


# Safety Barrier Technical Conditions for Use

## BG800 MDS Steel Safety Barrier - Permanent

|  |  |                                       |
|--|--|---------------------------------------|
|  | <b>Issue Date:</b> 6 April 2020  | <b>Supplier:</b> Ingal Civil Products |
|  | <p><b>These conditions take precedence over any instructions in the Product Manual.</b></p> <p>This document is a summary of the Austroads Safety Barrier Assessment Panel's assessment of the technical performance of the product against AS/NZS 3845 Parts 1 or 2 only. It does not consider procurement practices by individual Road Agencies.</p> <p>The Austroads Safety Assessment Panel may at any time, withdraw or modify this Technical Conditions for Use without notice.</p> <p>These acceptance conditions should be read in conjunction with the Product Manual and Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers.</p> <p>Acceptance of this product does not place any obligation on the Northern Territory Government or its contractors, to purchase or use the product.</p> |                                       |

|                                |  |
|--------------------------------|--|
| <b>Status</b>                  | <p><b>Accepted – may be used on the classified road network.</b></p> <p>These acceptance conditions take precedence over any instructions in the Product Manual.</p>   |
| <b>Product accepted</b>        | <p>BG800MDS Steel Safety Barrier</p> <p><u>Variants</u></p> <ul style="list-style-type: none"> <li>• 6 metre BG800 MDS Steel Safety Barrier – Permanent sections with an attached T-Top structure, concrete base using Hilti wedge bolt anchors</li> <li>• 12 metre BG800 MDS Steel Safety Barrier – Permanent sections with an attached T-Top structure, concrete base using Hilti wedge bolt anchors</li> <li>• BG800 MDS Full Height Terminal End (6 and 12 metre).</li> <li>• 0.61 metre BG 800 5° Radius Section.</li> <li>• 0.61 metre BG 800 10° Radius Section.</li> </ul> <p>Variants that are NOT listed above are NOT recommended for acceptance.</p> |
| <b>Accepted Speed</b>          | 100 km/h   |
| <b>Product Manual reviewed</b> | Rev. E – 03/20   |
| <b>Product Manual</b>          | <a href="https://az276019.vo.msecnd.net/valmontstaging/docs/librariesprovider35/manuals/bg800-manual-australia-amp-new-zealand---rev-c51847c7898cf6a15a1a9ff5200d30354.pdf?sfvrsn=364b1639_2">https://az276019.vo.msecnd.net/valmontstaging/docs/librariesprovider35/manuals/bg800-manual-australia-amp-new-zealand---rev-c51847c7898cf6a15a1a9ff5200d30354.pdf?sfvrsn=364b1639_2</a>  |

### Design Requirements

| Containment Level | Point of Redirection (m)                        |          | Tested Article Length (m) | Anchor/Post Spacing (m) | Dynamic Deflection (m) | Working Width (m) | Notes |
|-------------------|---|----------|---------------------------|-------------------------|------------------------|-------------------|-------|
|                   | Leading   | Trailing |                           |                         |                        |                   |       |
| MASH TL3          | Interface between barrier and the end treatment |          | 42                        | 6.0                     | 0.44                   | 0.98              |       |

## Approved Connections

| <b>Crash Cushions or Terminals must be fitted to both ends of a barrier</b> |   |
|---|---|
| <b>Public Domain Products</b>   |   |
| W-Beam Guardrail  | Not Permitted   |
| Thrie-Beam Guardrail  | Not Permitted   |
| Concrete  | Not Permitted   |
| <b>Proprietary Products</b>   |   |
| SMART Steel Crash Cushion   | <ul style="list-style-type: none"> <li>Refer SMART Crash Cushion Technical Conditions for Use.</li> <li>The BG 800 to SMART STEEL CRASH CUSHION TRANSITION must be used to connect the terminal to the barrier. The transition includes the Full Height Terminal End.</li> <li>Permitted as a terminal on a flare.</li> </ul> |

## Design Guidance

| <b>This product must be installed and maintained in accordance with the Product Manual and Road Agency specifications. Road Agency specifications and standards shall have precedence</b> |   |
|---|---|
| Minimum installation length   | 42 metres between crash cushions/terminals (tested article)   |
| System width (m)  | 0.54 metres   |
| Minimum distance to excavation  | 0.44 metres when anchored on concrete pavement<br>0.70 metres when anchored on flexible pavement  |
| Slope limit   | Side slope limit: 12.5 Horizontal to 1 Vertical (8 %).  |
| Systems conditions  | <ol style="list-style-type: none"> <li>Anchor spacing greater than 6 metres is NOT permitted.</li> <li>Installation on top of a kerb is not recommended.</li> <li>Flaring across the clear zone without a terminal listed is NOT permitted.</li> <li>Drainage and collection of debris should be considered as there is little clearance between the base of the barrier and the road surface.</li> <li>Corrosion issues should be considered as T-Top structure is likely to collect debris and moisture.</li> </ol> |
| Gore area use   | Refer to approved terminal conditions   |
| Pedestrian area use   | Permitted – consider potential for snagging and deflection  |
| Cycleway use  | Permitted – consider potential for snagging and deflection  |
| Frequent impact likely  | Permitted   |
| Remote location   | Permitted   |
| Median use  | Permitted   |

| <b>Foundation Pavement Conditions</b>     |               |                             |                             |                                     |   |
|---|---------------|-----------------------------|-----------------------------|-------------------------------------|---|
| <b>Pavement</b>                           | <b>Use</b>    | <b>Accepted Speed (max)</b> | <b>Post/Pin Spacing (m)</b> | <b>Post/Pin Type</b>                | <b>Pavement Construction</b>  |
| Concrete                                  | Permitted     | 100 km/h                    | 6                           | M24 x 250mm threaded rod with resin | Approx. 204mm (8") Concrete   |
| Deep lift asphaltic concrete              | Permitted     | 100 km/h                    | 6                           | M24 x 450mm threaded rod with resin | Minimum 150mm (6") Asphalt  |
| Asphaltic concrete over granular pavement | Permitted     | 100 km/h                    | 6                           | M24 x 450mm threaded rod with resin | Approx. 89-102mm (3.5-4") asphalt over Approx. 152mm (6") thick dense grade aggregate (DGA) |
| Flush seal over granular pavement         | Not Permitted |                             |                             |                                     |   |
| Unsealed compacted formation              | Not Permitted |                             |                             |                                     |   |

**Note: Installation in pavement conditions not listed above have not been justified to the Panel's satisfaction.**