



CPNI Advice Note: Due diligence in the selection and procurement of vehicle security barriers

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CPNI recommend that a barrier deployed for the purposes of countering terrorism to protect assets against vehicle-borne threats should be a 'Rated Vehicle Security Barrier' that has undergone formal vehicle impact testing.

The testing should:

- ✓ be conducted to a **recognised vehicle impact test standard**
- ✓ be performed at an **independent test house**
- ✓ achieve a **performance rating** in accordance with the chosen standard



Barrier selection should be based on a security Operational Requirement¹ and a detailed specification².



CPNI recommend:

- ✓ specifiers familiarise themselves with the vehicle impact test standards for vehicle security barriers;
- ✓ assessing the barrier's vulnerability to threat vehicle scenarios relevant to your site, the Operational Requirement and the specification;
- ✓ projects use suitably qualified and experienced security consultants³, who specialise and can demonstrate competency in the discipline of hostile vehicle mitigation; and
- ✓ reviews are conducted during the barrier specification, construction and installation stages to ensure compliance with the Operational Requirement, specification, detailed design and vehicle impact test standard to which it was tested.

The allocation of a performance rating **does not** imply a barrier will perform as tested in all sites or applications; and against all threat vehicle scenarios (vehicle class, impact speed, impact angle and multiple impacts).

A barrier might have more than one performance rating (to the same standard or different ones) if:

- several tests to different standards have been conducted on the barrier; or
- a single impact test has been commissioned and conducted in accordance with stringent test criteria across different specified standards (such as vehicle class/mass/dimensions, impact speed, ground conditions).

Further advice on hostile vehicle mitigation: cpni.gov.uk/hostile-vehicle-mitigation and IWA 14-2⁴. [continues]

¹ [Operational Requirements](#) (CPNI)

² Completing a [Vehicle Security Barrier Scoping Document](#) (CPNI) can assist the production of a specification.

³ [Procuring the services of a specialist security consultant when undertaking a project in the built environment](#) (CPNI, V3, May 2019)

⁴ ISO – IWA 14-2:2013 Vehicle security barriers – Part 2: Application

When assessing barriers, clients should seek assurance through their design and procurement process by asking:

- has the barrier been **impact tested**?
- which **barrier** (make, model and designation) was tested?
- what **configuration** was the barrier tested? (*i.e. length, height, width, anchoring/fixings, ground conditions etc.*)
- where the vehicle impacted the barrier? (*e.g. middle or end of barrier*)
- what **vehicle impact test standard** was it tested to?
Recognised standards are: IWA 14-1⁵, PAS 68⁶, ASTM F2656⁷, CWA 16221⁸, PAS 170-1⁹ & CPNI VADS.
- what **performance rating** was allocated? (e.g. classification code: IWA 14-1:2013 V/7200[N3C]/80/90:9.0)
- which **test house** conducted the testing?
- is the **test house accredited** to ISO 17025¹⁰?
- is the **test house accredited**¹¹ for the impact test standard the barrier has been tested to?
- for a copy of the **test report**¹² **from the test house** to ensure independence (authorised by the manufacturer).
- to review the **test house's footage and photography** of the respective impact test.
- is the barrier listed in the CPNI Catalogue of Impact Tested Vehicle Security Barriers?
- if the vehicle impact performance of the barrier meets the Operational Requirement and specification.

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⁵ ISO - IWA 14-1:2013 - Vehicle security barriers - Part 1: Performance requirement, vehicle impact test method and performance rating

⁶ BSI - PAS 68 - Impact test specifications for vehicle security barrier systems

⁷ ASTM F2656 / F2656M - Standard Test Method for Crash Testing of Vehicle Security Barriers

⁸ BSI - CWA 16221:2010 - Vehicle security barriers. Performance requirements, test methods and guidance on application (withdrawn)

⁹ BSI - PAS 170-1 - Vehicle security barriers. Low speed impact testing. Trolley impact test method for bollards

¹⁰ ISO - IEC 17025 - General requirements for the competence of testing and calibration laboratories (June 2019)

¹¹ [List of UKAS accredited test houses in the UK providing vehicle and track testing \(June 2019\)](#)

¹² Alternatives from the test house may be a test certificate or test summary document.