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October 2014



Steps

www.marshalls.co.uk/commercial





Steps

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Steps

Concrete and Natural Stone



Granite Steps, Wembley Plaza, London

Marshalls have been supplying step products for many years. The step offer from Marshalls includes readily available, high quality products backed up with a highly experienced and design-conscious specialist team.

Available across our most popular paving ranges, both concrete and natural stone steps use contrasting materials to highlight step presence.

We are also able to provide individually tailored step solutions. Whether you require a solution involving bespoke sizes or even radial and splay steps we can provide you with the answer.

Technical Detailing

Industry Relevant Documents

When designing stepped access to and from buildings it is essential that all relevant regulations and guidance documents are understood and considered and that the details contained within these documents are incorporated into any design. The following information provides designers with an insight into the regulations and information that needs to be considered when designing steps for external works.

Building Regulations 2000, Part M, Access to and use of buildings. Approved Document 2004 Edition outlines what is needed to achieve compliance with its regulations. It offers guidance and solutions for some of the more common building situations enabling the designer to meet the necessary requirements.

BS 8300:2009+A1:2010 Design of buildings and their approaches to meet the needs of disabled people. Code of practice. This document provides guidance and recommendations on good practice in the design of buildings, their approaches and any associated routes in the immediate vicinity of the building so as they are convenient to use by all people including those with reduced mobility. This British Standard is complementary to the building regulations and therefore whilst ensuring good practice it is not necessarily equivalent to compliance with the guidance in Part M.

The requirements listed here are by no means exhaustive and adherence to them does not guarantee the necessary compliance for each individual site. Guidance and confirmation must always be sought from the relevant Planning / Access officer.

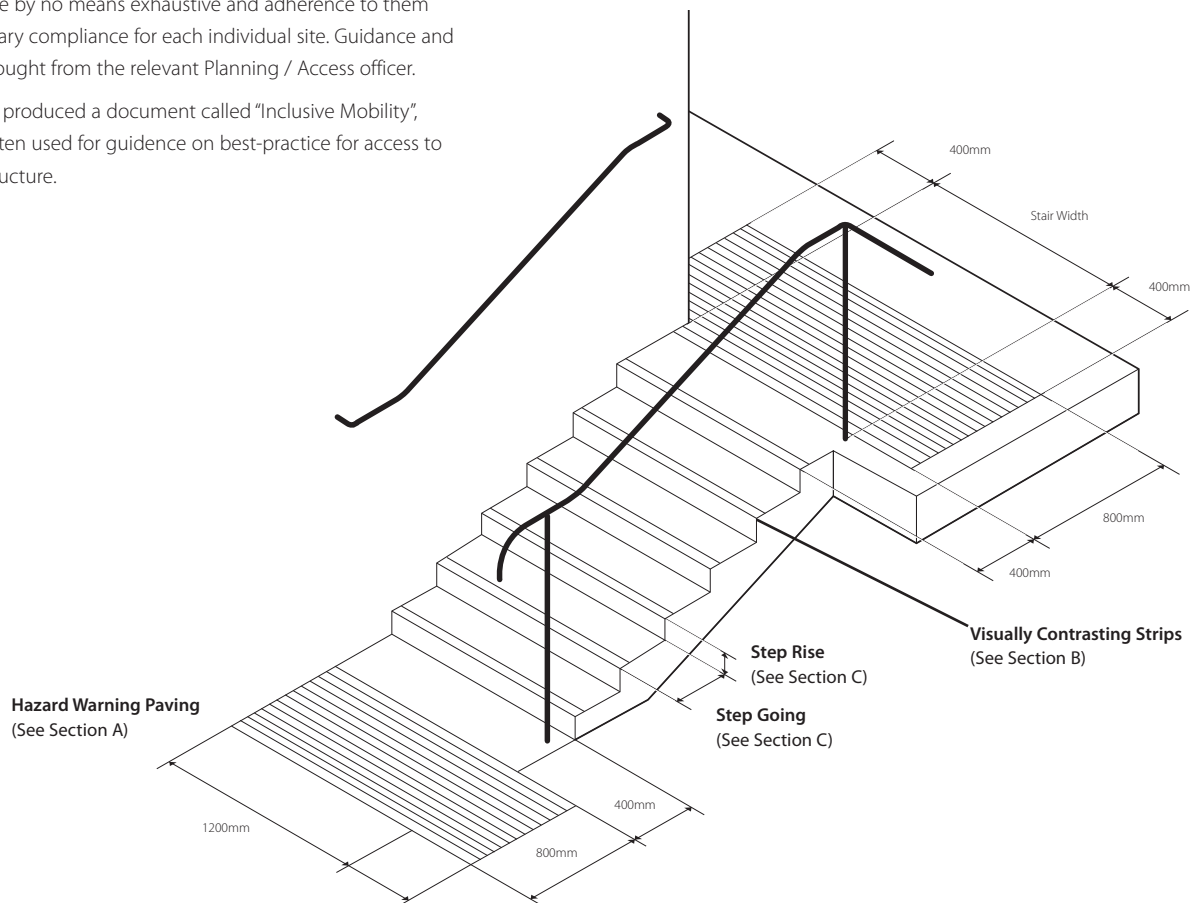
Department for Transport have produced a document called "Inclusive Mobility", which is also another source often used for guidance on best-practice for access to pedestrian and Transport infrastructure.

A - Corduroy, Hazard Warning Flags

People with impaired sight risk tripping or losing their balance if there is no warning that steps provide a change in level. For such people, the provision underfoot of a timely warning that there is a change in level is essential.

Building Regulations, Part M, 2004 edition section 1, clause 1.33, c). sets out requirements that a corduroy hazard warning surface is provided at the top and bottom landings of a series of flights to give advance warning of a change in level. When approached straight on the regulations dictate the inclusion 800mm of hazard warning surface set back 400mm from the front edge of the steps. The hazard warning flags should extend at least 400mm either side of the steps.

BS 8300:2009+A1:2010 Design of buildings and their approaches to meet the needs of disabled people. Code of practice. Clause 5.9.6 & Fig 9 sets out requirements that a corduroy hazard warning surface is provided at the top and bottom landings of a series of flights to give advance warning of a change in level. When approached straight on the document provides guidance for the inclusion of 800mm of hazard warning surface set back 400mm from the front edge of the steps. The hazard warning flags should extend at least 400mm either side of the steps.



B - Visually Contrasting Strips

When ascending and descending a flight of stairs, being able to appreciate the extent of the steps and identify the individual treads is essential.

Building Regulations, Part M, 2004 edition section 1, clause 1.33 i) dictates that “all nosings are made apparent by means of a permanently contrasting material 55mm wide on both the tread and the riser”

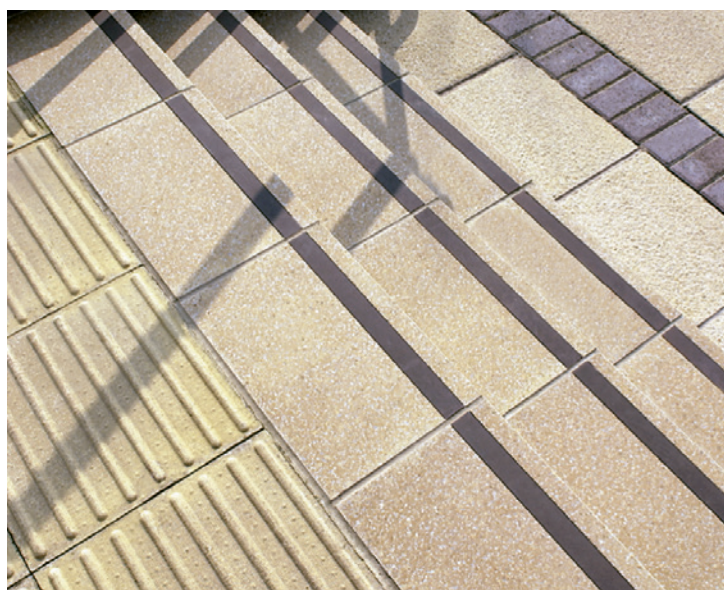
BS 8300:2009+A1:2010 Design of buildings and their approaches to meet the needs of disabled people. Code of practice. Clause 5.9.5 suggests that “Each step nosing should incorporate a permanently contrasting continuous material for the full width of the stair on both the tread and the riser.” “The material should be 50mm to 65mm wide on the tread and 30mm to 55mm on the riser and should contrast visually with the remainder of the tread and riser.” “The whole tread or the nosing should incorporate a slip resistant material, starting as close as practicable to the front edge of the nosing and extending the full width of the tread.”

Visual Contrast and Light Reflectance Values

The Light Reflectance Value (LRV) of a particular surface can be described as the total quantity of visible light reflected by a surface at all wavelengths and directions when illuminated by a light source. Research has shown that surfaces that differ sufficiently in LRV can be distinguished from one another by blind and partially sighted people.

Building Regulations, Part M, 2004 edition, Section 0 General Guidance – Definitions 0.29 states that a visual contrast is achieved when “the difference in Light Reflectance Value (LRV) is greater than 30 points”.

BS 8300:2009+A1:2010 Design of buildings and their approaches to meet the needs of disabled people. Code of practice. Annex B entitled “Using light reflectance values (LRVs) to assess visual contrast” B.1 states that “there is considerable confidence in recommending a difference in LRV of 30 points or more”.



C - Tread and Riser Dimensions

The maximum and minimum dimensions of both the treads and the risers are vitally important to the safe passage of all users travelling up and down the steps. They should also be a consistent dimension to ensure predictability.

Building Regulations, Part M, 2004 edition section 1, clause 1.33 l.) demands that “the rise of each step is between 150mm * and 170mm *, except adjacent to existing buildings where, due to dimensional constraints, the case for a different rise is argued in the access statement.”

Building Regulations, Part M, 2004 edition section 1, clause 1.33 m.) indicates that “the going of each step is between 280mm * and 425mm* ”

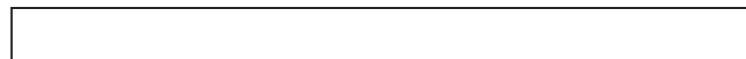
** Note: for school buildings, the preferred dimensions are a rise of 150mm, and a going of 280mm.*

BS 8300:2009+A1:2010 Design of buildings and their approaches to meet the needs of disabled people. Code of practice. Clause 5.9.2 advises that “the preferred dimensional ranges for steps and stairs are between 150mm and 180mm for the rise and between 300mm and 450mm for the going.”

Marshall's step products and recommended visibility strips have all been independently tested to ensure compliance with the LRV requirements of Building Regulations, Part M, 2004 edition and BS 8300:2009 and A1:2010 Design of Buildings and their approaches to meet the needs of disabled people.

All Marshall's visibility colour strips are manufactured by Gradus, the market leader in step accessories. The Gradus Strips is a rubber composite with the addition of aggregate fillers which provides a low risk of slip in both wet and dry conditions when tested to BS EN 660-2:1999

Step tread colour strip



White



Black (Standard)

For further advice please contact Marshall's Technical Advisory Services:

Tel: 08704 113344 (Calls may be monitored or recorded.)



Concrete Paver Step Treads and Risers

- Marshalls step treads and risers are available in the highly popular Saxon, Perfecta and Conservation ranges.
- 450x450x50 and 400x400x50 size treads are available from stock.
- All Tread front edges are finished to match.
- Standard strip colours meet required BS Standard Light Reflective Values. (LRV's)
- Team of experts available to advise and aid design process.
- Bespoke riser solutions available upon request.
- Standard designs for installation available upon request.
- Compliant with BS EN 1339:2003

Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.

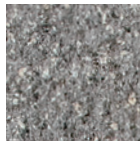
Textured



Saxon Natural



Saxon Buff

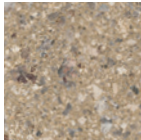

Conservation
Charcoal

Conservation
Silver Grey

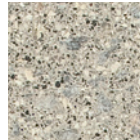
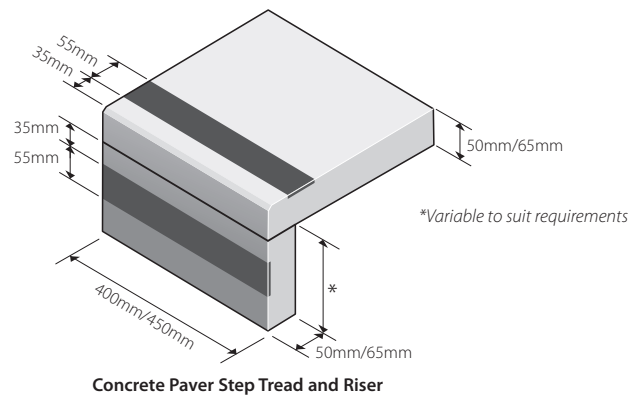
Smooth Ground



Perfecta Natural



Perfecta Buff


Conservation
Silver Grey


Type	Thickness (mm)	Plan Size (mm)	Unit Weight (kg approx)	Standard Visibility Strip Colour	Natural (Ref No.)	Buff (Ref No.)	Silver Grey (Ref No.)	Charcoal (Ref No.)
Step Tread								
Saxon	50mm	450 x 450	22.99	Black	FL963035	FL963040		
Saxon		400 x 400	18.16	Black	FL963065	FL963070		
Perfecta		450 x 450	22.80	Black	FL963335	FL963340		
Perfecta		400 x 400	18.18	Black	FL963365	FL963370		
Conservation Textured		450 x 450	24.03	Black			FL963635	
Conservation Smooth		450 x 450	23.00	Black			FL963835	
Conservation Textured		400 x 400	18.40	Black			FL963865	
Conservation Textured	65mm	400 x 400	23.61	Black			FL964665	
Conservation Textured		400 x 400	23.61	White				FL964670
Step Riser								
Saxon	50mm	450 x 170	8.69	Black	FL963200	FL963205		
		400 x 170	7.72	Black	FL963210	FL963215		
Perfecta	50mm	450 x 170	8.61	Black	FL963220	FL963225		
		400 x 170	7.82	Black	FL963230	FL963235		
Conservation Textured	50mm	450 x 170	9.08	Black			FL963240	
		400 x 170	7.82	Black			FL963245	
	65mm	400 x 170	10.03	Black				

Step Units with reference numbers indicated in bold black are available ex-stock.

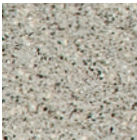


Concrete Kerb Step Unit

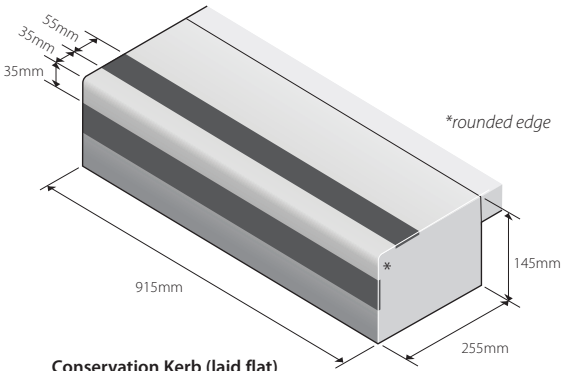
- Textured Kerb Step Unit available in Conservation Silver Grey.
- Available in 2 sizes: 145x255x915 / 255x205x915.
- Standard strip colour meets required BS Standard Light Reflective Values. (LRV's)
- Team of experts available to advise and aid design process.
- Standard designs for installation available upon request.
- Compliant with BS EN 1340:2003.

Colours

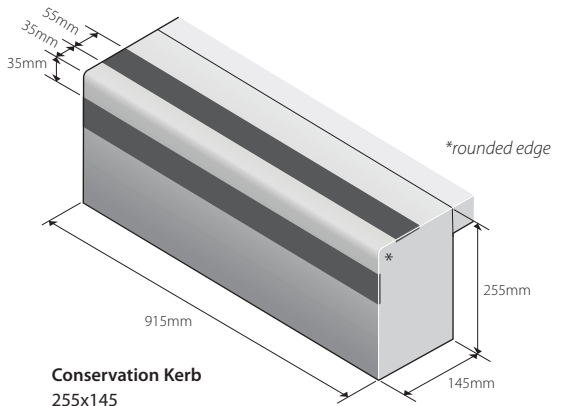
Precise colour and surface texture should be judged from actual materials rather than photographic representations.



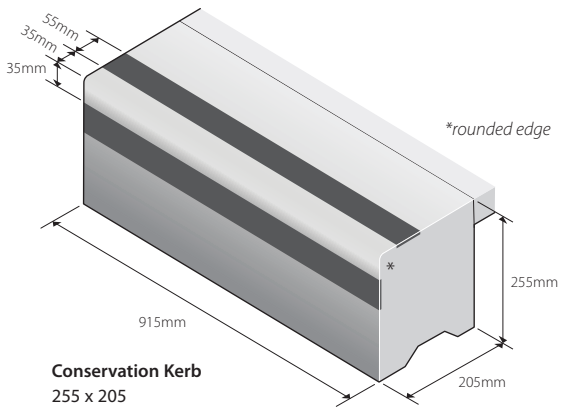
Conservation Silver Grey
Textured



Conservation Kerb (laid flat)
255x145



Conservation Kerb
255x145



Conservation Kerb
255 x 205

Type	Length (mm)	Plan Size (mm)	Unit Weight (kg approx)	Standard Visibility Strip Colour	Silver Grey (Strip Ref No.)	Silver Grey (Ref No.)
Conservation	915	145 x 255	83.01	Black	RK936010	RK936020
	915	255 x 205	98.40	Black	RK936010	RK936020

Kerb Step Units with reference numbers indicated in bold black are available ex-stock.



Single Solid Concrete Step Units

- Lightly textured granite aggregate Step Units.
- Manufactured using premium quality aggregates, giving clients the perfect finishing detail for any scheme.
- 2 plan sizes. 400mm option included to line up with 400x400x50 Concrete Hazard Warning Paving.
- 2 colour finishes offering a complementary Step Unit for use with the popular paving and block paving ranges; Conservation, La Linia, and Mistral.
- Standard strip colours meet required BS Standard Light Reflective Values. (LRV's)
- Standard designs for installation available upon request.
- Compliant to BS EN 1339:2003

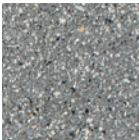
Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.



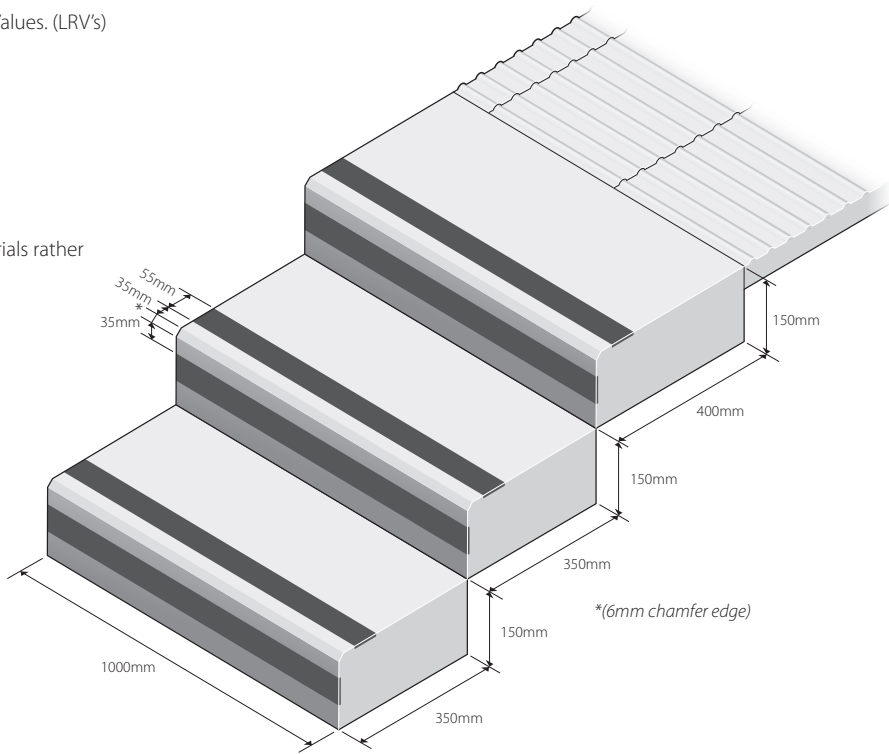
Silver Grey

- Complementary with:
- **Conservation** Silver Grey
 - **La Linia** Mid Grey Granite
 - **Mistral** Silver Grey



Charcoal

- Complementary with:
- **Conservation** Charcoal
 - **Mistral** Charcoal



Step Unit	Step Unit (mm)	Plan Size (mm)	Unit Weight (kg approx)	Recommended Visibility Strip Colour	Silver Grey (1 Strip Ref No.)	Silver Grey (2 Strips Ref No.)	Charcoal (1 Strip Ref No.)	Charcoal (2 Strips Ref No.)
	150	400 x 1000 (Top Step)	144	Black	FL9670150	FL9670200		
	150	400 x 1000 (Top Step)	144	White			FL9671150	FL9671200
	150	350 x 1000	126	Black	FL9670250	FL9670300		
	150	350 x 1000	126	White			FL9671250	FL9671300

Step Units with reference numbers indicated in bold black are available ex-stock.



Natural Stone Steps

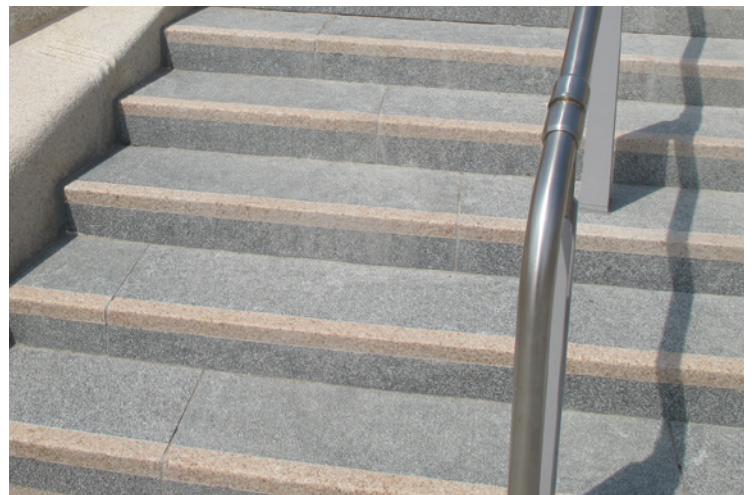
- Natural Stone Step units are available across our popular Yorkstone, Pennant and Granite ranges.
- Individual tread and risers are available in all natural stone types.
- Radius Steps are available in natural stone which can make a stunning feature of any public space.
- Due to the bespoke nature of the product the technical advice provided can help improve the finished design aesthetics, lower costs and potentially eliminate issues during the construction process.
- All Marshalls Natural Stone is sourced with regards to our obligations as a Corporate Member of the Ethical Trading Initiative. (ETI)
- Bespoke design details for installation available upon request.



Steps with inserts, cladding, coping and solid wall units, Pier Head Liverpool



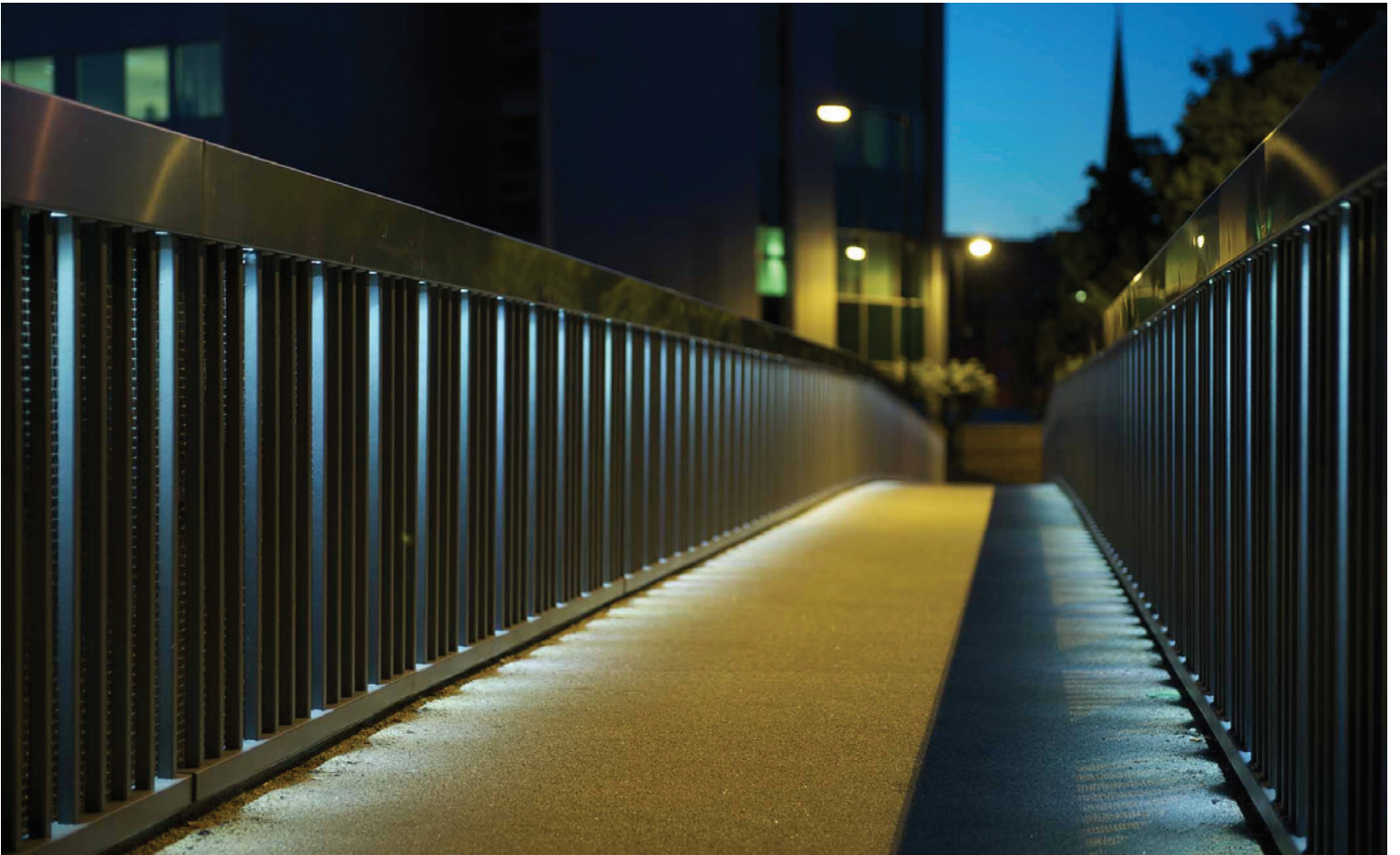
Stone insert visibility strips, Cabot Circus



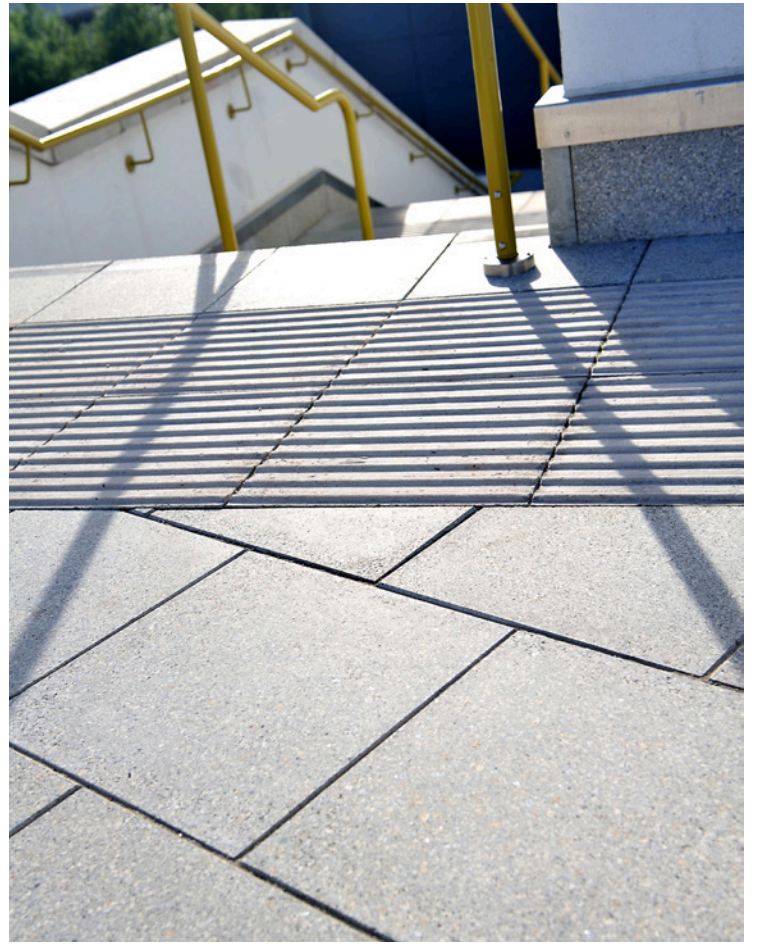
Natural Stone Steps



LED luminated handrails



LED luminated handrails



^ Marshalls Hazard Warning Paving - Visit www.marshalls.co.uk/commercial for further product details.



^ Bespoke Copings can be made to offer that perfect finishing touch.



Marshalls

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