

C.10 Lighting

Key Principle

Off-road routes which cyclists are encouraged to use after dark should be lit. Note: Even lit facilities remote from passive surveillance are unlikely to be used and a lit on-road alternative should be identified. Consider the provision of floodlighting where cycle routes cross roads.

Design Guidance

Lighting should be provided on all routes where cycling can be expected after dark. Lighting helps users detect potential hazards, discourages crime and generally engenders a feeling of security and confidence amongst its users.

Manual for Streets:

10.3.2 Lighting may not be appropriate in all locations or contexts. However, if it is to be provided it should be of high quality ...

10.3.12 Over-lighting should be avoided. More detailed information is given in the [Guidance Notes for the Reduction of Obtrusive Light](#).

2.3.5 The choice of surface materials, planting and street furniture has a large part to play in achieving a sense of place. The excessive or insensitive use of traffic signs and other street furniture has a negative impact on the success of the street as a place. It is particularly desirable to minimise the environmental impact of highway infrastructure in rural areas, for example, where excessive lighting and the inappropriate use of kerbing, signs, road markings and street furniture can urbanise the environment.

Cyclists using two-way cycle tracks alongside unlit carriageways are likely to be blinded or dazzled by the lights of oncoming vehicles. Their presence may also confuse motorists on high speed roads who do not expect to see white lights on their nearside. These hazards can be reduced if the cycle track is kept as far away as possible from the carriageway edge. Where this is not practicable the signing of a suitable alternative route should be considered. The hazards can be avoided if cycle tracks are provided on each side of the carriageway, enabling cyclists to travel with flow.

As an alternative, consideration could be given to the introduction of flush solar powered road studs to mark the edges of the cycle track. Experience in Cambridgeshire has found these to be helpful in combating the effects of dazzle at 12m centres. Because the light the studs give out is directional the spacing should be tightened up at points such as bends, bollards and bridges. Red studs can be used to denote where it is necessary to give way. Away from the carriageway the distance apart has been increased to 36m centres to good effect. Supply and installation costs can be expected to be in the region of £60 each for 120 with the price falling in the case of larger numbers.

Where cycle tracks cross roads the lighting at the crossing point should be upgraded to match that provided for pedestrian crossings.

Dutch experience shows that cycle routes remote from natural surveillance, such as those across parks, will not be used after dark once user levels have fallen, even if lighting is provided. In these cases a lit, on-road alternative should be identified that matches the desire line as closely as possible and avoids heavily trafficked roads. It is not expected that routes outside the built-up area or those used primarily for recreation would be lit.



Signing of alternative route, Colchester

Picture: Tony Russell

Where cyclists may be expected on a carriageway at night high pressure sodium lighting (White SON) is preferred as this will provide more positive contrast and better colour rendition than other forms of lighting.

When determining what lighting to employ for cycle tracks away from carriageways the designer should consider:

- The need to install lighting
- Energy usage
- The visual impact of the lighting equipment
- Minimising light pollution, including consideration of switching off the lighting between midnight and 06:00 a.m.

The Highways Act 1980 section 65 (1) contains powers to light cycle tracks and technical design guidance on may be found in *TR23 Lighting of Cycle Tracks* Institution of Lighting Engineers (1998).

Subways should be provided with high intensity, vandal-resistant lighting. They should be lit at all times of the day and night.

Publications

[LTN 2/08 Cycle Infrastructure Design](#) DfT 2008

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

[Cycling by Design](#) Transport Scotland 2010

[TA 90/05 The Geometric Design of Pedestrian, Cycle and Equestrian Routes](#) (pdf - 261kb) Design Manual for Roads and Bridges, Highways Agency 2002

[Cycling England 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 ([part 1](#), [part 2](#)) – creating pleasant road conditions Lancashire County Council, 2005 (Section 3)

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

[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

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

[TR23 Lighting of Cycle Tracks](#) Institution of Lighting Engineers, 1998

[TR12 Lighting of Pedestrian Crossings](#) Institution of Lighting Engineers, 2007