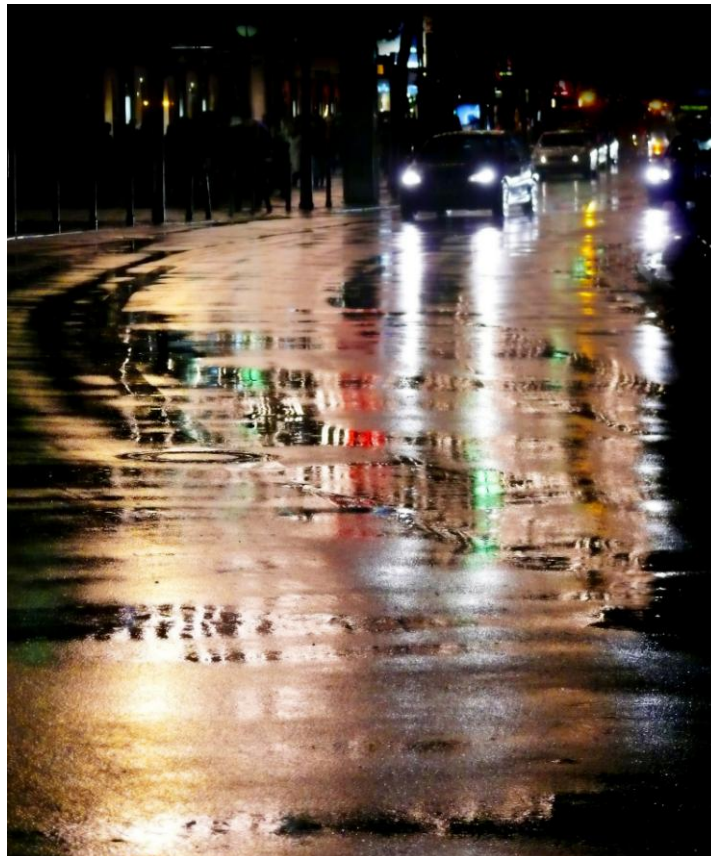


**Guidance Note on**  
**the Use of Traffic Signs,**  
**Lit and Retroreflective**  
**Bollards**



## **Guidance Note on the Use of Traffic Signs, Lit and Retroreflective Bollards**

The following is agreed industry guidance to assist clients, overseeing organisations, designers and contractors in deciding when and how to use lit and retroreflective bollards.

### **What legislation determines whether traffic signs should be lit?**

The Traffic Signs Regulations and General Directions (TSRGD) specify the format of traffic signs and when they should be lit (Schedule 17). Generally the following applies:

- Direction signs on local authority roads do not need to be lit (this applies generally to all non-motorway roads)
- Nearly all circular regulatory signs must be lit
- Safety critical signs (e.g. many triangular signs) must be lit

### **If I have to light traffic signs, what standard should I be using?**

The standard is BS EN 12899:2007. This specifies the luminance requirements that the sign must be lit to. Reference should be made both to the standard and the national Annex within that standard.

### **What legislation determines whether bollards should be lit?**

The Traffic Signs Regulations and General Directions (TSRGD) - Schedule 17 - applies where the bollard incorporates a traffic sign. BS EN 12899 together with the national Annex contained therein specifies classes and performance criteria of transilluminated bollards. In essence there is a difference in approach between bollards with a plain face - which are not considered to be traffic "signs" - and those containing a traffic sign (typically a "Keep Left" arrow).

Retroreflective self-righting bollards should conform to BS 8442:2005. If they incorporate a traffic sign, then they will require special signs authorisation, as they are not prescribed by the TSRGD (see below)

The TSRGD deals with the case of the traffic sign (eg diagram 610) mounted on a "traditional" bollard by saying that "where the sign is mounted in a bollard fitted with a means of lighting it internally, it shall be illuminated throughout the hours of darkness by that means of internal lighting". In other words, the means of illumination of the sign and the bollard must be one and the same. Just as the TSRGD does not permit differing methods of illumination of, say, signs and supplementary plates, it requires that bollards and any incorporated signs be illuminated by the same means.

### **If I have to light traffic bollards, what standard should I be using?**

BS EN 12899-2:2007 together with the national Annex sets out the illumination requirements for illuminated bollards (for example, if a bollard is to be used in city centres or areas of high ambient lighting this would be classified as L2 under BS EN 12899-1:2007 and that level requires a luminance of between 150 and 300 cd/m<sup>2</sup> and a uniformity of 1:3 or better). It should also be understood that all light sources suffer from lumen depreciation, so a maintenance factor needs to be factored in to the design in order that satisfactory lighting levels are maintained over the projected life of the installation.

### **Can I depart from the TSRGD?**

Currently the Department for Transport may consider the need for special authorisation arising from the proposed use of retroreflective self-righting bollards incorporating microprismatic retroreflective materials in locations where the TSRGD would require that a bollard be internally illuminated. The same is true of bollards incorporating LED displays.

Retroreflective self-righting bollards that incorporate a retroreflective traffic sign may be used in certain circumstances, and with certain conditions applied to their use, with special authorisation from the Department. Among these conditions is a requirement that a standard, high-level sign also be present, illuminated in accordance with the requirements of the TSRGD.

On the other hand, a retroreflective self-righting bollard that incorporates an illuminated traffic sign may be used anywhere that a transilluminated bollard can be used – but again this requires authorisation. The reasons for requiring authorisation are different – the TSRGD simply does not cover the situation where a sign is mounted on a retroreflective self-righting bollard.

Special authorisation can only be issued to a single traffic authority, by the DfT after receiving a request to do so. Authorisation is only granted after a product has been inspected by the DfT and approved for use. It is important to ensure that any product that is the subject of a special authorisation is fit for purpose. A number of local authorities are now able to use retroreflective bollards, and authorisations from the DfT have also been issued for LED bollards. It should be noted that no blanket authorisation has been issued.

### **If I do obtain special authorisation to use retroreflective self righting bollards, what standard should I be working to?**

Illuminated bollards are covered by BS EN 12899-2:2007 and retroreflective self-righting bollards by BS 8442. As with any other bollard, they may be erected by a Highway Authority under their general powers, so long as they do not incorporate a traffic sign. This would apply to bollards with white faces.

In a lit area, retroreflective self-righting bollards might be installed, for example, on islands with existing traffic control equipment (traffic signals or pedestrian signals) in situ. Where they are installed on islands without such equipment present, requiring the driver to be informed of a “Keep Left” or some other traffic sign requirement, then an illuminated traffic sign must be installed on a centre island post for approaching traffic.

For retro-reflective bollards, designers and specifiers should ensure that the Performance Index (P.I.) from BS 8408 is met. This will determine if the brightness of a reflective sheeting meets drivers’ needs. The P.I. is calculated for a particular traffic sign by taking into account all the geometrical factors and is dependent on the surrounding illumination level and the sign type. For regulatory and warning signs, the required P.I. is 1.0 in an unlit area and 3.0 in an area with street lighting.

It is essential that such bollards are kept clean through a regime of planned cleaning and periodic inspection and that damaged items are replaced promptly. Failure to keep such items clean could lead to the retroreflective covering being obscured through dirt, rendering it ineffective. This could lead to claims against the authority in the event of an incident. The same applies to damaged items where the retroreflective coating is affected (either through the position of the bollard or through damage to the coating itself)-

( It should be noted that once the bollard incorporates a roundel sign - ie diagram 610 or 611 - it, in effect, becomes a traffic sign and is covered by the requirements of the TSRGD).

BS EN 12899 referred to above is in five parts as follows:

|                 |  |
|-----------------|--|
| EN 12899-1:2007 | Fixed, vertical road traffic signs - Part 1: Fixed signs                             |
| EN 12899-2:2007 | Fixed, vertical road traffic signs - Part 2: Transilluminated traffic bollards (TTB) |
| EN 12899-3:2007 | Fixed, vertical road traffic signs - Part 3: Delineator posts and retroreflectors    |
| EN 12899-4:2007 | Fixed, vertical road traffic signs - Part 4: Factory production control              |
| EN 12899-5:2007 | Fixed, vertical road traffic signs - Part 5: Initial type testing                    |

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