

STEPS

STEP TECHNICAL GUIDANCE

Designing Steps

Step details are fast becoming more important in all projects, both in terms of visual appeal and, more importantly, safety. AG have been supplying step products for many years and through investment continue to find new and innovative concrete solutions in this area.

When designing external step details designers need to refer to UK Building Regulations Part M 2004 or Ireland Building Regulations TGD M 2010, Part M Access and Use which detail what is required for compliance. Additional guidance may be taken from the **Design of an accessible and inclusive built environment BS 8300:2018**:

“Those involved in the design and construction of a building may be required by the relevant building authority to provide such evidence as is necessary to establish that the requirements of the Building Regulations are being complied with”.

1 Hazard Warning Locations

Part M of the Building Regulations gives guidance on the use of hazard warning flags to facilitate the safety of persons with impaired vision when approaching changing levels in stepped areas.

The use of a corduroy hazard warning surface is a requirement that must be installed at both the top and bottom landing areas to provide advance notice of a change in levels. The hazard warning landing area when approached straight must be 800mm and set-back 400mm from the front edge of the steps whilst extending 400mm either side of the actual step width.

2 Step Dimensions of Tread + Riser

In line with Part M, the dimensions of step details are generally consistent with the rise of each step measuring between 150mm and 170mm whilst the tread is between 280mm and 450mm. These dimensions give consistency to all users thereby reducing the injury risks associated with step details.

3 Visual Contrast Strips

Part M of Building Regulations states that “all nosings are made apparent by means of a permanent contrasting material 55mm wide on both tread and rise”. When ascending or descending a flight of stairs the ability to distinguish between the individual treads and risers is essential, particularly for those who are partially sighted. Contrasting strips of a slip resistant material must be inserted along the full width of the steps both on the tread and riser. The inserted strips should ideally measure between 50-65mm in width from the front of the step on the tread and 30-55mm from the top of the riser. In accordance with Building Control technical booklet ‘H’ October 2012.

4 Slip / Skid Resistance

Safety underfoot and reducing the risk of slip / skid is as important for step details as it is for paved areas. AG provide a range of step details which have a low slip / skid resistance and comply with all the various testing procedures including PTV, USRV and R rating. Flags are available within the range for use in locations of changing levels. Contact AG Specification Department for further information. See slip / skid information for more detail.

5 LRV – Light Reflective Values

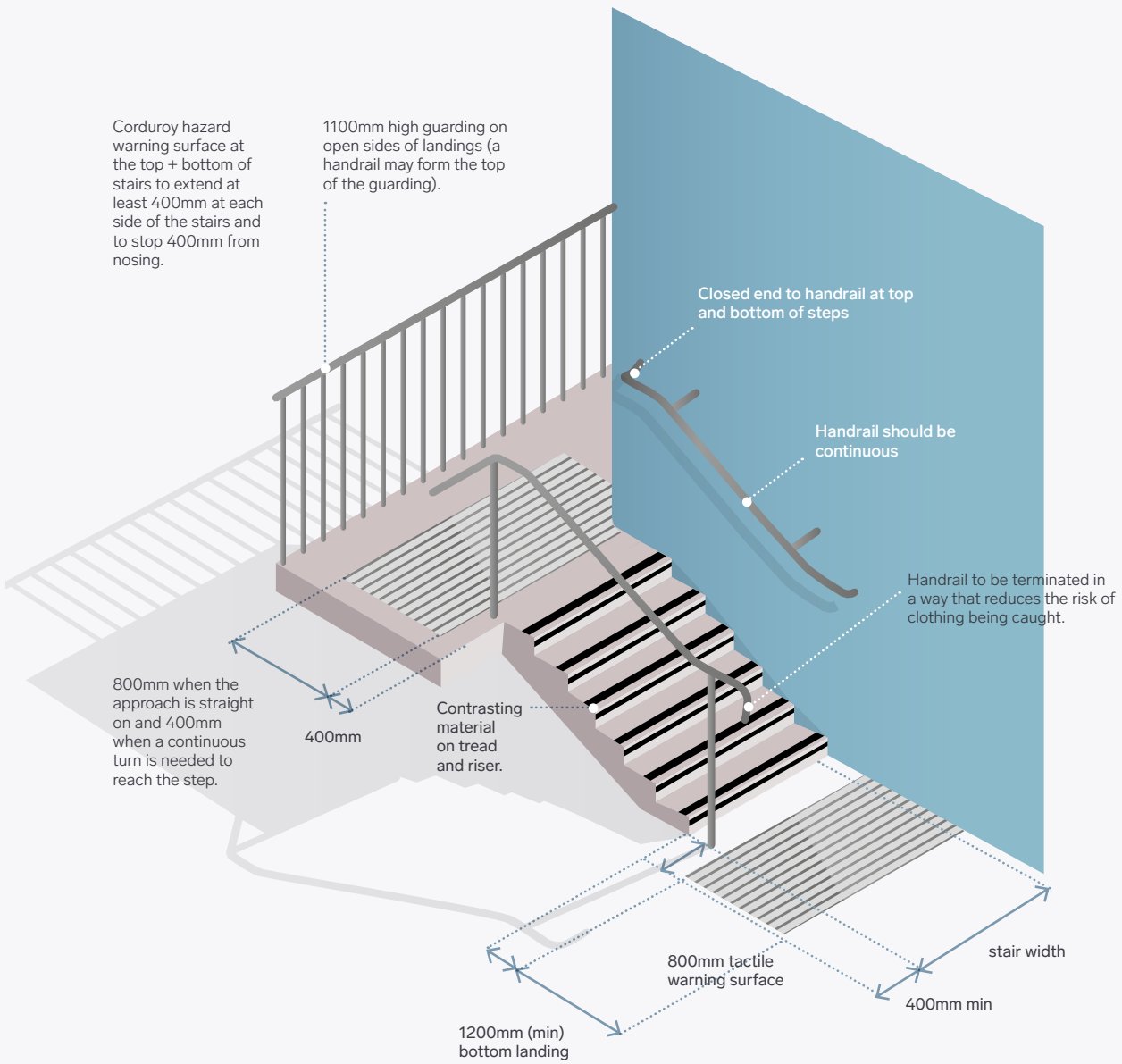
LRV is the total quantity of visible light reflected by a surface at all wavelengths and directions when illuminated by a visible light source. For persons with adequate vision, differences in the nature or the intensity of colour provide enough visual contrast. Unfortunately this is not the case for all people who are visually impaired. The main feature of a surface which appears to be strongly correlated with the ability of visually impaired people to identify differences in colour is the LRV. Differences in LRV can be used to assess the degree of visual contrast between surfaces of paving, walling, masonry and any surrounding surface.

LRV is scaled from 0, which is deemed absorbing and could be assumed to be totally black, up to 100 which may be reflective and perfectly white. For the purposes of practical influence in any application black is always greater than 0 and white never equals 100. To comply, in most cases, a difference of more than 30 points or more allows a degree of variability to provide reasonable visual contrast. This visual contrast and compliance with Part M is achieved when the difference in LRV is greater than 30 points. AG have a large selection of paving units and step details tested which comply with Part M of Building Regulations.

6 Solar Reflectance Values

Solar reflectance is becoming increasingly common in paving specification and AG can provide information in request. Contact the specification technical department for more information.

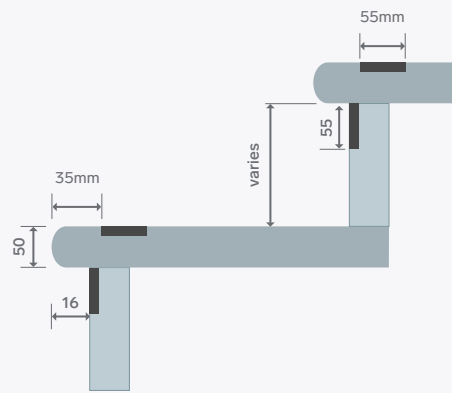
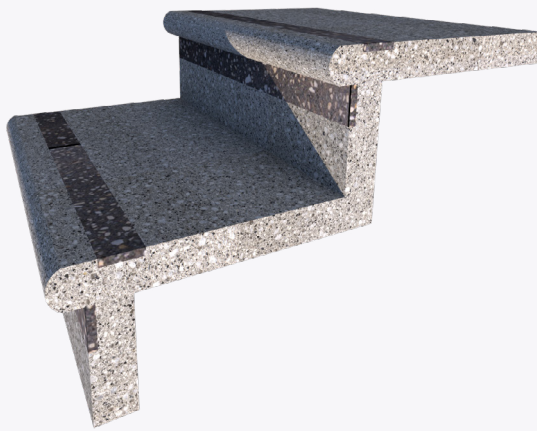
KEY PERFORMANCE COMPONENTS + DESIGN CONSIDERATIONS.



STEP PROFILES

There are multiple profile options available using a large selection of products from the TerraPave® flagstone range. Additionally you can consider our TerraKerb® or small block kerb formats.

BULLNOSE STEPS



Frost Resistant



Pedestrian Use

Available Options



Bullnose Steps
(Fiamma Alba)



Bullnose Steps with
Visibility Contrast Strip
(Fiamma Alba with Milazzo)



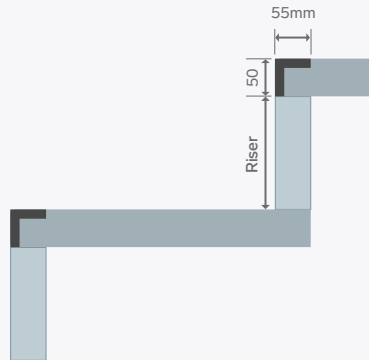
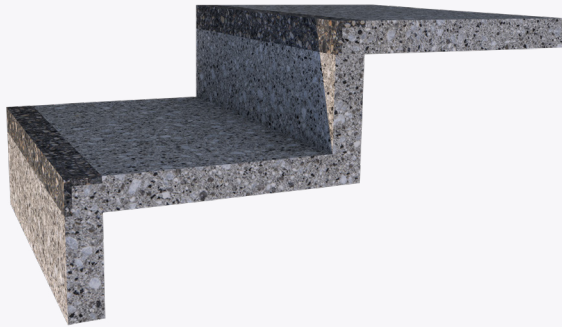
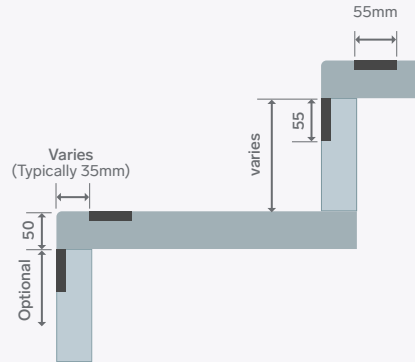
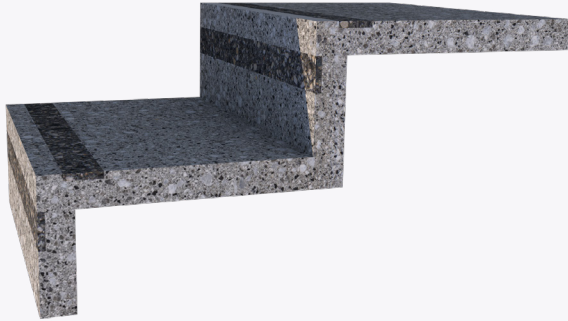
Bullnose Steps with
Visibility Contrast Strip
(Fiamma Milazzo with Alba)

FIAMMA FLAGSTONES

Premium flamed effect, granite aggregate flagstones.
See page 16 for colours.



SQUARE EDGE STEPS



Available Options



Square Edge Steps (Fiamma Alba)



Square Edge Steps with Visibility Contrast Strip (Fiamma Alba with Milazzo)



Square Edge Steps with Visibility Contrast Strip (Fiamma Milazzo with Alba)



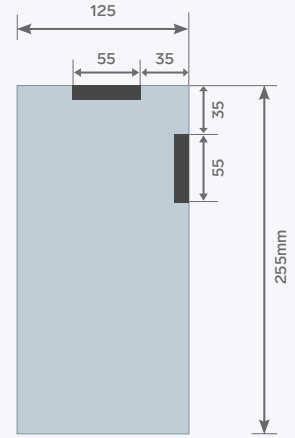
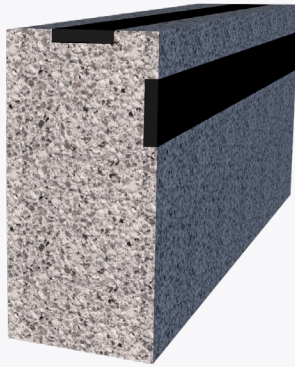
Square Edge Steps with BS8300 Visibility Contrast Strip Suitable for BS300 Design (Fiamma Alba with Black Carborundum)



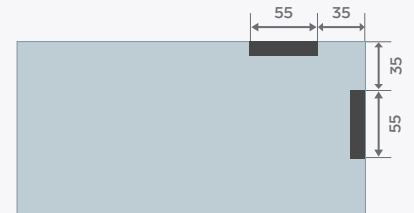
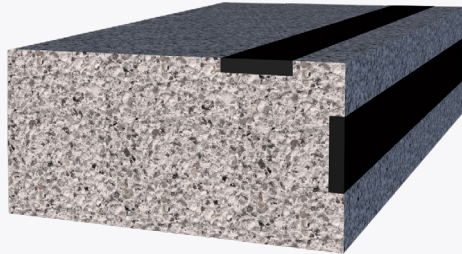
STEP PROFILES



TERRAKERB® HIGH STEP UNIT



TERRAKERB® LOW STEP UNIT



Frost Resistant

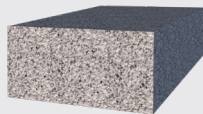


Pedestrian Use

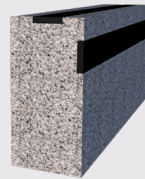
Available Options



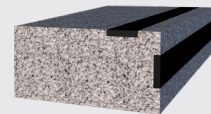
High Profile
(TerraKerb® Silver)



Low Profile
(TerraKerb® Silver)



High Profile with Visibility
Contrast Strip – Part M of
Building Regulations
(TerraKerb® Silver with
Black Carborundum)



Low Profile with Visibility
Contrast Strip – Part M of
Building Regulations
(TerraKerb® Silver with
Black Carborundum)

SMALL BLOCK – BULLNOSE KERB EDGE

Bullnose Kerb Sett finish

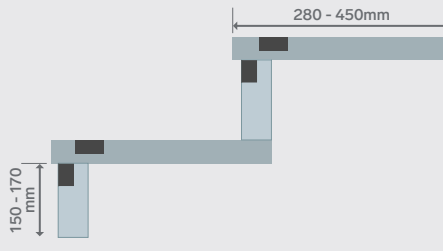
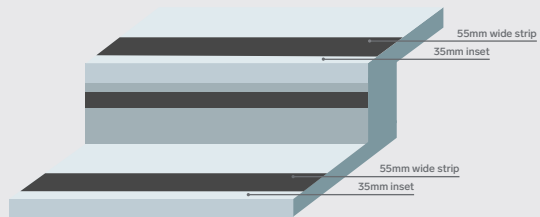


SMALL BLOCK – SQUARE KERB EDGE

Mile Stone® finish



VISUAL CONTRAST STRIPS



Available Options



Fiamma Milazzo Visibility Contrast Strip



Fiamma Alba Visibility Contrast Strip



BS8300 Black Carborundum Visibility Contrast Strip – Suitable for BS300 Design

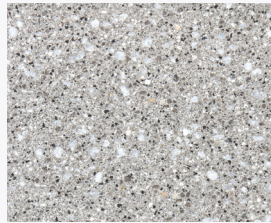
Steps

surface finish options

BULLNOSE STEPS + VISUAL CONTRAST STRIPS



FIAMMA
See page 20 for colours



TERRAPAVE®
See page 30 for colours



TAVIRA
See page 46 for colours



LASTRA

SQUARE EDGE + VISUAL CONTRAST STRIPS



FIAMMA
See page 20 for colours



TERRAPAVE®
See page 30 for colours



TAVIRA
See page 46 for colours



LASTRA



Frost Resistant



Pedestrian Use



Light Traffic



Heavy Traffic

KERB STEPS



TERRAKERB®
See page 196 for more information



BULLNOSE KERB SETTS
See page 202 for more information



MILE STONE KERBS
See page 208 for more information

SMALL BLOCK – KERB STEPS

Custom made step units

Incorporating contrast strips to your requirements

Please contact our Technical Specification Department if you are interested in specifying such products.

Steps

- 1 Tread: Country Cobble® Cashel paving + Setts Slate.
Riser: Mile Stone Slate kerbing, *Private*
- 2 Tread: Canterra® Silver flagstones with Plaza Pepper edging.
Riser: Bullnose Kerb Setts Slate Smooth, *Private*
- 3 Tread: TerraPave® Sorrento Ground flagstones with Country Cobble® Slate edging. Riser: Bullnose Kerb Setts Slate Smooth, *Private*
- 4 Tread: Country Cobble® Burren + Slate paving.
Riser: Anchor® Bayfield® corner block, Canelletto, *Private*
- 5 Steps: Fiamma Alba flagstones with Milazzo strips, *Co Cork*
- 6 Tread: Long Stone paving, Fiammata with Plaza Pepper edging. Riser: Mile Stone Slate kerbing, *Gilford*
- 7 Steps: Plaza Salt flagstones with Pepper strips, *Belfast*
- 8 Tread: TerraPave® Verona Ground flagstones, *Private*

