

Fire Safety Department

ACCESS FOR APPLIANCES AND FIRE-FIGHTING FACILITIES FOR FIRE & RESCUE SERVICE USE

1.0 REQUIREMENTS FOR ACCESS ROADS

1.1 ROAD WIDTHS

Access roads may be public highways, private roads, footpaths or specially strengthened and defined routes through the land surrounding the building(s). The requirements for pumping appliances and hydraulic platforms are as follows:

Type of appliance	Minimum width of access rd	Minimum clearance height	Turning circle between walls	Turning circle diameter between kerbs	Minimum width of gateways etc.	Laden weight
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Pumping Appliances	3.7m	3.7m	19.2m	16.8m	3.1m	12.5 tonnes
Hydraulic Platform	3.7m	4.0m	29.0m	29.0m	3.1m	17 tonnes

1.2 ACCESS FOR A HYDRAULIC PLATFORM

Where access for a hydraulic platform is specified, the roadway should be positioned with its nearest edge a maximum of 2 metres from the face of the building and its furthest edge a minimum of 7.5 metres from the building. This will enable the appliance to operate at its optimum height and reach, (see Diagram 1, App III). Roads, including any manhole covers and public utility service pits, should be capable of carrying the weights set out above for the respective appliances.

1.3 Hardstanding for Hydraulic Platforms should be as level as possible, and should not exceed a gradient of 1 in 12 (8%).

1.4 TURNING AND SWEEP CIRCLES OF APPLIANCES

When providing access for appliances, allowance should be made for a pumping appliance's turning circle of 16.8m diameter, and sweep circle of 19.5m diameter. Hydraulic platforms have a turning circle of 29.0m diameter with a sweep circle of 29.0m diameter. Additional turning space should be provided where corners have to be negotiated, and sweep circles should not be obstructed above kerb height.

Appendices I and II show the other relevant details of pumping appliances and hydraulic platforms. Although the diagrams show transition curves for travel in one direction only, it should be remembered when planning suitable turning and sweep circles that the curves need to be repeated in the opposite direction.

1.5 CUL-DE-SAC

Turning facilities should be provided on cul-de-sac roads exceeding 20m in length by means of a turning circle or a hammerhead.

2.0 OBSTRUCTION TO ACCESS

All access roads for Fire & Rescue Service appliances should be kept clear of any obstructions, including trees, lamp standards, etc. 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 Fire & Rescue Service.

2.1 POSTS AND BOLLARDS

Siting of bollards must not obstruct the use of hydrants.

(a) Fixed and removable posts or 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.

If the scheme is a simple environmental improvements scheme in a thoroughfare it may be acceptable for a row of fixed bollards to be spaced along the kerb line. If this is not acceptable to the traffic authority, there are a number of options:

(i) Intermediate bollards of a lower height, i.e. below 230mm in height.

(ii) A removable bollard - one only for any access route. Removable bollards may be of galvanised steel tube and of the standard design. They should be secured in position with a standard padlock.

(b) Collapsible posts or bollards

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. They should be secured by a standard padlock.

(c) Flexible posts or bollards

Any proposal to use flexible bollards of a new or improved design should be referred (with particulars of the design) to Fire and Rescue Service Headquarters, Old London Road, Hertford.

The design should incorporate features that prevent damage occurring to fire appliances.

They should not be used in conjunction with any other scheme.

SPEED CONTROL HUMPS

Speed control humps (these may sometimes alternatively be referred to as 'sleeping policemen', 'speed retardant humps' or 'road ramps') are generally not accepted, but where they form part of a traffic management scheme their installation should be considered on their merits.

2.3 PEDESTRIANISED AREAS/TRAFFIC CALMING SCHEMES

Local authorities are increasingly making alterations to certain areas of towns and villages for reasons of road safety and to try to enhance the appearance of the areas. Included within these schemes are pedestrianisation of high streets and shopping areas, and 'traffic calming' at certain accident problem areas. Some of these schemes may affect attendance times by slowing down appliances dramatically on through routes, or prevent access into areas where they may be required. It is important that they do not impede appliances unnecessarily. Schemes should meet the following criteria:-

- (a) A clearly defined fire path at least 3.7m wide, and capable of supporting the weight of a Service appliance, i.e. minimum 17 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 5.5m wide for use by hydraulic platforms as per diagram 2 in Appendix III.
- (b) 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 hydraulic platforms and/or extension ladders).
- (c) No seating, trees or flower beds should obstruct the fire path and no street furniture, e.g., lamp posts, should be allowed which could foul the ladders, etc., on appliances.
- (d) 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.
- (e) Any raised platforms should be at least 14m in length to prevent the grounding of hydraulic platforms.
- (f) Corner blips should not obstruct fire appliances that may need to negotiate the corner (see Appendix I and II).
- (g) Width restrictions should be a minimum of 3.7m, and have a "straight" approach on either side.
- (h) The provision of passing bays on roads reduced to a single lane will mean that in the event of an incident occurring parked fire appliances will not immediately close the road.
- (i) Chicanes must be capable of being negotiated by hydraulic platforms and pumping appliances, and have a "straight" approach on either side.
- (j) Speed tables should conform to (e) above.

2.4 STANDARD PADLOCKS

These are suitable padlocks for the purpose of securing bollards or posts, but must be capable of being cut open in an emergency with the bolt croppers carried on Hertfordshire Fire appliances.

3.0 ACCESS TO BUILDINGS

3.1 ALL BUILDINGS NOT FITTED WITH FIRE MAINS

Access should be provided in accordance with Table 1 below:-

TOTAL FLOOR AREA OF BUILDING M ²	HEIGHT OF FLOOR OF TOP STOREY ABOVE GROUND	PROVIDE VEHICLE ACCESS TO	TYPE OF APPLIANCE
UP TO 2000	UP TO 9m OVER 9m	SEE NOTE 3 BELOW 15% OF PERIMETER	PUMP HYDRAULIC PLATFORM
2000 - 8000	UP TO 9m OVER 9m	15% OF PERIMETER 50% OF PERIMETER	PUMP HYDRAULIC PLATFORM
800 - 16000	UP TO 9m OVER 9m	50% OF PERIMETER 50% OF PERIMETER	PUMP HYDRAULIC PLATFORM
16000 - 24000	UP TO 9m OVER 9m	75% OF PERIMETER 75% OF PERIMETER	PUMP HYDRAULIC PLATFORM
OVER 24000	UP TO 9m OVER 9m	100% OF PERIMETER 100% OF PERIMETER	PUMP HYDRAULIC PLATFORM

NOTE 1 The TOTAL FLOOR AREA is the appropriate aggregate of all the floors in the building.

NOTE 2 In the case of PURPOSE GROUP 7(a) (Storage) buildings height should be measured to mean roof level, as defined in Diagram C3 to Appendix C of Approved Document B to the Building Regulations 1991.

NOTE 3 There should be vehicle access to small buildings (those up to 2000m²) with a top storey less than 9m above ground level) to within 45m of any point on the projected plan or "Footprint" of the building (See diagram 1 Appendix IV).

NOTE 4 Any elevation to which vehicle access is provided in accordance with TABLE 1 should have a suitable door (not less than 750mm wide) giving access to the interior of the building.

3.2 BUILDINGS FITTED WITH DRY 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.

3.3 BUILDINGS FITTED WITH WET FIRE MAINS

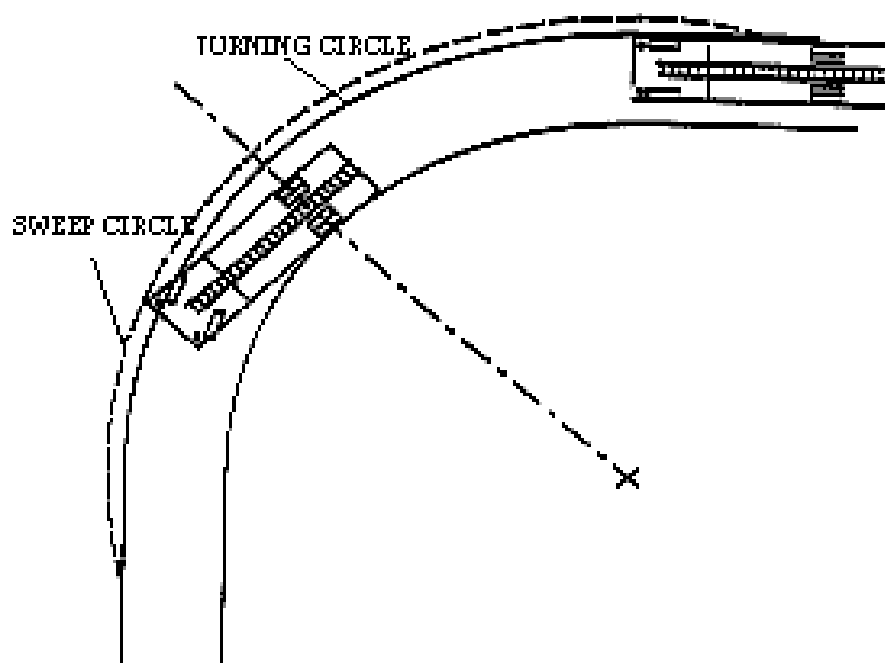
There should be access for a pumping appliance to within 18m, and within sight of, a suitable entrance giving access to the main and in sight of the inlet for the emergency replenishment of the suction tank for the main.

(NOTE To 3.2 and 3.3, see also Standard Forms 3/2/1/1 and 3/2/2/1)

DETAILS OF PUMPING APPLIANCES

Maximum length	8.5m
Maximum height	3.3m
Maximum width	2.3m
Maximum weight	12.5 tonnes
Maximum weight front axle	5.5 tonnes
Maximum weight rear axle	6.1 tonnes
Maximum length wheel base	3.81m
Track rear wheels	2m
Ground clearance	229mm

Turning and sweep circles



Width of roadway	3.7m
Turning circle.....	16.75m
Sweep circle	18.3m

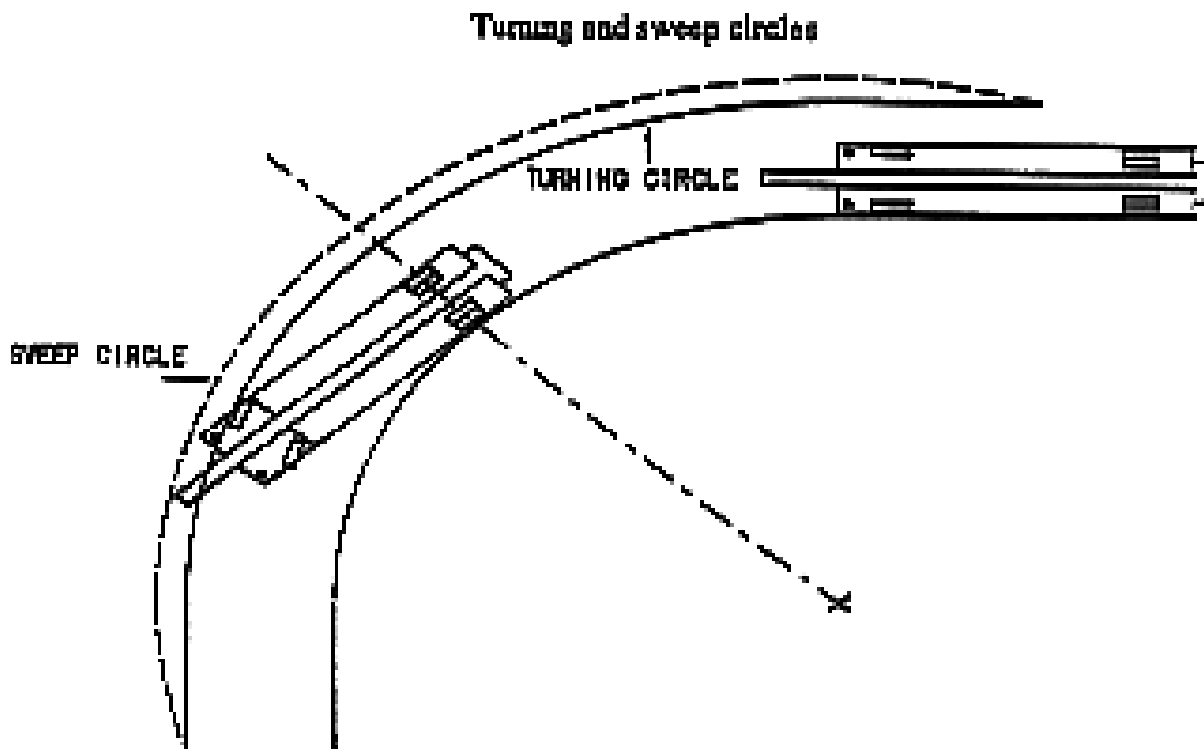
This diagram shows the path of the appliance and is not intended to indicate kerb lines.

DETAILS (AT MAXIMUM) OF HYDRAULIC PLATFORM

Maximum length.....	10m
Maximum height.....	3.5m
Maximum width.....	2.5m
Maximum width with jacks out.....	4.4m
Laden weight.....	18.00 tonnes
Average weight front axle.....	7 tonnes
Average weight rear axle.....	11 tonnes
Maximum length wheelbase.....	5.33m
Track rear wheels..	2m
Minimum ground clearance	229mm

NOTE: Overhang of booms on headrest do not exceed 1.83m from foremost part of the vehicle. Hydraulic platforms are fitted with four ground jacks as stabilisers. Under normal working conditions the weight on a jack should not exceed 7.5 tonnes.

Turning and sweep circles



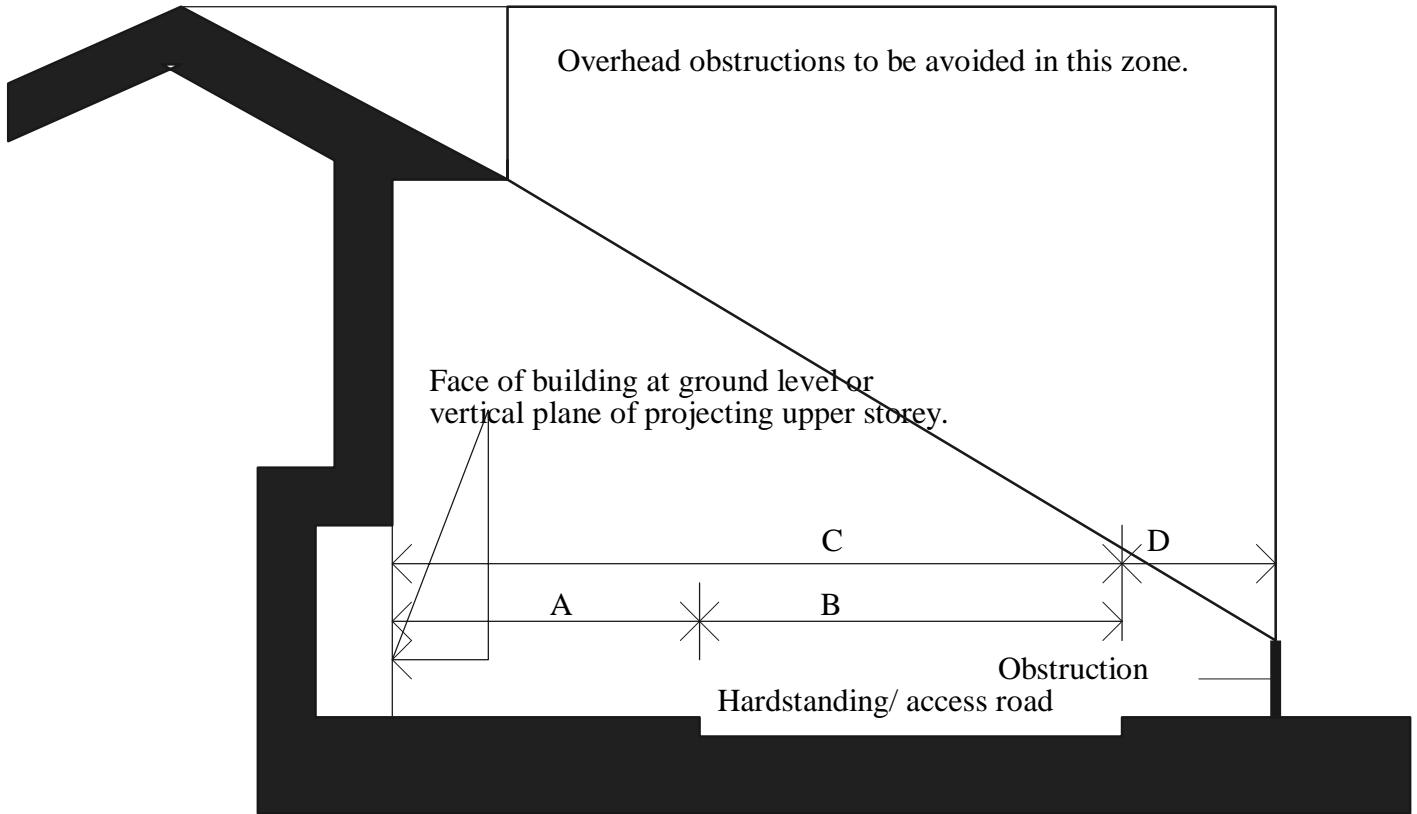
The diagram shows the path of an appliance and is not intended to indicate kerb lines.

Width of roadway.....	6m
Turning circle.....	20.12m
Sweep circle	24.5m

APPENDIX III

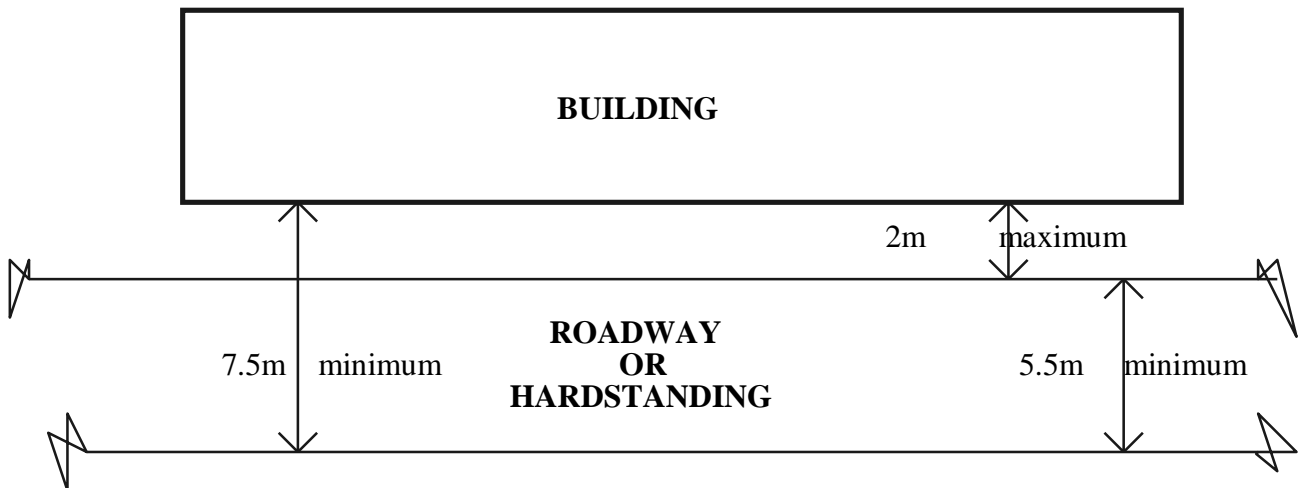
RELATIONSHIP BETWEEN BUILDING AND HARDSTANDING/ ACCESS ROADS FOR HYDRAULIC PLATFORMS.

DIAGRAM 1.



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|----|---|------|
| A. | Minimum distance of near edge of hardstanding from building. | 2.0m |
| B. | Minimum width of hardstanding. | 5.5m |
| C. | Minimum distance of further edge of hardstanding from the building | 7.5m |
| D. | Minimum width of unobstructed space (for swing of appliance platform) | 2.2m |

DIAGRAM 2.



APPENDIX IV

DIAGRAM 1

