By Email

MLM Reference: RB/623006-MLM-ZZ-XX-CO-YF-0003

Paul Fleming
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25 April 2020

Dear Paul,

Block 4, 1-13 Clavering Court, The Ridgeway, Hertford, SG14 2FU - EWS1 External Wall Fire Review

At the time of design the fire strategy for the building was considered to have an uppermost storey less than 18m and therefore the fire safety guidance placed no controls on the type of insulation used within the building. For a building with an uppermost storey greater than 18m above ground the applicable fire safety guidance at the time of construction recommended that the building be provided with external walls that include insulation (and other products) that are composed of materials that are deemed to be a “material of limited combustibility” in accordance with Approved Document B (ADB). Other routes to compliance given in ADB include fire testing in accordance with BR 135, through full scale fire testing in accordance with BS 8414-1 or BS 8414-2.

There are two main types of external wall construction within the building; those with a brick outer facing on the lower levels and a rainscreen cladding system to parts of the fourth and fifth floor. The insulation used in all external walls is understood to be Kingspan K15, which is a rigid foam board consisting of PIR which is inherently combustible in nature.

Since the construction of the building was completed additional fire tests have been undertaken that demonstrate that the installed brickwork walls on the lower levels would have been suitable for use on buildings of any height. The appropriate fire test information is as follows:

1. BRE Global Test Report P112065-1000 – *BS 8414-2:2015 + A1:2017 Test on brickwork cladding system with Kingspan Kooltherm K15 insulation*, Issue 1 26th October 2018, and:

2. BRE Global Classification Report P112065-1001 – *Kingspan Insulation Ltd Classification of fire performance in accordance with BR 135 Annex B*, Issue 1 31st October 2018.

The rainscreen clad parts of the building are understood to have used an Equitone product, which has a fire performance of A2-s1,d0 to EN 13501-1:2018 and therefore complies with the recommendations for buildings of any height.

Kingspan K15 has been successfully fire tested to BS 8414 with a number of rainscreen

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cladding systems, including one with a cement particle board. Additionally the Equitone rainscreen cladding system has been successfully fire tested in systems that use other PIR insulation. Therefore whilst not formally fire tested with the type of rainscreen cladding system installed within the building, it is considered that the fire performance would be favourable (albeit cannot be guaranteed) if subjected to a fire test.

The above assessment is made on the assumption that cavity barriers have been provided in accordance with the fire strategy and that the external wall construction is installed in accordance with the design details provided. Having reviewed photographic evidence taken during the construction stage we believe that the building was constructed in accordance with the design intent. However, we take no responsibility for any shortfalls in the standard of construction on site or any amendments to the building since the building was complete.

It is also considered that by compliance with the above requirements the building would adhere to the requirements contained in the Ministry of Housing, Communities and Local Government *Advice for Building Owners of Multi-storey, Multi-occupied Residential Buildings* document, dated January 2020.

I can confirm that this review has been undertaken by myself and that I am a Chartered Engineer with the Institution of Fire Engineers and are therefore suitably qualified to undertake such an assessment, in accordance with Note 3 of the EWS1 form.

Yours sincerely

Steven Marshall
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Director - Fire Engineering

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# Form EWS1: External Wall Fire Review

**Objective -** This form is intended for recording in a consistent manner what assessment has been carried out for the external wall construction of residential apartment buildings where the highest floor is 18m or more above ground level or where specific concerns exist (Note 1). It should not be used for other purposes. It is to be completed by a competent person with the levels of expertise as described in Notes 2 and 3 below.

**This review is for the sole and exclusive use of the client organisation named below. No responsibility is accepted to any third party for the whole or any part if its contents (Note 4). For the avoidance of doubt, the term 'third party' includes (but is not limited to): any lender who may see the review during the process through which they come to make a loan secured on any part of the Subject Address; and any prospective purchaser who may see the review during the process through which they come to purchase an interest in any part of the Subject Address.**

Client organisation: United Living

**Subject Address (One form per block)**

| Block or building name | Street | Town | Postcodes (all built) |
|---|---|---|---|
| Block 4, 1-13 Clavering Court | The Ridgeway | Hertford | SG14 2FU |

I confirm that I have used reasonable skill and care to investigate (Note 5) the primary external wall materials (typically insulation, filler materials and cladding) and attachments of the external walls of the above building/block.

**OPTION A(Note 1) – Where external wall materials are unlikely to support combustion**

I confirm that:

- I meet the professional body membership and competence criteria as described in Note 2
- In relation to the construction of the external walls, to the best of my knowledge the primary materials used meet the criteria of limited combustibility (Note 6) or better and cavity barriers are installed to an appropriate standard in relevant locations (Note 7)
- In relation to attachments to the external wall (*tick one of the following*):
  - ☐ **A1** - There are no attachments whose construction includes significant quantities of combustible materials (i.e. materials that are not of limited combustibility (Note 6) or better);
  - ☐ **A2** - There is an appropriate risk assessment of the attachments confirming that no remedial works are required
  - ☐ **A3** – Where neither of the above two options apply, there may be potential costs of remedial works to attachments (Note 8)

**OPTION B(Note 1) – Where combustible materials are present in external wall**

I confirm that:

- I meet the professional body membership and competence criteria as described in Note 3
- I have used the reasonable skill and care that would be expected of the relevant professional advisor to assess the level of fire risk (Note 9) presented by the external wall construction and attachments (*tick one of the following*)
  - ☑ **B1** - I have concluded that in my view the fire risk (Note 8) is sufficiently low that no remedial works are required
  - ☐ **B2** - I have concluded that an adequate standard of safety is not achieved, and I have identified to the client organisation the remedial and interim measures required (documented separately).

| | | | |
|---|---|---|---|
| Name | Steven Marshall | Qualifications | BEng(Hons) MSc CEng MIFireE MIET |
| Organisation | MLM Group | Professional body | Institution of Fire Engineers |
| Signature | [signature] | Date | 25/4/2020 |

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## NOTES

**Note 1 -** This form includes two options. Option A is for buildings where the materials used in the external wall would be unlikely to support combustion. Option B is for buildings where Option A does not apply and a more detailed review (and hence higher level of fire expertise) is required. The signatory should use either the Option A approach or the Option B approach and delete/cross out the unused option. Within each option there are sub-options, the user should tick the box of the relevant sub-option.

**Note 2 –**For Option A, the signatory would need the expertise to identify the relevant materials within the external wall and attachments and whether fire resisting cavity barriers and fire stopping have been installed correctly. However, this would not necessarily include the need for expertise in fire engineering. The signatory should be a member of a relevant professional body within the construction industry.

**Note 3 -** For Option B the signatory would need expertise in the assessment of the fire risk presented by external wall materials and should be a member of a relevant professional body that deals with fire safety in the built environment. This could be a Chartered Engineer with the Institution of Fire Engineers or equivalent.

**Note 4 –** Should there be a desire for a third party to rely on this form, they should contact the signatory's organisation.

**Note 5 -** The investigation must include evidence of the fire performance of the actual materials installed. For both Options A and B this would often include either a physical inspection by the signatory to this form, or inspection of photographic or similar information gathered by a 3rd party (subject to the signatory having sufficient confidence in that 3rd party). It would also include the standards of construction of key fire safety installations such as cavity barriers. Given the nature of external walls this would typically involve investigations in a limited number of locations (actual number to be determined by the signatory). Review of design drawings may assist but on their own would not be sufficient. If the wall construction includes multiple wall types, the investigation should include each type.

**Note 6 –** The term 'limited combustibility' is as defined in BS 9991:2015.

**Note 7 –** Cavity barrier fire performance and locations to be based on relevant fire safety design guidance documentation such as BS 9991 or relevant statutory guidance

**Note 8 -** In this situation the signatory should notify the client organisation that an appropriate risk assessment of the fire risk of the attachments might be required.

**Note 9 -** The assessment of fire risk as described above includes that insofar as is necessary to ensure a reasonable standard of health and safety of those in and around the building, all external wall constructions and any external attachments (e.g. balconies) of the building:

- Resist spread of fire and smoke so far as is reasonably necessary to inhibit the spread of fire within the building, and
- Are constructed so that the unseen spread of fire and smoke within concealed spaces is inhibited, and
- Adequately resist the spread of fire over the walls, having regard to the height, use and position of the building.

The assessment takes account of regulations and published design guidance as were current at the time of construction as well as those which are current at the time of this assessment. It cannot be guaranteed that it would address guidance and regulations which may be introduced in the future.

**Note 10 -** The signatory may wish to provide their client organisation with a separate report on their investigation to support their statements in this form. That separate report would not normally

need to be supplied to the valuer along with this form (unless there are specific issues which may require it).

**Note 11 –** This form will need to be reassessed if any significant changes occur to the external wall or attachments of the building and is valid for up to 5 years from the date at which it is signed.

## Flow Chart

## Flow Chart