

BG800

REVISION REGISTER

Revision	Description	Date
1	Issued for use.	11/11/2005.
1 A	Supplier details amended	15/06/2012
1 B	Requirement for intermediate anchors added. List of terminals permitted added.	23/11/2012
1 C	Details for additional Owner / Supplier added. Conditions updated.	6/11/2018
1 D	Product Name changed. Owner / Supplier details updated. Product Manual reference updated. Barrier offsets amended.	11/03/2020
1 E	Updated conditions, terminals and manual.	9/08/2021
1 F	Updated conditions, terminals and manual.	14/10/2022
1 G	Absorb-M terminal clarified, ArmorBuffa terminal added, NCHRP 350 rated terminals removed, pavement types updated and use of radius sections clarified.	10/04/2026

BG800 is a portable steel barrier, which is anchored to the pavement at the ends (and at intermediate anchors if required) and is considered a semi rigid system that was developed for temporary applications.

BG800 was formerly known as BarrierGuard 800.

BG800 is approved for use in temporary applications.

BG800 may be considered for permanent installation. However, approval is required from MRWA Road & Traffic Engineering Branch prior to specifying this application.

Images:



Cross section

BG800



Photograph of Installation

Ownership:

Ownership
Highway Care 3 Bullace Lane, Dartford, Kent DA1 1BB, United Kingdom
Supplier
Ingal Civil Products 3 Temperley Close, Welshpool 6106 Ph: (08) 9358 9139 http://www.ingalcivil.com.au/home

Test Level: Approved to MASH TL 3 – TL 4.

Test Level	Test Description	Deflection	Working Width (measured at base of units)
MASH – TL 3	2,270 kg vehicle @ 100 km/h, 25° impact angle	1.66 m	2.20 m
MASH – TL 4*	10,000 kg vehicle @ 90 km/h, 15° impact angle	2.31 m	3.66 m

*T-Top Lite must be attached to achieve MASH TL 4.

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Accepted Configuration:

- The BG800 system consists of 6 or 12 m long units. Other components include 600 mm long 5° and 10° radius sections and a Full Height Terminal End (6 m or 12 m long).
- As the barrier is designed to resist loadings by deflecting the units should be free to move but the system must be anchored at each end and if required at intermediate locations.
- The location of pinned intermediate anchors shall be at intervals not greater than 60 m.

Design Considerations:

- Design to be in accordance with BG800 Product and Installation Manual IMP-031 Issue 1.2, dated 20 August 2021.
- It is recommended that the barrier should be offset from the edge of traffic lane by:
 - traffic speed 40 km/h or less – 0.2 m,
 - traffic speed 41 to 60 km/h – 0.3 m,
 - traffic speed 61 to 80 km/h – 0.5 m,
 - traffic speed greater than 80 km/h – 1.0 m
- Barrier length must be sufficient to adequately protect the hazard.

Minimum Length:

60 m (n.b. minimum length tested = 72 m)

Point of Redirection:

For MASH TL 3, the leading and trailing points of redirection shall be the interface between the barrier and end treatment.

For MASH TL 4 the leading and trailing points of redirection shall be 36 m from the interface between the barrier and end treatment.

Terminals permitted:

- Absorb-M (suitable for maximum design speed = 80 km/h, maximum posted speed = 70 km/h)
- ArmorBuffa (suitable for maximum design speed = 80 km/h, maximum posted speed = 70 km/h)
- SMART crash cushion.
- TAU-M crash cushion.
- Quadguard M10 CZ crash cushion.

Crash cushions may only be installed where reverse impacts are highly improbable and a risk assessment has been completed and steps undertaken to mitigate any risks identified.

The following terminals are no longer accepted.

- Absorb 350
- Tau-II crash cushion
- Quadguard crash cushion (including CZ version)

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Connections Permitted:

BG800 may be used within a longer length of HighwayGuard LDS, BG800 LDS and/or BG800 MDS with transition pieces for the T-Top sections for BG800 MDS applications.

BG800 may be connected to permanent concrete barrier, with a nested Thrie beam connection as detailed by the supplier.

Limitations:

- The ends of the barrier should be shielded with a suitable end treatment (refer to the Product and Installation Manual for more information) or by an overlapping barrier.
- The cross slope shall be not greater than 10% for the area immediately behind the barrier for the width of the deflection.
- Cannot be placed adjacent to kerbs or other objects within the deflection limits of the barrier, which may prevent lateral displacement.
- Not to be used on longitudinal slopes or crossfalls greater than 8%.
- To be used where pavement consists of:
 - 200 mm thick reinforced or 250 mm thick unreinforced concrete,
 - 250 mm thick asphalt,
 - 150 mm thick asphalt over 150 mm basecourse,
 - 400 mm basecourse,
 - 500 mm AASHTO standard soil (unsealed formation).For pavements not meeting these requirements design advice shall be sought from the Supplier.
- Anchoring details consist of:
 - 460 mm long epoxied M24 threaded rod (MASH TL 4),
 - M30 smooth driven pin (MASH TL 3 only)
 - Driven pile anchor (MASH TL 3, basecourse or unsealed formation only).
- The use of 5° and 10° radius sections is restricted to tight radius curves and emergency openings. Where 5° and 10° radius sections are used the speed should be restricted to a design speed of 60 km/h or less (posted at 50 km/h or less) – Refer Austroads Technical Advice SBTA-23-002.
- Objects should not be placed on top of the barrier as they are designed to move under impact. “Anti-Gawk” screens are not to be attached.

Installation and Maintenance Requirements:

In accordance with the relevant Product or Installation Manual. The holes in the pavement for the anchors made to accommodate the anchor pins must be repaired to the satisfaction of the road authority.

Parts to be Replaced after Impact:

Units may need to be repaired after impact or replaced depending on the extent of damage.

Parts Typically Re-Useable after Impact:

Undamaged units.

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References:

BG800 Product and Installation Manual IMP-031 Issue 1.2 dated 20 August 2021.

Item	Description
1	Barrier system information can be found on Main Roads file 05/2666.