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Job No: 304096
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BY EMAIL ONLY

28/01/2021

Dear Ian,

Travelodge Manchester Central Arena – Glass Rainscreen Panel

Background

Travelodge Manchester Central Arena is an operational hotel within Manchester. The building is over 18m in height when measured from outside ground floor to the floor level of the highest hotel floor. Warringtonfire Consultants Ltd have been appointed as fire consultant to review the existing façade construction on the building and to advise Travelodge on the most appropriate route to compliance and remedial works for the building.

The cladding systems at present are considered to be non-compliant with the requirements of the Building Regulations. The main issues pertain to cavity barriers which have not been installed as expected, and the use of combustible cladding panels and combustible materials within the cladding systems themselves. Remedial works is therefore proposed to rectify this.

This statement pertains to the glass rainscreen system on the building.

Glass Rainscreen

NON-COMPLIANCES

The glass rainscreen system is installed as a bonded glass system and covers a small section of the north elevation on Francis Street as outlined in red in for clarity.



Figure 1 – Glass Rainscreen Highlighted on North Elevation

From investigations into this system it was found that;

- The backboard of the system was an OSB board, which is a combustible material and therefore is considered not to be compliant with the Building Regulations. The material would be a medium for fire spread through the system.
- Additionally, upon inspection it was noted that there was a lack of cavity barriers installed within the system, this is also considered to be non-compliant against the Building Regulations. The lack of barriers would provide unhindered route of fire through the system.

PROPOSED REMEDIAL

The proposed remedial work to address the two main issues but whilst maintaining the same type of glass panel, is to provide a new backboard to the system using a non-combustible material and to install cavity barriers within the system. However, to meet the functional requirement of Building Regulation this new system would be required to be tested as a whole in a full scale BS 8414 test and meet the associated BR 135 assessment criteria.

However considering the glass panels are bonded to the system, and the relatively low failure temperatures of glass when compared to furnace conditions it is considered unlikely that this type of bonded glass system would pass a BS 8414 test (although this would need to be confirmed by testing).

An alternative solution would be to use a panel similar in appearance to the glass rainscreen, but metal in construction and mechanically fixed to rails. The adjacent grey panels will likely be replaced with this type of system (which will also need to be tested). It is considered that this metal panel system would be more likely to pass a BS 8414 test and achieve the required performance criteria than a glass rainscreen system.

Yours sincerely,

JGore

JGore, (Jan 28, 2021 14:30 GMT)

Jordon Gore
Senior Consultant
Warringtonfire Consulting Limited

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Reviewed by:	<u><i>Ben Rogerson</i></u> Ben Rogerson (Jan 28, 2021 14:47 GMT) Ben Rogerson Principal Consultant (for and on behalf of Warringtonfire Consulting Limited)	28/01/2021
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