

4.3.2 Pedestrian Crossings

Crossings are one of the most important aspects of street design as it is at this location that most interactions between pedestrians, cyclists and motor vehicles occur. Well designed and frequently provided crossings are critical to the balancing of movement priorities. The design of crossings, and the frequency at which they are provided, will have a significant impact on pedestrian/cyclist mobility and comfort and the flow of vehicular traffic.

Crossing Selection

Crossings are referred to as controlled, such as zebra or signalised crossings or uncontrolled.²¹ Uncontrolled crossings include less formal types such as courtesy crossings and/or those identified by a drop kerb. At junction locations the type of crossing used will generally be determined in conjunction with the form of junction control that is used to manage traffic (see Section 4.4.3 Junction Design). More generally, designers should be guided by pedestrian demands, safety and vehicle flows. In this regard:

- In general, signalised crossings should be provided on busy *Arterial* and *Link* streets and/or where cyclists are likely to cross.

- Zebra crossings provide pedestrian priority and may be used where formal crossing facilities are desirable, however a fully signalised crossing is not needed. Examples may include on *Arterial* and *Link* streets within lower speed environments, such as *Centres* (see Figure 4.37) and/or where both levels of pedestrian and vehicular activity are more moderate.²²
- Courtesy crossings, which are generally defined by a change in material and/or vertical deflection (see Section 4.4.7 Horizontal and Vertical Deflections), allow pedestrians to informally assert a degree of priority over drivers. They may be used in lower speed environments where formal crossing facilities are not required to assist in making such environments self regulating, see Figure 4.38.
- *Local* streets, due to their lightly-trafficked/low-speed nature, generally do not require the provision of controlled crossings. The provision of drop kerbs will generally suffice. However zebra crossings or courtesy crossing should be considered where pedestrian demands are higher such as around *Focal Points*.

²¹ Refer to Section 12.3-12.4 of the *Traffic Management Guidelines* (2003).

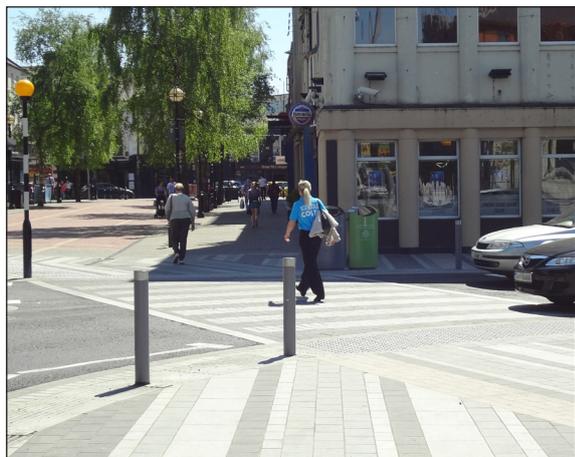


Figure 4.37: Example of a Zebra crossing within the town centre of Dundalk, Co. Louth. Zebra crossings promote greater levels of pedestrian priority as drivers must give way to pedestrians once they have commenced the crossing.

²² Refer to Section 12.3 of the *Traffic Management Guidelines* (2003).



Figure 4.38: Example of an informal 'courtesy' crossing in Westport, Co. Mayo. Drivers stop and wait for pedestrians to cross as a courtesy.

Crossing Locations

The location and frequency of crossings should align with key desire lines and be provided at regular intervals. Within larger areas this may need to be addressed via a spatial analysis and supporting plan (see also Section 5.2.1 Plans and Policies). Methods that rely on absolute figures, such as the system of warrants, should not be used. More generally, designers should:

- Provide pedestrian crossing facilities at junctions and on each arm of the junction.
- Minimise corner radii so that crossing points are located closer to corners on pedestrian desire lines (see Section 4.3.3 Corner Radii).
- Provide regular mid block crossings in areas of higher pedestrian activity, such as *Centres*, where the distance between junctions is greater than 120m.
- Locate mid-block crossings at strategic locations where pedestrians are likely to cross, such as adjacent to bus stops and *Focal Points*, or to coincide with traffic-calming measures on longer straights (see Section 4.4.7 Horizontal and Vertical Deflections).

Crossing Design and Waiting Times

Smarter Travel (2009) requires that pedestrian movement at signalised crossings be given priority by timing traffic signals to favour pedestrians instead of vehicles by reducing pedestrian waiting times and crossing distances at junctions.²³ To achieve this objective, designers should:

- Optimise pedestrian movement, with pedestrian cycle times of no more than 90 seconds at traffic signals.
- Allow pedestrians to cross the street in a single, direct movement (see Figure 4.39). Staggered/staged crossings should not be used where pedestrians are active, such as in *Centres*, *Neighbourhoods* and *Suburbs* (except where stated below).
- Where staggered/staged crossings currently exist they should be removed as part of any major upgrade works. This should include realignment works to slow vehicle movements, such as reduced corner radii and/or carriageway narrowing (see Figure 4.40 and Section 4.3.3 Corner Radii)

²³ Refer to Action 16 of *Smarter Travel* (2009).

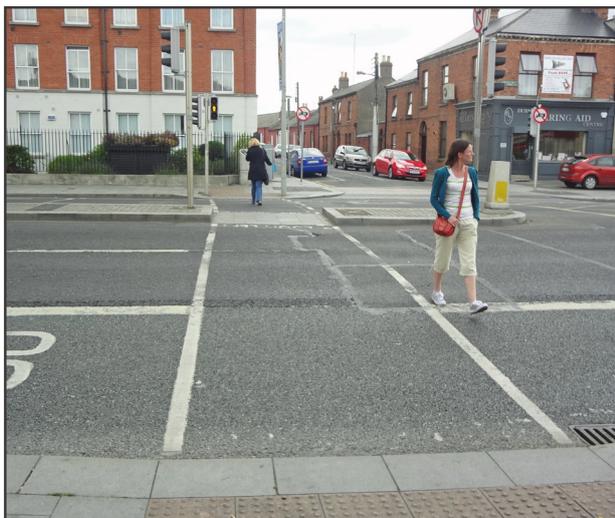


Figure 4.39: Example of a wide streets with a crossing that allows pedestrians to cross in a direct manner and in a single movement. The median acts as a refuge island for those users who cannot cross the street in a reasonable time.