Working together.
Protecting lives.

ASSET International
VEHICLE RESTRAINT SYSTEMS

HARDSTAFF
BARRIERS

ASSET International
VEHICLE RESTRAINT SYSTEMS

Asset International VRS is the leading supplier of steel temporary safety barriers in the UK.

The 'Vehicle Restraint Systems' division of the business was established in 1998 to provide temporary safety barriers to the highways sector. Asset VRS now provides a full installation service from strategically located depots around the UK and Ireland.

Asset's Zoneguard® and Varioguard® range are complemented by M.A.S.S. temporary barriers for lower speed roads, Varioguard Single-Sided permanent system, static crash cushions and easy opening gates for concrete barriers.

Asset's success is built upon providing cost-effective solutions to client requirements, backed up by professionally qualified engineers. Delivering a reputation and service that is unrivalled.

HARDSTAFF BARRIERS

Hardstaff Barriers are the leading supplier of approved concrete road safety barriers.

With over 20 years' experience in the supply and installation of temporary and permanent concrete safety barriers, Hardstaff Barriers, alongside their in-house haulage fleet, have the knowledge, expertise and capabilities to consult, deliver and deploy on time and within budget on highways projects.

Multibloc TVCB and Maxibloc THVCB concrete barriers are complimented by a full range of innovative Rebloc® temporary and permanent concrete vehicle restraint systems.

This specialist expertise linked with our reputation for innovation; research and development; and reliability has been instrumental in establishing and maintaining excellent customer relations across a broad variety of client industries.

04 Vehicle Restraint Systems

- Zoneguard®
- Varioguard®
- Works Safety Gate
- Rebloc® RB80SA
- Rebloc® RB60H
- Rebloc® RB80S
- Rebloc® RB80A
- Rebloc® RB80H
- Rebloc® RB84XEAL
- Rebloc® RB140SFS
- Rebloc® NB100/D
- Multibloc
- Maxibloc
- M.A.S.S.

18 Crash Cushions

- Quest™ CEN
- QuadGuard™ CEN
- VecuStop®

20 Crossover Gates

- Sologuard®
- SteelStep System

Zoneguard®

H1 W3
N2 W2
N2 W6

Zoneguard is the lowest deflecting portable steel highway barrier in the world. Energy absorbing permanent and temporary steel barrier, Zoneguard barrier stabilizes as vehicles drive onto the Zoneguard foot limiting barrier deflection. Successfully tested to BS EN 1317 Standards, accepted by Highways England, tested to USA standard NCHRP 350, MASH 08 and Federal Highway Administration accepted to TL-4.

Easily transported, Zoneguard weighs 92kg per metre enabling up to 180m to be efficiently transported on one vehicle.

Rapidly installed Zoneguard can be easily positioned and connects using Zoneguard speed joints, at approximately 300m per hour. Integral drainage channels are incorporated into the foot section for ease of handling and manoeuvrability with fork lift.

Zoneguard portable barrier system is comprised of pressed and galvanized steel panels assembled in 12m or 4m sections each being 800mm high, 700mm wide and 160mm wide at the top. The Zoneguard foot is 200mm wide on each side ensuring low centre of gravity compared to other steel portable barriers that do not have a foot section.

Permanent or Temporary Zoneguard can be used as emergency protection for highway structures with up to 300m installed in an hour, reducing risk to operators, drivers and workforce with fewer vehicle movements.

TB32 test with Zoneguard pinned every 12m to provide a minimum Dynamic Deflection of 100mm and Permanent Deflection of 100mm.

Zoneguard fitted with protective fencing has been tested to BS EN 1317 for use on UK highways.

Speciality components are also available for tight curves, bridge expansion joints and where access through barriers is required.

Varioguard®

Varioguard®

N2 W3

N2 W4

N2 W6

Varioguard is fully tested to BS EN 1317 performance levels. Different working width classes are available, dependent on the anchorage configuration.

When used as a temporary safety barrier Varioguard is usually anchored at each end with four 500mm long anchor pins into pre-drilled holes.

With a huge rental pool of Varioguard located at depots around the UK and Ireland, small installations to many kilometres can be serviced. Emergency call-outs to any part of the UK are routinely responded to within hours.

Asset's concrete block anchor system allows Varioguard and Zoneguard barriers to be installed quickly and simply without the need for road surface preparation. Ideal for use on bridge decks and protected road surfaces.

Varioguard®

WSG

WSG

Works Safety Gate

With increased focus on worker safety across the UK road network, Asset have developed the Works Safety Gate (WSG) to greatly reduce the danger faced by road workers when adjacent to works access points.

Developed for both the approved Varioguard® and Zoneguard® temporary vehicle restraint systems, the WSG further raises the bar when considering the safety of road workers and the travelling public at the necessary works access points required within major road work schemes.

A typical 48m length WSG installed at a works access point, can be opened manually by removing the securing pins at 8m centres and separating the WSG into manually manageable lengths, or via a towing hitch to a vehicle thus opening the area up and providing access to works vehicles and subsequently closing using the same methodology maintaining a secure and safe environment at all times.

The highly visible red and white powder coated sections of the WSG clearly define the access points within the works presenting clear delineation for works vehicle drivers.

WSG is available in a multitude of lengths from 48m to 168m for any planned or existing works throughout the Highways England network.

The WSG is unique in the fact that existing road worker professionals can be trained by Asset International instructors to operate the system safely and when necessary, which means that access to the work site can be arranged at short notice in a controlled and extremely safe manner.

RB80SA

REBLOC® RB80SA

N2 W1

Designed and tested to BS EN 1317-2 the Rebloc RB80SA slim system width of 300mm and the low working width W1 are important determinants, if little space is available. Each element is anchored with only four anchor pins, which can be easily installed and removed allowing for an installation rate of up to 200m per hour.

Thanks to the unique interlocking coupling on the RB80SA's 12-metre long unit, there are no loose parts, which prevent unauthorized removal of pieces and protects fully against targeted vandalism.

The RB80SA has large contact areas with integrated elastomer pads which result in a low surface pressure.

RB80SA

RB80SA

RB60H

REBLOC® RB60H

N2 W4

REBLOC® RB80S

H1 W4

The RB60H and RB80S by Rebloc are temporary concrete barrier systems consisting of 12-metre long units. RB60H provides N2/W4 containment while the RB80S provides H1/W4 containment. Both systems have been designed and tested in accordance with BS EN 1317-2.

Both RB60H and RB80S utilise Rebloc's innovative coupling system that ensures ease of installation while maximising safety. The systems are adaptive, transitioning into various standard and terminal elements.

The long length and low unit weight of the systems allow for 132–144m to be carried on a standard 44 tonne HGV.

RB80A

REBLOC® RB80A

H2 W1

REBLOC® RB80H

H2 W5

The RB80A by Rebloc is a permanent single-sided concrete barrier system consisting of 8-metre long units anchored to the carriageway. The RB80H is a permanent double-sided concrete barrier consisting of 8-metre long free-standing units. RB80A provides H2/W1 containment while the RB80H provides H2/W5. Both systems are designed and tested in accordance with BS EN 1317-2.

The RB80A and RB80H are innovatively designed, combining years of research and development to produce this highly effective and market-leading system.

Utilising Rebloc's innovative coupling system ensures ease of installation and maximises safety. The systems are adaptive, transitioning into various standard and terminal elements.

RB80H

RB84XEAL

REBLOC® RB84XEAL

H2 W1

The Rebloc RB84XEAL is a unique temporary to permanent concrete vehicle restraint system.

The system can be used free-standing along temporary works, then can be repositioned and embedded 40mm into the asphalt or concrete to create a permanent central reserve barrier.

Tested to BS EN 1317 the RB84XEAL provides H2/W1 containment when permanently installed.

The RB84XEAL is suitable for long and short sections and is also available with integrated drainage channels.

RB140SFS

REBLOC® RB140SFS

H4 W4

Permanent pre-cast concrete vehicle restraint systems are ideally used for long lasting protection on the central reservation and along the verge. The RB140SFS achieves the highest containment level of H4a offering the best possible protection and restrains an impact of a 30 tonne truck driving at 65km/h (TB71 in accordance with BS EN 1317-2).

The integrated, innovative coupling does not contain any loose parts enhancing safety and installation speed. The easy installation, which does not depend on weather conditions, reduces the risk of works over running helping meet deadlines and budgets.

Thanks to the interlocking construction, there are no loose parts, which prevent unauthorized removal of pieces and protects fully against vandalism.

RB140SFS

NB100/D

NB100/D

REBLOC® NB100/D

H2 W4

The Rebloc NB100/D is a free-standing integrated noise barrier system consists of 8-metre long concrete VRS barriers topped by noise deflecting barrier units of equal length.

The concrete VRS barrier provides H2/W4 containment and is designed and tested in accordance with BS EN 1317-2. The integrated noise barrier achieves an airborne sound insulation rating of D4 in accordance with BS EN 1793-6. This system has the additional benefit of a significantly reduced working footprint over other systems.

Multibloc

N2 W3

The Multibloc system is a tried and tested product that has seen decades of successful service across a broad spectrum of applications.

Multibloc TVCBs are BS EN 1317-2 approved and are designed to deflect an errant vehicle away from local hazards within or immediately adjacent to the highway.

Multibloc is ideal for use as roadway delineators for both large and small construction projects. The added option of using mounted fence systems and gates allows for the prevention of unauthorised site access while also enhancing safety for workers and the general public alike.

Multibloc

Multibloc

Transition

Maxibloc

H4a W2

H4a W5

The Maxibloc THVCB is tested and approved to BS EN 1317-2, providing H4a/W5 containment when surface mounted and H4a/W2 when recessed.

Maxibloc's principal design feature is to deflect HGVs from bridge supports and other vulnerable structures, providing very effective temporary parapet protection during works.

Maxibloc is also ideal for use as roadway delineators for construction sites or depot areas, especially in locations with high volumes of heavy goods vehicles and haulage traffic.

With the added option of using mounted fence systems and gates, Maxibloc also allows for the prevention of unauthorised site access.

Maxibloc

M.A.S.S.

T2 W5

M.A.S.S. is specially designed to self stabilise when an errant vehicle drives on to the base units of the system, helping to protect the workforce and vehicle occupant.

The high visibility base units are not fixed to the road; anchorage is achieved at the terminal points with a steel buffer filled with sandbags. No coring or drilling into the road is necessary.

The relatively light weight and favourable shape of M.A.S.S. makes storing, transporting and handling straightforward. 160–200 metres of M.A.S.S. can be delivered to site, pallet packed on a single vehicle.

M.A.S.S. is extremely quick and easy to assemble due to its unique plug-in section. Maximum safety is achieved together with a minimum of traffic-flow disruption during assembly.

The steel M.A.S.S. base unit provides the foundation for M.A.S.S. 1 and the four additional guard elements. These guard elements can be interchanged without having to replace or purchase new base units.

**M.A.S.S 1 is tested to T2/W5.*

M.A.S.S. 1

SITEGUARD

SCREENGUARD

PEDESTRIAN GUARD

VISIRAIL GUARD

- **M.A.S.S. 1**

  A highly visible safety solution and ensures a stable secure connection. It is the core of the system and its versatility allows it to be used in many applications throughout Europe. M.A.S.S. 1 has been fully tested to T2/W5 providing protection to workforce, vehicle occupants, as well as pedestrians.

- **SCREENGUARD**

  This is a hoarding panel for use on work sites where privacy is required. The high steel screen offers security combined with easy assembly in a range of environments and situations.

- **SITEGUARD**

  This is an anti-climb, galvanized mesh fencing. M.A.S.S. Siteguard offers high security for the site, workers and equipment. Gates are also available.

- **PEDESTRIAN GUARD**

  This is a low-level fence addition to compliment the M.A.S.S. 1 vehicle restraint system which provides a simple solution to improve pedestrian safety.

- **VISIRAIL GUARD**

  This is a high visibility pedestrian rail that combines the benefits of Pedestrian Guard with a high visibility steel security rail complying with Chapter 8 of the 'Traffic Sign Manual'.

Quest™ CEN

The Quest system has been tested successfully using BS EN 1317-3 criteria for 110km/h and below.

Consisting of a series of W-beam fender panels supported by diaphragms, the Quest features an innovative integrated front trigger mechanism. During impacts, this mechanism releases the support frame assembly to absorb the energy of the impact. The system is designed to telescope rearward during head-on impacts to absorb the energy of impact and to redirect vehicles during side angle impacts.

QuadGuard™ CEN

The QuadGuard system is designed to protect motorists in vehicles up to 1,500kg, from roadside hazards as narrow as 610mm and as wide as 2,285mm. The QuadGuard system has been tested as a re-directive crash cushion at 110km/h, 100km/h, 80km/h, and 50km/h using BS EN 1317-3 specified criteria.

During head-on impacts at speeds up to 110km/h, the QuadGuard system telescopes rearward, crushing the cartridges and effectively dissipating the energy of the errant vehicle. During angle impacts at angles up to 15°, the vehicles are safely redirected back into the original travel path. After a design impact, the QuadGuard system can be quickly and easily refurbished by a two man team reusing the majority of the components.

QuadGuard is also accepted for use as BS EN 1317 compliant by Highways England for use as a double-sided P4 terminal for crash barriers.

VecuStop®

The progressive concept of the VecuStop crash cushion system is based on more than forty years of experience in designing industry-leading vehicle restraint systems.

The full ‘family’ of tests, as detailed in BS EN 1317 part 3, has been successfully completed and approved. BS EN 1317 approved to performance class 110km/h. VecuStop models can accommodate many different layouts, whether parallel or tapered in design.

All models of the VecuStop crash cushion system consists of hollow cylinders arranged in rows. They are highly effective energy and impact absorbing elements which are guided by a steel wire rope system. Once installed, the system elements of the VecuStop crash cushion do not require any maintenance.

Full corrosion protection is provided by a hot dipped galvanised finish. All components are made of steel and may be completely recycled.

VecuStop crash cushions are also available for use on approach ends of temporary vehicle restraint barriers when space is limited, or when the approach flare cannot be accommodated due to site constraints.

Sologuard®

Sologuard®

Sologuard is a safety barrier for carriageway crossover points allowing opening and closing by two operators in just a few minutes.

Altering the flow of traffic is achieved quickly and safely by simply removing four securing pins and winding down four sets of hidden wheels.

Sologuard is used at many emergency crossing points on motorways and trunk roads, as well as, maintenance crossing points at tunnels and bridges around the UK.

Sologuard can be fitted into existing safety fences using transition units with Maintenance Crossing Points to lengths of 150m and Emergency Crossing Points with 24m lengths being accommodated.

High quality reflectors fixed onto the posts provide the additional visibility needed for safe guidance at night, or in wet or foggy conditions.

SteelStep

Sologuard®

SteelStep

SteelStep System

The SteelStep System is employed at emergency crossing points in step profile concrete central reserve barriers.

The system consists of a rapid opening and closing, bi-directional gate. With its extremely low deflection and high containment capability, SteelStep System is the ideal system for emergency access points between central reservation concrete step barrier systems.

The system enables easy opening in different configurations. By removing locking pins at either end of the barrier, the SteelStep System can either pivot from each end or be relocated laterally, thus exposing the full opening. Maintenance training in use of the system is provided by Asset's in-house training facility.

SteelStep System can also be used on bridge decks, where conventional slip form concrete cannot be used due to its weight. Anchored every 5.4m, the system's performance is equivalent to concrete and is cost-effective.

Asset can undertake installation of this product, or alternatively can train our customers in safe installation under Highways Agency Sector Scheme 2(b).

Installation & Logistics

All products are stored in Asset International's and Hardstaff Barriers' main depots; both located in the docks area at Newport, South Wales; as well as a core of strategically located storage and operational facilities throughout the UK and Ireland.

Asset International's and Hardstaff Barriers' products are usually installed by in-house trained installers, with the exception of M.A.S.S., which is quick and easy to assemble in-situ. All products have National Highways Sector Scheme 2(b) training schemes (excpet M.A.S.S.) to which installers are all accredited.

Asset International and Hardstaff Barriers offer a 24-hour call out service for emergency requirements. Our crews are always on standby and can react to any location in the UK within hours.

We have access to 12 specialist artic cab mounted HIABs and up to 20 additional artic cabs for trailer haulage, all equipped with fall protection safety frames to facilitate safe working at height.

Health & Safety

Asset International and Hardstaff Barriers understand individual needs, working closely with main contractors and major traffic management companies throughout the country. Both undertake every type of installation possible, from tunnel applications to narrow verges.

With our extensive range of barrier systems we have a solution for most applications. With many years of experience, servicing thousands of sites across the UK, the leading experts in this market.

Asset International and Hardstaff Barriers are accredited to both Building Confidence and TIVA, and employ professional Health & Safety staff. All installers are trained and hold Sector Scheme 2(b) VRS tickets for installation and CSCS cards.

As part of our continuous improvement programme we are always updating and improving our systematic training regime. With the Work-At-Height Regulations in force from April 2005, ASSET increased safety measures by equipping our vehicles with specialist safety frame fall arrest equipment. All of these frames are tested as required by LOLER regulations.

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VEHICLE RESTRAINT SYSTEMS

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