

## Chapter 3 - Route Planning Criteria

### General

It is an aim of the National Cycle Network that there should be a consistent high quality of provision throughout. This does not mean that the design of cycling facilities should be uniform, as clearly the route along a forest track will be quite different from that along a town road or a canal path. However, it is important that there is a consistency of approach, so that, for example, a broadly similar approach is adopted for all forest tracks, both within individual sections and for sections in different parts of the country. The over-riding principle is to achieve high quality standards, to suit the needs of users, while aiming to improve the local environment.

Since the National Cycle Network is aimed at attracting people who do not currently cycle, they are not likely to ride as fast as the experienced urban cyclist. Route designs are not, therefore, based on a high cycling speed, although a higher standard should be adopted where the Network coincides with local commuter networks.

A lesser quality of provision than set out in this guide is unlikely to be successful and it is a basic aim that the National Cycle Network should set an example of excellence in its particular area. The quality of these routes should make clear the status of cycling as a form of transport favoured by the authorities, and in some cases more welcome than motor traffic.

### Network criteria

The design criteria for a cycle route can be summarised by five qualitative evaluations:-

#### Safety

A route that minimises dangers for cyclists, pedestrians and other users, and gives a feeling of security

#### Coherence

A continuous route with a distinct and identifiable National Cycle Network character, integrated with local roads and cycle paths

#### Directness

A route that is as direct and quick as possible

#### Attractiveness

A route that complements and enhances its environment in such a way that cycling is attractive

#### Comfort

A route that enables a comfortable flow of cycle traffic and is easy to use.

These criteria were first set out in the Dutch guidelines "Sign Up For The Bike" by CROW. The CROW manual deals mainly with urban networks in a country where cycling is much more common. The criteria can be expanded and adapted for the National Cycle Network as follows:

## Safety

Safety for cyclists is largely dependent on the flow and speed of motor traffic. At low flows and low speeds, cyclists and motorists can share road space with no significant danger. As flow or speed increases conditions become increasingly unpleasant and dangerous, requiring measures to restrain motorised traffic. The designer must judge whether traffic speed and/or flow can be satisfactorily reduced by remodelling links and junctions, or demand management measures, or whether cyclists might benefit from segregation.

The designer should bear in mind that the inexperienced cyclist or family group will benefit from segregation from motor traffic at lower speeds and volumes than the experienced cyclist. A preliminary route survey should therefore assess the safety of links and junctions and the scope for safety improvements. Route alignment is also crucial - for example, a cyclist will encounter less risk in turning right onto a major road and then left off it, rather than the other way around.

Equally important is the safety and convenience of other non-motorised travellers - walkers, wheelchair users and horse-riders, who may be able to benefit from the development of a particular part of the National Cycle Network. Careful discussion will help to fine-tune the proposals for maximum benefit to all.

Good design of segregated routes should also take into account the personal security of the user. with good sightlines, lighting where appropriate and the provision of a spacious and inviting environment where the traveller can

feel at ease. It should be remembered that popular and well-used routes generate their own informal surveillance which helps to give confidence to diffident users.

## Coherence

The key characteristic of a successful route is its continuity of design, of standard, of signing and most particularly at crossings.

With the publication of the Cycle-Friendly Infrastructure Guidelines and National Cycling Strategy it is possible to give clearer guidance on cycle priority at road crossings. Hitherto almost every cycle route has been fragmented at these vital points such that the route itself has been compromised and its attractiveness to cyclists severely affected. Wherever possible the National Cycle Network route should have priority over secondary roads in order to make clear the authority's commitment to encourage cycling.

In order to maximise its usefulness, the National Cycle Network needs to link seamlessly to local cycle networks and other roads used by cyclists. Good links to public transport, particularly rail, are also very important, both for long-distance cycle carriage and for bike/train commuters.

## **Directness and convenience**

Where the National Cycle Network route forms part of a regular journey to school or the town centre, it should aim to be **shorter and quicker** than the comparable route for motorists, in order to encourage the public to cycle. This may be achieved by a combination of short cuts for cyclists, junction improvements and cycle priority, **together with traffic calming and restraint measures.**

Key measures include:

- gaps in street closures
- contra-flow lanes
- cycle access into false one-way streets
- advance stop lines
- turns at junctions permitted only to cyclists
- routes through the pedestrianised core of the town.

For cyclists to achieve quick and convenient door to door journeys the routes must reach right to the entrances of schools, places of work, shops, tourist attractions etc. Good quality and highly visible cycle parking will be needed, located within or immediately outside such destinations; at railway stations etc. there may be a requirement for secure long-term cycle parking.

Where a section of the network is more generally used for leisure and recreation, the attractiveness of the route and its qualities of freedom from traffic and avoidance of unpleasantly steep hills may be more important criteria than directness.

Unduly circuitous routes should be avoided however, especially where the route could be considerably shortened by implementing a crucial new feature or measure.

## **Attractiveness**

A National Cycle Network route has the function of convincing the public that cycling is a pleasurable experience, as well as a safe, convenient, attractive and healthy one! To this end it should pass interesting places, including major tourist attractions, and its route should give a variety of views and experiences.

In some cases landscaping measures will be appropriate. In urban areas streets are much enhanced by avenue tree planting and it would suit the quality and status of the National Cycle Network route if it were to be marked in this way.

Off-road routes in urban areas may be lit, but consideration should also be given to the way in which traffic-free paths can act as wildlife corridors and fingers of countryside running right into the town.

In rural areas thought needs to be given to routes offering winter and summer options - the latter being off-road routes, for example across the Marlborough Downs, which are perfectly serviceable in summer and perhaps more interesting from the tourist point of view than the minor road alternative. The latter can be used in wet weather when they are impassable.

Cycling is a social activity and where possible, provision should be made for cyclists to travel

two abreast. However, in recognition of the constraints of the UK built environment this may not always be possible in urban areas.

### **Comfort**

Paths for pedestrians and cyclists should be built of materials which remain hard and serviceable throughout the year. They should be laid to a camber or cross-fall to give proper drainage and a smooth riding surface.

Junctions should be convenient and easy to understand, and the cyclists passage across major roads simplified. Long uphill sections should be free from motor traffic wherever possible, and routes adjacent to main roads, with their fumes and noise, should be minimised.

### **Monitoring**

As with any major infrastructure project, use of the National Cycle Network needs to be monitored. Wherever possible, regular counts and interviews should be carried out. The resulting information can be used to make modifications, to justify additional works and to assist in determining the wider benefits of the National Cycle Network such as promoting low impact tourism.

### **Examples of Journeys**

These criteria need to be borne in mind when designing each part of any route, as well as its whole. Typical routes might consist of many components, as illustrated by the typical urban and rural journeys, and the urban route planning diagram shown on the following pages.

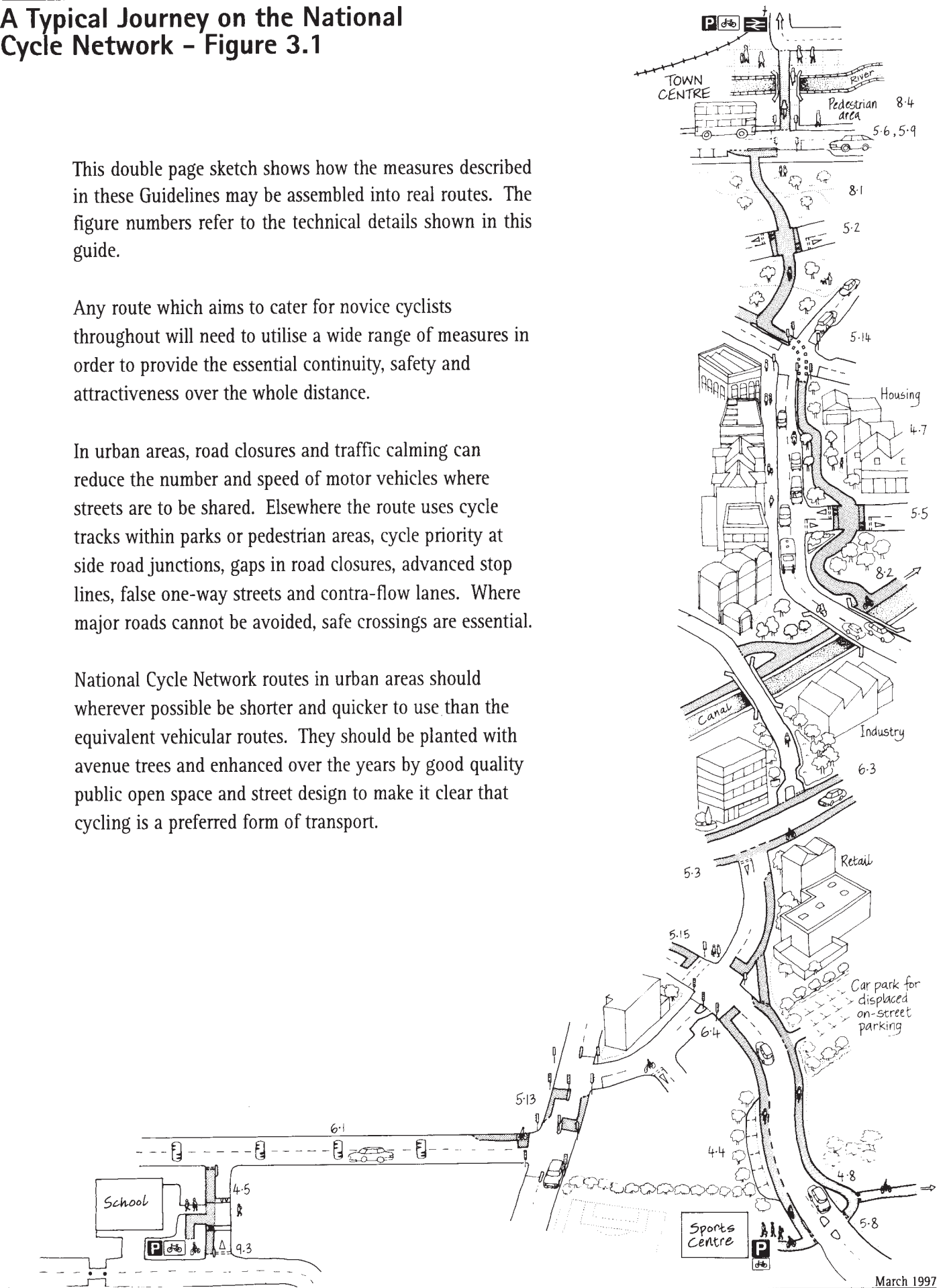
# A Typical Journey on the National Cycle Network - Figure 3.1

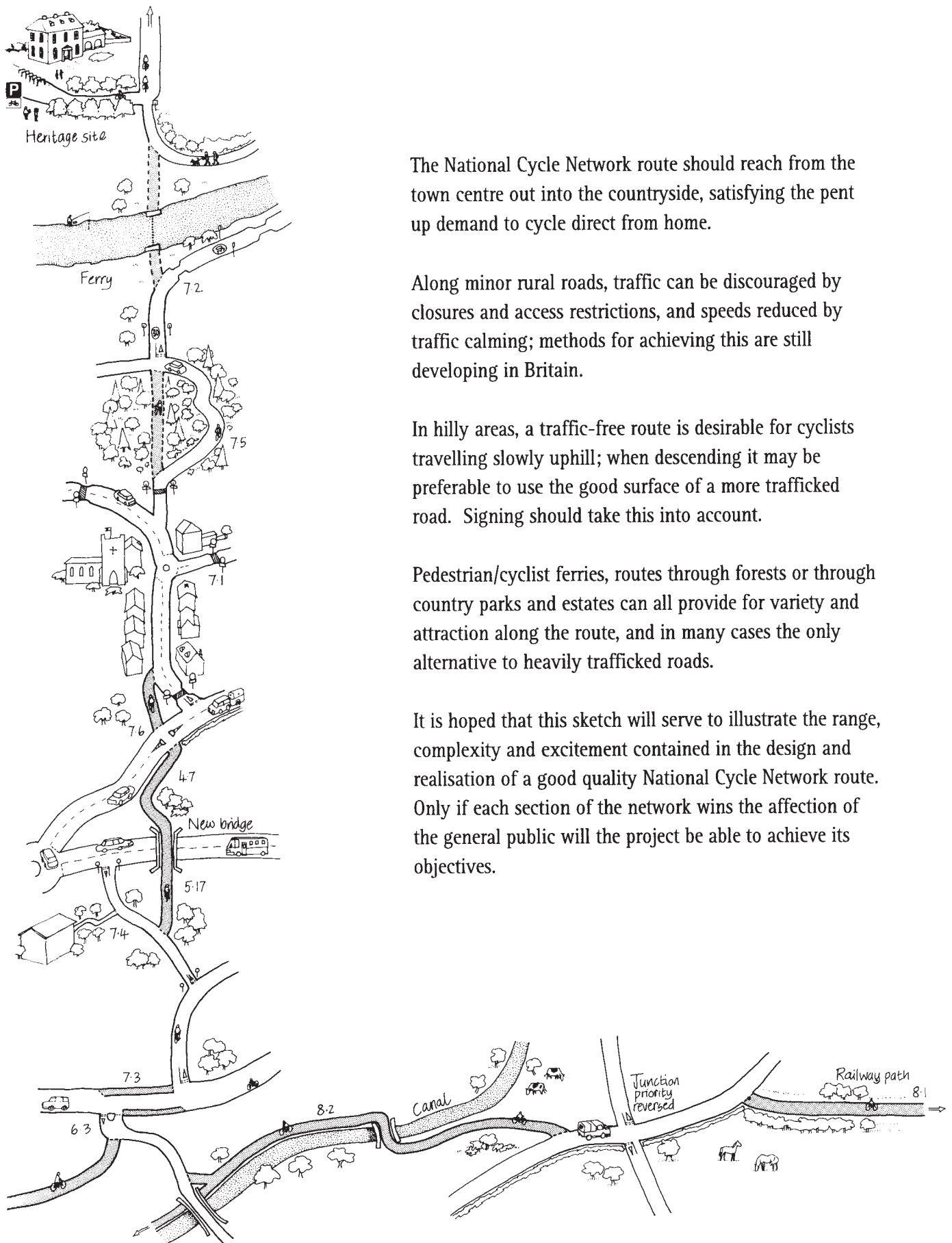
This double page sketch shows how the measures described in these Guidelines may be assembled into real routes. The figure numbers refer to the technical details shown in this guide.

Any route which aims to cater for novice cyclists throughout will need to utilise a wide range of measures in order to provide the essential continuity, safety and attractiveness over the whole distance.

In urban areas, road closures and traffic calming can reduce the number and speed of motor vehicles where streets are to be shared. Elsewhere the route uses cycle tracks within parks or pedestrian areas, cycle priority at side road junctions, gaps in road closures, advanced stop lines, false one-way streets and contra-flow lanes. Where major roads cannot be avoided, safe crossings are essential.

National Cycle Network routes in urban areas should wherever possible be shorter and quicker to use than the equivalent vehicular routes. They should be planted with avenue trees and enhanced over the years by good quality public open space and street design to make it clear that cycling is a preferred form of transport.





The National Cycle Network route should reach from the town centre out into the countryside, satisfying the pent up demand to cycle direct from home.

Along minor rural roads, traffic can be discouraged by closures and access restrictions, and speeds reduced by traffic calming; methods for achieving this are still developing in Britain.

In hilly areas, a traffic-free route is desirable for cyclists travelling slowly uphill; when descending it may be preferable to use the good surface of a more trafficked road. Signing should take this into account.

Pedestrian/cyclist ferries, routes through forests or through country parks and estates can all provide for variety and attraction along the route, and in many cases the only alternative to heavily trafficked roads.

It is hoped that this sketch will serve to illustrate the range, complexity and excitement contained in the design and realisation of a good quality National Cycle Network route. Only if each section of the network wins the affection of the general public will the project be able to achieve its objectives.

## Route Planning in Urban Areas - Figure 3.2

### Notes

1. It is generally acceptable to permit cyclists in vehicle restricted areas. See also Chapter 8.
2. The introduction of cycling within a pedestrianised area should be accompanied by an information/ education process to encourage considerate behaviour by cyclists, possibly with appropriate signing where conflicts may occur between pedestrians and cyclists.
3. Access to pedestrianised areas for cyclists may need to be restricted at certain periods of the day due to the high level of pedestrian activity. This will normally only need to be limited to peak retail periods, such as 11:00 to 15:00.
4. In areas of dense pedestrian activity and where bus lanes do not exist, segregated cycle tracks should be considered.
5. If there is 24 hour cycle access it is recommended that cycle parking be provided at the heart of the local area. Parking on the periphery may be more appropriate if there are time restrictions. Additional parking at points of interest or community facilities should be provided.
6. Routes for cyclists within urban areas should aim to be at least as direct as those for motor vehicles.
7. It is important that visitors to local areas are informed of facilities such as toilets, libraries and information centres, by locating maps at key points, such as next to cycle parking.

### References

1. Local Transport Note 1189 Making Way for Cyclists (S)
2. Local Transport Note 1187 Getting the Right Balance
3. Traffic Advisory Leaflet 9193 Cycling in Pedestrian Areas

### Examples

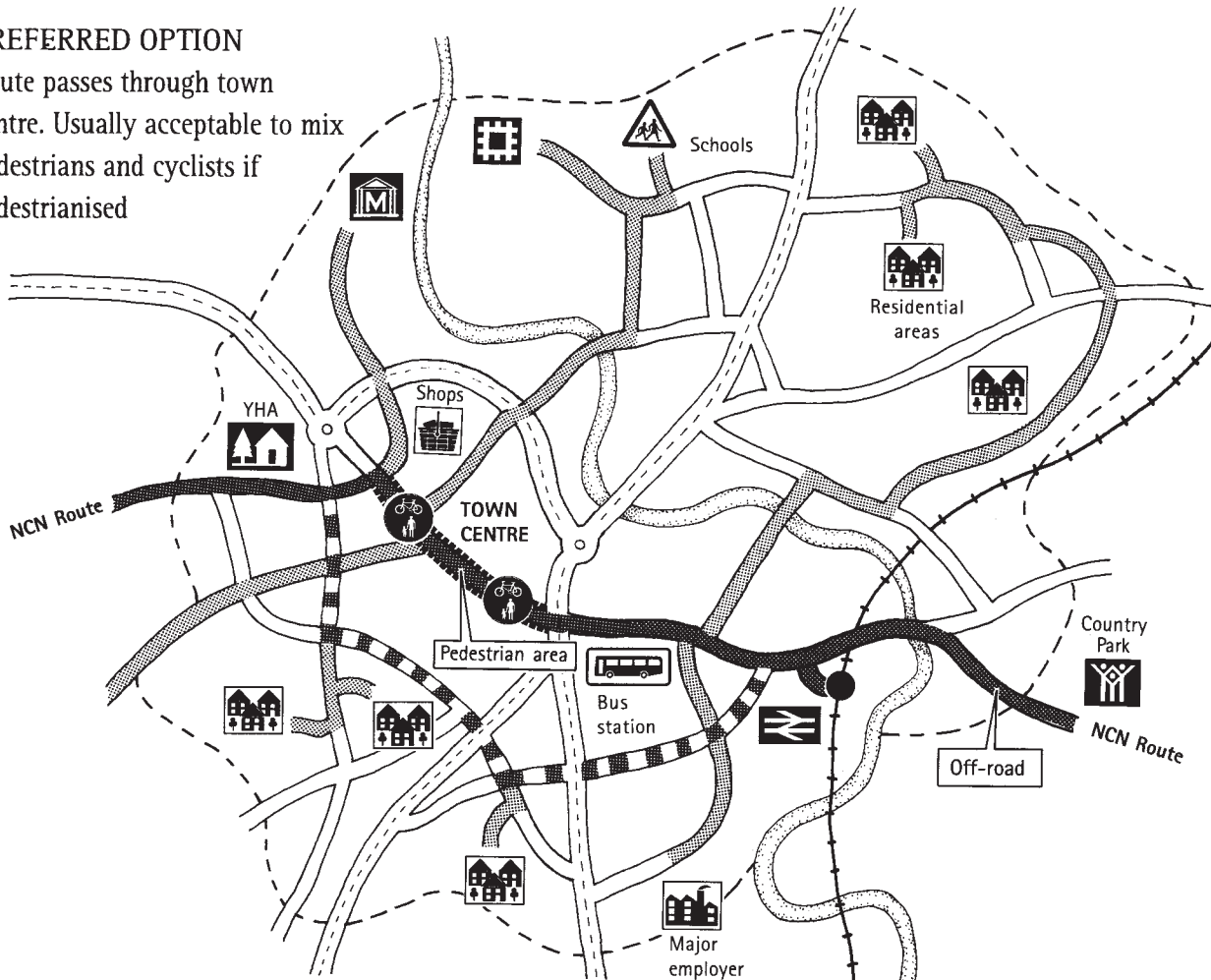
1. YORK: Pedestrian area in heart of the old city. This area is open to the cyclist during evening and morning peak commuting hours: before 11am and after 4pm Monday to Friday. The ban on cycling in the peak shopping period is well respected, not least since the volume of pedestrians makes progress by bicycle very slow. (York City Council)
2. BIRMINGHAM: Cycling is permitted on pedestrian streets, without special facilities, in particular New Street and High Street. Also cyclists may use Victoria Square and Chamberlain Square. (Birmingham City Council)
3. BRISTOL: East Street  
(Avon County Council)
4. CHICHESTER: West Street, South Street, Crane Street,  
North Street, East Street  
(West Sussex County Council)
5. MANCHESTER: West Nesley Street  
(Manchester City Council)
6. PETERBOROUGH: Bridge Street, Long Causeway  
(Cambridgeshire County Council)

## Route Planning in Urban Areas – Figure 3.2

The National Cycle Network route should link to the commuter network, tourist attractions, civic amenities, transport interchanges, schools and other main attractors. Cycle parking should be provided at all these locations.

### PREFERRED OPTION

Route passes through town centre. Usually acceptable to mix pedestrians and cyclists if pedestrianised



### ALTERNATIVE OPTION

Where the direct route through the centre is not feasible, then a close parallel route with feeders to the town centre may be appropriate

