

Direction Signing on the National Cycle Network

Introduction

This information sheet has been prepared to provide assistance for people involved with signing sections of the Network and links to or away from it. In particular, it offers guidance on:

- the recommended standard of signs
- the signs required and where they should be located
- reviewing newly signed routes
- the monitoring and maintenance of signing.

National Cycle Network and Signing

The National Cycle Network is a comprehensive network of safe and attractive places to cycle throughout the UK, comprising of both National and Regional Routes.

10,000 miles of National Route, together with numerous links have been completed. One third of these routes are traffic-free paths, while the rest follow quiet lanes or traffic-calmed roads. The National Cycle Network is co-ordinated by Sustrans, with the support of over 450 local authorities and other partners.

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 to make up the Network.

The attractiveness and utility of a route 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 the Network. One missing sign can result in cyclists ending up on very busy roads and could put them off cycling forever.

Visitors need to have confidence that they will not get lost, and should be able to follow the route – in either direction – without needing a map.

Clear signing towards and away from a network is as important as the signing along the network itself.

Signing also advertises the presence of cyclists to other road users and advises them that there is an alternative to using the car.

Direction Signs

It is essential, at frequent locations along the route, that signs include key destinations and distances, and there should be consistency in the destinations selected. Ideally, two main destinations should be shown, showing locations close by (see figures 1 & 2). Typically, these will be the next village and town. Care may be needed to avoid erecting these in locations where they might encourage car drivers to follow the Network as a scenic route to their destination. In Wales, bilingual versions of signs should be used (see figure 3).

The common ingredients of all National and Regional cycle route signs are the bike symbol and route number. These are directional, with the route number patch behind the bicycle (as if it were a trailer) or immediately below. National Routes use a red route number patch, in contrast to a blue patch for Regional Routes. In the case of an overlap of a Regional and a National Route, both a red and a blue patch appear



Figure 1: Clear destinations at Slochd summit



Figure 2: Eastbourne seafront



Figure 3: Good example of a bilingual sign at Bedwas, South Wales



Figure 4: Dartford, showing local destinations on and away from the route

Sustrans is the UK's leading sustainable transport charity and works on practical projects to encourage people to walk, cycle and use public transport to benefit their health and the environment.

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Direction Signing on the National Cycle Network

on the sign. Self-adhesive number patches may also be added to existing cycle route signs where there is room to do so within the design rules. However, it will usually be necessary to replace these signs in due course. The use of double-sided signs at junctions on the route will inform users not already on the National Route that they can join it. In addition, end mounted signs all fixed at the same level generally look neater than face fixed signs, whilst making little difference to the overall cost.

Signs for the National Cycle Network are included in the DfT Traffic Signs Regulations & General Directions 2002 (TSRGD 2002) ⁽¹⁾. The key diagrams are 2105.1, 2106.1, 2601.1, 2602.1, 2602.2 and permitted variant schedule 16 item 27. One-off signs should be designed in accordance with 'The Traffic Signs Manual', Chapter 7 ⁽²⁾.

The size of a sign is determined by its 'x-height', which is the height of the lower case letter 'x'. At on-road locations an x-height of 35mm is likely to be necessary for simple National Route direction signs, to ensure that the signs are visible. Where destinations are included, and hence the sign larger, a smaller x-height may be acceptable. A number of authorities have successfully used an x-height of 25mm which is less obtrusive, particularly on traffic-free routes (see figure 5). Placing the logo and route number beneath the destinations will reduce the sign size. Care needs to be taken to ensure that the signs are large enough to be clearly visible to potential users of the links at the speeds that they may be travelling, otherwise their effectiveness is compromised. Further details are shown in the National Cycle Network Guidelines ⁽³⁾, or Sustrans' Traffic Engineer can assist with the development of a signing scheme.

It should be noted that the cycle symbol and the number patch are not recognised as tourism symbols and should not be used on brown signs.

Link Signing

Links are an essential component of the National Cycle Network and extend its reach. Links of a particularly high standard are treated as an integral part of the National Route itself, giving access to a wide range of local destinations.

If the link is traffic free, the pedestrian symbol should be included on signing positioned behind the bicycle (and route number patch if appropriate) (see figures 6 & 11).

Towards the National Cycle Network

Signing towards the National Cycle Network should show a local destination that can be safely and effectively reached using the National Cycle Network. It can also be of benefit to include the local route name as a destination itself (see figure 7 & 11). Where a local name does not exist, the National Cycle Network itself can be included as a destination. The bicycle symbol with the National or Regional Route number patch behind it should be included with the route number in brackets, in accordance with TSRGD 2002 (see figure 8). Where the link to a National Route coincides with a Regional Route, the Regional Route number in a blue patch should be included as well as the National Route number in brackets in a red patch (see figure 10).

Away from the National Cycle Network

The signs should include useful local destinations such as community centres, schools, stations, shops or attractions (see figures 6 & 15). It is important that local knowledge is used to select destinations. The bicycle symbol should



Figure 5: Small 'x-height' on National Route 11, Coe Fen, Cambridge



Figure 6: Sign showing local destinations away from National Route 4, Goose Green



Figure 7: Sign towards the Exe Cycle Route and National Route 2, Exeter



Figure 8: Link sign to National Route 3

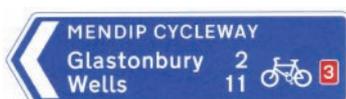


Figure 9: Diagram 2602.1, TSRGD 2002



Figure 10: Example of a sign on Regional Route 10 linked to the Bristol to Bath Railway Path, National Route 4



Figure 11: Example of sign on a shared path linked to the Cuckoo Trail, National Route 21

be used without a route number patch unless the link is also a regional route, in which case the relevant blue route number patch should be included. Confirmation signs could just use an abbreviated destination such as 'School' in order to reduce the sign size.

Signs at the Junction of a Link and National Route

At junctions, it is particularly important that the public know which way to turn along the main route, or if travelling along the main route where to turn off for their destination. At these junctions finger posts are particularly appropriate, where destinations and distances should be given (see figure 12).

Joint Signing

Where a National Route coincides with an existing signed cycle route, joint signing should be developed to cut down on sign clutter.

In the cases of the Trans Pennine Trail and the National Byway, the DfT agreed a set of joint signs incorporating the Trail logo. The inclusion of any logo still requires authorisation. In the case of joint signing with the National Byway, the signs should be blue (see figure 13).

Locating Signs

Along all routes, care must be taken to ensure that satisfactory signing is provided in both directions. 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. 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. 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. 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 (see figure 15).

Signs should be designed and erected in a way that will not require constant maintenance. They should be fixed at the same height as general traffic signs in such a way that they cannot be easily rotated, hit by passing vehicles or vandalised, either by using square poles or inserting self-tapping screws through the bracket into the pole. These have been successfully used on the Network in many locations, such as in Northern Ireland, Derby and East Sussex (see figure 16).

Signs fixed to round posts should be secured with anti-rotational clips, so that they cannot be turned.

On-road Routes

On-road direction signing should generally be provided at each junction where there is a change in direction, where cyclists using a route have to give way, or where there is possible ambiguity. In addition, advance direction signing should be provided on the approach to a junction where the National Route turns off the main route – this is particularly important where a right turn is involved (see figure 17).

A continuity sign just past a junction will both confirm the route to users and assist cyclists joining the route. It will not normally be necessary to sign the route at every side road it passes. On stretches of route with few junctions, additional continuity signs should be considered, approximately every 1.5km in rural areas and much more frequently in urban areas. In remote rural areas, it may be appropriate to extend the spacing of continuity signs up to 5km, using existing poles wherever possible (see figure 18). In urban areas, consideration should be



Figure 12: Clear sign at junction of two routes, Portbury



Figure 13: Joint National Cycle Network and Byway sign, Dumfries



Figure 14: Continuity sign on the Celtic Trail, National Route 4, St. David's



Figure 15: Example of a junction sign, in a rural area, National Route 3. Note: it is always best to include distances as well as destinations



Figure 16: Sign using square pole, Northern Ireland

Direction Signing on the National Cycle Network

given to affixing signs on lamp columns, with the prior agreement of the Highway Authority, to ensure continuity. Self-adhesive versions of these signs have been successfully trialled in Leicester (see figure 19).

The opportunity should be taken to rationalise existing signing in the process, so as to minimise sign clutter. The most effective way to minimise clutter is to incorporate cycle signing into highway signs, as shown in TSRGD 2002 Diagrams 2105.1 & 2106.1.



Diag. 2105.1, TSRGD 2002

If the signing is being rationalised, it is possible to use the more attractive traditional finger post signs to show both cycle and road information (see figure 21). This type of signing is particularly suitable where a number of cycle routes converge.

Carriageway signs should normally be set back to give a clearance of at least 450mm from the edge of the carriageway. The best level to fix a sign in the verge for visibility is between 900 and 1500 mm, although care must be taken not to obstruct visibility splays with low level signs. Mounting a sign at this level also reduces its visual intrusion. However, where signs are erected on footways and transverse to them, the mounting height should allow a minimum of 2.1m clearance for pedestrians and 2.3m for a cycle track. Mounting heights should also have regard to possible vandalism/theft.

Traffic-free Routes

For routes free from motor traffic, the signing of junctions and access points should follow similar principles as for on-road junctions. However, x-heights should not normally be greater than 30mm. Routes that form part of a network of paths, such as those through forests, demand careful attention to signing and will have a higher frequency of signs than a simple linear route, both to direct and reassure cyclists and other users. On a multi-use path where there is already a

high pedestrian use or where this is expected, the pedestrian logo should generally be included on the sign. Where a path is signed as shared use (diagrams 956 or 957)⁽¹⁾, the number patch can be added beneath the sign. If new posts are required, it is often better to use short, substantial square section timber posts with smaller signs fixed to them (see figure 22).

In sensitive areas, abbreviated signs may need to be used, in which case at the entry points to these areas, clear signs need to be erected indicating what symbol or logo the user should follow.

Signs should normally be erected on existing posts. In areas where there is difficulty in finding suitable locations for conventional signs, occasional use of more novel approaches should be considered. Throughout, the cycle symbol and route number should be retained. The same symbol and number should be included on information boards, bollards and elsewhere.

Surface 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.

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 (see figure 23). A similar system is also in use in parts of London.

Carriageway markings may also be useful for guiding cyclists through complex junctions and residential streets in urban areas. More use should be made of Diag. 1057 without lane markings, but with occasional use of sign to Diag. 967 to let vehicle drivers know they are on a cycle route.

Surface markings can also reduce both sign clutter and vandalism, and have been successfully used in Swindon with full colour markings used on traffic free routes (see figure 24).



Figure 17: Sign in advance of junction, Shropshire



Figure 18: Continuity sign using existing pole, Carrbridge



Figure 19: Example of self-adhesive continuity sign



Figure 20: Existing junction sign with added route direction

The London Cycling Design Standards ⁽⁴⁾, Section 6.4, gives good advice on this subject.

Putting Up Signs

Only the Highway Authority has powers to erect signs on the public highway, which it can do directly or through an approved contractor. Elsewhere, signs may be erected by another party with the permission of the landowner. Sustrans volunteer Rangers are working closely with local authorities to assist in the signing and maintenance of all Network routes.

When a new route is to be signed, a sufficient lead in time should be allowed to ensure that all parties have signed their section of route prior to the official opening, with particular reference to the timescale required by the Highway Authorities. To achieve this, the signing schedule should be drawn up at least three months before the opening date, to allow time for sign design, manufacture and erection.

Signing Schedule

It is usual for the Highway Authority to compile a schedule of the signing required along a route. This will specify the position, orientation, mounting height, size and fixing method of each sign, incorporating diagrams, drawings and detailed notes as required. This will be used when the signs are erected and can be useful for subsequent checking of the signing along a route. A sample sign schedule is available from Sustrans.

The route will need to be signed in both directions. We recommend that, wherever possible, the full signing schedule be compiled with the route being travelled in both directions, as it is easy to omit or mislocate signs facing “the other way”. Ideally this should be undertaken on a bicycle, but the use of a car may be necessary on longer rural routes.

Review Of Signing

When a route is initially signed, it is vital to check that the signs have been erected as specified and any corrections made. We strongly recommend that the adequacy of the signing then be reviewed in both

directions with the assistance of the local Sustrans volunteer Rangers. This independent assessment by a cyclist may pick up aspects of the signing that should be improved. It is also useful to use someone who is not familiar with the route, who might identify gaps in the signing.

Monitoring and Maintenance

It is essential to establish at the outset who is responsible for the maintenance of signing on each section of the route. Maintaining the continuity of signing is vital, and a route needs to be regularly monitored to identify missing or damaged signs. Local Authorities will seldom have the resources to undertake this. This work lends itself to enlisting the assistance of the Sustrans volunteer Rangers, with individuals or groups taking on responsibility for specific sections of route (see figure 25).

Sustrans has a fault reporting system for volunteer Rangers, which can cover route faults as well as missing signs. Rangers fill in the fault form, send them to the Local Authority and copy them to the local Sustrans manager. This provides a regular update on the state of the route and in particular the signing. Rangers are asked to put up temporary signs until the Highway Authority can replace the original or install a new sign (see figure 26).

A full schedule of all standard signs available to Sustrans volunteer Rangers together with the guidance issued to them can be obtained from the Sustrans Ranger Team at rangers-uk@sustrans.org.uk

Other Opportunities

Mileposts and Waymarkers

As well as formal direction signs, there will be other opportunities for marking the route such as mileposts and information boards. One thousand cast iron mileposts, incorporating the route number, have been erected throughout the Network, which are maintained by local residents, schools and Sustrans volunteer Rangers.



Figure 21: Integrated signing in Cumbria



Figure 22: Confirmation sign fixed to a timber bollard, National Route 45



Figure 23: Road marking on National Route 3, Bodmin Moor



Figure 24: Preformed thermoplastic marking on traffic-free section of National Route 45, manufactured by Preformed Markings SW



Figure 25: Volunteer Ranger removing graffiti on the C2C, National Route 72

Information Boards

Map-based information boards should 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 (see figure 28). These boards should be positioned so that the orientation is the same as the direction of travel. There is also scope to erect weatherproof perspex leaflet holders which can hold local leaflets or other information.

Temporary Destination Signs

Sustrans volunteer Rangers recognise the considerable difficulty of adequately signing the myriad of detailed destinations, which make up the everyday journey. At a local level, they are able to put up temporary destination signing of the type shown here (see figure 29). These are very often on traffic-free routes. The small destination detail is intended as information for local people who do not yet use the route, and may be encouraged to do so if they realise it goes to local popular destinations. This is a low cost intervention that can assist local authorities in deciding if a more formal sign is needed.

We are grateful to all those who have contributed to the development of this document and welcome further comments which should be addressed to the technical department at Sustrans.

References

1. HMSO, 2002, Traffic Signs Regulations and General Directions (TSRGD) 2002
<http://www.opsi.gov.uk/si/si2002/20023113.htm>
2. Sustrans and Ove Arup & Partners, 1997, The National Cycle Network: Guidelines and Practical Details, Issue 2
<http://www.sustrans.org.uk/default.asp?siD=1100529418828&pID=>
3. Institution of Highways & Transportation, CTC, DOT and Bicycle Association, 1996, Cycle Friendly Infrastructure: Guidelines for Planning and Design
<http://www.iht.org/publications/technical/cyclefriendly.asp>
4. Transport for London, 2005, London Cycling Design Standards
<http://www.tfl.gov.uk/cycles/company/standards.shtml>
5. DOT & Welsh Office, 1987, Signing of Cycle Facilities, Local Transport Note 2/87.
6. DfT, Department for Regional Development (Northern Ireland), Scottish Executive, Welsh Assembly Government, 2004, Traffic Signs Manual, Chapter 4 (Warning Signs)
http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_610049.pdf
7. DfT, Department for Regional Development (Northern Ireland), Scottish Executive, Welsh Assembly Government, 2003, Traffic Signs Manual, Chapter 7 (The Design of Traffic Signs)
http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_610052.pdf
8. Sustrans, 2003, Signing Links to the National Cycle Network: Guidance for Rangers.



Figure 26: Sustrans volunteer Ranger erecting signing on traffic-free section of National Route 4



Figure 27: Traditional style sign with destinations away from the route, Radstock



Figure 28: Integrated information board on the Colliers Way, National Route 24



Figure 29: Temporary destination sign, National Route 72

Further information

For further information on the National Cycle Network, visit www.nationalcyclenetwork.org.uk, or call the Information Line on **0845 113 0065**