


Safety Barrier Technical Conditions for Use

BG800 Steel Rail Safety Barrier - Temporary

	Issue Date: 2 March 2023	Proponent: Highway Care International
	<p>These conditions take precedence over any instructions in the Product Manual.</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>	

Status	Accepted – may be used on the classified road network
Product accepted	<p>BG800 Steel Rail Safety Barrier - Temporary</p> <p><u>Variants</u></p> <p>6 metre BG800 Steel Safety Barrier – Permanent sections. 12 metre BG800 Steel Safety Barrier – Permanent sections. BG800 Full Height Terminal End (6 and 12 metre). 0.61 metre BG 800 5° Radius Section. 0.61 metre BG 800 10° Radius Section.</p> <p>Variants that are NOT listed above are NOT recommended for acceptance.</p>
Accepted impact speed	100 km/h
Product manual reviewed	IMP-031 Issue 1.2
Product Manual	https://az276019.vo.msecnd.net/valmontstaging/docs/librariesprovider35/manuals/bg800-manual-australia-amp-new-zealand---rev-c51847c7898cf6a15a1a9ff5200d30354.pdf?sfvrsn=364b1639_2

Design Requirements

Containment Level	Point of Redirection		Tested Article Length (m)	Anchor/Post Spacing (m)	Dynamic Deflection (m)	Working Width (m)	Notes
	Leading (m)	Trailing (m)					
MASH TL3	Interface between barrier and the end treatment		72	60	1.66	2.20	
MASH TL4	36	36	72	60	2.31	3.66	T-top lite must be attached for TL4 containment

Approved Connections

<i>An accepted end treatment must be provided at both ends of all barrier installations</i>	
Public Domain Products	
W-Beam Guardrail	Not Permitted
Thrie-Beam Guardrail	Not Permitted
Concrete	Permitted – BG800 to Thrie Beam to Type F Concrete Safety Barrier. The transition includes the Full Height Terminal End.
Proprietary Products	
SMART Crash Cushion	<ul style="list-style-type: none"> Refer SMART Crash Cushion Technical Conditions for Use. The BG800 to SMART Crash Cushion transition must be used to connect the crash cushion to the barrier. The transition includes the Full Height Terminal End. Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
UNIVERSAL TAU-M Crash Cushion	<ul style="list-style-type: none"> Refer Universal Tau-M Crash Cushion Technical Conditions for Use. The BG800 to Universal Tau-M Crash Cushion transition must be used to connect the crash cushion to the barrier. Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
QUADGUARD M10 CZ Crash Cushion	<ul style="list-style-type: none"> Refer to QUADGUARD M10 CZ Crash Cushion Technical Conditions for Use. The BG800 transition to end terminal must be used to connect the crash cushion to the barrier. Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
HIGHWAYGUARD LDS Safety Barrier	<ul style="list-style-type: none"> Refer to HighwayGuard LDS Technical Conditions for Use The BG800 to HighwayGuard LDS Barrier transition must be used to connect the barriers.
ABSORB-M Crash Cushion	<ul style="list-style-type: none"> Conditionally recommended until 31 December 2024 The installation is restricted: <ul style="list-style-type: none"> to an impact speed of 80 km/h or less on asphalt foundations to an impact speed of 70 km/h or less on concrete foundations Refer to Absorb-M Crash Cushion Technical Conditions for Use. The BG800 to Absorb-M Crash Cushion transition must be used to connect the crash cushion to the barrier. This is a gating device.
LEGACY: UNIVERSAL TAU-II Crash Cushion	<ul style="list-style-type: none"> LEGACY status recommended from 1 January 2021. Refer Universal Tau-II Crash Cushion Technical Conditions for Use. The BG800 to Universal Tau-II Crash Cushion transition must be used to connect the crash cushion to the barrier. The transition includes the Full Height Terminal End. Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
LEGACY: QUADGUARD CZ Crash Cushion	<ul style="list-style-type: none"> LEGACY status recommended from 1 January 2021. Refer QUADGUARD CZ Crash Cushion Technical Conditions for Use. The BG800 to Quadguard CZ transition must be used to connect the crash cushion to the barrier. The transition includes the Full Height Terminal End. Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.

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<p>LEGACY: ABSORB 350 Plastic Terminal</p>	<ul style="list-style-type: none"> • LEGACY status recommended from 1 January 2021. • The installation is restricted to an impact speed of 70 km/h or less. • Refer to ABSORB 350 Terminal Technical Conditions for Use. • The BG800 to AB350 Terminal transition must be used to connect the terminal to the barrier. • This is a gating device.
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Design Guidance

Minimum installation length	60 metres between crash cushions/terminals (tested article)
System width (m)	0.54
Minimum distance to excavation (m)	1.66 – TL3 - measured from the outer edge of the foot on the works side 2.31 – TL4 - measured from the outer edge of the foot on the works side
Side slope limit	8%
System conditions	<ol style="list-style-type: none"> 1. Installation on top of a kerb is not recommended, however if installed on top of a kerb all system components must be free to operate. 2. All offsets are to be measured from the relevant outer edge of the foot. The foot is not trafficable. 3. T-top lite must be attached for TL4 containment.
Gore area use	Permitted
Pedestrian area use	Permitted
Cycleway use	Permitted
Frequent impact likely	Permitted
Remote location	Permitted
Median use	Permitted

Foundation Pavement Conditions					
Pavement Type	Use	Max Accepted Impact Speed (km/h)	Post/Pin Spacing (m)	Post/Pin Type	Pavement Construction
Concrete	Permitted	100	60	M24 x 460mm threaded rod with epoxy	Min 200mm reinforced Min 250mm non-reinforced
Deep lift asphaltic concrete					Min 250mm
Asphaltic concrete over granular pavement				M30 driven pin TL3 only	150mm asphaltic concrete over 150mm granular subbase
Flush seal over granular pavement				Flat Top Pin or Flag Top Pin TL3 only	Min 150mm granular pavement
Unsealed compacted formation				Driven pile anchor TL3 only	Min AASHTO standard soil strength
				Flat Top Pin or Flag Top Pin TL3 only – pin spacing reduced to 48m	

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