

Product Profile

Impeder Bollards are the highest security bollards available in the UK.

Tested to BSI PAS 68 or IWA 14-1, Impeder Bollards offer variations in performance, thus allowing you to mitigate the vehicular threat perceived in that specific location.

Simple tested protection from hostile vehicles.



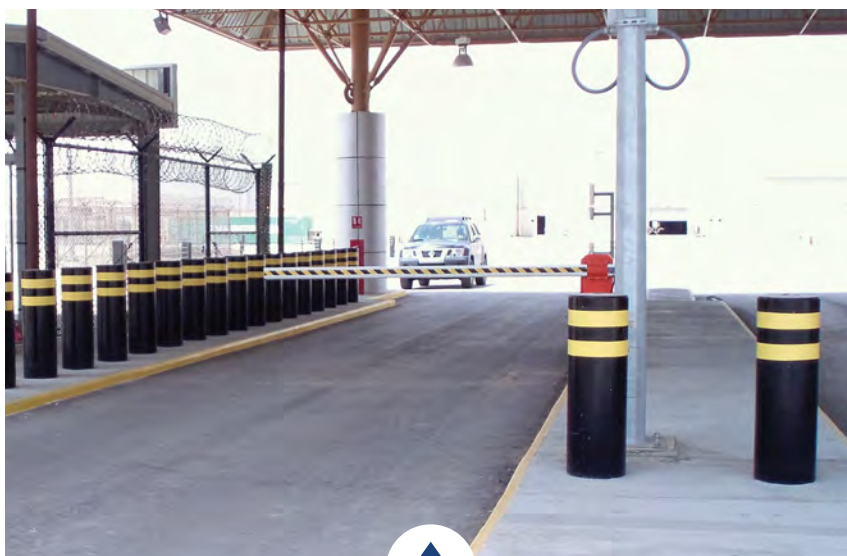


Bristorm Impeder Bollards



High security, high performance Bollards tested to BSI PAS 68 or IWA 14-1.

Bristorm Impeder Bollards are manufactured from steel tubes and cast into concrete foundations. They can be installed in small groups or as a complete perimeter line to ensure hostile vehicles, travelling at 30, 40 or 50mph, are mitigated.



Product Features:

- ✓ Tested to **BSI PAS 68** or **IWA 14-1**
- ✓ **Economical option** for short lengths of perimeter
- ✓ Can **integrate with other Bristorm products**
- ✓ **Shallow mount versions** available
- ✓ **Immobilises attacking vehicle**
- ✓ Ability to **withstand subsequent encroachment**
- ✓ **Certain models available as removable**
- ✓ **Under 1m penetration version** available
- ✓ All galvanised as standard – **EN ISO 1461:2009**
- ✓ **Stainless steel or powder coat finishes** available – see Bristorm Street Furniture

Bristorm Impeder Bollards

BSI PAS 68 and IWA 14-1 tested and rated



Type	Vehicle (Kg)	Speed (mph)	Impact Angle	Performance Rating	Penetration
Impeder 30	7,500	30	90	V / 7500 / 48 / 90 : 0.0 / 0.0	0.0m
Impeder 30 Shallow	7,500	30	90	V / 7500 / 48 / 90 : 0.0 / 0.0	0.0m
Impeder 40	7,500	40	90	V / 7500 / 64 / 90 : 3.3 / 0.0	3.3m
Impeder 50	7,500	50	90	V / 7500 / 80 / 90 : 10.6 / 11.1	10.6m
Impeder 50 HD	7,500	50	90	V / 7500 / 80 / 90 : 0.8 / 18.1	0.8m
Impeder 50 Shallow	7,200	50	90	V / 7200 / 80 / 90 : 3.0	3.0m



Bristorm Impeder Bollards

BSI PAS 68 and IWA 14-1 tested and rated

Type	Vehicle (Kg)	Speed (mph)	Impact Angle	Standard	Performance Rating	Penetration	Major Debris
Impeder 30	7,500	30	90	BSI PAS 68	V / 7500 / 48 / 90 : 0.0 / 0.0	0.0m	0.0m
Impeder 30 shallow	7,500	30	90	BSI PAS 68	V / 7500 / 48 / 90 : 0.0 / 0.0	0.0m	0.0m
Impeder 40	7,500	40	90	BSI PAS 68	V / 7500 / 64 / 90 : 3.3 / 0.0	3.3m	0.0m
Impeder 50	7,500	50	90	BSI PAS 68	V / 7500 / 80 / 90 : 10.6 / 11.1	10.6m	11.1m
Impeder 50 HD	7,500	50	90	BSI PAS 68	V / 7500 / 80 / 90 : 0.8 / 18.1	0.8m	18.1m
Impeder 50 Shallow	7,200	50	90	IWA 14-1	V / 7200 / 80 / 90 : 3.0	3.0m	20.6m

Bristorm Stopper Bollards

BSI PAS 170 tested and rated

Type	Vehicle (Kg)	Speed (mph)	Impact Angle	Standard	Performance Rating	Penetration	Major Debris
Stopper 10	2,500	10	90	BSI PAS 170	V / 2500 / 16 / 90 : 0.1	0.1m	n/a
Stopper 20	2,500	20	90	BSI PAS 170	V / 2500 / 32 / 90 : 1.8	1.8m	n/a



Type



Speed



Impact Angle



Performance Rating

Product Profile

PAS 170 is the newest Hostile Vehicle Mitigation standard to be published by the CPNI.

It is designed to provide a guaranteed level of protection to pedestrians and infrastructure within crowded locations.

Bristorm Stopper Bollards are the first UK Bollards to be rated against BSI PAS 170.



BSI PAS 170 is a Publicly Available Specification, sponsored by the CPNI

PAS 170 describes an efficient way of testing the performance of a single bollard when hit by a 2500Kg vehicle at low speed

It is a quick, and proportionate way of testing static bollards that will provide proven protection for many applications

PAS 170 tested Bollards will typically protect areas that may be hit by a passenger vehicle accidentally or by vehicle criminal at up to 20mph

Cost-effective solutions with a measurable performance





Bristorm Stopper Bollards

Medium security, cost-effective Bollards tested to BSI PAS 170.

Bristorm Stopper Bollards will appropriately protect pedestrians and infrastructure from accidental or intentional vehicular collisions, such as a ram raid attack. Manufactured from steel tubes and cast into concrete, Bristorm Stopper Bollards provide a guaranteed level of performance making them ideal across all retail, commercial and vulnerable locations.



Product Features:

- ✓ Fully tested anti-ram bollard solution
- ✓ Ideal for commercial and retail parks, car parks and city centres
- ✓ Reliable system with guaranteed performance
- ✓ No maintenance
- ✓ Proven anti-ram performance
- ✓ Mitigate errant passenger vehicles – intentional or accidental collisions
- ✓ Galvanised as standard – EN ISO 1461:2009
- ✓ Simple foundation, no rebar cage
- ✓ Bristorm Stopper Bollards are **the first UK Bollards** to be rated against **BSI PAS 170**

Bristorm Stopper Bollards

BSI PAS 170 tested and rated



Type	Vehicle (Kg)	Speed (mph)	Impact Angle	Performance Rating	Penetration
Stopper 10	2,500	10	90	V / 2500 / 16 / 90 : 0.1	0.1m
Stopper 20	2,500	20	90	V / 2500 / 32 / 90 : 1.8	1.8m