

Advice to the local planning authority

Advice to the local planning authority (LPA) from the Health and Safety Executive (HSE) as a statutory consultee for developments that include a relevant building.

To LPA	Reading Borough Council
LPA planning ref no	240173
Our ref	pgo-5010
Site address	Broad Street Mall Broad Street Reading
Proposal description	Part-demolition of existing retail units, car park and service areas, demolition and rebuild of car park ramp, and construction of a residential-led, mixed-use development fronting Queens Walk and Dusseldorf Way, including all necessary enabling and alteration works required.
Date on fire statement	21/12/2023
Date consultation received	22/03/2024
Date response sent	19/04/2024

1. Substantive response for the local planning authority

Thank you for consulting HSE about this application.

Headline response from HSE
Headline Response from HSE ('content')

Scope of consultation

- 1.1. The above consultation relates to the part-demolition of existing retail units, car park and service areas, demolition and rebuild of car park ramp, and construction of a residential-led, mixed-use development in three residential blocks A, B and C/D:

- **Block A:** 30 storeys (ground and 29), comprising residential flats on all floors above ground with associated amenity accommodation, with a height of 89.3m.
 - **Block B:** 26 storeys (ground and 25), comprising residential flats on all floors above ground with associated amenity accommodation, with a height of 77.3m.
 - **Block C/D:** 19 storeys (ground and 18), comprising residential flats on all floors above ground with associated amenity accommodation, with a height of 56.3m.
- 1.2. There is one basement storey which is understood to contain ancillary accommodation including, plant rooms, refuse stores and car parking. The car park continues through storey 1-4 adjacent to the residential blocks. Renovation work is understood to involve the rebuild of the car parking ramp only, the car park is existing.
- 1.3. It is noted that Block A and B residential towers will be provided with a fire-fighting shaft containing firefighting stair, firefighting lift and a wet riser, together with alternative escape stair (protected staircase). Block C/D residential tower, due to the floor size, will be provided with two fire-fighting shafts containing firefighting stair, firefighting lift and a wet riser.
- 1.4. It is understood six commercial units will be included within the development, unit 1 to 4 at ground floor level of Block A, Unit 5 at ground level of Block B and unit 6 at ground floor level of Block D. It is unclear from plan drawings whether Block C will have a retail unit, the plan colour coding would suggest this to be the case, however, the wording for this retail unit states 'entrance'. All units are separated from the residential accommodation.
- 1.5. Section 6 of the fire statement confirms that the building has been designed using Approved Document B Volume 1 ('ADBv1'). HSE has assessed the application accordingly.
- 1.6. It is noted that validation used in 3.3.1 of the Stage 2 Fire Strategy (location of cooking facilities) may be guidance utilised from the draft version of BS9991. The draft standard of BS9991 is not current beyond 6th October 2021 for the purposes of consultation and specifically states on the cover that it should not be used for the purpose of designing buildings. HSE provides advice to the LPA based on extant fire safety standards and is therefore unable to comment on consultation draft recommendations, which are likely to be subject to change. HSE has therefore assessed this application based on the extant version of BS9991:2015.

Consultation

- 1.7. Following a review of the information provided in the planning application, HSE is content with the fire safety design as set out in the project description, to the extent it affects land use planning considerations. However, HSE has identified some matters that the applicant should try to address, in advance of later regulatory stages.

2. Supplementary information

The following information does not contribute to HSE's substantive response and should not be used for the purposes of decision making by the local planning authority.

Qualitative Design Review

- 2.1. Section 7 of the fire statement states: *"Given the height of the buildings a Qualitative Design Review (QDR) has been completed as detailed in BS7974. The QDR process follows a deterministic analysis as per Section 4.3.3 of BS7974. It is stated that in a deterministic analysis, the team should make a judgement as to whether the "what if" event is likely to significantly affect the overall fire risk and this analysis is specifically detailed in the QDR."* This is noted, HSE welcome the early inclusion of the QDR process and submission of supporting documentation, as part of this planning application. It will be for the applicant to demonstrate compliance at later regulatory stages.

Means of escape

- 2.2. Section 7 of the fire statements states: *"All cores contain travel distances within the common corridors that are extended beyond the recommendations of Approved Document B. At a later stage of design, a Computational Fluid Dynamics (CFD) assessment will be required to validate the smoke venting strategy for the block in accordance with the guidance from the Smoke Control Association: (SCA) Guidance on Smoke Control to Common Escape Routes in Apartment Buildings (July 2020)."*
- 2.3. It is therefore noted that computational fluid dynamics (CFD) analysis has not yet been undertaken such that it has informed the development design presented to the LPA.
- 2.4. If the CFD analysis does not support the design in the planning application, this is likely to affect land use planning considerations such as the layout and appearance of the development. It will be for the applicant to demonstrate compliance at later regulatory stages.

Fire separation

- 2.5. Section 8 of the fire statement states: *"The commercial unit and car park will achieve 120 minutes fire resistance to separate from residential accommodations."* HSE notes a high degree of separation in Figure 12 of the Stage 2 Fire Strategy, which shows the amenity area connecting with the car park at storey 2 of Block B. This connection appears to be in contrast to the connection shown in Block A, which has imperforate separation between the carpark and residential occupancy.
- 2.6. Due to the height of the building, stated to be more than three storeys above ground floor level, connection between the two occupancies are not appropriate because the proposal does not meet the specific criteria listed in the sited fire safety standard for flats in mixed use buildings.

- 2.7. Design changes to remove the connection is unlikely to affect land use planning considerations and it will be for the applicant to demonstrate compliance at later regulatory stages.

Open plan apartments

- 2.8. Floor plan drawings show some apartments within the development have kitchen areas located adjacent/near the entrance door, the means of escape from bedrooms passing the kitchen area in order to achieve reasonable safety in the common corridor.
- 2.9. Item 3.3.1 of the Stage 2 Fire Strategy states: *“It should be noted that in the open plan apartments, occupants should not have to make their escape past a kitchen. Therefore, the kitchen shall be placed in a location remote from the means of escape route from the apartment. Where this is not possible an assessment will be made on the escape route and the proximity to the kitchen. This is to be developed at the next stage of design, however the minimum distance between the hob and the escape route should be 1.8m, with a minimum width of 750mm for the escape route.”* It is unclear whether supporting analysis has been carried out in relation to the proposal. Where radiative analysis is undertaken, consideration should be given to the occupancy characteristics of the resident/s including mobility impaired people, wheelchair users, people who are deaf or hard of hearing and blind or partially sighted people, as part of the analysis.
- 2.10. BS9991 states: *“the kitchen should be enclosed in open-plan flats having an area exceeding 8m × 4m. Cooking appliances in open-plan flats having an area smaller than 8m × 4m should not be adjacent to the entrance of the flat.”* Cooking facilities should be located at the most remote part of the flat to protect the means of escape.
- 2.11. Design changes in this instance, comprising internal alterations only, are unlikely to affect land use planning and it will be for the applicant to demonstrate compliance at later regulatory stages.

External terraces

- 2.12. It is noted that the storey 25 floor plan illustrates escape from the external communal terrace is by way of an unprotected area (unspecified amenity area). The cited fire safety standard states: *“b. The route across the roof should lead to a storey exit...”*
- 2.13. Figure 14 of the Stage 2 Fire Strategy illustrates corridor provision between the residential terrace and the storey exit of storey 25. HSE assumes a drafting error in the submitted plans, and that corridor provision will be included. It will be for the applicant to demonstrate compliance at later regulatory stages.

Hydrants

- 2.14. Section 13 of the fire statement states: *“Existing fire Hydrants will be provided within 100m of the wet riser inlet locations as currently shown on the plans referenced in Section 14. Where the existing hydrant is further than 100m from the building, a private hydrant will be provided within 90m of the wet fire main, or an alternative source of*

supply such as a water tank will be provided.” This is noted, and it will be for the applicant to demonstrate compliance at later regulatory stages.

Green roofs

- 2.15. Plan drawings illustrate residents' podium gardens located at storey 3 of blocks A and B, and C and D (storey 9 of block D, storey 18 of block C, storey 25 of block B and storey 28 of block A).
- 2.16. 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 \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/612312/Fire_Performance_of_Green_Roofs_and_Walls.pdf) 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 roofs are viable in relation to fire safety and to demonstrate compliance at later regulatory stages.

Yours sincerely

Y Spafford
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Fire Safety Information Assessor

Guidance on Planning Gateway One is available on the Planning Portal: [Planning and fire safety - Planning Portal](https://www.planningportal.co.uk/advice-and-guidance/development-types/building-and-engineering/development-types/building-and-engineering/planning-and-fire-safety/).

This response does not provide advice on any of the following:

- matters that are or will be subject to Building Regulations regardless of whether such matters have been provided as part of the application
- matters related to planning applications around major hazard sites, licensed explosive sites and pipelines
- applications for hazardous substances consent
- London Plan policy compliance

