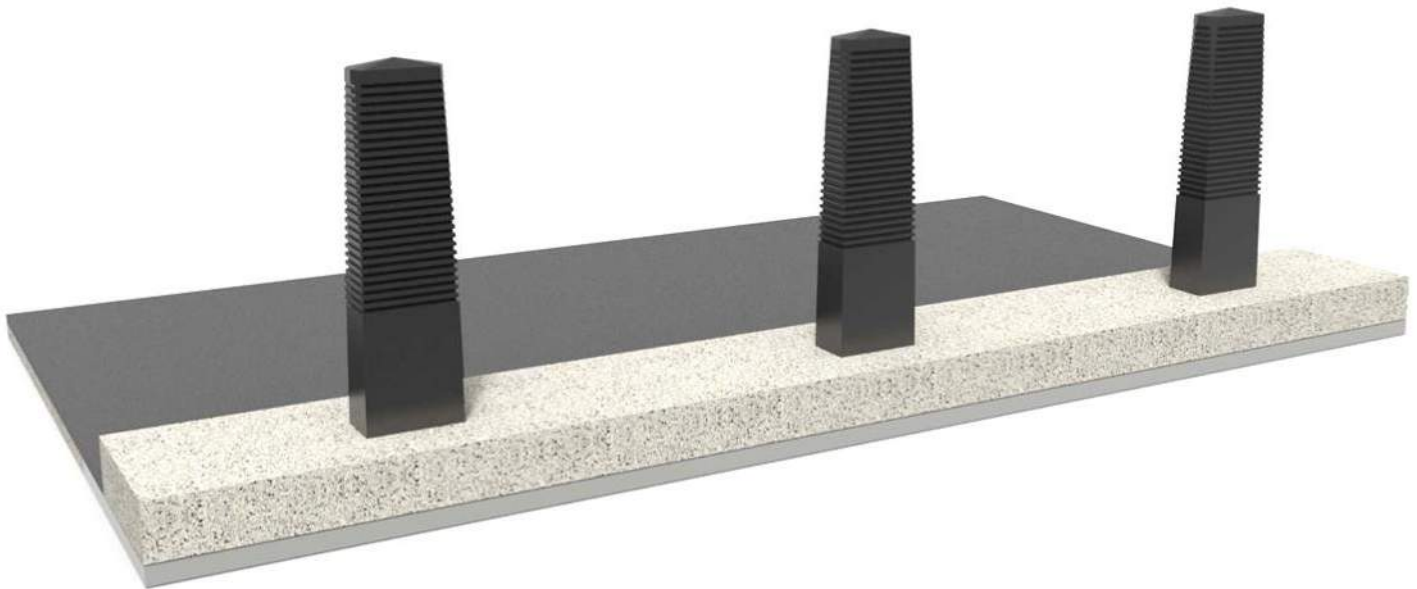


RhinoGuard® Ultra Shallow 50™

IWA-14.1:2013 Bollard V/7200(N2A)/48/30:1.1

Date Created: 01/06/20



RhinoGuard® Ultra Shallow 50™ Bollard to Protect Bridges

Requiring just a 50mm excavation depth, the RhinoGuard® Ultra Shallow 50™ bollard series has been successfully crash tested in two different foundations under the IWA-14.1 standard and is capable of stopping a 7.2 tonne vehicle travelling at 30mph.

Tested on both a typical footpath installation, and cycle segregation foundation, the bollard series successfully performs in both environments, immobilising the vehicle and achieving a stopping distance of only 1.1m. Both tests demonstrate a real life scenario by impacting a single bollard at 30 degrees which is considered to be the most likely angle of attack on long linear runs of Hostile Vehicle Mitigation (HVM) protection.

Using just 7 easy to install bollards that are simply bolted together allows for quick and flexible deployment opportunities and the requirement of just 50mm of foundation makes the Ultra Shallow 50™ the perfect solution for use on bridges and other areas where underground service and utilities affect installation. Individual modules can be added to the system to cover the required length of any project.

Along with the Westminster style Ferrocast® sleeve design and the standard mild and stainless steel options, the slim profile of the bollard core means a varied choice of sleeve designs are also available with the Ultra Shallow 50™. With a breadth of aesthetic options available, the bollards can either blend in with the surrounding environment or can create a unique design feature in any space. Additionally, the core bollard elements can be incorporated in to other products within the Landscape Protection portfolio including seating, cycle stands, lighting, handrails and wayfinding solutions, offering a variety of innovative and protective design solutions to meet a range of requirements.

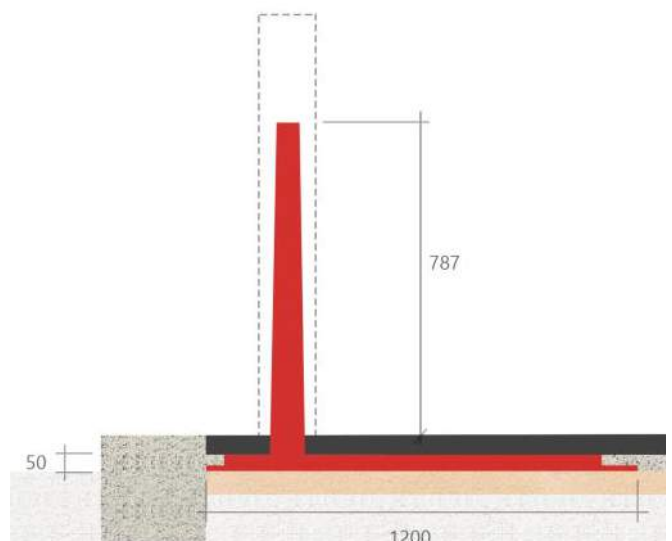
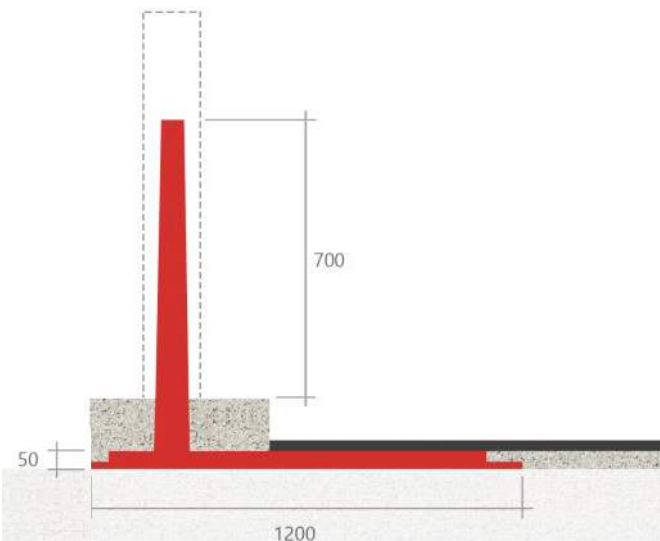
RhinoGuard® Ultra Shallow 50™
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INSTALLATION - CYCLEWAY



INSTALLATION - FOOTWAY



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PHYSICAL BOLLARD CORE PROPERTIES

NAME	APERTURE Ø (MM)	MATERIAL	FINISH	FOUNDATION LENGTH (MM)	WIDTH (MM)	HEIGHT ABOVE GROUND (MM)	ROOT DEPTH (MM)	CORE WEIGHT (KG)
SINGLE BOLLARD 72/30	200 x 100	Mild Steel	Galvanised & Painted	1200	200	820	50	390
TESTED BOLLARD ARRAY (7) 72/30	200 x 100	Mild Steel	Galvanised & Painted	9740	1600	820	50	3000

SLEEVE OPTIONS

NAME	APERTURE Ø (MM)	MATERIAL	FINISH	HEIGHT ABOVE GROUND (MM)	OVERALL WEIGHT (KG)	SLEEVE WEIGHT (KG)
STAINLESS STEEL NO GROOVE	219Ø	Stainless Steel	Brushed	1000	406	16
STAINLESS STEEL 1 GROOVE	219Ø	Stainless Steel	Brushed	1000	406	16
STAINLESS STEEL 2 GROOVE	219Ø	Stainless Steel	Painted	1000	406	16
MILD STEEL NO GROOVE	219Ø	Mild Steel	Powder Coated	1000	420	30
MILD STEEL 1 GROOVE	219Ø	Mild Steel	Powder Coated	1000	420	30
MILD STEEL 2 GROOVE	219Ø	Mild Steel	Powder Coated	1000	420	30
GEO	254Ø	Stainless Steel	Bead Blasted	1000	411	21
LED	254Ø	Stainless Steel	Brushed	1000	410	20
DECORATIVE	254Ø	Stainless Steel	Powder Coated	1000	442	52
WESTMINSTER	260 x 140	Ferrocast®	Painted	1075	410	20
MANCHESTER	350Ø	Ferrocast®	Painted	1100	424	34
SLOPED	240 x 121	Stainless Steel	Brushed	1000	400	10



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CLEANING & MAINTENANCE

FURTHER INFORMATION

FERROCAST®

Due to its non-ferrous and high chip and abrasion resistant properties, Ferrocast® requires only minimal maintenance which means that life time costs of the product are low. Generally, cleaning regimes can be infrequent if dirt and grime build up is minimal. Products can be cleaned using mild detergent, water and a soft cloth.

POWDER COATED STEEL

Once steel has been effectively treated against corrosion it will require very little maintenance. Polyester powder coated steel is extremely easy to clean and has a long life span. In order to retain aesthetic qualities of products, it is important that they are cleaned regularly. The frequency of cleaning depends upon the environment in which the product is situated. Polyester powder coating can be cleaned using a solution of mild detergent in warm water. All surfaces should be cleaned using a soft cloth, sponge or natural bristle brush.

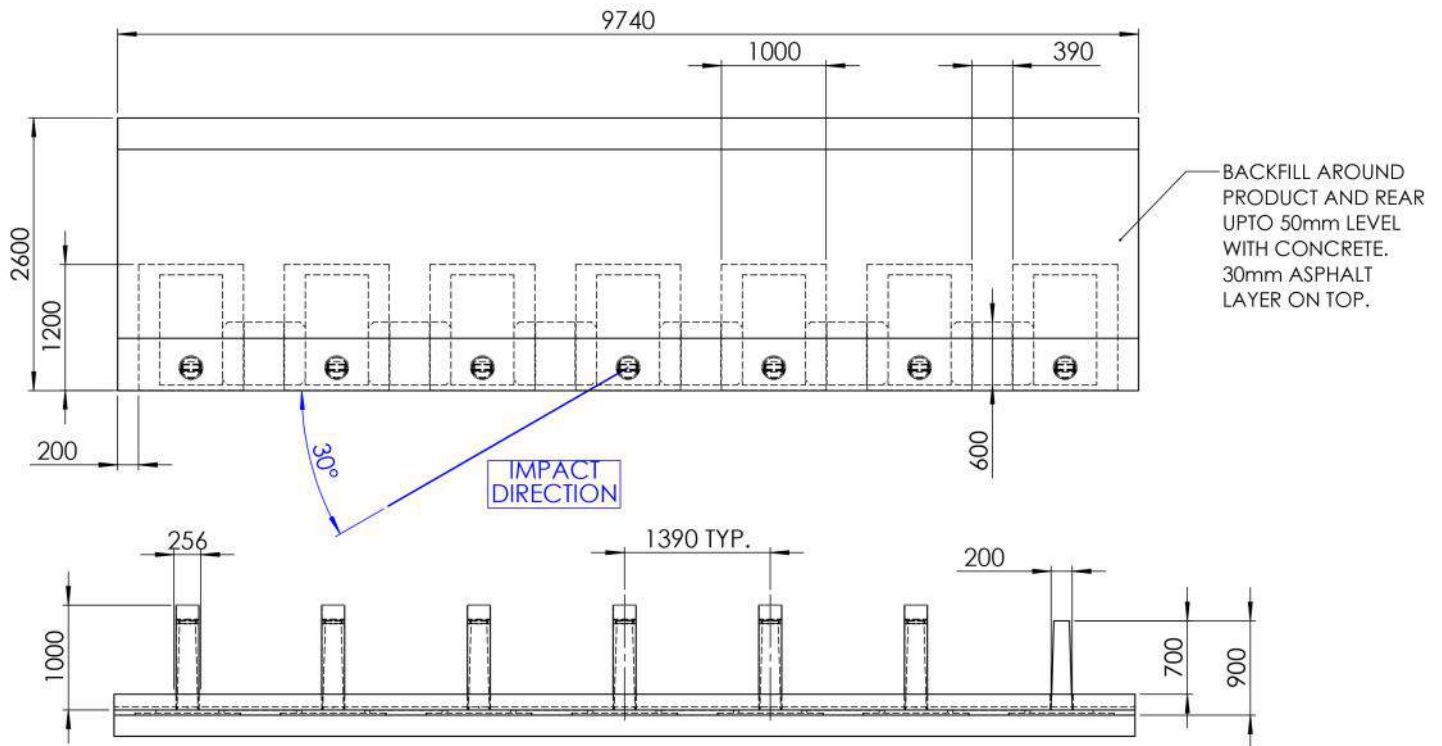
STAINLESS STEEL

Stainless steel requires relatively low maintenance. However its corrosion resistance and aesthetic properties can be compromised if its surface is not kept clean. Regular cleaning schedules will enhance the performance of the product and result in a longer service life. Stainless steel is very easy to clean. Washing with a soap or mild detergent and warm water followed by a clean water rinse is usually adequate. Where stainless steel has become extremely dirty alternate methods of cleaning can be used.

Contact Us

For technical information on the design, specification and construction when utilising the product, contact the Technical Advisory Services Department on 0370 411 2233.

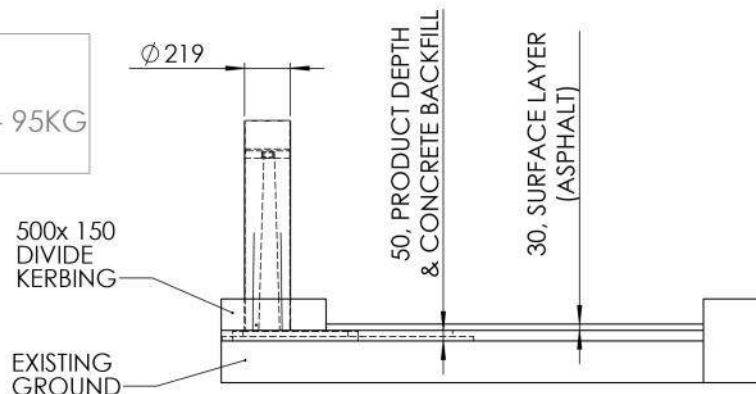
TECHNICAL DRAWINGS - CYCLEWAY



PRODUCT WEIGHTS:

HVM FRAME - 390KG
CONNECTION BRACKET - 95KG
SLEEVE - 16KG

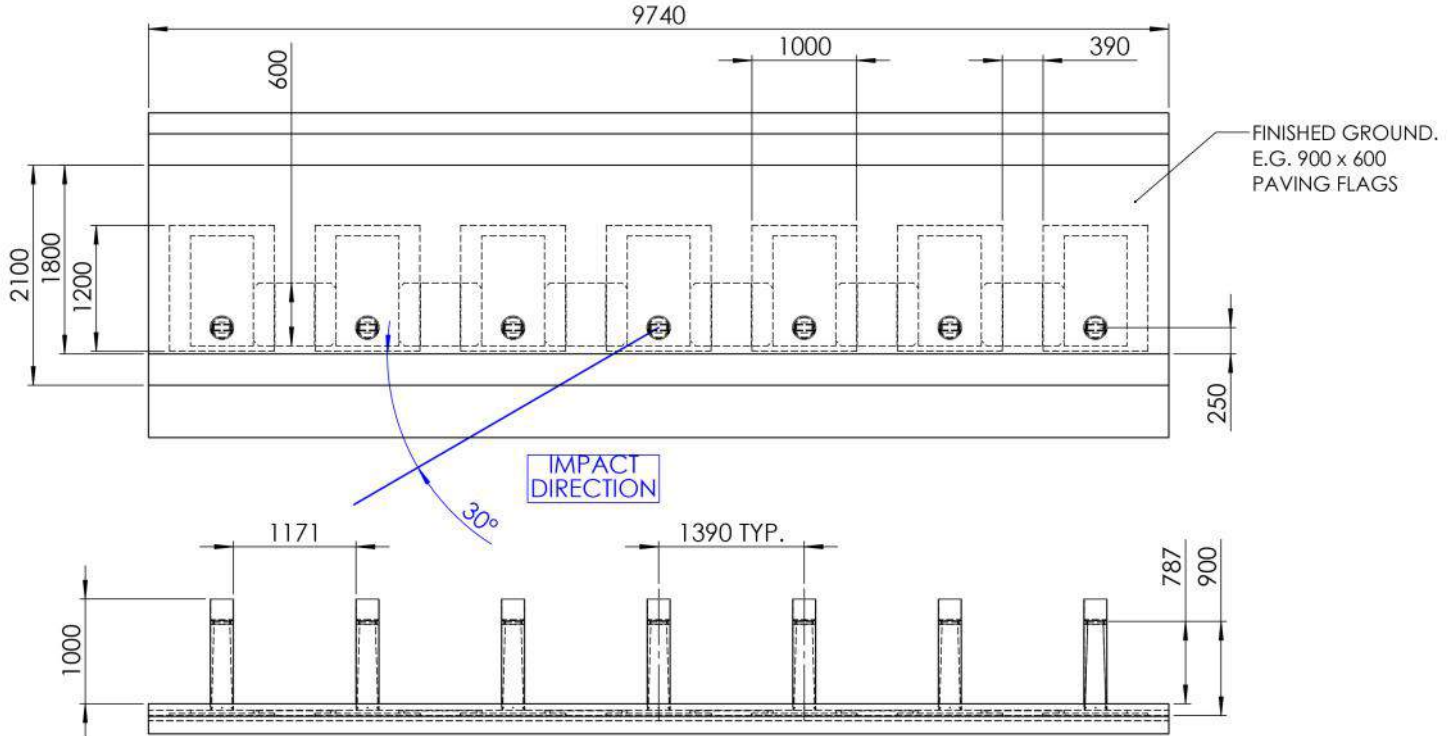
NOTE: Ø219 STAINLESS STEEL SLEEVE SHOWN. OTHER SLEEVES ARE AVAILABLE.



RhinoGuard® Ultra Shallow 50™

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TECHNICAL DRAWINGS - FOOTWAY



PRODUCT WEIGHTS:
HVM FRAME - 390KG
CONNECTION BRACKET - 95KG
SLEEVE - 16KG

NOTE: Ø219 STAINLESS STEEL SLEEVE SHOWN. OTHER SLEEVES ARE AVAILABLE.

