Department for Communities and Local Government

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Dear Local Authority Chief Executive

SAFETY OF LARGE PANEL SYSTEM BUILDINGS

You may be aware of recent work being undertaken with regard to the safety of four tower blocks in the London Borough of Southwark. I have previously written to local authorities with buildings similar to those that have been affected, and I am now writing more widely to all local authorities and housing associations to ensure you are aware of the situation and to outline actions you may want to consider in relation to any Large Panel System buildings within your control.

In the London Borough of Southwark, residents raised concerns about cracks in their buildings on the Ledbury Estate. Structural engineers were subsequently instructed by the council, to investigate the cause of the cracking. These investigations have concluded that the gaps reported by tenants did not compromise the structural safety of the building but did require remedial action to ensure continued fire compartmentation.

Whilst the investigations were taking place a separate historic issue was raised regarding the piped gas supply in the blocks, which may be relevant to other buildings across the country with large panel systems.

The issue of concern related to the gas explosion at Ronan Point in Newham in 1968. This caused a partial collapse of the block. Following the Griffith Review that year into Ronan Point, the government wrote to local authorities giving advice about the need for urgent appraisal and, where necessary, measures for the strengthening of existing blocks. Records of the buildings affected, and any work undertaken are therefore likely to be held at a local rather than national level.

Reports after the event suggested that the Southwark blocks which were built after Ronan Point, and other large panel system buildings across the country, had been strengthened. This would have been in order to make them safe to carry a piped gas supply and withstand the type of explosion that took place at Ronan Point.

The structural engineers investigating the blocks in Southwark were not able to locate records of the blocks' construction or any remedial works. In order to ascertain the structural integrity of the building the engineers undertook a range of invasive and non-invasive investigations. On the basis of those investigations and on the advice of their structural engineers Southwark Council decided, as a precautionary step, to turn off the gas supply.

The structural engineers have now submitted a report setting out findings from their preliminary investigations. It should be noted that a programme of further investigation is planned, involving intrusive and non-intrusive techniques in 10 per cent of the flats to develop an objective assessment of the structural condition of each of the four buildings. These investigations will continue until the end of November when further reports on the findings from these investigations are anticipated.

Southwark Borough Council has published the report which is available at:

www.southwark.gov.uk/assets/attach/4349/245112-05_REP-Ledbury-Estate-Issue%202.pdf

To date, our correspondence with local authorities has focused on high rise buildings of the same Larsen Neilsen/Taylor Woodrow Anglian large panel system common to both the Ledbury Estate and Ronan Point.

There are, however, other large panel system buildings still in use which utilise alternative systems with similar characteristics. Most of these buildings will have been subject to similar programmes of structural evaluation and strengthening over time. In light of the findings in Southwark, there are a number of points I would like to communicate more widely in relation to all large panel system buildings.

Fire compartmentation

The gaps which residents identified on the Ledbury estate are a common characteristic of large panel systems built between 1963 and 1978. They are caused by the large precast concrete panels expanding and contracting, and in some cases 'bowing' due to being wet and cold on the outside and warm and dry on the inside. These gaps tend to open and close as temperatures fluctuate.

Wherever these gaps are reported it is important that they should be sealed to restore fire compartmentation using a suitably flexible fire resistant mastic capable of withstanding the differential expansion and contraction of the large panel system. Tenants or leaseholders may not always report these gaps, preferring instead to cover or fill them themselves. Building owners should consider what process needs to be in place to ensure that fire compartmentation is maintained.

Gas supplied buildings

Buildings containing gas supplies need to be stronger in order to remain structurally stable in the event of a gas explosion. It is therefore recommended that you should ascertain whether buildings with large panel systems for which you have responsibility have piped gas, and if they do, you should take action to ensure that these buildings can carry piped gas safely. You should consider taking expert advice to assure yourselves of this.

Whether or not a gas supply is installed, it is important with all large panel system buildings that their structural history is known, and that their condition and continued structural integrity are understood and monitored. This should include desktop studies where necessary to establish what strengthening work has been undertaken, and to assess the original design of the building. In undertaking desktop studies, building owners may not be able to rely solely on their own records. They may also need to explore records prior to them taking ownership of the building and explore the accuracy of them. Depending on the records available and findings from non-intrusive investigations, building owners may wish to commission more intrusive forms of investigation to check condition and strength of critical connections.

The structural design of large panel system buildings may vary from building to building, even where they are ostensibly of the same original design. This means that each building needs to be assessed on its own merits. There are a number of reports available which may be helpful in understanding how to assess the large panel buildings for which you are responsible:

- *Large panel system. The structure of Ronan Point and other Taylor Woodrow-Anglian buildings* Building Research Establishment 1985 ISBN 0 85125 342 3;

- *The structural adequacy and durability of large panel system dwellings. Part 1 Investigations of construction* Currie, Reeves and Moore. BRE 1987 ISBN 0 85125 250 8;

- *Handbook for the structural assessment of large panel system (LPS) dwelling blocks for accidental loading.* Stuart Matthews and Barry Reeves. IHS BRE Press 2012 ISBN 978-1-84806-200-9;

- *Structural assessment of existing large panel system built dwelling blocks for accidental loads.* Stuart Matthews and Barry Reeves. The Structural Engineer. August 2012.

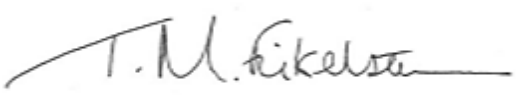
Ministers will be seeking views of the Expert Panel advising Government and from the Standing Committee on Structural Safety (SCOSS) about further advice that might be helpful to building owners.

Residents may be concerned about their building following recent reports they may have seen in the media. You may want to consider, therefore, contacting them yourselves to reassure them about steps you are taking.

I would also like to highlight that we will be writing to you separately today regarding the identification of all residential tower blocks with Aluminium Composite Material. Your Head of Building Control will also be receiving a letter regarding cladding wind loading and we will be publishing consolidated advice on the complete set of system tests.

If you have any questions or concerns then please contact the DCLG Tower Casework Team on 0303 444 1119 and towercaseworkteam@communities.gsi.gov.uk.

Yours sincerely,



Tamara Finkelstein
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