

PROVIDING GUIDANCE TO MANUFACTURERS AND USER COMMUNITIES

GUIDANCE ON THE USE OF TEMPORARY BARRIERS WITHIN STREET WORKS AND ROAD WORKS



Introduction

Temporary barriers are essential elements of traffic management in the UK under Signing Lighting and Guarding requirements. They are used to warn and inform drivers and pedestrians about temporary changes to the roadway and to protect them from and guide them safely through these changes. They are also used to create safe work zones for personnel undertaking maintenance, repair and other important tasks near to moving traffic.

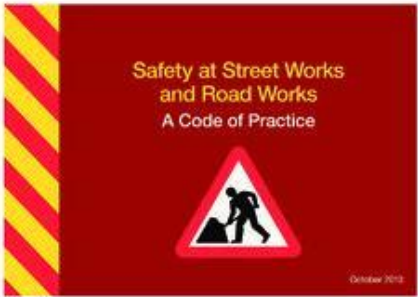
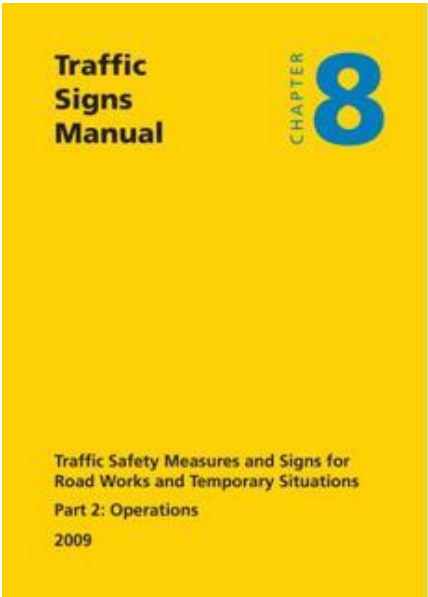
Any temporary barrier used for the purposes described in the Guidance should fully comply and be used as per relevant standards, namely The Traffic Signs Regulations and General Directions 2016, BS EN12899-1 (Reflective only), BS8442, Traffic Signs Manual Chapter 8, and Safety at Street Works a Code of Practice (The Red Book).

This Guidance does not specifically cover barriers intended for vehicle restraint. You are advised to check TSM Chapter 8 and other industry guidance on vehicle mitigation systems (referenced below).

Definition

Temporary Barriers deployed only for the duration of works being carried out on or near the highway and/or street works. They must be portable but must also be capable of being stabilised against wind (including that generated by passing vehicles) during the full duration of their deployment. Whilst appearing substantial, barriers deployed where they are at risk of vehicle impact should be of a construction that will not present a collision hazard (wooden or tubular steel rails are not acceptable).

Devices and Materials



The Traffic Signs Regulations and General Directions 2016 covers the regulations for all signage. The requirement for barriers is found at Schedule 13, Part 6 diagram 7105 - depicted below

8	Diagram 7105 Position of barrier to mark length of road closed to traffic or to guide traffic past an obstruction				4, 8
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BS 8442 requirements for barriers

Section 6.1 and Annex B confirm that barriers units – comprising barrier boards, tapping rails, supports and bases shall be constructed so as to allow the use of ballasting and the assembly support must be able to resist the wind speed class(es) for which it is designed.

The Traffic Signs Manual Chapter 8 Part 2 Requirements for barriers.

There are four basic types of barriers:

- Pedestrian Barriers
- Traffic Barriers
- Lightweight Barriers
- Vehicle Restraint Systems (Barriers)

Pedestrian barriers must include Red and white marking as per diagram 7105. Base supports should not protrude more than 300mm and any vertical edge should not be more than 25mm high. Temporary pedestrian routes should never be less than 1m wide and wherever possible should be at least 1.5m wide to ensure access for vulnerable users.

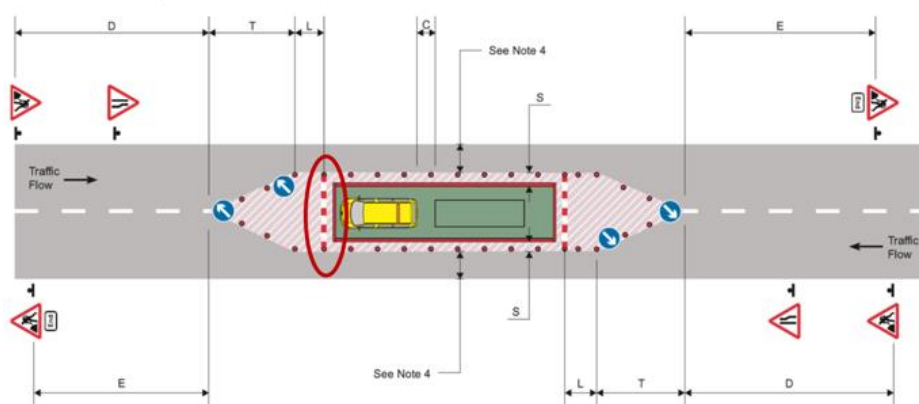


The barrier should be of sufficiently solid construction to guide the blind and partially sighted. In addition, the barrier should have a robust tapping rail at a height of approximately 150mm above ground level measured to the underside of the rail and a robust handrail at a height of between 1.0m and 1.2m measured to the top of the rail. In both cases the rail should be 150mm deep. The thickness and/or width will depend on the material and construction and will need to be as such to ensure sufficient strength.

Pedestrian Barriers alongside excavations greater than 300mm in depth in high duty areas should be able to withstand crowd pressure and be at least 300mm clear of the edge of the excavation. Barriers alongside excavations should be the subject of a risk-based assessment which may identify the need for more than one type of pedestrian barrier, or one system meeting several requirements.

Traffic Barriers are for guiding vehicles and indicating that a traffic lane or part of a traffic lane is closed. Traffic barriers for guiding vehicles past obstructions should be placed on the traffic side of the obstruction and should be red and White as per diagram 7105. The barrier should be placed between 0.8m and 1.5m above ground level. A Traffic only barrier need not include the tapping rail as pedestrians would not be in the vicinity. Traffic barriers are usually solo barriers standing at the end of the longways clearance and therefore will require additional weights to provide stability. In most cases however a pedestrian barrier will be used as these are generally of higher specification and have additional ballast options.

Works in the centre of a two-way road



Lightweight Barriers for delineating the inner edge of safety zones. Lightweight barriers may be used where there are no risks of pedestrians encountering the works or where there is a need to delineate the inner boundary of a safety zone. All elements of lightweight barriers should be sufficiently stable to withstand wind buffeting from passing traffic and to prevent any part being blown into the live carriageway or presenting a hazard to traffic. Expanding barriers and barriers incorporating steel or plastic mesh and similar material are acceptable provided they are placed continuously. Specially adapted cord or tape systems may also be used.

Vehicle Safety Restraint Systems (Barriers) – Guidance on temporary and permanent safety barriers is given in CD377 ‘Requirement for Road Restraint Systems’ and the Road Restraint Risk Assessment Process (RRRAP)

These barriers are not part of the signing, lighting and guarding requirements and are used in addition to any SLG requirements. Risk assessments must be undertaken when using any type of equipment for vehicle restraint products which should be tested to BS EN 1317.



In addition, Chapter 8 states that where sections of closed road used for works vehicle access and works areas (including working spaces), may need additional provision to control incursions, this will need to be passively safe and / or conspicuous and designed to restrain vehicles and not disable them. If the signing cannot be shown to be sufficiently unambiguous then the contractor may be liable for any injury or damage.

Safety at Street Works and Road Works

Individual barriers should be joined together to form a continuous barrier to the working space. Barriers should be joined in a way that resists tampering. If, through monitoring visits or in any other way, you find that barriers are being tampered with and separated, then you must take additional measures to secure the barriers, for example by the use of clamps or ties that require a tool for removal.

Wind classes are given in Table 2 of BS8442 (2022) Miscellaneous Road Traffic Signs and Devices – Requirements and test methods. Wind force should be calculated in accordance with Annex B (b.1) of that standard. Individual barriers or groups of barriers need to be capable of withstanding:

- England and Wales, Class C (8.7m/s) blowing from any direction
- Scotland, where a site is unattended for a period of 24 hours or more (including weekends), individual barriers or groups of barriers need to be capable of withstanding winds of Class B (17.6 m/s) blowing from any direction.

FORCE / WARNING	DESCRIPTION	CONDITIONS	mph	m/s	Km/h	BARRIER CLASS
0	Calm	Smoke rises vertically.	<1	<.45	<1	C
1		Not strong enough to affect wind vanes.	1-3	.45-1.3	1-5	
2	Light breeze	Wind felt on face.	4-7	1.8-3.1	6-11	
3	Gentle breeze	Leave & twigs in constant motion.	8-12	3.6-5.3	12-19	
4	Moderate breeze	Raises dust & loose paper.	13-18	5.8-8.0	20-28	
5	Fresh breeze	Small trees in leaf begin to sway.	19-24	8.5-10.7	29-38	B
6	Strong breeze	Large branches in motion, difficulty using umbrellas.	25-31	11.2-13.9	39-49	
7	Near gale	Loose objects displaced. Hazardous driving conditions.	32-38	14.3-17.0	50-61	
8	Gale	Minor damage to buildings & power lines with power outages.	39-46	17.4-20.6	62-74	
9	Strong gale	Several trees fallen with damage to buildings. Possible threat to life.	47-54	21.0-24.1	75-88	A (N/A)
10	Storm	Widespread power outages, danger to life, transport & events cancelled.	55-63	24.6-28.1	89-102	
11	Violent storm	Severe infrastructure damage. Danger to life, unsafe to be outdoors.	64-72	28.6-32.2	103-117	
12	Hurricane	Life threatening conditions, isolation of communities. Many routes impassible.	73>	32.6>	117>	

Ballast

Additional ballast weights can be added in a design that do not present a hazard to road users. Guidance as to the weight of ballast required to maintain stability in certain wind conditions should be available from the manufacturer which should be followed where provided. Any site setup should be compliant with BS8442 wind stability classes.



Further Information

[Road traffic signs, signals and road markings - GOV.UK](#)

[Safety at street works and road works - GOV.UK](#)

[Traffic signs manual - GOV.UK](#)

TMCA Guidance on Additional Measures for Determined Vehicles [Resources - TMCA](#)

ARTSM, WG2 September 2026

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