

Gateshead Council Transport Technical Appendices

Visibility

1. Introduction

1.1 Ensuring adequate visibility for road users is important in minimising the risk of accidents. This note outlines the principles to be adopted in the design of new roads and junctions in order to provide the necessary visibility for road users.

1.2 Visibility requirements are related to the actual or anticipated speed of traffic. For existing roads this will usually be the speed limit of the road. For new roads this will be the design speed of the road.

1.3 In some cases there may be concerns about traffic speeds in an area, especially where these are thought to be above the speed limit. In such cases speed surveys may be required in order to inform visibility requirements. In any such instances (and where appropriate measures to reduce speeds to the speed limit are not proposed) visibility should reflect the recorded 85th percentile speed of the traffic.

2. Speeds in excess of 40mph

2.1 Where proposals involve construction of, connection to, or works on roads with a speed limit in excess of 40mph visibility should be provided in accordance with the relevant sections of the Design Manual for Roads and Bridges (DMRB).

3. Speeds below 40mph

3.1 For development proposing construction of, connection to or works on roads with a speed limit of 40mph or less the visibility should be provided in accordance with the figures for Safe Stopping Distance (SSD) in table 1.

Design speed (mph)	SSD (car/light vehicle) (metres)	SSD (bus/HGV) (metres)
40	n/a	101
30	43	47
25	33	36
20	25	27
15	18	19
10	11	12

3.2 The SSD should be provided throughout the road network affected by development. This includes the relevant 'Y' distance at junctions (Figure 1) and on bends (Figure 2).

3.3 An X distance of 2.4m should also be provided at junctions (Figure 1). Longer X distances enable drivers to look for gaps as they approach the junction, thereby increasing capacity for the minor arm. However this also increases the possibility that drivers on the minor approach will fail to take account of other road users,

particularly pedestrians and cyclists. Longer X distances may also result in more shunt collisions on the minor arm.

3.4 Vertical visibility should be measured using an assumed eye height of 1.05m (car drivers) and 2.0m (lorry drivers). Drivers must be able to see obstructions from 2.0m high down to 0.6m above the road surface.

3.5 Assessment of visibility should take into account the possibility of obstructions such as bus shelters, fences, walls, trees, lighting columns, planting and parked cars. Shrubs may be planted in visibility splays at junctions and on bends, provided when mature they do not significantly obscure horizontal sight lines. Generally the aim should be to ensure good visibility without having to rely on frequent maintenance.

3.6 Parking areas within visibility splays are not recommended, and should be located outside those areas.

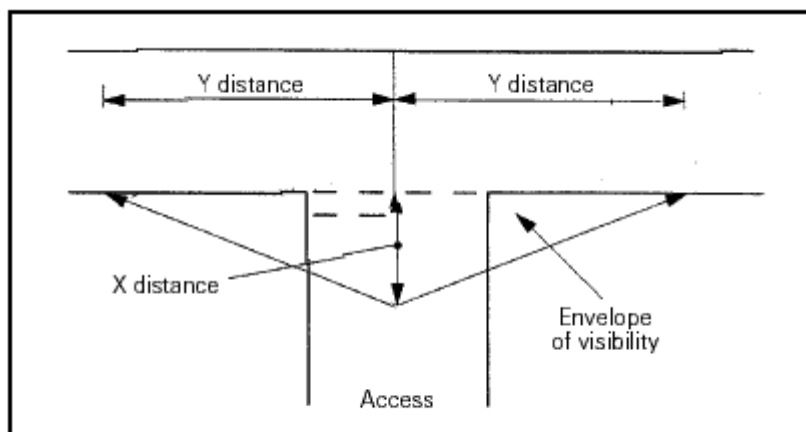


Figure 1: Visibility at junctions and accesses – x and y distances

Figure 2 – Visibility on bends

