LFEPA
LONDON FIRE & EMERGENCY PLANNING AUTHORITY

STATUTORY FIRE SAFETY NOTE

Smoke Outlets

STATUS
This instruction is advisory

SUMMARY
This instruction provides guidance on Smoke Outlets.

ACTION
By all staff

Number:	I030:a4
Date:	June 2004
Authority:	Assistant Commissioner (Statutory fire safety)
Originator:	FC/SFS/ENG
Distribution:	All Borough Teams
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1 STATUTORY REQUIRMENT

1.1 It is the Authority's practice to recommend and the Building Control authority's to require smoke outlets from the basement storeys of buildings subject to control under Section 20 of the London Building Acts (Amendment) Act 1939. The Approved Document B and LDSA Fire Safety Guide No.1 details these requirements.

1.2 Smoke outlets are also provided in some buildings not under the Authority's control via the Building Regulations 1991 Approved Document B5.

2 SITING

2.1 Smoke outlets from basements and smoke outlet shafts from sub-basements should be arranged in well-distributed positions along street frontages or adjacent to external walls and be easily accessible to the Fire Brigade. Smoke outlets should be as numerous and as large as possible and arranged so that through-draughts are created. The combined cross sectional area of all smoke outlets should be not less than 2.5% of the floor area of the storey they serve. Separate outlets should also be provided from areas of special risk, (e.g., transformer chambers, boiler rooms) where a vent area equivalent to 5% of the floor area is required under the London Building Acts (Amendment) Act 1939.

3 FIRE RESISTANCE

3.1 Smoke outlet shafts from sub-basements and any bulkheads over such shafts should be enclosed with imperforate walls having a standard of fire resistance at least equal to that of the floor over the storey or part of the storey from which the smoke outlet originates, so as to maintain the same standard of fire separation between storeys. Where shafts from different parts of the sub-basement adjoin they should be separated from each other by imperforate construction of a similar standard of fire resistance.

4 LOAD BEARING

4.1 Covers of smoke outlets normally take the form of stallboard or pavement lights consisting of glass lens set in a reinforced concrete framework of a type easily broken by fire-fighters.

4.2 The standard pavement light capable of taking a load of 20Kn/m^2 should be used in the majority of instances. Where there is a possibility of vehicular traffic passing over the pavement light a heavy-duty light should be installed capable of withstanding a concentrated load of 75Kn/m^2.

5 MARKING

5.1 The position of each smoke outlet should be suitably indicated on the external wall of the building adjacent to the outlet by a metal plate 100mm x 75mm marked "SMOKE OUTLET FROM BASEMENT" or "SMOKE OUTLET FROM SUB-BASEMENT".

5.2 Smoke outlets from basement and sub-basement lobbies should be indicated by means of a metal plate at least 3.24cm² in area marked "SMOKE OUTLET FROM BASEMENT LOBBY" or "SMOKE OUTLET FROM SUB-BASEMENT LOBBY" and affixed to the external wall of the building adjacent to the outlets.

6 NON-STANDARD COVERS TO SMOKE OUTLETS

6.1 Before approval is given to any new type of smoke outlet tests are to be witnessed by Fire Safety Officers in order to ascertain that they can easily be broken.

6.2 Some pavement lights have been especially designed so that the surface finish matches the surrounding area. This type of panel is indicated by the prefix S.G. (Solid Grid). As the finish cannot be approved, the installer should seek the approval of the Building Control Authority, and informed that the Brigade will need to witness a physical test on any panel of this type.

6.3 The test referred to above consists of the outlet panel, together with the desired modification, being constructed as realistically as possible, preferably on site, so that a Fire Safety Officer can witness it being broken with blows from a 6.3 kg (14lb) hammer.

6.4 The modification should not affect, to any degree, the destruction of the actual outlet panel nor the total free area available for ventilation. As a guide, for light or medium duty outlets after about 6 blows of the hammer (the operator should be of average build) a hole should have been made through which venting can take place. For heavy-duty outlets, about 10 blows should be required. Subsequent blows should cause the destruction of the outlet panel. The purpose of the test, is to prove the effort required to destroy the vent panel and modified finish, is reasonable. If the test proves satisfactory, the panel and finish should be installed to the same specification as that tested. If the test fails the developer is to redesign and submit for re-test.

For further information or advice, please contact the Fire Engineering Group on Ext 6327