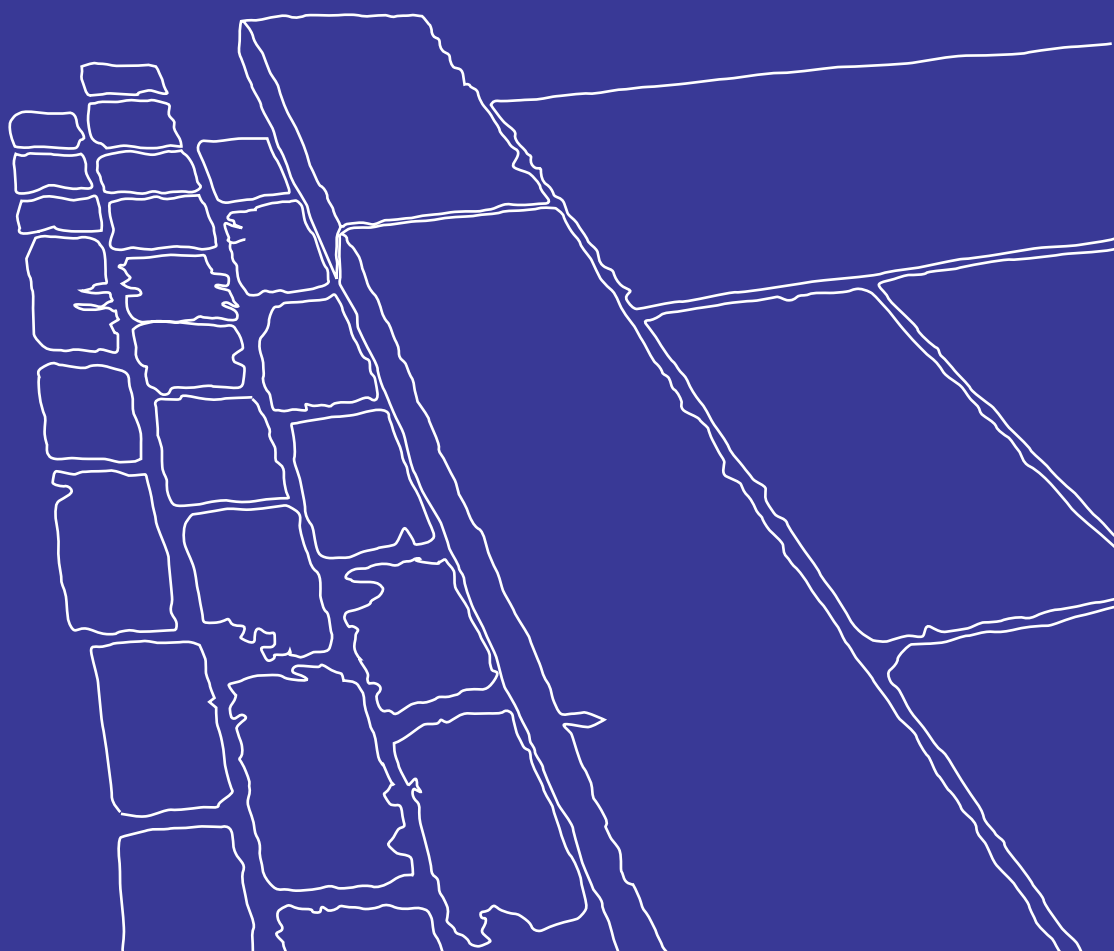


Footway Details

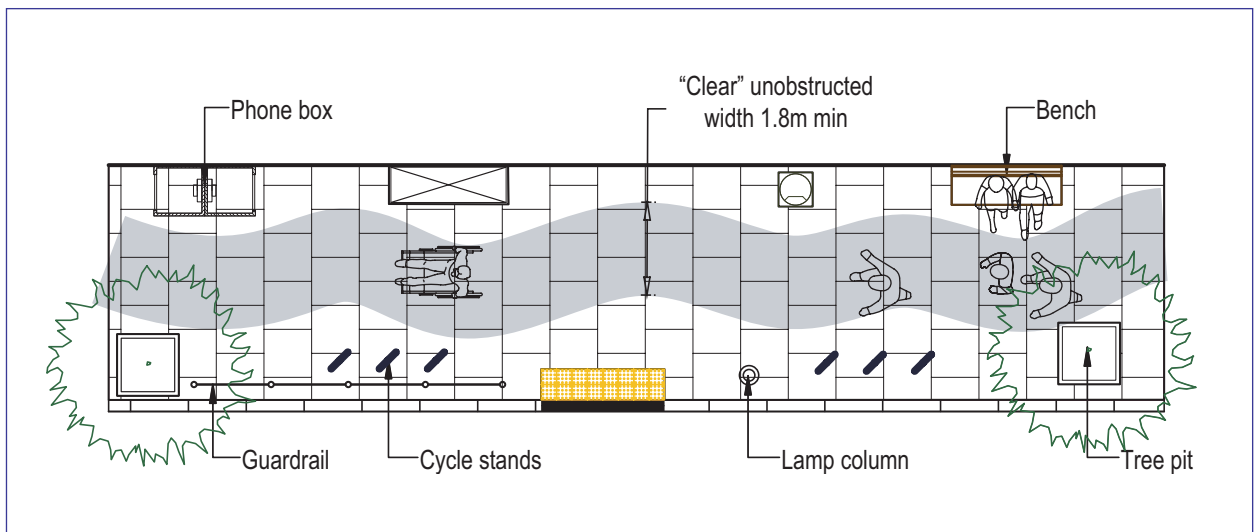


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Footway Widths

- Footway widths vary historically. There are, however, guidelines for maintaining '*clear footway*' widths for different volumes of pedestrian traffic.
- 'Clear footway' is *not* the distance from kerb to boundary wall, but the *unobstructed* pathway width within the footway.
 - 1.8 metres - minimum width needed for two adults passing.
 - 3 metres - minimum width for a busy pedestrian street, though greater widths are usually required.
- Keeping the footway width *visually* free of street furniture is also important, allowing clear sightlines along the street. Combining or '*bunching*' of street furniture can help achieve this.
- When given the opportunity to re-design footway width, try to predict *peak* pedestrian flow on each section and design accordingly. For instance, near school entrances, peak flow will be very high at certain times of the day, requiring wider footways in the near vicinity.



Considerations for maximising 'clear' footway width

3.01 Continued

Reducing Clutter

- Footway obstructions are numerous and varied – some can be remedied quickly, while others require detailed consideration before removal or relocation can be approved.
- Some pavement obstructions are a permanent feature of the street, required by traffic law or current safety considerations.
- **Short-term obstructions:**
 - *Overhanging foliage* from private properties – refer problem to Street Environment Services.
 - *Overspilling street traders, A-boards* – refer problem to Enforcement Team (Street Environment Services).
- **Longer-term obstructions/ other street furniture:**
 - *Trees* section 1.09
 - *Traffic signs* section 4.01
 - *Sign posts* section 4.02/03/04
 - *Guardrail* section 4.09
 - *Bollards* section 4.10
 - *Cycle parking* section 4.11
 - *Bus shelters* section 4.12
 - *Litterbins* section 4.16
 - *Recycling bins* section 4.17
 - *Telephones* contact Highways Management for utility company details.
 - *Postboxes* contact Highways Management, Forward Planning and the Post Office.



Bunched street furniture on Gray's Inn Road



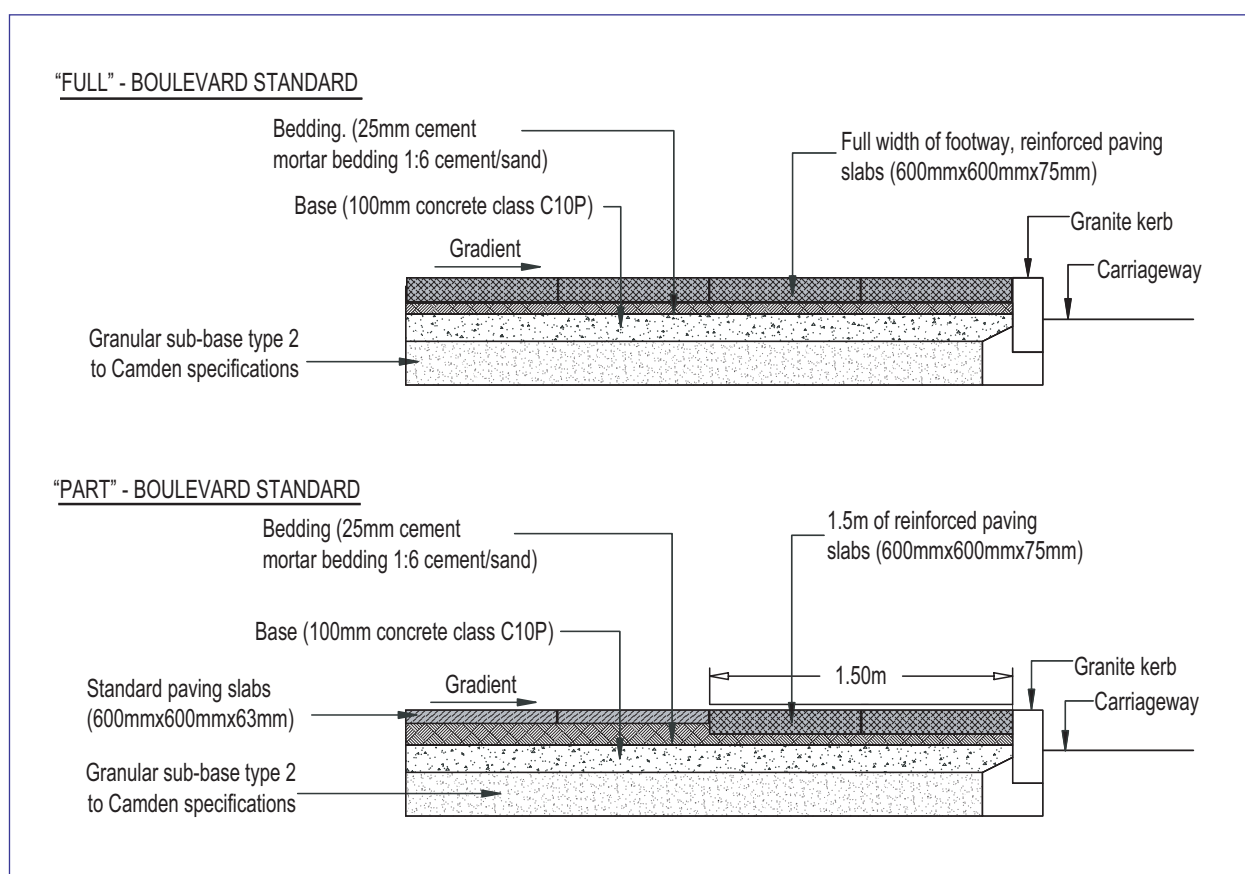
A-boards licensed to be on the footway

Concrete Paving and Boulevard Standard

- Concrete slab paving is a cost effective, practical alternative to natural stone paving.
- It provides a uniform 'uncluttered' appearance, with a durable surface and is easy to clean and maintain.
- Reinforced concrete paving is thicker than standard concrete paving, but has the same appearance.
- Concrete paving is required for all 'Boulevard' streets, likely to be subject to 'continental-style cleansing' in the near future. For more details on the Boulevard Project see section 0.07.
- The full width of the footway must be laid with reinforced concrete paving to reach 'Boulevard' standard.
- Only 'part-Boulevard' standard is reached when strengthening 1.5m from the kerb. This can be done to protect footways likely to be overrun by heavy vehicles.



Boulevard paving laid with 150mm staggered bond



Boulevard paving construction

3.02 Continued

Slab options

- 'Marshall' Liverpool natural re-enforced slabs or an equivalent product are commonly used.
- **Slab size options:**
 - Reinforced paving: 600 x 600 x 75mm
450 x 600 x 75mm
 - Standard paving: 900 x 600 x 63mm
750 x 600 x 63mm
600 x 600 x 63mm
- Larger sizes can be used outside nationally important buildings (900 x 600 x 63mm).
- Small element paving (400 x 400mm) and tegular block paving must not be used and should be replaced whenever possible.
- (At time of writing, trials are taking place using 'fibre mesh' reinforced slabs, with slab thickness of 63mm. If successful, this product may facilitate the use of larger slab sizes in the Boulevard programme).

Laying

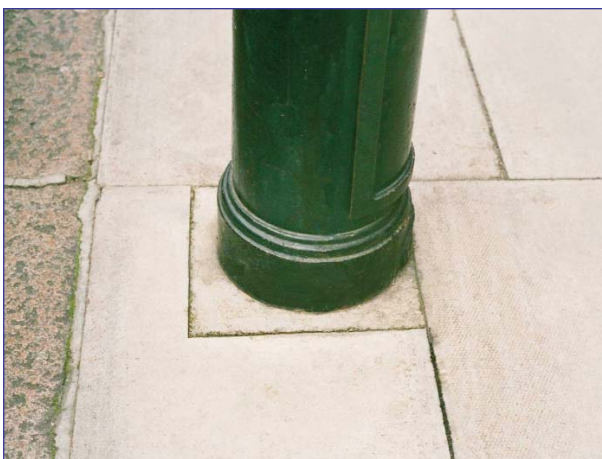
- All paving (including kerbside strengthening) must be laid in a 150mm staggered bond, transverse (90°) to the kerb line.
- For all 'Boulevard' streets, slabs are to be butt jointed with a concrete base beneath cement mortar bedding.
- No slabs should be cut to less than 300mm wide or splay cut, until approved by the lead officer, except where abutting street furniture.
- Careful attention must be paid to cutting slabs around street furniture to leave a neat finish.

Other considerations

- As opportunity arises, reinforced paving should be laid in all major commercial streets for aesthetic improvements and to enable 'continental-style cleansing'.
- Good reinstatement by utility companies is essential to maintain level and unbroken paving. Compliance with NRSWA standards must be enforced to ensure settlement does not affect paving. Use of fully consolidated material (e.g. lean mix concrete) will reduce the adverse effects of settling.



Boulevard paving on a busy commercial street



Careful attention to cutting slabs around street furniture

York Stone

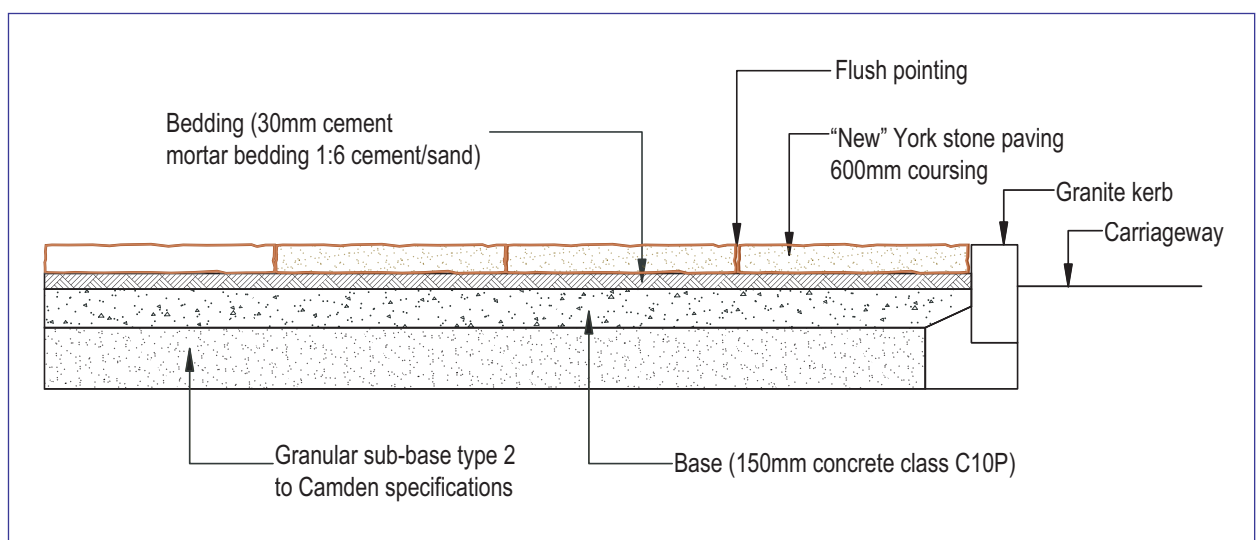
- York stone is the original material used in Camden's footways. It is aesthetically pleasing, but costly.
- 'Old' York stone (from the same site) can be re-laid in situ, with particular care taken on producing neat flush pointing of no more than 10-15mm.
- Second-hand York stone can only be used with the approval of the engineer.
- 'New' York stone should have sawn-cut edges with flush pointing to create a smooth finish.
- Try to match local precedence (in colour, material finish and bonding) when approving samples of 'new' York stone.
- Generally, coloured variations are preferable to bland, consistent colour.
- Coursing of 600mm should be used, laid 90° to the kerb with random slab lengths used to create random bonds.



Old York stone re-laid with flush pointing



New York stone in Argyle Walk



New York stone paving construction

3.04

Bituminous Surfaces

- Bituminous (or “black top”) footway surfaces are the quickest paving option. It provides a smooth surface when first laid, but suffers badly in appearance, if continually dug up by utility companies.
- There are three types of bituminous material used in Camden:
 - 1 Mastic asphalt (MA)
 - 2 Fine graded bitumen macadam wearing course
 - 3 Rolled asphalt sand carpet wearing course, 25mm (HRA)
- Asphalt surfacing can be considered where there is a shallow construction depth or where there are cellars under the footway.
- See the Highway Works Contract for construction specification.



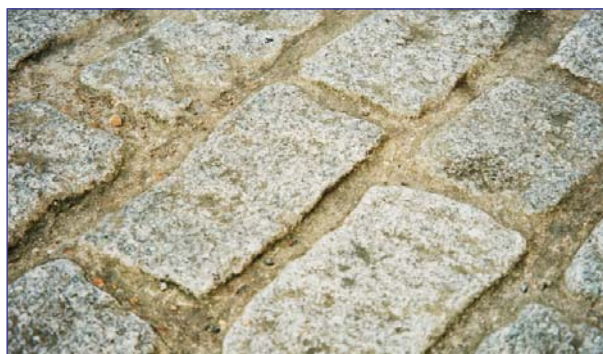
New bituminous footway on Regent's Park Road

Granite Setts

- Granite setts can be used in certain locations to delineate an area, such as on level loading bays or drainage channels in footway build-outs.
- They can also be used to change surface texture in the carriageway such as on the ramps of raised entry treatments (see section 2.05) or areas where walking is discouraged.
- A flush surface must be achieved where people are likely to walk on the granite setts, using a fine picked finish with flush pointing.
- Cropped granite setts can be used in the carriageway as a slight traffic calming effect, as well as in areas where walking is discouraged.
- Choose granite sett colours by following local precedent.
- Traditionally, granite setts have been laid in random sizes and coursing.
- The use of random sized reclaimed setts is preferred.
- For new setts, the most common size is 200 x 100 x 100mm, laid with a half bond.
- Cubed setts (100 x 100 x 100mm) can be used to match local use.
- See the Highway Works Contract for construction specification.



Flush, fine picked granite setts suitable for walking



New cropped granite setts



Old granite setts in Daleham Mews



Setts in level loading bay in Chalk Farm Road

3.06

Granite Kerbs

- Granite kerbs have traditionally been used in Camden, with different arrangements found across the borough.
- Existing granite kerbs should be retained wherever possible, with the size of new kerbs chosen to match local precedent.
- Standard sizes for new build are:
 - 300 x 200mm
 - 150 x 300mm
- Kerb length will vary from 900 to 1200mm.
- Traditionally, granite setts were placed alongside kerbs to form a drainage channel. Wherever found, the setts should be cleaned and maintained.
- Refer to Highway Works Contract for more detail.

Flat Kerb

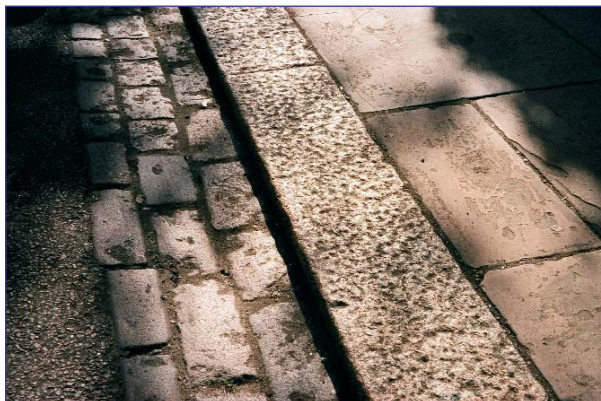
- 300 x 200mm standard kerb arrangement, with 125mm upstand.

Edge Kerb

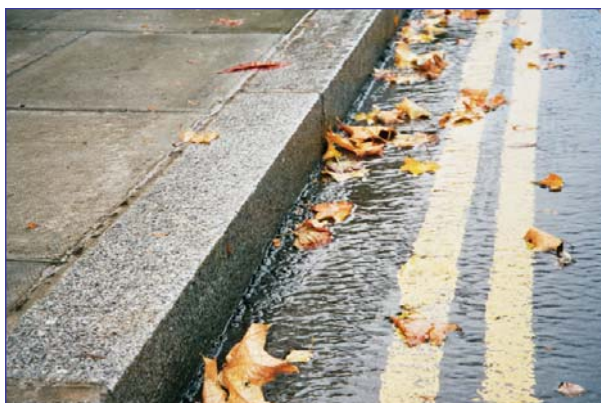
- Where a higher upstand (or a narrower kerb width) is required, a 150 x 300mm granite kerb can be used.
- Standard upstand: 125mm.
- Maximum upstand: 200mm.

Double Granite Kerb

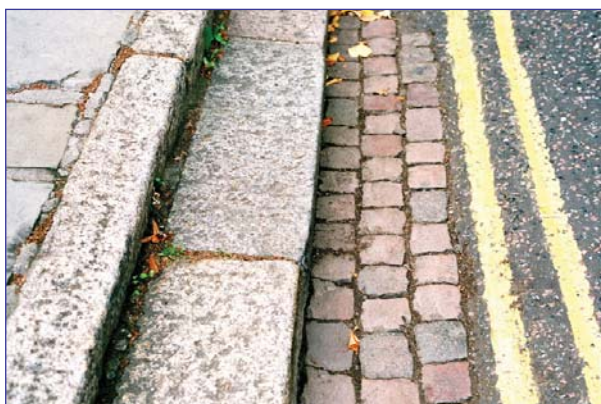
- Double kerbs have been used where the footway is considerably higher than the carriageway, and are effective in preventing vehicles mounting the footway.



Flat kerb with drainage channel made of granite setts



Edge kerb in Haverstock Hill



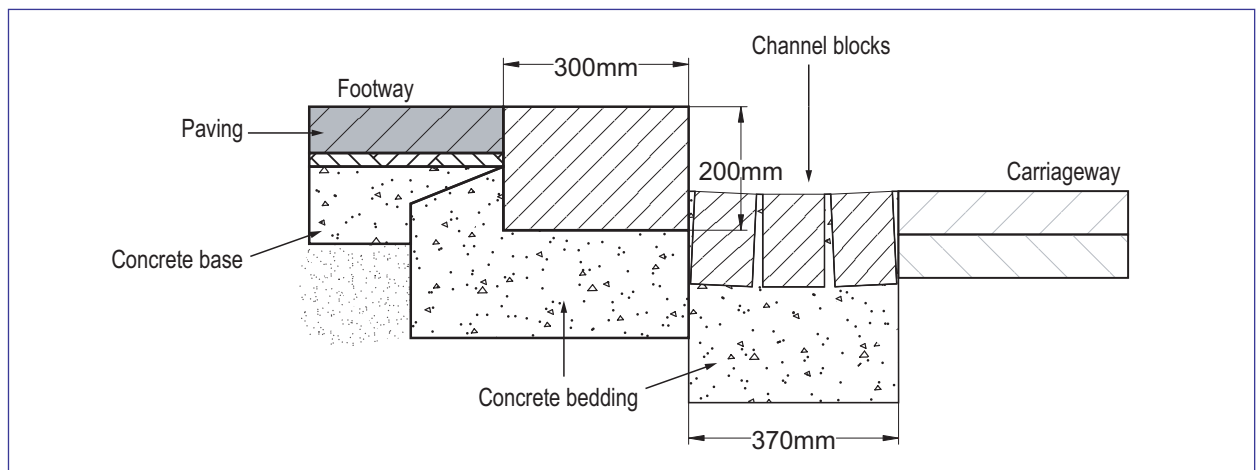
Double granite kerb with drainage channel

Granite Slabs at Cellar Flap

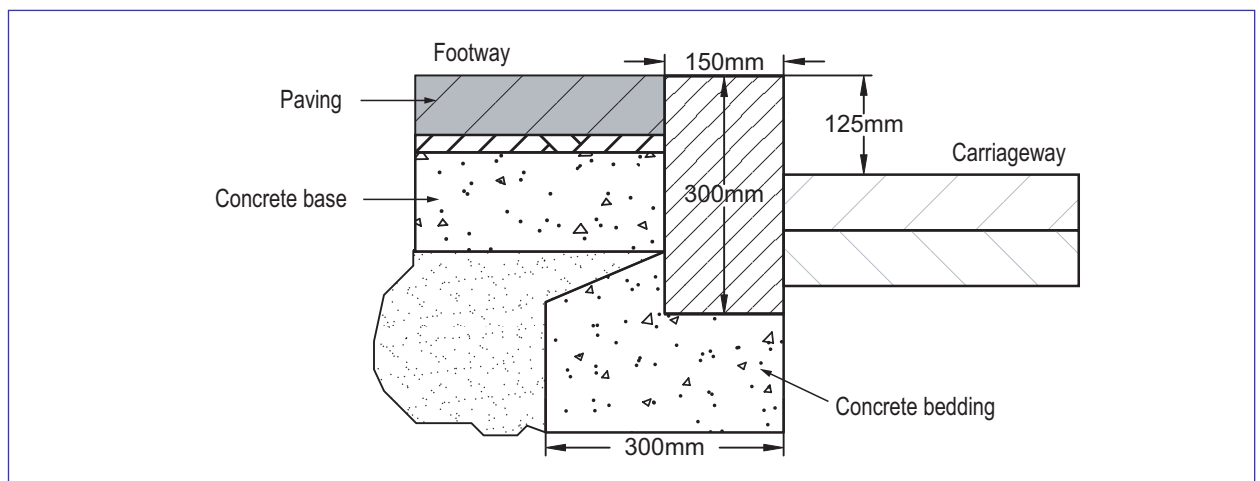
- 'Granite landing slabs' or 'barrel runs' form the original hardwearing paving outside pub cellar doors. Granite setts were also commonly used. If uneven, re-lay slabs or setts to fit with paving either side. If slabs are broken, replace using granite kerbs, to maintain a good walking surface.
- Lay slabs or granite kerbs on a cement mortar feed on top of a concrete sub-base. Finish with flush or struck jointing.



Granite setts laid in front of a cellar flap



Depth construction of flat kerb



Depth construction of edge kerb

3.07

Tactile Paving

- Tactile (or blister) paving is intended to warn and inform, blind and partially sighted people of the existence of a crossing point.
- Tactile paving must be laid at every controlled and uncontrolled crossing point, as well as areas where the carriageway has been raised to the same level of the pavement.
- Refer to the DETR 'Guidance on the use of Tactile Paving Surfaces 1998', for clarification on details in the installation of tactile paving.
- Use of 400 x 400mm tactile paving is preferred. However, where persistent kerb overrun is evident, 200 x 100mm modular blocks can be used for easier maintenance.
- At all crossings, the tactile surface must be laid 'in line' with the angle of the crossing, *not* 'in line' with the kerb line. See DETR Guidance for more detail.
- Different colours of tactile (or 'blister') paving area used at different crossing points to help visually impaired distinguish between crossing types.



Continuity of tactile paving maintained through inset inspection cover



Red tactile paving with stem at controlled crossing

Controlled Crossings

- i.e. Light controlled and zebra crossings:
 - Red tactile, full width of dropped kerb.
 - At crossing in-line with pedestrian flow – 1200mm depth of tactile with stem back to a point in line with the buildings.
 - At inset crossing ('off to the side' of pedestrian flow) – 800mm depth of tactile with stem back to building/pavement edge.

Uncontrolled Crossings

- e.g. Side road junctions, raised crossings, 'access road' crossovers, signal junctions without pedestrian phases:
 - Buff or dark grey tactile (whichever provides the greatest contrast to surrounding paving) full width of dropped kerb.
 - At crossing in-line with pedestrian flow – 1200mm depth of tactile. Tactile stem not required.
 - At inset crossing ('off to the side' of pedestrian flow) – 400mm width of tactile. Tactile stem not required.
- See DETR Guidance for situations with overlapping crossings, pedestrian refuges and pedestrian islands. Also see section 2.06 (Pedestrian Refuges).
- Where tactile paving is 'interrupted' by an inspection cover, an inset cover must be installed with tactile paving laid in the same direction. See section 3.09 (Inset Inspection Covers) for more details.



Buff tactile paving at an uncontrolled crossing, on a raised entry treatment

White Kerb Edge at Crossing Points

- At dropped kerbs and raised crossings, the granite kerb edge should be removed and replaced with a pre-cast flat concrete channel and covered with a white marking ('Stamark') or similar approved.
- Concrete blocks can be used around radii, which must be screeded with concrete for a smooth finish prior to laying 'Stamark'.

3.08

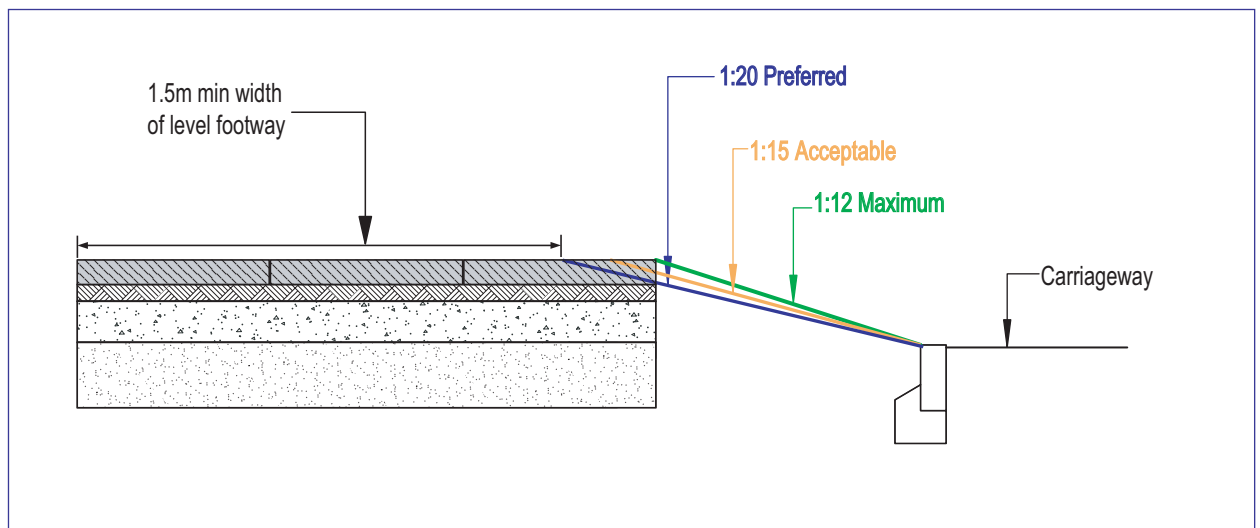
Dropped Kerbs

- Providing dropped kerbs at crossing points (controlled and uncontrolled) helps pedestrians cross the road, including wheelchair users, elderly and infirm as well as people with buggies and suitcases. Dropped kerbs should also be added at the rear of a disabled bay for wheelchair access from the road.
- The DDA1995 requires the Council to endeavour to install or alter dropped kerbs at every crossing point, such that gradients are as shallow as possible. A shallow gradient is better for all users, not just for the disabled and infirm.
 - 1:20 gradient is preferred, if pavement width allows;
 - 1:15 gradient is acceptable;
 - 1:12 gradient should only be used in exceptional circumstances.
- If a pavement is so narrow that even a 1:12 gradient is not possible (while leaving a 1.5m level footway), then an alternative 'route' or solution must be identified. If necessary, the full width of the pavement could be lowered, with the ramps stretching 'along' the footway.
- Dangerously steep dropped kerbs must not be installed, and existing steep ones removed.
- Dropped kerbs should have an absolute minimum width of 1.2m.
- Tactile paving must be added at all crossing points and busy 'access road' crossovers. However, it must not be added to a dropped kerb required for disabled bay access or at most footway crossovers.



Details of dropped kerbing in John St

- Close attention should be paid to pavement materials surrounding dropped kerbs. The same paving material should be used in creating the dropped kerb as found in the footway.
- Concrete-block paving should be avoided and only used at very difficult sites. Colours should match the paving slabs.

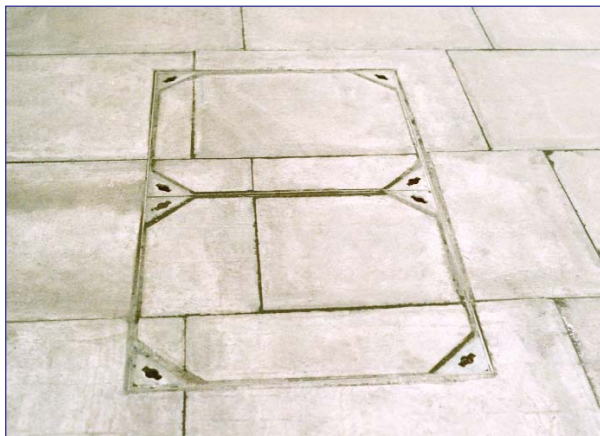


Options for dropped kerb gradient

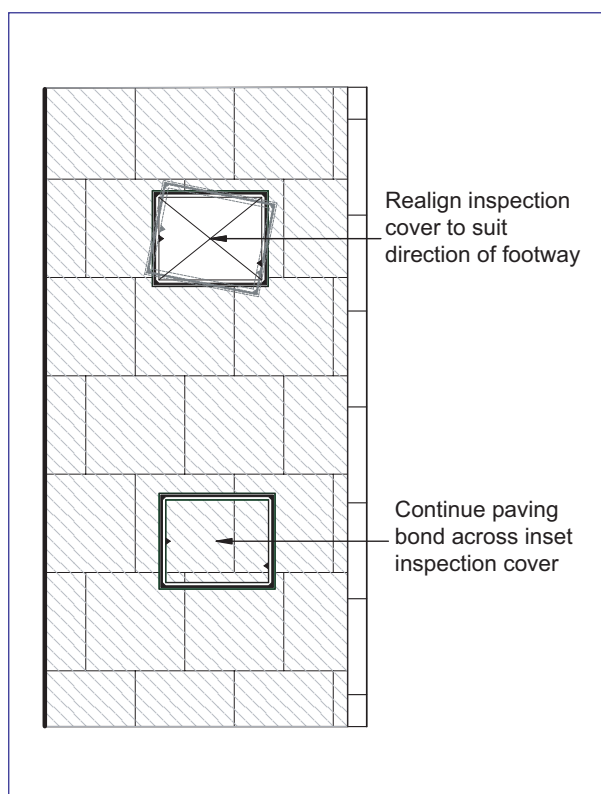
3.09

Inset Inspection Covers

- Inspection covers are installed by utility companies to access underground services. They remain the property of the utility company.
- Utility companies should be encouraged to lay new inspection covers aligned parallel to the kerb. Inspection covers that are less than 5° out of alignment can and should be reset on their existing chamber wall.
- Inspection covers visually disrupt a paved area. Inset covers should be used to create a continual paved surface, where funds permit.
- Utility companies must be informed if covers are changed to inset covers. Contact details are available from Highways Management.
- Inset covers must be used where an inspection cover disrupts the continuity of tactile surfacing, and other paving near crossing points.
- To maintain a continuous appearance, paving bonds should be continued within the inset cover.
- All paving to be dressed into ironwork should have joints and fillets of, ideally, no more than 10mm, or as narrow as any flange surrounding the ironwork permits. Consider chamfering the underside edge of the paving slab to position slab closer to inspection cover.
- Inset inspection covers must be marked to identify the relevant utility company.
- Liability issues surrounding the use of inset covers are currently under review and subject to change.



Inset inspection cover showing careful alignment of paving bonds



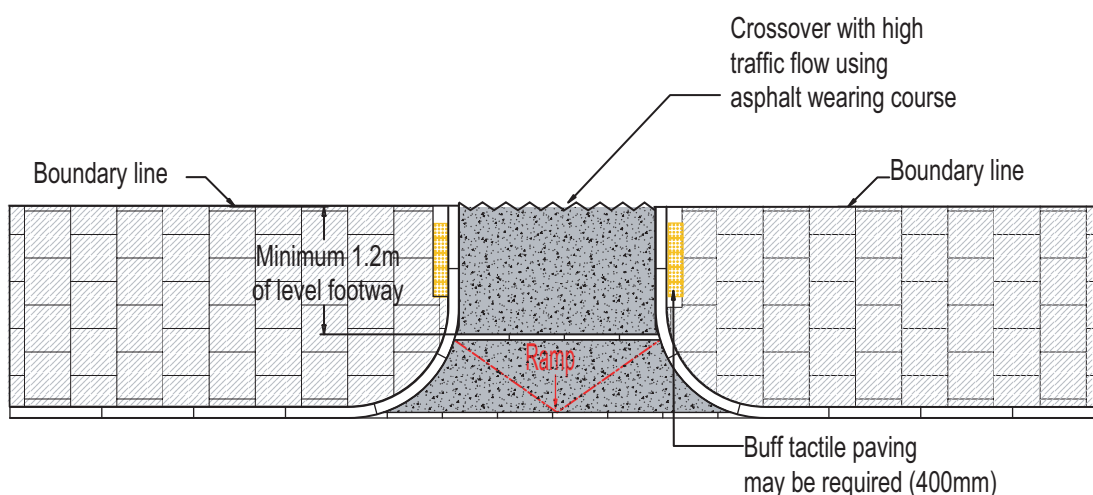
Alignment and fill of inspection covers

Footway Crossovers

- Vehicular footway crossovers are provided to enable vehicular access to developments and residential off-street parking.
- At least 1.2m width of *level* footway must be retained.
- Footway materials at crossovers should be consistent with the surrounding pavement to maintain a seamless appearance. For example, using strengthened paving slabs of the same size, material finish and coursing as the adjacent footway slabs.
- Crossovers with high traffic flows or heavy vehicles may require a different surface material such as an asphalt wearing course, on a base designed to full carriageway depth with radii kerbs. Tactile paving is usually necessary either side of this type of crossover.



Level footway maintained at crossover with continuous paving



Level asphalt crossover for heavy vehicular flow

Notes and Amendments