



FRONTIER PITTS

DATA CENTRE PROTECTION

INTRODUCTION

Bespoke protection for data and cash centres

Frontier Pitts secure various Data Centres and Cash Centres in the UK and around the World, with a variety of equipment from both our HVM impact tested portfolio and our Security Range. Clients include MSN and Google in Dublin.

As the UK's economy has become increasingly dependent upon information for delivery of online services and governance of major organisations, commercial Data Centres are recognised as an essential asset of the British Critical National Infrastructure (CNI).

The main purpose of any type of security is to protect an asset. An asset can include people; staff, visitors, guests, or physical assets; buildings, contents, equipment and sensitive materials. Depending on what the asset is will depend on the threat level. The threat level may remain constant, or may change throughout the day, month or year depending on an event (i.e. Crowded Places venue) or the current political environment.

Every data centre location is unique; therefore a bespoke physical security protection solution needs to be designed for each site. To start, a detailed Risk and Threat Assessment needs to be carried out by a specialist who understands the potential threats, hazards, vulnerability and weaknesses. From this, an Operational Requirement is developed and an appropriate solution identified.

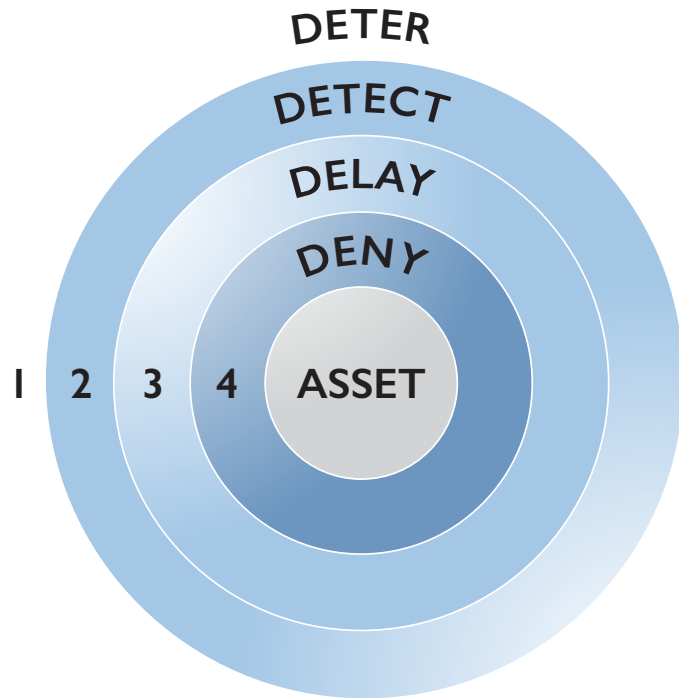
DATACENTRE TIERS

Telecommunications Infrastructure standard for data centers

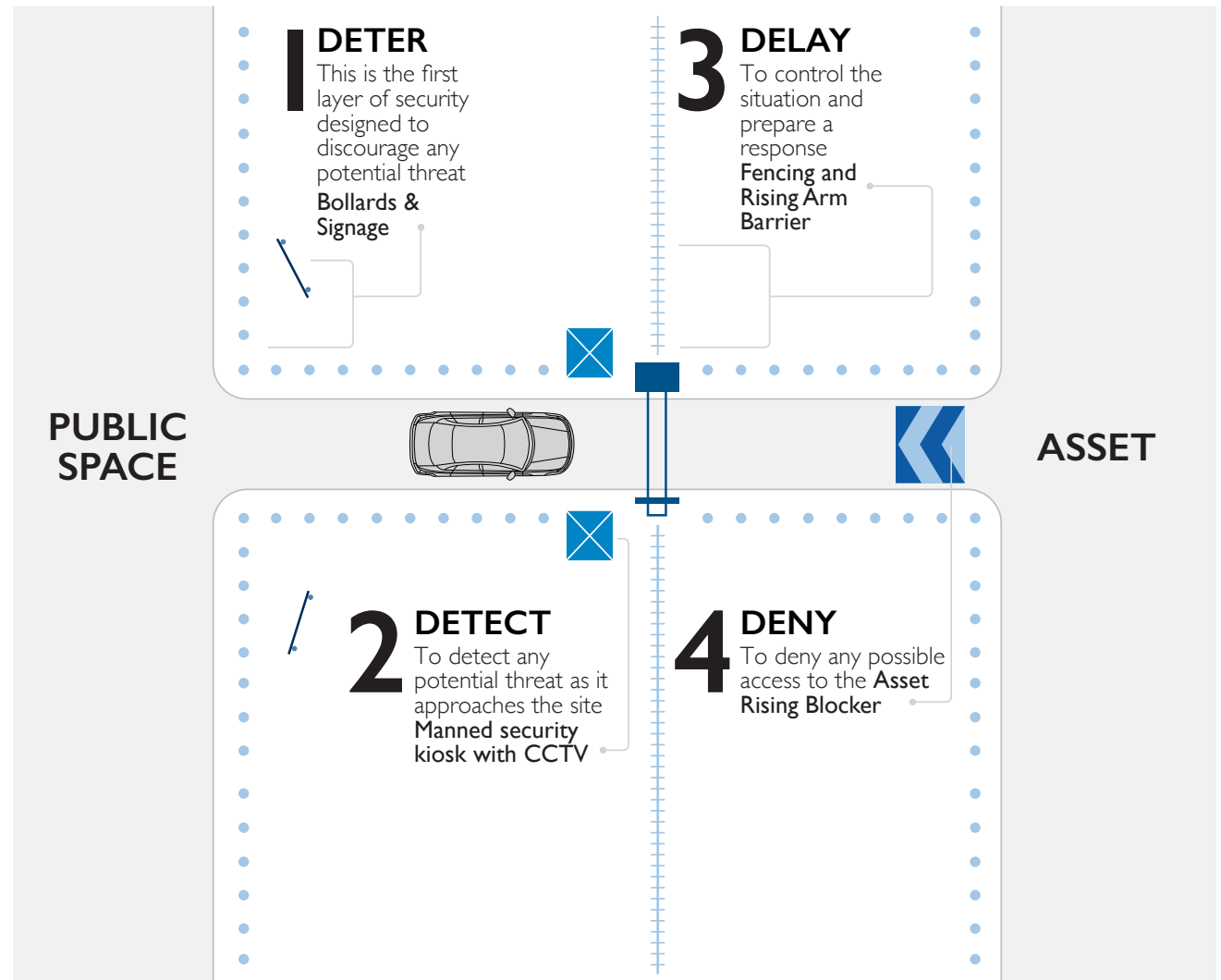
Tier Level	Requirements	Security Requirements
1	<p>Description: Server Room/Small Businesses</p> <ul style="list-style-type: none">• Single non-redundant distribution path serving the IT equipment• Non-redundant capacity components• Basic site infrastructure	Security Range
2	<p>Description: Medium Size Businesses or companies that do not run 24/7</p> <ul style="list-style-type: none">• Meets or exceeds all Tier 1 requirements• Infrastructure capacity	Security Range
3	<p>Description: Large Size Businesses with constant worldwide presence</p> <ul style="list-style-type: none">• Maximum 2 hour downtime per annum• Meets or exceeds all Tier 2 requirements• Multiple independent distribution paths serving the IT equipment• All IT equipment must be dual-powered and fully compatible with the topology of a site's architecture• Concurrently maintainable site infrastructure	Security Range with Terra Range (dependent on Asset and Threat)
4	<p>Description: Hosts mission critical computer systems with fully redundant subsystems and compartmentalized security zones controlled by biometric access controls methods</p> <ul style="list-style-type: none">• No downtime.• Meets or exceeds all Tier 3 requirements• All cooling equipment is independently dual-powered, including chillers and heating, ventilating and air-conditioning (HVAC) systems• Fault-tolerant site infrastructure with electrical power storage and distribution facilities	Security Range with Terra Range (dependent on Asset and Threat)

OPTION 1: LAYERED SECURITY

Vehicle access control points (VACP)



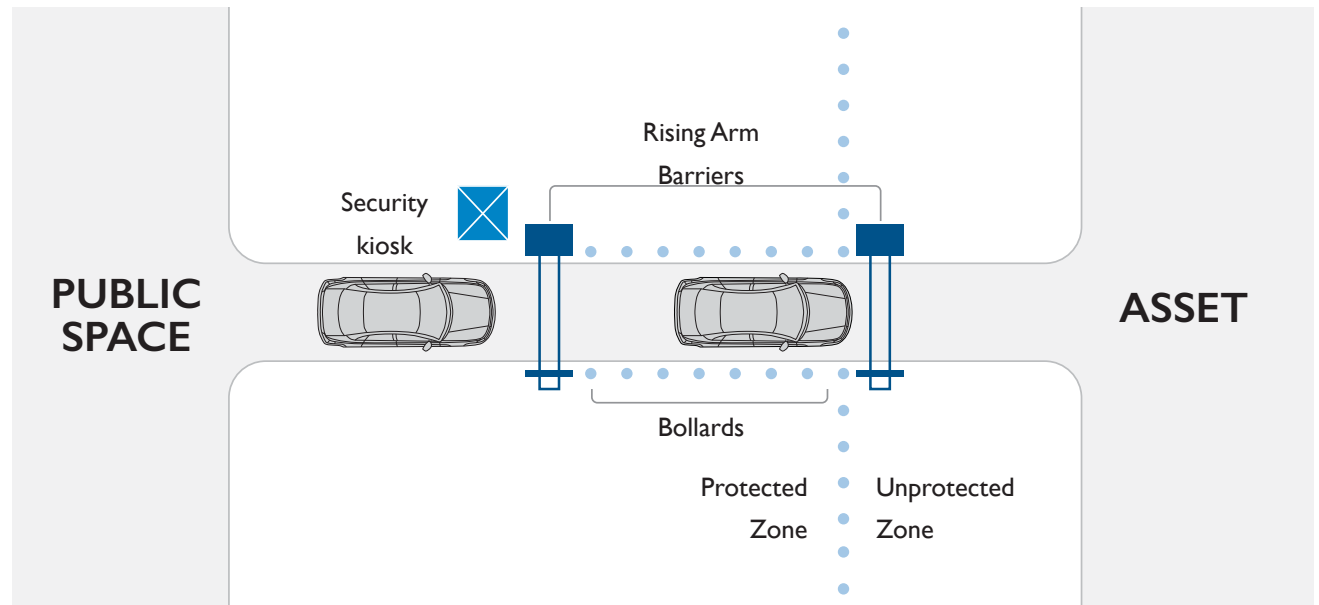
One such solution is a layered security approach, also known as an ‘onion’ approach. This provides the facility with layers of security and protection around an asset which will **deter, detect, delay** and **deny** any attack.



OPTION 2: INTERLOCK SECURITY

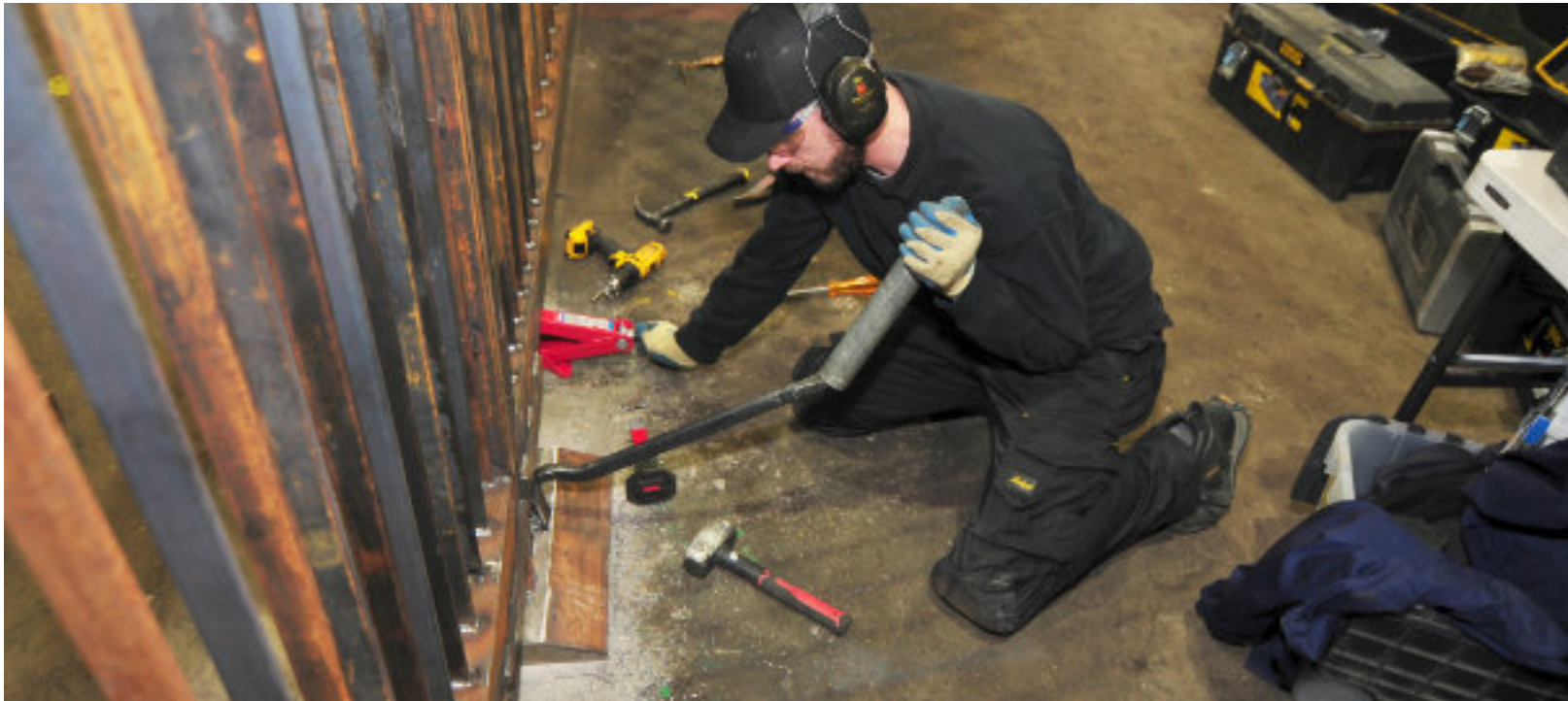
Vehicle access control points (VACP)

An Interlock system, or 'Sally Port' and 'Tiger Trap' as it is also known, is another option. This setup provides the site with a secure containment area to check incoming or outgoing vehicles. The traffic throughput for an interlock includes vehicles entering the first section control point and once in, this set will close. If the vehicle is authorised to proceed after security checks, the second control point will open and allow entry to site. At no point during the cycle will both sets of VSBs be in the open position. Only when the first set of VSBs are fully secured in the closed position will the second set open.



LPS1175 SECURITY RATED

Gates & Turnstiles



The standards for the protection of Building Fabrics and External Perimeters are set by the Loss Prevention Board (LPCB). The Loss Prevention Standard LPS 1175 covers the “Requirements and Testing Procedures for the LPCB Approval and Listing of Intruder Resistant Building Components, Security Enclosures and Free Standing Barriers”. Products tested and approved to this standard are widely recognised by Government Agencies and Datacentres as being an effective means of protecting people and assets. The objective of this equipment is to **Deter, Detect, Deny, Delay** and **Defend**, thus reducing the risks of loss to crime or terrorism.

Security Rating grades illustrate the different attack times & tools.

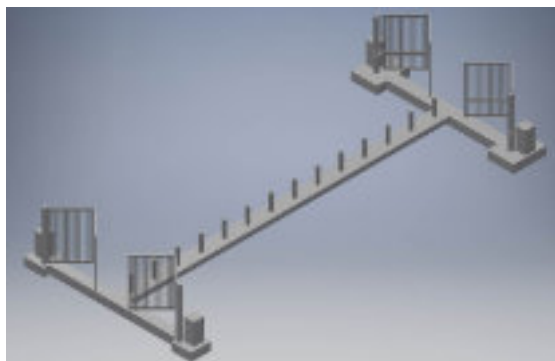
IWA 14 – 7.2T @ 30MPH

LPS1175: Issue 8 Security Rating B3 (SR2)

Unique to the market this double leaf HVM Bi-folding Gate impact test resulted in minimal penetration.
Dual certifications – IWA14 & LPS1175



IWA14 HVM & LPS1175 SECURITY RATED TERRA BIFOLDING GATE



Introducing the latest **Terra Bi-folding Speed Gate** which has been successfully impact tested to the International IWA14 Specification, stopping a 7.2 ton vehicle travelling at 30mph (48kph).

Intruder resistant to forced entry, certified by **LPCB** to **LPS1175: Issue 8, Security Rating B3 (SR2)**

Designed with datacentres in mind, with the dual certification on the Red Book Live of IWA14 Hostile Vehicle Mitigation and LPS1175 Intruder resistance.

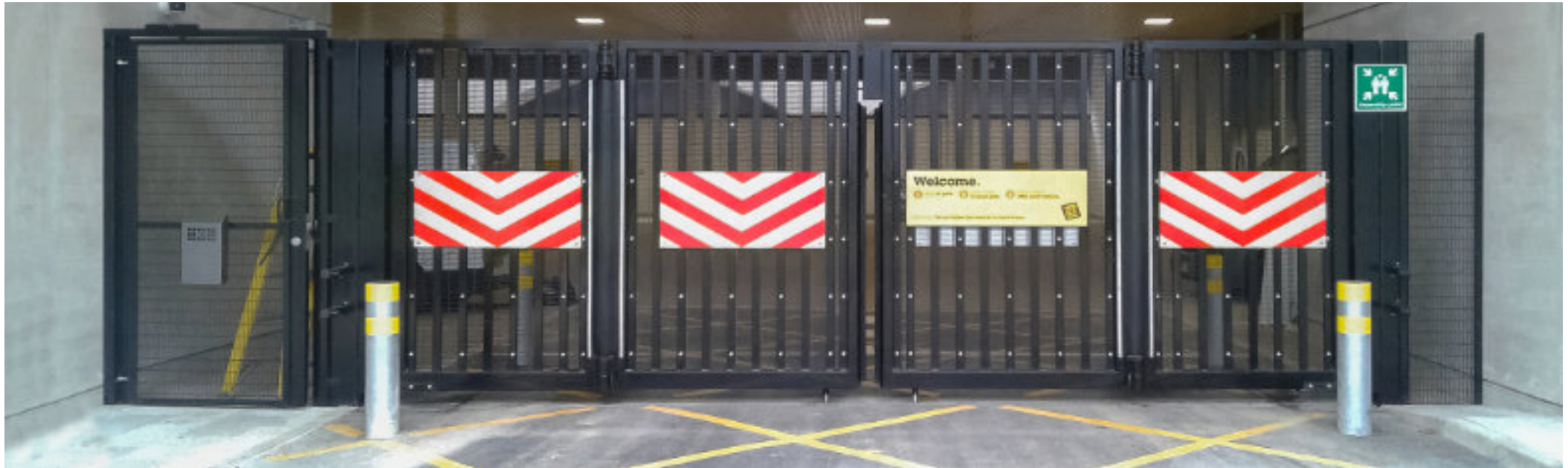
BIM models also available for our Terra Bi-folding Gate Interlock system



Terra Bi-fold Gate
Certified to LPS1175: Issue 8
Security Rating B3 (SR2)
Certificate Number C10596-02
Certified to IWA14-12813
Rating V17206(N2A)-48/90-0.2
Certificate Number C10596-01

LPS1175 SECURITY RATED

Vehicle Access Control Point (VACP)



Our Platinum Vehicle Gate has been designed for the Datacentre market and successfully tested by LPCB to LPS1175 Security Rating 2 & 3 to withstand intruder at tacks of up to 5minutes.



Models include:

- Bi-folding Gate – Double leaf up to 10m
- Bi-folding Gate – Single leaf up to 5m
- Hinged Gate – Double leaf up to 10m
- Hinged Gate – Single leaf up to 5m
- Sliding Gate – up to 10m

LPS1175 SECURITY RATED

Pedestrian Access Control Point (PACP)



LPS1175 Platinum Pedestrian Gate pictured here next to our LPS1175 Terra Diamond Turnstile, with HVM Static Terra Bollards in front

Our Platinum Turnstile is LPS1175: Issue 8 Security Rated B3 and able to withstand intruder attacks of up to 3 minutes.

Our Terra Diamond Turnstile* is LPS1175 Security Rated 3 & 4 and able to withstand intruder attacks of up to 10 minutes. Approved for Government Use, please contact CPNI.

Our Platinum Pedestrian Gate has been designed for the Datacentre market and successfully tested by LPCB to LPS1175 Security Rating 2 & 3 to withstand intruder attacks of up to 5 minutes.

Models include:

- Manual Operation Wicket with optional Drop Bolt and Shoot Bolt
- Semi-Automatic Wicket with Hydraulic Closer and Locking Bolt
- Fully Powered Wicket with Gate Back Actuator and Locking Bolt

CPNI[®]

Centre for the Protection of National Infrastructure

Approved for Government Use, please contact CPNI for details

* CPNI approved for the Terra Diamond Turnstile



Platinum Pedestrian Gates SR1, 2 & SR3
Approved to LPS1175 Issue 7
Security Rating 1, 2 & 3
Cert/LPCB Ref: 1059b/10 & 14



Platinum Turnstile B3
Approved to LPS1175 Issue 8
Cert/LPCB Ref: 1059/01



Terra Diamond Turnstile SR3 & SR4
Approved to LPS1175 Issue 6
Security Rating 3 & 4
Cert/LPCB Ref: 1059a/01

BI-FOLDING GATES

The Perfect Solutions for Datacentres



Frontier Pitts also manufacture standard security Bi-folding Gates that meet EN1627 requirements.

The popular Bi-folding Speed Gate is a fast-acting security gate which is ideal for sites where there is a limited area for the gate to open and close.

Bi-folding gates are available in various models including overhead guidance, bottom guidance or trackless.

AUSTRALIAN DATACENTRE

PAS 68 HVM compact terra Barriers



Frontier Pitts installation of the five PAS 68 HVM Compact Terra Barriers at an Australian DataCentre provides the locations physical security with a layer of counter terrorist protection.

The Compact Terra Barrier is drop arm barrier which has been successfully PAS 68 impact tested using a 3.5t vehicle travelling at 30mph, by an Independent Impact Test Facility and witnessed by the Government.

TELECOMS DATACENTRE

Layered Vehicle security Barriers (VsBs)

Frontier Pitts solution for this Telecoms Datacentre integrated PAS 68 Terra Blockers and Static Terra Bollards with Security Hinged Gates to provide Hostile Vehicle Mitigation protection with vehicle and pedestrian traffic control.



When Frontier Pitts were shown the initial perimeter security specification certain parts contravened health and safety regulations. As the Automation Specialists, Frontier Pitts liaised closely with the Architect to create a scheme which met the following objectives:

- High Security of entire boundary to prevent ram-raiding
- Prevent viewing of loading in the yard
- Deter climbing into site (no footfalls) Emergency Pedestrian Access
- Health & Safety regulations achieved even in the location's limited space

The program of works included our Security Hinged Vehicle Gate and our Wicket Pedestrian Gate installed on the loading bay area. These were backed by Hostile Vehicle Mitigation Terra Blockers, Static Terra Neptune Bollards and Removable Static Terra Neptune Bollards. The Pedestrian Gate was fitted with a push bar to open for Emergency Exit use. This high security single point locking push bar has an integrated electro mechanical/solenoid deadlock for use with access control systems. Automatic bolting upon door closure is fitted as standard.



SATE override fitted allowing emergency escape at all times via internal push pad with instructions "push" at the point of use. The unit is fitted with a manual mechanical key override as standard also.

The success of this installation illustrates the benefits of working with perimeter security experts at point of design to specify an achievable scheme whilst also exceeding the client's expectations.

DATACENTRE PROTECTION

Layered Vehicle security Barriers (VsBs)



The system of the HVM Terra Ultimate Barrier working with the bi-folding Speed Gates provides the location with the Ultimate level of counter terrorist protection and the speed of operation.

As with all Frontier Pitts equipment, this inter-lock system has a duty rating of 100%. The Terra ULTIMATE Barrier is the PAS 68 automatic drop arm barrier which provides the Ultimate Solution. Integrated with

Frontier Pitts Bi-folding Speed Gates, the Ultimate Barrier provides the ultimate hostile vehicle mitigation defence to the fast acting security gates.

Successfully impact tested to PAS 68 stopping a 7.5t vehicle travelling at 50mph (80kph), the Terra Ultimate Barrier stopped the vehicle within the aperture.

For Pedestrian access, Full Height Turnstiles were installed next to the vehicle access.

This system has been fully maintained since commissioning by Frontier Pitts for additional peace of mind.

DATACENTRE PROTECTION

PAS 68 HVM Terra Gates, Blockers & Barriers



Frontier Pitts PAS 68 HVM Terra Gate and Terra Barrier installation at a key UK Data Centre

The PAS 68 Terra Gate has been successfully impact tested with a 7.5t vehicle travelling at 50mph (80kph - which equates to 1852kj) in both the fully closed and half open positions.

On both impacts the gate completely stopped the vehicle resulting in zero penetration on to site and the gate remained fully functional after impact.



HVM Terra Blockers

Frontier Pitts PAS 68 Terra Blocker was installed to provide HVM protection to a set of Rollershutter doors.

The Terra Blocker, finished with red and black chevrons, has been successfully impact tested stopping 7.5t travelling at 30mph. This mitigates the threat of the run up to the roller shutter doors, protecting the assets within.

Terra Sliding Cantilevered Gate and Compact Terra Barriers were also installed at this location to provide HVM protection to other venerable areas of site.



HVM Terra Ultimate Barrier

A cash centre installed the HVM Terra Ultimate Barrier in front of entry roller shutter doors to the main building to mitigate the treat from the run up available from the main road.

The Terra ULTIMATE Barrier is the PAS 68 automatic drop arm barrier which provides the Ultimate Solution. Successfully impact tested to PAS 68 stopping a 7.5t vehicle travelling at 50mph (80kph), the Terra Ultimate Barrier stopped the vehicle within the aperture.

This system is fully maintained by Frontier Pitts, complete with a four hour call out for additional peace of mind.

“ The overall consensus from the team found Frontier Pitts to be extremely proactive and responsive, determined to deliver a quality product and service, as well as resolve demanding challenges imposed upon them.

In this demanding industry it was refreshing to appoint a physical security supplier that you can totally rely on and trust. ”

DataCentre Professional



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