

22 December 2025
Project Number: 5029228

Ms Fiona Williamson
Enfield Council
LBE Civic Centre
Silver Street
Enfield
EN1 3XA

1 Royal Court
Kings Worthy
Winchester
Hampshire
SO23 7TW

01962 834400
www.ridge.co.uk

Dear Fiona,

Shropshire and Cheshire House – Large Panel System, Upper Storey Risk Response

Thank you for your email regarding clarification of the risk level due to an explosion in upper stories of Large Panel System (LPS) Buildings.

We can confirm that upper stories of LPS buildings are at a greater susceptibility to collapse due to an explosion. This is primarily due to the lower weight imposed by fewer stories above. The load of upper floors, including dead loads (i.e. the weight of structural wall panels and finishes) and live load (i.e. occupants, furniture and belongings), is generally transferred vertically through the building to the foundations via the wall panels. At the topmost floor the wall panels are merely supporting the weight of the roof slab which is a relatively light load when compared with that supported by walls at a lower level. At the lowest level of an LPS structure, the wall carries the combined dead and live loads from all the floors above, meaning the load increases significantly.

When a blast occurs within a flat, the walls are subjected to a lateral force which pushes against the wall panel. It is this force which the wall is required to resist in an explosion. The load imposed by the building above is provides resistance against this lateral displacement force. At upper floors, where walls are most lightly loaded, the lateral loading can cause them to move out of plane or become dislodged entirely. This loss of alignment disrupts the intended vertical load path within the panel stack and may lead to removal of the load bearing panel therein removing support for wall and floor panels above. Furthermore, any displaced panels or debris falling from upper levels is likely to impose additional impact loads on the floors below, increasing the likelihood of a progressive collapse mechanism.

Within our original LPS inspection report dated January 2023 we have calculated that in the upper 8 storeys are specifically vulnerable to cross wall panels failing under these conditions.

It should be noted that this specific case does not remove or supersede other weaknesses within the block identified, and this letter should be read in conjunction with all previous documentation issued regarding the blocks:

- Structural Robustness Assessment Report (Latest Issue: January 2023)
- Risk Management Report (Latest Issue: February 2023)
- Reinspection Report (Latest Issue: May 2025)
- LPS Blocks Executive Summary Document (Latest Issue: July 2025)

All other aspects must be considered to ensure the global structural performance of the block is adequate to resist accidental loading events, such as explosions.



We trust that the above will satisfy your requirements. Should you have any further queries or wish to discuss the contents further, please do not hesitate to contact us.

Yours sincerely,



Sam Stevens
Structural Engineer
For Ridge and Partners LLP

