



Skanska UK
12 Dyott Street
London
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13th January 2020

For the attention of Richard Kirkpatrick

Re: MEDIUS HOUSE – GEORGIAN BARS TO FIRE-RATED WINDOWS

Dear Sir,

Further to recent discussions we need to advise the following.

We are required to install decorative window bars to a number of locations on the South Elevation of the building into window sets that are Fire-Rated.

Due to the fire rating, the system supplier confirmed that so long as the bars did not penetrate their tested system, and the project fire consultants were happy with bars bonded to the glass face they did not object but that they could not comment on likely performance.

As you will be aware from the installation of the Georgian Bars to the North Elevation, such systems are normally physically integrated with the window system using a combination of adhesives to the glass face, a mastic seal to the bar edges and a retaining clip which mechanically secures the bars to the window framing.

On the fire-rated windows there is no opportunity to fix mechanically and due to this the decorative elements would be entirely reliant on the adhesive to the glass face alone.

These windows are South-facing and during sunlight cycles wide variations in temperature of the glass and the metal adhered to it will be likely.

As a result we expressed our concern about the requirement to both Apt and Skanska in the design team meeting on 3rd March 2021 where it was agreed that the Georgian Bars in this location should be omitted as their performance could not be guaranteed and they posed a safety risk. This was minuted by Razvan Dumitrescu and confirmed to attendees via email on 4th March.

It was subsequently confirmed to us that the planning requirement needed to be met. Razvan then emailed again on 15/3 expressing concern that the bars were going to be an issue, but the element was confirmed as being necessary to achieve construction status.

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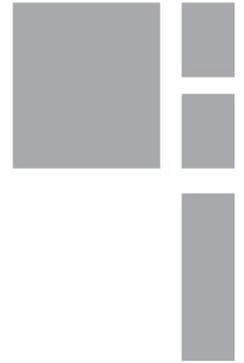
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The design was subsequently progressed and approved through to construction phase where the elements were procured and installed using the tape as the sole adhesion. During these works the absence of mechanical fixings was picked up by the façade consultants (Wintech) who noted that the bars on Level 7 had started to debond due to mechanical action between the glass and the bars during heat cycles in this high-level South facing area. They questioned the absence of mechanical fixings and during subsequent meetings we agreed to instate additional clips to hold the bars in position.

The additional clips are small aluminium angles fixed only into the cover cap (therefore not penetrating the tested window system) which physically restrain the bars. These have been fitted to most of the windows affected, but even before the process is complete, it is clear that these alone are not successfully holding the bars onto the glass face. This is because the only restrained element is the final 25mm of the bars near to the perimeter caps, the remainder still being able to detach as the adhesive fails to prevent the mechanical action between glass and metal.

The above was noted by Wintech, who in their report number 13, noted that there is nothing to prevent differential movement of the elements due to the bars only being supported in place to the framing (rather than rigidly fixed) or prevent de-bonding of the adhesive.

We feel that we have warned in advance that the application was not something we would recommend and that having been told we must proceed with it, we have used the strongest adhesive tape available and then further implemented additional clips in an attempt to try and make the situation work.

Sadly, we feel our attempts are not successful and we feel we have no further options other than to advise that this element should be omitted as it is not practical and is visually defective. We feel the additional clips obviate some of the safety risk, but risk remains while the only rigid fixing is via an adhesive that we can see is failing.

We understand the planning constraint, but given that the rear elevation is largely concealed from view we feel that a revision to the planning is the most sensible course of action here.

Yours sincerely

For and on Behalf of the Fleetwood Group of Companies

Ross McDougall
Project Manager

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