



# Rail Products

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**London Bridge Station, the fourth busiest station in the country, is undergoing a massive redevelopment project which will create new platforms allowing for more trains, a new concourse and a bigger station to accommodate the 50 million passengers it brings into the city each year.**

**The improvements will be funded by the Thameslink programme, a £6bn Government investment in rail.**

#### Challenge

Marshalls was selected to supply and fit pavement and drainage products for the first phases at London Bridge station. The project will involve the construction of 15 new platforms in total over the next four years.

Marshalls has been involved in this long-term project for Network Rail for the last three years, working closely alongside Grimshaw Architects and engineering and construction group Costain's in-house design and procurement teams to provide the perfect products.

The station re-development is expected to be completed by 2018. A number of platforms have been completed to date using a significant number of Marshalls paving and drainage products.

The paving products were required to be hard-wearing to cope with the high level of passenger footfall, as well as durable to handle the large numbers of luggage, trolleys, wheelchairs and pushchairs used by passengers.

Drainage was needed along the platform as well as coping units on the platform edge where passengers enter and exit the trains.

Network Rail set out strict criteria, demanding adherence to tight deadlines and the use of high specification products. On top of this, as a key supplier, Marshalls had to access the site - still a very busy, functioning train station - with timed deliveries, usually between 4pm and 10pm through the centre of the capital while keeping disruption to a minimum.

#### Solution

Marshalls demonstrated that their products were ideal by contributing to a mock-up of what was required and how the platforms would work and look, at a special site in Edmonton, North London. With numerous tests undertaken before construction began, Marshalls was able to prove these products were suitable in both aesthetics and function.

This combination not only allowed for the more unusual tight 100mm space in which to install, but, with its galvanised channel and Birco Lite cast iron top, also proved much more economical than stainless steel.

Side drainage was also required which was accommodated into the final design, and altogether around 4,000 linear meters of drainage will be required.

Overall 14,000 sq m of Keyblok block paving at 60mm in Charcoal will be required for the platforms themselves, as well as the platform edge (offset tactile) using 400x400x50 in Natural and around 4,000 linear metres of NR A100 coping units.

#### Benefits

Using Marshalls products and their expert knowledge of linear drainage and installation allowed Network Rail to keep to their tight deadlines while keeping a busy station up and running.

Marshalls has worked closely with the architect and engineers over a long period of time, allowing them to get under the skin of the project and coming up with cost-saving and effective alternative products.

Working with Marshalls ensured that Network Rail and the engineers were happy with the products, testing them before construction began, and have an expert, dedicated team on hand to complete the first phase of the project while working towards the next stage.



## London Bridge Station

### Platform Paving, London

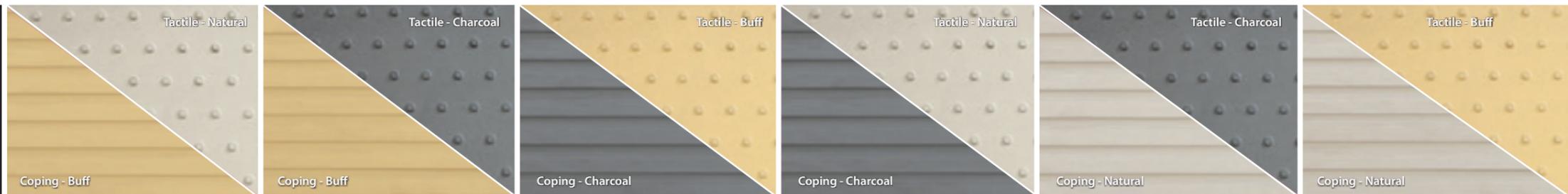




Combined Coping & Tactile Unit, Example

# Combined Coping & Tactile Unit

PC40



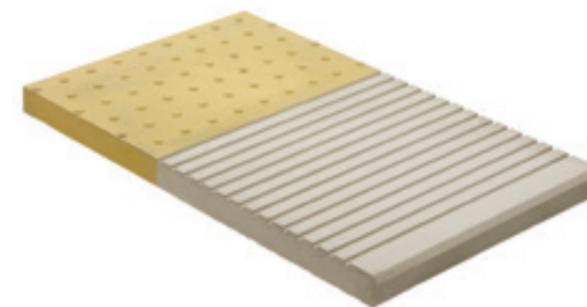
Using an Innovative combination of dual-pour concrete technology and steel reinforcement, Marshalls combined platform coping and tactile unit provides a highly durable and aesthetically pleasing finish. This single unit is easier and quicker to install than the traditional two part system and tighter tolerances allow for a consistent installation, thereby offering faster productivity on site. The unit is DDA compliant and comes with a textured surface finish to offer an enhanced slip skid performance. Marshalls high strength M-Tech concrete offers long term performance and can negate the need for steel preparation works under the platform, reducing installation costs.

See my related products...

St George Paving ..... pg 88

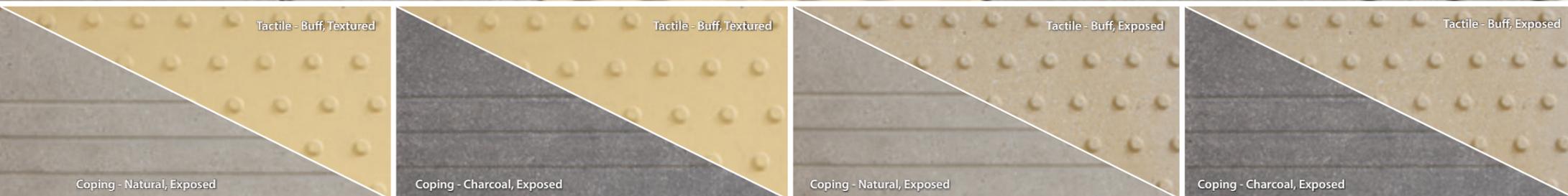
Thickness (mm)	Plan Size (mm nom.)	Unit Weight (kg approx)	Tactile Natural Coping Buff Item Code	Tactile Natural Coping Charcoal Item Code	Tactile Buff Coping Natural Item Code	Tactile Buff Coping Charcoal Item Code	Tactile Charcoal Coping Natural Item Code	Tactile Charcoal Coping Buff Item Code
65	600 x 1000	85	WA611010	WA611015	WA611030	WA611035	WA611050	WA611055

\*Natural products are manufactured from aggregates sourced locally to the works and contain no pigmentation, therefore colour variation between products from different works is possible.  
\*All PC40 references that are in light black are manufactured to order. Please contact our Sales office for your requirements.





Combined Coping & Tactile Unit, Example

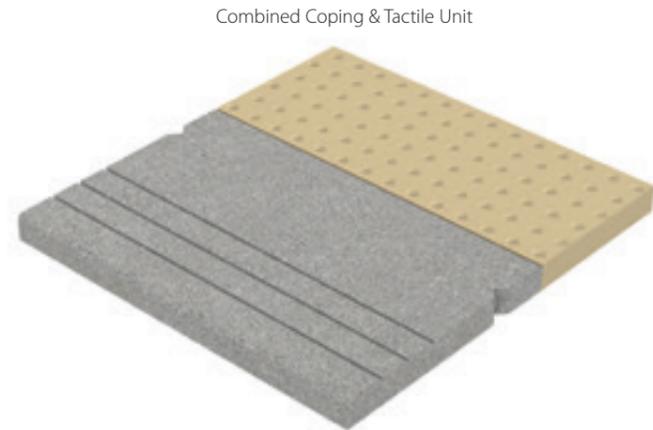


# Combined Coping & Tactile Unit

A100/B100

Description	Thickness (mm)	Plan Size (mm Nom)	Unit Weight (kg approx)	Tactile Buff - Textured Coping Natural - Exposed Item Code	Tactile Buff - Textured Coping Charcoal - Exposed Item Code	Tactile Buff - Exposed Coping Natural - Exposed Item Code	Tactile Buff - Exposed Coping Charcoal - Exposed Item Code
A100 NR Combined Coping & Tactile Unit	100	930 x 1160	264	WA6120100	WA6120300	WA6120500	WA6120700
B100 NR Combined Coping & Tactile Unit	100	1215 x 1160	345	WA6120150	WA6120350	WA6120550	WA6120750

Combined Coping & Tactile Unit references that are in light black are manufactured to order. Please contact our Sales office for your requirements.



\* White line optional upon request

Using an innovative combination of dual-pour concrete technology and fibre reinforcement, Marshalls combined platform coping and tactile unit provides a highly durable and aesthetically pleasing finish. This single unit is easier and quicker to install than the traditional two part system and is cast with the lifting facility built in, thereby offering faster productivity on site. The unit is DDA compliant and is available in a textured or exposed surface finish offering excellent slip skip performance. Marshalls high strength M-Tech concrete offers long term performance and can negate the need for steel preparation works under the platform, reducing installation costs. In addition, the macro synthetic fibres provide additional residual strength and resistance to corrosion and chemical attack.

**nssPlus**  
Q25 315 320



For the latest carbon value visit [www.marshalls.co.uk/commercial/carbon-calculator](http://www.marshalls.co.uk/commercial/carbon-calculator)



Natural

Platform Coping Unit, London Underground, Tottenham Hale

# Platform Coping

This high quality concrete platform coping provides a durable and aesthetically pleasing finish. The product is available in a textured finish and conforms to slip skid requirements. Manufactured in accordance with relevant London Underground Standards and British Standards.

See my related products...

*Platform Edge Tactile Paving* ..... pg 86

*St George Paving* ..... pg 88

Thickness (mm)	Platform Coping	Plan Size (mm nom.)	Unit Weight (Kg Approx)	Natural Item Code
65	PC10	600 x 610	57	CF3100100
90	PC30	910 x 685	135	CF3101100

Platform copings references that are in light bold are manufactured to order. Please contact our Sales office for your requirements.

Platform Coping Unit PC10



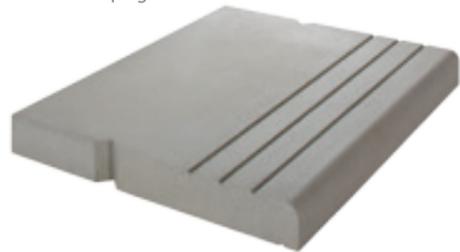


Platform Coping, Natural, London Bridge

Thickness (mm)	Platform Coping	Plan Size (mm nom.)	Unit Weight (Kg Approx)	Natural Textured Item Code	Natural Exposed Item Code
65	A65	930 x 760	109	CF3100500	N/A
65	B65	1215 x 760	143	CF3100700	N/A
65	B65-2	1215 x 760	172	CF3100900	N/A
100	A100	930 x 760	169	CF3100400	CF310041
100	B100	1120 x 914	260	CF3100800	N/A
100	C100	1160 X 760	212	CF3101000	N/A

Platform Copings references that are in light bold are manufactured to order. Please contact our Sales office for your requirements.

Platform Coping A100



\* Natural - Exposed

Natural - Textured

# Platform Coping

This high quality concrete platform coping provides a durable and aesthetically pleasing finish. This product is available in a textured or exposed surface finish and conforms to slip skid requirements. Manufactured in accordance with relevant Network Rail Standards and British Standards.

*\*Fibre Reinforced*

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Q25 320

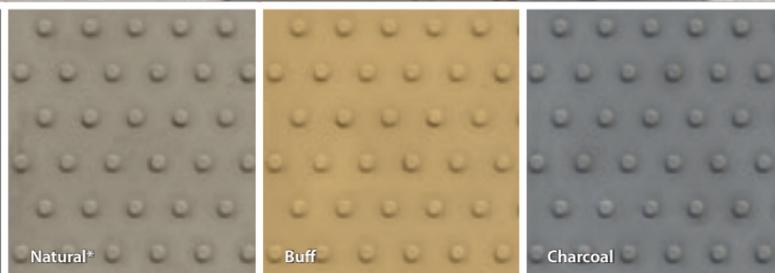


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# Platform Edge

Concrete Tactile Paving, Heavy Rail



Platform Coping, Natural

Platform edge tactile paving (Offset blister paving) is used to indicate the presence of off-street heavy rail systems, whether mainline or underground. The product is used as a hazard warning informing sighted and visually impaired persons they are approaching the edge of the railway platform and to proceed with caution. Platform edge paving should provide a good contrast in colour with the surrounding area to assist visually impaired persons.

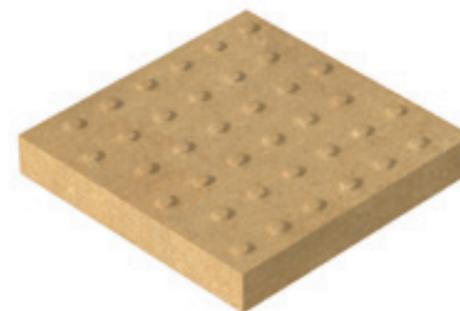
*This product is manufactured in accordance with BS EN 1339:2003 (see scope) and guidelines from the Department for Transport. For further information visit [www.gov.uk](http://www.gov.uk), search "guidance on the use of tactile paving surfaces" or contact Marshalls technical support. At Marshalls, we continually strive to create better spaces to the benefit of everyone, by designing for all, we aim to take into consideration the needs of the disabled persons as set out in the The Disability Discrimination Act 2005.*

*See my related products...*

- Platform Coping Unit (London Underground) Paving ..... pg 84*
- Platform Coping Unit (Network Rail) Paving ..... pg 85*

Thickness (mm)	Plan Size (mm nom.)	Unit Weight (kg approx)	Pack Size (m <sup>2</sup> approx)	Pack Weight (kg approx)	Buff Item Code	Natural Item Code	Charcoal Item Code
50	400 x 400	19	5.4	646	<b>FL6231000</b>	FL6230550	FL6232500

Platform Edge paving with reference numbers indicated in bold black are available ex-stock. Platform Edge paving with reference numbers indicated in light black are manufactured to order. Contact our sales office to discuss your requirements. \*Natural products are manufactured from aggregates sourced locally to the works and contain no pigmentation, therefore colour variation between products from different works is possible.

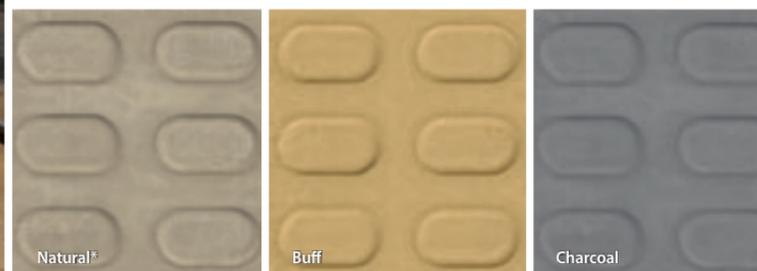




Lozenge, Buff, Nottingham Light Rail

Thickness (mm)	Plan Size (mm nom.)	Unit Weight (kg approx)	Pack Size (m <sup>2</sup> approx)	Pack Weight (kg approx)	Buff Item Code	Natural Item Code	Charcoal Item Code
50	400 x 400	20	5.8	720	FL6201000	FL6200500	FL6201500

Lozenge with reference numbers indicated in light black are manufactured to order. Contact our sales office to discuss your requirements.  
 \*Natural products are manufactured from aggregates sourced locally to the works and contain no pigmentation, therefore colour variation between products from different works is possible.



## Lozenge

Concrete Tactile Paving, Light Rail

Lozenge tactile paving is used to indicate the edge of the platform for on-street applications, such as Light Rail Transport (LRT) and Supertram schemes. The product is used as a hazard warning informing sighted and visually impaired persons they are approaching the edge of an on-street platform and to proceed with caution. Lozenge paving should provide a good contrast in colour with the surrounding area to assist visually impaired persons.

*This product is manufactured in accordance with BS EN 1339:2003 (see scope) and guidelines from the Department for Transport. For further information visit [www.gov.uk](http://www.gov.uk), search "guidance on the use of tactile paving surfaces" or contact Marshalls technical support. At Marshalls, we continually strive to create better spaces to the benefit of everyone, by designing for all, we aim to take into consideration the needs of the disabled persons as set out in the The Disability Discrimination Act 2005.*

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 Q25 215 Q40 430  
 Q25 225



CO<sub>2</sub> per m<sup>2</sup>

For the latest carbon value visit  
[www.marshalls.co.uk/commercial/carbon-calculator](http://www.marshalls.co.uk/commercial/carbon-calculator)



St George, Oyster Beige and Onyx Grey, Example

# St George

Internal & External Smooth Ground Paving



Oyster Beige



Pebble Grey



Onyx Grey

Developed using a distinctive mix of aggregates, St George Paving offers a durable smooth surface ground finish for ease of cleaning and is precision engineered to offer tighter tolerances for ease of installation. No secondary processing is required on site, offering improved site health & safety. The product is UK sourced and manufactured and is available in a selection of distinguished colours, thicknesses and plan sizes.

Thickness (mm)	Plan Size (mm)	Unit Weight (kg approx)	Pack Weight (kg approx)	Pack Size (m <sup>2</sup> approx)	Oyster Beige Item Code	Pebble Grey Item Code	Onyx Grey Item Code
28	300 x 300	5.8	411	6.3	FL9210100	FL9210200	FL9210300
35	400 x 400	12.9	779	9.6	<b>FL9213100</b>	<b>FL9213200</b>	<b>FL9213300</b>
35	600 x 300	14.5	440	5.4	FL9215100	FL9215200	FL9215300
50	400 x 400	18.9	756	6.4	FL9223100	FL9223200	FL9223300
50	600 x 300	21.6	432	3.6	FL9225100	FL9225200	FL9225300

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 \*St George with reference numbers indicated in bold black are available ex-stock. St George with reference numbers indicated in light black are manufactured to order, contact our sales office to discuss your requirements.