DEPARTMENT OF
INFRASTRUCTURE, PLANNING AND LOGISTICS

Safety Barrier Technical Conditions for Use

Defender 100 FS Safety Barrier - Temporary

Issue Date: 1 December 2021 | **Supplier:** Safe Barriers Pty Ltd

These conditions take precedence over any instructions in the Product Manual.

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.

The Austroads Safety Assessment Panel may at any time, withdraw or modify this Technical Conditions for Use without notice.

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.

Acceptance of this product does not place any obligation on the Northern Territory Government or its contractors, to purchase or use the product.

Status	**Recommended for Acceptance**
Product accepted	DEFENDER 100 FS Safety Barrier – each barrier unit requires the installation of three (3) Ballast Boxes which are filled with concrete. Ballast Box washers shall be clearly identifiable for ease of inspection. Variants Variants that are NOT listed above are NOT recommended for acceptance.
Accepted impact speed	100 km/h
Product manual reviewed	D100FS-M-2108 March 21 Ver 2.2
Product manual	Microsoft Word - D100FS-M-2103 Installation Manual V2.2.docx (safebarriers.com)

Design Requirements

Containment level	Point of redirection		Tested Article length (m)	Anchor/post spacing (m)	Dynamic deflection (m)	Working width (m)	Notes/Conditions
	Leading (m)	Trailing (m)					
MASH TL3	66.3	66.3	156	Freestanding with ballast	1.9	2.58	

Approved Connections

An accepted end treatment must be provided at both ends of all barrier installations	
Public Domain Products	
W-Beam Guardrail	Not permitted
Thrie-Beam Guardrail	Not permitted
Concrete	Not permitted

Proprietary Products	
LEGACY: UNIVERSAL TAU-II Crash Cushion	• **LEGACY status recommended from 1 January 2021.** • Refer to Universal Tau-II Crash Cushion Technical Conditions for Use. • The Defender 100 FS barrier adjacent to the Universal Tau-II Crash Cushion must be anchored to the pavement as required by the Product Manual. • The Defender 100 FS to Universal TAU-II Crash Cushion transition must be used to connect the crash cushion to the barrier. • Leading and trailing points of redirection are considered to be 0. • 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.
ABSORB-M Crash Cushion	• **The installation is restricted to an impact speed of 80 km/h or less.** • Refer to Absorb-M Crash Cushion Technical Conditions for Use. • The Defender 70 to Absorb-M Crash Cushion transition must be used to connect the crash cushion to the barrier. • This is a gating device.
SLED Plastic Water Filled Crash Cushion	• **The installation is restricted to an impact speed limit of 80 km/h or less**. • Refer to SLED Plastic Water Filled Crash Cushion Technical Conditions for Use. • The Defender 70 to SLED Crash Cushion transition must be used to connect the crash cushion to the barrier. • This is a gating device.
QUADGUARD M10 CZ Crash Cushion	• Refer to QUADGUARD M10 CZ Crash Cushion Technical Conditions for Use. • The Defender 100 FS barrier adjacent to the Quadguard M10 CZ Crash Cushion must be anchored to the pavement as required by the Product Manual. • The Defender 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.

Design Guidance

Minimum installation length	156 metres between crash cushions/terminals (tested article)
System width (m)	0.68
Minimum distance to excavation	1.90 – measured from the outer edge of the foot on the works side
Slope limit	10%
Systems conditions	1. Installation on top of a kerb is not recommended. 2. All offsets are to be measured from the relevant outer edge of the foot. The foot is not trafficable. 3. Each Defender 100 FS barrier unit requires the installation of three (3) Ballast Boxes which are filled with concrete. Ballast Box washers shall be clearly identifiable for ease of inspection.
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	Freestanding Foundation pavement conditions must be smooth and free of snag points, kerbs or obstructions that may interfere with the operation of the product		
Deep lift asphaltic concrete					
Asphaltic concrete over granular pavement					
Flush seal over granular pavement					
Unsealed compacted formation					

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