

**From:** M.Smith@maxfordham.com  
**Sent:** 30 October 2014 18:40  
**To:** David Gibson  
**Cc:** Claire Williams; philip.booth@uk.arteliagroup.com; Simon Lawrence (slawrence@rydon.co.uk); Neil Crawford  
**Subject:** RE: Grenfell and windows  
**Attachments:** 20120905 - Grenfell Tower - Stage C(B).pdf

Evening David

I have reviewed the analysis carried out previously for our Stage C report and the case of a single tilt and turn window within the confines of the existing opening is directly comparable with model reference 'C2'. What this shows is that when in the 'tilt' position, the worst case single bedroom flats on the East and West facades are well above our target figures.

In practical terms what this implies is that the large windows may be open in the 'turn' position with no restriction on opening size for a considerable amount of time during the summer months to prevent overheating. This is shown in the graphs in figures 4-3 and 4-4 of the report (attached below). The East and West facing single bedroom flats are the worst case conditions, but it can also be seen that the bedrooms within the two bedroom flats are also adversely affected:

#### C2\_Tilt and Turn Windows and Trickle Ventilation

	Living hours above 28 C		Bedroom hours above 26 C	
	Existing	Proposed	Existing	Proposed
<b>New Build Target</b>	47		40	
<b>North West</b>	71	72	42	120
<b>North East</b>	70	72	40	121
<b>East</b>	139	319	81	280
<b>South East</b>	85	92	54	167
<b>South West</b>	100	104	58	166
<b>West</b>	144	299	84	281

The table above shows our estimate of the existing case versus the model reference 'C2' for all facades showing the number of hours that the rooms are above what the Chartered Institute of Building Services Engineers deem as comfortable temperatures. The existing case is based on the current sliding window arrangement with the opening restriction installed. Our intent as outlined in the Stage C report was to match the existing case as a minimum, with an aspiration to meet the new build targets where possible.

In our original proposal the open louvre on the smaller purge window was included to allow this to be opened fully to prevent overheating and left in that position whilst eliminating the fall risk due to not restricting the opening.

In order to come in below the recommended peak number of hours above target temperatures it will be necessary to either accept that a large window is potentially going to be fully opened in the turn position,

or reinstate a smaller window of the same dimensions of the previous purge window that may be fully open alongside the larger window in the 'tilt' position. Both of these options could be achieved in the smaller structural opening if acceptable, though Studio E may have some comments on the proportions.

Whilst there will be a slight negative effect on the amount of daylight within the flats if the window size is reduced to match the existing structural opening, the daylight factors for the existing flats are in the order of 2-3 times what is required and so this will not reduce it below recommended levels.

Kind regards,

Matt

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To: "m.smith@maxfordham.com" <m.smith@maxfordham.com>,  
Cc: "philip.booth@uk.arteliagroup.com" <philip.booth@uk.arteliagroup.com>, "Simon Lawrence (slawrence@rydon.co.uk)" <slawrence@rydon.co.uk>,  
"Claire Williams" <clwilliams@kctmo.org.uk>  
Date: 27/10/2014 09:44  
Subject: RE: Grenfell and windows

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Matt,

Following our design review meeting last week it has been agreed to pursue the opportunity of reviewing the window design if we can do this quickly, and if the planners treat this as a non material change.

Can you please review and amend the original analysis report on overheating and ventilation to suit the proposed new window sizes. Please liaise with Rydon on this.

(Claire is on leave, returning Friday, and will tie up any paperwork on her return).

Can you please acknowledge receipt of this request, and confirm timescales for the review.

Many thanks

**David Gibson**  
Head of Capital Investment



t: [REDACTED]

m:

a: The Network Hub, 292a Kensal Road, London, W10 5BE

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**From:** Simon Lawrence [<mailto:slawrence@rydon.co.uk>]

**Sent:** 24 October 2014 18:42

**To:** Claire Williams

**Cc:** David Gibson; philip.booth@uk.arteliagroup.com

**Subject:** RE: Grenfell and windows

Hi Claire,

Due to the importance of this item and the potential implications I just wanted to confirm what we are being asked to do. Apologises if some of this has already been said.

- I will liaise with Amy to ascertain what impact altering the window widths at this stage will have on the current planning application. The view is that if it can be dealt with via a Non Material Amendment over the 28day notice period then KCTMO intend to proceed with the design change. My understanding from our conversation is that you would like the comment to the Planners to be based along the lines that *'At the inception of the scheme several years ago it was the intention to increase the window sizes so as to better the current daylight and ventilation conditions. In addition to this the original Planning Application showed a new external louvre which covered a section of each window opening thereby reducing the daylight to this glazed area. One of the reasons for increasing the window width would have been help compensate for this. In the current scheme the external louvres have been removed as now deemed unnecessary by KCTMO. The focus of the recently submitted Planning information was on the Cladding Materials and colours scheme rather than the window dimensions. On reflect the KCTMO team now feel that the disruption caused to the residents by having to make the major structural alterations to every window within their occupied homes does not outweigh the potential benefits by bettering their current daylight and ventilation slightly. It is felt that slight alteration to window width is unlikely to be noticed significantly against any drawings previously submitted. However as there has been some personnel changes within both the KCTMO and LPA teams so some of the history may no longer be known. Therefore it was felt by KCTMO best to highlight this matter prior to carrying out the works'* You thoughts on this wording would be appreciated so nothing is submitted which you aren't in agreement with.
- Building Regs – From experience with refurbishment and having looked at the approved documents I don't feel that this area is a big risk. If you were carrying out a standard window replacement programme without Cladding then you would have no choice but fit new thicker frames within the existing aperture, thereby slightly decreasing the daylight. Building Control would feel the thermal benefits using modern materials would outweigh any negatives. Also the required background ventilation figures for replacement of existing windows are lower than what we've been asked to achieve here.
- Max Fordham's report on overheating and ventilation – Max Fordham carried out the studies based on the original larger window configuration and made the recommendations which formed the tendered scheme. I think it would be prudent for you to get them to run a new analysis on keeping the new windows the same width as existing. That way it will not only flag up any potential issues but there will also be an audit trail so it doesn't look like their original recommendations were ignored. I'm happy to assist and liaise with them on this but I'm guessing that they will need your instruction to proceed.

As you know I am on annual leave next week but I will continue to take calls and emails on this to help push it forward. Can I suggest we review this on the early part of the following week before we reach the current window order deadline.

Regards

[REDACTED]

Simon Lawrence, ACIOB, MInstLM  
Contracts Manager

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**From:** Claire Williams [<mailto:clwilliams@kctmo.org.uk>]  
**Sent:** 24 October 2014 16:40  
**To:** Simon Lawrence  
**Cc:** David Gibson; [philip.booth@uk.arteliagroup.com](mailto:philip.booth@uk.arteliagroup.com)  
**Subject:** RE: Grenfell and windows

Simon

As discussed, the response from Studio E is not one I would forward to the planners.

I think that the comment should be along the lines that we would want to retain the current structural opening dimensions to reduce any disruption to the residents, while installing a window size to ensure resident comfort and also meeting building regulations standards for refurbishment. Will you please take the lead on this and communicate with Amy Peck, as you need to be managing the design and programme?

I found an M&E report from Max Fordham as above. It says Sept 2012, not August as the report that Bruce referred to. There are sections on overheating here, which refer to insulation standards, but it still refers to the old window format with purge window and pivot window. I believe that the new resident controlled heating systems will make an impact on the thermal capacity of the building. I suspect that some of these assumptions may have changed, but I am not conversant with the detailed design.

In relation to the below, the TMO would happily work with the middle option – but cannot entertain a full planning application as the last option.

Please ring me if you have any queries.

Claire Williams  
Project Manager



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m: [REDACTED]  
a: The Network Hub, 292a Kensal Road, London, W10 5BE

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**From:** Simon Lawrence [<mailto:slawrence@rydon.co.uk>]  
**Sent:** 24 October 2014 13:06  
**To:** Claire Williams  
**Cc:** [philip.booth@uk.arteliagroup.com](mailto:philip.booth@uk.arteliagroup.com); Nick Valente; Simon O'Connor  
**Subject:** RE: Grenfell and windows

Hi Claire,

Following our conversation and your email regarding planning response to Amy. I've been in contact with our Façade Contractor (Harley) over the last couple of days regarding window lead times and programme options. We haven't run every scenario exactly yet but I've laid out our early thoughts as below:-

- Based on the current design and cutting the reveal walls back - At the moment windows are on a 7 weeks lead time which means we need to place the finalised order w/c 3<sup>rd</sup> Nov in order to get some fitted ahead of time for the 12<sup>th</sup> Jan 2015 start inside the flats.
- If the change is a non-material amendment – Send NMA application Friday 7<sup>th</sup> Nov. Validated by LPA within 8

days. Decision or response with 28days means that we are likely to know Mid December meaning the windows obviously won't be on site for the Jan start. Knock on affect of this is that the residents will have separate visits to the HIU install. However those visits will be a lot less disruptive. I was hoping that we could just re sequence the window install within the cladding period without affecting the overall duration. But we need still need to check the affect on the cladding grid work and cladding panel setting out. If we can get a solution for these elements then we can carry on full steam and slot the windows in later.

- If the change is a full Planning Application i.e. 12+ weeks – This will definitely have a negative programme and end date affect unless KCTMO are happy to proceed at risk.

Lets see what today's conversations bring.

Regards

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Simon Lawrence, ACIOB, MInstLM Contracts Manager	
T M	

**From:** Claire Williams [<mailto:clwilliams@kctmo.org.uk>]  
**Sent:** 23 October 2014 17:16  
**To:** Simon Lawrence  
**Cc:** [philip.booth@uk.arteliagroup.com](mailto:philip.booth@uk.arteliagroup.com)  
**Subject:** Grenfell and windows

Simon

I spoke to Amy Peck this pm (planning consultant/Marc Watterson's replacement).

She is going to talk to Claire Shearing who is the new planning officer for RBKC. I asked her if she needed any information to take this forward, but she said no, that she wanted to start the discussion off just with a chat.

I will update you when I hear, hopefully tomorrow, how the ground lies.

However, you may want to consider what you would need to put in place if there is any chance of the planners looking at this favourably, and any implications on programme. I will keep you posted.

I am on site tomorrow morning to get info from your site team on what we need to put in the next newsletter, ie photos and text re works due in November.

Thanks

Claire Williams  
Project Manager



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