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**Marshalls**  
*Creating Better Spaces*

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# RhinoGuard®

## Super Shallow 100™ Bollard

  
**Marshalls**  
*Creating Better Spaces*



**A PERFECT HVM SOLUTION  
FOR USE IN AREAS REQUIRING  
MINIMAL EXCAVATION**



# PRODUCT OVERVIEW

Developed by our experts to only require a 100mm foundation depth, the unique design of the RhinoGuard® Super Shallow 100™ bollard is successfully crash tested to IWA 14.1 standards and is capable of withstanding a 7.2 tonne vehicle travelling at 40mph.

As the Super Shallow 100™ requires little excavation, the bollard series makes the perfect solution to use in areas with high utilities or services. Additionally, the level of waste during install is minimal.



RhinoGuard® Super Shallow 100™ Bespoke Ferrocast® Bollard Sleeve

# OUTSTANDING PERFORMANCE

The RhinoGuard® Super Shallow 100™ Bollard has been tested to IWA 14.1 standards and can successfully withstand a 7.2 tonne vehicle travelling at 40mph.



IWA14.1-1:2013 Bollard, Performance Rating: V/7200(N2A)/64/90:7.6

# DESIGN CAPABILITIES

The slim profile of the bollard core means a varied choice of sleeve designs and material options are also offered with the Super Shallow 100™.

The tapered design of the core also means that bespoke designs can be achieved to compliment schemes, events or branding. Like with the RhinoGuard® Ultra Shallow 50™, 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.

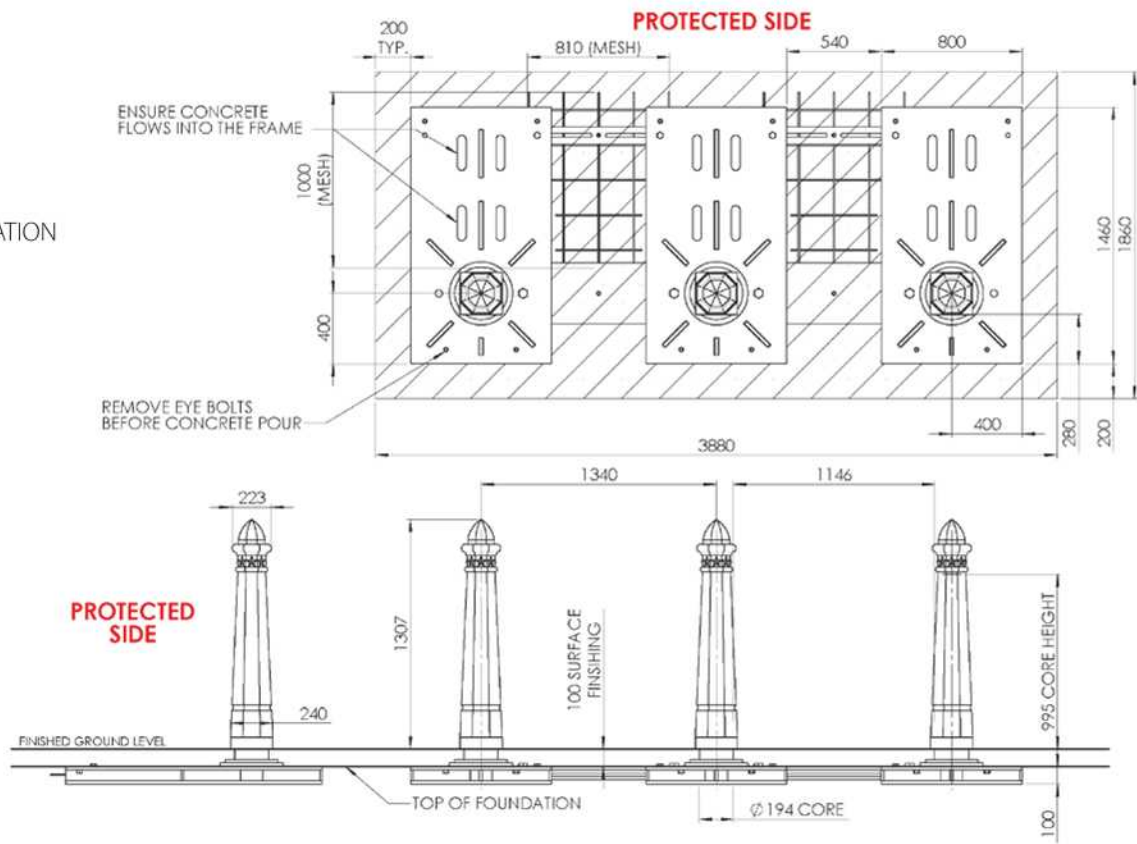




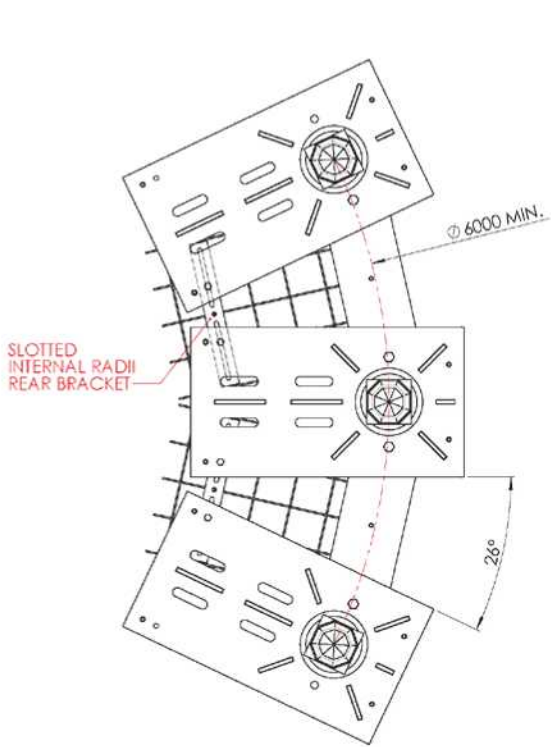
# Marshalls

## RhinoGuard® Super Shallow 100™ Bollard

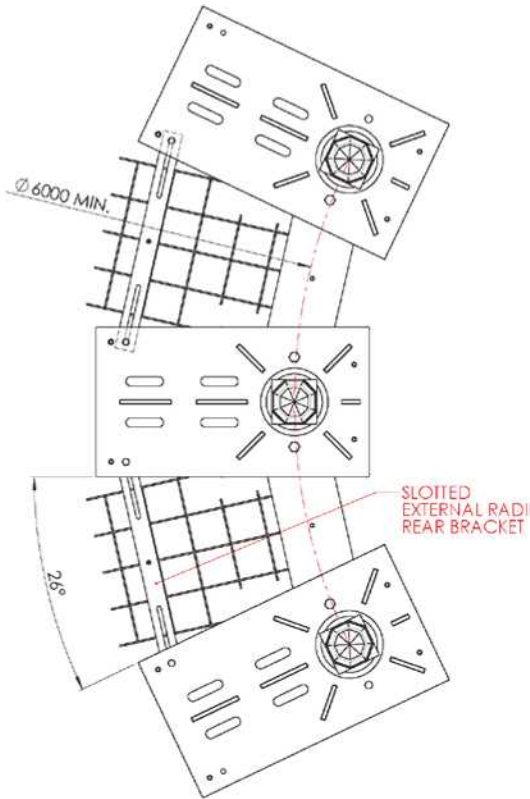
INSTALLATION SPECIFICATION



INTERNAL RADIUS  
INSTALLATION SPECIFICATION










EXTERNAL RADIUS  
INSTALLATION SPECIFICATION



Core Bollard Specifications

CORE	DIAMETER (mm)	HEIGHT ABOVE GROUND (mm)	OVERALL WEIGHT (kg)
Super Shallow 100™ Core	194	995	520

Standard Sleeve Specifications

SLEEVE OPTIONS	DIAMETER (mm)	HEIGHT ABOVE GROUND (mm)	SLEEVE MATERIAL	SLEEVE FINISH	SLEEVE WEIGHT (kg)
 Stainless Steel, No Groove (1 or 2 Groove Options)	204	1020	Stainless Steel	Brushed	11
 Mild Steel, No Groove (1 or 2 Groove Options)	204	1020	Steel	Painted	17
 Geo	204	1100	Stainless Steel	Bead Blasted	16
 Manchester	350	1100	Ferrocass®	Painted	34
 LED	204	1020	Stainless Steel	Brushed	14
 Decorative	204	1020	Stainless Steel	Brushed	34
 City of London	240	1300	Ferrocass®	Painted	28