

Sparklet Street – Ashton Fire response to HSE comments

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Following the review (ref. pgo-5306) carried out by Health and Safety Executive (HSE) of the Gateway 1 Form for the proposed Sparkle Street development located at Sparkle Street, Manchester, M1 2NJ, Ashton Fire has prepared responses/ clarification to the comments noted in HSE Consultation. It is noted that HSE headline response is “content”. The review has been carried out at planning Stage.

Table 1 - Ashton Fire response to HSE Comments

HSE reference	HSE comment	Ashton Fire response	
2.1 - 2.4	Section 7 of the fire statement states: “Given the height of the building additional recommendations, such as mechanical smoke ventilation system to account for possible stack effects, multiple lifts, multiple staircases, have been incorporated in the design to support the fire strategy and account for the height of the building. The lifts are also designed to augment the vertical evacuation”. It is unclear, if due to the height of the blocks, a qualitative design review (QDR) will be or has been undertaken. Therefore, whilst it is not mandatory, best practice is for a QDR to be undertaken concurrently with design development, prior to the submission of a planning application. This approach would have provided explanatory information to support the planning application. A QDR should assess the implications of fire safety systems failure or foreseeable events. Fire safety design guidance on the QDR process includes the provision of a ‘what if’ study; and advises that an assessment of ‘what if’ events should be undertaken to identify system failures or foreseeable events that might have a significant influence on the outcome of the study. This may include fire safety system failures, management failures, workmanship failures, or the potential for fire conditions to deteriorate, thereby requiring immediate building evacuation concurrently with firefighting operations. HSE advises that it would be best practice to ensure a QDR is started at the earliest possible opportunity, prior to planning approval. The findings of a QDR at the planning stage may require subsequent design changes which may affect land use planning considerations such as design, layout and appearance of the development, including the provision and configuration of residential units.	Comment noted. A QDR has been prepared for the scheme.	
2.5	The fire safety standards also state that a mechanical smoke ventilation system should demonstrate that conditions in the lobby or corridor and stairs are equivalent to or better than the natural ventilation system that it replaces. This is usually shown by a comparative computational fluid dynamics (CFD) analysis. If the CFD analysis does not support the design, then this may affect land use planning considerations. It will be for the applicant to demonstrate compliance at later regulatory stages.	The performance of the smoke ventilation system will be demonstrated through CFD modelling at the detailed design stage when Building Regulations are applied for.	
2.6 – 2.9	It is noted that floor plan drawings show the introduction of a dual entry fire-fighting lift between the fire-fighting shaft (west side) and the lift lobby to the protected staircase. ADBv1 does not provide guidance relating to dual-entry fire-fighting lifts,	Comment noted. The configuration provided – the firefighting lift is accessed on both sides from a lobby which is provided with the same level of protection as the staircase itself and does not provide direct access to any accommodation.	

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	although it is acknowledged section 15 makes reference to the general construction in accordance with BS9999. Consideration should be given to the additional risk this particular arrangement will present to the safety of the fire-fighting shaft. Recommendations given in BS9991 do not promote the use of dual-entry fire-fighting lifts in residential building. It is unclear from information provided, whether risk mitigation has been considered, because as previously noted, supporting information has not been made available for scrutiny. BS EN 81-72 states: "During fire-fighting operation either the front or rear doors on any particular floor will have been chosen for the firefighter to exit the lift. The remaining lift door that is not intended to open during firefighting operations needs to be provided with an automatic fire shutter that will close at the latest on operation of the firefighters lift switch. It is necessary that this shutter when closed provides the same level of insulation and integrity as that provided by the lift well structure." Design changes to ensure that a protected firefighting shaft is provided in accordance with fire safety standards are unlikely to affect land use planning considerations and it will be for the applicant to demonstrate compliance at later regulatory stages.		
2.10 – 2.11	The design and access statement shows open plan apartments and the proposed location of cooking facilities in the apartments are near to the entrance door. The resident/s would be required to evacuate past the cooking facilities in order to reach reasonable safety in the protected corridor. The cited fire safety standard, ADBv1 para 2.11, does not permit a bedroom to be an inner room and further states in para 2.12 that a kitchen cannot be an access room. In this instance, design changes necessary to improve the means of escape from open plan apartments may not affect land use planning considerations where it is possible to resolve the current proposal by way of internal alterations, for example, provision of a protected entrance hall. It will be for the applicant to demonstrate compliance at later regulatory stages.	Comment noted. Additional studies published in IFE Journal (Open plan apartments – revisiting risks in light of contemporary demands. IFE Journal Issue No 18, November 2016) and the Architectural Engineering and Design Management journal have been carried out in addition to the study which informed the BS 9991 recommendations for open plan flats. Recommendations for flat layouts are supplemented from additional research and guidance.	
2.12	Storey 11 drawings illustrate that escape in a westward direction from the external communal terrace is by way of an unprotected area (i.e., enclosed amenity area). However, it is noted that a fire shaft is provided for escape in an eastwardly direction, from the communal terrace. The cited fire safety standard states that the route across the roof should lead to a storey exit. Resolving this issue by providing a protected corridor through the enclosed amenity area is unlikely to affect land use planning considerations because it would most likely involve internal alterations to the enclosed amenity area. It will be for the applicant to demonstrate compliance at later regulatory stages.	Comment noted. Residential accommodation does not escape over roof. Terrace and amenity are designed in line with BS 9999 and escape is provided in two directions. The arrangement is considered reasonable given the two escape route from which one leads directly to a storey exits, i.e. staircase.	
2.13 – 2.14	Plan drawings illustrate resident's roof terraces located at storeys 2, 11 and 28. The external envelope of a building should not provide a medium for undue fire spread. A green roof may constitute a fire hazard as it requires a regular management and maintenance regime. Where green roofs are proposed the roof construction will need to provide sufficient fire resistance to prevent fire spread to any adjoining wall(s). This document Fire Performance of Green Roofs and Walls (publishing.service.gov.uk) will provide guidance on the fire performance aspects of green roof and wall construction and maintenance. It will be for the applicant to establish that the proposed green/planted roof is viable in relation to fire safety and to demonstrate compliance at later regulatory stages.	Comment noted. Guidance cited will be adopted.	