

Fire Safety Strategy - Citywest - September 2019

This fire strategy is for the proposed construction of mixed use development at Citywest Blocks A - F, adjacent to the existing Shopping Centre. The buildings will be primarily for residential use (290 no. apartment units) with small retail units / ancillary accommodation at ground floor level in a number of the building. The buildings will be a combination of five, six and seven storey buildings. The Fire Engineering proposals support the Architectural Design Concept for the building. Where required the principles of Fire Safety Engineering will be employed to ensure the design concept is adhered with whilst meeting the statutory requirements to comply with Building Regulations.

The fire safety strategy for the means of escape from the buildings will be developed in line with the recommendations set out in BS 9991, Section 1.4 of Technical Guidance Document B and BS 9999. The design concept proposed by the architect at an initial stage includes the provision of a domestic sprinkler installation in each residential unit. Whilst a domestic sprinkler installation is not mandatory in each residential unit, it mitigates against the requirement of protected entrance halls, permits inner rooms and allows increased travel distances in common entrance halls reducing the need for additional stair cores. The sprinkler installation also eliminates reliance on maintaining integrity of entrance halls which have proven to be inadequately constructed in recent times. It should be noted that the means of escape from the residential units is assessed in accordance with BS 9991, however, compliance with Sections B2 – B5 of the Building Regulations will be with reference to Technical Guidance Document B.

The general principles of BS 9991 will be adopted which includes the following with respect to design of escape routes, alarm systems, fire protection active and passive, fire brigade access, and compartmentation.

Ex BS9991

The provisions for means of escape for flats or maisonettes are based on the assumptions that:

- a) provided that the building is well managed, and corridors/stairways are kept clear, fire is more likely to occur within the flat or maisonette than in the common parts (e.g. not in a stairwell);*
- b) there can be no reliance on external rescue (e.g. a portable ladder);*
- c) the flat or maisonette will have a high degree of compartmentation and therefore there will be a low probability of fire spread beyond the flat or maisonette of origin, so in most fires simultaneous evacuation of the building is unlikely to be necessary; and*
- d) where fires do occur in the common parts of the building, the materials and construction used in such areas will prevent the fire from spreading beyond the immediate vicinity (although in some cases communal facilities exist which require additional measures to be taken).*

The common escape routes serving the buildings will be compliant with Figure 6 of BS 9991 and Section 8 of BS 9991 such that:

- The flats will be served by a single stair.
- The maximum travel distance to the entry point of the stairs will be 15m (units sprinklered).
- The common area will be provided with a smoke control system.
- The stairs will be provided with a 1sqm AOV at the head of the stairs or an openable window at every upper landing level.

An application for a fire safety certificate will be submitted to the local authority for approval. Once the application is granted and a commencement notice is submitted, The fire engineer will monitor that compliance with the Fire Safety Certificate grant takes place on site. This will be done through a series of site inspections during construction and attendance at relevant site meetings. the fire engineer will issue an opinion of compliance with the Building Regulations Part B and will provide ancillary certificate of completion as required in accordance with the Building Control Amendment Regulations 2014.