Safety Barrier Technical Conditions for Use

SHIELD I WATER FILLED BARRIER SYSTEM - TEMPORARY

Issue Date: 12 June 2018 | **Supplier:** National Plastics 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	**Accepted – may be used on the classified road network.** These acceptance conditions take precedence over any instructions in the Product Manual.
Product accepted	SHIELD I Plastic Water Filled Safety Barrier System (Longitudinal Barrier and Terminal).
Product Manual reviewed	Version 1.1 2018
Variants NOT accepted	• Variants that are not on the list above are not accepted. • Variants accepted in other jurisdictions, but not accepted in the local jurisdiction, are NOT permitted.
Product manual	https://www.barriersystems.com.au/safety-traffic-barriers/shield-i-safety-barrier/

Speed limit (km/h)	50 km/h	
Tested containment	MASH Test Level 1 (2,270 kg at 50 km/h and 25°)	
Deflection	50 km/h	2.2 metres.
	Note that deflections are measured in crash tests performed under controlled conditions. Designers should be aware that the deflection figures published as a test result may not be the deflection values achieved in the field for all impacts by errant vehicles dependent upon foundation conditions and roadside geometry.	
Working width	50 km/h	Not recorded.
	Working width may be determined following a site specific risk assessment based upon type and speed of vehicles on the adjacent roadway. Working width (refer diagram) is the minimum width that is required to prevent an impacting vehicle from colliding with an object behind a road safety barrier system and includes both the dynamic deflection of the road safety barrier and the extra width to allow for vehicle roll.	
Point of redirection	Leading point of need is 13 barrier units (excluding terminals) Trailing point of need is 9 barrier units (excluding terminals). Refer to appropriate approved terminal conditions.	

Minimum length of barrier between terminals	44 metres. Minimum length is the tested article length.
System width (m)	0.6 metres

System conditions	1. Flaring across the clear zone without a terminal listed below is NOT permitted. 2. 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.	
Terminals and connections	W-Beam guardrail	Not permitted
	Thrie-Beam guardrail	Not permitted
	Proprietary product	1. SHIELD I TERMINAL – TEMPORARY • This is a gating terminal. • Terminal units are not filled with water. • Permitted as a terminal on a flare.
	Other	A terminal must be fitted to both ends of the barrier.
Gore area use	Permitted – consider speed and deflection limitations.	
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 – consider speed and deflection limitations.	
Flare (See Explanation of Terms diagram)	Refer to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers Table 6.5 for design advice.	
Offset to travel lane (m)	Refer to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers, Section 6.3.5.	
Hazard free area beside barrier or terminal (Working Width)	Refer to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers, Section 6.3.16.	

Installation	The SHIELD I WATER FILLED BARRIER SYSTEM - TEMPORARY must be installed and maintained in accordance with the Product Manual and Road Agency specifications. The Road Agency specifications and standards shall have precedence.	
Minimum distance to excavation	2.2 metres minimum distance between the edge of the barrier and the edge of an excavation. (Being the largest adopted dynamic deflection).	
Slope limit	Side slope limit: 20 Horizontal to 1 Vertical (5%). Side slopes must be considered to minimise manual handling risks and site conditions.	
Foundation pavement conditions	Concrete	Permitted
	Deep lift Asphaltic Concrete	Permitted
	Asphaltic concrete over granular pavement	Permitted
	Flush seal over granular pavement	Permitted.
	Unsealed compacted formation	Permitted.
	Natural surface	Permitted.
	Foundation pavement conditions must be smooth and free of snag points, kerbs or obstructions that may interfere with the operation of the product.	

Attachments and screens	In accordance with the requirements of Australian/New Zealand Standard AS/NZS 3845, road furniture such as headlight screens, signs, lighting posts and fences for pedestrians, visual screens, debris screens, platforms for workers and other non-product hardware must not be attached to the product. Screens may be placed adjacent to the side of the product not exposed to traffic. The distance between the screen and the product shall be determined by a site specific risk assessment that considers the deflection distance. Screens must not have horizontal members that present a risk of impaling errant vehicles that impact the product.
Damaged components	Damaged components must be replaced. Repaired components must not be used.
Delineation	The installed system shall include delineation as prescribed by Road Agency specifications and drawings.

Traceability and markings	Product markings shall be in accordance with marking/s prescribed by the current Australian/New Zealand Standard AS/NZS 3845 Road Safety Barrier Systems and Road Agency specifications. Traceability details that must be permanently fixed to product are: • Name of the product. • Manufacturer or distributor name. • Date of manufacture. • Model or version details of the product, if applicable. • Batch number, if applicable. • Serial number, if applicable. Traceability details must be easily visible but unobtrusive and not be in a form that becomes prominent advertising. No advertising shall be displayed on the installation. Traceability must be in a form that will not be erased with use.

Notes	Conditions are based on the Product Manual supplied by the Proponent, submitted 1 February 2017. This acceptance will cease if there is any change in the product design or specifications.
	Only the Product Manual authorised by the Proponent shall be used in any marketing of the product.
	Acceptance of the SHIELD I WATER FILLED BARRIER SYSTEM - TEMPORARY does not place any obligation on the Road Agency, or its contractors, to purchase or use the product.
	The Austroads Safety Barrier Assessment Panel may periodically re- assess the SHIELD I WATER FILLED BARRIER SYSTEM - TEMPORARY. The Road Agency may withdraw or modify at any time, the acceptance status or conditions of use of the product without notice. Users should refer to the Road Agency web site to ensure they have the latest version of the conditions related to this product.