists only, excluding pedestrians. Where a route is for shared use by pedestrians and cyclists, diagram 956 is used.



Figure 21: Diagram 955 and diagram 956.

To give more protection to pedestrians and to indicate that cyclists should give priority to pedestrians, alternative signs similar to diagram 956 can be used. These signs would not be permitted on a “highway”, but are perfectly suitable on traffic-free routes such as through parks. Simple information boards may also suffice.



Figure 22: Examples of shared use signs promoting cyclists to be courteous.

Sustrans publishes a “Sustrans Good Cycling Code” which can be used to derive suitable text for such signs.

³ Where sign diagram 955 / 956 or 957 is omitted then the permitted use can not be enforced legally. Therefore where nuisance use by motorcyclists etc might be expected then use of these signs is recommended.

Diagram 957 is similar to diagram 956 but allocates each group one particular side of the path width. The separation is done by using a continuous white line (diagram 1049) or a raised continuous white line which is supposed to be detectable by visually impaired people (diagram 1049.1). In practice sign diagram 957 is often not adhered to, as cyclists and pedestrians tend to cycle or walk side by side wherever possible, whereas this sign indicates a sense of priority for cyclists on their part of the route that could put pedestrians in danger. Where there is not enough space for all the pedestrians and cyclists using a route, more space or additional routes should be created.



Figure 23: Diagram 957 and example where pedestrians and cyclists stray onto other side of path

The most recent amendments to TSRGD require a minimum of one repeater sign, in place of the earlier need to provide them at regular intervals, thus giving designers the flexibility to place only those signs they deem necessary.

Where a route is shared between cyclists and buses, diagram 953 is used.



Figure 24: Diagram 953

3.2. Pedestrian Zones

Pedestrian zones in urban areas can often provide vital and safe short-cuts to cyclists where otherwise heavily trafficked roads bypassing centres would need to be used.

Use of diagram 956 (see section 3.1) is preferred at shared pedestrian and cycle facilities, as it prominently encourages cyclists to use the route. An alternative is shown on the picture below (from

Cambridge) showing a pedestrian zone sign allowing cycle use but highlighting pedestrian priority and vulnerability.



Figure 25: Example of cycle-friendly pedestrian zone signs

There are two “official” pedestrian zone signs, both of which are very large and can be unsightly. Only one of the two sign options (indirectly) permits cycling (diagram 618.2). This variant incorporates sign diagram 619 (“no motor vehicles”) and therefore permits cycle use. To encourage cyclists, direction signs (see section 2) or cycle road markings (see section 3.3) can be used in combination with the pedestrian zone sign.



Figure 26: Variant of diagram 618.2 (incorporating diagram 619) permitting cyclists

The other alternative of the pedestrian zone sign diagram 618.2 incorporating diagram 617 (“no vehicles except mechanically propelled vehicles pushed by pedestrians”) is not normally recommended to be used, other than where pedestrian zones are so crowded at all times that cycling would be impossible and there is a suitable alternative route.



Figure 27: Variant of diagram 618.2 (incorporating diagram 617) not permitting cyclists

Simple road markings (potentially combined with use of bollards) can indicate shared use and motor vehicle free zones without the need any mounted signs⁴.



Figure 28: Use of bollards and road markings to create cycle route. Signs are not required.

3.3. Home zones

Successful home zones create streets where pedestrians, cyclists and vehicles share the space on equal terms - streets which people can socialise and play in or move through without fear of speeding traffic, having as a key element a street design that makes it natural for drivers to proceed slowly and carefully. There are many design issues for home zones beyond the remit of this guidance.

Scheme specific names (e.g. Long Street in the example below) can be incorporated into the signs.



Figure 29: Home zones start and end with diagrams 881 and 882 (left). In Northern Ireland, an alternative sign may be used (diagram 544.1 (right)).

⁴ Mounted signs are required to allow for enforcement - see also footnote 3 on page 16.

3.4. Cycle lanes

Different types of road markings are used to indicate cycle lanes on highways. The main difference between these markings is whether they are used for mandatory or advisory cycle lanes.

Mandatory cycle lanes are lanes reserved solely for the use of pedal cycles, and are indicated by a continuous white line (diagram 1049). To advertise the sole use by cyclists, a road marking showing a bicycle (diagram 1057) is displayed at regular intervals along the route. A variant of this type of lane is the shared use bus / cycle lane (sometimes also allowing taxis). Again the shared use is usually indicated by displaying relevant bus and cycle symbols as road markings (diagram 1048.4). Mandatory cycle lanes (of adequate width) give better protection to cyclists on highways than advisory lanes, as cyclists are separated from other forms of transport.

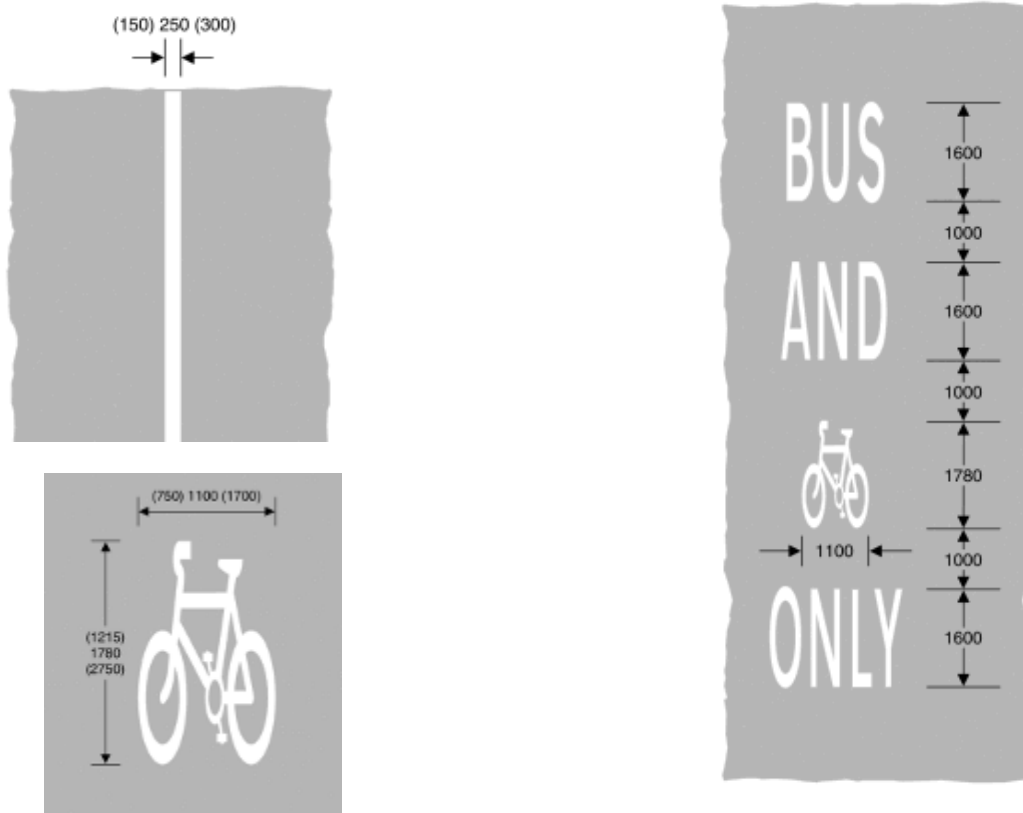


Figure 30: Diagrams 1049 (top left), 1057 (bottom left) and 1048.4 (right)

Advisory cycle lanes are lanes where other vehicles may straddle the cycle lane. They are indicated by a dashed line road marking (diagram 1004). In practice, advisory cycle lanes are regularly occupied by motor vehicles, and often parked upon. This type of cycle lane should only be used where cycle lanes cross junction areas (and thus other vehicles may need to cross the cycle lane). Advisory cycle lanes do not require a Traffic Regulation Order to be set up.



Figure 31: Parked vehicle on advisory lane, requiring cyclist to swerve around and potentially into traffic

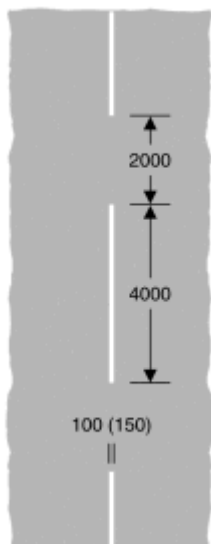


Figure 32: Diagram 1004 and use across junction with side road

For both types of cycle lane the road surface can be coloured green or red to give the cycle lane more prominence, particularly in junction areas. This colouring is not a road sign and therefore does not follow the TSRGD.

In addition to the road marking signs can be used to indicate the lane arrangement. Diagram 959.1 thus may be used at intervals along cycle lanes to indicate the presence of the cycle lane, however it rarely adds any value⁵. There is a sign variant used for shared bus / cycle / taxi lanes (diagram 959).



Figure 33: Diagram 959.1

⁵. This view contradicts statutory guidance from the TSRGD. The prescribed typical layout for cycle lanes is shown on page 23.

Where a mandatory cycle lane on the highway starts up diagram 958.1 (or diagram 958 when the cycle is shared with buses or taxis) is used as an advance warning to motorists. However, in the spirit of reducing sign clutter and in promoting continuous rather than sporadic cycle provision, the use of this sign is limited.

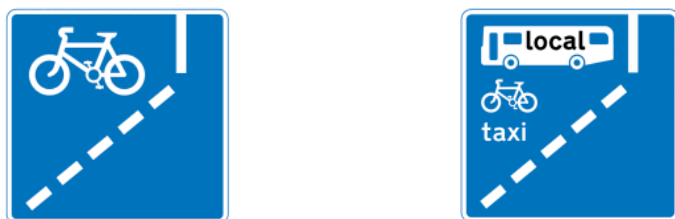


Figure 34: Diagrams 958.1 (left) and 958 (right)

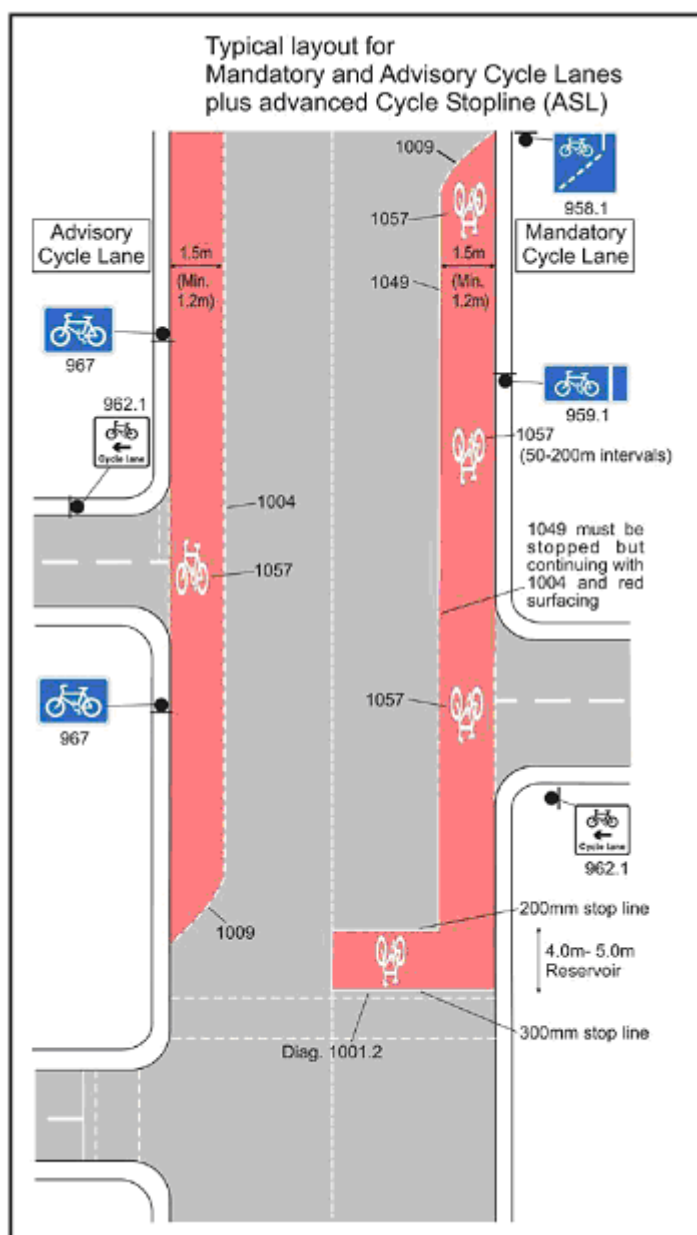


Figure 35: Statutory layout of mandatory and advisory cycle lanes according to TSRGD. From Nottingham Cycling Design Guide 2006.

3.5. Cycling against motor traffic flow

There are a number of cycle facilities on highways where cyclists are given two-way use of a one-way street applicable to all other road users. In some circumstances, cyclists and buses might share a contraflow facility. Contraflow facilities are a good way to enable shortcuts for cyclists in urban areas.

Contraflow exist in various different designs: some have marked (advisory or mandatory) cycle lanes, in others cyclists use a lane that in the past had been used by motorists, and in some other designs there is no actual contraflow lane at all – the cyclist simply uses available road space.

At the start of a contraflow cycle facility a traffic island may be used to provide protection for cyclists along with sign diagram 955 (see section 3.1). Where the lane is shared with buses, sign diagram 953 is used. Alternatively there is now a special direction in England allowing use the No Entry sign with an Except Cycles plate below. The road marking diagram 1057 (cycle symbol) and coloured road surfaces (red or green) are useful to highlight the contraflow lane and make it safer.



Figure 36: Contraflow cycle lane signs

If at junctions at the start of the contraflow cycle lane turning restrictions need to be revoked for cycles (to allow turning into the contraflow lane) this can be done using a white plate with the text “except cycles” or “except buses and cycles” (diagrams 954.4 or 954.3) as shown on the examples below. Following highway sign regulations the white plate “except cycles” (diagram 954.4) can only be used with a limited number of signs, namely diagrams 606 and 609 (both indicating that traffic must proceed in direction of arrow), 612 (no right turn), 613 (no left turn), 616 (no entry) and 816 (no through route – see below).



Figure 37: Diagrams 612 with 954.3 (left), 606 with 954.4 (centre) and 816 with 954.4 (right)

To warn vehicles opposing the direction of the contraflow lane (i.e. those vehicles travelling in the “normal” direction of travel along a stretch of highway), diagram 960.1 (or in its variant diagram 960 also showing a bus) is used at intervals to indicate a contraflow cycle lane. The 2011 Amendments to

TSRGD (which apply to Great Britain) allow diagram 960.2 to be used where a contraflow facility with an advisory lane or without a lane marking exists. These signs should be shown at intermediate junctions and where the section of road with the contraflow lane starts. The number of lane arrows can be adapted.



Figure 38: Diagram 960.1 and use of diagram 960.2 (photo CTC).

Where contraflow cycle lanes are used it might be necessary to warn pedestrians and motorists expecting vehicles to arrive only from one direction of the danger of cyclists arriving from the other direction.

For pedestrians this will very rarely be the case, as lane layout and other road markings outlined above should already provide enough information to pedestrians, making the contraflow lane obvious. Where, however, this warning may be needed, diagram 963.1 (or diagram 963.2 where buses share the use of the contraflow lane) can be used. The text on this sign can read “right”, “left” or “both ways”.



Figure 39: Diagram 963.1

Diagram 950 (see section 3.10) is best used on minor roads just before the junction with the contraflow cycle lane.

3.6. Junction diagrams

To highlight cycle lanes or cycle routes across junction areas it is possible to extend cycle routes into the junction area using “elephant’s footprints”. This is not a prescribed highway sign according to the DfT Traffic Signs Regulations & General Directions 2002, but has been used effectively together with coloured highlighting (green or red) of cycle lanes in junction areas.



Figure 40: Elephant footprint

3.7. Advanced stop lines

Advanced stop lines (diag 1001.2) should normally be used with cycle lanes, as they allow the cyclist to safely negotiate junctions ahead of following traffic. Cycle lanes should be continuous along a section of road until the advanced stop line is safely reached, and should continue on the opposite side of the junction. Cycle journey speeds are accelerated when advanced stop lines are used.

Safety at junctions is improved when using advanced stop lines, as cyclists are clear of traffic, however in good view of motorists.

Advanced stop lines without a feeder lane are now permitted under the 2011 Amendments, but may be less effective if cyclists struggle getting past other traffic to reach it safely. Feeder lane design needs to be considered carefully, especially where cyclists are required to turn right and therefore need to move away from the left side of the carriageway.

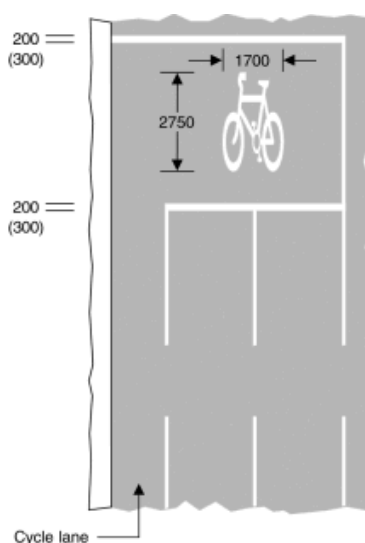


Figure 41: Diagram 1001.2 and example

3.8. Give way

The standard “give way” marking on cycle routes should be a double broken line (diagram 1003) on the riding surface. Only in few situations will the triangle marking (diagram 1023) be necessary, or even the vertical red / white give way sign (diagram 602).

Where stopping is not required, the word “slow” (diagram 1024) can be used.

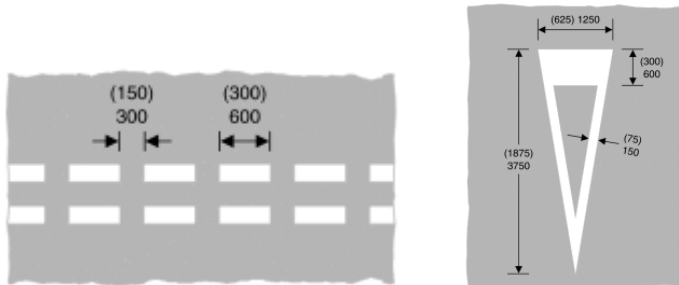


Figure 42: Diagram 1003 (give way line) and diagram 1023 (give way marking)

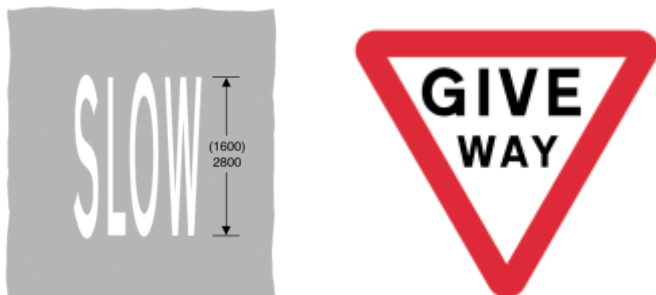


Figure 43: Diagram 1024 (slow) and sign 602 (give way)

3.9. Cycle parking

Cycle parking facilities are, by their layout and necessary equipment, self-evident. Good cycle parking facilities have good surveillance and are thus easily found. Only in very rare circumstances (e.g. where motorcyclists take up cycle spaces) will it be necessary to erect a sign indicating the parking space using sign diagrams 968 or 968.1. The difference between the two signs is that for diagram 968 the blue parking symbol and the white bicycle symbol are arranged horizontally, whereas for 968.1 they are arranged vertically.



Figure 44: Diagram 968.1

The TSRGD also provide direction signs towards cycle parking facilities (diagrams 2603 and 2604), which are basically variants of diagrams 2601.1 and 2602.1 (see section 2.2). These signs would only very rarely be required.

3.10. Warning sign

In cases where other vehicles need to be warned of cycle routes, the general warning sign diagram 950 (“cycle route ahead”) can be used once. A white plate adding distance (diag 572) or distance and direction (diagram 573) can be added where required.

It is important to ensure that this sign is clearly visible. Other safety measures (e.g. reducing traffic speed, highlighting a cycle crossing through road markings or street furniture etc) should be considered first before putting up this sign. In the picture below, diagram 950 is hidden behind other signs, and has no effect.



Figure 45: Diagram 950 (left). Useless (as hidden) diagram 950 (behind brown sign for Mallory Park) on right

A white plate reading “child cycle test”, “child cycle training”, “cycles crossing” or “cycle event” (all diagram 950.1) also can be added to sign diagram 950 where appropriate.

3.11. Cycle prohibition

“Cyclists prohibited” (diagram 951) should only be used where there is an imminent danger to cyclists ahead, e.g. on a road leading only towards a motorway or into a long unlit road tunnel. Alternative routes for cyclists must be signposted in these instances. Sustrans provides guidance on dealing with security and nuisance issues on paths (information note FF21) – this sign is not the solution to such problems.



Figure 46: Diagram 951

3.12. Signs not recommended

Sign diagram 967 “route recommended for pedal cycles” is not descriptive and generally only adds to sign cluttering on highways. Use of cycle route direction signs (see section 2) are more useful to cyclists and carry more information than diagram 967, and should be preferred. Lane markings (e.g. diagram 1057 – see section 3.3) are equally visible and do not clutter the landscape.



Figure 47: Diagram 967

The signs “cyclist dismount” (a permitted variant of diag 966) and “end of cycle route” (diag 965) and the cycle lane marking “End” (diagram 1058) should not normally be used⁶. “Cyclist dismount” usually represents a failure on behalf of the designer, as seen in figure 49 below. In the 2011 Amendments to TSRGD, sign Diag 966 is now shown as “cyclists rejoin carriageway”, with “cyclists dismount” as a permitted variant.



Figure 48: Diagrams 966 (cyclist dismount) and 965 (end of route)



Figure 49: A failed design with diagram 966

Highway designs should be obvious to all users, so that “end” signs and markings are not necessary. Where some such signing is unavoidable, a “Cyclists Rejoin Carriageway” sign is now permitted under the 2011 Amendments to TSRGD, this being the new version of Diag 966. Other alternatives that could be considered are “cyclists give way to pedestrians” or “cyclists proceed with caution” (these signs would normally require authorisation from DfT / the Scottish Transport

⁶ According to the “Traffic Signs Manual” Chapter 3 the cyclist dismount sign should (not must) only be provided where there is a pedestrian crossing facility that cyclists are not legally entitled to cycle over, where there is low headroom, at the entrance to pedestrian areas or where visibility is very restricted.

Directorate / Transport Wales, however similar diagrams are in use without authorisation in many parts of the country.)



Figure 50: New version of Diag 966

Sign Diagram 961 is, according to highway standards, a possible addition to diagrams 958, 958.1, 959 or 959.1 (shown in section 3.1) and is used to impose time restrictions to the bus or shared bus / cycle lanes. When creating cycle routes or networks, this sign should not normally be used, as it limits the availability of a safe cycle lane outside the hours indicated on the sign.



Figure 51: Diagram 961. This sign is fixed to the bottom of diagram 960.1

Cycle routes through junction areas should be clear and evident to approaching cyclists, and there should be no need to put up signs to further inform cyclists of particular lane layouts. According to highway sign regulations diagram 2601.2 can be used to indicate how cycle routes cross slip roads, and similar signs can be used to describe routes through junction areas. For this type of sign to work however care must be taken to ensure that the information on the sign is easy and quick to understand, and clear to all users, which would provide that the junction area is clear to understand in the first place and the sign not required.



Figure 52: Diagrams 2601.2 (left) which is particular to slip roads and 962.1 (right)

Sign diagram 962.1 is meant to be used in minor roads to highlight a cycle lane adjacent to a major road ahead. Where such a warning is required (i.e. where the cycle lane is not suitably advertised by highlighting of the road surface, street furniture, road layout etc) it should be prominent and improve the safety of cyclists and use of sign diagram 950 (red warning triangle) instead is recommended. However, it may be appropriate to use this sign to alert drivers where a contraflow cycle lane is present on the road they are joining.

4. Technical details

4.1. Locating signs

Care should be taken to locate all signs so that they are clearly visible and legible to approaching cyclists, who can then prepare to make the appropriate manoeuvre. Signs must be free from obstruction by foliage, stopping buses or parked vehicles – note that this may change with seasons. A balance must be struck between the need for continuous signing and the visual clutter that signing can cause. Within sensitive areas, such as rural settings or forests, care should be taken to ensure that direction signing meets the needs of visitors whilst being sympathetic to the nature of the area.

Rural areas may be protected (National Parks, AONBs etc) and special care should be taken to use appropriate signs. Parkland and open spaces might also call for special treatment. Efforts might already have been made to cut road signs to a minimum. Cycle signs should be tailored to the character of the area.

Using modern “designer signs” should be carefully considered – what is in fashion now might not be seen as fitting in several years.

New highway signs should be set into existing highway signboarding, or fixed to existing columns or walls. New signposts should only be introduced as a last resort.

Positioning a sign against a backdrop is an important environmental factor, as it hides the back of the sign, diminishes the visibility of the post and avoids breaking the skyline. Suitable backdrops might include a wall, building, fence, hedge, embankment or tree. Fixing two signs back to back can be a neat solution, so long as the signs are the same size. Locations of signs should be agreed with the Highway Authority and/or landowner. The colour and material for the sign support should be appropriate for the location – it does not always need to be a high steel post, it may also be fixed directly to a wall or at another suitable location.

Care may be needed to avoid erecting bicycle route signs in locations where they might encourage car drivers to follow the Network as a scenic route to their destination.

4.2. Dimension from highway and cycle path

Carriageway and cycle path signs should normally be set back to give a clearance of at least 500mm from the edge of the carriageway or cycle path. Where signs are located closer to or on a cycle route, they reduce the effective path width available for cyclists.

The best level to fix a sign in the verge for visibility by cyclists is between 900 and 1500 mm off the ground, although care must be taken not to obstruct the visibility of children on footways adjacent to highways with low level signs. Mounting a sign at this level however reduces its visual intrusion. However, where signs might overhand cycle or walking routes, the mounting height should allow a minimum of 2.1m clearance for pedestrians and 2.3m for a cycle track. The minimum clearance for equestrians is 3.4m. Mounting heights should also have regard to possible vandalism and theft – higher posts are recommended where such problems are expected. Sign post extensions are available from sign manufacturers.

4.3. Putting up signs

Only the Highway Authority has powers to erect signs and road markings on the public highway, which it can do directly or through an approved contractor. Any organisation with suitable capabilities may apply to become an approved contractor for erecting signs. On cycle routes away from highways, signs may be erected by any party with the permission of the landowner.

4.4. Text and sign size

The size of signs is usually dependent on the text that is shown, and therefore dependant on the text size that is used. The normal way to determine the size of text is using the height of the letter 'x' (called the "x – height"). Standard signs usually have a standard size or size options.

4.4.1. Signs with text

There is no absolute 'right' size. Cycle route signs have a smaller 'x – height' than, for example, motorway signs which have to be readable at high speed and distance.

For bicycle and pedestrian signs in public highways in urban areas, the 'x – height' is usually 30 or 35mm.

For signs incorporated onto other highway signs that are mounted at height or on busy roads, the 'x – height' can be increased to 40mm so that people can see it more easily.

On traffic free cycle routes, in sensitive areas of natural beauty, on rural highways or where there are no other signs around, the 'x – height' should be 25mm. On rare occasions smaller text sizes have been used but this should only be done for information that is in addition to the main destination displayed on a sign (e.g. where there are two route options to the same destinations, and additional information is given to describe the different options or see example below).



Figure 53: 25mm x-height in rural setting (left). Smaller text to minimise sign size (right)

Once the "x – height" has been determined sign manufacturers can produce standardised sign boards using prescribed margins and line spacing. This information is available from sign manufacturers on request or is given in "The National Cycle Network: Guidelines and Practical Details" (see references).

It should be noted that symbols on signs can appear next to or under the text displayed on a sign (see examples below). The choice is up to the person designing the sign. For fingerpost style signs fixed at one end only it is usually best to have a shorter sign, while for centrally mounted (or face mounted) signs longer signs do not present such a problem.



Figure 54: Signs with symbols under and beside text

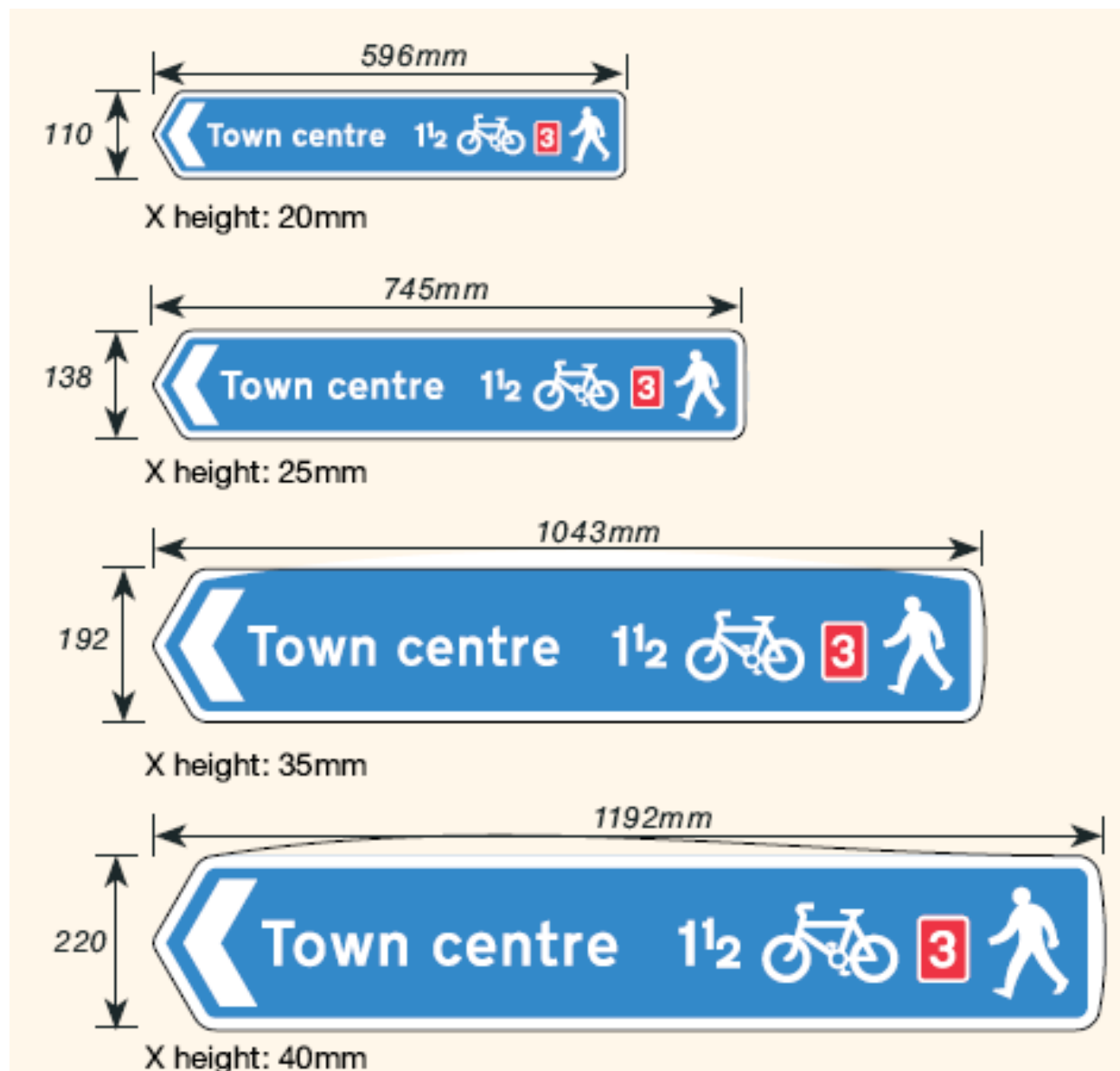


Figure 55: Comparison of different x-heights for same sign text

4.4.2. Adding Sustrans Strap Line

Where direction signs are erected on Sustrans managed land we should take the opportunity of adding the wording, 'Sustrans bringing you the National Cycle Network'. Other landowners may also be happy to have signs with this additional line.

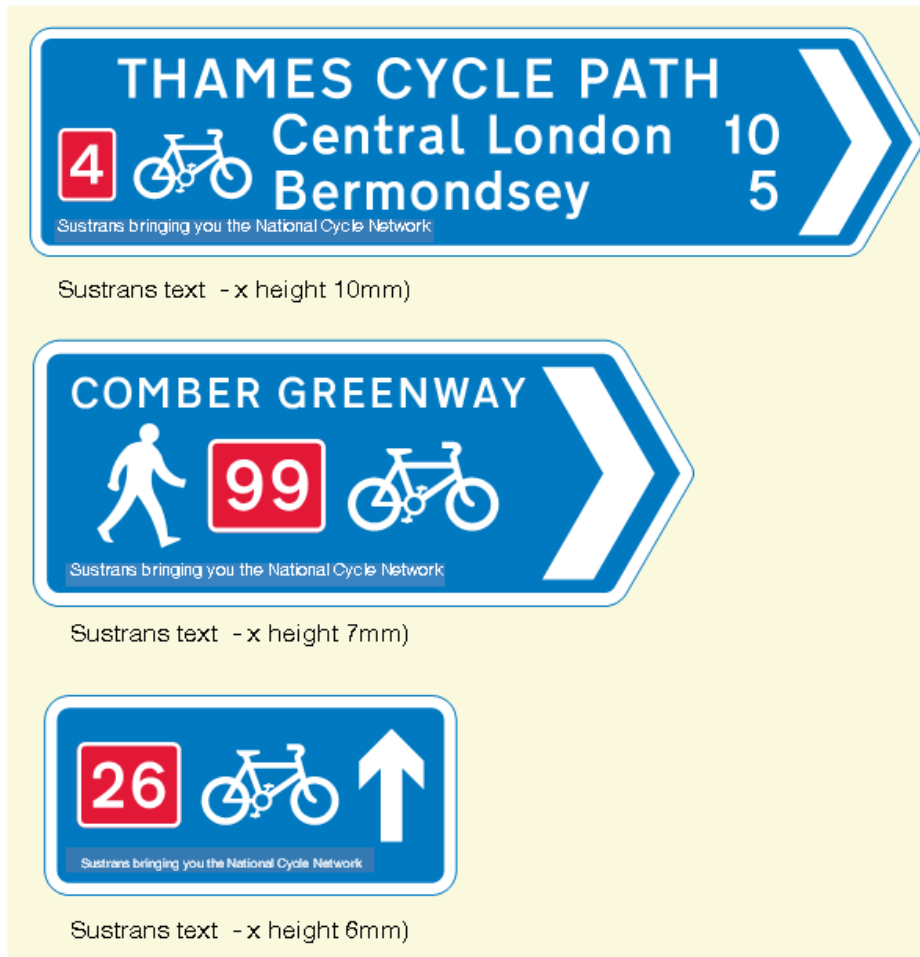


Figure 57: Comparison of different x-heights for same sign text

4.4.3. Signs without text

Signs without text (i.e. most signs referred to in section 3 of this guide) have prescribed standard sizes. These vary for round signs from 100mm diameter to 1500mm diameter, and for triangular signs from 600mm height to 1500mm height. The typical height or diameter on highways is 600mm, which is typically what is required for motorists to see. Where signs are intended for use by cyclists only, smaller signs are appropriate, typically between 100mm and 300mm in diameter or height.



Figure 58: Sign mounted on bollard

4.5. Sign specification

Standard sign boards have the following specification:

Material:	3mm thick aluminium, double back channels for fitting (or single channel for very small signs)
Finish:	Class 1 (high intensity) background, reflective, with grey reverse and radius corners. Or: S.E.G film provides a compliant but more durable alternative to Class 1 materials. Class 1 is more reflective, but tends to degrade more easily due to the way they are made.
Fitting:	Signs can be fitted either using banding, buckle and clamp or using anti-rotational clips. To prevent signs being twisted around (by wind or vandals), it is recommended that screws are tapped through the fitting band into the pole; one per sign. Fitting Option 1 can be done with self-drilling-tapping screws after sign is attached to pole (not on lamp-posts!). Fitting Option 2 requires band to be drilled before being attached to pole. Alternatively square poles can be used. A strip of neoprene can be used between the band and the post to increase grip.

Where signs are likely to be prone to vandalism or graffiti, a higher specification sign board made of polycarbon can be used. Sign manufacturers may also have other particularly vandal resistant sign boards available. Polycarbon signs cannot easily be scratched, defaced and can more easily be cleaned. Where graffiti is the only problem, self-adhesive clear protective overlay film may be stuck to the face of the sign and replaced when necessary. This may increase sign cost by 10%

4.6. Lighting

Lighting of cycle route signs is not generally required. The TSRGD however specifies lighting for certain types of signs on the highway.

4.7. Sign posts

Standard highway signposts have the following specification:

Poles	3.3 - 3.75 metre length, 76mm diameter (or 80mm square), galvanised steel poles, complete with plastic caps (unless manufactured with welded steel cap) This length of pole is used to deter vandalism by making the signs difficult to reach. However, shorter poles can be used where necessary – for example, in rural areas where high poles would be unnecessary or visually obtrusive. Use square post only if the sign direction(s) can be indicated accurately. Sign post extensions can be manufactured if necessary.
Installation	Poles set in 0.5m ³ C20 concrete, set 0.7m deep in ground. A baseplate should be fitted to prevent poles being lifted out. A horizontal bar diagonally through the pole cast into the concrete prevents the pole being rotated. Approximately one third of the pole should be buried in the concrete.

Alternative designs for sign posts using wooden posts, railway sleepers, fence posts, rock etc can be derived from the following photos. These are generally appropriate for off-highway application only, and may be specified to respond to ecologically or aesthetically sensitive areas. Use of such signs should be encouraged, particularly for nature areas of special protection.





Figure 59: Alternative sign mounting options

Signs should be designed and erected in a way that will not require constant maintenance – short signs have less leverage for vandals, and diagonal anchor pins through the post foundation prevent turning of the post. When deciding a signpost location, the safety of the access route for construction and maintenance staff shall also be taken into account.

4.8. Road markings

The following is extracted from the DfT Traffic Signs Manual, Chapter 5, sections 23.2 – 23.8.

“Road markings are applied using thermoplastic, cold plastic, preformed material or paint. They may be laid as permanent markings or as temporary markings.

Thermoplastic material is applied hot and sets on laying. It may be applied by a hand or mechanical applicator. It has good durability and is suitable for use on all roads. Mechanical application is most suitable for busy roads, as it can be done fast.

Cold plastics are supplied in single or multicomponent forms. The product is laid on the carriageway and a cohesive film is formed by chemical action.

Preformed thermoplastic road markings are applied by heating the material until it bonds to the road surface by melting or fusion. They provide a simple way to apply arrows, lettering etc. and to reinstate short lengths of line without the need for substantial application and support equipment.

Preformed cold plastic material is applied to the road surface using an adhesive.

Preformed tape is produced in sheet or roll form and is either bonded to the road surface or inlaid. Pressure is applied, but not heat. Preformed markings have good durability, are of uniform thickness and do not spread in hot weather or under the weight of heavy traffic. They can be difficult to apply to some surface dressings and block paviers. They are also manufactured in an easily removable form for use at road works.

Paint is best restricted to roads where the markings are not subject to heavy traffic wear. It is particularly suitable for edge lining as, being thinner than thermoplastic material, it will not interfere with drainage. The ease and safety in handling paint compared to thermoplastic material, its suitability for laying with motorised equipment and the material's low initial cost, makes paint an attractive economic proposition for such applications."

Where road markings are used, reflectorisation should be used for cycle routes lane markings on highways to give extra protection at night. For routes away from highways reflectorisation is not normally required. Texture can be applied to lane markings, however where cyclists need to cross lanes texture is uncomfortable to the rider and should be avoided. Highway drainage may require lane markings to have texture to allow the flow of water of the carriageway.

5. Additional Information

5.1. Temporary Diversion Signs

Temporary diversions of cycle routes may be required while road works are being carried out. For each worksite contractors are required to submit a signing schedule to the overseeing highways authority, according to Chapter 8 of the DfT Traffic Signs Manual (2006). Where cycle routes are affected by street works, these should be diverted on a safe route around the construction works. Principles for diversion route quality should be the same as those for normal other cycle routes (see The National Cycle Network: Guidelines and Practical Details).



Figure 60: Cycle route diversion on yellow background

Signposting along diversion routes should follow the principles for signposting highway diversion, i.e. using yellow background directional signs in the same style as normal (blue background) directional signs would be. 'X – heights' should be the same as normal cycle route signs (minimum 35mm).

A route closure information board detailing the nature and duration of the diversion should be in place at either end of the diversion (see Fig 6.1) At the start of the diversion, the alternative route should be clearly displayed using a sign similar in style to diagram 2601.2 (see Fig 6.2). At the end of the diversion a "Diversion ends" signs should be displayed (see Fig 6.2). Signage throughout the diversion should be such that the route can be followed by signs alone. Any existing signage should be removed or masked to avoid confusion while the diversion is in place. On traffic free routes a pedestrian symbol should be added, and when the route reopens original signage should be reinstated and diversion signage removed.

Fig 1. Info board 598mm x 362mm @ x height 15

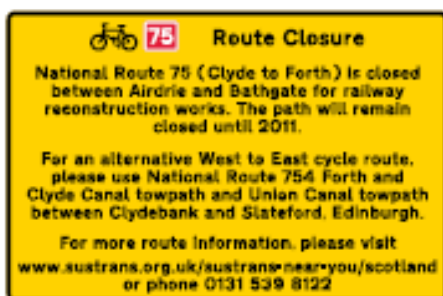


Figure 61: Information board

Fig 2. 619mm x 545mm @ x height 45



Fig 3. 619mm x 506mm @ x height 45



Figure 6.2 Route diversion start and end

There is a variant to the “cyclist dismount” sign that appears in highway signing legislation intended for use temporarily during highway works (diag 7018.1). This sign should be avoided and contractors should be encouraged to provide temporary cycle facilities adjacent to their work site.



Figure 63: Diagram 7018.1

5.2. Seasonal routes and other fixed route alternatives

Occasionally cycle routes have seasonal or other fixed route alternatives (e.g. a route using a ferry or going round a bay, or alternative illuminated routes). On the National Cycle Network these routes have different route numbers, and are therefore easy to identify. In addition, these routes can be signposted using the normal range of signs, but using additional commentary shown with the ‘x – height’ of 20mm. One example is shown below.



Figure 62: Diagram 2062.1

5.3. Cycle events

Cycle events vary in their requirements for signing depending on the type and size of event taking place. It is recommended for event organisers to make individual arrangements with local highway authorities.

The cycle warning sign diagram 950 is the only prescribed warning sign from highway signing legislation. It can be used together with a white plate reading “child cycle test”, “child cycle training”, “cycles crossing” or “cycle event” (all diagram 950.1) where appropriate.



Figure 63: Diagram 950 with additional plate 950.1

5.4. Bilingual signs

In areas where bilingual signs are used, cycle signs are should also be adapted to display bilingual messages. Bilingual signing strategies as applied on the highways should be adapted to cycle signs. In the case of directional signs towards towns with a different name in either language it might be necessary to reduce the number of destinations indicated so as not to increase the sign size extraordinarily. The distance to this destination point is only shown once, in a line halfway between the lines of the two town names.

5.5. Sustrans Volunteer signs

On routes where permanent signs have not yet been installed Sustrans' Volunteer Rangers looking after sections of the National Cycle Network might use a range of temporary signs. Some local authorities also choose these signs for their low environmental impact or where routes are not yet fully open. These signs are either stickers attached to lampposts or small plastic boards attached to suitable signposts. The signing guidelines for application of these signs are the same as for permanent signs. More information can be found in the Sustrans Ranger Handbook (see references). Rangers also have yellow temporary signs available for diversions where paths are under construction.



Figure 64: Sustrans' volunteer ranger signs

6. How to plan and order signs

1. Cycle the route in both directions, including all links leading towards the route and links leading away from it. Roads crossing the cycle route or leading towards it probably also require signs or road markings. Cycling along a route will ensure that signs and markings are appropriate to the user, and in useful locations. Driving the route could give you the wrong sense of what is required.
2. Identify all critical locations where signs are required
 - Junctions / forks
 - Dangerous areas
 - Priority arrangements
 - Permitted user groups, restrictions, prohibitions, instructions
 - Confirmation sign locations
3. Decide on required signs
4. Draw up list of destinations that appear on signs - identify locations that people can identify on maps.
5. Measure distances between destination points along cycle route so that distances on the signs are accurate for the cyclist
6. Consider additional information – area maps, information boards, plaques, finials, shared use codes and suitable locations.
7. Consider the location and its surroundings
 - Consider the type of sign appropriate to surrounding
 - Consider size of sign (or x – height of text) that is appropriate
 - Sign post / lamp post availability or any other suitable mounting structure (see section 4.7)
8. Develop signing schedule, then extract information into ordering spreadsheet. Ensure that signing is covered in both directions along the route. Specify sign types, sizes, location, mounting height and fixing method. Ensure that destination signing is consistent, and that destinations can be reached by using the cycle route.
 - A list of available signs with their sign code is enclosed in appendix A.
 - An example signing schedule is enclosed in appendix B.
 - Blank sample spreadsheets for developing a sign order for different types of signs is included in appendix C.

9. Place order with supplier or contractor. Suppliers and contractors need clear information on sign locations, specifications and identification presented in a well illustrated schedule. This should assist the contractor with installing the signs correctly, allow cross – checking and also approval by external bodies as required.

7. Sign surveys

After a route has initially been signed and at intervals later on, it is vital to check that the signs have been erected as specified and that necessary corrections are made. It is strongly recommend that the adequacy of the signing be reviewed in both directions. It is recommended that cyclists unfamiliar with a route are taken along to signing checks to identify gaps in the signing. This independent assessment by a cyclist may pick up aspects of the signing that should be improved.

The sign survey should then be used to amend signs, replace signs, order new signs and update records of signs. Cycle routes may change, and surveys will identify whether signing is still up to date.

Before surveying, it is important to check local records, gather up local knowledge of routes local cyclists use (which might be different from those currently signed) and gather up sign defect records (usually held by local councils / highway authorities and sometimes local cycling groups). To avoid duplicate site visits especially to remote areas, it can also be useful to simply take small tools and a sample of temporary signs (stickers) along to the survey to fix small problems while the survey is carried out.

Surveys are only successful if useful and good quality information is collected. Photographic records need to be of good quality and linked to locations and field notes, sign locations and orientations need to be recorded accurately, and the surveyor needs to identify locations on maps accurately. Preparing survey sheets to prompt recording the right information may be useful.

Sustrans has in the past used digital recording methods for surveys of routes, using GPS based recording equipment that can easily carried on a bicycle. This information can then be linked with digitally held geographic information, field notes, photographs and map locations to form one surveying database. If dictaphones are used to record information, this might need to be transcribed into written records.

Information collected during the survey should consider the following points

- The cyclists' perspective as they approach the sign / location
- Where the sign is seen from – impacts of x-height/ orientation / mounting
- Is the route on-road or traffic-free
- Will the cyclist be stationary or moving?
- Sign post details – is a new post needed or is it sufficient
- Is an additional confirmation sign needed?
- Vandalism prone areas, and solutions required
- Sign clutter – are the signs appropriate
- Vegetation encroachment – seasonal changes

- Is road marking more appropriate than a sign?

It is useful to record more information on site rather than less, as this best prevents that the site needs to be revisited. Photos should be taken from various angles to allow viewing the whole site from the office. Take photos at different zoom levels, and use bikes or people for scale.

Surveys need adequate time to write up and analyse. Depending on complexity and experience, a day on site will probably require several days in the office to sort out data and develop conclusions from the survey. Surveys that are not followed up by an implementation stage of the outcomes may be useless.

Appendix D contains typical sign surveying outcomes.

8. Appendix A - Overview of signs

Direction Signs

Direction sign with arrow	Pointing direction sign	Route confirmation	As 2601.1	As 2602.1
2601.1	2602.1	2602.2	2105.1	2106.1

Cycle paths and shared use

Cycles route only	Cycles and pedestrian route only	Cycles and pedestrian route only	Cycle and bus route only	Pedestrian zone (cycling not permitted)	Pedestrian zone (cycling permitted)
955	956	957	953	618.2	618.2








Homezones

Homezone starts	Homezone ends	Northern Ireland only - Homezone
881	882	544.1


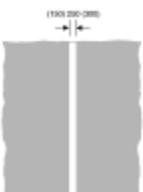

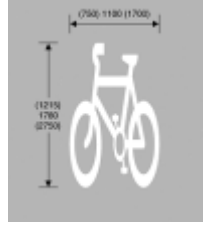
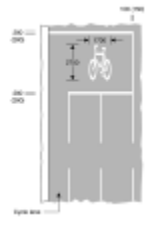

Parking, warning and temporary signs

Cycle parking	Warning of cyclists	Warning with particular note	No cycling	Temporary sign
966.1	950	950 with 950.1	951	7018.1







Signs not recommended

	 				
Cycle route	Cyclists dismount	End of route	Time restrictions for routes	Cycle route across junction	End of cycle lane, track or route
967	966	965	961	2601.2	1058


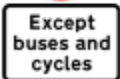



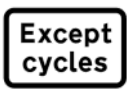



Road markings

					
Cycle and bus route only	Mandatory cycle lane	Advisory cycle lane	Cycle route	Advanced stop line	Elephant footprint
1048.4	1049	1004	1057	1001.2	No number

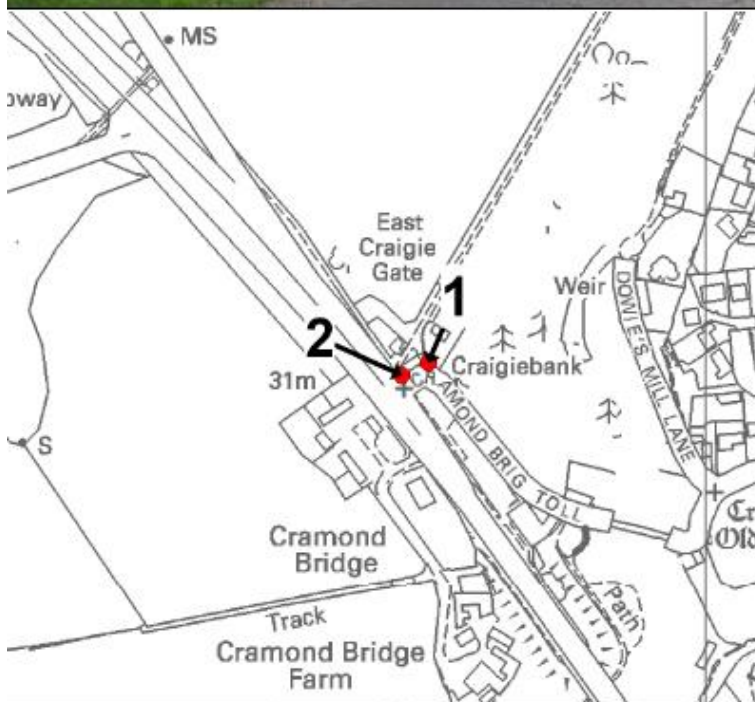
Cycle Lanes

					
Cycle lane	Start of cycle lane	Contraflow cycle lane	Warning of cyclists for pedestrians	Cycle route across junction	Warning of cycle lane for motorists
959.1	958.1	960.1	963.1	2601.2	962.1

Entry only permitted to cyclists

 	 	 	 	
No right turn except cycles	Left turn only expect cycles	No through road except cycles	No entry except cycles	No motor vehicles
612 with 954.3	606 with 954.4	816 with 954.4	616 with 954.4	619

9. Appendix B – Example signing schedule



Site ID: 1

Sign ID: 1

Notes: Install sign directly beneath existing caution sign

10. Appendix C - Examples of sign ordering sheets

To order signs, use the sign material specification (section 4.5 of signing guidance) and the tables below.

10.1. Direction signs

The table below can be used for diagrams 2601.1 and 2602.1. Both diagrams can be used with or without text, and with a combination of user symbols and route numbers. Diagram 2602.1 can only point right or left, whereas diagram 2601.1 can point in all directions. Typically three lines or text are used.

[illegible]

10.2. Confirmation signs

Confirmation signs diagram 2602.1 can be ordered with a combination of user symbols and route numbers. Arrows are not shown.



Diagram 2602.1

Reference	How Many	X - height	Horse symbol	Main route number	National / Regional	Other route number (in brackets)	National / Regional	Cycle symbol	Pedestrian symbol
Example above	1	25	--	14	National	--	--	Yes	--
						--	--		
						--	--		

10.3. Other signs

Other cycling signs usually have a limited range of options and the table below is suggested to be used



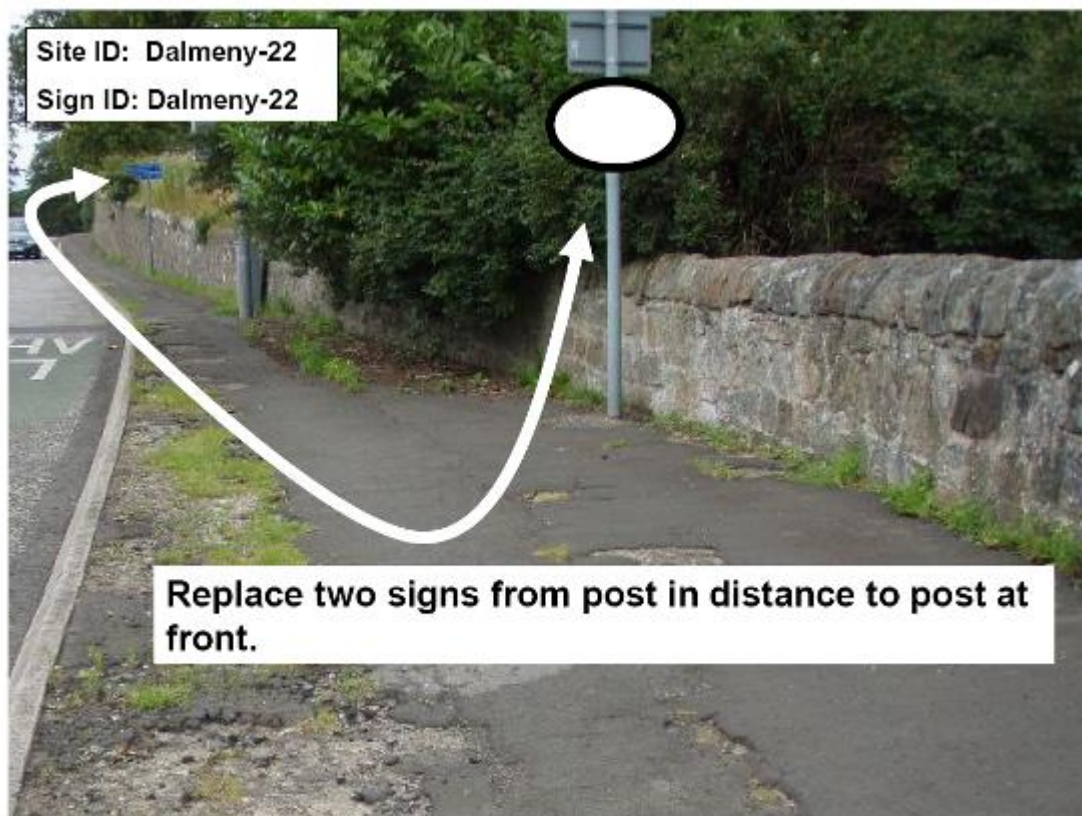
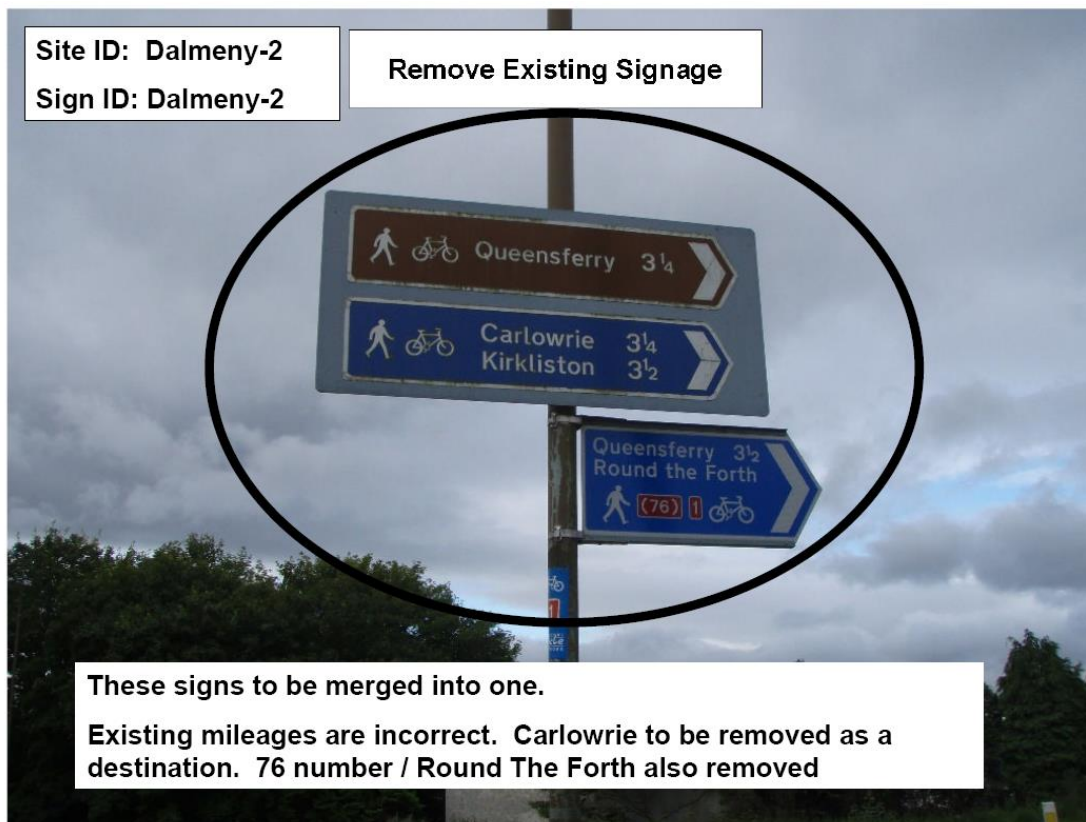
Example diagram 950 with 950.1

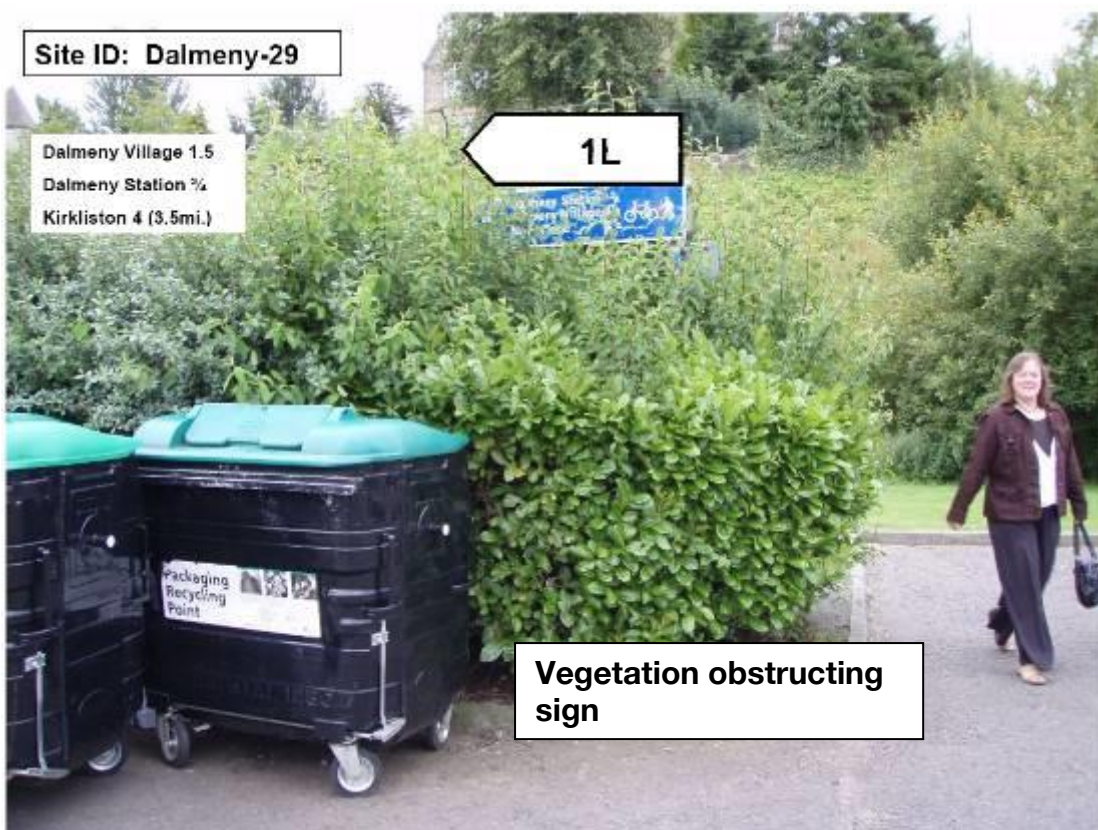
Reference	Diagram number	How Many	Dimension	Comment
Example above	950	1	300mm height	--
Example above	950.1	1	X – height 30mm	Text: Child cycle tests

11. Appendix C – Sample sign surveying sheet

[illegible]

12. Appendix D – Sign surveying outcomes





13. References

HMSO (2002) Traffic Signs Regulations and General Directions 2002
<<http://www.opsi.gov.uk/si/si2002/20023113.htm>>

HMSO (2006) Traffic Signs Manual 2006 <<http://www.dft.gov.uk/pgr/roads/tss/tsmanual/>>

Sustrans and Ove Arup & Partners, 1997, The National Cycle Network: Guidelines and Practical Details, Issue 2 <<http://www.sustrans.org.uk/default.asp?slD=1100529418828&pID=>>

Transport for London, 2005, London Cycling Design Standards
<http://www.tfl.gov.uk/cycles/company/standards.shtml>

Sustrans Ranger Handbook – available from Sustrans <www.sustrans.org.uk> Tel: 0845 113 00 65
Email: info@sustrans.org.uk

Sustrans *Sustrans Good Cycling Code* Information Note FF15.
<<http://www.sustrans.org.uk/webfiles/Info%20sheets/ff15.pdf>>