

Junction spacing and treatment

Junctions are key points along the highway network where most conflicts arise and where most collisions take place involving all road users, such as motorists, cyclists and pedestrians. Detailed design for cyclists at junctions can be found in [LTN 1/20](#).

Good junction design not only achieves sufficient capacity and convenience, but also the safety of all road users.

Crossroads

Crossroads work well where traffic speeds are low as they allow better permeability and achieve better desire lines. However, cross-roads will not be acceptable where there are higher traffic volumes and/or speeds.

Fig 1: Indicative drawing of crossroads, with speed reduction measure



Junction spacing

Where new junctions or accesses are proposed onto existing roads, and crossroads are not appropriate or possible, the spacing of junctions should be close enough together to encourage permeability but far enough apart to avoid conflict between turning vehicles.

In such circumstances, junctions within the minimum visibility distance of each other should also be avoided to prevent collisions. For further information on minimum visibility distances see *Visibility Guidance*.

Individual driveways should be no closer than 10m to the nearest junction. There is no minimum distance between adjacent driveways.

In the case of residential streets, the minimum distance between street junctions on opposite sides of a road is z , where z is determined using *Table 1* below. The normal stagger between junctions on the same side of the street is $2z$.

Fig 2: Minimum Junction Spacing

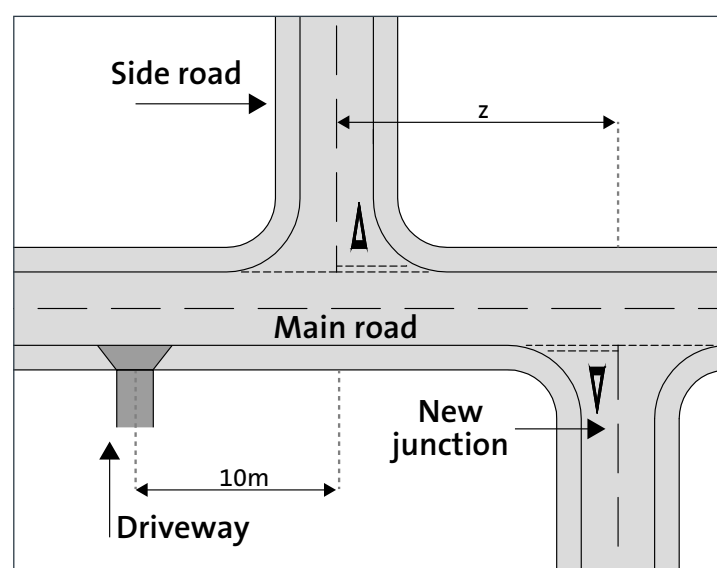


Table 1: **Minimum distance (z) required between junctions**

| | Side Road: Low traffic residential street – design speed maximum 20mph | Side Road: Mixed use street / higher traffic volumes / speeds more than 20mph |
|--|---|--|
| Main Road: Low traffic residential street – design speed maximum 20mph | 20m | 20m |
| Main Road: Mixed use street / higher traffic volumes / speeds more than 20mph | 20m | 30m |

Pedestrian provision at junctions

Where pedestrians are required to cross junctions they should not be displaced from the desire line and crossings should be as direct as possible.

Dropped kerbs and tactile paving will be required on the desire line of the junction. Build-outs at junctions can create additional visibility for pedestrians, reduce the length of crossing, and reduce the speed of traffic turning into the junction.

On routes where pedestrian flows are expected to be high, and turning traffic levels low, new junctions could give priority to pedestrians through the introduction of a continuous pedestrian crossover at the junction. The provision of such

facilities would be dependent on the site-specific circumstances.

Junction treatment

Where the more traditional kerbed radius junction is used, the size of the radius kerbs used should be minimised to allow for crossing the shortest distance. Generally junction radii for residential streets, where the roads meet at 90 degrees, will be a maximum of 6m.

For streets that are proposed to include bus routes or heavy traffic flows, the appropriate radii will need to be confirmed by swept path analysis, generally for 15m coach.