

Submission on behalf of Panel Systems Ltd

1) Synopsis of Panel Systems

- 1.1) Panel Systems (PSL) are a supply only manufacturer of Composite Panels used in the Construction industry and other specialised markets.
- 1.2) For construction projects we manufacture panels that are used primarily to achieve a predetermined thermal performance. They would comprise outer skins of metal with an insulating core.
- 1.3) The choice of panel core is determined by a combination of factors including thermal, fire, cost, resistance to moisture and suitability for a panel construction. The range of insulating core material includes extruded polystyrene (Styrofoam), polyurethane, polyisocyanurate, phenolic and mineral fibre. PSL bonding capability enables panels to be manufactured from any of these cores.
- 1.4) PSL input to a panel specification will vary for each project. Architects and specialist Glazing contractors may seek our advice on panel composition or they may formulate a performance specification we need to achieve at quote stage. Finally, there are enquiries where we are supplied with a list of panel dimensions, colours and performance criteria for which we would quote.

2) Fire Classification of Panels

- 2.1) PSL do not manufacture a panel that has been subjected to any independent fire testing. The fire performance of the panel will be based on the performance of the individual elements of the panel.
- 2.2) There are several basic queries in terms of the fire performance of panels that may form part of designing the panel composition.

These may include: -

- a) Class 1 Surface Spread of Flame
 - b) Class 'O' to Building Regulations
 - c) Non-Combustible Core
- 2.3) To achieve (a) we may propose an aluminium skin, to achieve (b) a polyisocyanurate foam and for (c) a lamella mineral fibre.
 - 2.4) Where fire performance is not stated we would offer a panel with Styrofoam as the core.
 - 2.5) PSL are not qualified to provide fire assessments on Construction projects and would only propose a panel to meet a specification as proposed by an Architect or similar.

3) Aluglaze

- 3.1) Aluglaze is a generic brand used for a wide range of panel compositions.
- 3.2) Aluglaze is primarily an insulating composite panel which can be designed with a range of fire performance depending on the choice of panel core.

- 3.3) Aluglaze is not a cladding panel and cannot be installed using proprietary cladding fixing systems.
- 3.4) The product literature provided in the folder LITERATURE outlines a choice of panel cores and details the likely fire performance based on specific panel cores. Furthermore, it details that where fire performance is key requirement we can advise the specifier on selecting the appropriate panel core.
- 3.5) There is a summary of literature documents in the folder named SUMMARY OF LITERATURE.

4) PSL and Grenfell Tower

- 4.1) The folder TRANSACTIONS list the key elements of this supply contract. A description of the transactions is summarised in the spreadsheet named SUMMARY OF TRANSACTIONS.
- 4.2) On January 19th, 2015 our Sales Office received a telephone call from Harley CW and this was recorded in a Sales Daybook. (Ref. 1-Daybook)
- 4.3) This was followed up with a detailed enquiry with panel sizes and colours (Ref. 2-Enquiry Email).
- 4.4) The panels were described as Spandrel panels which would imply they were to be used around floor slabs. The panel thickness of 28mm would indicate they were to be glazed in a window framing system.
- 4.5) Delivery of the panels was to CEP Architectural Facades St. Helens.
- 4.6) The enquiry did not specify any performance criteria in terms of thermal or fire.
- 4.7) PSL were not aware of the project other than the enquiry from Harley CW.

- 4.8) It was not known if the project was new build or refurbishment. There was no knowledge of the building height and PSL was not aware of any specific limitations on material choice in glazing or cladding applications.
- 4.9) A quote for supply only was formulated (Ref. 3-Quote). The quote was for Aluglaze panels with details on the panel components. i.e. Aluminium and Styrofoam. The quote value was not significant at £38,132. There was no site visit to Grenfell Tower or CEP Architectural by PSL personnel.
- 4.10) An order was received in line with our quote (4-Harley CW Order) with a delivery to CEP Architectural Facades.
- 4.11) There was no indication from Harley CW or CEP on the installation method of the panels or any post processing of the panels by CEP.
- 4.12) There was a no. of despatches to CEP and a sample delivery note is detailed (5-Sample Dly Note). A Sample invoice for this delivery is also attached (6-Sample Inv).
- 4.13) The last delivery of panels on this order was June 2015.
- 4.14) Harley CW ceased trading in June/July 2015.
- 4.15) In September 2015 we received a two small orders for panels (£1611.44) from Harley Facades (7-Harley Facades Orders). The new orders were for a different panel specification incorporating Kingspan TP10 in lieu of Styrofoam. TP10 is a polyisocyanurate foam with improved fire performance compared to Styrofoam. TP10 is foil faced and an alternative polyisocyanurate foam was used in the Aluglaze panel. The change in specification was determined by Harley Facades.
- 4.16) A sample Delivery Note and Invoice for Harley Facades are attached (8-Harley Facades Dly and 9-Harley Facades Inv). It should be noted these two small orders were delivered direct to Grenfell Tower.

5) Literature (Item 3)

- 5.1) The folder LITERATURE contains all product data on the different materials used in the manufacture of the panel supplied by PSL for Grenfell Tower.
- 5.2) There is also a copy of literature relating to our Aluglaze/Composite panel.

6) Fire Test Reports (Item 6)

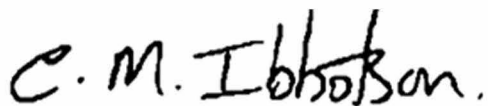
- 6.1) PSL confirm that there are no supporting fire test certificates relating to the Aluglaze panels supplied to Grenfell Tower.
- 6.2) Fire performance is as determined by each element of the Aluglaze panels with the panel core most relevant.
- 6.3) PSL are not aware of any independent fire assessment of the refurbishment of Grenfell Tower including an actual test or desktop evaluation.

7) Support Communications (Item 9)

7.1) A full search has been undertaken on all emails and paper documents received by the Company for the listed organisations. The results are as follows: -

- a) Harley CW/Facades – only that detailed above.
- b) CEP Architectural Facades – only as detailed above as a delivery point.
- c) Rydon Maintenance – no correspondence.
- d) Studio E Architects – no correspondence.
- e) Exova Warringtonfire – no correspondence.

For and on behalf of Panel Systems Limited

A handwritten signature in black ink that reads "C. M. Ibbotson." The signature is written in a cursive, slightly slanted style.

Christopher Ibbotson

Managing Director

Panel Systems Limited