

Sightline Visibility for Junctions and Direct Accesses



Comhairle Contae an Chabháin
Cavan County Council

Sightline Visibility for Junctions / Direct Accesses

Permanent unobstructed visibility splays shall be provided to enable emerging drivers from a direct access to have adequate visibility in each direction to see oncoming public road traffic in sufficient time to make their manoeuvre safely and without influencing the safety or free flow of traffic on the public road.

Direct accesses should also not encroach on the visibility requirements of adjoining direct accesses or junctions in regular use.

New access points onto the public road network shall generally be subject to sight line visibility standards as set out in the following documents (or amendments thereof):

- Rural Roads > 60kph: TII Publications standard DN-GEO-03060.
- Urban Roads: Design Manual for Roads and Streets, 2019 (DMURS).

(For reference see figures for minimum requirements taken from the above named standards. Note: where standards are amended in the lifetime of the Development Plan the updated requirements/standards shall apply.)

Factors affecting sight distance requirements

- Required sight distances may differ depending on the specific road characteristics and environment. Where values indicated in the standards refer to the designed environment and are not applicable, sightline requirements shall generally be calculated on the basis of the speed limit of the road, rather than design speed.
- In circumstances where the 85th Percentile Speed of vehicles on the stretch of road appears to be in excess of that speed limit, the sightline shall cover the equivalent distance for the 85th Percentile Speed. Note: the Local Authority may require the applicant to provide speed measurements by an automated device in places where actual speeds are considered high.
- Where the 85th percentile speed on lightly trafficked local roads is significantly below the speed limit, reduced sight lines proportionate to the 85th percentile speed may be considered. In cases where a reduction in the 'y' value is sought, the Planning Authority may require the applicant to provide demonstrable evidence to support the case for a reduced sight distance e.g. speed measurements from Automated Traffic Counters, a Road Safety Audit or Certification by the applicant's engineer.
- Where sightlines extend beyond the applicant's landholding, they shall be required to provide 3rd party consent letters and accompanying Land Registry Maps for the full extents of the clear sight distance triangle, where applicable.

Other Junction Sightline Requirements

- Clear sight lines are required at the junction for all road users. Drivers turning right into a direct access must have clear unobstructed sight lines towards oncoming traffic on the public road.
- Road users approaching a direct access must have appropriate unobstructed forward stopping sight distances towards vehicles stopped or slowing down to make a left or right turn into that access.

Definition of 'X' and 'Y' distances and 'Clear Sight Triangle'

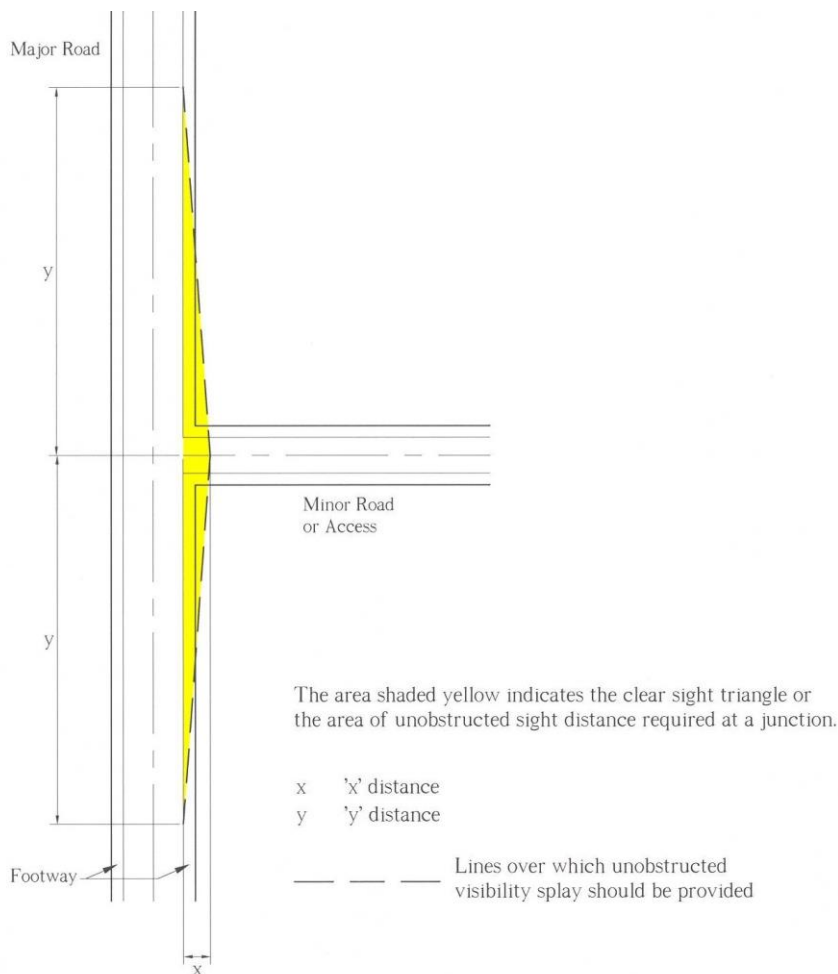
The 'X' distance is referred to as the setback distance along the minor arm (or direct access) from which visibility is measured. It is normally measured from the continuation of the line of the nearside edge of the public road (edge of carriageway markings and not the hard strip). Where a hard shoulder on the public road continues across the line of the direct access, the 'X' distance shall be measured from the back of the hard shoulder.

The 'Y' distance is the distance a driver exiting from the minor road (or direct access) can see to the left and right along the major arm (public road). It is normally measured from the nearside edge of the main road running lane to its intersection with the centreline of the minor road (or direct access).

The 'Clear Sight Triangle' is the term used for the area of unobstructed sight distance required at a junction. This is measured from a driver eye height of 1.05m to an object height of 1.15m. (All of the triangle must provide view)

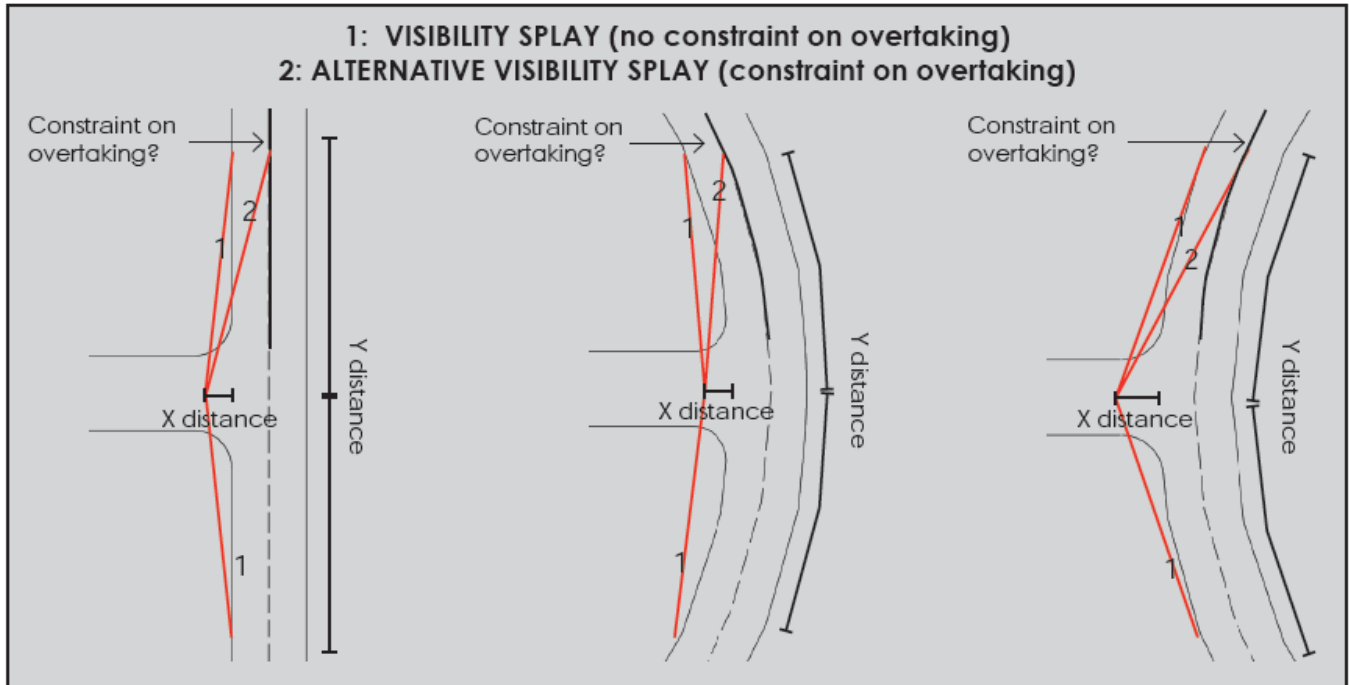
The following diagram details the method by which the clear sight triangle shall be calculated and presented for all planning applications, with the exception of urban roads where there is a constraint on overtaking.

Figure 1. Clear Sight Triangle



For non-national **urban** roads, where overtaking is prohibited by a solid white line, a relaxation may be allowed to measure the visibility splay to the left to the near side for oncoming traffic, rather than the nearside edge of the road.

Figure 2. Alternative Visibility Splay for urban non-national roads where overtaking is prohibited (source: DMURS 2019)



Sightlines ('Y' distances) at direct accesses with the non-national public road in rural areas outside a 60kph speed limit zone shall generally be in accordance with the following table.

Table 1. 'y' distances from the minor road (access) (Source: TII Publications DN-GEO-03060, June 2017)

Design Speed of major road(km/h)	'y' Distance(m)
42	50
50	70
60	90
70	120
85	160
100	215
120	295

Sightlines ('Y' distances) at direct accesses in urban areas within a 60kph speed limit shall generally be based on the stopping sight distances set out in the following table.

Table 2. 'y' distances (corresponding to SSD) from the minor road (access) (Source: DMURS 2019)

SSD STANDARDS			
Design Speed (km/h)	SSD Standard (metres)	Design Speed (km/h)	SSD Standard (metres)
10	7	10	8
20	14	20	15
30	23	30	24
40	33	40	36
50	45	50	49
60	59	60	65
Forward Visibility		Forward Visibility on Bus Routes	

Table 3. 'x' distances on the minor road (access) for visibility measurements (Source: TII Publications DN-GEO-03060, June 2017)

Major road use	Minor road use	Standard	'x' Distance(m)
All roads	All junctions and accesses, Stop control	Desirable Minimum	3.0
All roads	Cycleway	Desirable Minimum	4.0
All roads	Cycleway	Absolute Minimum	2.0
National roads	Simple Junctions, Stop control	Relaxation	2.4*
Regional & Local Roads	All junctions and accesses, Yield control (where there are no relaxations associated with the junction layout)	Desirable Minimum	Max. 9.0
Regional & Local Roads	Accesses, Lightly trafficked	Relaxation	2.0
All roads	All junctions and accesses	Desirable Maximum	9.0

For 'x' distance requirements at direct accesses in Urban areas refer to DMURS.