

# ZAUN

Perimeter Protection Systems

## High Security Perimeter Event Overlay



## Zaun Limited In a class of its own

At Zaun, we lead the way in creating products and system solutions for specific market needs, by ensuring a continuous plan of research and development along with investing constantly in system technologies. Our business truly sets new boundaries in perimeter protection systems, whether for high security applications or sport, play and event overlay, we are at the forefront of the industry. Zaun has therefore delivered schemes for some of the most prestigious high profile events in the world.

Zaun is one of the largest manufacturers of perimeter protection systems, providing a completely integrated solution. Our systems are manufactured in a state of the art production facility, produced to ISO 9001 standards; this to ensure the quality of the systems is second-to-none giving us an unrivalled reputation for delivering high security perimeter overlay.

Today, in the sports sector, our unrivalled experience and all-round business capabilities have seen Zaun produce specialist systems, which have been specifically designed for individual sports and stadium requirements, ensuring application usage, user safety and security considerations are fully reflected in the solutions we have installed.

This has been demonstrated in the extensive use of our systems at The London 2012 Olympic Games in both perimeter security and event overlay where we provided tailored solutions for specific sporting venues. A selection of our other installations include, The English Football Association training centre at St Georges Park, Meydan Racecourse, Dubai and Donnington Park Racing Circuit, UK.

Our in-depth knowledge of the sector is key to our success. Whether through our active involvement with sector specific trade associations or through to our work with sport

governing bodies, we ensure the emphasis of the solutions we provide, always address the requirements of its usage.

Put simply, our sports sector experience, and our unrivalled resources and 'can do' approach of our company along with ISO and product accreditations will help ensure the success of your sports project.

Photography:

Opposite  
The English Football Association  
St Georges Park





ST. GEORGE'S PARK  
MADRID

**2** DAVID  
BECKHAM  
PITCH

“We have developed specialist systems to specifically address the individual sports and stadium requirements of the schemes we work on. These industry leading technologies ensure application usage, user safety and security considerations are fully reflected in the solutions we provide”

Paul Painter  
Co-Founder – Zaun Limited

## All round capabilities for sport

Zaun doesn't simply supply fencing; it has a range of solutions to ensure complete delivery of a full turn-key package.

1

Main stadium - Crowd loaded perimeter fence, internal buggy route, utility protection, drop arm barriers.

2

Media Centre - Multi-Fence perimeter, bespoke access hatches, vehicle restraint barriers.

3

Multi-story car park - Fence cladding for multi-story media centre car park, perimeter fencing, security cage.

4

17km external perimeter fence with electric topping and CCTV enhancement and 1000+ gates.

5

Eaton Manor training facility - Perimeter fencing.

6

Athletes Village - 4.5km perimeter fencing with electric topping and CCTV enhancement.

7

Basketball Arena - Utility fencing.

8

Clean Energy Centre - Perimeter fencing and gates.

9

Aquatics Centre - Temporary fence to protect against crowd loading.

10

Accreditation Areas - Security checking various locations 7km.

11

O2 Arena - Multi-Fence temporary high security fencing.

12

Westfield Shopping Centre - Car park cladding, outer perimeter fence, automated sliding gates.

13

Abbey Mills Utility Station - Critical national infrastructure perimeter protection system.



Photography:

Stratford Olympic 2012  
Park London

“We supply a full turn-key solution, starting from a site survey, through to internal product design, in-house manufacture and managed installation of these systems”

Paul Painter  
Co-Founder – Zaub Limited





All round capabilities  
for sport

Photography:

Stratford Olympic 2012  
Park London

# Olympic Stadium

## Securing the greatest show on earth

London 2012 – Zaun’s proudest moment and biggest contract to date



“We tried to imagine every conceivable security eventuality and protect against it – and Zaun were with us every step of the way, developing new products to meet the demands we placed on them”

### The Challenge

The eyes of the world were on London and its showcase Olympic Park as an estimated global audience of almost five billion tuned in to London 2012. If ever terrorists wanted a jaw-dropping public target, the main Stratford site and its village of 10,500 athletes was it.

The British government and Games organisers insisted security was tighter than ever before and the perimeter of the Olympic Park allowed only those who had tickets and had been properly vetted to get in to enjoy the greatest show on earth.

### The Solution

The Olympic Delivery Authority turned to Zaun to secure the near 20km boundary of the Olympic Park. A further 1.5km of Zaun fencing provided a ‘ring-within-a-ring’ around the Olympic Stadium.

Zaun worked with Olympic Park contractor Skanska and stadium contractor BAM Nuttall to install 3.6m high fencing above ground, topped with 1.2m of electric fencing, with security properties specified by Olympic security advisers.

They chose a mix of Zaun’s Multi-Fence, Hi-Sec, Super 6, Duo5 and Duo8 while the perimeter incorporated intruder

detection systems, CCTV at regular intervals, hostile vehicle mitigation where appropriate and vehicle and pedestrian access portals, gates and turnstiles.

The design for the Olympic Stadium included VIP emergency gates, which were dubbed the Obama Gates, in case of attack during the highest-profile and most sought-after events, such as Usain Bolt’s historic 100m gold medal triumph.

In total, Zaun worked 30,000 man hours poured 1,400 cubic tonnes of concrete and installed more than 1000 gates. It was also on call 24/7 to rectify any issues that arose during the Games.

### Key Project Data

Sector

Sub-sector

Project scope

Services provided

Project location

Client

Contractor

Budget

High Security Venues

Sports Stadia and Venues

Permanent Hostile Vehicle Mitigation Crowd Control Fencing Solution

Design; Manufacture / Fabrication; Build

Stratford, East London

Olympic Delivery Authority

BAM Nuttall, Skanska

> £25m

## Temporary Venues

### HVM from Weymouth to Newcastle

Olympics venues' temporary protection from vehicle and crowd attack



“My team insisted on security enhancements wherever we saw a potential threat. Zaun proved to be uniquely responsive to our specific demands and tailored every installation to our needs”

#### The Challenge

London 2012 organisers wanted to protect temporary Games venues as securely as the main Stratford site. But they needed the perimeter protection to be removed as soon as competition was over to minimise disruption to the local community.

They also wanted to incorporate vehicle and pedestrian access along with CCTV and detection systems and to tailor protection individually to each location and the security threat and attack potential identified by security advisers.

#### The Solution

Zaun offered a single Hostile Vehicle Mitigation (HVM) contract for almost 5km of fencing all temporary venues to include Horse Guards Parade, Wembley Stadium and Arena, Greenwich Park, the O2 Arena, the Royal Artillery Barracks, St James's Park Newcastle and Weymouth sailing village.

It developed a mobile high-security HVM fence especially for the Games, mounting its PAS 68 Multi-Fence into concrete blocks to resist attack by 7.5 tonne vehicles driven straight at it at 40mph.

Multi-Fence uses anti-climb mesh fencing, and is available up to 5m high.

It is one of the first temporary solutions to achieve PAS68: 2010 V7500(N2) 64/90: 5.0/0.0, is manufactured to BS EN 1317 Part 2 (vehicle restraint systems) and is approved by the Highways Agency.

The solution at each venue had to work with existing security and perimeters. Typically this entailed another 'cordon of security' around existing installations with access portals at strategic locations.

Zaun secured the main TV and temporary CCTV control centres at Horse Guards and made Wembley safe – then dismantled the security cordon as soon as the last ball was kicked.

#### Key Project Data

Sector

Sub-sector

Project scope

Services provided

Project location

Client

Contractor

Budget

High Security Venues

Sports Stadia

Temporary Hostile Vehicle Mitigation Crowd Control Fencing Solution

Design; Manufacture / Fabrication; Build

Greater London, Newcastle, Weymouth

Olympic Delivery Authority

FM Conway, ISG, John Sisk

> £1m

## Political Party Conferences

### Party conferences secured

Home Office adds Rapid Deployable System (RDS) to National Barrier Asset



recognition for making this a safer world ADS  
Awarded to Zaun for its RDS System



“RDS is a big leap forward in securing events cost effectively, given the reduced numbers of guard force needed and the improved security against unauthorised access by pedestrians and vehicles”  
  
Steve Worth  
Greater Manchester Police Inspector

#### The Challenge

The Home Office and British police forces wanted a rapidly-deployed high-security temporary fencing solution that would resist forcible attack by crowds or vehicles and with no below ground foundations to help cut the cost of policing party political conferences.

The solution had to pass Hostile Vehicle Mitigation (HVM) and crowd control / mob attack testing and offer protection normally only available from permanent fixed installations. It also had to be installed and removed quickly within tight time scales.

#### The Solution

Zaun developed its RDS Fence and RDS PAS68 and then worked with the Home Office and Sussex Police to take it through testing against attack by 2.5 and 7.5 tonne vehicles to PAS68:2010 V2500 (N1G)/48/90:4.7/0.0 and PAS68:2010 V7500 (N2)/48/90:6.0/0.0 standards.

RDS, which won the Security Innovation Award 2013, uniquely provides HVM up to 30mph in a rapidly deployed temporary fencing solution and was tested on-event for the first time at the European Committee of Ministers meeting. It was such a success that Sussex Police advised it was bought for the

autumn party conferences, estimating a saving of 90% of police time when it was next used at the Lib Dem Conference.

The Home Office initially bought 600 metres of RDS fencing, including access portals, turnstiles and gates, which was then used by for the Labour and Conservative conferences that followed. It has since taken this quantity to over 6KM.

RDS Fence is Secured by Design. It goes up to heights of 3m and can include CCTV, PIDS, vehicle gates and pedestrian portals. It suits sites with moderate undulations in ground levels and differing standards of ground standings.

#### Key Project Data

Sector

Sub-sector

Project scope

Services provided

Project location

Client

Contractor

Budget

High Security Venues

Political Conferences

Temporary Hostile Vehicle Mitigation Crowd Control Fencing Solution

Design; Manufacture / Fabrication; Build

Brighton, Manchester, Birmingham

Home Office and three police constabularies

Zaun

< £1m

# The English Football Association Centre

## A stage fit for tomorrow's FA stars

David Beckham Pitch gets branding-friendly premier perimeter solution



Zaun managed the installation to ensure minimal disruption on-site and a quality finish all in good time for the Royal opening”

St George's Park

### The Challenge

The FA wanted only the best for its highest profile 'social pitch' at St George's Park, its new centre of excellence in Staffordshire, opened in October 2012 by the Duke and Duchess of Cambridge –FA President Prince William and his wife Kate.

The fence at Pitch No 2, the David Beckham Pitch, needed to take sponsorship and branding and keep rattle and noise to a minimum.

The FA also wanted to fit in with the landscaping of the National Forest in which the centre sits.

### The Solution

The system had to be in keeping with the environment – even down to surfacing the pitch surround in the same golden colour as the car parks. It needed to limit noise impact on neighbours and cause minimal disruption to pitch use during installation as the fencing went in after the pitch.

They chose a quality system that will last on this high-usage pitch at heights of 2m and 5m with EPDM inserts to insulate the fence panels from the posts to reduce noise during impacts to 72dB compared with the 93dB of wooden panels.

Zaun designed its Super Rebound to take branding and sponsorship signs and for the fencing to remain

robust even in brisk winds when the graphics can threaten to act as a 'sail'.

The installation, which is around a pitch that is primarily used by the public rather than for England training, carries Zaun's industry-leading 12-year product guarantee.

Zaun worked closely with East Staffs Borough Council on planning consent and with the St George's Park groundsmen and facilities team to complete a tight programme of works on the £105m complex on budget and in time for the royal opening.

### Key Project Data

Sector

Sub-sector

Project scope

Services provided

Project location

Client

Contractor

Budget

Sports Stadia and Venues

Football Pitches

Noise and Rattle Reduction Pitch Perimeter Fencing Solution

Design; Manufacture / Fabrication; Build

Burton on Trent

St George's Park / The Football Association

Zaun

> £50k

### Meydan Racecourse, Dubai

#### Perimeter fencing for an architectural masterpiece

Zaun's fencing selected for Meydan Racecourse



"We specified Zaun fencing as the solution met the exact requirements of the racecourse. Zaun worked very closely with us, to ensure every detail in the design, manufacture and supply were met to the complete satisfaction of our customer"

Jeremy Knight  
Senior Contracts Manager – Duralock

#### The Challenge

The owners of Meydan embarked on the development of the world's first 5-star horse racing facility. The 67 million sq ft facility was developed in the suburbs of Dubai in Meydan City and represents the landmark in horse racing facilities.

With a planned capacity of over 60,000 within the grandstands and over 120,000 across the full facility, Meydan is planned to be the largest racing facility providing unsurpassed standards in horse racing facilities.

#### The Solution

Zaun supplied over 3.6km of fencing panels to Meydan Racecourse. These panels were used extensively within pedestrian areas of the course along with the perimeter of the track.

Zaun worked with partners Duralock - the specialist equestrian fencing supplier, to provide materials to the iconic racecourse. Duralock specified a bespoke mesh panel and the renowned quality of the British fencing manufacturers system was key to the course owners.

Working closely with both Duralock and the course developers, Zaun was able to tailor their fencing to meet the specific requirements of the course, ensuring an aesthetic and safe solution was provided.

The system was delivered on time and in full for the launch of this prestigious facility, ensuring the estimated 120,000 crowd, were safe as the course hosted the world's richest and most illustrious race – the Dubai World Cup.

#### Key Project Data

Sector

Sub-sector

Project scope

Services provided

Project location

Client

Contractor

Budget

Sporting facilities

Horse racing

Internal perimeter and crowd demarcation fencing

Design & manufacture

Meydan City, Dubai, UAE

Duralock

Duralock

< £100k

# Cannock Hockey Club

## New Hockey System to Cannock Hockey Club

Zaun's new Hockey Fencing selected to surround Cannock Hockey Club pitch



“When Commencing this new project, I was looking for a fencing system which would be more durable than the traditional type of fencing, particularly at each end behind the goals. The Zaun System provided this and more”

Ken Bedford  
Ground Committee President

### The Challenge

Cannock Hockey club is the most successful National Premier League hockey club in the UK, having won the title in four out of the last five years. While a match hockey ball weighs only 5.5 ounces, the high level of play at the club means that the ball can travel at speeds in excess of 80 mph. As a result pitch-side fencing is required to prevent the ball leaving the playing area and causing damage to property or injury to passers-by, but ironically, such is the level of impact against the fence, the fence itself needs protecting.

### The Solution

Zaun have developed a hockey fencing system that does away with the need for wooden boards altogether. The lower 210mm of Zaun's new Hockey Fencing system uses a high density of horizontal wires in a close 25x50mm mesh pattern to ensure that the panel is able to withstand the ball impacts. As this is integrated into the fence panels, the cost of the wooden boards is saved, as well as the initial board install costs and all costs associated with ongoing replacement.

The integrated hockey panel also means that the noise resulting from ball impacts is significantly less than the noise of impacts against wooden boards. The noise of ball impacts against wooden boards can be heard from several hundred meters away, and may cause problems if local residents and other amenity users complain. In some instances this has meant that hockey clubs have had to add rubber padding to the hockey boards, another cost and ongoing expense.

### Key Project Data

Sector  
Sub-sector  
Project scope  
Services provided  
Project location  
Client  
Contractor  
Products used

Sport  
Sports Club  
Sports fencing, General perimeter fencing, Noise reduction  
Design; Manufacture / Fabrication; Build  
West Midlands  
Cannock Hockey Club  
Managed installation  
Duo® sports fencing with hockey rebound panel; Hockey pitch  
Rigid mesh fencing system

## Duo Sports

Duo Sports fencing has been proven to withstand the rigours of the most demanding applications such as five-a-side football. The twin wire panel consists of two 8mm horizontal wires welded either side of the vertical wires.

Safe play is ensured as the panel ends are covered with a continuous clamp bars to eliminate the risk of catching on the wires.

rubber inserts so that noise is reduced from ball impacts; a feature that is highly appreciated and essential in residential areas.

Duo Sports fence is incredibly adaptable: the top can be cranked for added ball retention, and the fencing can be extended up to ten metres with sports netting for applications such as golf and cricket.



## Super Rebound

Zaun manufacture a sports rebound fencing known as the Super Sports Rebound Panel.

Zaun's Super Sports Rebound Panel has become the preferred and popular choice over wooden rebound board systems which offer a hiding place to trespassers and children, acts a canvass for graffiti and is not able to provide a long lasting service life due to the nature of the material used.

Great care has been taken in developing the Super Rebound Panel to ensure that optimum performance in a sporting environment.

For example, the panels are insulated from the post using synthetic rubber EPDM inserts that reduces noise during impacts (super rebound 72dB V wooden panels 93dB), and a continuous clamp-bar completely covers the ends of the panels so that clothing cannot snag.

## Hockey

Zaun Hockey Fencing overcomes the problems related to wooden boards by eliminating them altogether!

The Zaun system uses twin 8mm in a close 25x50mm mesh pattern to clad the lowest 210mm of the fence. This results in an extremely robust section of fence, which is able to withstand the cannonball like impacts that occur during a game of hockey, however for pitches that receive heavy use the body panel is available in a 100x50mm

pattern this creates a strong panel in which the vertical wires are extremely resistant to impacts.

The Zaun Hockey system does not have the expense of wooden boards and the required fixings and so is less expensive than similar fencing using wooden boards.



## Tennis

Zaun's Advantage tennis fencing system is capable of withstanding heavy use while allowing easy viewing of the on court action.

The Advantage tennis system uses a 200x40mm twin wire mesh, resulting in an extremely durable court perimeter, which enhances the area in which it situated. The use of 200x40mm mesh means that there is no possibility of a

ball passing through the fence, a problem that can occur behind the serving line with the more common 200x50mm mesh.

The twin horizontal wires mean that the court will even be strong enough for high impact sports like five-a-side football.

## Spectator Railings

Designed by Zaun to the highest standard, handrails or 'spectator rails' improve safety for both players and spectators.

Manufactured from strong tubular section, Zaun handrails are lightweight, robust and attractive. The system is available with or without infill panels.

Now becoming an FA requirement for many non-league clubs, spectator rails are both attractive and practical.

The players feel that the game is played at a higher level and there is less likely to be any incursion on the pitch by eager fans.



## Sports Barn

In collaboration with our construction partners, Zaun have developed the Sports Barn.

This radical building design gives you all the benefits of fresh-air play, but is roofed and lit so that it can be played in all weather conditions, day or night, 365 days a year.

The Sports Barn uses traditional construction methods for the frame and roof, but any or all of the brick walls re replaced by Duo Sports fencing. This

significantly lowers construction costs, and running costs and are less as there are no ongoing bills such as heating and air conditioning. The pitch can be used all year round, and the concept lends itself to all sports, increasing the value return on investment.

Total enclosure means total security, and 100% ball retention means that the Sports Barn can be located in areas where a traditional 5-a-side court would pose a hazard. Any of Zaun's Goal Units and Sports Accessories can be added.

## MUGA - Colosseum

Zaun's new Colosseum sports system has been developed to the highest standards to give a new option when selecting a modular multi use games area.

The system is designed to ensure maximum playability, while ensuring that the system is as safe as possible. This makes Colosseum ideal for any environment where play will take place, from schools through to urban settings that receive heavy usage and aggressive play. Colosseum combines football and basketball and utilises a unique styling

that is both aesthetically pleasing and also encourages play.

Colosseum is constructed from a combination of hollow tube railing panels and twin wire mesh. The Colosseum system is available as a full court, or for areas where space or possible budget is restricted, the goal ends can be purchased separately. The goal ends retain the flexibility of the full system, allowing for any width to be specified and various heights dependent on the requirements for ball retention.



## Swimming

Swimming pools can be extremely dangerous places and many children and adults are injured or worse each and every year. Children need to be constantly supervised around swimming pool areas and unlawful entry of swimming pool areas can have disastrous consequences. Ensuring that your area has the correct fences around it can help prevent these accidents.

Zaun has developed swimming pool fences to prevent unauthorised access

to swimming pool areas and fences to reduce accidents and drowning deaths in swimming pools.

Some countries such as France now have fencing laws that require swimming pool areas to be enclosed by fences as they understand that physical barriers such as fences are one of the best ways to prevent accidents and deaths.

# ZAUN

Perimeter Protection Systems

## Our Locations



For more information on Zaun Limited, along with our products and services,  
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Setting new boundaries in sport