Visibility

Vehicle and Pedestrian Sight-splays

These are required where cycleways , house drives, shared private drives, access ways to parking or garage courts and individual parking spaces and garages are accessed across the footway of a street.

Sight-splays should give 1.5m x 1.5m clear visibility above a height of 600mm and may be achieved by splaying back the building or wall abutting the entrance – either by setting the building or wall back 1.5m from the rear edge of the footway, or by widening the entrance by 1.5m on either side. Alternatively, various combinations of these measures may be used to achieve the same result.

Forward Visibility

At all points on a development's street system (except parking squares and mews courts), there must be sufficient forward visibility to allow the driver of a vehicle to stop comfortably and safely. The forward visibility distance is related to vehicle speed, which in turn depends on alignment. The following standards should be applied:

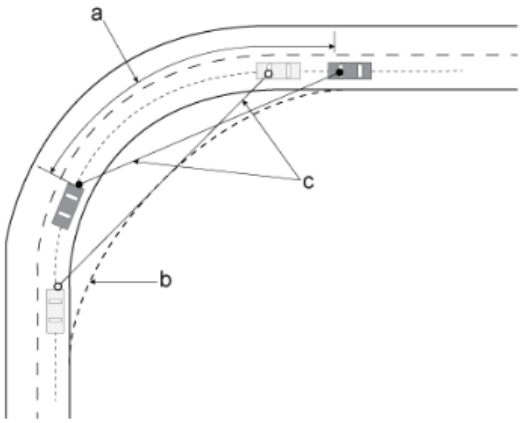
- For type A roads with speed limits over 30mph, Design Manual for Roads and Bridges (DMRB) standards will apply.
- For streets with speed limits of 30mph or under in particular type B, C and D roads, Manual for Streets standards will apply.
- For type E and F roads, Manual for Streets standards will apply unless a bend is introduced with a deflection angle of 70 degrees or more. In such cases, the forward visibility may reduce to the centreline radius of the bend down to a minimum length of 11m.

The table below is reproduced from Manual for Streets (2007). It shows stopping site distances at speeds up to 37mph and is included here as a guide to visibility recommendations in new layouts. Appropriate speed-restraint measures must accompany any layout promoting the use of these values. Streets with speeds above 37mph should be designed to DMRB criteria.

Derived stopping sight distances (SSD) for streets:

Kilometres per hour	16	20	24	25	30	32	40	45	48	50	60
Miles per hour	10	12	15	16	19	20	25	28	30	31	37
SDD (metres)	11	14	17	18	23	25	33	39	43	45	59

The minimum forward visibility required is equal to minimum SSD, based on the design speed at the location being considered. It is checked by measuring between points on a curve along the centreline of the inner traffic lane.



a. Forward visibility measured along centre of inner lane. b. Visibility splay envelope. c. Visibility splays. Diagram reproduced from Manual for Streets 2 by CIHT.

Gradients

Where a change in gradient of more than 1% occurs, a vertical curve is required at both summits and valleys for comfort of driving and, at summits, to ensure forward visibility. In the latter case, a forward visibility distance of 25m to a point 600mm above the road surface is required within 20mph zones. This forward visibility distance rises to 43m on 30mph roads. For roads over 30mph, Design Manual for Roads and Bridges (DMRB) visibility standards will apply.

Forward visibility 25m in 20mph (30kph) zones; 43m on 30mph (50kph) roads
a. Vertical curve at summit