

# Edge Protection Safety

Presentation 2014



Presented by Paul Gilligan, General Manager



# Crowne Plaza

Newcastle, United Kingdom

Double height edge protection with built-in toe board – this makes the site safer for pedestrians on the ground and construction workers on the site.









# What is edge protection?

- Edge protection is fall protection equipment most commonly used during the construction of commercial buildings, residential housing, stadia and roads. It often consists of a toe board, a main guard rail and an intermediate rail
- Edge protection protects workers from falling as well as preventing accidents from falling material and debris, which is why we believe that engineered edge protection should be mandated for all SC022 buildings, training centres and stadia. A significant risk is the community walking underneath the sites
- Edge protection is often required to meet strict technical safety standards set by government authorities, and RAPID EPS has Class A and Class B Standards
- Depending on occupational safety requirements in any given country or region, the quality of edge protection used on building and construction sites can be examined by government inspectors
- Builders can be prosecuted for using a non-compliant height safety protection system. Great Britain and Europe strictly adhere to BS EN 13374: 2013



# BS EN 13374:

The British/ European standard for temporary edge protection systems

## Qatar will soon be adopting the new British Standard

The publication of this new standard for edge protection has led to the launching of a significant number of purpose-designed systems for improving edge protection safety.

The Standard is the result of many years of work by specialists from several European countries, including the U.K. Until its publication, the only reference work for these applications was the rather limited SIR15 – a specialist HSE inspectors report, which has been effectively out of date for a number of years.

## Edge Protection Classifications within BS EN13374

Edge Protection Systems are selected primarily based on the gradient of the surface for which they are to provide protection. The performance requirements for the various classes are detailed within the standard BS EN 13374 thus:

### Class A:

Provides protection to flat surfaces and slopes generally up to 10°. It provides resistance to static loads and is based on the requirements to support a person leaning against, walking beside, and possibly stumbling against the edge protection.

### Class B:

Provides protection to flat surfaces and slopes, generally up to 30°, and to even steeper slopes with short slope lengths. It provides resistance to both static and low dynamic loads and is based on the requirements to support

a person leaning against, walking beside, possibly stumbling against and sliding down a sloping surface towards the edge protection.

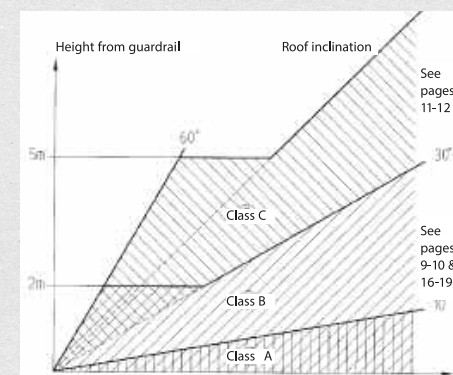
### Class C:

Provides protection to steeply sloping surfaces, generally up to 45°, and up to 60° for 5m slopes. It provides resistance to high dynamic loads only and is based on the requirements to contain a person sliding down a steeply sloping surface.

## Loading requirements for class A system in BS EN 13374

The graph indicates the normal expected application range for the different classes of edge protection. It appears in an informative annex to BS EN 13374 and, as such, compliance with the graph is not a requirement of the Standard. There is, therefore, a degree of freedom left to select classes and systems for more shallow slopes than those indicated within the graph, where the specific hazard identification and risk assessment might suggest the use of a class with a steeper gradient capacity.

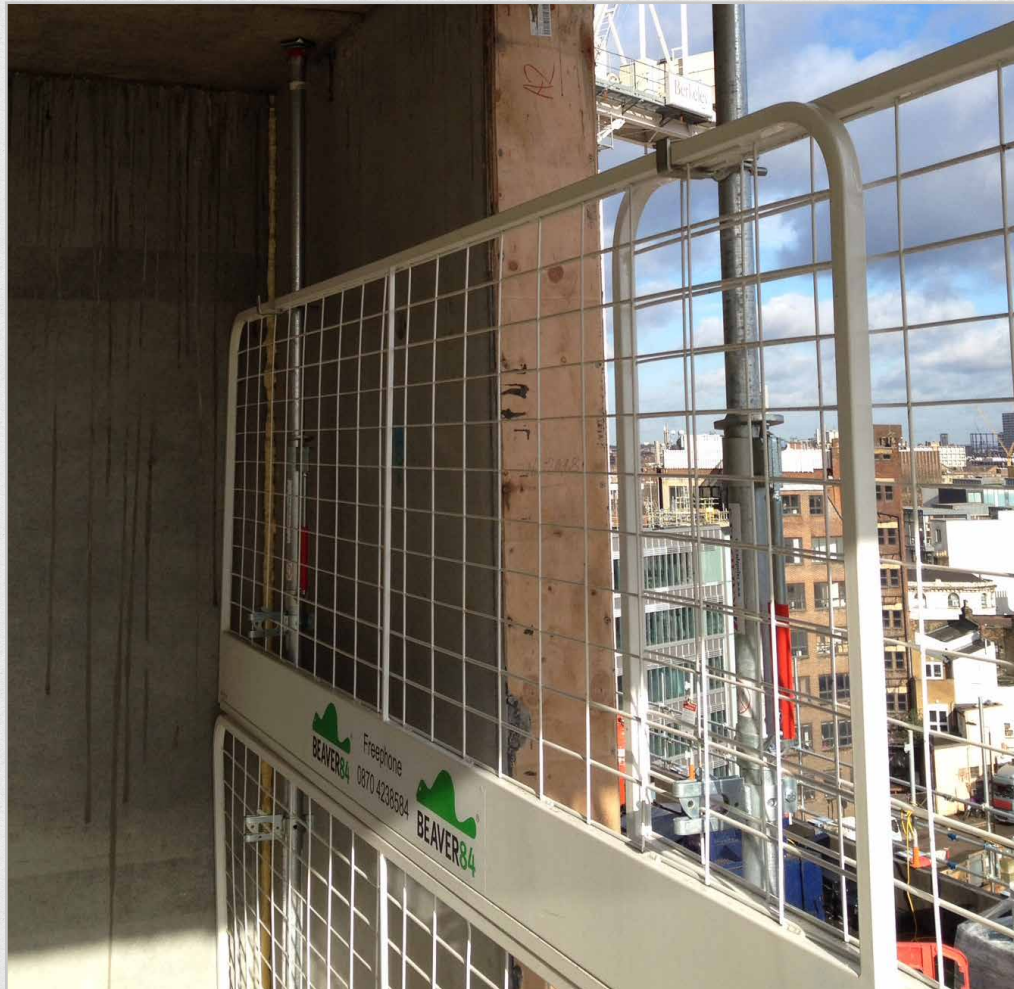
Further clarification of the detailed classification requirements can be found within BS EN 13374.





# RAPID EPS

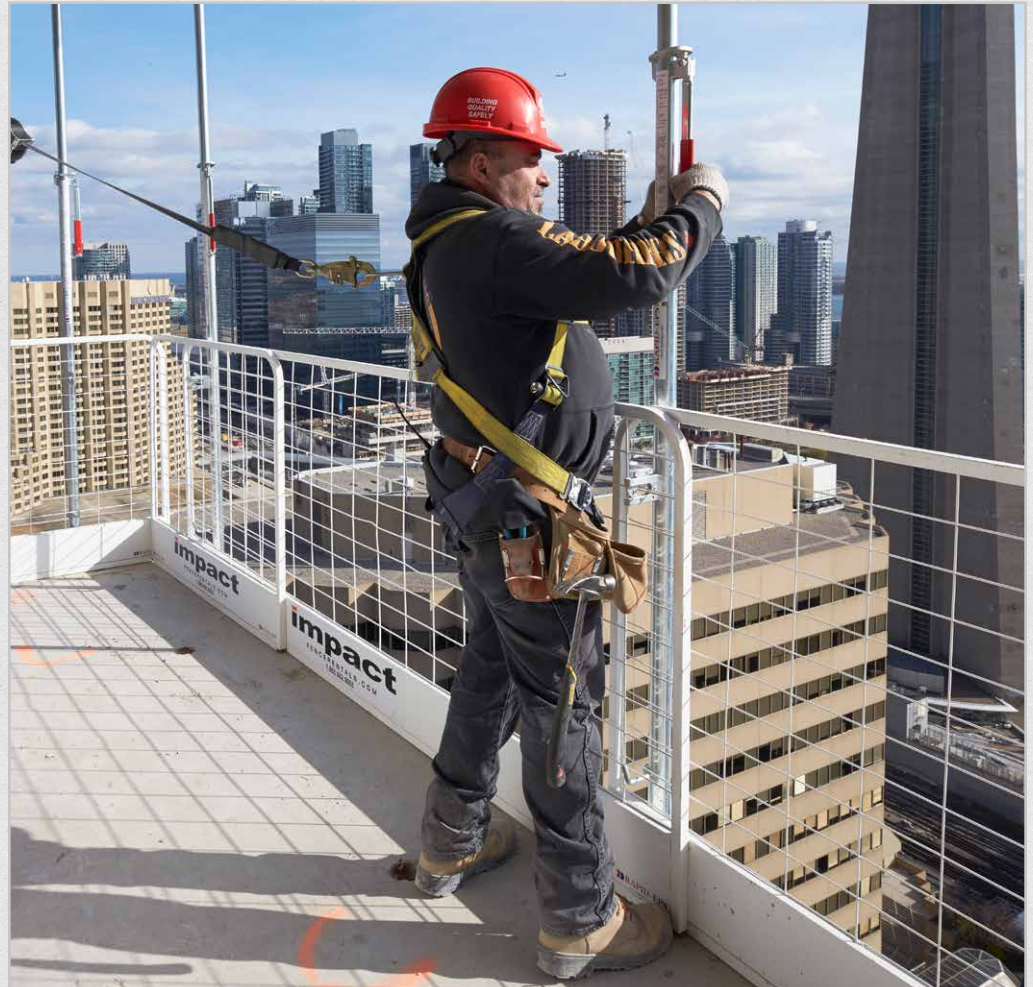
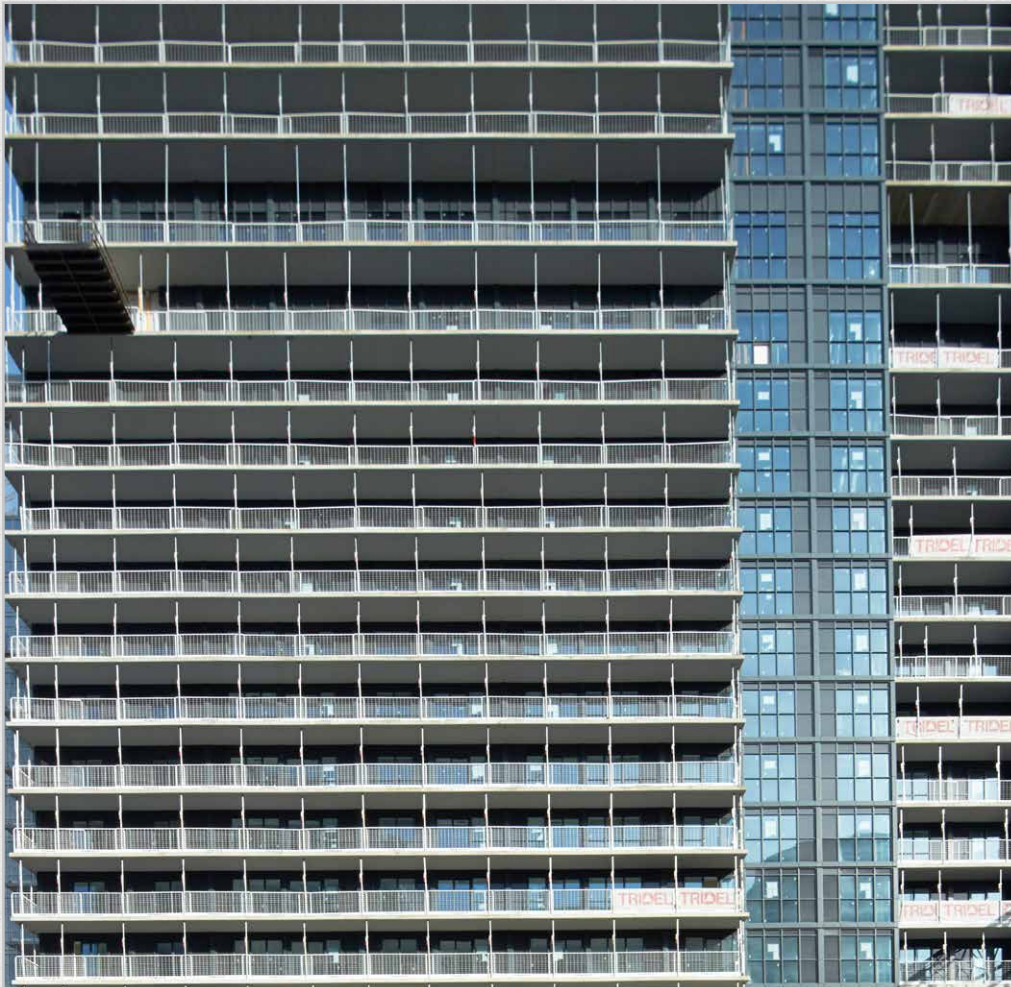
Portrays a very clear image of safety to the outside world





# RAPID EPS

Has been rigorously tested for high rise buildings where wind speed is increased





# Qatar deserves the best

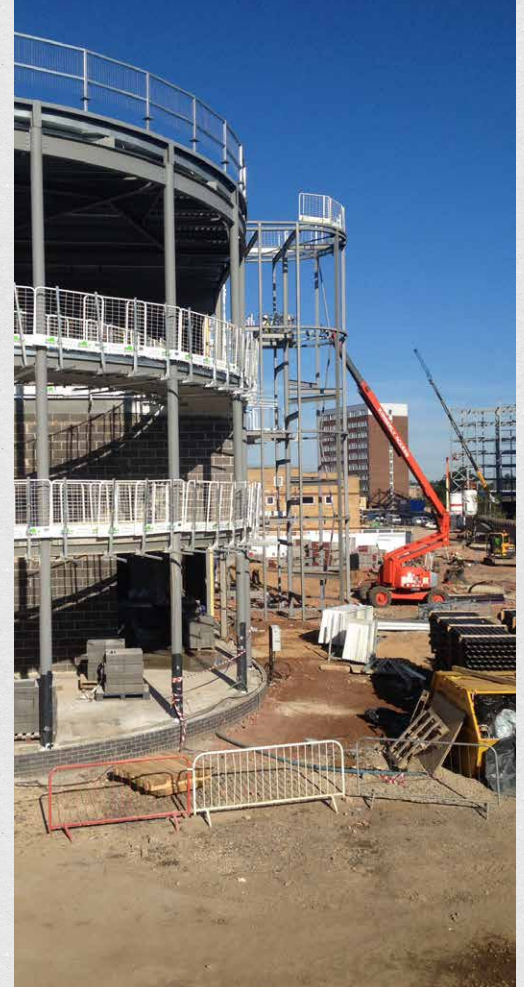
A vision of FIFA 2022 World Cup construction site safety?





# Experts in football stadia

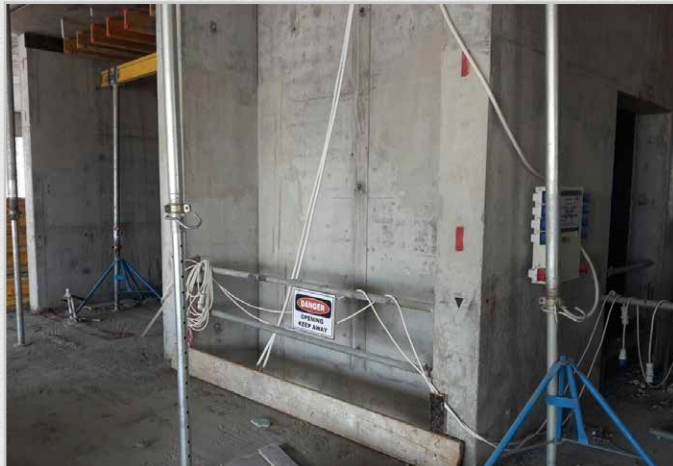
RAPID EPS used on professional football stadium





# Qatar deserves the best

RAPID EPS Middle East will help improve site safety in Qatar



Before



Before



Before



After



After



After



- » RAPID EPS trading since 2007 – factory in Leeds UK
- » 5,000 sq.m. state-of-the-art training education centre for new clients
- » We guarantee for 2 million uses – no other manufacturer offers this
- » Revolutionary edge protection worldwide patent
- » Only system that does not require drill and fixing
- » Middle East branch set up in 2013 with regional office in Dubai
- » Distributors in UK, Canada, USA (3), in talks with Australia, Saudi Arabia, France and New Zealand
- » Prestigious client base including Balfour Beatty, Brookfield Multiplex, KCT, Sun Engineering and Beaver 84 among many others
- » Paul Gilligan, General Manager, based in Doha



## Standard Post Assembly



See other product videos here  
(External links)

[STANDARD POST ASSEMBLY](#) ↗

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[SLAB GRAB](#) ↗

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## Slab Grab



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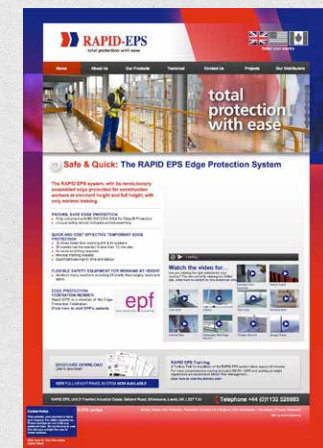
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## Concrete

1. RAPID POST
2. Dual Purpose Stand
3. Surface Mounted Socket
4. Slab/Curb Grab
5. Slab Edge/Parapet Bracket

## Timber

1. Surface Fix
2. Face Fix

## Steel

1. Bolt On
2. Socket
3. Clamp

## Stairs

1. Surface Mounted Socket
2. Face Mount Bracket
3. Clamp

## Lift shafts

1. Unique Lift Shaft Protection

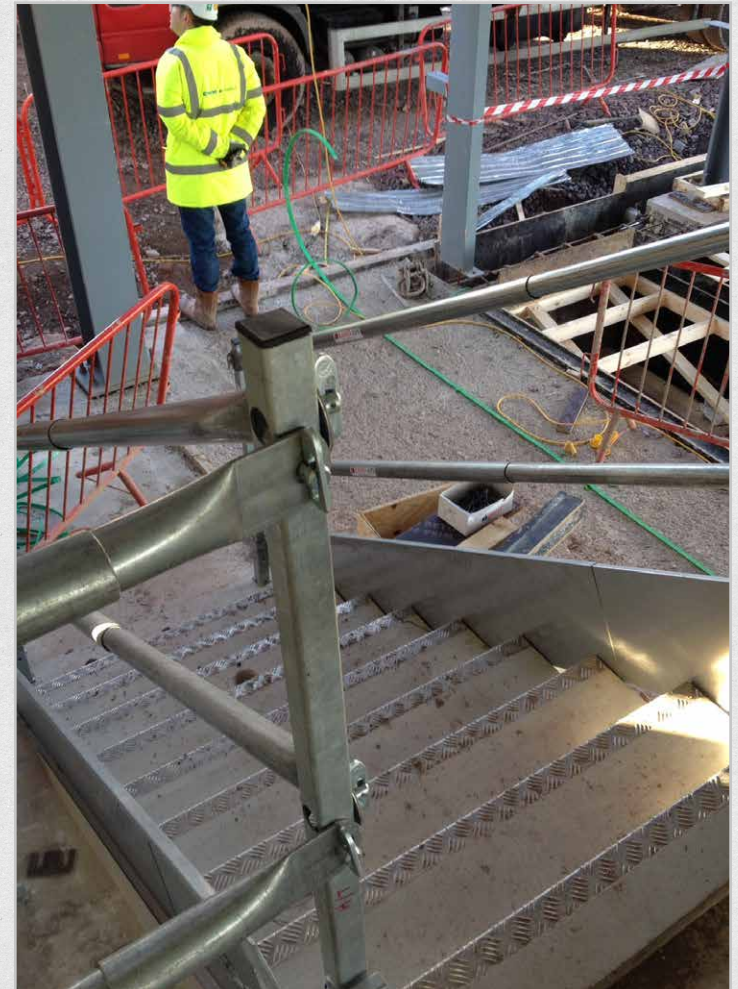
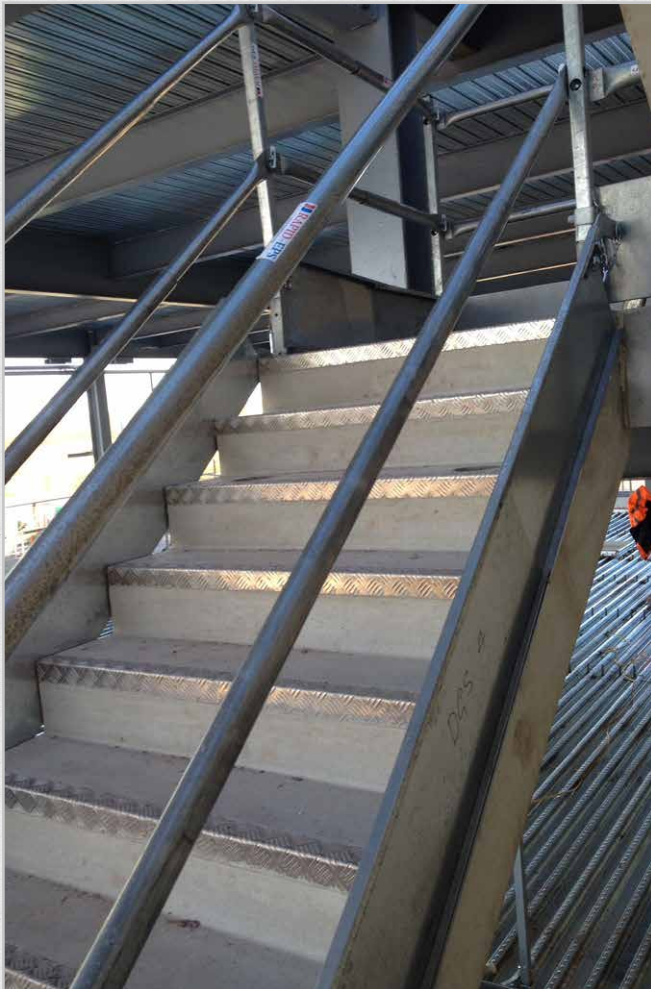
## Formworks

1. DOKA
2. PERI
3. Timber



# Stairwells

RAPID EPS offers a solution for stairwells – available for internal & external situations





# Lift shafts

RAPID EPS offers a solution for lift shafts

The Lift Door Solution can be used with RAPID EPS and has a lockable door outside with safety push bar on the inside. This is the only such product available on the market.





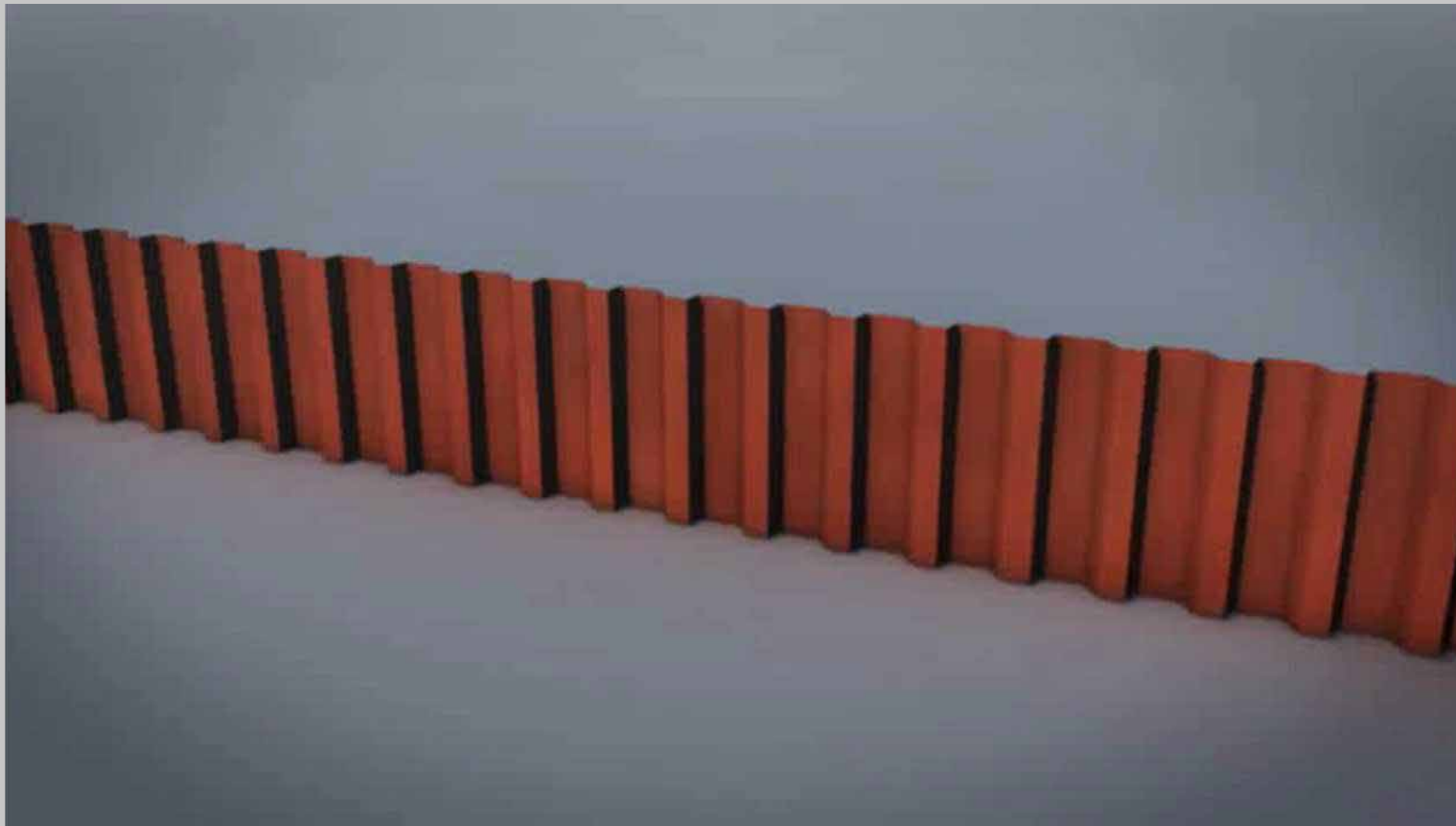
## RAPID EPS has produced the Trench Guard Edge Protection System for the trenching and shoring industries

### Key features

- ✓ Lightweight for ease of use – weight 22lbs (15kg)
- ✓ Revolutionary quick installation
- ✓ Conforms to the latest temporary edge protection BS EN 13374:2013
- ✓ Fits all types of trench sheets and piles
- ✓ Trench box clamp – adjustable with speed threads compatible with up to 10 inch thick box
- ✓ Trench sheet clamp – adjustable with speed threads compatible with up to 1 inch thick sheet
- ✓ Galvanised steel 48 inches long with plastic end cup
- ✓ Ladder-safe platform manufactured from mild steel with powder coated finish
- ✓ Built-in toe board to prevent debris from falling onto operatives below
- ✓ Only system on the market which requires no drill and fix with Class B BS EN 13374:2013
- ✓ Fence has strengthening Box frame making it ideal to stack for storage without damage



## Trench Guard



See other product videos here  
(External links)

[STANDARD POST ASSEMBLY](#) ↗

[CURB GRAB](#) ↗

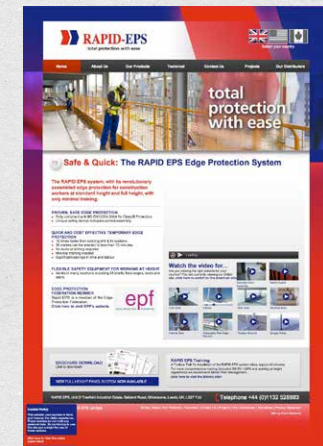
[SLAB GRAB](#) ↗

[EXTERNAL STAIR](#) ↗

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[ADJUSTABLE SLAB EDGE](#) ↗

More videos on our website





# Demo & Development Centre

Our product range ready for testing







## Rapid Panel Test 1

Tested on 23/08/2013 on concrete using 2 Dual Purpose Stands bolted to concrete at 2.7m centres.

Test to Australia Standard AS NZS 4994.1 2009.

Dynamic test 60Kg at 200mm from bottom rail – deflection 75mm

## RAPID Panel Test 2

Tested on 23/08/2013 on concrete using 2 Dual Purpose Stands bolted to concrete at 2.7m centres.

Test to Australia Standard AS NZS 4994.1 2009.

Dynamic test 60Kg on top rail – deflection 140mm

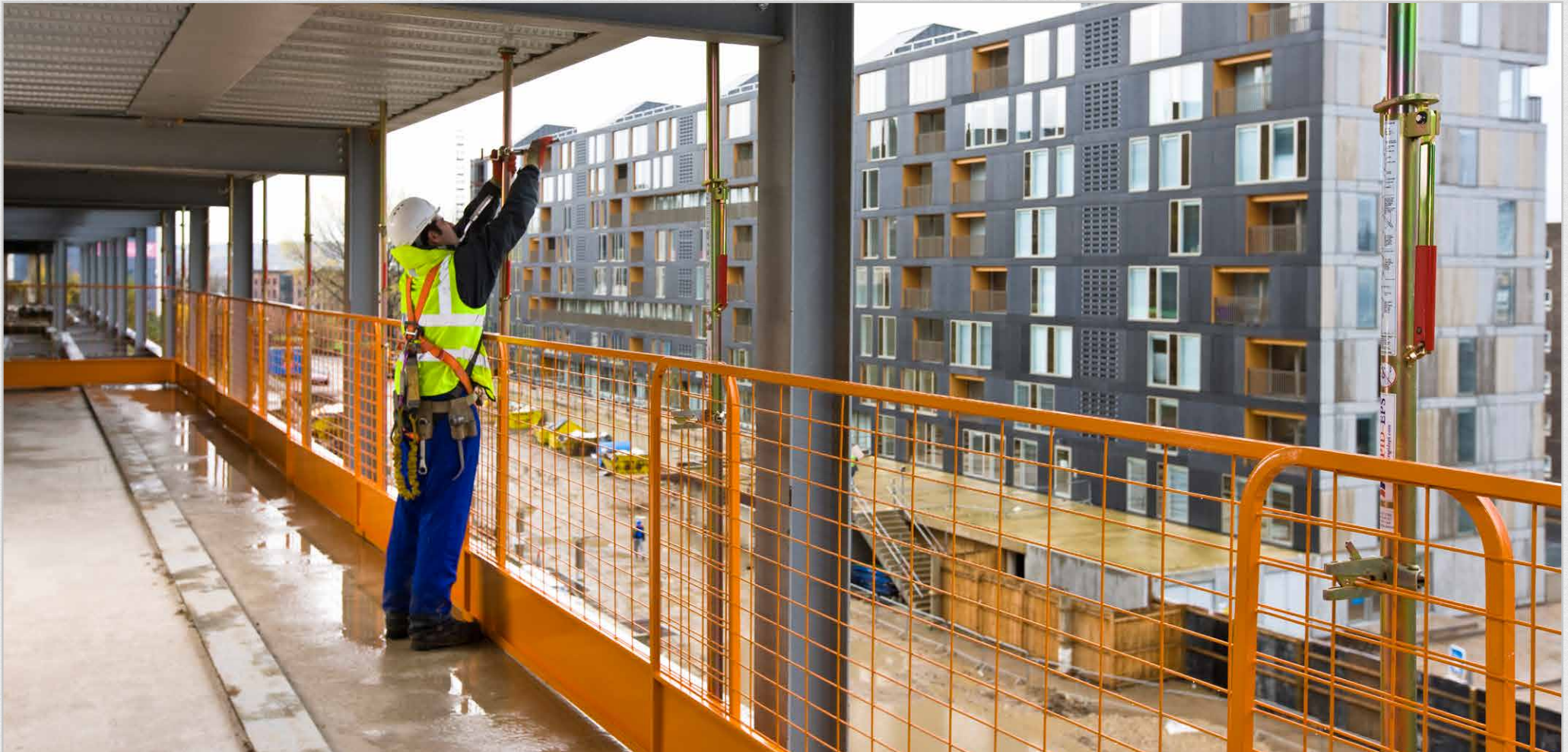


# Cost comparison



	<b>Rapid EPS</b>	Standard proprietary edge protection	Well known brand Power Post system	Scaffold edge protection
<b>Cost per linear metre</b>				
Labour (based on \$5/hr hourly rate)	<b>USD 0.42</b>	USD 2.50	USD 3.75	USD 5.00
Parts	<b>USD 110.00</b>	USD 65.00	USD 140.00	USD 13.00
<b>Other Properties/Features</b>				
Time to setup (minutes)	<b>5</b>	30	45	60
Tools required	<b>None</b>	Hammer drill	Multiple	Multiple
Re-usability	<b>100%</b>	65%	75%	50%
Repairs	<b>None required</b>	Medium	Medium	Extensive
Durability	<b>10 years</b>	3 years	5 years	4 times (average 1 year)
<b>Summary</b>				
Initial Cost (Material + Labour)	<b>USD 110.42</b>	USD 67.50	USD 143.75	USD 18.00
Expected Lifespan	<b>10+ years</b>	3 years	5 years	1 year
Initial Cost per Year of Lifespan	<b>USD 11.04</b>	USD 22.50	USD 28.75	USD 18.00
Maintenance Cost and Waste per Year	<b>USD 2.50</b>	USD 20.58	USD 20.00	USD 18.00
Total Cost over 10 Years	<b>USD 135.42</b>	USD 290.68	USD 327.50	USD 180.00
Cost per Year over 10 Years	<b>USD 13.54</b>	USD 29.07	USD 32.75	USD 18.00
Installation	<b>Simple</b>	Complex	Very Complex	Medium
Quality	<b>Excellent</b>	Good	Good	Inconsistent
Remedial Work	<b>None</b>	Part	Part	Extensive
Positioning	<b>Relocatable</b>	Part Fixed	Part Fixed	Fixed
Labour skill	<b>Low skill</b>	Skilled	Skilled	Skilled
Ease of double height application	<b>Very easy</b>	Complex	Complex	Not possible
Daily inspections	<b>Visible</b>	Touch to check	Touch to check	Physical check
Compliance to BS:EN 13374:2013	<b>A and B</b>	Only A and 2004 standard	Only A and 2004 standard	No







# Walkie Talkie Tower

London





# St George Tower

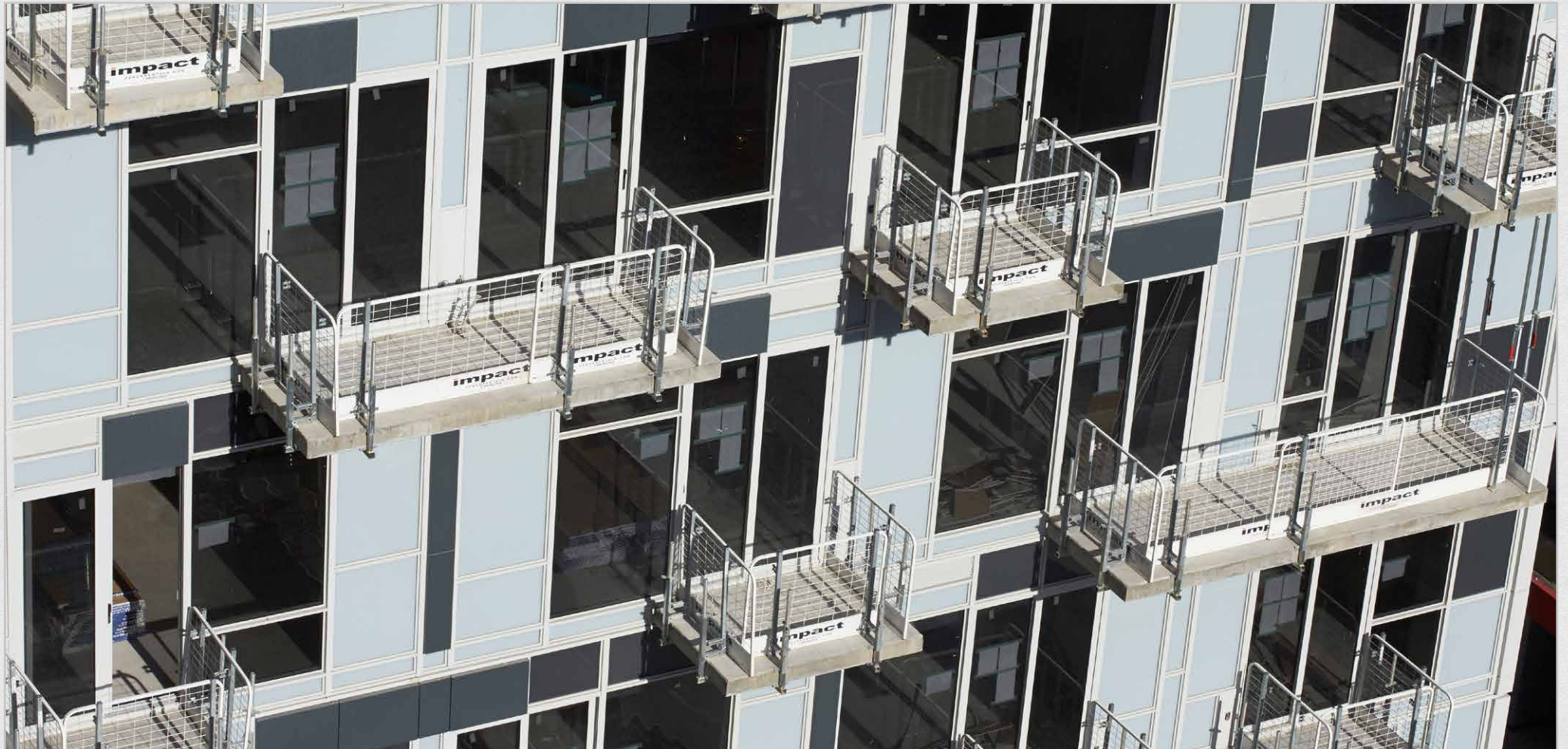
London



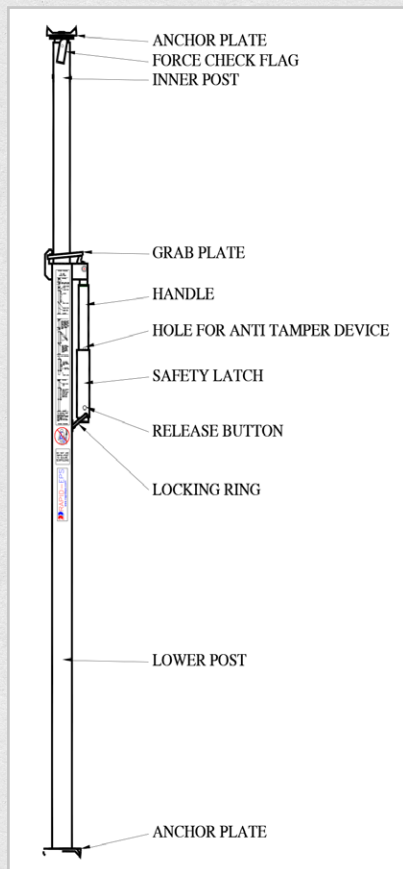


# RAPID POST balcony

Canada





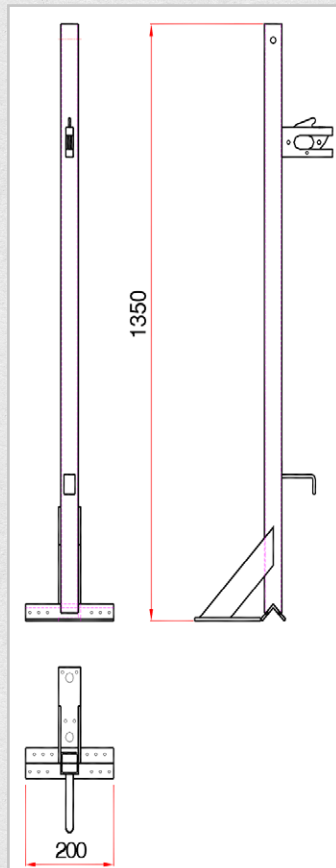


## Pros

- ✓ Quick
- ✓ Flexible (single, double and full height)
- ✓ No tools
- ✓ No penetration (and having to make good later)
- ✓ Can be positioned close to the edge without any danger of “cracking out”
- ✓ Visual check



# Dual Purpose Stand

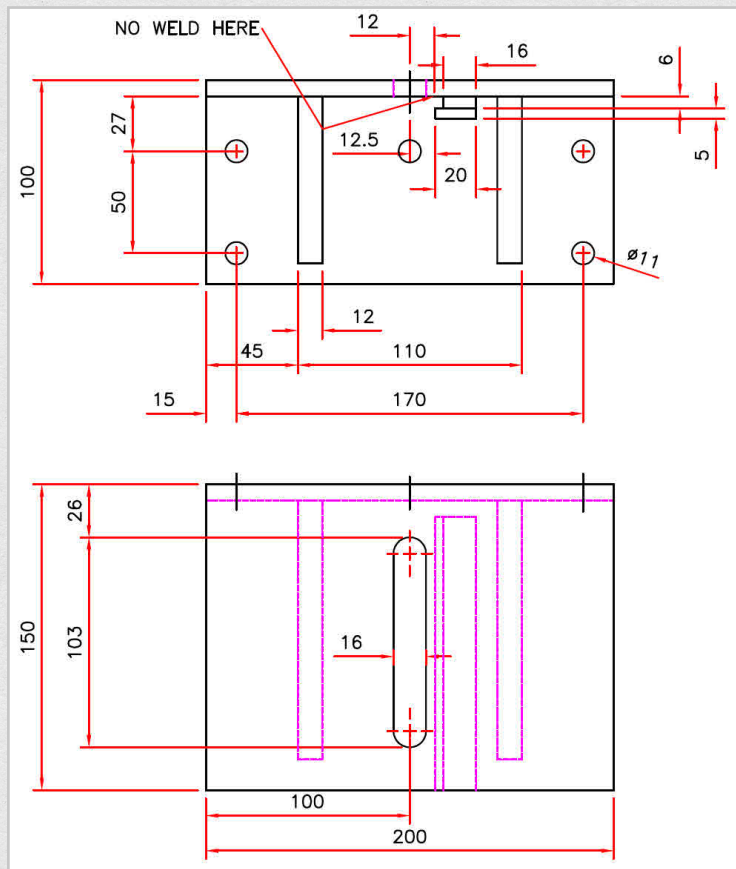


## Pros

- ✓ Simplicity (provides both mount and support)
- ✓ Strong
- ✓ Offers good value and flexibility



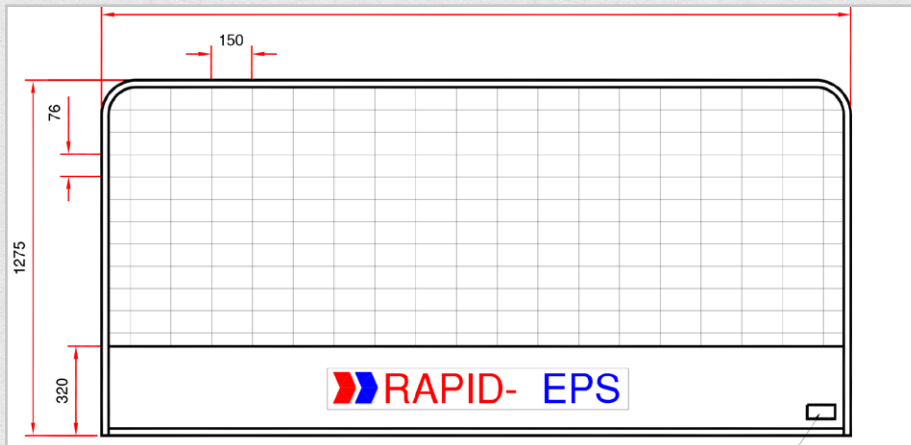
# Face Fix Bracket



## Pros

- ✓ Keeps the line of edge protection outside the envelope of the building so will not clash with glazing etc. and keep following trades safe
- ✓ Simple to install
- ✓ Offers good value





## Pros

- ✓ 2900mm wide making it one of the widest on the market
- ✓ Tested with 2700mm support centres making for fewer supports and fewer barriers over any distance
- ✓ Very light at only 21.5kg despite its width, making for ease of handling and indeed installation
- ✓ Despite this width and weight it is extremely strong with a proven and certified ability to withstand impacts of up to 1100j
- ✓ Very robust in manufacture with nothing left to chance with a design life of 10 years



- ✓ Revolutionary system
- ✓ The Barrier
- ✓ Simplicity
- ✓ Quicker
- ✓ Cost savings
- ✓ Innovative
- ✓ Purchase and rental options



Contact us for enquiries



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