

DS.206

Basic requirements for Formal Crossing facilities for pedestrians

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1 Introduction

1.1 Notes

- a. This standard explains requirements about the frequency, location and basic design of Formal Crossing facilities for pedestrians. These may be provided at or between junctions and may be either Controlled or Uncontrolled. It does not address the circumstances in which Controlled Crossings should be used in preference to Uncontrolled nor describe design requirements for the many additional statutory features associated with these (such as stop lines, traffic signals and controlled area markings).
- b. See the SSDM webpages at www.southwark.gov.uk/ssdm about the design of streets and spaces.

1.2 Discussion

- a. Providing adequate facilities for crossing carriageways is important to the comfort and convenience of footways users. This is particularly so for more vulnerable people who may struggle mixing with vehicles.
- b. Formal Crossings are typically provided at locations where designers wish to encourage vulnerable pedestrians to cross. They normally include particular physical features. There are broadly two types.
 - i. Uncontrolled Crossings
These are crossings that are not associated with traffic control measures like signals or zebra markings that give pedestrians formal priority over users of the carriageway. They consist merely of an area of flush access to the carriageway (usually provided using a dropped kerb) and suitable tactile surfacing so that visually impaired people can identify the crossing opportunity whilst knowing where the edge of pedestrian safe space is
 - ii. Controlled Crossings:
These are similar to the above but also include signals or other similar controls to stop vehicles using the carriageway for a period so that pedestrians can cross. Examples include Stand-Alone controlled crossings like zebras, puffins

pelicans and toucans and Signalised Junction arrangements that incorporate similar crossings into their design.

- c. Both Controlled and Uncontrolled Formal Crossings are distinct from the many informal opportunities to cross the street that may exist in places where there is good visibility, no obstruction at the edge of kerb (e.g. from parking) and a reasonably narrow crossing distance (though no formal aids like dropped kerbs or tactile paving). Many less vulnerable people will happily cross in such locations by applying road awareness.
- d. Though not all people will require Formal Crossings all the time, most will at some point in their lives. This might be when they are
 - i. very young and gaining road awareness
 - ii. a parent and have a pram and need to find somewhere safe to cross where there is no kerb step to negotiate
 - iii. recovering from an injury and have temporary limited movement (e.g. they are on crutches or in a wheel chair)
 - iv. in old age and are no longer so brisk in their movement.
- e. Formal Crossings remain crucially important to both physically impaired people (like crutch or wheel chair users) who need level places to cross the street and visual impaired people who need clearly defined crossing places.
- f. Given these functions, designers try to place Formal Crossing facilities at points of potential conflict like junctions, so guiding vulnerable people to the safest locations to cross.
- g. In order that they can adequately fulfil their intended functions, it is important that Formal Crossings are as frequent as possible and are placed at locations that anticipate the desire-lines that users will want to take. Where this is not the case then vulnerable users like children and young people (who may lack adequate road awareness) may be tempted to cross informally to avoid inconvenience. Visually and mobility impaired users may be severely inconvenienced. This is not just important at junctions. It is also important

along sections of streets between junctions (Links) – particularly on busier roads.

- h. Notwithstanding the importance of Formal Crossings, there may be occasions when leaving them out could be beneficial to safety. For instance: at a T junction with a major road where a zebra Controlled Crossing is provided across the major road to one side of the side road, it could be beneficial to not provide a further Uncontrolled Crossing to the other. The benefit of doing so would be that this could encourage vulnerable people to use the safer Controlled Crossing. However, this is only likely to be acceptable where good informal crossing opportunities exist at the location. Failing this, less vulnerable pedestrians could be tempted into following their natural desire-line and crossing informally where it is not safe to do so.

2 Use requirements

NOTE: It is not the purpose of this design standard to describe the circumstances when Controlled Crossings should be introduced in preference to Uncontrolled Crossings, nor to prescribe the type of such facility (e.g. zebra, puffin, pelican, toucan) that should be used in different circumstances.

2.1 New streets and spaces

- a. In new streets and spaces, Formal Crossings should be provided as follows.
- i. Along Links
 - Either a Controlled Crossing or an Uncontrolled Crossing should be provided every 60m or less. These features may include such crossings located at junctions as per 'ii' below. The distance between crossings should be measured between the closest edges of their respective blister tactile waiting areas
 - As an exception from the above, if both
 - the length of a Link between two junctions does not exceed 90m
 - the junctions at either end of the Link include crossings over the Link carriageway (being crossings on those arms of the junction

made by the Link and not crossings on other arms)

then – subject to level 1 departure – the requirement to provide a Formal Crossing on that Link between the junctions may be dropped.

- ii. At junctions
 - Streets with a 20mph limit or forming part of a 20mph zone:
Either a Controlled Crossing or an Uncontrolled Crossing should be provided across each arm. However, crossings may be left out from one or more arms (but not all) with level 1 departure. It must be demonstrated that this will promote road safety for vulnerable pedestrians without inconveniencing ambulant pedestrians (see note)
 - Streets with a 30mph speed limit:
Either a Controlled Crossing or an Uncontrolled Crossing should be provided across each arm. Leaving out a crossing from any arm requires level 2 departure.

NOTE: For instance, on quiet roads where a controlled crossing is provided across one arm of a major road at a junction, it may be appropriate to omit an uncontrolled crossing from the other major road arm – providing it is otherwise straight forward for ambulant pedestrians to cross this. This strategy could help encourage vulnerable pedestrians to use the controlled facility.

- b. In new streets and spaces, all Formal Crossings should be located on either a Raised Table or Traffic Carpet as standard DS.111.

2.2 Existing streets and spaces

- a. In existing streets and spaces, Formal Crossings should be provided as follows.
- i. Along Links
Designers should do their utmost to limit the spacing between Formal Crossings to the values stated for new streets and spaces as section 2.1
 - ii. At junctions
Requirements are the same as for new streets and spaces in section 2.1. However, locating crossings on Raised Tables or Traffic Carpets is not a

requirement (though it should nonetheless be preferred wherever possible).

continuation of the edge of priority road Highway (see note 5)

NOTE 1: The above also applies to mid-Link crossings where a footpath intersects with a street.

3 Design requirements

3.1 Basic requirements

- a. All Formal Crossing facilities should include
 - i. blister tactile surfaced waiting areas
 - ii. flush access between the footway (or cycle track) and the carriageway

Requirements for the use of blister tactile surfacing can be found in standard DS.207. Unless the Formal Crossing is located on a Raised Table or other Level Surface area of carriageway then achieving flush access will mean providing a dropped kerb.

NOTE 2: For Uncontrolled Crossings, this limit will be defined by the extent of the blister tactile waiting areas to either side of the crossing. For Controlled Crossings the limit will be the marked formal limits of the crossing (as indicated by dotted line road markings or studs).

NOTE 3: The edge of the junction is defined as the notional projected continuation of the kerb line of the major or minor road excluding transitional corner radii. See standard DS.106 about acceptable corner radii dimensions at junctions.

3.2 Width of waiting areas (measured along the street)

- a. The maximum and minimum width of the waiting area to either side of any Formal Crossing is effectively defined by the constraints set out in standard DS.207 on the use of the blister tactile surfacing that must be provided with this. See that standard for further details. See also section 3.6 for discussion about the contribution of this to effective delineation of the footway edge where Formal Crossings span Raised Tables.

NOTE 4: In the case of side road crossings along a street, the distance should be based upon the speed of the major road.

NOTE 5: Normally this will mean ensuring that the waiting area of the side road crossing extends beyond the building line (or boundary wall/railings) of the properties along the edge of the priority road to either side of the junction. This helps ensure that the crossing is easy to intercept for blind and partially sighted people walking along the priority road.

3.3 Proximity to pedestrian desire-lines at junctions

- a. At junctions (see note), unless a level 1 departure is agreed, Formal Crossings should be located so that
 - i. the closest edge of the defined or notional crossing limit (see note 2) is *within* the following distance of the edge of the junction (see note 3).
 - 2.5m on 20mph streets (see note 4)
 - 5m on 30mph streets (see note 4)
 This applies irrespective of whether the facility is a Controlled Crossing or an Uncontrolled Crossing
 - ii. where they pass over a side road, the closest edge of the defined or notional crossing limit (see note 1) to the priority road is at least 0.5m within the projected

NOTE 6: There is no objection in principle to locating crossings on corner radii provided necessary design requirements from other standards are met. A common sense approach should be adopted. See standard DS.106 for further information about corner radii and carriageway widths at junctions.

3.4 Orientation

- a. Formal Crossings should be orientated to be within 10 degrees (in either direction) of perpendicular to the carriageway edge (see note). Orientating crossings at other angles requires level 1 departure.

NOTE: This is so that pedestrians have sight of approaching vehicles on their side of the road. If a crossing alignment is too acute then they may be facing in the wrong direction.

3.5 Visibility

- a. See standard DS.114.

3.6 Delineation issues associated with siting Formal Crossings on Raised Tables

- a. If Formal Crossings are located on Raised Tables then it is of the utmost importance that all interfaces between the footway and the plateau of the Raised Table (other than the blister tactile surfaced waiting areas associated with crossing points) are suitably delineated. This is order that blind and partially sighted people (and well as other vulnerable people) can recognise the limits between the footway and carriageway. Failing this the risk exists that they may wander mistakenly onto the Raised Table carriageway without being aware that they have left the footway. Avoiding or minimising this risk requires very careful design. This will be assisted by maximising the width of blister tactile surfaced waiting areas against the length of the Raised Table plateau. Where Raised Tables that span entire junction spaces are proposed (Intersection Tables) then particular care is required in respect to junction corners between crossing points.

3.7 Other design issues

- a. See standard DS.118 about providing Build Outs in association with Formal Crossings.

NOTE: The above standard generally requires Build Outs to be provided through and to the corners of junctions to improve the visibility of pedestrian crossing points and deter vehicles from parking in front of these. Introduction of build outs may sometimes also be necessary for mid-Link crossings to meet visibility requirements.

- b. See standard DS.207 for requirements about the design of tactile surfacing at Formal Crossings.
- c. See standard DS.002 about providing parking restrictions through and around Formal Crossings.