

## Junctions and Crossings in Greater London

### London Living Streets' Good Design Principles for Pedestrians

Almost three-quarters of deaths and serious injuries to pedestrians, cyclists and motorcyclists in London occur at junctions (TfL, 2018). Unsafe or inconvenient crossings result in significant non-compliance by vulnerable road users – sometimes over 50% - leading to more collisions and injuries.

In 2017, Mayor of London's *Safer Junctions* programme identified 73 junctions on TfL-controlled roads (TLRN) for major improvement. This document sets out design principles for use by campaigners responding to consultations on these and other junction improvements. The principles and objectives listed here focus on reducing road danger, increasing active travel and making locations healthier and more welcoming, in line with the Mayor's Healthy Streets approach.

The overall objective for local authorities should be, in line with their statutory and common law duties, to create an environment that provides for the free and safe movement of sensible 10 year-old children and older, disabled people covered by the Equality Act 2010.

It should be noted that the Ministry of Housing, Communities and Local Government's Planning Practice Guidance provides a user hierarchy with pedestrians and cyclists at the top. The Traffic Management Act sets a duty to secure the expeditious movement of traffic, which includes pedestrians. Expeditious movement should, therefore, be secured across a street as well as along it.

In its Liveable Neighbourhood campaign, Living Streets aims for a minimum Healthy Street 'spider diagram' score of 60% in two key categories: 'People choose to walk, cycle and use public transport' and 'Pedestrians from all walks of life'. To achieve this requires significant improvements to cycling and pedestrian provision.

Emphasis should be placed on improving the experience of walking by making junctions and crossings safer, quicker and more pleasant for pedestrians.

This is a working document, so please share comments and additions with London Living Streets at [londonlivingstreets.com/contact/](https://londonlivingstreets.com/contact/)

Principles and objectives to consider:

1. Crossings should be **direct, in a single stage and provide sufficient time to cross with minimal waiting time**. Staggered crossings or central refuges at signalised crossing points should only be used in exceptional and explicitly justified circumstances and where associated wide junctions are unavoidable<sup>1</sup>. Carriageways wider than 15m at signalised crossing points should be avoided (LTN 2/95).
2. **Junction geometry** should encourage motorists to drive with caution and at significantly slower speeds while making turning manoeuvres.
3. Signalised junctions should have a **pedestrian phase on all arms of the junction**.
4. **Wait times at signalised crossings should be kept to an absolute minimum**, with a target of no more than 30 seconds, since experience shows that this is the maximum time most pedestrians are willing to wait. There should be an absolute maximum cycle time of 60 seconds. We are concerned that 90-120 seconds has become the default waiting time in London, significantly

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<sup>1</sup> The Department of the Environment Transport and the Regions (DETR, 2000) recognised that 'being caught in the middle of the road amid the noise and fumes is very unpleasant'.

exceeding even the maximum waiting time set out in DfT's Local Transport Note (LTN 1/12) on Shared use routes for pedestrians and cyclists (DfT, 2012)

5. The **minimum crossing time** must be based on a walking speed of 0.6m/sec, based on data taken from University College London research on walking speeds of older and disabled pedestrians (Asher et al. 2012). Calculations should also factor in impediments such as inclination or unevenness, noting that manual wheelchairs take longer on steep cambers<sup>2</sup>.
6. **Pedestrian crossings** on junction arms, across side roads and on stretches of road that are subject to existing or proposed 20mph speed limits should be **at footway level** (i.e. raised on the carriageway or, if applicable, cycle way). A short gentle ramp could indicate to visually-impaired people the direction of crossing.
7. **Crossing widths** should maximise pedestrian comfort and safety. Crossing widths up to 10 metres are permitted under the Traffic Signs Regulation and General Directions 2016. Wider crossings are permitted by application to the Department for Transport. Experimental crossings up to 30 metres in width are in use in the City of London.
8. Crossing points should be located on **pedestrian desire lines**, with minimal diversion.
9. **Diagonal crossings** of signalised intersections should be provided at busy junctions wherever practical to accommodate pedestrian desire lines. These must be safe for visually impaired and slow walkers and should be facilitated by 'All Green Man' phases and road markings that are clear to all users.
10. Disabled pedestrians should benefit from the **fullest application of the Equality Act 2010** and the Public Sector Equality Duty to promote equality of opportunity for disabled people. Larger schemes should have an Equality Impact Assessment available as part of public consultation.
11. **Visually-impaired users** should be provided with appropriate **tactile alerts** at crossings. Consider **audible countdown timers** at signalised crossings to indicate how much time is left for waiting. Reflective or illuminated studs should mark the boundaries of crossings to enable visually-impaired users to safely cross without straying.
12. Consider measures to reduce the risk of conflict between people walking and cycling across **toucan crossings**. Such crossings should be used for low pedestrian and cycling volumes; only link areas where cycling is already (or is to be) permitted (such as cycle lanes); and be made wide enough to comfortably accommodate both people walking and cycling. Preferably provide parallel zebra and cycle crossings.
13. **Guardrails** and similar barriers should be removed as far as possible and justified in all cases.
14. **Roundabouts should be replaced** by either signalised or Give Way crossroad junctions.
15. **Gyratories** should be removed and replaced with two-way bus and cycle traffic at least, and two-way general traffic where this reduces speeds and volumes.
16. **Informal crossings** (that do not meet regulatory requirements and therefore do not confer formal priority on the crosser) should be provided along streets with high pedestrian demand, at a maximum spacing of 100m as recommended in Inclusive Mobility (DfT, 2005). Informal crossings should be made easier and safer for people to use by installing build outs (with cycle bypasses to ensure smooth cycle flow and prevent cyclists from deviating into path of vehicles) and raised tables. Wider footways are preferable to median strips or traffic islands/pedestrian refuges, since they reduce carriageway and hence crossing distances.
17. **Zebra crossings** should be the minimum provision on mid-link crossings of streets with low traffic speeds and volumes. Signalised crossings should be used on streets with higher speeds and

<sup>2</sup> The current guideline of 1.2m/sec was originally derived from uncorroborated 1950s USA data. (Exnicios, 1952).

volumes of motor traffic. Note that visually-impaired people and many older and disabled people prefer signalised crossings.

18. **Segregated cycle lane and bus stop bypass crossings** should have suitably located zebra crossing markings as a minimum to allow pedestrians to cross conveniently.
19. At **side road junctions**, pedestrian priority should be emphasised by:
  - a. maintaining the level of crossings at footway height;
  - b. continuing the footway surfacing and width across the junction mouth, to give clear visual priority to pedestrians;
  - c. creating ‘tighter’ junctions, protected by street furniture;
  - d. moving ‘Give Way’ road markings and signs behind the inner line of the footway.

**The following information should be provided to stakeholders and for public consultation.**

1. Comprehensive data including counts of pedestrians, cyclists and other traffic and recorded casualties. Counts and casualties should be monitored and reported before and after implementation.
2. Surveys, studies and any other information on which proposed designs have been based.
3. Detailed footway and crossing parameters (e.g. levels and widths) and original kerb and footway lines. Dimensioned construction drawings should also be provided as soon as drafted and followed by any revisions.
4. Existing and proposed waiting and crossing times at signalled crossings. Where single-stage crossings are not planned, maximum overall designed crossing times should be provided.
5. New or replacement pedestrian crossings should be distinguished from existing ones on drawings.
6. Level change details between different footway components and any ramp angles.

**Notes and abbreviations**

DETR: Department of the Environment Transport and the Regions

DfT: Department for Transport

LTN: Local Transport Note (DfT)

Pedestrians: those either on foot or using any kind of disability mobility device

TfL: Transport for London

UCL: University College London

**References**

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Co-authors: T. Platt, B.Puech & S. Knightswood with input by London Living Streets