

Advice Leaflet 10 Access For Fire Appliances

Ref FS-PAN010
Rev May 2008
To be reviewed May 2011

West Yorkshire Fire & Rescue Service
Fire Safety Group
Oakroyd Hall
Birkenshaw
West Yorkshire
BD11 2DY

Tel: 01274 682311
Fax: 01274 655888

Introduction

This Guidance Note has been prepared to give advice on the provisions necessary to provide adequate access for Fire Service appliances to and around buildings. The measurements stated take into account those outlined in the Building Regulations Approved Document B (2000 Edition).

General

Access roads may be public highways, private roads, footpaths, or specially strengthened and defined routes through the land surrounding the buildings. The requirements for pumping appliances and high reach appliances are as follows:

Table 1 - Typical Vehicle Access Route Specificationⁱ

Appliance Type	Pump	High Reach(Aerial)
Minimum width of road between kerbs (m)	3.7	3.7
Minimum width of gateway (m)	3.1	3.1
Minimum turning circle between kerbs (m)	16.8	26.0
Minimum turning circle between walls (sweep circle)(m)	19.2	29.0
Minimum clearance height (m)	3.7	4.0
Minimum carrying capacity (tonnes)	12.5	17

Access To Buildings

A) Buildings not fitted with Fire Mains

There should be vehicle access for a pump appliance to small buildings (those of up to 2000m² with a top storey less up to 11m above ground level) to either:

- 15% of the perimeter;
- or
- within 45m of every point on the projected plan area (or 'footprint') of the building; whichever is less onerous.

For single private dwelling houses, the 45m may be measured to the door of the dwelling. Any elevation to which vehicle access is provided should have a suitable door, not less than 750mm wide, giving access to the interior of the building.

**Advice Leaflet 10
Access For Fire Appliances**

Table 2 - Appliance Access to Buildings not fitted with Fire Mains

Total Floor Area of Building m² (1)	Height of Floor (m) of top storey above ground (2)	Provide vehicle access to	Type of Appliance
Up to 2000	Up to 11 Over 11	See paragraph above 15% of perimeter	Pump High reach
2000 - 8000	Up to 11 Over 11	15% of perimeter 50% of perimeter	Pump High reach
8000 - 16000	Up to 11 Over 11	50% of perimeter 50% of perimeter	Pump High Reach
16000 - 24000	Up to 11 Over 11	75% of perimeter 75% of perimeter	Pump High Reach
Over 24000	Up to 11 Over 11	100% of perimeter 100% of perimeter	Pump High Reach
Notes	1) The total floor area is the aggregate of all the floors in the building. 2) In the case of storage buildings, height should be measured to mean roof level.		

B) Buildings fitted with Fire Mains

In the case of a building fitted with fire mains there should be access for a pumping appliance to within 18m of each fire main inlet connection point. The inlet should be visible from the appliance.

Turning And Sweep Circles Of Appliances

When providing access for appliances, allowance should be made for an appliance's turning circle and sweep circles. Additional turning spaces should be provided where corners have to be negotiated, and sweep circles should not be obstructed above kerb height.

Turning facilities should be provided on cul-de-sac roads exceeding 20m in length. This can be a hammerhead or turning circle designed on the basis of Table 1.

Obstruction To Access

All access roads for Fire Service appliances should be kept clear of any obstructions. It may, however, be considered necessary to restrict unauthorised entry and various arrangements are set out below.

Before any obstructions are installed the proposed arrangements should be agreed with the local Fire Station Commander.

Advice Leaflet 10 Access For Fire Appliances

Posts And Bollards

When considering the type of post or bollard to be used, either fixed or removable, it is particularly important to bear in mind the type of scheme being considered. The siting of post or bollards must not obstruct the use of hydrants.

Removable bollards may be of galvanised steel tube. A padlock that can be cut away by the Fire Service in an emergency should secure them.

Collapsible posts and bollards are acceptable in certain cases provided they do not project more than 150mm above ground level when folded and are not of such a type that an appliance passing over one end of the collapsed bollard will raise the other end and foul the appliance. Collapsible posts may be of iron pivoted near the ground. A padlock that can be cut away by the Fire Service in an emergency should secure them.

Any proposal to use flexible bollards of a new or improved design should be referred (with particulars of the design) to your local Fire Station Commander.

Gate Barriers

Most types of gate barrier are acceptable if they meet the following criteria:

- They must be quickly and easily openable by Fire Service personnel,
- They must be only secured at one point by a padlock and chain which can be cut away by the Fire Service in an emergency.

Any proposal to install electrically operated barriers should be referred to the local Fire Station Commander.

Speed Control Humps (Road Humps)

The Highways (Road Humps) Regulations 1990 came into effect on 13 April 1990. These Regulations stipulate very precise and demanding criteria for the construction, siting and signing of road humps on public roads.

Following the publication of The Highways (Road Humps) Regulations 1990, the Department of Transport Circular 3/90, 15 November 1990, paragraph 16, confirms the Fire Service should be consulted when a local authority proposes introducing a road hump scheme.

Written notification of the final scheme details should be presented to the Fire Service at least one month prior to implementation. Such notification would enable Fire Service Officers to consider and introduce any contingency arrangements that may be possible.

Proposals to amend any part of an existing scheme should be subject to further notification and consultation in order that officers may consider the full implications of the revised scheme and with regard to any adjacent traffic management schemes.

Advice Leaflet 10 Access For Fire Appliances

The West Yorkshire Fire & Rescue Service is supportive of the aims associated with the introduction of traffic management schemes for the benefit of the resident population. However, there is no limit on the number of road humps that may be proposed for any one scheme and with a delay of approximately ten seconds per hump, appliances attending an incident may be considerably delayed. Every consideration should be given to the introduction of other traffic calming measures in place of road humps to complement the total scheme.

A typical location for a road hump system would be a long and fairly straight secondary road situated in a residential area. Where the distance from the nearest fire station is significant and where access is considered to be essential (with no suitable alternative route) the Fire Authority might object to such a scheme.

Additional factors to be considered include:

1)	Round top humps are preferred to those with a flat top.
2)	Humps of 50mm high are preferable to those of 75mm or 100mm high. The overall length of a specific type of hump should be as near to the recommended minimum as possible.
3)	In general, the Fire Service would prefer the maximum permitted distance between humps. However, there may be specific sections of a road on which it is desired to achieve a more defined speed limitation and which consequently will result in closer positioning of humps. Accordingly such measures should not apply to the whole length of the road.
4)	The removal of previous restrictions on the number of humps in a series may lead to a tendency to identify road(s), which though worthy of the installation of road humps, could result in unnecessary extensive series of road humps. This tendency should be avoided and humps only installed where their specific benefits have been identified
5)	Generally the placement of road humps within close proximity of bus stops, roundabouts, road junctions and on dual carriageways are likely to lead to speed reductions, but correspondingly heavier traffic congestion which would, invariably, further delay appliances attending emergency incidents. Therefore, such proposals would be discouraged.
6)	The Highways (Road Humps) Regulations 1990 indicate a minimum length for a flat top hump but not a maximum length. This allows a road to be raised for a considerable distance to provide a flat topped table, which are known as Speed Tables.

Pedestrianised Areas

A clearly defined fire path at least 3.7m wide and capable of supporting the weight of a Fire Service pumping appliance, i.e. maximum 12.5 tonnes, is required through a pedestrianised area. (This may be indicated by the use of different coloured concrete or different paving patterns.) Where tall buildings abut, the fire path will need to be 6m wide for use by high reach appliances with a working width of 8m, as per Diagram 1, and capable of taking a maximum weight of 17 tonnes.

Advice Leaflet 10 Access For Fire Appliances

The siting of the fire path should take into account building design features, e.g. canopies, extended shop fronts etc, (these features may affect the positioning and operational use of high reach appliances or extension ladders). No seating, trees or flower beds should obstruct the fire path and no street furniture, eg, lamp posts, should be allowed which could foul the ladders etc, on appliances. If appliance access to a pedestrianised area crosses a kerb, it should be ramped with a steady incline for a minimum length of 500mm with the difference in levels not exceeding 100mm and both ends inset.

ⁱ At the time of writing, high reach appliances in use by West Yorkshire Fire and Rescue Service have a weight of 17.4 tonnes and a working width of 5.08 metres. In addition, from September 2008 dual-purpose pump/high reach appliances will be introduced in certain areas of West Yorkshire. These vehicles have a gross weight of 18 tonnes but will respond to incidents which have traditionally attracted the attendance of the lighter 12 tonne pumping appliances. Building developers may wish to take this into account when considering building design and vehicle access requirements.