

## C.01 Headroom

### Key Principle

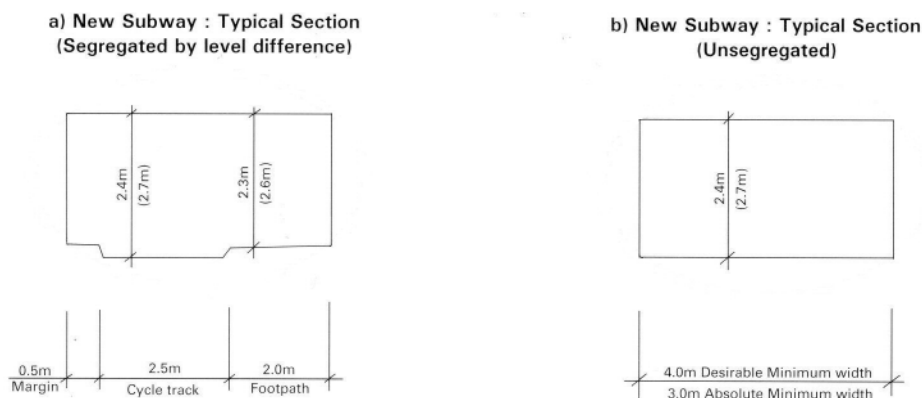
Headroom in new subways should be a minimum of 2.4m. Existing subways with lower headroom have been successfully converted to cycle use but should be risk assessed and warning signs added where appropriate (see also [A.15 Audits and Risk Assessment](#)). Signs should be mounted at least 2.3m above the surface of a cycle track.

### Design Guidance

#### Clearances for subways and signs

##### New subways

Guidance on the headroom required for new subways is given in *Design Manual for Roads and Bridges Volume 6, Section 3, TD 36/93* Highways Agency 1993 and is summarised in the diagram below:



Whenever new bridges are constructed over corridors catering for pedestrians or cyclists provision should always be made to accommodate the cross-section for segregation by level difference shown above left. Even if no cyclists currently use the corridor, this approach will ensure that the bridge does not present a barrier to providing for cyclists at a later date.

#### Manual for Streets:

6.4.11 The headroom over routes used by cyclists should normally be 2.7 m (minimum 2.4 m). The maximum gradients should generally be no more than 3%, or 5% maximum over a distance of 100 m or less, and 7% maximum over a distance of 30 m or less. However, topography may dictate the gradients, particularly if the route is in the carriageway.

In new-build situations where a balance of excavated and fill material can be achieved, consideration should be given to raising the road (in the case of subways) or lowering (in the case of cycle bridges) to minimise the approach gradients for cyclists.

### **Existing Subways**

The headroom in an existing subway, underpass or route under a structure will typically be a minimum of 2.3m. Existing subways with lower headroom have been successfully converted to cycle use but should be risk assessed and warning signs added where appropriate.

Any plans to convert an existing subway to shared use should take the following factors into account:

- a) A balance must be struck between the needs of existing users and those of cyclists. Existing users should not be unduly put at a disadvantage.
- b) The inability of the proposal to conform to accepted standards should not lead to its automatic rejection. A risk assessment might show that going ahead with the proposal is preferable to not doing so (see [A.15 Audits and Risk Assessment](#)).
- c) It must be fit for its purpose: it should be attractive to those who might otherwise have to use an alternative, potentially hazardous, surface route.
- d) It must represent an improvement in provision for cyclists if it is replacing an existing route.
- e) Consideration should be given as to how it acts as a link in any network.

### **Signs**

The minimum headroom under all signs which project above a cycle track is 2.3m. If large signs are placed across the full width of a cycle track, from a distance they can give the visual impression that they are lower than they should be. In these circumstances, the headroom may be increased to up to 2.7m. Increased headroom to signs is also useful if the area is prone to vandalism (see also [C.03 Signs](#)).

Signs should not create hazards for cyclists. Sign posts should not be sited within a cycle track. Existing cycle tracks should be reviewed to ensure that existing signs comply with these guidelines. Programmes should be introduced to remove or reposition signs and posts which do not comply. Where sign posts (or any other columns) cannot realistically be re-located outside existing tracks, it is essential that the hazards they represent are minimised. This could be achieved by making them highly visible using paint and/or reflective materials, or it might be done by moving the cycle track, for example.

### **References**

[TD 36/93 Subways for Pedestrians and Pedal Cyclists Layout and Dimensions](#) (pdf – 95kb) Design Manual for Roads and Bridges, Highways Agency 1993

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[\*Design manual for bicycle traffic\*](#) CROW 2007

[\*Manual for Streets\*](#) DfT, Communities & Local Government 2007

[\*Policy, Planning and Design for Walking and Cycling\*](#) – Local Transport Note 1/04, Public consultation Draft, DfT 2004

[\*Adjacent and Shared Use Facilities for Pedestrians and Cyclists\*](#) – Local Transport Note 2/04, Public consultation Draft, DfT 2004

[\*Traffic Signs Regulations and General Directions\*](#) DfT 2002

[\*Cycling England, Engineering, Picture Gallery\*](#) (pictorial examples)

[\*London Cycling Design Standards – A guide to the design of a better cycling environment\*](#) (Sections 3.4, 3.5, and 3.6) TfL 2005

[\*Lancashire - The Cyclists' County\*](#) (pdf - 5.45Mb) (Section 3) – creating pleasant road conditions Lancashire County Council, 2005

[\*CTC Benchmarking – Best practice case studies\*](#)

[\*Making Ways for the Bicycle\*](#), Sustrans, 1994

[\*National Cycle Network – Guidelines and Practical details, Issue 2\*](#) Sustrans 1997

### **Other references**

[\*Cycle Friendly Infrastructure - Guidelines for Planning and Design\*](#), Bicycle Association et al 1996