

SHOWCASE

BIRMINGHAM NEW STREET STATION

Kwik-klik

FAST FIT TEMPORARY HOARDING SYSTEMS



Ultrahord on a mainline platform in 2009



A footbridge is removed. Hoardings on bottom left.

Kwik-klik
ultraspan
UNLIMITED FLAT PANEL SYSTEM

Kwik-klik
soundmaster
TEMPORARY FIRE-RATED HOARDING SYSTEM

Kwik-klik
compact
LOW RISE HOARDING SYSTEM

Kwik-klik
ultrahord
COMBINED BASE & PANEL SYSTEM

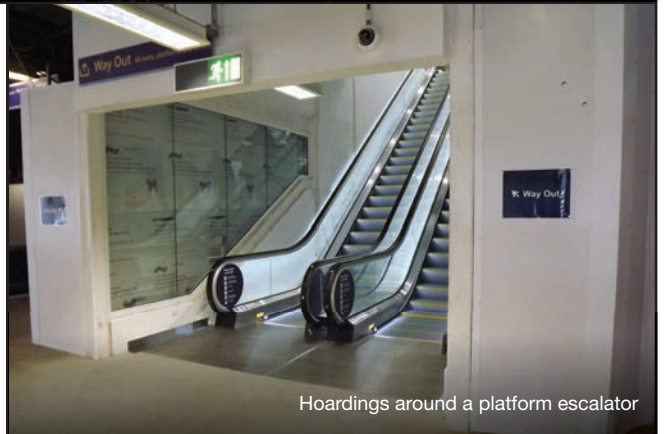
Client: Network Rail

Main Contractor: Mace

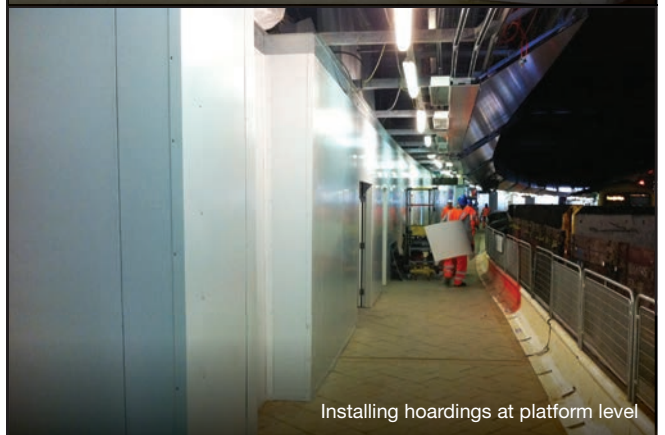
Key Contractors: Balfour Beatty, Colemans, DHESI, Keltbray, MPB Structures, Volker Fitzpatrick

Products: K-K Ultraspan R-11, K-K Soundmaster, K-K Compact, K-K Ultrahord

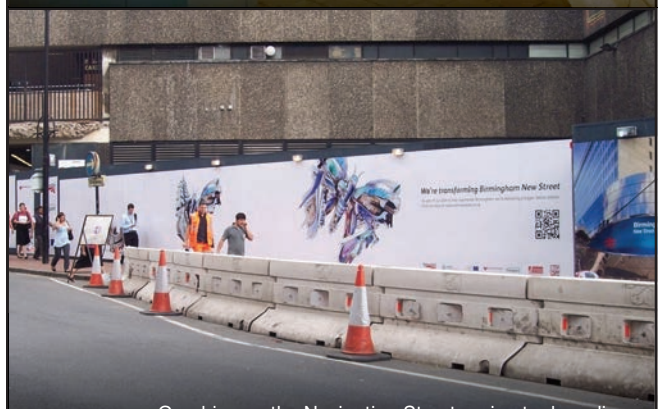
Requirement: 2000 linear metres of temporary re-locatable hoardings for multiple locations throughout the BNS site during multi-phased works



Hoardings around a platform escalator



Installing hoardings at platform level



Graphics on the Navigation Street perimeter hoardings

In brief

On 28 April 2013, Phase 1 of the £600m Birmingham New Street Station (BNS) redevelopment was completed. Phase 2 is scheduled for completion in 2015.

From September 2009 onwards, hoarding systems designed and installed by **Kwik-Klik** have contributed to the safe operation of BNS and ensured passengers and rail staff have safe and uninterrupted access to the station.

BNS is the biggest single location project **Kwik-Klik** has been involved with. Over 2000 linear metres (1.2 miles) of **Kwik-Klik** hoardings have created dozens of secure work areas, walkways, screens, fire exits, temporary barriers, tunnels, entrances and gateways.

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Project overview

BNS is the UK's busiest railway station outside London. For many decades it has suffered from a poor reputation due to its dark platforms below street level and its poor build quality.

The much-needed redevelopment will transform the station into an ultramodern station with extensive daylight provision and a built finish that will rival leading airports.

The station has remained open throughout the project.

Kwik-Klik hoardings are playing a significant role in establishing safe passenger routes throughout the station. The hoardings are constantly being re-located as individual work phases are completed and different trade and construction teams move into, or hand over, new areas of the site.

The benefits

Client benefits

For Network Rail, the modular, re-usable and re-locatable hoardings are ensuring that the work phases can begin quickly and progress simultaneously and seamlessly throughout the vast BNS site.

Kwik-Klik's durable, clean and versatile hoardings are maintenance-free and can be installed for any duration from 5 days to 4 years.

Different hoarding systems are used to meet the performance criteria needed in each location. Unlike timber and plywood hoardings, everything is re-usable and nothing is sent to landfill sites.

Vibrant vinyl graphics featuring colour illustrations of the new station and wayfinding signage have been attached to the hoardings to inform passengers and the general public of the BNS vision.

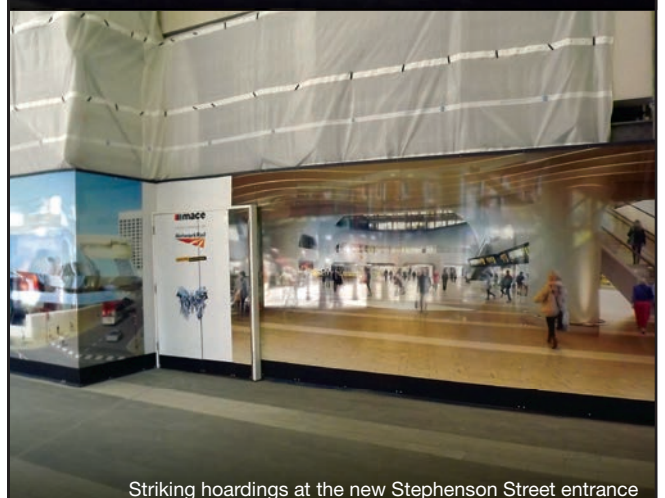
Monoflex sheet is used to fill the void above the hoarding and keep dust within the work site, as seen on the right. All of our hoardings are re-usable and the majority of the panel systems are made from 100% recycled PVC which is 100% recycled at the end of their usable life.

Contractor benefits

The main contractor, MACE, and additional teams of demolition, construction and fit out specialists are benefiting from the robust, modular hoarding systems which are easy to dismantle and re-locate as needed.

Vehicle access gates, personnel security doors and passenger fire exit doors have been built into the hoarding runs and re-positioned as necessary. Project BREEAM ratings and sustainability scores are boosted by using our 'zero to landfill' hoarding systems.

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The BNS site

The huge BNS site in central Birmingham is a busy hub at the heart of the city. As seen in the diagram on the right, trains and platforms run on an East-West axis through the station and the main passenger concourse runs from North to South offering access to all of the station platforms below.

Phase 1 included redevelopment of the West side of the site. The newly opened central passenger concourse (formerly a car park) runs North to South through the middle of the station and features the main ticket office, Boots, M&S, WHSmith and other concessions.

A comprehensive rebuild of BNS will include a new roof which will allow natural light to flood into all 12 refurbished platforms.

Facts and figures

Kwik-Klik hoardings are being used to provide secure work areas for each new escalator, lift and passenger entrance in the new BNS station.

The number of:

- platform escalators will increase from 5 to 31
- passenger lifts will increase from 2 to 15
- pedestrian station entrances will increase from 2 to 8.

The redeveloped Pallasades, hoarded by **Kwik-Klik** in 2010, will be re-launched as Grand Central Birmingham – a spacious shopping centre with a new John Lewis store on the south elevation that will create up to 1,000 new jobs.

Substantial platform alterations are being made and **Kwik-Klik** hoardings are creating both small and large work areas at platform level which will create capacity for:

- 92 extra trains added to the fleet
- 146 extra carriages to be added to existing trains.

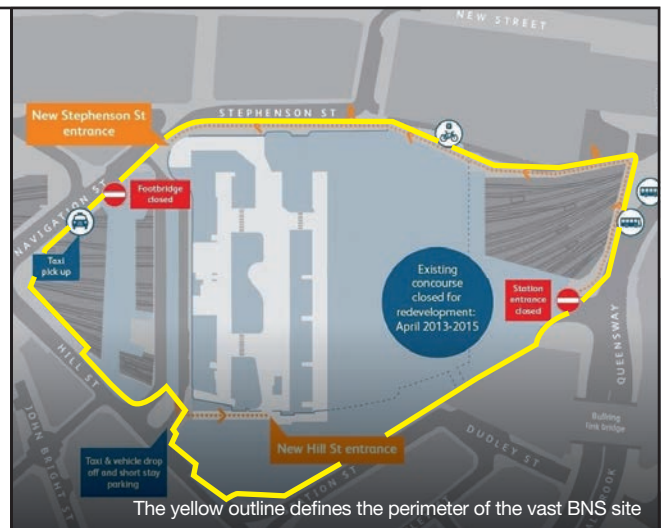
Overnight working

Installation teams of up to 22 personnel (including key contractors) have installed hoardings overnight from 12 midnight to 5 am. Simultaneous installations have been completed in several areas of the site to establish hoardings on platforms, around stairways and lining the site perimeter.

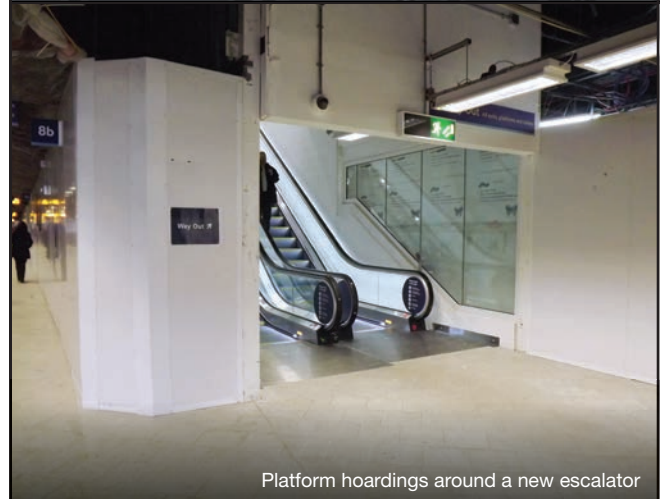
The main contractors and trades entrance to the site was located on the North West corner during Phase 1, but this has been moved to the Eastern tip as Phase 2 begins.

Passengers arriving from the Bullring now follow a new walkway lined by **Kwik-Klik** hoardings around the northern and southern perimeter of the site. Station Staff with foam hands are helping to direct passengers after the change in access routes.

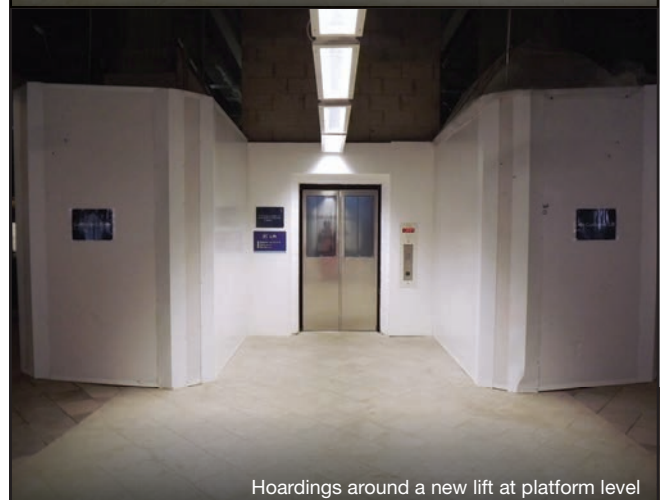
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The yellow outline defines the perimeter of the vast BNS site



Platform hoardings around a new escalator



Hoardings around a new lift at platform level



Re-directing passengers around the site perimeter

Systems Used

Ultraspan R-11 grey and white

We have installed *Ultraspan* panels manufactured to Network Rail's *R-11* specifications throughout the station. The lightweight and robust panels are made in their corporate blue/grey colour and we have also used a white panel in some places.

The panels used are made from 100% recycled PVC and at the end of their life, these panels are also 100% recyclable. Matching trims also make a perfect finish and create a neat and professional public-face. The benefits of *Ultraspan* include:

- **High performance** – weather-proof, lightweight, easy to fit
- **Modular fast-fit system** – adapts to any perimeter shape
- **Stable and safe** – minimum disruption to the public/customers
- **Superior smooth finish** – ideal for attaching high quality graphics
- **Recycled plastic** – 100% recycled PVC which is 100% recyclable
- **Zero landfill** – systems are re-usable and re-locatable – no landfill.

Our hoardings also create a smooth and even finish which makes the customer-facing façade an ideal surface for attaching temporary signage and promotional vinyls.

Network Rail grey *Ultraspan R-11* panels were used to form a screen around the perimeter of the multi-storey car park, the Pallasades shopping area and along St Stephens Tower street.

Soundmaster FR60

Heavy duty *Soundmaster* panels with 100mm depth create sturdy temporary walls which enclose work areas where demolition and construction are taking place.

Soundmaster is capable of spanning heights in excess of 12 metres. Each panel is 1.2m wide. Cherry pickers are used during installation.

Panels are made from fire-rated MF. As the product name suggests, *Soundmaster* suppresses sound and creates a strong temporary wall in any environment.

The photographs show how the various locations where *Soundmaster* has been used.

- **Fire resistant** – all components conform to appropriate British Standards.
- **Stable** – independent tests have verified its structural stability.
- **Semi-permanent** – suitable for longer term installations.
- **High strength** – high density panels are strong and durable
- **Flexible** – we tailor the composition and configuration to each location.

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Ultraspan R-11 and Soundmaster create a temporary entrance



Perimeter R-11 hoarding along Stephenson Street



Soundmaster in Network Rail grey along the Pallasades



Soundmaster at platform level in 2010

Ultrahord

Our *Ultrahord* system was used on the mainline platform within the station. Ultrahord uses sturdy polythene bases which can be filled with water for added stability and impact resistance.

The versatile bases can be re-used on a variety of projects including creating traffic lanes. The system passed both wind and impact resistance tests before being granted Network Rail approval for use on platforms where high speed trains can generate considerable air flow pressures.

The vertical panels used with the *Ultrahord* system include powder-coated aluminium as well as our 100% recycled plastic *Ultraspan* panels.

Compact

Our *Compact* system creates a sturdy but lightweight temporary wall within a work compound to allow station staff and drivers safe access through the work site and into the centre of the station. The low-rise white hoardings can be seen in the photograph on the right. They create a safe walkway inside the secure compound (made from *Ultraspan R-11* in Network Rail grey).

The benefits include:

- **Rapid installation** – easy to install, hollow form panels
- **Stable & safe** – thanks to strong fabricated steel supports
- **Re-locatable** – can be re-sited as needed
- **Attractive and clean** – creates a professional finish
- **Robust** – high impact resistance, virtually indestructible, yet light to handle
- **100% Recycled PVC** – also panels are 100% recyclable – zero to landfill.

Next stage

During **Phase 2** the existing concourse will be closed. It will be expanded to three and half times its current size of 10,500m². It will be enclosed by a giant-size, light-filled atrium and the new concourse will provide access to clearer and brighter platforms.

The busiest platforms, 8 and 9, will be widened. Phase 2 is expected to be completed in 2015.

Please see the **Kwik-Klik** website for more news and photographs of Birmingham New Street at www.kwik-klik.co.uk/construction-projects/rail-stations

Contact Tony Doherty

Tel: **01274 525 660**

Email: info@kwik-klik.co.uk

www.kwik-klik.co.uk / www.ecogenik.co.uk



Kwik-Klik Hoardings Ltd. 10-14 Ward Street,
Bradford, West Yorkshire, BD7 3PR



Wind-tested *Ultrahord* offers maximum stability



A secure staff entrance is created using *Compact*



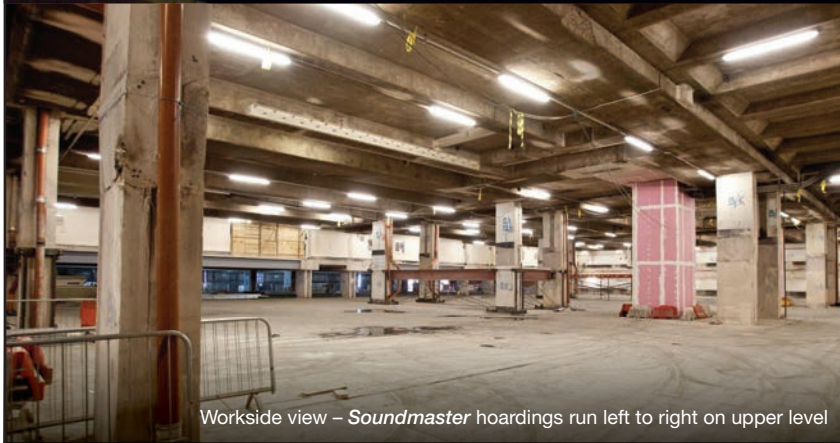
Soundmaster hoarding with mesh grille at the drop-off area



A worksite view of the extensive site



Hoardings along the full length of Platform 8



Workside view – *Soundmaster* hoardings run left to right on upper level



Temporary fire exit doors on a mainline platform



Perimeter hoardings protect pedestrians from site works



Car and taxi drop-off zone



Strong vinyl graphics between two pedestrian tunnels



An early perimeter hoarding in 2009