

# M4 – Tactile Paving

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# Tactile Paving



Image: [London Streetscape Guidance, 2016](#)

**A tactile paving flag is one that has a distinctive raised surface profile that aids partially sighted/visually impaired users navigating their way around the street environment. Different surface profiles indicate different types of hazards.**

Types include:

- Blister
- Ladder / Tramline
- Corduroy
- Platform Edge (Lozenge)
- Guidance

**Blister tactile paving has to be provided at all controlled and uncontrolled crossing points. [NB. Exception for 'continuous footway' crossings].**

## Colour

- Tactile paving in Edinburgh should be of a contrasting grey colour (red & buff may be used only in exceptional circumstances if there is a special requirement).
- Within asphalt surfacing this should be light grey; in flagged areas this should be charcoal grey.

## Inspection chambers

- Inspection chamber covers inside the tactile paving zone should be replaced with a recessed cover in-filled with tactile paving.

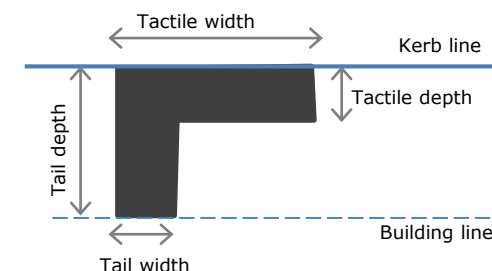
## Temporary tactile

- Stick on tactile flags are available for temporary situations if it is not possible to install standard tactile flags.



The City of Edinburgh Council

## Tactile paving terminology used in this guidance



### Relevant Factsheets:

Crossings (G4)  
Shared Space (P8)

Flush/Drop Kerb Detail (G4)  
Continuous Footways (G7)

Signalled Crossings at or Near Junctions (G5)

## Departures from National Guidance

**The following departures from National Guidance should be used by designers working on existing schemes or on new streets in Edinburgh when designing tactile paving at controlled crossings.**

### Use of contrasting colour

Research shows that partially sighted people often use the contrasting colour of tactile paving to guide them through the streetscape. However, there is less evidence that the specific colour used makes the space more legible.

Therefore, all tactile paving in Edinburgh should be of a contrasting colour that tones with the general footway colour; NOT RED as stated in the national guidance. The use of red coloured tactile paving will be considered ONLY in exceptional circumstances on a case-by-case basis, in particular where the use of red paving is considered essential to avoid high- risk safety issues.

### Crossing tactile tails is not allowed

The crossing of tactile tails can cause confusion for visually impaired users and should be avoided. To avoid tails crossing, the tail associated with the crossing with lower pedestrian demand should be terminated at least 800mm from the other tail.

### The use of reduced width tactile tails and tactile paving at the kerb edge (800mm instead of 1200mm)

Research undertaken in [2010 by University College London](#) concluded that 'the blister profile is readily detectable when it is 800mm wide' as it will always capture a person's stride. We have therefore reduced the width used for all tactile paving surfaces from 1200mm to 800mm; two rows of 400x400mm flags (reduced from three).

### Recording departures from National Guidance

- Consistency in application is of fundamental importance for legibility and so any deviations from national guidance and the national approach to tactile provision should be carefully justified.
- This is achieved through referencing the ESDG in respect to Tactile Paving where the departure has been recommended by that factsheet.



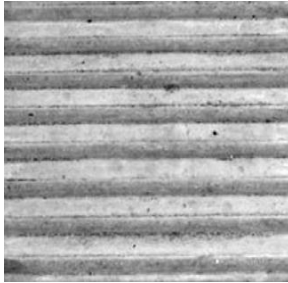
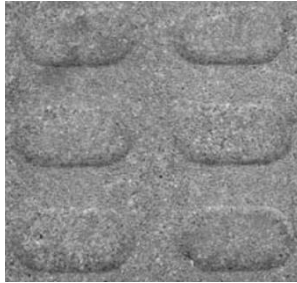
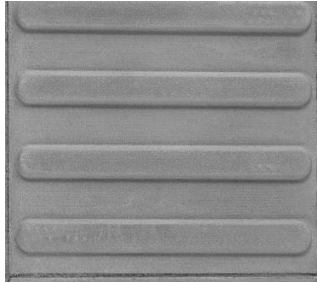
#### Relevant Factsheets:

Crossings (G4)

Flush/Drop Kerb Detail (G4)

Signalled Crossings at or Near Junctions (G5)

## Types of Tactile Paving Used in Edinburgh (colour: contrasting grey)

Tactile Type				
<b>Blister</b>	<b>Ladder / Tramline</b>	<b>Corduroy</b>	<b>Platform Edge (Lozenge)</b>	<b>Guidance</b>
				
Function				
<ul style="list-style-type: none"> <li>To mark where to cross the carriageway for visually impaired people</li> </ul>	<ul style="list-style-type: none"> <li>To delineate between segregated cycle and pedestrian surfaces on a shared use route.</li> </ul>	<ul style="list-style-type: none"> <li>To mark a hazardous situation</li> </ul>	<ul style="list-style-type: none"> <li>To mark the edge of all on street platforms (Tram Stops).</li> </ul>	<ul style="list-style-type: none"> <li>To guide visually impaired pedestrian where traditional indicators such as kerb (in height) are absent.</li> </ul>
Location				
<ul style="list-style-type: none"> <li>Use at all uncontrolled and controlled crossings.</li> <li>Use at the kerb of all zebra and controlled crossings, as well as across the footway itself as a 'tactile tail'.</li> </ul>	<ul style="list-style-type: none"> <li>Use at the start and end of a cycle route on and level with the footway.</li> <li>Use at end of segregated track, including where entering share space.</li> <li>Use at any pedestrian/cycle route junctions where pedestrians with visual impairments may unknowingly walk on to the cycle track.</li> <li>Use as a repeater marking for above.</li> </ul>	<ul style="list-style-type: none"> <li>Use at the top and bottom of stairs.</li> <li>Use at the foot of a ramp to an on-street light rapid transit platform, but not any other ramps.</li> </ul>	<ul style="list-style-type: none"> <li>Use at raised street platforms such as Tram Stops.</li> </ul>	<ul style="list-style-type: none"> <li>Use where pedestrians need to be guided around obstacles.</li> <li>Use where a number of visually impaired people need to find a specific location.</li> <li>Use in transport terminals to guide people between facilities.</li> </ul>

## Blister Paving

### Colour / Material

- Contrasting grey
- Concrete or natural stone depending on the surrounding material.
- **Metal studs are not to be used.**

### Application

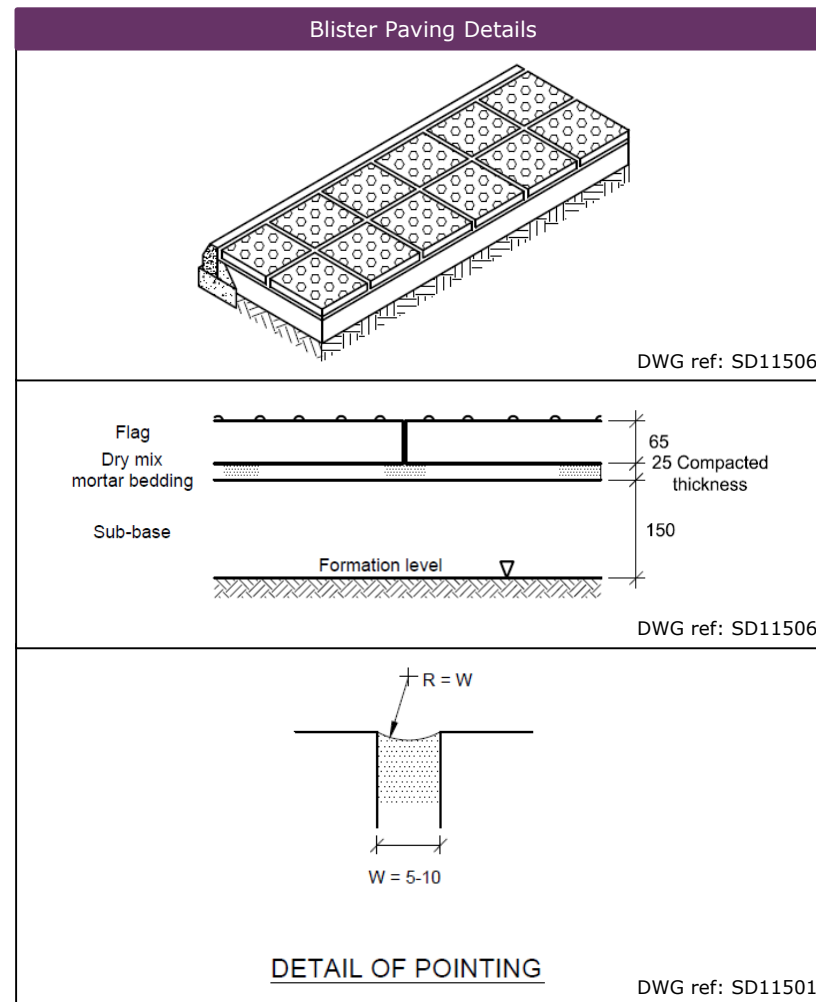
- Two rows of 400 x 400mm tactile, for a total of 800mm deep at the narrowest point across the full width of the flush crossing.
- Tactile tails will form an 'L' shape at the crossing and are to be 800mm wide.
- Flag widths shall only be cut square and be equidistant between rows of surface texturing, except where against a building or fence line.
- **Flags shall be laid so that the texture pattern is square with the crossing.**
- Concrete infill around obstructions should not exceed 25mm in width and should be the full depth of the flag and similarly coloured.
- Flags must be 400 x 400 x 65mm thick.

### Relevant standards:

- Precast concrete Flags must comply with BS EN 1339:2003
- Natural stone flags must comply with BS 7533 Part 4:2006
- Placement should comply with [Guidance on the use of Tactile Paving Surfaces, DETR, 1998](#) for other issues that are not dealt with in this guidance.



Contrasting Grey



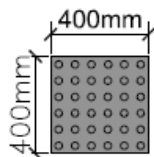
### Relevant Factsheets:

Crossings (G4)  
Shared Space (P8)

Flush/Drop Kerb Detail (G4)

Signalled Crossings at or Near Junctions (G5)

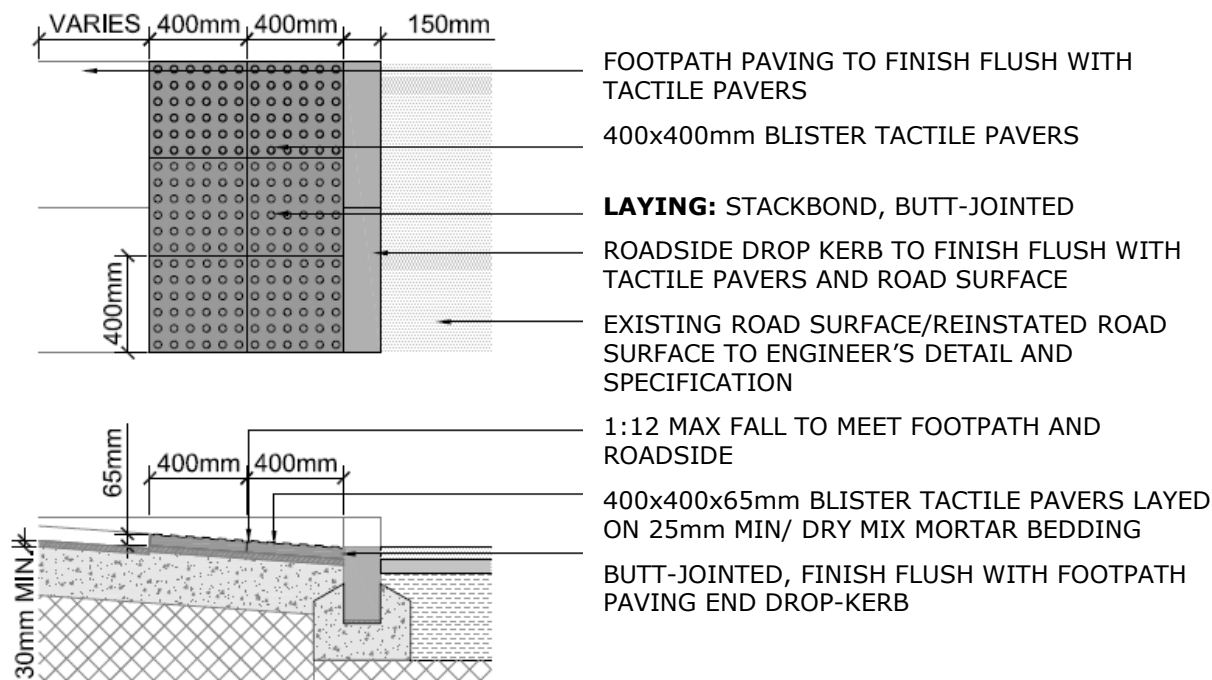
## Detailed Layout



**Application:** All Crossings

**Size:** 400 x 400 x 65mm

**Colour:** Contrasting Grey



BLISTER TACTILE PAVING PROFILE

DWG ref: Adapted from London Streetscape Guidance

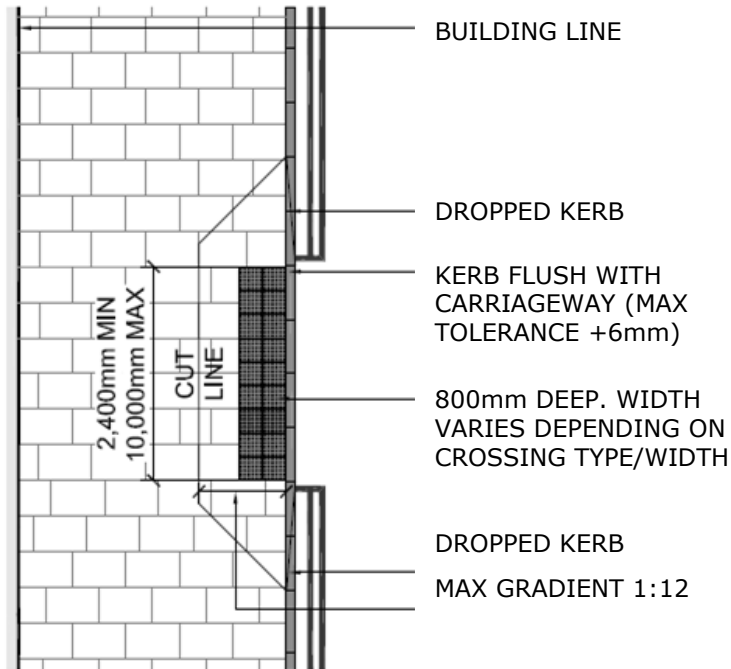
**Relevant Factsheets:**

Flush/Drop Kerb Detail (G4)

Signalled Crossings at or Near Junctions (G5)

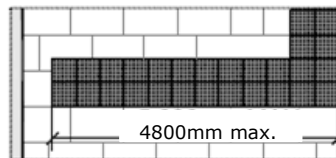
Crossings (G4)

## Layout at Uncontrolled and Controlled Crossings

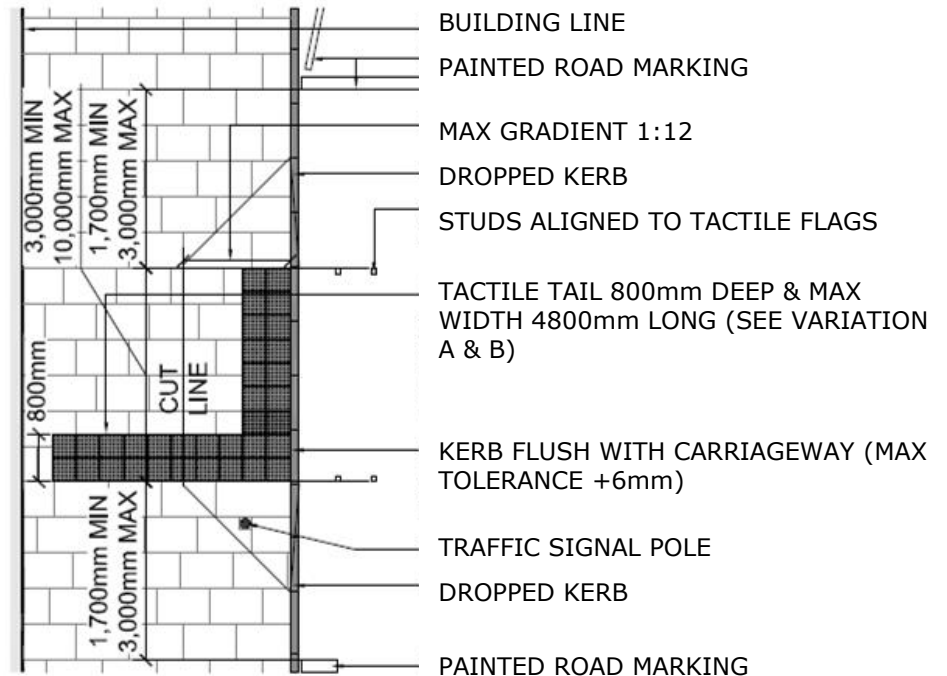


UNCONTROLLED TACTILE CROSSING - PLAN

### VARIATION A

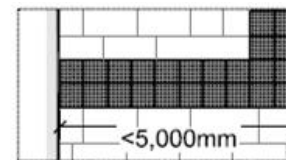


Maximum tail length is normally 4800mm. If the gap between the tail end and the rear of the footway is < 1000mm, run the tactile paving to the building line (or any other obstacle/street furniture e.g. seating, bins). Otherwise retain tactile length as 4800mm. This length needs to be assessed on a site-by-site basis according to pedestrian flows and desire lines.



CONTROLLED TACTILE CROSSING - PLAN

### VARIATION B



Maximum tail length is normally 4800mm. If the footway width is < 6000mm, run the tactile paving to the building line (or any other obstacle/street furniture e.g. seating, bins). This length needs to be assessed on a site-by-site basis according to pedestrian flows and desire lines.

DWG ref: Adapted from London Streetscape Guidance

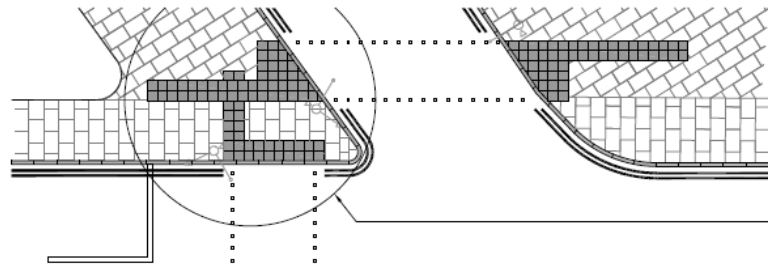
### Relevant Factsheets:

Flush/Drop Kerb Detail (G4)

Signalled Crossings at or Near Junctions (G5)

Crossings (G4)

## Tactile Tail Layout at Signalised Crossings



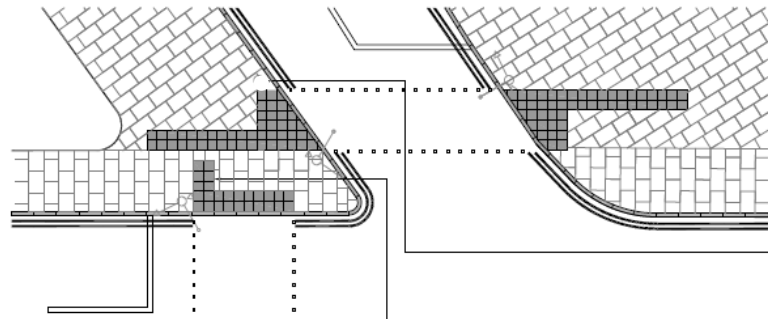
AVOID CROSSING TACTILE PAVING TAILS



**NOT ACCEPTABLE - CROSSING TAILS SHOULD NEVER OCCUR**



PLAN



CONSIDER LOCATING ADDITIONAL PUSH BUTTON IF CROSSING WIDTH >3.5M PROVIDE IF WIDTH >4M



**ACCEPTABLE**

TACTILE PAVING TAIL HAS BEEN MOVED TO CAPTURE PEOPLE FROM SECONDARY ROUTE



PLAN

**The tail associated with the crossing with lower pedestrian demand should be terminated at least 800mm from the other tail**

DWG ref: Adapted from London Streetscape Guidance

**Relevant Factsheets:**

Flush/Drop Kerb Detail (G4)

Signalised Crossings at or Near Junctions (G5)

Crossings (G4)



M4 - Tactile Paving

Factsheet

# Ladder and Tramline Paving

## Function

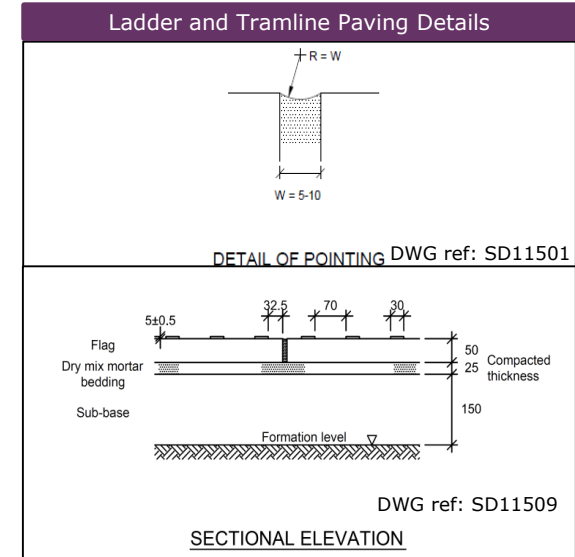
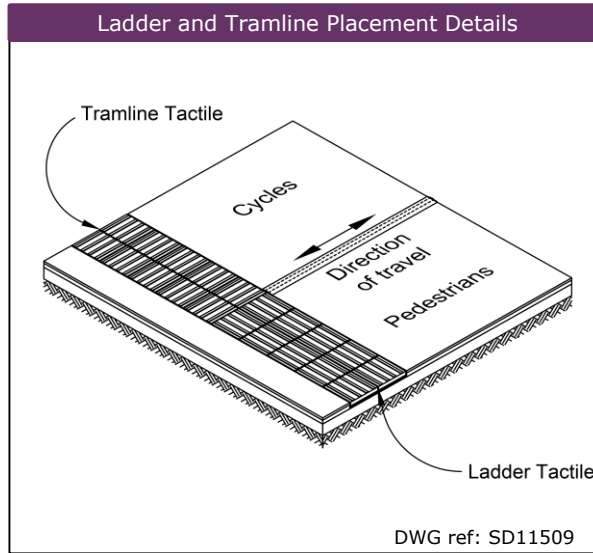
- To mark the pedestrian and cycle entrances to shared use footways (cycle/pedestrian).
  - Laid transverse to denote the pedestrian path.
  - Laid longitudinal to denote the cycle path.

## Locations

- Use at shared footways.
- Use at the start and end of a cycle route on and level with the footway.
- Use at any pedestrian / cycle route junctions where pedestrians with visual impairments may unknowingly walk on to the cycle track.

## Application

- Flags shall be laid for pedestrians so that the bar pattern runs perpendicular to the direction of travel. For Cyclists, the flags shall be laid so that the bar pattern runs parallel to the direction of travel..
- Concrete infill around obstructions should not exceed 25mm in width and should be the full depth of the flag and similarly coloured.
- Flags must be 400 x 400 x 50mm or 70mm thick.
- While national guidance for ladder and tramline recommends a 2,400mm wide application for this material, 800mm will be adopted.
- Skid resistant material to be trailed, contact Active Travel Team for details.



## Note:

CEC are currently trialling a bespoke ladder/tramline unit which aims to improve the grip offered by this paving. For further information please consult with the Active Travel Team.



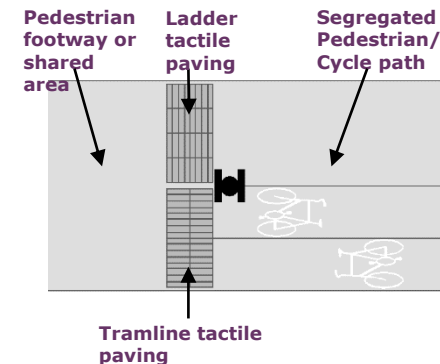
Contrasting Grey

## Relevant standards

Precast concrete Flags must comply with BS EN 1339:2003

Natural stone flags must comply with BS 7533 Part 4:2006

Comply with [Guidance on the use of Tactile Paving Surfaces, DETR, 1998](#) for other issues that are not dealt with in this guidance.



## Relevant Factsheets:

- Shared Space (P8)
- Signalled Crossings at or near junctions (G5)

Soft Segregation: Integration with Bus Stops (C3)

M4 - Tactile Paving

Factsheet

# Corduroy Paving

## Function

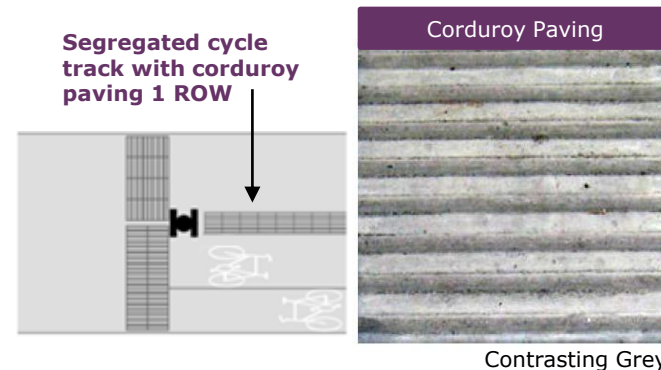
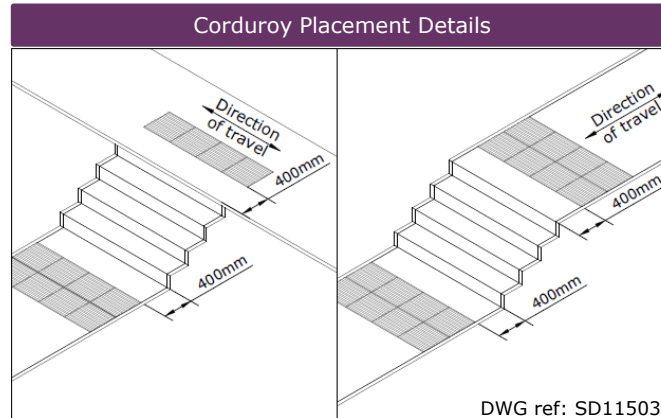
- To mark a hazard but **NOT** to mark shared footway entrance to/from cycle or pedestrian routes.
- NOT to define edge of kerb when level with carriageway.

## Location

- At the top and bottom of stairs.
- At the foot of a ramp to an on-street light rapid transit platform, but not at any other ramps.
- On the approach to level differences
- Can be used to indicate separation of cyclists and pedestrians on a segregated path.

## Application

- Flags shall be laid so that the texture pattern runs perpendicular to the alignment of the hazard.
- Flags widths shall only be cut square, and equidistant between rows of surface texturing, except where against a building or fence line.
- Concrete infill around obstructions should not exceed 25mm in width and should be the full depth of the flag and similarly coloured.
- Flags must be 400 x 400 x 50mm or 70mm thick.

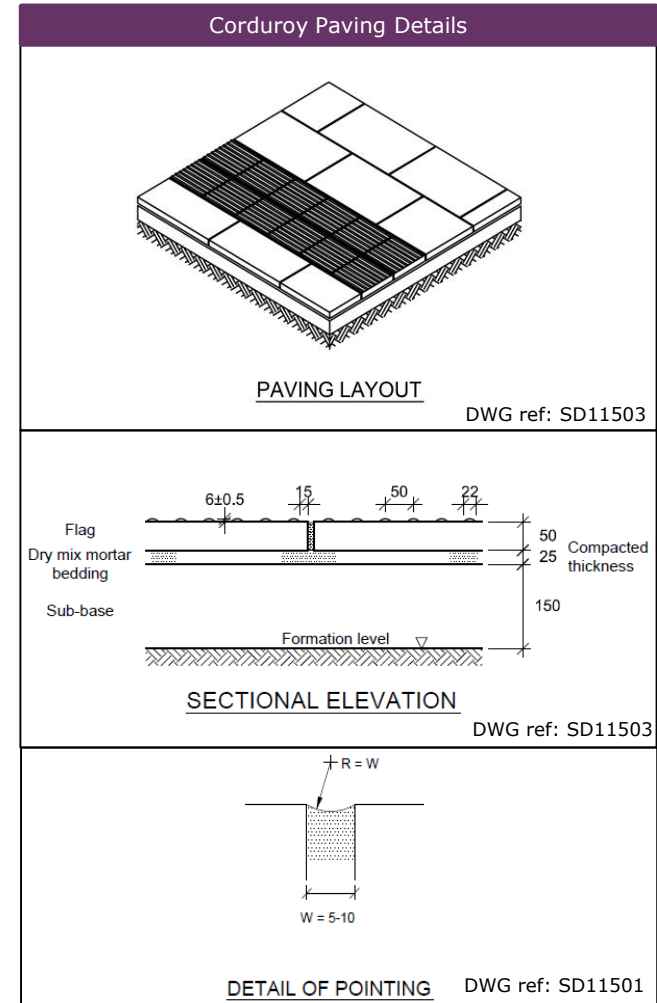


## Relevant standards

- Precast concrete Flags must comply with BS EN 1339:2003
- Natural stone flags must comply with BS 7533 Part 4:2006
- Comply with [Guidance on the use of Tactile Paving Surfaces, DETR, 1998](#) for other issues that are not dealt with in this guidance.

## Relevant Factsheets:

- Shared Space (P8)
- Signalled Crossings at or near junctions (G5)



Soft Segregation: Integration with Bus Stops (C3)

M4 - Tactile Paving

Factsheet

# Platform Edge (Lozenge) Paving

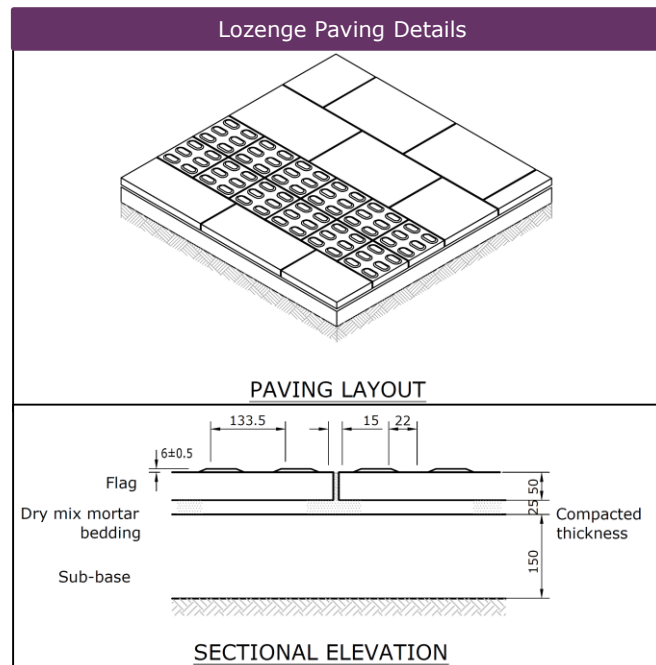
- Platform Edge Paving must be 400x400mm paving units, with rows of lozenge-shaped rounded raised ridges 6mm high, 150mm in length, 83mm in width and equally spaced at 50mm intervals.
- Lay in one 400mm wide row and set back a minimum of 500mm from edge.
- Extend for full width of hazard.
- Edge of Platform should also be marked with a white line.
- Concrete infill around obstructions should not exceed 25mm in width and should be the full depth of the flag and similarly coloured.
- Flags must be 400 x 400 x 50mm or 70mm thick.



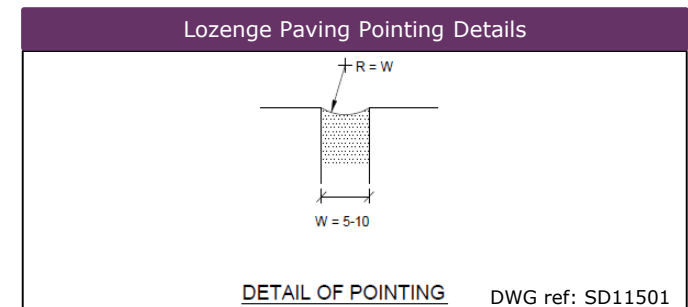
The City of Edinburgh Council

## Relevant standards

- Precast concrete Flags must comply with BS EN 1339:2003
- Natural stone flags must comply with BS 7533 Part 4:2006
- Comply with [Guidance on the use of Tactile Paving Surfaces, DETR, 1998](#) for other issues that are not dealt with in this guidance.



DRG ref: 3D-DR-C-0005



DETAIL OF POINTING DWG ref: SD11501



Contrasting Grey

## Relevant Factsheets:

Designing Inclusive Streets (P2)

Equality & Rights Impact Assessment (P2)

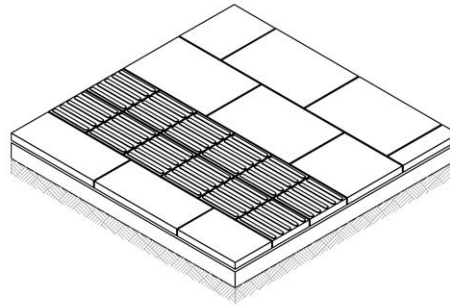
## M4 - Tactile Paving

## Factsheet

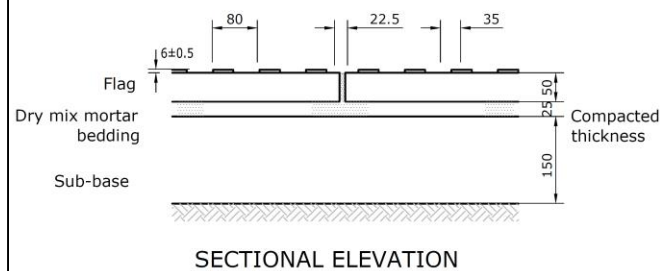
## Guidance Paving

- Use to be used as a guide for the visually impaired where traditional indicators such as kerb lines have been removed or are not available.
- The profile of the guidance path surface comprises a series of raised, flat-topped bars running in the direction of pedestrian travel. The bars are 5.5mm ( $\pm 0.5$ mm) high, 35mm wide and are spaced 45mm apart.
- The surface should be installed with the bars running in the direction of pedestrian travel.
- Laid 2 pavers, 800mm wide.
- There should be at least 800 mm unobstructed spaces either side of pavers.
- Pavers should be laid as straight as possible.
- Flag widths shall only be cut square and equidistant between rows of surface texturing, except where against a building or fence line.
- Concrete infill around obstructions should not exceed 25mm in width and should be the full depth of the flag and similarly coloured.
- Flags must be 400 x 400 x 50mm or 70mm thick.

Guidance Paving Details



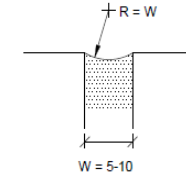
PAVING LAYOUT



DWG ref: 3D-DR-C-0006

**Use sparingly and only after local consultation with relevant local groups.**

Guidance Paving Pointing Details



DETAIL OF POINTING

DWG ref: SD11501

Guidance Paving



Contrasting Grey

### Relevant standards

- Precast concrete Flags must comply with BS EN 1339:2003
- Natural stone flags must comply with BS 7533 Part 4:2006
- Comply with [Guidance on the use of Tactile Paving Surfaces, DETR, 1998](#) for other issues that are not dealt with in this guidance.

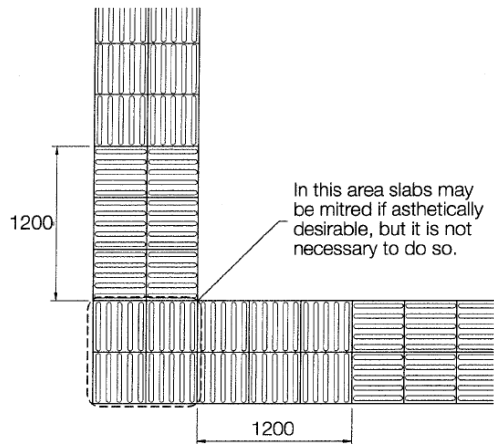
### Relevant Factsheets:

Designing Inclusive Streets (P2)

Equality &amp; Rights Impact Assessment (P2)

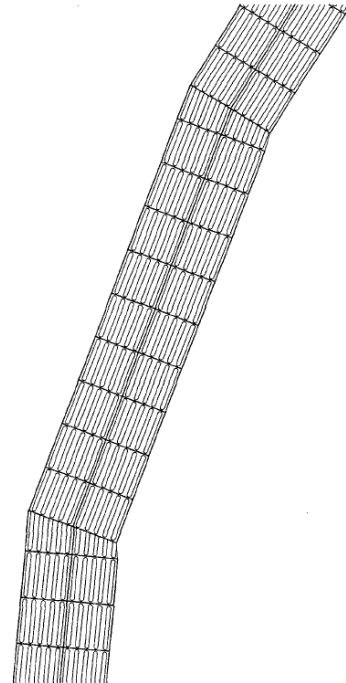
# Layout

Layout of guidance path surface at a right angle turn



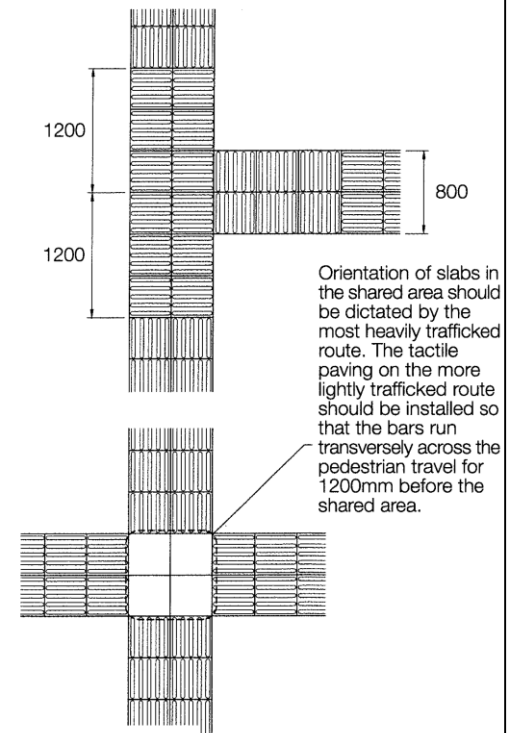
Notes: 1) Not to scale.  
2) All dimensions in millimetres.

Layout of guidance path surface at a turn other than a right angle



Notes: 1) Not to scale.

Layout of guidance path surface at a 'T' junction and at a cross roads



Notes: 1) Not to scale.  
2) All dimensions in millimetres.

DWG ref: [DFT Guidance on use of tactile paving](#)

**Relevant Factsheets:**

Designing Inclusive Streets (P2)

Equality & Rights Impact Assessment (P2)

Crossings (G4)

## Utility Inspection Covers

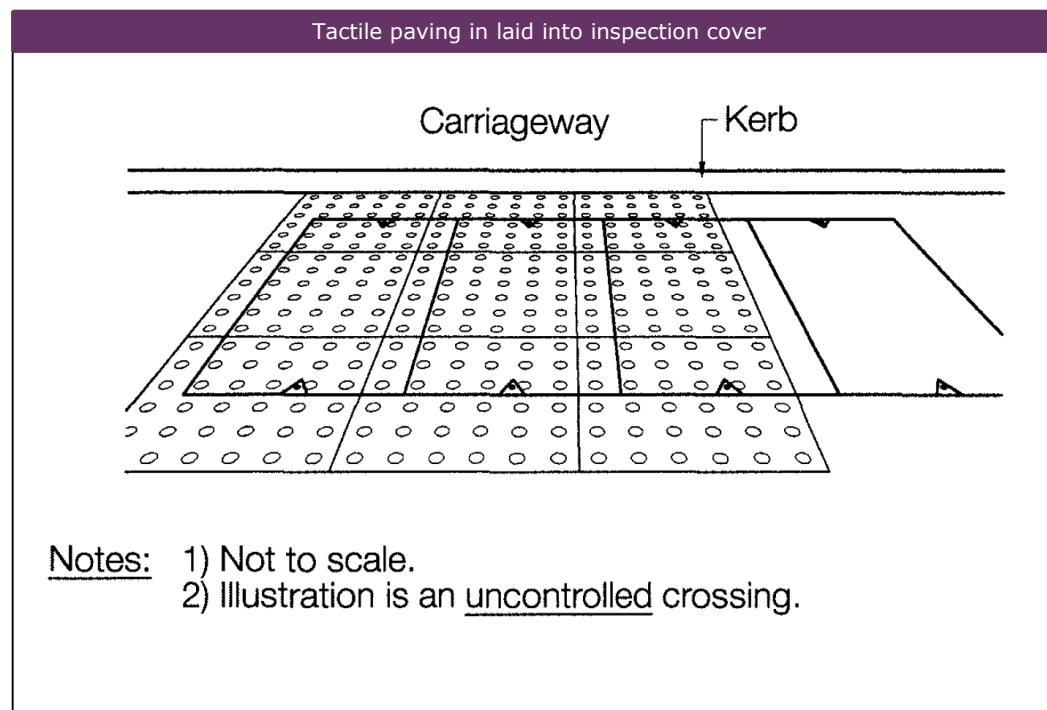
- The Council requires utilities, where possible, to provide covers which can be converted to take a tactile surface inlay.
- Access covers located within the layout of tactile paving should be in-laid to prevent visually impaired people missing the message being conveyed.

### Stick on tactile

Tactile paving is available in a stick on format for use as a last resort option. This may be useful where:

- Excavation of block pavers would be difficult (e.g. on reinforced concrete).
- For temporary provision (during construction).
- Where existing dropped kerbs exists without tactile paving. However these will be replaced with permanent tactile paving when/if any capital scheme is undertaken along the extent of the street or nearby.

See [Guidance on the use of Tactile Paving Surfaces, DETR, 1998](#) for other issues that are not dealt with in this guidance.



DWG ref: [DFT Guidance on use of tactile paving](#)

## Image References

### **Tactile Paving**

Image: London Streetscape Guidance, 2016

Tactile Paving in Use: The City of Edinburgh Council

### **Platform Edge (Lozenge) Paving**

Image: The City of Edinburgh Council

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