Development Control
Advice Note 15
(2nd Edition)

Vehicular Access Standards

An Agency within the Department of the Environment

August 1999

CONTENTS

Department for Infrastructure
An Roinn Bonneagair
www.infrastructure-ni.gov.uk

EXPLANATORY NOTE

DCAN 15: VEHICULAR ACCESS STANDARDS (1999)

The purpose of this note is to clarify that the guidance contained in DCAN 15 - Vehicular Access Standards will continue to have effect (where relevant) unless and until such guidance is updated, revised or replaced by new Departmental guidance on this planning issue.

Further information on the contemporary status of all former DoE planning guidance (prepared under the unitary planning system) is available from the following web link:

https://www.infrastructure-ni.gov.uk/articles/guidance-update

October 2019

Development Control Advice Note 15
Vehicular Access Standards

This is a joint Planning and Roads Service Development Control Advice Note.

The purpose of this Advice Note is to give general guidance to intending developers, their professional advisors and agents on the standards for vehicular access. Any legal views expressed in this Note have no statutory force and should not be relied upon as an authoritative interpretation of the law.

A list of other current Advice Notes in this series can be obtained from Divisional Planning offices or from Planning Service Headquarters, Department of the Environment for Northern Ireland.

August 1999

Price - Free

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Introduction

1.1 The Department's Planning Policy Statement 3 "Development Control: Roads Considerations" (PPS3) refers to the Department's standards for vehicular accesses. This Development Control Advice Note (DCAN) sets out and explains those standards.

1.2 A well-designed access is important for the safety and convenience of all road users - those proceeding on the public road as well as those using the access. So, when the Department considers proposals for a new access or the intensification of use of an existing access, it will normally have a number of requirements to promote safety and avoid excessive delay, as indicated in the Department's PPS3: "Development Control: Roads Considerations[1]". Intensification is considered to occur when a proposed development would increase the traffic flow using an access by 5% or more.

1.3 The Department's normal requirements for vehicular accesses which apply in Northern Ireland are set out in this Advice Note which supersedes the 1983 publication "Access Standards" and DCAN 15 "Vehicular Access Standards" issued in March 1999. However, access is one factor among many - albeit a very important factor - which the Department has to consider when dealing with planning applications. Even if the standards set out in this Note are met, planning permission may still be refused on Main Traffic Routes as defined in PPS3: "Development Control: Roads Considerations" or for non-access reasons such as visual amenity, land use or protection of the natural and built environment. On the other hand, in exceptional circumstances, a relaxation to the normal access standards may be accepted as indicated in tables A & B in order to secure other important planning objectives. Proposals likely to prejudice road safety will not be approved.

1.4 It is not the Department's policy to grant planning permission for development involving the creation of an access and / or visibility splays, unless the applicant is able to demonstrate control or the reasonable prospect of acquiring control of any land likely to be the subject of a condition relating to the provision of any such access and / or visibility splays. Further advice is given in PPS3[1], para. 13.

1.5 The requirements set out in this DCAN apply to new private accesses and new development access roads joining the public road. Throughout this DCAN the access is referred to as the minor road and the public road which it joins is called the priority road. For the avoidance of doubt, it should be noted that all internal junctions within new potentially adoptable housing developments are covered by separate Departmental guidance on the design and layout of residential developments[2].

1+2 see page 14

Visibility From the Minor Road

2.1 Good visibility is essential to enable drivers emerging from the minor road to see and be seen by drivers proceeding along the priority road.

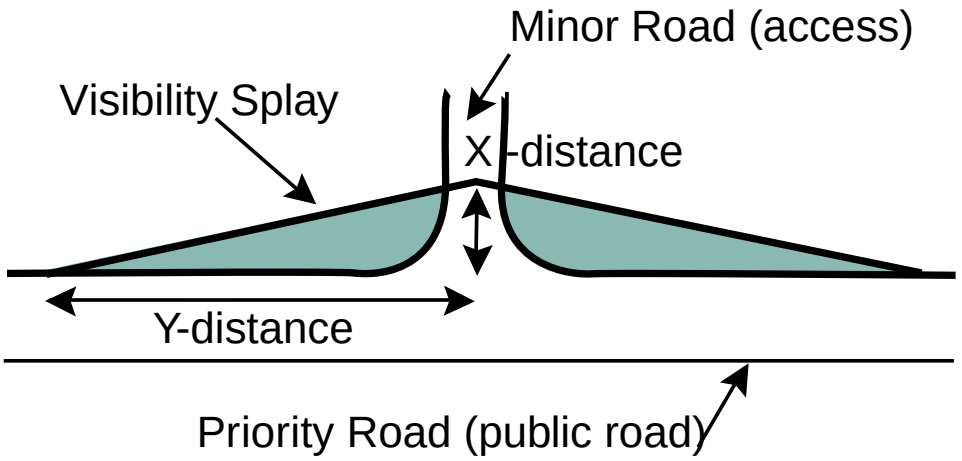


Fig 1: Visibility Splays

Visibility is required over the shaded area shown in Figure 1. The x-distance is measured along the centre-line of the minor road from the edge of the running carriageway of the priority road. The y-distance is measured along the near edge of the running carriageway of the priority road from the centre-line of the minor road. Where the access is on the outside of a bend, an additional area will be necessary to provide splays which are tangential to the road edge as shown in Figure 2.

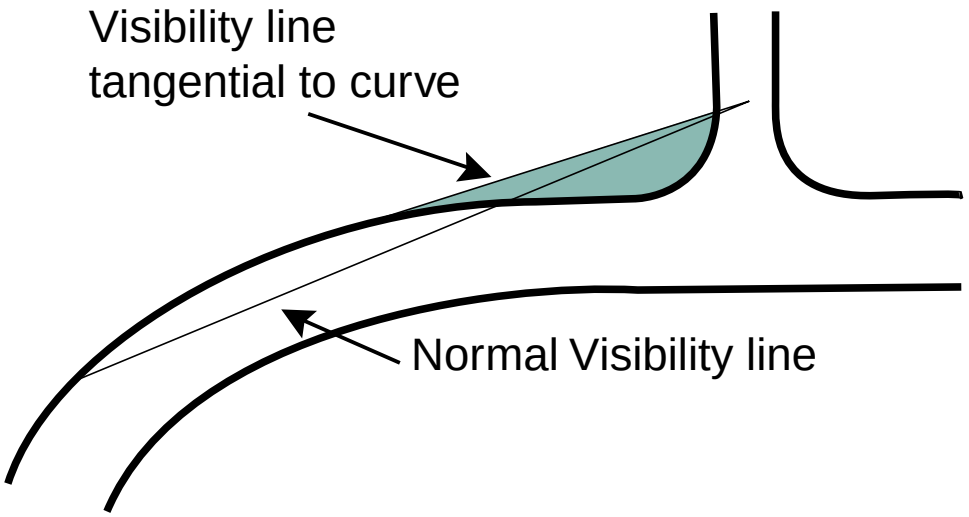


Fig 2: Visibility Splays for Access on Outside of Bend

2.2 The normal requirements for the minor road distance or x-distance are set out in Table A, and the notes thereto. When the minor road is relatively busy and traffic on the priority road is fast, a greater x-distance is required to allow drivers on the priority road to see in good time vehicles approaching the give way or stop line of the minor road. In addition, when the minor road is busy, a greater x-distance is necessary to allow more than one emerging vehicle to accept the same gap in priority road traffic, thus reducing delay and frustration for emerging drivers. If there is a dispute about the predicted minor road traffic volume, it will be determined using a recognised database such as TRICS[3], or failing that by a direct survey of a similar existing development over an acceptable period.

2.3 The normal requirements for the priority road distance or y-distance are set out in Table B and the notes thereto. They depend on the speed of traffic on the priority road, the volume of traffic on both the priority road and the access, and the judgement which the Department makes in any given case about road safety matters.

2.4 In the case of a new access, x- and y- distances must be adjusted as necessary to allow for any planned road improvements.

Visibility on the Priority Road

3.1 Forward visibility as shown in Figure 3 is also required to provide intervisibility between vehicles using the minor road and those proceeding along the priority road. In particular, a vehicle waiting on the priority road to turn right into the access must be able to see oncoming traffic and be seen by following traffic. Forward visibility depends on the same factors as y-distance and the normal requirements are set out in Table B and the notes thereto.

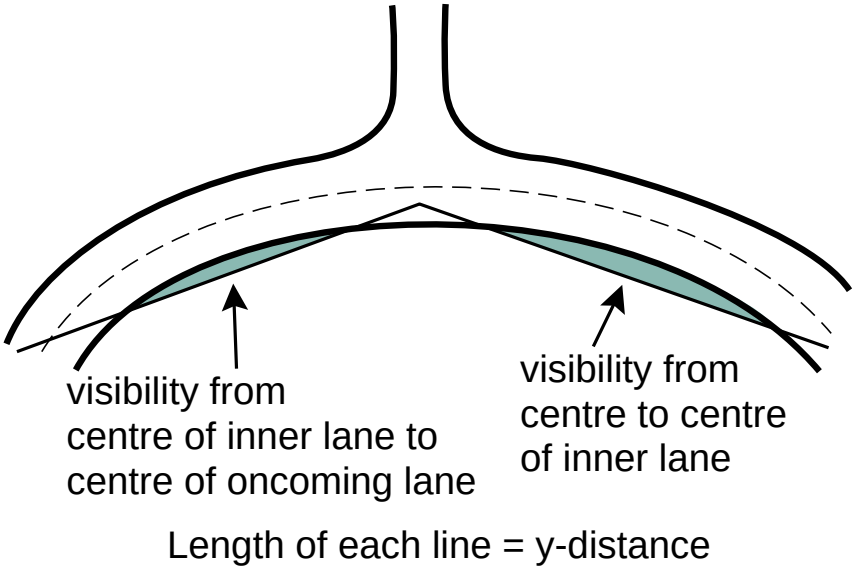


Fig 3: Forward Visibility Requirements

Visibility - Other Requirements

4.1 The area within visibility splays (both those beside the minor road and those required for forward visibility) must be cleared to provide a surface no higher than some 250mm above the level of the adjacent carriageway. Minor departures from this requirement, such as the retention of a single slender pole or column, may be permitted at the discretion of the Department as long as visibility is not materially affected. Once provided, visibility splays must be retained and kept clear. In this regard it will be helpful for trees and shrubs to be planted at least 3m to the rear of the visibility splay to allow for future growth. However, where there is existing hedge / bank or amenity is a consideration, a hawthorn or natural species hedge may be required 0.5m behind the visibility splay to maintain the character of the rural area. To reduce the impact of an access on the countryside, its location and design must be carefully considered and existing access, including lanes, should be used where possible. Further guidance on fitting new buildings into the landscape can be found in Department's 'Design Guide for Rural Northern Ireland'[6].

4.2 Visibility in a vertical plane must normally be provided from a driver's eye height of 1.05m to 2.00m to an object height between 0.26m and 1.05m. For a minor access carrying less than 250 vehicles per day the minimum object height may be relaxed to 1.05m provided there is no relaxation of the distance given in Table B.

4.3 The Department will not introduce a speed limit simply to facilitate a new access.

Right Turning Lanes

5.1 A right turning lane consists of local widening of the priority road with associated carriageway markings to define a deceleration taper and dedicated waiting area for vehicles intending to turn right into the minor road. Design shall be in accordance with TD 42 / 95 - Geometric Design of Major / Minor Junctions set out in the Design Manual for Roads and Bridges (DMRB[4]) - Volume 6.

5.2 A right turning lane will often be required where the priority road is a primary, district or local distributor (as defined in the Layout of Housing Roads - Design Guide[2]) or a main traffic route as defined in PPS3[1]: "Development Control: Roads Consideration".

5.3 Factors which the Department will take into account include:

- volume of right turning traffic-requires particular consideration when total flow on the minor road exceeds 500 vehicles per day (i.e. serving more than 50 dwellings) or when right-turns into the development are the dominant movement, having regard to the relative location of the town centre or other major traffic attractor);
- speed and volume of priority road traffic;
- forward sight distance (proximity to crest or bend);
- junction spacing;
- accident history / potential;
- character / status of the priority road;
- advice in TD 42/95, DMRB[4] - Volume 6; and
- relevant traffic model output.

Diverging & Merging Tapers

6.1 Major accesses (i.e. carrying more than 250 vehicles per day) on busy or high speed roads may require diverging and/or merging tapers. These allow vehicles to leave or join the priority road more safely by giving them a separate lane in which to decelerate or accelerate. Merging tapers are not permitted on single carriageways.

6.2 Design shall be in accordance with TD 42/95, DMRB[4] - Volume 6.

Location of Accesses

7.1 Where a site is at the junction of two public roads (or private streets determined for adoption) the access should normally emerge onto the minor road (see Figure 4). This concentrates turning movements at a single point on the major road.

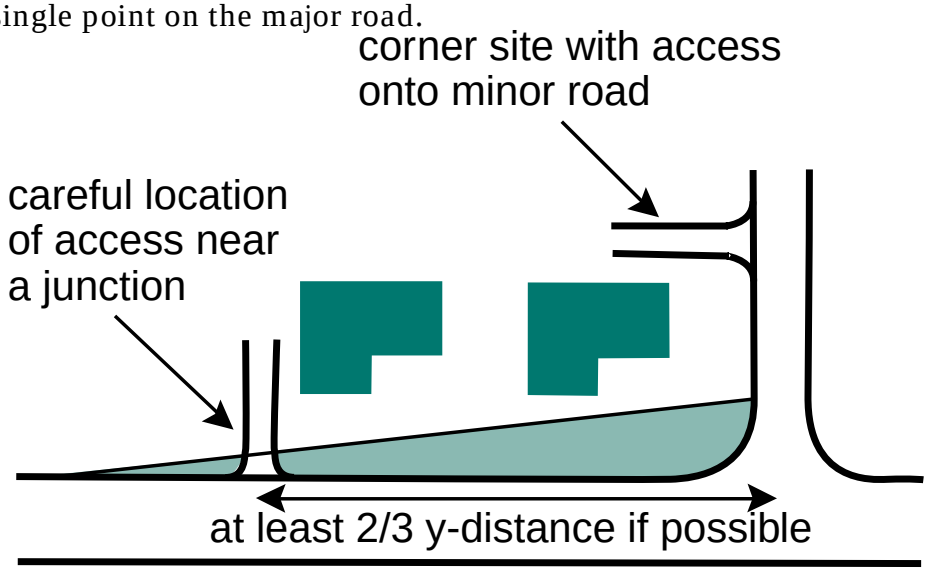


Fig 4: Location of Accesses Near a Junction

7.2 If a dwelling access is located near a junction, visitors might park their vehicles on the priority road and obstruct junction visibility. To reduce this risk, dwelling accesses should not normally join a priority road within the y-distance of a junction. However, as a relaxation on urban roads (subject to a 30 or 40 mph speed limit), dwelling accesses should not, as far as possible, join a priority road within the first $^{2}/_{3}$ of the y-distance (see Figure 4). An alternative may be the provision of at least double the in-curtilage parking standard to give additional spaces for visitors off the priority road.

7.3 The spacing between a proposed major access (i.e. carrying over 250 vehicles per day) and existing junctions or major accesses must be considered. When the proposed and existing junction or access are on the same side of the road the spacing should preferably exceed $^{2}/_{3}$ of the minimum forward sight distance given in Table B and must be at least 30m. When on opposite sides, the spacing should be sufficient to separate conflicting turning movements and avoid 'straight across' vehicle movements. The spacing should normally be at least 15m and a right-left stagger is preferred (see Figure 5). There may be occasions when the layout of a major access will require a stagger spacing in accordance with TD 42 / 95 DMRB[4] Volume 6, and in excess of the minimum indicated in Figure 5.

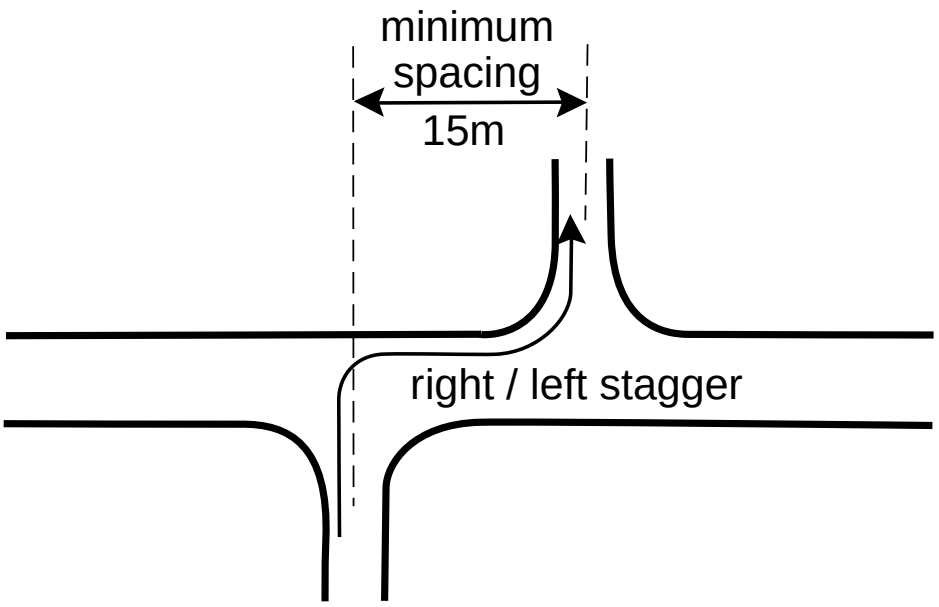


Fig 5: Right / left junction stagger

7.4 On dual carriageway roads, it is important to keep crossing points to an absolute minimum to maintain safety, by confining traffic to public road junctions. Only in very exceptional circumstances will movements across the central reserve be permitted to and from an access. Crossings

of the central reserve shall not be provided on dual three lane carriageways and wider. These restrictions apply even when an access would otherwise be permitted under the main traffic routes policy contained in PPS3[1]: "Development Control: Roads Considerations".

Drainage

8.1 Drainage shall be provided where necessary to prevent water from the access flowing onto the public road. Similarly, when an access is being constructed the existing road drainage must either be maintained or effective alternative measures provided.

Layout of Accesses for Single or Paired Dwellings

9.1 On rural roads the access layout must allow at least one vehicle to wait off the carriageway. Alternative layouts are shown in Figure 6.

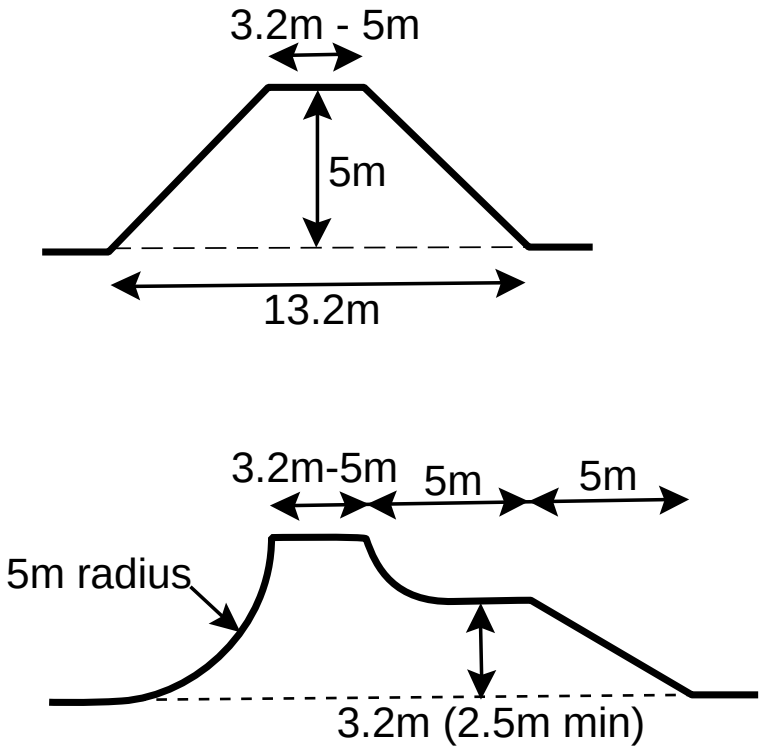


Fig 6: Alternative Layouts for Rural Accesses

9.2 Within development limits, lowering of kerbs will normally be acceptable where there is a frontage footway. Where the priority road carries more than 3000 vehicles per day, the entrance gates should be sited at least 5m from the edge of the carriageway to allow an entering vehicle to stop clear of the carriageway when the gates are closed. On other roads gates shall be sited behind the visibility splay and must be hung so that they do not open towards the carriageway or, where that is not possible, sited so that they do not open into the public road area.

9.3 The minimum width of a single access will normally be 3.2m with a maximum width of 5.0m.

9.4 The gradient of the access should not normally exceed 8% over the first 5m outside the public road boundary (see section 13.4 for accesses onto trunk roads). It is good practice to avoid excessive gradients (i.e. more than 10%) over the remainder of the access so that it may continue to be used during wintry weather.

Layout of Other Accesses

10.1 The entry and exit radii shall be sufficient to accommodate the largest vehicle likely to use the access. In most cases 10m radius should be adequate but, where this is not practical, a minimum of 6m may be permitted.

10.2 The minimum width of the access shall be 6.0m for a two-way access and 3.75m for a one-way access.

10.3 The gradient of the access shall not normally exceed 4% over the first 10m outside the public road boundary (see section 13.4 for accesses onto trunk roads). The remainder of the access should have a gradient less than 10% so that it may be used during wintry weather.

10.4 Entrance gates should normally be sited far enough from the edge of the carriageway to allow the largest vehicle likely to use the access to stop clear of the carriageway when the gates are closed. Where this is not possible the provision of a deceleration lane or lay-by may be required. Gates must be hung so that they do not open towards the carriageway or, where this is not possible, sited so that when open they do not project into the public road area.

10.5 It may be necessary to control the internal layout to prevent vehicles queuing back onto the public road. For example, a weighbridge or car park barrier should be located a sufficient distance from the access.

10.6 Where the access crosses a footway it is important to have intervisibility between pedestrians and emerging motorists. In these circumstances there should normally be visibility splays between a driver's viewpoint 2m back into the access and a distance measured along the back of the footway for 2m on each side of the viewpoint.

10.7 Accesses which are determined for adoption as public roads shall be in accordance with TD 42/95, DMRB[4] - Volume 6, or if within a proposed housing development, the Department's Design Guide for the Layout of Housing Roads[2].

Schools

11.1 The access layout shall be in accordance with section 10 above. Significant congestion can be caused by the setting down and picking up of pupils and adequate facilities for this activity shall be provided in the form of a lay-by, with a turning area if necessary.

11.2 In some cases the setting down or turning area may have to be provided within the site. If so, the setting down or turning area should be separated from areas used by children by a fence, wall or other appropriate measures.

Petrol Filling Stations

12.1 The access shall generally be in accordance with section 10 above. Normally a separate entry and exit shall be provided, each at least 7.3m wide and separated by at least 20m. Generally a system of one way working should be operated. It is extremely important that visibility splays are kept free of any advertising signs.

12.2 On main traffic routes, petrol filling stations should be accessible without dangerous right-turning movements across traffic flows. This often means the pairing of stations on either side of the road - on both single and dual carriageways. For further details see PPS3[1]: "Development Control: Roads Considerations" and Policy IC 15 of the Department's "Planning Strategy for Rural Northern Ireland"[5].

Requirements for Trunk Roads

13.1 The Department has special additional requirements for accesses onto roads classified as trunk roads in order to comply with TD41/95: "Vehicular Access to All-Purpose Trunk Roads" set out in DMRB[4] - Volume 6. Trunk roads are a subset of the network of designated main traffic routes. These requirements apply even when an access would otherwise be permitted under the main traffic routes policy contained in PPS3[1]: "Development Control: Roads Considerations".

13.2 A new access shall not normally be permitted in an overtaking section of single carriageway trunk roads as defined in TD 9/93: "Highway Link Design" set out in DMRB[4] - Volume 6.

13.3 A new access shall not normally be permitted where the trunk road gradient exceeds 4%. It is recognised that in hilly terrain accesses at locations with steeper gradients may sometimes be acceptable, particularly where the trunk road flows are in the bottom half of the range TD 20/85: "Traffic Flows and Carriageway Width Assessment" DMRB[4] - Volume 5.

13.4 The gradient of an access onto a trunk road shall not exceed 10% other than in exceptional circumstances. The access gradient immediately next to the trunk road should be considerably less and a 'dwell' area of at least 15m provided immediately adjacent to the trunk road carriageway. Where site conditions are particularly difficult this area may be relaxed to 10m. In the case of a single or paired dwelling access it may be relaxed to 5m. The gradient for the dwell area shall lie between 0 and 2% on the approach downgrade. In difficult circumstances this may be increased to between + and - 4%. The intention is to prevent vehicles stalling on a mild hill when attempting to accept a gap in trunk road traffic or inadvertently rolling out into the trunk road carriageway.

References

1 Planning Policy Statement 3, Development Control : Roads Considerations; DOE(NI); 1996; Planning Service.

2 Layout of Housing Roads - Design Guide; DOE(NI); 1988; HMSO. Please note that this guide is currently under review. A draft version of the Department's new guidance entitled "New Residential Development: Overall Design Character and Requirements for Access and Parking" was issued for public consultation in March 1997 and it is intended to publish the final version of the revised Guide by the end of this year.

3 TRICS - Trip Rate Information Computer System; JMP Consultants Ltd; London.

4 Design Manual For Roads And Bridges; Department of Transport, Scottish Office, Welsh Office & Department of the Environment (NI); 1993; HMSO.

5 A Planning Strategy For Rural Northern Ireland; DOE(NI); 1993; HMSO.

6 A Design Guide For Rural Northern Ireland; DOE(NI); 1994; HMSO.

Table A: X-distance (m)

Type of Access	X-distance
Access with traffic flow up to 60vpd	The minimum x-distance is normally 2.4m. Where traffic speeds on the priority road are below 60 kph (37 mph), the minimum x- distance is 2.0m. On other roads the x-distance may be reduced to 2.0m only where danger is unlikely to be caused
Access with traffic flow between 60 & 1000 vpd	The minimum x-distance is normally 4.5m. It may be reduced to 2.4m, but only if traffic speeds on the priority road are below 60 kph (37mph) and danger is unlikely to be caused.
Access with traffic flow over 1000 vpd	The desirable minimum x-distance is 6.0m. It may be reduced to 4.5m, but only where danger is unlikely to be caused. In this case developers may be required to demonstrate the adequacy of the access capacity using junction analysis techniques

Notes:

1. Reductions in visibility standards will not be permitted simply because the applicant does not control the required visibility area or does not have a reasonable prospect of bringing it under his control.

2. Traffic volumes are in vehicles per day (vpd) and refer to the total combined flow in both directions. Volumes on the priority road include traffic generated by the development.

3. If there is a dispute about the predicted minor road (access) traffic flow, it shall be determined by reference to a recognised database such as TRICS[3], or failing that by a direct survey of a similar existing development over an acceptable period.

4. Where the minor road (access) flow is subject to peaks, an enhanced x-distance may be required.

5. The traffic speed to be used is a reasonable estimate of the 85%ile speed on the priority road; for example, by the use of following vehicle surveys or, in the case of a dispute, the measured 85%ile speed.

Table B: Y-distance (m) and Forward Sight Distance (m)

Type of Access	Traffic Speed on the Priority Road kph (mph)							
	120 (75)	100 (62)	85 (53)	70 (44)	60 (37)	50 (31)	40 (25)	30 (19)
Access other than those listed below	295 [215]	215 [160]	160 [120]	120 [90]	90 [70]	70 [45]	45 [33]	33
Access flow up to 60 vpd onto priority road > 3000 vpd	215	160	120	90	70	60	45	33
Access flow up to 60 vpd onto priority road < 3000 vpd	215 [160]	160 [120]	120 [90]	90 [70]	70 [45]	60 [33]	45 [33]	33

Notes

1. In exceptional circumstances a reduction in the visibility standards may be permitted where, in the judgement of the Department, danger to road users is not likely to be caused. Where exceptional circumstance are considered to exist, it is highly unlikely that the Department will permit visibility standards which fall below the figures in the square brackets.

2. In the case of single or paired dwelling accesses a reduction in the visibility standards may be acceptable where, in the judgement of the Department, there is a slightly lower risk of conflict, particularly when traffic on the priority road is light.

3. Reductions in visibility standards will not be permitted simply because the applicant does not control the required visibility area or does not have a reasonable prospect of bringing it under his control.

4. Traffic volumes are in vehicles per day (vpd) and refer to the total combined flow in both directions. Volumes on the priority road include traffic generated by the development.

5. If there is a dispute about the predicted minor road (access) traffic flow, it shall be determined by reference to a recognised database such as TRICS[3], or failing that by a direct survey of a similar existing development over an acceptable period.

6. The traffic speed to be used is a reasonable estimate of the 85%ile speed on the priority road; for example, by use of following vehicle surveys or, in the case of a dispute, the measured 85%ile speed.

7. Where actual speed falls between the given values the y-distance may be interpolated.