
Grenfell Tower Inquiry

Day 20

July 14, 2020

Opus 2 International - Official Court Reporters

Phone: +44 (0)20 3008 5900

Email: transcripts@opus2.com

Website: https://www.opus2.com

Tuesday, 14 July 2020

(10.00 am)

SIR MARTIN MOORE-BICK: Good morning, everyone. Welcome to today's hearing.

You may remember that, some time ago now, we started hearing evidence from Mr Sounes, one of the architects from Studio E. We had to break off his evidence at that time, but I'm glad to say that we're going to be able to resume it this morning.

So could I ask Mr Sounes to come to the witness box, please.

MR BRUCE SOUNES (continued)

SIR MARTIN MOORE-BICK: Yes, do sit down, Mr Sounes.

Before we begin, I think it's right that I should remind you publicly that you took an oath to tell the truth when you started giving your evidence, and that continues to be the case: you are still on oath.

All right?

THE WITNESS: Yes.

SIR MARTIN MOORE-BICK: The other thing I think I should mention, because a lot of time has passed since you were last here, now you're in the course of giving your evidence, it's very important that you don't discuss your evidence or anything relating to it with anyone else, right, and that includes Mr Kuszell, who I see is



back sitting in the room.

THE WITNESS: Yes.

SIR MARTIN MOORE-BICK: So don't talk to anyone else, either in person or by phone or anything else about your evidence until you have completely finished. All right?

THE WITNESS: Understood.

SIR MARTIN MOORE-BICK: Good. Thank you very much.

Yes, Ms Grange.

Questions from COUNSEL TO THE INQUIRY (continued)

MS GRANGE: Yes, thank you.

Good morning, Mr Sounes.

When we broke off last time, which was on 11 March 2020, we had started looking at the topic of insulation, the insulation that sat behind the rainscreen panels, and we were part-way through a detailed consideration of the documents and the chronology and how Celotex FR5000 came to be in the employer's requirements and the NBS specification. Do you remember?

A. Yes, I do.

Q. What I'm going to do is just pick up where we left off on that topic, and I want to start by looking at an email, which is at {SEA00004737/2}. Just to orientate yourself within this, this is an email from Mr Smith -- is it Matt Smith? --



A. Yes.

Q. -- of Max Fordham to you on 18 June 2012, and the subject is "Grenfell Tower - wall build-up", and he says:

"Afternoon Bruce

"Do you have an idea on the likely wall/cladding build-up yet? What U-value are you targeting?"

Then he talks about some early indications from the acoustic survey. So he is asking you what U-value are you targeting; do you see that there?

A. Yes.

Q. Now, do you agree that it was for Studio E, as the lead consultant and the lead designer, Studio E would have all the necessary information to make an assessment as to what the target U-value would be?

A. I knew that the U-value target would be governed by part L.

Q. Yes.

A. That I knew.

Q. Yes.

A. I knew I could look it up.

Q. Yes.

A. That's the answer to your question, I think. The reality is in most of my experience, and particularly with Max Fordham, which goes back a long way, we tended



to look to them to propose a U-value.

Q. I see, yes.

Do you agree in this email he seems to be asking you what U-value you are targeting?

A. Yes.

Q. Yes, and is that how you understood it at the time, that he was looking to you to give some indication from your perspective as to what you were targeting?

A. Yes, he's asking us. I knew even then, I think, that he had only recently graduated, so I can understand why he might.

Q. Yes.

Would you agree with this: while a building services engineer like Max Fordham might recommend a U-value target, actually it was ultimately Studio E's responsibility, as the architect and lead designer, with all the information that you had, to decide actually what U-value was feasible and appropriate on the project?

A. I think we could have overruled something that was put forward by Max Fordham as the lead designer, yes.

Q. Yes.

A. I agree with that. We would have to have a good reason not to go with it.

Q. Yes.

A. In other words, as you say, it would not be feasible, and in that case, yes, we would overrule it.
Q. Yes. Yes.
A. Yes.
Q. Do you agree that when you were developing the design to the concept stage, that's RIBA stage C, you would have had to have considered lots of aspects of the external wall design up to that point?
A. Yes.
Q. And that would include the type of cladding to use, it would include the depth of the existing walls and the columns, and also the type and thicknesses of the insulation that would sit behind the rainscreen. Do you agree that all those kind of factors would feed into the concept design stage?
A. I think the zone particularly of the insulation was the most critical.
Q. Yes.
A. So you have described the build-up, which is insulation, cavity and cladding. The cladding is relatively nominal in terms of build-up, but the insulation is significant, and on Grenfell Tower, the diamond columns were very significant because they abutted the windows. So the thickening -- offsetting of the cladding from the face of those columns potentially could impact on the



windows --
Q. Yes.
A. -- sizes, so yes.
Q. I think what you are saying is that particularly the outer rainscreen element is very thin.
A. Relatively.
Q. Then you have a cavity, but then you potentially have quite a thickness of insulation, so that's a key consideration when you are looking at that build-up; is that correct?
A. Yes.
Q. Do you agree that Studio E would have to take into consideration a range of factors, including things like the client's budget, the client's overall requirements, the planning requirements, and any technical issues, such as buildability and regulatory compliance, when they were looking at that external wall build-up?
A. I would say that's correct, that's the context we're working in.
Q. Would you agree that all that information would potentially feed into an assessment of what an appropriate U-value should be for the project?
A. Yes.
Q. Would you agree in that way -- and I think you have confirmed it in your earlier answer, that you said you



could overrule, if necessary, on an U-value -- Studio E was ultimately responsible for co-ordinating the design strategy as a whole of the external wall?
A. We were responsible for co-ordination, yes.
Q. Would you agree that, in contrast, the building services engineer might not be aware of certain bits of information that would be relevant to that ultimate choice as to how you build up that wall?
A. It wouldn't be their interest, but, you know, we did discuss things and they were aware of what would happen. They're experienced engineers. I think to say that they wouldn't know is maybe not correct.
Q. But they might not be as familiar as you, for example, with the client's budget requirements and, you know --
A. They wouldn't be as interested.
Q. Yes.
Can we turn to some minutes from a design team meeting that was held on 25 June 2012. This is at {SEA00004864}. We can see that date at the top there, Monday, 25 June, and we can see you're there and present as part of that list.
If we can go on to page 2 {SEA00004864/2} and look at the final paragraph under "Services". So it's at the bottom of that page, it's the final paragraph before "Acoustics", if we could just blow that up. If we can



just read that paragraph, it says, "MF" -- so that's Max Fordham; yes?
A. Yes.
Q. "... indicate target U-values for walls as 0.15 W/m2K and 0.22 W/m2K for SE windows, subsequently corrected to 1.6 ..."
Then it says:
"(limiting U-values given in Part L1B are 0.30 and 1.8 respectively)."
Do you see that there?
A. Yes.
Q. So did you read this as Max Fordham saying target U-values for the walls were 0.15, but the limiting U-value given in part L was actually higher than that, it was 0.30? Is that how you read that at the time and understood that discussion?
A. I believe I clarified that after the meeting. I think there is an email where I clarified that.
Q. When you say clarified that, what do you mean, clarified that it was 0.15?
A. No, that it was 0.13. The limiting value was 0.13 -- 0.3, sorry. In other words, what the upper bound we needed to work to was.
Q. What, that it wasn't that? Is that what you're saying?
A. No. What I'm saying is, at the meeting, the 0.15 figure

was put forward.
Q. Yes.
A. And I, either at the meeting or after, sought clarification as to what the limit would be under part L.
Q. I see. Does that mean that the parts in brackets went in after the meeting and the result of that --
A. Well, I obviously wrote the minutes after the meeting, but I can't recall when I clarified it with Max Fordham.
Q. I see.
Did you have any thoughts at the time about the appropriateness of that U-value as a target figure? Did that say anything to you in terms of how ambitious that was, for example?
A. I think I used the word somewhere "aspirational", or -- yes, I think it was quite low.
Q. Did you ever check Approved Document L during your time on the project to see what U-value that guidance required for the thermal performance?
A. I don't recall doing so.
Q. Were you aware that, as per this advice from Max Fordham, and the words in brackets, Approved Document L recommended that in circumstances where the entire wall at Grenfell was to be insulated, a U-value of at least 0.30 watts per metre square kelvin was to be



adopted; that was the guidance?
A. That's what that bracketed phrase --
Q. Yes.
A. -- confirms.
Q. So that means, doesn't it, that it's a more generous --
A. Yes.
Q. -- piece of guidance in Approved Document L, the 0.3. If it's higher, it's a less efficient --
A. Correct.
Q. -- thermal insulator.
A. The principle being under L1B that it's a refurb and, therefore, there is less expectation of meeting the current requirements.
Q. Yes, yes, yes.
A. So Max Fordham were proposing the current requirements to bring the building up to current standards, whereas the guidance didn't require that.
Q. No. And in fact, were you aware at the time that there was even more flexibility in the Approved Document L guidance, in that if it was not technically and functionally feasible to achieve the 0.3, then it just had to be upgraded to the best standard that's technically and functionally available? Did you know that there was even more flexibility in those circumstances?



A. I can't remember specific knowledge of that --
Q. Yes.
A. -- no.
Q. So I think we've established that in meeting the requirements of part L, there is in fact considerable latitude in terms of the U-value that could be adopted on this project.
A. To meet the requirements of part L, yes.
Q. Yes, yes.
Were you aware when you were having these discussions about target U-value -- I mean, you have mentioned the 0.3 in the meeting, but in your mind, did you think to yourself: well, I know ultimately we've got some flexibility on this if that becomes necessary? Was that something that occurred to you?
A. Well, there it is, the 0.3.
Q. Yeah, okay.
A. It's double.
Q. We're going to keep going chronologically through the sequence of events, so now I'm going to turn to an email of 5 July that you sent to Rockwool. If we can pull this up, this is at {SEA00004967}.
A. Can I --
Q. Yes.
A. -- just say that 0.3 is double 0.15 in terms of



performance.
Q. Yes.
A. In retrospect, it has occurred to me that Max Fordham were equally aware of the flexibility --
Q. Yes.
A. -- of that margin.
Q. I see. Okay. Yes.
A. It -- that it probably would have tolerated a change in insulation spec.
Q. I see. Yes.
A. And so I think they would have been aware of that at this time.
Q. Yes, okay. I'm primarily interested in whether you had that awareness of the flexibility available to you.
A. I was aware of the flexibility; I wasn't aware that it would allow us a straight switch between a foam insulation and a mineral wool.
Q. I see, okay.
A. Which I think it would.
Q. So let's turn, then, to that email, {SEA00004967}. So this is an email that you sent on 5 July 2012 to tech.enquiries@rockwool.co.uk; do you see that at the top?
A. Yes.
Q. It's about the Grenfell Tower regeneration, the subject

matter, and I think you have sent a couple of drawings, and you say:

"We are looking at overcladding an existing 1970s residential tower block in London. It is 24 storeys.

"The Service's engineer have indicated a target U-value for walls of 0.15 W/m2K. The existing building has pre-cast concrete spandrels 250mm thick."

Then you go into some detail about the drawing, and then in the next paragraph you say:

"Please could you advise the appropriate insulation type and thickness for this application and to achieve the desired U-value?"

Do you see that?

A. Yeah.

Q. And then you've got a last comment about the roof area, which we don't need to look at.

So you seem to email a general enquiries email address within Rockwool at that point. Does that mean that you didn't have any specific contact yourself at Rockwool at that time, so that that was the logical place to be asking?

A. Every company has their own approach. That email address is tech.enquiries. I think I was aware of -- or I phoned and discovered that they would like an email sent.



Q. Yes.

A. No, if you're asking, some companies might have individuals that, you know, area managers, that's not the way Rockwool --

Q. I see.

A. -- tended to work, not for a U-value enquiry.

Q. That's helpful, yes. Okay.

So we can see that you sent off that email. Can we then look at another email on 5 July. This is {SEA00004973}. So this is you emailing Mr McQuatt and Mr Smith and Mr Watts at Max Fordham, and you attach something called "Rockwool duoslab". You say you're disappointed in the first line that a meeting didn't happen today; don't worry about that.

Let's look at the last paragraph, you say there:

"We've sent off enquiries to Rockwool and Kingspan on the insulation and await their reply. The 0.15 U-value you've asked for looks to me a bit aspirational - see attached which suggests approx 450mm+ of insulation."

Do you see that there?

A. (Witness nods).

Q. So I think that's the email you were prefacing earlier in your evidence, where you say it looks a bit aspirational.



What you do is you have attached something to this email. It was a spreadsheet, and I want to turn to have a look at that. This is at {SEA00001334}. It appears to be an analysis, I think, of the thickness that would be required of the Rockwool to achieve the U-value required.

Can you remember, did you put that attachment together?

A. I did, yeah.

Q. You're slightly grimacing, Mr Sounes.

A. I'm not grimacing.

Q. No, no, sorry. Do you want to say something about that before I ask some questions about it?

A. I'll explain what I was doing, and I never got a response to it, so I don't know if anyone looked at it.

The figures with the orange background are taken direct from what would have been the pdf brochure or -- of the Rockwool Duoslab products, in other words the thickness and the U-value for that assembly, and I think the assembly included the wall and the lining, and it's clear it only went down to 0.2 --

Q. Yes.

A. -- which is short of the target. So I graphed it, and because -- although the insulation has the biggest



impact on the U-value, it's not a linear relationship, as the graph demonstrates. All I was trying to do was, well, if I extrapolated the line --

Q. Yes.

A. -- where would that leave me, roughly.

Q. Exactly, yes.

A. So it was a sort of amateur detective.

Q. That's really helpful. So you effectively put the dotted line on --

A. Yes.

Q. -- to try and work out, to get to 1.5, roughly what thickness would you end up with. And that was your analysis; that wasn't an analysis you had got from somebody else?

A. I was aware that they had published these figures and that the ratio was not linear.

Q. Yes.

Just thinking back to the language that was used in that covering email, you say, "The ... U-value you've asked for looks to me a bit aspirational". So you say the "U-value you've asked for" to Max Fordham.

Did Max Fordham actually ask for that U-value? What do you mean by "asked for"?

A. At the meeting they put forward a U-value of 0.15, so ask -- that was their proposal.

Q. I see.

In your witness statement at paragraph 43.7, if we can just turn that up, at {SEA00014273/20}, you say:

"The level of insulation on the building was originally proposed by Max Fordham at the Project Meeting on 25 June 2012. They proposed a U-value of 0.15 w/m2K."

So we see that there.

What I want to put to you is that, at the time, it was merely a suggestion rather than something they were actually requiring. It was a suggested recommendation by them. Is that how you interpreted it at the time, or did you think that they were being more definite with you, that it had to be that?

A. There was nothing in a sense mandatory about their request. I mean, it was aspirational, and an aspirational -- for the sake of the project to maximise the thermal efficiency of the building.

Q. Yes.

A. I didn't -- it's clearly not required, but I've done a lot of work with Max Fordham and this is very much a feature of their work and our work with them --

Q. Yes.

A. -- had been to -- I mean, aspirational doesn't mean irresponsible; it just means trying to do the best you



can.

Q. Yes, yes, I understand.

Now --

SIR MARTIN MOORE-BICK: Sorry, can I ask: did they ever say at that meeting what the basis of the 0.15 was? Or did they just --

A. I think I knew or it was mentioned that that is -- that was the current requirement for a new-build. I think I was aware of that at the time.

SIR MARTIN MOORE-BICK: Yes, thank you.

MS GRANGE: Yes.

Now, Mr Smith of Max Fordham responds the same day. Can we look at that email next. So this is {SEA00004978}. So you have sent him your analysis of the build-up, and you have said it looks a bit aspirational, and if we look at the first paragraph, he says in the second sentence:

"It would be good to discuss your proposed cladding/window system at the same time [that's at a meeting]. Those thicknesses of Rockwool seem a bit high - does that also include the thermal bridging from fastenings/frame etc and a ventilated cavity? For a glass fibre slab (excluding fastenings etc) we'd expect to be able to achieve 0.15 U-value with approx 180 mm (material only)."



Do you see that there?

A. Yeah.

Q. Then he goes on:

"A phenolic foam insulation would give greater insulation for the depth. Hopefully the response from Kingspan may be closer to target."

Then he says something in the final paragraph about windows, which we don't need to worry about.

So when you got this, do you agree that Mr Smith of Max Fordham does seem to be questioning whether there really was a need for 450-millimetre depth of Rockwool? He thinks that's a bit high.

A. Yes.

Q. Did you ever go back and clarify that with Max Fordham, and say, "Well, can we do something more precise to have a look at what the thicknesses might be"?

A. No. No, I don't think there's any evidence that I did.

Q. He is raising in his email the question of thermal bridging from fastenings and frame, et cetera, and he is saying that that could have a significant influence on the thickness of the product that would be needed.

Can you explain why he was saying that was relevant? Did you understand that at the time, why it might be relevant?

A. Yes, I think it reflects he didn't look at my email.



The Rockwool figures would have accounted for the thermal bridging of the brackets.

Q. Is the point that if you use thermally bridged brackets, there is less heat transfer or heat loss through the bracketry, so they can help you keep your insulation narrower while still achieving the U-value that you want? Is that the point?

A. No, I think in any calculation the brackets have to be factored as a thermal bridge. Even with any thermal sort of neoprene thermal spacer, I think they still represent a bridge which would be factored into any calculation.

Q. But did you think at this time about what he might be suggesting is that if you used thermally broken brackets, that that thermal bridging can be improved?

A. I think the standard thermal -- thermally broken brackets were standard, I think.

Q. I see, okay. So your analysis did think about that, did it?

A. I believe the Rockwool figures reflect that, because it showed a full build-up.

Q. Yes.

Now, you got a response from Rockwool on 24 July 2012, if we can turn that up. This is at {SEA00005276/2} at the top.

So we see this is from a Mr Pritchard at Rockwool to you on that date, 24 July 2012, and he says this:

"Dear Sir

"Please accept my sincere apologies for the delay in getting back to you.

"Further to your email, we would normally recommend the use of our Rainscreen Duoslab for these types of construction; however, due to the low specified U-value the thickness needed would be exceptionally high, probably beyond the point of sensible building practice."

Then he goes on and talks about the roof in the last paragraph.

Just before I ask you some questions about this, can we scroll then up to the top of page 1 {SEA00005276/1}, and what we see is that you then forward that email from Rockwool to Mr Smith and Mr McQuatt at Max Fordham, and you say:

"Andrew, Matt,

"I asked Rockwool about achieving 0.15 U-values and this is their response, below.

"We have been working on a maximum of 250mm build up to the spandrel zones. The decision on the final system is pending, but assume a 50mm panel / vent zone, leaving you 200mm for insulation. The geometry at the columns



results in a reduced build up of approximately 200mm (150mm insulation) at high level. At low level ..."

I think you then say what you're thinking about.

Then you say this in the next paragraph:

"Pushing the cladding line any further out will probably have buildability (below) and aesthetic issues."

Do you see that there?

A. Yeah.

Q. Now, just on that, can you explain how you arrived at the geometric specification of between 150 millimetres and 200 millimetres for the part of the cavity in which the insulation would sit? That's what you're saying in that email.

A. How we came up with those figures?

Q. Yes, how did you arrive at that, can you remember?

A. I can't remember exactly how we came up with those figures, no.

Q. Did you ever consider increasing the size of the cavity in order that a mineral wool insulation could be used within the cladding system?

A. I think, based on that response from Rockwool, and if you do try and draw on what becomes more than half a metre of projection, it starts to become unfeasible. The -- just the projection of the brackets. I think the



reason, I believe, the -- Rockwool were advising against it is the product itself is not that rigid, so it would require, I think, support of some sort.

Q. Yes, yes.

A. So I think they recognise it as not being feasible for their product.

Q. I see, yes.

In that third paragraph, that single sentence where you say:

"Pushing the cladding line any further out will probably have buildability (below) and aesthetic issues."

Can you just explain exactly what you meant by buildability issues?

A. I'm referring to the comment from Rockwool that there wasn't a means of sort of putting a frame up to support the insulation of that depth. That's the build --

Q. I see, yes.

A. As I said, it's not practical for that depth, for that product.

Q. I see.

A. Now, here I'm -- that's my interpretation of what he said.

Q. Yes, yes.

How could you be confident that there were any



buildability issues, if you hadn't confirmed that the 450-millimetre thickness of Rockwool would in fact be required to achieve the target U-value of 0.15?

A. I'm sorry? How would I ...?

Q. How could you be confident that there would be buildability issues if you hadn't actually confirmed that 450 millimetres of Rockwool would in fact be required to achieve the 0.15 U-value?

A. Does that email from Rockwool confirm both, both thickness and the ...

Q. Let's go back to the email from Rockwool, just so you have it in front of you, {SEA00005276/2}. So he says:

"Further to your email, we would normally recommend the use of [it] ... however, due to the low specified U-value the thickness needed would be exceptionally high ..."

Do you agree that he doesn't actually give a thickness?

A. No, he doesn't quantify it, no.

Q. So he has not said to you it's going to be 450 millimetres.

A. (Shakes head).

Q. That was your extrapolation on that graph, I think.

A. (Witness nods).

Q. Do you agree what he is just saying is in general terms

he thinks the thickness would be exceptionally high?
A. Yes. Beyond the point of sensible building practice. I'm not obviously sure what he meant by that.
Q. And what I'm asking is whether you ever got that definitively confirmed, where they got someone to do an analysis to check: would it in fact be 450 millimetres?
A. I didn't, but of course, I guess I might have ... no, I didn't.
Q. Okay, yes.
You also, in your email, said that there might be buildability issues and aesthetic issues with having a greater thickness of mineral wool. What did you mean by aesthetic issues?
A. I wasn't sure how that was going to work around these diamond columns.
Q. Yes.
A. For instance, on the corners, it would look ... probably something you would want to avoid, I think.
Q. I see, yes.
A. I saw that as -- whether it was feasible, we didn't know. Well, we had just been told it's not feasible, but I think aesthetically it would have been undesirable.
Q. Yes, yes. And is that because the columns are already



a kind of thickness out from the --
A. I think --
Q. -- spandrels, so the concrete columns already stick out, so if you are putting then a big thickness on to that, you were worried how it might look at the corners?
A. At the corners, yeah. I think the bigger issue is how that would impact on the windows next to the columns.
Q. But you wouldn't know exactly how it would play out in terms of aesthetic issues, would you, if you haven't done the precise calculation? You wouldn't have known exactly what it would be.
A. No. 450 did sound excessive. I mean, it's half a metre, once you have added the cavity.
Q. Yes.
Is it the case that, following the exchange of these emails, Studio E gave up on the possibility of using Rockwool as an insulating material in the building?
A. That's implying we should have pursued it.
Q. Well, let me put it more neutrally: was there any thought given after this, these exchanges of emails, to using Rockwool? Were there any further investigations about that, that you did or you know anyone else did?
A. I think after -- following this email and following the -- which I think you'll come to -- the one from Kingspan, I did pass on a glass wool product --



Q. Yes?
A. -- to Max Fordham. I think after that I did not pursue any other alternatives, because it would appear the thermal conductivity of the foam products, Rockwool or any other fibre couldn't compete with.
SIR MARTIN MOORE-BICK: Did you think at all about simply abandoning the 0.15 target in favour of a more relaxed target?
A. As I said, we've done a lot of work with Max Fordham, and they pride themselves as an aspirational engineer, and we've gone with them. When I say gone with them, we've participated in numerous designs where they have done exceptionally sustainable buildings, and by and large that sustainability is driven by passive -- passive measures. So we -- and we supported that. So where possible we would, for instance, on our school work, we would try and naturally ventilate the classrooms rather than mechanically ventilate. So this emphasis on passive sustainability was something that we shared with Max Fordham over a number of years.
So, without good reason, I at that point had no -- I couldn't see any reason to abandon the 0.15. It was in the project's interest to try and achieve it.
SIR MARTIN MOORE-BICK: Thank you.
MS GRANGE: Given that reliance on Max Fordham to provide



specialist advice about the thermal performance, did you ever think about asking them to run the calculation as to precisely what thickness would be required of the Rockwool?
A. I didn't think of it, because I -- I didn't.
Q. No.
A. No.
Q. But do you agree that, given the ambiguity in Mr Smith's email, you could have actually confirmed what the thickness actually would be with Max Fordham? You could have actually asked them to run that calculation, you would have got a precise figure back from them?
A. They did eventually do one.
Q. With the Rockwool?
A. Not with the Rockwool, no, but with the Celotex.
Q. Yes. But I'm just asking: they could have done that calculation for the Rockwool if you had asked them to, couldn't they?
A. I guess I was challenging them by that little exercise that I did.
Q. Yes.
A. But I didn't necessarily expect them to -- I mean, I'm -- I don't know what they thought of it, but they weren't prompted to disprove it.
Q. Yes.

Can we just look at something in the Inquiry's expert report, Mr Hyett's expert report, {PHYR0000003/19}. I don't know whether you have had a chance to consider this, but Mr Hyett has run the calculations to see what thickness of mineral wool could be achieved and what U-value you would get. His calculations are that, with a mineral wool, it's possible for the spandrel condition to produce a 0.14 U-value, so that's under the 0.15, against a 250-millimetre mineral wool insulation build-up. So it's perhaps thicker than you were envisaging in your email of 200, but it's 250. And for the column, it would be a 0.17, so this is a slightly worse U-value than the 0.15, against a thickness of 180 millimetres mineral wool for the columns.

Have you considered those before giving evidence?

A. I think our opening statement pointed you to the Rockwool website.

Q. I beg your pardon?

A. Studio E's opening statement, or perhaps it was the appendix, pointed you to the Rockwool website, with its online calculator.

Q. Right, okay.

A. Which came up with the same figure of 450 to achieve 0.15.



Q. I see. So you're still saying you think it would be 450 millimetres?

A. I wouldn't -- I wouldn't be so presumptive to think that my calculation was better or more accurate than the figures published by the manufacturer.

Q. I see.

Mr Hyett's calculations, just for completeness, appear at pages 20 {PHYR0000003/20} and 21 {PHYR0000003/21}, if we could just briefly look at those.

So this is the calculation that he has done there for the columns, and it gives you the 0.17 there and the 180-millimetre mineral wool build-up, and then I think over the page at 21 we get the 0.14 and the 250-millimetre mineral wool thickness for the spandrels. Both of those U-values would be within the higher level of 0.30 that was in Approved Document L.

Is it possible that the difference between Mr Hyett's calculations and the information which you were looking at at the time via Rockwool is that -- I'm going to put this to you again -- he has used thermally broken brackets which can make a difference in terms of the thermal efficiency and explain why a smaller thickness of insulation is required on his calculations? Is that possible, that that might explain the



difference?

A. I expect that Rockwool gave some thought to the figures that they published and whether the figures seem excessive because they've allowed for -- haven't allowed for thermal breaks may be one factor, there may be others. That's obviously a question for them.

But in the first instance, in researching the insulation, I certainly gave greater priority to the figures that were published by the suppliers than a spreadsheet that I could have done myself.

Q. I see, okay.

Can we go on and look at another email, {SEA00014346}. This is an email from Mr Rek to you dated 25 October 2013. So this is later in time than the exchanges we've just looked at. It's an email -- the subject is "BREEAM", do you see that there?

Is it right that BREEAM means the BRE Building Research Establishment Environmental Assessment Method?

A. Yes.

Q. Is that right?

A. Yes.

Q. Is it right that that's an established method of assessing, rating and certifying the sustainability of buildings?

A. Yes.



Q. Mr Rek attaches his potential scoring assessment comments against BREEAM.

Then if we go to page 2 {SEA00014346/2}, under the heading "Mat 01 Environmental Impact of Materials", he talks about some assumptions about what's been achieved, and then there's this comment that I just want to ask you about. It's in black as distinct from the blue text. He says:

"It also seems MF [Max Fordham] went for 'ott' U values to achieve maximum credits available for Thermal Performance Criteria which come to force if Green Guide Rating credits do not manage [to] achieve the top 25 credits available."

Do you see that there?

A. Yeah.

Q. I just wanted to ask you about what you understood to be the phrase "'ott' U values". Do you think he is saying over the top U-values?

A. Well, I did follow his evidence; yes, I believe he confirmed that.

Q. Did you ever discuss at the time with Mr Rek that he thought the Max Fordham U-values were over the top?

A. I must be honest, the whole subject of BREEAM wasn't one that I was much involved during the project.

Q. Forget BREEAM for a moment. At any time during the

project, did you have a discussion with Mr Rek about Max Fordham's U-value and, in particular, the 0.15 for the external wall and whether that was over the top? Do you remember ever discussing that with him?
A. "Over the top" has got a sort of pejorative sense, which I do not recall.
Q. No.
A. No.
Q. So you didn't recall having a discussion in those terms?
A. No.
Q. Do you recall having any discussion with him about how ambitious that U-value target was?
A. It wasn't ambitious, it was what the standard was for a new-build. It wasn't superinsulated; it was trying to match new-build.
Q. I see.
Did you ever go back to Max Fordham and discuss the possibility of increasing the U-value at any stage on the project?
A. No.
Q. Can you help us as to why that discussion didn't happen, why you never went back to them and discussed increasing it?
A. Well, with hindsight, obviously, no one challenged the insulation.



Q. Yes.
A. That's ...
Q. Now, if we can bring up -- so I'm picking the chronology back up in July 2012 now, okay? I want to look at {SEA00004986}. We can see that on that date you emailed Mr Smith of Max Fordham, copying in a number of others, including at Max Fordham, and you say:
"Matt
"Kingspan have come back with 200mm phenolic to achieve 0.15 U-value. See attached."
Then you say:
"I've attached a datasheet for glass fibre product. I'm rusty on calculations but I interpret this product as having twice the thermal conductivity of phenolic, and therefore needing twice the thickness."
Do you see that?
A. (Witness nods).
Q. Again, I think you anticipated we would come to this earlier in your evidence.
Can we just have a look at the glass fibre insulation product datasheet that you attached to this email. We can look at that at {SEA00001337}. So this is headed "Superglass, April 2012, Cladding Mat 37", and we see in the installer text just underneath that heading it says:



"Cladding Mat 37 is a resilient mineral wool insulation mat with a high tensile strength for use in the walls and roofs of profiled metal clad buildings."
Do you see that there?
A. Yeah.
Q. So it also appears to be a form of mineral wool insulation. If we look in the bottom of page 1 in that little green bubble, we can see from the first bullet it's saying:
"Fire performance - Fire classification A1 non-combustible."
Now, you said in your covering email that you were rusty on calculations; did you ever think to check your calculations in respect of the Rockwool product with Max Fordham, or with Rockwool themselves?
A. Isn't that just a repeat of your earlier question?
Q. It is, but it was with specific reference to you having said in that email that you were rusty on calculations.
A. Well, I was comparing the K value there of 0.037 with the Kingspan.
Q. Yes.
A. Because I knew that the insulation has the biggest impact on the U-value, so you could just look at those figures and --
Q. Yes.



A. -- see roughly where they sit next to each other.
Q. When you were looking at this product, did you note the fire performance of this product?
A. No.
Q. That wasn't something you looked at?
A. No.
Q. I think you said earlier, back in March, that you wouldn't have understood what the A1 meant; is that right? The European classification method.
A. What it actually specifically means, no, I can't say I know now, but non-combustible means non-combustible.
Q. Yes.
Now, if we can turn to {SEA00005818}, this is an email of 15 August 2012, and I want to pick up on what you say -- so this is to Mr McQuatt of Max Fordham, and it's about the external wall and BREEAM, and I want to pick up in the last paragraph, you say:
"We need to discuss U-value/insulation spec. I found a u-value calculator here ..."
And you give the link for that:
"... and made a stab at insulation thickness to achieve the 0.15 U-value. Attached is from the website. I'm not sure how to make allowances for the brackets. Remember we have an issue with the insulation around the columns and I don't want you advertising something we a)

aren't showing and b) we can't achieve. Can we discuss?"

Do you see that there?

A. Yeah.

Q. Now, can you recall what those calculations showed in terms of the thickness of insulation that was needed?

A. No. I haven't revisited this.

Q. You say there, "I'm not sure how to make allowances for the brackets". Could that be not sure how to make allowances for thermally broken brackets that we were discussing earlier?

A. No, for the thermal bridging that the brackets represent.

Q. I see.

A. You have to allow that a certain amount of heat is going to find its way through the brackets.

Q. And you weren't sure how to do that calculation; is that right?

A. Using that online calculator.

Q. Yes, I see, I see.

Now, Mr McQuatt of Max Fordham replies to this on 16 August, the following day. Can we go to that at {SEA00005840}. He says this:

"Bruce,

"I have done the following calculations to work out



how much insulation that we would need to achieve 0.15 overall. The Celotex FR5000 is a solid PIR board, data sheet attached, I think this is the only type of product that will give us the required performance, Kingspan also so a version of this."

Then he says:

"Could you comment on the spandrel panel?"

Et cetera.

So he provides at this point the datasheet, the product datasheet, for the Celotex FR5000 product; is that right?

A. Yes.

Q. Now, did you know what PIR board was referring to in that second line? He says, "FR5000 is a solid PIR board". Did you know what PIR was?

A. Yes. Well, I knew what it stood for: polyisocyanurate.

Q. Yes.

A. And I think I mentioned previously that I had been aware of it for some time.

Q. What was your reaction when you received this email about the suitability of the Celotex FR5000 product for use in the overcladding system?

A. I can't recall.

Q. Did you have any concerns about the reference to PIR board in this email? Did that ring any alarm bells for



you?

A. No. I think, going back, PIR and phenolic had become all but standard in every project at this time.

Q. When you say standard for every project, can you be clear what you mean? Every project you had worked on?

A. Every project that I had worked on. There were exceptions, but invariably some form of foam board was used in the façades and on the roof.

Q. I think we clarified at the very beginning of your evidence you hadn't done a residential overcladding above 18 metres before; is that correct?

A. Yes.

Q. So these other projects were low-rise projects --

A. Five storeys.

Q. -- is that right? Yes.

Now, I just want to pick up at this point something that you have said in your witness statement, if we can look at that at this point. This is {SEA00014273/55}. I want to look at the very last sentence at the top of that page on 116.2. This is where you're discussing the Celotex FR5000, and you say this:

"None of Max Fordham, CEP, Exova or any other specialist I had discussed the Project with had raised this as a technical design issue."

I think you mean "this" as in its fire performance;



is that right?

A. It's class 0 fire performance.

Q. Yes. So you're saying none of those bodies on the project had raised the Celotex FR5000 and its class 0 fire performance as a technical design issue, that's what you're saying?

A. Yes.

Q. Is it your evidence that, because neither Max Fordham nor CEP nor indeed Exova ever raised the question of compliance of FR5000 with you, Studio E had no reason to think that it was non-compliant with the Building Regulations or the guidance in ADB?

A. Is that the only reason? I can't believe it's the only reason. I think the products -- these types of products were widely used.

Q. Yes.

SIR MARTIN MOORE-BICK: Can you just help me with this: you say that these foam boards had become quite common on projects that you had dealt with --

A. There had been a distinct tightening of the part L requirements over five, ten years. The dominance of --

SIR MARTIN MOORE-BICK: What I'm really interested to know is this: you obviously knew about those boards, from what you have told us, and I suspect you knew that they were quite efficient. Your first instinct, on the other

hand, was to reach for the Rockwool.
A. Yes.
SIR MARTIN MOORE-BICK: Why was that?
A. It's the safest. There was a time when BRE -- BREEAM assessments would only give a class A -- sorry, would only give Rockwool category A status, so maximum points could only be achieved with Rockwool. When I started as a young architect, that's all we used. So ... yeah.
SIR MARTIN MOORE-BICK: All right, thank you.
MS GRANGE: Can I just be completely clear: when you say it's the safest, do you mean the safest in terms of fire performance or the safest in terms of its thermal performance?
A. No, I would say safest in terms of fire, but also its sustainability in a broader sense. It embodied carbon recyclability. It was always regarded as the safest choice.
Q. Did you have any awareness, once the Rockwool fell out of the picture, that what you were looking at with other products was less safe from a fire performance point of view? Did you have any awareness of that at the time?
A. I would have to agree that you can't put them side by side and say the mineral wool isn't less likely to burn; obviously it's less -- it's not going to burn. But at the time I was of the view, which I think I've



said, that the Celotex didn't burn, it just charred. It was -- the whole history of polyurethanes had been solved and it was safe to use in cavities. That was my understanding at the time.
Q. Yes.
Did there ever come a time when you asked Max Fordham, before the NBS specification was prepared, whether the use of FR5000 was compliant with the Building Regulations and the guidance in Approved Document B? Were they ever asked that question?
A. No.
Q. Now, we've looked, and we looked in detail in your evidence last time, at the advice and the written advice produced by Exova. Is it right that there was never any written advice from Exova about the suitability of FR5000 before the NBS specification was prepared?
A. No.
Q. Or any verbal advice from Exova? Did you ever discuss the suitability of FR5000 before you put the NBS together?
A. I personally did not, no.
Q. Did it ever occur to you that it might be a good idea to ask Exova to comment specifically on the suitability of using the Celotex FR5000 product?
A. No, it didn't, and ... why I say personally it never



occurred to me is Adrian Jess and Tomas Rek had independent conversations with Exova, so I don't personally know of any discussions with Exova of -- I'm not aware that they had any conversations with Exova and I'm aware that I didn't have any conversations with Exova.
Q. Okay, yes.
A. We did not -- I know you're coming to this, but we did not put forward proposals to Exova because we, as I saw it, didn't have a firm scheme for them to assess.
Q. Yes.
A. I mean, whether it was one form of board or another, I knew that it's just a board, it's just a zone, at stages C and D.
Q. Okay.
Turning to CEP and thinking about them for a moment, did you ever specifically raise the proposed use of FR5000 with them?
A. I don't recall.
Q. Now, turning then to your witness statement, can we go to {SEA00014273/114}, and I want to look at paragraph 270. You say here:
"I got in touch with Harley on 11 September 2013 and we arranged to meet on 27 September 2013. We arranged to meet near London Bridge station, and the meeting took



place at a coffee shop in Hays Galleria. It was Ray Bailey, Mark Harris (both Harley), Tomas Rek (Studio E) and me."
Then you say:
"Before the meeting, Tomas Rek emailed Mark draft elevations, details, wind load calculations and U-value targets."
Now, I'm going to come back to ask you about this Hays Galleria meeting when we're talking about the aluminium composite panels, because we're going to look at that in detail in a moment, but I just want to focus for a minute on the insulation.
You then say at paragraph 271, just below that, in your statement, if we can read it out, you say:
"I was of the understanding that PIR products were generally safe to use in cavities. This was based on my general awareness that it had been widely used in the construction industry in the last 20 years, during which time I had not heard it constituted a fire hazard (my understanding was that it would only char when subjected to a flame), and it had also been marketed with certification from the Loss Prevention Certification Board as part of steel composite panels which are very widely used. When I met Harley I believe I had a lingering uncertainty about PIR because this was

a high-rise and I had not been involved in a high-rise before. I believe, but I cannot say for sure, that I asked Ray Bailey a question about the acceptability of using rigid foam insulation on a high-rise building, probably at the end of the meeting. If I did, I don't recall he provided a definitive response."

Do you see that there?

A. Yes.

Q. Now, you have set out your understanding about PIR products at the beginning of that paragraph and what your general awareness was. Was that your understanding at the time you met Harley on 27 September 2013?

A. Yes.

Q. Yes.

Where you say that you thought they were generally safe to use, was your expectation that that would also be in high-rise buildings as well, prior to that meeting?

A. Given that it had been put forward by Max Fordham, that had been my understanding. But I believe I did ask the question.

Q. Where did your understanding come from that PIR products only char when subjected to a flame? What was that based on?

A. I'm having deja vu. I remember in my previous practice,



would have been 1998/1999, the Celotex representative visiting and presenting their products, and part of that presentation -- I say, it wasn't a CPD, it was a round-the-table discussion which covered the polyurethane fires, and I have looked it up, I believe he did refer to the Sun Valley fire where it was -- prior to that -- sorry, prior to the reduction in use of polyurethanes, they represented a hazard because they could burn within cavities, they could smoulder long distances, and the message I was -- and understanding that I had over 20 years was polyurethane doesn't do that -- sorry, polyisocyanurate doesn't do that. If you check Wikipedia, there is a video which gives you an illustration of what I understood.

Q. Okay.

You then go on and you're talking about having, you believe, a lingering uncertainty about PIR because it was a high-rise. Was the lingering uncertainty in relation to fire safety or some other lingering uncertainty?

A. No, it would have been its fire.

Q. It would have been its fire?

A. Yes.

Q. Do you have any recollection of discussing insulation with Mr Bailey of Harley at that meeting? Can you



actually recall discussing the insulation, as distinct from the rainscreen panels?

A. I believe I asked him about the acceptability of using a rigid foam, and I might not have mentioned it was Celotex.

We did discuss insulation in the round, because we discussed the assembly of the façade, the sequence, how it would all be supported. So in a general sense we did discuss insulation.

On reflection, I believe one of the reasons I might have been prompted to ask, not just any kind of lingering uncertainty, but I think we were shown several pictures of the Ferrier Point Tower under construction, and those in-progress construction you could quite clearly see were -- the insulation was mineral wool.

Q. Yes.

A. That's in hindsight. Those pictures have been disclosed by the Inquiry, but we didn't receive digital copies until six months later, I believe.

Q. Do you know now exactly which pictures you're referring to?

A. Do you want me to ...?

Q. Have you got a reference?

A. I've got a reference. 00003497.

Q. Is that a Studio E document?



A. Sorry, SEA, yes.

Q. SEA, okay {SEA00003497}. I'll take you to that in a moment.

Can I just pick up on something you said. You said you asked him about the acceptability of using rigid foam insulation on a high-rise building. What did you mean by acceptability?

A. I think that is probably a regulatory question as to whether the regulations would accept it.

Q. From recollection, would Mr Bailey have understood it -- sorry, I can't ask you that. Is that how you meant him to understand what you were asking him? Were you clear that he had understood you were asking about the compliance with the Building Regulations? Or is it possible -- I mean, can you actually remember using the word "acceptability"?

A. No. I can't remember what words I used. "Is it okay?" You know, I can't -- I mean, I would speculate. I cannot recall.

Q. When you say "Is it okay?", is that you saying what you might have said to him?

A. I might have said that, I can't remember. The reason why it wasn't minuted, in my mind I didn't think it was a key issue. You know, I did a set of notes from this meeting, and I didn't minute this, I didn't think it was

something I needed to report back on, and I ... I don't even think I necessarily asked it while we were sitting down, I think I might have said it after we had stood up. It was an afterthought.

Q. So is your best recollection now that you might have said "Is it okay?"

A. That's a bit of guessing, but that might be -- might have been what I said.

Q. So does it remain your evidence that you believe but you can't say for sure that you raised a question with Mr Bailey at the end of the meeting?

A. I can't say for sure, but I believe I did.

Q. Okay.

Do you have any recollection of discussing fire safety any more generally at this meeting with the Harley representatives?

(Pause)

A. I'm trying to think if there was anything that may have had a bearing, but I can't think of anything, no.

Q. If you were going to ask Mr Bailey a question because you were concerned about compliance, would you agree that you would probably have asked, "Is PIR safe to use on a high-rise building?" You would have put the question that way?

A. If I had any serious concern, I would have asked that



first.

Q. Yes.

A. As I said, it was an afterthought, it was a ... it wasn't a serious concern.

Q. Are we to understand that the reason it was an afterthought is because of exactly what you have said in the beginning of this paragraph, that your general understanding was that it was safe to use --

A. Yes.

Q. -- because of what you had understood before this?

A. Yes. And I think I was aware that it was used on high-rises, I think. I mean, I can't point or anything firm, but you see the buildings going up.

Q. Yes.

A. Insulation is sometimes exposed and you do see it.

Q. I see.

Did you ever raise that lingering uncertainty with Exova, the fire safety specialist, at any time?

A. Well, I -- no, if it was a genuine concern, I would have raised it directly.

Q. But you didn't ever do that?

A. No. In this context, I think it was because of all the mineral wool that was used on Ferrier Point, I think I was prompted just to mention it, because that was a big -- one of the differences between Ferrier Point



and Grenfell was the insulation.

Q. Did it ever occur to you that it might be sensible to get written advice from Exova addressing this specifically and the compliance of using a PIR product?

A. Exova were appointed to provide a fire strategy. At this stage and even thereafter, I did not look at them as being a -- necessarily providing detailed checking of specification. I mean, that doesn't feature in their outline fire strategy. That's not the focus of their work.

Q. Yes.

At this point, I promised you I would take you to the document that you have just referred me to. Let's do that now. This is {SEA00003497}. So is what you're saying that this is one of the images that you were shown at that meeting?

A. I can't be sure I was shown that image, but I believe there were a handful of which the Inquiry has --

Q. Okay.

A. -- showing the construction of the tower with the panels half on.

Q. Yes. And that was at that Hays Galleria meeting?

A. Yes.

Q. You're sure about that?

A. Pretty sure.



Q. I've asked you about Exova. Did you ever go back and seek a definitive response from elsewhere, for example from Max Fordham, about the acceptability of using the PIR in a high-rise?

A. No, because that wouldn't really fall to them.

Q. What about with Building Control? Do you have any recollection of ever asking Building Control whether they were content for a PIR insulation to be used on a high-rise?

A. I'm not sure. I do not recall.

Q. Does that mean you can't remember or you can't recall having that specific discussion with Building Control?

A. The same thing. I don't recall any conversations on the subject myself.

Q. With Building Control?

A. The conversations with Building Control, as was covered in all of Exova's testimony, really did focus on the inside.

Q. Yes.

A. And particularly the smoke and the escapes.

Q. As you have mentioned, you have said candidly that there is no written record of you querying the PIR insulation with Harley and Ray Bailey at this meeting. Mr Bailey doesn't refer to any such question having been posed to him in his statement, albeit we will in due course be

able to ask him about this. But I want to put it to you: is it not more likely that you actually didn't raise this issue at all with Harley, given you had this confidence in the use of PIR?
A. No, I think if you look at that -- I mean, I asked Tom, Tomas Rek, if he remembered anything, and he couldn't remember anything, so I don't expect Ray Bailey to remember it, but if you look at all the pictures together, I think, you know, you might ask the question.
Q. Because what you are saying is all the pictures together definitely clearly show some insulation as well the --
A. Show lots of mineral wool, yeah.
Q. Showed lots of mineral wool specifically?
A. Yeah. These pictures show a tower which is a similar height to Grenfell and it's all mineral wool.
Q. Are you saying that that's mineral wool that we can actually see there now?
A. Yes, sorry, that's -- sorry.
Q. So the yellow substance?
A. Yes.
Q. Yes.
A. But you can tell immediately what that is.
Q. So you can tell, from looking at that, that that is mineral wool --
A. Yes.



Q. -- as distinct from a PIR board?
A. Which has got the foam -- the silvered --
Q. Because it's not got the foil with the product logo on the outside?
A. Yes.
MS GRANGE: Yes, I see, yes.
Mr Chairman, I think that would be a good moment for a break, if that's okay.
SIR MARTIN MOORE-BICK: Yes, all right.
Well, we're going to have a break now, Mr Sounes. We take slightly longer breaks than we did in the past to give other people a chance to feed questions in to counsel, so we're going to break now until 11.35. You can go and stretch your legs, maybe get a cup of coffee. But please remember not to talk to anyone else about your evidence or anything to do with Studio E's involvement in this matter while you're out of the room.
Thank you very much. Would you like to go with the usher.
(Pause)
Right, 11.35, please.
MS GRANGE: Thank you.
SIR MARTIN MOORE-BICK: Thank you.
(11.16 am)
(A short break)



(11.35 am)
(Proceedings delayed)
(11.45 am)
SIR MARTIN MOORE-BICK: Right, Mr Sounes, I'm sorry that the break was rather longer than we had intended, but there were some practical problems with the technical equipment. I hope someone told you what was going on?
THE WITNESS: Yes.
SIR MARTIN MOORE-BICK: Anyway, are you ready to carry on now?
THE WITNESS: I am.
SIR MARTIN MOORE-BICK: Yes.
Yes, Ms Grange.
MS GRANGE: So, Mr Sounes, I just want to take you to another -- we have looked up the picture you gave us and we have found another one in the series, I think, that you referred to that you were shown at the Hays Galleria meeting. Can we go to {SEA00003516}. That's more of a close-up of the Ferrier Point project.
So is that the kind of photo you think you were shown at that meeting?
A. I do, yeah.
Q. Yes. And just to be clear, the mineral wool is the pale yellow --
A. Yes.



Q. -- substance that's behind the cladding, and you know instantly it's not a PIR or another phenolic product because it doesn't have the foil face with the insulation name of it; is that right?
A. You can see it's the mineral wool.
Q. You can see it's mineral wool, you're saying?
A. Yeah.
Q. Great, thank you.
Just another question picking up on my last theme: did Mr Crawford ever say to you that he had got an assurance from Exova that the RS5000 product was safe from a fire point of view? So we know RS5000 is the same as FR5000, it was just marketed differently. Did Mr Crawford ever say that he had had that assurance from Exova?
A. I obviously watched Neil's testimony and I was copied in to those emails, September 2014 and March 2015. I think you're asking me to summarise all of that.
Q. No, I'm not. I'm asking you: at the time of the Grenfell project, thinking back at the time -- try and forget the evidence that you heard in the Inquiry -- do you remember Mr Crawford ever saying to you that he had got an assurance from Exova that the RS5000 was safe from a fire point of view?
A. As I say, I thought that was covered in those emails

much later.
Q. I see. So you didn't know any more than was in those email chains that were being disclosed at the time?
A. Correct.
SIR MARTIN MOORE-BICK: I'm sorry to interrupt you. Can I ask you: is your transcript functioning properly?
MS GRANGE: No, actually, it's gone back up to the top again.
SIR MARTIN MOORE-BICK: Mine keeps resetting itself every few seconds.
MS GRANGE: I think that was part of the problem this morning.
SIR MARTIN MOORE-BICK: It was. I interrupt you in case you or those behind you need to have it working. I can manage without it.
MS ISTEPHAN: Mine is fine.
SIR MARTIN MOORE-BICK: Ms Istephan's is working all right, so we don't need to stop. It looked to me as though the feed on to the large screens is running pretty normally; is that right?
Well, no, I can manage without it.
MS GRANGE: Let's carry on. Ideally I would have it because it is helpful for me to have it, but let's carry on for the moment.
SIR MARTIN MOORE-BICK: Yours is not functioning either?



MS GRANGE: Not right now.
SIR MARTIN MOORE-BICK: Well, will you let me know if it's a problem and then we'll see what can be done.
MS GRANGE: Yes.
SIR MARTIN MOORE-BICK: Thank you.
MS GRANGE: Now I want to look at an email from September 2013. This is {SEA00008790}. If we can just blow up the top half of that for now.
This is an email from you on 27 September 2013 to various people on the project, including some TMO personnel, Matt Smith of Max Fordham as well, and some Artelia people are there, Chweechen Lim, we see.
You say this in the first paragraph:
"Dear All.
"We met with Harley Curtain Wall this morning to discuss the project. They are very keen and have been tracking the project for some time. They are specialists in this type of project [then you have given a link to their webpage] ... They pointed to Ferrier Point as a being very similar to Grenfell, although it is triple glazed and super insulated. We had forwarded them sample details and the elevation measure beforehand."
Do you see that there?
A. Yeah.



Q. So you're referring there to the Ferrier Point project as being very similar, and it's the Ferrier Point project photos you think you were shown in that meeting.
A. Yes.
Q. That's correct.
You say there they pointed to Ferrier Point as being very similar to Grenfell; did you interrogate whether the similarity related to the insulation type or solely to the use of ACM?
A. Neither, actually. I think it was a tall council block which had been overclad and the windows replaced.
Q. I see.
A. That's the biggest obvious --
Q. So that's what made it similar in terms of a project?
A. Yeah.
Q. I understand.
Now, there's no reference here to any specific discussion about the insulation. We may come back to some of this in terms of the ACM, but we can't see anything specifically said about the insulation in this email, is there?
A. No.
Q. No.
I now want to look at what the NBS specification said about the insulation. This was part of the



employer's requirements. Just for the record, you begin to address this at paragraph 286 and following of your witness statement {SEA00014273/118}.
When you drafted the insulation section of the NBS specification, did you ever send that to Exova or Max Fordham so they could comment on that aspect of the specification?
A. I didn't prepare the specifications. You would normally consult with a relevant person while preparing them. You wouldn't necessarily use them as a checker. But I don't recall, obviously, sending it.
Q. When you say "I didn't prepare the specification", is that because you're saying it was other more junior representatives of Studio E that were doing the specification work?
A. I think we discussed this previously, I think it was shared somewhere between Tomas Rek and Adrian Jess, and I might have done some of it. I know I did the last bit, which was a section on a revision to the doors, but I don't recall doing anything else.
Q. Can we just look at the NBS specification, {SEA00000169}. It's dated 30 January 2014. You see that in the little revisions box, the tiny text there, 30 January "L20 (Doors) Revised", do you see that there?
A. Yeah.

Q. So this seems to have been a revised version that was issued because there had been a change to the L20 doors package.

Within that, can we go to page 63 {SEA00000169/63}. This is the start of the H92 rainscreen cladding section. Then if we go on within that to page 73 {SEA00000169/73} and we look at the top of that page, if we blow that up, 776, "Thermal insulation", do you see that there?

A. Yeah.

Q. We can see it says, "Manufacturer: Celotex", two lines down. Then there is actually the product given a bit further down, "Product reference: FR5000 aluminium foil faced both sides"; do you see that there?

A. Yes.

Q. Do you know who put together this part of the NBS specification within Studio E?

A. I can't -- I mean, I can only guess, but I think that's a bit unfair. No, I --

Q. Was it you that put together this section? Are you clear that you did do it or didn't get involved in it?

A. I'm reasonably confident that it wasn't me.

Q. It wasn't you?

A. No.

Q. In which case I'm not going to ask you some of the



detailed questions we put to Mr Rek on this.

Can we just look back at your witness statement. This is {SEA00014273/118}. I want to look at what you say in paragraph 287 in the first sentence. You say:

"With regard to the insulation, I refer you back to paragraphs 43.9 and 116.2 where I discuss how the insulation was selected by Max Fordham."

Then you give the specification for the insulation in the NBS which we've just looked at. I just want to focus there on the use of your word "selected". Does it remain your evidence that the insulation was selected by Max Fordham?

A. They put it forward in the first instance.

Q. Would you agree with me, therefore, that a more accurate description of what happened is that Max Fordham suggested the use of a particular insulation product, but it was Studio E as architect who then specified it in the employer's requirements?

A. Yes.

Q. Yes, thanks.

Now, looking just a little bit further on in your witness statement at this point, at paragraph 292 on page 121 {SEA00014273/121}, you say in the third line down on 121:

"At this stage, we would not go beyond addressing



the issues raised by Building Control in the early meetings: specifically on 6 November 2012 which Adrian Jess (Studio E) attended, 17 September 2013, Paul Hanson's (Building Control) comments received 31 December 2013 and the input from Exova regarding fire strategy. We would not usually seek to verify compliance of all materials and products prior to submitting a Building Control Full Plans Application."

Do you see that there?

A. Yeah.

Q. Now, we know that -- and we will come to this later when I ask you some questions about Building Control -- you didn't actually submit the Building Control full plans application until August 2014.

I want to ask you about that last sentence: can you explain why it was Studio E's practice not to verify the compliance of materials and products prior to submitting a Building Control full plans application?

A. Well, full compliance is only possible through an application, as I understand it. You don't know until you've had the submission verified and agreed with Building Control, so your compliance is subject to receiving that certificate. It all depends on that process. I think your more general question is: would we seek to satisfy ourselves that it would comply?



Q. Yes.

A. Yes.

Q. That's my general question.

A. Yes.

Q. Wouldn't you seek to satisfy yourselves about compliance of the materials and products prior to submitting a Building Control full plans application?

A. Invariably it's not something you doubt. If you've specified something you think is suitable or you have been recommended as suitable, you do not expect to be told, once you've submitted, that there is something profoundly wrong with it.

Q. But do you agree if you don't do an internal check that the materials are compliant prior to submitting the Building Control application, you're at risk of making a submission that might be non-compliant with the Building Regulations?

A. I think every application involves a process of agreeing materials with Building Control, and there is some risk attached to that in every project.

On a design and build project, stage E in particular, it's not possible to confirm compliance. Well, not that it's not possible; your efforts could come to nothing if the contract makes a change. So you're unlikely to be sure you have complied anyway.

So I think it would have been a -- it was not common practice to do a full part B compliance assessment at stage D or at stage E. That was not --

Q. Yes.

I think what you have just said is because otherwise you would be concerned that there would be a change and it would be wasted work; is that what you're saying?

A. That would be one reason, yes.

Q. Any other particular reasons?

A. Building Control might take a different view.

Q. So is what you're saying that effectively what you're doing by putting a Building Control full plans application in is opening up a dialogue with Building Control about the compliance of the materials? Is that what you're saying?

A. I think every project we seek to engage Building Control at the earliest opportunity, to understand issues that need to be addressed, yes. I think that's my experience going back as far as I can remember. We would seek to get Building Control's input on the salient issues.

Q. Just to be clear, does it follow that there might be Building Control full plans applications you're submitting where you're not entirely sure that Building Control are going to agree that the materials are compliant, and you are anticipating they might come



back at you and challenge that?

A. At stage E I would expect them to be minor details rather than --

Q. I'm talking about when the full plans application has gone in, Mr Sounes. Are you sometimes putting in the full plans application -- so that would be after stage E; yes?

A. Full plans is, in the first instance, the general arrangements, and the details usually follow.

Q. When those details are submitted, are there times when you're putting those details in and they've got certain products in them and you're thinking to yourself: "Actually, some of those, Building Control might challenge, might pick up on, and we might have to discuss that further with them"? Is that part of the thought process?

A. Obviously if there was any concern we would raise it sooner, and I think --

Q. I see.

A. -- that is the root of your question: why weren't we concerned? We had no reason to be concerned.

SIR MARTIN MOORE-BICK: Could you just help me a little further on this. Would you satisfy yourself that materials complied with the regulatory requirements before you put them up to Building Control?



A. Regulatory requirements and statutory standards?

SIR MARTIN MOORE-BICK: Well, whatever.

A. These aren't the way people approach the approved document.

SIR MARTIN MOORE-BICK: Let me explain. I'm a little surprised if you are saying that you would propose materials to Building Control without being reasonably confident in your own mind that they did comply with any necessary requirements.

A. We were reasonably confident that they complied.

SIR MARTIN MOORE-BICK: So you would satisfy yourself, are you saying, before you put materials up for consideration by Building Control, that they did comply?

A. In our minds we had no reason to be concerned.

SIR MARTIN MOORE-BICK: Well, that may or may not be quite the same thing. But anyway, on you go, Ms Grange.

A. Well, the standards, as you have referred to them before, imply that it's clear cut, whereas my experience is the -- satisfying the requirements of part B is not so clear cut. It's --

SIR MARTIN MOORE-BICK: No, that I understand. I just wondered what was lurking in this sentence that you have been asked about, that you wouldn't seek to verify compliance before you submitted a full plans application, and I just wanted to understand whether you



were saying that you would put up materials without being satisfied yourself of their compliance.

A. No, I think that's taking it a bit -- a very wide interpretation of that statement.

SIR MARTIN MOORE-BICK: That's why I'm giving you an opportunity to explain it.

A. Where products had been used before, in the same instance -- in the same circumstances, whether it be by ourselves or where we were aware in this instance that they had been used elsewhere, we had a measure of confidence that the materials must comply.

SIR MARTIN MOORE-BICK: Yes.

A. I mean, it's ...

SIR MARTIN MOORE-BICK: All right. Yes, thank you.

Yes, Ms Grange.

MS GRANGE: Would you agree that if you don't take proactive steps to satisfy yourselves on each particular project that the materials are compliant, there could be a significant impact on programme and cost if it suddenly turns out that there is a non-compliance in the application?

A. Most definitely there is a risk of impact on programme and cost, and I think, as a lead designer, you're thinking of that throughout --

Q. I see.

A. -- in your design.
Q. Okay.
Is what you've described -- so this process of saying, "Well, if it's been used in a similar type of project, we don't have to be, you know, concerned about the compliance" -- do you think that was common in the construction industry at the time? Was that an attitude you had to other projects within Studio E?
(Pause)
A. I think ... if I can take the example of the insulation.
Q. Yes.
A. There is an email from Leadbitter Bouygues that we received, I think it was in January 2013, from a Juan Medina, it doesn't appear in my statements and I've no idea if it's been disclosed, but he's responding to Adrian about the insulation. He says, "I think you may need to use phenolic because it's a high-rise".
So if you're asking me: was I -- was it Studio E's policy, I think there is a common understanding of where issues are and what is acceptable, and I think at that point, in 2013, people understood it was acceptable.
Q. Yes, I understand.
A. So if there had been any alarm raised from any quarter, I think it would have come through quickly.
Q. If you, Studio E, didn't take proactive steps yourselves



to verify compliance before the Building Control full plans application, when in the process would you expect compliance of the materials to be addressed, either by you or someone else?
So you haven't taken those proactive steps prior to the Building Control full plans going in; is it just a question of waiting for Building Control to come back to you, or would you conduct a compliance assessment yourselves, a positive one, at some point?
A. I think you've asked me that before. That's a duty that I would argue goes far beyond our role at any point. What I think, for instance, the smoke ventilator subcontractor did is he engaged in a dialogue from an early point with Building Control to reach an agreement, and that was a particularly difficult item.
Usually, in preparing your designs, it's when you get to the final detailed design that you would -- to avoid abortive work, never mind any impact on the project, you would try and understand for yourself that it complied.
Q. Let's take your example, the insulation, which is what we have been discussing as an example. So you yourselves haven't positively sought to go out and confirm that it does in fact comply; you have assumed



that from basically the fact you know it's been used on other projects.
What is the position after the full plans application goes in? If Building Control don't come back to you and query the insulation, does there come another point in the process where you, Studio E, would have checked for compliance with the Building Regulations?
A. Not on this project, I can't -- I don't think we would. It's a design and build. I'm not sure that the full effect of design and build is understood by the Inquiry. It does sideline the original architect's role from what it was pre-novation. We are no longer in any sense policing what other people are doing.
Q. Okay.
Now, before we leave the topic of insulation, I've just got a few questions about the selection of the insulation after the employer's requirements were prepared.
Did you ever review, as far as you were aware, or did Studio E review, the specification of Celotex FR5000 once the design was changed to the Reynobond ACM panels in order to check whether the products were suitable in this different application?
A. No.



Q. Did you ever ask Harley, Exova or Rydon whether the change of cladding arrangement had any implications on the type of insulation to be used?
A. No.
Q. Now, in fact we know that it was Celotex RS5000 which was eventually finally chosen for use on the project and not the FR5000 product. Do you know when that substitution took place?
A. I don't, no.
Q. Were you aware of that substitution at the time?
A. I might have been. I was copied in on the emails, so ... but whether I was ... I can't remember.
Q. Do you know why this different Celotex product was selected?
A. I'm afraid too much time has passed.
Q. Yes.
A. I've --
Q. I'm just seeking to understand how involved you were in that bit of the project, because I know by that time Mr Crawford was more the day-to-day contact within Studio E.
A. I'm afraid I'm at risk of saying something that overlaps with something he has said, and I'm not sure.
Q. Okay.
I do want to ask you something about Mr Crawford's

evidence and what he said. He said -- this is {Day9/139:18-20} -- that you were fairly adamant about the appropriateness of using FR5000 on the project.
A. Me?
Q. Yes. He said you were fairly adamant about using the FR5000, with reference to what was in the NBS specification.
Did you make that clear to Mr Crawford?
A. Sorry, what was the context?
Q. Mr Crawford said in his evidence that you were fairly adamant about the appropriateness of using the FR5000 on the project. That's what he said. I just wanted to ask whether you recall having conversations with Mr Crawford in which you were expressing a confidence or being adamant with him that FR5000 was appropriate?
A. I ... I can't remember, I'm afraid, any conversation that was that definitive.
Q. Okay.
So I just want to ask you a few questions about the KALC project, the Kensington Academy and Leisure Centre project, and then we're going to come on to the big topic today, which will be the ACM panels.
You told us back in March on Day 7 of your evidence that you were involved in KALC but primarily in the bid process; was that right?



A. Yes.
Q. You also said that you were aware of the specifications for the KALC project, such as the external wall build-up, but that that came later; is that right?
A. Yes.
Q. Can you recall when you came to know about the details of the external wall build-up on the KALC project, specifically for the school? Can you recall approximately when you might have known about that?
A. I'm unsure what you're going to ask me about the KALC façade, because I'm not that familiar with it.
Q. Okay. Well, let me ask my questions and if you're not familiar with it then please say.
Can we just go to {SEA00006047}, and I want to look at the third email down on that page at the very bottom of the page. This is from Mr Kuszell to Mr Lloyd Jones, copying you and others in at Studio E:
"David
"Let's stick with Wednesday ... for the design review ..."
Then he says this:
"The technical audit for KALC would best be carried out by Bruce or Mark or both ..."
Then he talks about availability.
Were you asked to do the technical audit for the



KALC project?
A. I can't remember.
Q. You can't remember?
A. No.
Q. So you can't remember whether you did it on the KALC?
A. I can't remember, sorry, no. I might have done. I don't -- I think Neil would have formalised it; in other words, the record would have been, I think, prepared by him. So I might have done, but I -- because I didn't prepare anything, I don't recall.
Q. I see. So you're saying because Mr Crawford might have prepared the documents for it --
A. Yeah, more clear to me and to you that he was involved, but I don't recall being involved. It's possible, though, I just don't recall.
Q. Were you aware that on the academy, the school project, a non-combustible mineral insulation had been used in the cladding system? Was that something you had an awareness of at the time?
A. No.
Q. There is a document which shows that the build-up was an ACM panel with combustible styrofoam insulation, backed with a non-combustible mineral insulation.
Now, remember, the academy was a low-rise building, so I'm not suggesting that was non-compliant, I'm just



asking you whether you knew about that wall build-up and the use of the non-combustible mineral insulation as part of it?
A. No.
Q. No.
Let's move now to ask you some questions about the rainscreen cladding itself, the ACM, including the eventual decision to use the aluminium composite material panels.
Can we start by looking at paragraph 71 of your statement, {SEA00014273/35}.
You say this:
"After some searching online I approached CEP Architectural Facades Limited (CEP) (a cladding products supplier) with a view to meeting to discuss the project. As I recall CEP had experience in overcladding residential towers, particularly in the midlands where they were based. My recollection is that Geof Blades (CEP) may have met one of my colleagues, possibly Markus Kiefer, on site in April ..."
This is 2012, by the way, so early on:
"... and I met him at our office a week or so later, perhaps on 11 April 2012. Geof emailed me detail drawings for a project called Stretford House on 5 April 2012. They showed a multi-storey brick building with

new windows, external insulation and ACM cladding."

Do you see that there?

A. Yes.

Q. I just want to be completely clear about how CEP came to be involved.

Is it right you were not familiar with CEP before this project?

A. No.

Q. You found them, as you say there, by searching on the internet; is that correct?

A. Yes.

Q. Was there anything in particular that drew your attention towards them?

A. Overcladding of high-rise.

Q. Yes.

A. Council blocks.

Q. So you could see that on their profile, could you?

A. Yes.

Q. They're a cladding product supplier; is that right?

A. That's in retrospect. At the time I wasn't entirely clear what they did. I know they were involved, but I wasn't sure if they were a contractor or fabricator or supplier.

Q. I see, yes.

Can we then go to {CEP00048112}. I want to look in



the middle of that first page to the email of 4 April 2012 from Mr Kiefer to Geof Blades, copying you in. He says:

"Dear Geof

"Bruce instructed me to issue you some information regarding the Grenfell Tower upgrade.

"Hence find attached our drawing ... showing indicative existing floor plans and the south elevation as well as photos of the tower.

"Since we a (sic) further meeting with the client on the morning 09.04.12 we would appreciate your initial thoughts regarding the appropriate cladding systems and the rates associated with them.

"If you have further queries do not hesitate to contact Bruce or myself."

Do you see that?

A. Yep.

Q. Then he says:

"Please note that this is one of five email because of the size of the attached files."

So you are asking CEP for their initial thoughts.

If we can go to Mr Blades' response, {SEA00003941}. If we can blow that up. So this is his response, it's just to you, on 5 April. He says:

"Bruce.



"Please see the attached details which may be of benefit for your meeting on Tuesday."

Do you see that there?

A. Yeah.

Q. We can see from the attachments that what he has done is he has emailed you drawing details of a multistorey brick building called Stretford House, which had new windows, external insulation and ACM cladding.

Now, do you recall having any impressions of the details provided to you by CEP when you received them?

A. No. I'm -- I may have opened one or two, but at the time, given that the project was just setting out, I don't believe I looked at them or scrutinised them in any detail.

Q. Yes.

Did you notice from the details that were sent that the CEP system involved Rockwool insulation?

A. No.

Q. We can see that just to make that good. Let's look at {SEA00003943}. This is one of the details that he sent you. We can see it's for the Stretford House project in the label on the bottom right-hand corner.

If you look on the left-hand side, the first written label, if we can zoom in to that, it says "Rockwool Duoslab insulation" there, do you see that?



A. Yeah.

Q. But you didn't note that at the time?

A. (Shakes head).

Q. Did you ever discuss with Mr Blades of CEP what insulation product to use on Grenfell?

A. No, that -- this was before the U-value discussion started. I mean, this was within a week or two of -- within a month of our first site visit.

Q. Yes.

Did you notice at the time that some of these drawings referred to fire barriers within the cladding build-up?

A. I did not notice that at the time, no.

Q. Yes.

Now, let's go on to {SEA00003965}, and I want to look at the second email down on the first page.

This is an email from you to Mr Blades of 10 April 2012, and it's clear from the email that you have arranged to meet at site the following day, when this email is sent. Because you say in the beginning:

"We would like to meet at site tomorrow rather than our office."

You say:

"Site address is a little complicated."

You give the address:

"I might need to leave before you get there."

And in that last paragraph on the page, you say:

"It is important to be discreet while we are there as the political context for the development and the development of the adjoining site is very sensitive. I would refrain from discussing with residents or staff who you might meet, or discussing drawings where anyone can see them. There is enough misinformation about on the estate and we don't want to add to it unwittingly."

I'm going to come back and ask you about this in the context of the whole question of resident engagement separately. It's part of the chronology here.

Did you end up meeting Mr Sounes(sic) on site?

A. Sorry, Mr --

Q. I beg your pardon, you are Mr Sounes -- Mr Blades on site the next day.

A. I don't think I -- I can't remember meeting him, no.

Q. Do you recall that, have any recollection of meeting? You said, "I might need to leave before you get there", so it's possible that it was Mr Kiefer that he met.

A. I'm pretty sure I didn't meet him on site. I think Markus might have met him on site. That's the memory I'm trying to draw on.

Q. You say in that email that the political context was sensitive:



"... the political context for the development and the development of the adjoining site is very sensitive."

Why did you say that? What was the reason for that?

A. Prior to this, I had received an email from Mark Anderson from the TMO, warning me off speaking to someone in the TMO, saying that any -- well, go back to the context. The context was the development of the KALC project. The development on the adjoining site is very sensitive, and there had been some objections raised to that development. The reason I think I might have warned him to not discuss things openly was that email from Mark Anderson.

Q. I see, okay. Okay.

Now, as you said just a moment ago, in your statement you said that you think you met Geof Blades at your offices the next day, on 11 April 2012. That was at paragraph 71 of your statement. Mr Blades recalls that it was a meeting on site, and we can see here that you have emailed him the day before about a meeting on site.

Do you think, looking at this now, that you may have been mistaken that it was at your offices and that in fact it was at site?

A. I thought there were two different days, sorry.



I remember meeting Geof. I can't remember meeting him on site, I just don't remember that.

Q. Okay.

If the meeting was at site, Mr Blades would have seen -- it would have been obvious, wouldn't it? -- that Grenfell Tower was a building over 18 metres high.

A. Yes.

Q. Do you have any memory of any discussion with Mr Blades around 11 April 2012 about the performance of cladding in fire? Was that discussed at all at this early stage with him?

A. Not to my recollection, no.

Q. Okay.

After the meeting with Mr Blades, there was a design team meeting number 1 on 19 April 2012. For the transcript, the notes of that are at {TMO10001143}. We don't need to turn that up but, following that meeting, you wrote to the TMO, and I want to look at that. This is at {SEA00004051}.

Now, this is an email dated 20 April 2012 to Mr Anderson of the TMO, and I want to focus on what's said in the second paragraph about the cladding.

So just to put this in context, you seem to be talking about engagement with the planners that had run on until 2.00 pm, that's in the first part of that first



paragraph. Then in the second paragraph you say this:

"The comments on the appearance of the tower were limited but the both Ed and James were uncomfortable with the suggestion of aluminium cladding - plastic and Croyden(sic) were the words used - and a render system would be their first preference, with a request to consider leaving concrete columns exposed. (This is likely to be problematic.) They sound very amenable to meeting when we're ready. The pre-application charge is no longer an issue any on KALC but they were not sure about Grenfell."

Do you see that there?

A. Yeah.

Q. So I just want to ask you about those comments about how uncomfortable planning were at this stage about the suggestion of aluminium cladding.

Did you take it from the meeting you had had that ACM would be unlikely to get through the planning process?

A. They don't mention ACM and I wouldn't have automatically inferred ACM from that comment.

Q. I see. So you're saying that what had been suggested was just aluminium cladding; is that right?

A. In fact, I would even go so far as to say the emphasis on the materiality is maybe not fully what they were

communicating. They were communicating a plastic effect that a flush block can achieve if it's all covered in a panel, a seamless, featureless system. And I think that's what they refer to as plastic, looks like a plastic box.

Q. I see, so --

A. So I don't think -- that's possibly -- at this point, when we're talking in such general terms, I don't think the -- because they did eventually agree to aluminium, I don't think it was the material itself that they were objecting to.

Q. Yes, it was the concept of having a metal panel --

A. Featureless block.

Q. So was the planners' concern based on appearance?

A. Yes.

Q. Yes.

Did anybody at this early stage raise any concern about fire performance?

A. You wouldn't expect -- well, that is obviously handled by Building Control, not by planning.

Q. Yes.

We see from the rest of the second paragraph of the email that the planners also suggested a render system as their first preference. Can you just explain to us so people understand, what is a render system?



A. It's quite complicated.

Q. Is it effectively kind of sticking material to the existing concrete, kind of plastering material on to it, a substance on to it?

A. For this application you would be looking at an insulated render system, of which there are numerous on the market, some of which apply a reinforcement mesh directly to the insulation and then build up sometimes a very thin layer of -- call it render, plaster, on top of it.

Q. Yes.

A. Because it's very thin it invariably involves a lot of polymers, it's a reinforced polymeric of some sort, and they get more involved with backing boards and cavities.

Q. Yes.

A. But fundamentally they're in a trowelled on surface.

Q. Can you explain briefly why that was not pursued, why that wasn't thought about any further?

A. I think it comes up in conversations later, but any render, even a polymeric type, which you wouldn't expect to repaint, builds up -- can pick up a lot of dirt, and invariably can crack at corners, at junctions, and needs to be repaired and cleaned frequently for it not to look very unsightly.

Q. Yes.



A. So I think, over the lifespan of the planning application, that the idea of a render fell away for those reasons.

Q. Is it fair to say that at this stage the selection of materials for the cladding was largely driven by aesthetic considerations, that that was uppermost in people's minds?

A. Yes.

Q. Now, can we look at paragraph 111 of your witness statement, {SEA00014273/52}.

I just want us to read that together. You say:

"On 27 July 2012, Paul Dunkerton (KCTMO) emailed me and asked for information for the residents' newsletter regarding the proposals. The same day, Blaine Cagney emailed him attaching images for the newsletter, including one for VMZ Composite which said it had a 'polyethylene core FR (fire retardancy)'. I recall that we were still researching cladding options at this stage. I note that in an August 2012 version of the KCTMO Project newsletter, the cladding with the most favourable reception from the residents' consultation was a zinc cladding system, illustrated as 'VMZ Composite' with a 'polyethylene core FR (fire retardancy)'."

Do you see that there?



A. Yeah.

Q. Again, on a separate topic I'm going to come to the subject of resident consultation and what the residents were shown in terms of different cladding options, but just sticking with the theme of ACM, there you refer to Mr Cagney sending Mr Dunkerton images of potential cladding panels. Can we just look at that information that was sent by Mr Cagney. It's at {SEA00005330}. This is for the VM zinc composite panel.

We can see it said there that, in the top middle of the page, that:

"VMZ Composite is a system made up of two sheets of zinc and a high density mineral-rich core combining the qualities of zinc with the rigidity and flatness of composite. This combination offers unique architectural possibilities for facades on new or renovated buildings."

Do you see that there?

A. Yeah.

Q. On the right, there is a little diagram and the label at 2 says, "polyethylene core FR (Fire Retardancy)."

Do you see that there?

A. Yes.

Q. Did you know what polyethylene was at the time?

A. Not more than that it was a plastic.

Q. Did you know anything about its fire performance?
A. No.
Q. Did you understand what these references to "FR (Fire Retardancy)" meant at the time in terms of fire performance?
A. FR ... if I had not seen the "fire retardancy" appended, I would have just said fire rated. I would have just read it as meaning fire rated.
Q. Do you remember noticing at the time that it said "FR (Fire Retardancy)" in relation to this product?
A. I can't remember the circumstances where I asked Blaine to send this, but I don't think I looked at it.
Q. Okay.
There are the words in the middle which we read as well saying "a high density mineral-rich core". Does it follow from your answers that you didn't think about that phrase either in terms of what it might mean --
A. No.
Q. -- in terms of fire performance?
When you sent this sheet, had you or anyone else at Studio E, as far as you were aware, investigated whether these VM zinc composite panels would comply with the Building Regulations and the guidance in Approved Document B for buildings over 18 metres?
A. No, at this stage we were just researching options.



Q. Yes.
Was there any particular reason why this panel sheet for this VMZ Composite was sent to Mr Dunkerton of the TMO? Can you remember what the rationale was for singling out this product and sending the detail to him?
A. I know that -- well, I don't know, but I can't remember, I haven't tried to piece this bit back together in my mind, but I know that we had a public engagement or resident consultation --
Q. Yes.
A. -- around this date --
Q. Yes.
A. -- and I believe we presented several options --
Q. Yes.
A. -- on the boards. I don't think at that stage we had samples. And I think that the request to put something in the newsletter was -- came out of that evening event.
Q. Yes.
A. And I think that's where this --
Q. That came from.
A. -- came from.
Q. Okay.
Did you give any consideration at this stage to using a panel with a FR fire retardancy core?
A. No.



Q. Did you think to check with Exova whether this type of panel would be appropriate for use on the Grenfell project?
A. No.
Q. Now, we know this was not the main panel that you ended up including in the -- for the main part of the NBS specification. We will come to that in due course when we look at the Proteus honeycomb panel.
Can we now go to {SEA00005597}. If we can blow that up, we can see from this that it's on 7 August, and it's you emailing Mr Anderson and Mr Dunkerton of the TMO, copying in a number of others, including some at Max Fordham, about the project. It appears to be about a meeting that you have had with the planners that morning. You say:
"Mark,
"Marc and I had a positive meeting with Edward George this morning."
Edward George was one of the RBKC planners, wasn't he?
A. Yes.
Q. You say in the second line:
"He was comfortable with the zinc, agreeing the joints on the triangle pilasters could be accentuated."
Do you see that there?



A. Yeah.
Q. When you said there, "He was comfortable with the zinc", what exactly did you mean? Did you mean he was comfortable with the aesthetic look of zinc?
A. Yes.
Q. Yes.
A. The appearance, that's --
Q. Yes.
A. When discussing elevations, that's not the only thing that planners look at, but that's in this context what he was looking at.
Q. So it was that that made him comfortable, was it?
A. Yes.
Q. Now, can we turn on to your statement at paragraph 114. This is {SEA00014273/53}. There you're dealing with the email of 7 August 2012, which we have just looked at, and I want to focus on the last two sentences in the last five lines. You say:
"In terms of Building Control compliance, at this stage I don't believe anyone then would have highlighted this as being of particular relevance to cladding selection. We all believed we were choosing cladding products that had been used many times before."
Do you see that there?
A. Yes.

Q. I want to ask you about that last phrase.
So, just to be clear, by August 2012, you have not yourself investigated whether the panels you were considering complied with the Building Regulations?
A. No.
Q. I think we established this earlier in your evidence, that you have made an assumption that they must be compliant because they have been used on other projects; is that right?
A. Yes.
Q. Yes.
Would you agree, though, that you didn't know the specific context in which such materials had been used on other projects? You didn't have full details of other projects at this time, so you wouldn't know the full context in which --
A. No.
Q. -- those panels had been used?
Now, if we can go on to look at paragraph 136.6 of your statement on page 65 {SEA00014273/65}, there you go on to talk about a meeting on 16 October 2012 at your offices where CEP introduced Studio E to Debbie French. If we just read this paragraph, you say:
"On 9 October 2012, Geof Blades (CEP) emailed me regarding a meeting to discuss the rainscreen materials.



I have no record of why he called me but my recollection is that he thought we may be interested in a zinc composite panel that Reynobond offered. I recall that I met Geof and Debbie French of Reynobond, and our office calendar records it as having happened on 16 October 2012 at [Studio E] LLP's office. Whilst I do not recall much of the detail of the meeting, in these sort of product representative meetings usually I would have talked them through the drawings and then they would discuss finishes, sizes, fixings and details. My recollection is that Geof and/or Debbie brought product samples to the meeting, including, I think, a paint effect Zinc ACM, amongst other metal effects Reynobond offered."
Do you see that there?
A. Yeah.
Q. Then a little bit further on in that paragraph, you say:
"I do not recall CEP or Reynobond discussing the plastic core of the panels nor providing any recommendations for buildings over 18m in height. Reynobond's name would continue to come up in the next stage in conversations with contractors. However we never approached them directly for advice, nor Alucobond whom I had been aware of since I was a student."
So we have all that --



A. Did you -- I think it was September last year we came across, in our office, some of the material that we gathered from --
Q. Yes, and I think you sent that to the Inquiry at the time.
A. Yes. You have seen that?
Q. I believe we have seen that. I will double check, but I think we have seen that.
So you have helpfully explained the meeting here.
In your experience, is it common for a supplier -- that was CEP -- to broker a meeting between a particular manufacturer and an architect? Does that occur frequently on projects?
(Pause)
A. I'm sorry, I -- you're, I think -- this was an unusual meeting, yes, I agree, but I wouldn't have thought anything untoward about it.
Q. No, I'm not suggesting there is anything untoward, I'm just asking you how common it was that a supplier like CEP would set up a meeting with a particular manufacturer. Did that strike you as unusual at the time?
(Pause)
A. Not really unusual. It was -- I mean, it was an unusual meeting, yes, because -- but it also was logical because



he knew we were interested in zinc, and --
Q. Yes.
A. -- Reynobond had this paint-effect zinc.
Q. When you say it was an unusual meeting, why do you say that?
A. Well, I think he approached us rather than we approached him.
Q. I see.
A. Specifically on this material choice.
Q. Now, you have said there that you don't recall the details of that meeting but you say it's likely that you talked them through the drawings for the project.
A. Yeah.
Q. Would that have given an indication of how high the tower was at that meeting? Would you have talked about the fact it was a multiple-storey residential block?
A. I believe I would have.
Q. Now, you have indicated that the discussion at this meeting was around Reynobond zinc panels. Do you recall, was anything about cost discussed at this meeting?
A. I can't remember any specific conversations about cost, but ...
Q. So you can't recall whether anything might have been said at that meeting about zinc being too expensive in

the light of the budget? Did you have any such discussions?
A. I don't know if it was -- as I say, I can't remember any specific discussion about cost, but I think it's understood that an aluminium product would be cheaper than a zinc product.
Q. Okay. You understood that at the time, did you?
A. I understood that, yes.
Q. Yes.
Did you understand at the time of this meeting that there was a difference between zinc composite material panels and pure zinc panels?
A. Yes.
Q. You knew the difference between a composite panel and a --
A. Yes.
Q. Yes.
Do you know whether aluminium composite panels were mentioned as an alternative at this meeting?
A. Well, that -- I believe that zinc patina, which I believe there is a sample of in that folder of samples, was an ACM with a zinc effect painted on.
Q. I see. But do you remember discussing that at the meeting, that aluminium was another option, other than zinc composite?



A. Well, we were looking at various options, yes.
Q. Okay.
Do you remember any specific discussion about fire safety at this time?
A. No.
Q. Or about fire performance of particular panels?
A. No, no.
Q. Now, I now want to ask you just some questions about value engineering.
Just in terms of the overall concept, do you agree that value engineering is the process of trying to find more cost-effective ways of achieving the same outcome, or achieving a better outcome for the same cost?
A. I agree with the first sentence. I think you could have lifted that from my statement. But the second one, yes, I would agree with that too.
Q. Yes.
In your experience, is value engineering a common process that occurs on construction projects in the UK?
A. Yes.
Q. Prior to the Grenfell project, had you been involved in value engineering exercises before on other projects?
A. Yes.
Q. Can we go at this point to {SEA00007413}, an email that I want to look at.



So this is from Alun Dawson of Appleyards, or later Artelia, dated 26 February 2013, and it's to you and your colleagues at Studio E, copying in some others, including at the TMO. The subject is headed "Grenfell Tower Regeneration Project - Value Engineering"; do you see that there?
A. Yeah.
Q. It says:
"Gents
"As you are aware, there is currently a significant deficit between the approved cost plan/budget and the initial figures coming back from Leadbitter - not least of which on the external façade and general fit-out where we are as much as £483k and £1.24m apart respectively.
"Clearly we have to reconcile but moreover bridge this gap as a matter of some urgency - your urgent assistance in this regard would therefore be appreciated. Can you come back to us with a radical re-think of the scope/spec (whilst still meeting the original brief) by early part of next week to deliver it within budget.
"If you have any queries at all as to what is required then please don't hesitate to give any of the team here a call ..."



And then he asks for your availability for a meeting. Do you see that there?
A. Yes.
Q. So this was about 11 months, approximately, before the NBS specification was finalised in January 2014, and we can see Mr Dawson is saying that there is a significant deficit between the approved cost plan and the budget and between the initial figures coming back from Leadbitter at that stage.
Now, we know from your statement that the cost plan had been based on zinc, you have told us that; that's at paragraphs 43.5 {SEA00014273/19} and 116 to 119 {SEA00014273/53}, for the transcript.
It would appear from this email that Leadbitter are quoting £483,000 more for the façade than had been anticipated; is that right? I think we see that --
A. It's quoted there, yes.
Q. "... not least of which on the external façade and general fit-out where we are as much as £483k and £1.24m apart respectively."
So I think the external façade is said to be the 483 figure. Do you see that there?
A. Yes.
Q. You are asked in the second paragraph to undertake a radical re-think of the scope spec; do you see that

there? So this was a significant email to receive, would you agree, in terms of your design of the external wall?
A. Sorry, do I think it's significant?
Q. Because of the words "radical re-think of the scope/spec".
A. I think he is out of line, frankly.
Q. Say that again?
A. I think he's out of line.
Q. Can you explain why you think he's out of line?
A. He's not the client.
Q. But he's the --
A. If it's a radical re-think, it's not value engineering.
Q. I see.
Mr Dawson, so he is Appleyards/Artelia, they are performing the function of employer's agent --
A. Project manager.
Q. -- as well as quantity surveyor and -- well, you say project manager, but we know that's not agreed.
A. I know it's disputed, but I have seen correspondence supporting it.
Q. They're engaged to carry out the employer's agent, CDM co-ordinator and quantity surveyor roles, so they're coming back to you.
Just on your reaction, was your reaction at the



time, "You're out of order for telling us this"?
A. No, it wasn't -- I wasn't -- that strong a response, but I do think to introduce the words "radical re-think" is completely at odds with value engineering.
Q. I see, okay.
You have replied to that email on the same day. Can we go to that at {SEA00007414}. So we see on 26 February you go back to him and others and you say:
"Alun
"It is not really possible to undertake a radical re-think without sight of the figures, a discussion with the client, and the involvement with the Services Engineer who is not copied into your email. Is the M&E not under review as well?"
Then you say what you think the obvious targets for savings are; do you see that there?
A. Yeah.
Q. You say in that second subparagraph, you have got:
"Change Zinc cladding material to something cheaper. I think Planning will need a sweetener to swallow this perhaps copper, ceramic, terracotta or more glass at low level."
Do you see that there?
A. Yeah.
Q. You also say there, just to pick it up now:



"Scale back crown. This will also be Planning sensitive."
Do you see that there?
A. Yes.
Q. Did you have aluminium also in mind when you wrote this email, as in aluminium composite material, as a potential cheaper option that you might be able to change to?
A. I was certainly aware of it at that point, yes.
Q. Would that have been based on your meeting and discussions with CEP and Arconic, Deborah French?
A. Yes. Not exclusively, but yes.
Q. What else would it have been based on? You say not exclusively.
A. Well, we did a lot of research in the early months of the project, so I'm ... we met with Reynobond, but I was very aware of Alucobond.
Q. Yes. You were aware that that was going to be a cheaper option than the zinc option?
A. I think I would have known it would have been cheaper, yes.
Q. You say in your email that you had concerns that planning were likely to "need a sweetener to swallow this". What did you mean by that?
A. By taking away the natural finish of a zinc product,



they may want to have it compensated somehow. You know, in other words, that's in one way me anticipating a possible conversation or dialogue with planning.
Q. What kind of compensation were you thinking that they might --
A. Perhaps some high-quality materials at low level.
Q. I see, yes.
You then say in your witness statement that you met with CEP to discuss value engineering options on 4 March 2013. We can see that if we look at paragraph 190 of your statement, {SEA00014273/85}.
So you say:
"On 4 March 2013, CEP came into Studio E to discuss the cheaper ACM cladding option and various other value engineering options."
Do you see that there?
A. Yeah.
Q. Now, who first raised the possibility of ACM as a subject to discuss with CEP? Was it you or them, can you recall?
A. I'm afraid those two lines, all I -- to give it context, all I can say is it was March 2013 and we were in a hiatus, not really working on the project, the project was -- the negotiations with Leadbitter hadn't really come to anything yet. Without -- I can't remember the

context.
Q. Okay.
At that meeting, did CEP express a preference for ACM in terms of final product selection?
A. I'm sorry, I can't remember --
Q. You can't remember?
A. At this point, on just those two lines -- and I know it's my witness statement -- I can't recall the --
Q. No, if you can't recall, you can't recall, I just wanted to know if you could recall anything more about what was discussed at that meeting.
Did you think at this time about getting some independent advice on whether ACM was an appropriate material to use, for example from Exova?
A. No.
Q. Were you aware that CEP might have a preference for particular products and might be keen for you to use those particular products?
A. Well, they didn't disclose any preference. I --
Q. So you didn't have any concern at the time that, by speaking to CEP about it, you might only be being recommended certain products?
A. When we first approached CEP, I mean, we looked at some very diverse products, and one of them was a sort of stone chip product. So the fact that they referred us



to Reynobond to me wasn't significant. I understood ACM was a fairly generic product.
Q. Okay.
You then report back to Artelia that you're considering a number of options. Can we just look at that, and then we can break for lunch. So this is at {SEA00007442}. So this is an email from you again to Mr Dawson, and what I want to do is focus on the fourth bullet in the middle of the page where you say:
"We have had CEP come in today to discuss the cheaper ACM cladding option and they will be forwarding samples for possible presentation to Planning. From our conversation with CEP we feel there might be scope to switch from zinc but it will require a bit more elaboration than the Leadbitter's figure allows. We note that Leadbitter don't appear to have costed the zinc and have put in a budget figure only."
Do you see that there?
A. Yeah.
Q. Then in the next bullet, you deal with insulated render and you say:
"An insulated render is an option for cladding the tower. It is not clear from the schedule whether this is cheaper than ACM. It is less desirable from a maintenance and lifespan point of view."



Do you see that there?
A. Yes.
Q. I think you explained, was that because of the concerns that you explained to us earlier?
A. Yeah.
Q. In the next paragraph you also say that you're looking at a Marley Natura as a cladding option as well; do you see that?
A. Yes.
Q. Can you explain what cladding option that was?
A. Marley is a cement board.
MS GRANGE: Right, yes.
Mr Chairman, I think that's a good moment, if we could pause there. I am carrying on, but it's a good moment.
SIR MARTIN MOORE-BICK: We will have a break now, Mr Sounes, so everyone can have some lunch. Please remember not to talk to anyone at all about your evidence or anything to do with it over the break, and we will resume at 2 o'clock, please. All right?
Thank you. Would you like to go with the usher.
(Pause)
Good, 2 o'clock, then, please.
MS GRANGE: Thank you.
SIR MARTIN MOORE-BICK: Thank you.



(1.00 pm)
(The short adjournment)
(2.00 pm)
SIR MARTIN MOORE-BICK: All right, Mr Sounes?
THE WITNESS: Yes.
SIR MARTIN MOORE-BICK: Ready to carry on.
THE WITNESS: Yes.
SIR MARTIN MOORE-BICK: Good, thank you very much.
Yes, Ms Grange.
MS GRANGE: Yes, thank you.
Mr Sounes, just picking up the chronology, in paragraph 200 of your statement {SEA00014273/87}, what you say is that over the following weeks -- so this is kind of the spring of 2013 -- Studio E corresponded with CEP in relation to four different Reynobond products. You say that at paragraph 200, for the transcript.
Can we just go to the email that you have referred to in that paragraph of your statement, {SEA00007527}. We can see that the email you have referred to is in fact a communication between Blaine Cagney of Studio E and reynobond@alcoa.com. Do you see that there?
A. Yes.
Q. So it seems to be a direct communication not with CEP but with Alcoa or, as we know them, Arconic. Do you see

that?
A. Yes.
Q. Do you recall any further direct communication or correspondence with Arconic around this time?
A. I don't, and this was just a request for samples --
Q. Yes.
A. -- by Blaine.
Q. Yes, no, that's right.
Can we go, then, to {SEA00007563}. We can see that on 17 April you sent an email to Peter Maddison of the TMO, copying in various others on the project. If we go to the very bottom of that first page, we can see that you have circulated some samples. You say:
"Going beyond the meeting I think it is worthwhile circulating the samples we have been collecting of alternative cladding options to zinc."
Do you see that there?
A. Yes.
Q. Then you have set out a number of samples. So we can see you have coated aluminium, aluminium composite material, and there are five different ACMs there. Do you see that?
A. Yes.
Q. Then if we go over the page {SEA00007563/2} we get some more ACMs, I think, at 6, 7 and 8. Then you say:



"Marley Equitone: Cement Particle Board."
Do you see that there?
A. Yes.
Q. At item 8 you have something called a "Rheinzinc - material originally shown to Planners", do you see that there?
A. Yes.
Q. By this stage, had you formed a view that aluminium composite material was going to be the best option in terms of cost on this project?
A. From everything that we had been presented and discussed -- and I'm not sure I'm exclusively referring to CEP here, but I think that would have corresponded with what Artelia thought as well -- it was my understanding that ACM would have been the most cost-effective.
Q. Yes. It's right, isn't it, that by this stage --
A. Of the metals, I should add. Obviously the Marley Equitone isn't a metal at all.
Q. No, that's a cement particle board.
A. I'm not sure how those compare --
Q. I see.
A. -- in cost.
Q. Okay. But by this point, you haven't considered the fire performance of the aluminium composite materials,



have you?
A. No.
Q. Now, going back to your witness statement, if we can look at paragraph 207 -- this is at {SEA00014273/88} -- in the first sentence of that you say -- this is I think in April 2013, the rest of the paragraph, so that's the time period. You say:
"Further to the above issues and apparent requirements of Planning, I raised the idea of using Alucobond (a supplier of ACM panels), on the basis that it had been suggested to me by numerous parties and there were various colour options with this [project]."
Do you see that there?
A. Product, "with this product", yes.
Q. Yes, and you have said in the line before that "it had been suggested to me by numerous parties". Can you remember which parties had been suggesting Alucobond to you?
A. Can I give a little bit of context --
Q. Yes, absolutely.
A. -- to this, because why am I looking at ACM, I think would be the first point, and at this point the project had stalled --
Q. Right.
A. -- almost entirely, it seemed, on the basis of cost.



Q. Okay.
A. I don't want to say we were desperate, but it was not clear that it was going anywhere --
Q. Right.
A. -- in terms of the negotiations with Leadbitter.
Q. Okay.
A. So why would I be looking at the cheapest options? Well, that's because perhaps that's what the client would need.
Q. Yes. We have already looked at that email that you received about a radical re-think.
A. But did anyone -- no, Alucobond -- I knew Alucobond from my student days.
Q. You say Alucobond "had been suggested to me by numerous parties". It was that that I was interested in. Which various parties had suggested Alucobond to you, can you remember?
A. No, I raised the idea of using Alucobond on the basis that it, being ACM, not Alucobond itself --
Q. I see.
A. -- had been suggested by numerous parties.
Q. I see, so it's the ACM that you are talking about --
A. Yes.
Q. -- that had been suggested to you, I see, yes.
A. I've obviously done some research and I've -- it's not

currently on the Inquiry's portal, but in 2009, Alucobond produced a marketing brochure called "From a pioneer to the synonym", and I think anyone of my age or older would commonly refer to ACM as Alucobond.
Q. I see, yes. It was synonymous with that product, was it, that particular brand?
A. I was 19 when I learned about the product, and I believe it's older than I am, as a product on the market.
Q. Can we look, then, at the Alucobond product brochure, {SEA00014431}.
Do you remember looking at this at the time of the Grenfell project?
A. The brochure?
Q. Yes, the Alucobond product brochure, do you remember looking at this at the time?
A. No, at this stage I was looking at the samples.
Q. If we go on within this at page 32 {SEA00014431/32}, we see a list of the different panels available and their properties, and we can see that the standard Alucobond at the top of the page has a PE core and is said, in the little tiny writing on the right-hand side, to have, 1, polyethylene core, 0.5-millimetre aluminium, and then it says "normal flammability". Do you see that there?
A. Yeah.
Q. The next down is Alucobond plus, and that says that it's



a mineral filled core, and in the tiny writing it says it's of low flammability. Do you see that there?
A. Yeah.
Q. I think it also says -- yes, in the middle of the text on the left, it says:
"Thanks to its mineral-filled core Alucobond plus meets the stricter requirements of the fire classifications."
Do you see that there now?
A. I do.
Q. Yes.
A. I repeat, I didn't look at this at the time.
Q. Okay, I'm just going to ask you a general question.
Then at the bottom of the page we have the Alucobond A2, and it's said there that it's the only non-combustible aluminium composite material used in architecture that fulfils the respective standards worldwide, and it says:
"Thanks to its mineral-filled core, ALUCOBOND A2 meets the strict requirements of the fire regulations and enhances the possibilities for the concept and design of buildings."
On the right-hand side, in the little tiny text, it says, "incombustible". Do you see that there?
A. Yes.



Q. Now, I appreciate you say you didn't read this product brochure at the time, but did you appreciate that there were these different types of panel in terms of fire performance available at the time?
A. Absolutely not, no.
Q. So it follows you didn't give any consideration to which of these might be appropriate on the Grenfell project when you were talking about Alucobond?
A. That follows. I can't see what application a flammable product has.
Q. Yes.
Can we now look at paragraph 209 of your statement. This is at {SEA00014273/89}. You say there that:
"On 22 April 2013 I met with Jason Tisbury of CGL Systems (CGL), a façade designer and manufacturer, in our office to discuss another project. Following the meeting, Studio E ordered samples of Alucobond Spectra and Metallic colours and requested further information on cladding pricing and subcontractors. I had asked Jason Tisbury to provide me with contact details for appropriate subcontractors which we might approach to discuss the detail of the cladding on the Project."
Do you see that there?
A. Yeah.
Q. You say you had asked him to provide you with



appropriate subcontractors; did you ask CEP the same question?
A. No.
Q. Do you know why you didn't ask them?
A. Sorry, I do give a reason. Is it not in this paragraph? By that stage I understood that they were not installers per se, they didn't contract, they were fabricators.
Q. I see, so is it explained by the next sentence?
A. Yes.
Q. "By this time I understood that CEP were a fabricator rather than an installer and could only give limited comment on actual costs and details."
A. I can't remember where or how I learnt that, but I understood that they didn't themselves install and design the systems.
Q. Yes. Then you go on and you give the names that were provided to you, and we can see that one of those names was Harley. Do you see that there?
A. Yes.
Q. Had you heard of Harley before April 2013?
A. No.
Q. Had you ever worked with them before?
A. No.
Q. Now, in fact I think we can see that Harley contact you then, before you have a chance to contact them. Let's

go to {SEA00007603}. If we can blow that up. So this is Mark Harris of Harley to you on 25 April 2013, and he says:

"Dear Bruce

"Following up on the contact from Jason at CGL, this is just a quick email to confirm our interest in the proposed over-cladding scheme for Grenfell Tower.

"Over-cladding tower blocks is very much what we do, and specifically in London, hence our keen interest in Grenfell.

"I've attached a small selection of tower block project info sheets, and would welcome the opportunity of meeting up with you to talk through your requirements."

Then he looks forward to hearing from you.

Now, in your experience, was it common for a subcontractor to contact the architect about a project in this way?

A. I can't think of many instances where this has happened; however, the circumstances in which it happened were very understandable.

Q. Yes, because you had been speaking to CGL about them.

A. Yes.

Q. I see.

Now, the product examples that Harley provided you



with in that email, we can see from looking at those that they all involved ACM. Did you notice that at the time?

A. I don't think I, at the time, paid too much attention to this because the project was, in a sense, on hold. I can't recall exactly if I noted that they were ACM. I might have done.

Q. We can see there are attachments: Castlemaine, Chalcot, Clements. I see, so you didn't notice at the time that --

A. I might have done, but obviously it doesn't say so, so I ...

Q. And --

A. I don't think I read those sheets. I might have looked at the pictures.

Q. Did you follow up with Harley after this email?

A. Much later.

Q. Much later?

A. Yeah.

Q. Did you ever visit any of the sites of Harley's previous projects?

A. No.

Q. Did you carry out any form of due diligence on Harley as a subcontractor?

A. No.



Q. Were you aware of Harley and Rydon's work together on the Chalcots Estate in Camden?

A. I think I would have only been aware at the tender phase, by the end of the -- well, once the tender returns came back.

Q. So later in the project?

A. I don't think I connected them at this point.

Q. Were you aware that there had been a fire on the Chalcots Estate project in 2012 involving the cladding?

A. No.

Q. Can we now go to {SEA00007722}, and this is a draft revised brief as at June 2013 that you're provided with by Appleyards for the Grenfell Tower project.

Now, if we look down the first page to the heading "Primary Project Driver", can you see there --

A. Yes.

Q. -- under that heading we have:

"The primary driver for the project is value for money in accordance with Appleyards statue report addendum issued on 24th May."

Do you see that there?

A. Yes.

Q. Now, by this stage it's right, isn't it, that you knew that ACM was likely to be a cheaper option than the original zinc options you had been considering?



A. Yes.

Q. But was zinc still your preferred cladding option?

A. It was, and I believed we were steered towards that by the planners as well.

Q. Yes. Was that a solid zinc panel or a zinc composite panel that was your preferred cladding option at this point, can you remember?

A. I think at this point we were unclear how we would achieve it still, whether it would be a composite or some other folded -- because you can fold zinc in a number of ways to use it as a cladding.

Q. Yes.

Now, can we go to {SEA00002067}. Now, I think it's right -- correct me if I'm wrong -- that this is a proposed cladding materials project brief that Studio E prepared for Councillor Feilding-Mellen in 2013; is that right?

A. I think I prepared this following a meeting with Councillor Feilding-Mellen.

Q. Right, I see, so it's after the meeting with him?

A. Well, looking at the dates, I think -- I have to conclude I did it after.

Q. Yes.

A. And it was summarising what we discussed.

Q. And it was you that prepared this document, did you?

A. Yes.
Q. Yes.
On page 4 {SEA00002067/4} it's got a picture of some ACM panels. In the top right picture we see it says:
"An ACM a polyethylene core with two outer skins of aluminium. It is both light and strong."
Do you see that there?
A. Yes.
Q. As at this stage, did you understand the difference between a polyethylene core and other types of core, including FR cores?
A. At this stage, no. I -- obviously we went on to specify something with a honeycomb core.
Q. Yes.
You had previously proposed, we saw, that the VM zinc composite panels with a FR fire resistant core. Is it just that nobody thought about proposing the equivalent type of ACM panel at this point?
A. This was a discussion on finishes and appearance.
Q. I see.
A. Not on --
Q. Yes.
A. I mean, there's nothing here -- the examples below, Euramax, is just a coated coil of aluminium without a core. All we're looking at is the appearance.



Q. Yes. So this briefing note didn't look at anything to do with fire performance?
A. No.
Q. It wasn't -- no.
Now, going forward in 2013, we know that you provided a revised stage D report on 20 August 2013. For the transcript, that's at {SEA00008052}. Let's just have a quick look at that. So let's go to a reference {TMO10003310}. This is that stage D report of August 2013. Within that, can we go to page 21 {TMO10003310/21} where we've got a section, 4.4, headed "Design Approach: Façade".
Then at page 22 {TMO10003310/22} we can see that you're still proposing a zinc composite rainscreen panel, which appears to be the Rheinzink panel that's being suggested here. Do you see on the right-hand column at the top it talks about, "A zinc composite rainscreen cladding is proposed to the upper levels"?
A. Yeah.
Q. Then it talks about the advantages of zinc.
At the bottom, we have some images, including of the Rheinzink, and then you have got figure 28, Rheinzink natural and pre-patinated colours. Do you see that there?
A. Yes.



Q. Pausing here and looking at that Rheinzink brochure that you have a picture of, we find that at {SEA00014616/37}.
This is some Rheinzink information that you appeared to have at the time. Can we go on to page 41 {SEA00014616/41}. We can see that Rheinzink is non-combustible. If we look at the right-hand column under 1.2, the material properties, at the end of that list you can see it says "Non-combustible". Do you see that there?
A. Yes.
Q. Did that factor in to your decision to select that panel at that time to put in the stage D report, that it was non-combustible?
A. No.
Q. Was it appearance that had largely led to it being in the stage D report?
A. The preference for zinc was, yes, its appearance, but it's also its enduring appearance, its longevity as a material.
Q. Yes.
Now, going back to the stage D report, if we can go back to that, {TMO10003310/26}, it said in the stage D report -- it had this page headed, "Alternative cladding options which may be considered". Do you see that in the middle?



A. Yes.
Q. What we can see is various images there of aluminium -- in the top middle, figure 40, aluminium cassette rainscreen, aluminium composite rainscreen below that. Do you see those there?
A. Yes.
Q. So they're being shown as alternative cladding options.
As we looked at previously, issue 1 of Exova's outline fire safety strategy was also included as appendix D to this stage D report.
Did you ever bring to Exova's attention the specific cladding materials that you were considering in this report?
A. I can't recall doing so.
Q. No. Yes.
Can we also go to page 27 {TMO10003310/27} of this stage D report. There we can see that there's something called an architect's risk assessment schedule. Do you see that there?
A. This is at stage D?
Q. Yes, yes, it is. It was part of the stage D report.
A. So at this stage I -- and obviously later there's more conversations with Exova, but at this stage we only commenced our serious engagement with Terry around this point, and that was all to do with the changes at the

lower level which you covered with him.
Q. I see. We're in August 2013, so he has delivered his issue 1 of the fire strategy back in October 2012.
A. 2012, yeah.
Q. Yes. Can we focus on this architect's risk assessment schedule here, and look over at page 28 {TMO10003310/28}, because it goes on into page 28. So that's the totality of the table we see at this stage.
Would you agree that this is a fairly general list with little project-specific risks identified, very little project-specific risks identified?
A. I wouldn't ... I wouldn't concede that straight off, no. I think this would have been prepared specifically for this report, or for this project, because so many of them deal with the working at height, they may -- risks that would sit with the contractor, they may seem generic.
Q. Can we go back one page to the start of it {TMO10003310/27}. Yes, so the very first line under "General", it says, "00a Fire risk during works". Do you see that there?
A. Yeah.
Q. Then you have some risk factors, but then you haven't got any information there in the right-hand columns. Do you see that?



A. Yes. That "Fire risk during works" specifically refers to a fire occurring during the works.
Q. I see.
What were the specific fire risks that were identified at this stage? Were there any specific fire risks that were identified on this particular project?
A. I would be looking to Exova to clarify those. Obviously --
Q. As part of the -- sorry.
A. Obviously as part of a refurbishment within an occupied building, there are very real issues around machinery and work.
Q. What about as part of the CDM, the construction design and management process, were you looking to Exova for assistance there with fire risks, or was Studio E looking at them themselves?
A. The CDM obviously relates to design. Our -- this is our CDM risk schedule.
Q. Yes.
A. Risk assessment. We have flagged up the obvious, that during the works there is a risk of fire --
Q. Right.
A. -- occurring as part of the works.
Q. As a more general comment on all of these headings, these seem to be very generic headings, and the only



project-specific item we can see, if you go over the page again at page 28 {TMO10003310/28}, item 14a, you can see there it talks about:
"Cleaning of new external cladding windows."
And you have got an action taken at the design stage:
"Horizontal 'tilt-&-turn' units with key-operated restrictor will now be fitted."
So you have got something specific about the project there, but otherwise it does seem to be a very generic list, would you accept that, at this stage?
A. No, CDM is obviously all-encompassing, but as designers you're -- the CDM is encouraging you to think of the risk to the operatives during the work, and thereafter the maintenance. That's my -- that was my understanding of the focus of the CDM.
Q. Did you understand it could be more broad than that --
A. No, absolutely.
Q. -- and look at the risks to anybody within that building?
A. Yes, of course, absolutely, but that goes in a sense without saying. The -- my understanding of the introduction of the CDM was focused on health and safety on site, specifically construction and especially maintenance, so that you didn't design yourself or



a future maintenance operative a problem.
Q. Yes. Okay.
A. That --
Q. Yes.
Can you recall whether Artelia had any role as CDM co-ordinator in the preparation of this schedule or this bit of the report?
A. Designers would all prepare risk assessments on their own and the CDM co-ordinator would co-ordinate them --
Q. Yes.
A. -- and receive them, and I think the CDM co-ordinator did include a submission in this report.
Q. Right.
Did Artelia ever ask you for a more detailed design risk assessment, including in respect of the overcladding?
A. No.
Q. Now, I now want to consider the contact that you had with Harley prior to or around stage E of the project.
So by this stage, we know that Studio E was in contact with Harley. We've seen some of that. Let's look at some further correspondence. If we can go to {SEA00008375}. So this is an email from you to Mr Harris at Harley on 11 September 2013, and you say:
"Dear Mark

"The Grenfell project is moving again and I would like to arrange a meeting with you or someone from Harley to discuss options, costs and technical details. This is integral to us de-risking the project, which will be tendered some time in November. We're not the easiest place to get to so I'm happy to travel.

"Many thanks

"Bruce ..."

Do you see that there?

A. Yeah.

Q. So you have asked to meet to discuss options, costs and technical details.

What did you mean by the phrase "this is integral to us de-risking the project"? What did that mean?

A. I think I've said a few times that the challenge of undertaking such a significant refurb, and particularly overcladding, on an occupied building was something new to us, and to understand any impacts on the client, on the programme, on the cost, it was important for us to try and understand how their component would interface --

Q. Yes.

A. -- with the whole. So CEP hadn't been able to give us that type of insight, so it made sense to approach a specialist subcontractor.



Q. Yes.

Now, can we look at another email you send a little bit later in September to Mark Harris. This is at {HAR00010233} and I want to look at the bottom of the page. So this is an email from you to Mark Harris, 25 September:

"Sorry for the delay getting back to you.

"Can we meet half way in Tower Bridge or Victoria first thing on Friday? A coffee shop perhaps? It would be fine for you to meet Tomas alone but I would prefer to be there. With two projects at critical junctions my weeks are being rapidly consumed by meetings and we have a full set of ERs to prepare for end of October."

That employer's requirements?

A. Yes.

Q. So you wanted Harley's input into the specification prior to preparing the employer's requirements; is that correct?

A. I think I'm referring to a different project.

Q. I see. Which project was that?

A. Well, the ERs for Grenfell were prepared end of November, beginning of December.

Q. Right.

A. And I -- I haven't checked, but that is likely to refer to the Heston Leisure Centre that I was working on in --



Q. I see, and you were seeking Harley's assistance in relation to that leisure centre as well?

A. No, it was that project which initially got me in touch with Jason Tisbury from CGL, which in turn led me on to Harley. No, Harley had no input on the other project. I'm just referring to the fact that I'm focusing on a deadline on another project.

Q. Oh, I see. So that's just to explain that your weeks are becoming rapidly consumed, is it?

A. By meetings, yes.

Q. Okay.

Did it occur to you that Harley might ultimately end up in the supply chain for this project in terms of being the cladding subcontractor?

A. I wouldn't have said likely, no. I -- definitely not likely. Obviously it was a possibility.

Q. Your phrase "de-risking", might that have also been a reference to needing to produce a very clear and tightly-framed specification so that the eventual contractor had less discretion to provide what it wanted and you had control over the spec for the cladding?

A. I'm sorry, could you rephrase that?

Q. Yes. When you refer to de-risking the project, might you also have been referring to how specific you wanted the specification for the cladding to be, so that you



had control over what the product would be?

A. That's something completely different to trying to de-risk the project.

Q. Okay.

A. I'm sorry, I --

Q. Fair enough, no, I'm just asking.

You then met with Harley, we know, on 27 September 2013 at Hays Galleria. This is referred to as the Hays Galleria meeting. We looked at it this morning in the context of insulation.

Can we go to {SEA00008790}. What you have done in this email -- it's from you to Peter Maddison at the TMO; Phillip Booth, Artelia; Claire Williams, the TMO; and then someone from Max Fordham, Matt Smith, as well.

What you have done is you have given a summary of the meeting you have had with Harley after, which you have sent to these parties. You say:

"We met with Harley Curtain Wall this morning to discuss the project. They are very keen and have been tracking the project for some time. They are specialists in this type of project ... They pointed to Ferrier Point as a being very similar to Grenfell, although it is triple glazed and super insulated. We had forwarded them sample details and the elevation measure beforehand."

Then you say this at the first subparagraph:

"Their 'back of a fag-packet' budget, based on the areas is "around £3m", of which would include £250k for the mast climbers and zinc rainscreen cassettes. This equates to 18% over our Stage D budget of £2.3m (assuming access costs fall under Preliminaries )."

Do you see that there?

A. Yes.

Q. So there you can see their very rough estimate for installing the zinc rainscreen cassettes, they say in the middle. Do you see that there?

A. Yes.

Q. Is that the estimated cost of installing the whole façade, as you understood it?

A. Yes. I guess it's open to interpretation what that meant, but --

Q. Yes.

A. -- yes.

Q. Okay. Then at point 2, if we can read that:

"Their recurring experience is that budgets force clients to adopt the cheapest cladding option: Aluminium Composite Material (ACM), face-fixed. We have offered to forward a more detailed take-off so they can provide a more accurate budget. A Zinc Composite Panel is also available which is cheaper to install than a cassette."



Do you see that there?

A. Yes.

Q. So at that meeting with Harley, had you gained the impression that they had a preference for using ACM?

A. No, that explicit preference came later. I don't think that was communicated at this meeting. It was ... it was an opportunity for me to ask questions to understand how they go about what they do.

Q. I see. But they had told you that their recurring experience was that budgets forced clients to adopt the cheapest cladding option?

A. Yes. I --

Q. But they didn't express any preference from their point of view about whether ACM --

A. Not at this -- obviously Mark Harris' email subsequently states that, but I don't recall that at this meeting.

Q. I see, yes.

Did the fact that it was the cheapest material ever cause you at this stage to question whether it sacrificed performance in the interests of price?

A. Well, in my opinion, it did, because the coating on the ACM is 40 micron, it's -- it doesn't last forever, and it's subject to scuffing and scratches, so your appearance is not comparable to zinc, in my opinion.

Q. I see. And its durability is not comparable?



A. Aesthetic durability. I think the panel itself is aluminium, which is not going to corrode, but its appearance will degrade.

Q. Did you think about its fire performance and whether it might be sacrificing fire performance in the interests of price?

A. No, no, I don't.

Q. Now, you say in paragraph 207 of your statement {SEA00014273/88} that CEP once said something similar about budgets forcing clients to adopt the cheapest cladding options. Can you recall who said that to you from CEP, and when that was said?

A. I only met Geof Blades from CEP, and it would have been right at the very beginning of the project, either a conversation in person or in -- it probably was in person, but ...

Q. So you have a clear recollection of that being said by Mr Blades, do you?

A. It's in my statement, I believe I did. Sorry, I think so, yes.

Q. Now, you say at the end of this email, if we look at the very last sentence at the bottom of this page, you have also approached Paneltec. who are preparing budget costs, and you have described in your witness statement your interaction with Paneltec at paragraph 268 of your



statement {SEA00014273/113}, and you say there that you don't recall if they ever provided you with any costs.

Is it fair to say that the only input on costs that you ever had was from Harley?

A. Yes, although I think there was some communication between SIG and Harley.

Q. Between SIG and Harley?

A. Yes, at this point.

Q. Okay. Yes, we may come to that in a moment.

Can we go now to {SEA00008809}.

A. Just --

Q. Sorry, yes.

A. -- if I can point out, we're not the quantity surveyors, so we were doing this off our own back.

Q. Yes.

A. It's not for us to price the project. We were just helping, assisting as far as possible to get as precise a cost in advance of a tender.

Q. Yes, because you knew your client was having issues about the budget --

A. Yes.

Q. -- and there was a suggestion that the cladding was an area where you needed to find savings; yes?

A. And it was a risk item, as I saw it.

Q. Yes.

A. It's a difficult thing to put a rate against because of the complexity involved.
Q. Okay.
Can we go, then, to {SEA00008809}, and we can see from this email that you inform Harley on the same day -- this is 27 September 2013, to Mark Harris, copying in Ray Bailey of Harley and Tomas Rek within Studio E. You say:
"Dear Mark, Ray.
"Thank you very much for the conversation this morning. It was very useful and I'm especially grateful you could come into London. We will follow up early next week with a quantity take-off from our model. I've communicated your 'back of a fag packet' figure to the QS and it is over budget - which is to be expected - but some firmer budgets will help focus everyone's minds."
Do you see that there?
A. Yeah.
Q. Then you say:
"We're looking seriously at Nedzinc's composite panel. The small sample we have in the office looks like Alucobond but is apparently zinc."
Do you see that there?
A. Yes.
Q. If we can go on to {SEA00008985}, on 4 October you send



another email to Mark Harris, and in the third paragraph you say this:
"The clients response to your budget was 'what about aluminium?' We haven't had samples or cost back from Nedzink but this could be ideal if it eliminates the need for fabricated trays and is true zinc ..."
Then you have a link to the NedZink -- and we see that it's a NedZink NOVA composite panel from the title -- and then you say:
"We are looking at Ali planks/trays to the lower 4 floors ...
"Would it be possible to come back with budget costs? Or what would the material cost uplift be for a Nova composite versus a metallic/faux-zinc Reynobond panel?"
Do you see all that?
A. Yeah.
Q. So you're suggesting there in that first paragraph I read that the NedZink composite panel could be ideal, you're saying. So is it right that your strong preference at this stage was still for zinc but it would appear to be a zinc composite panel you're referring to there?
A. I think ... I think I'm again expressing a preference for true zinc.



Q. I see. So the NedZink NOVA composite, was your understanding that that was a --
A. I haven't --
Q. -- wholly zinc panel.
A. I can't remember what that panel was. It might have had aluminium on one side and zinc on the other.
Q. Okay.
A. I can't --
Q. Yes.
You have asked Harley in that last paragraph to come back with budget costs:
"Or what would the material cost uplift be for a Nova composite versus a metallic/faux-zinc Reynobond panel?"
So were you actually asking for a quotation for the NedZink NOVA panel? Is that what you were looking for from Harley?
A. Not a quotation, just an indication of a budget.
Q. Yes, okay, so budget costs --
A. Yes.
Q. -- for that.
And the faux-zinc, the metal faux-zinc Reynobond panel you're referring to, was that an ACM panel?
A. Yes, that would have been a panel that Debbie French presented a year before -- no, no, that was only



six months or so before.
Q. Then let's look at Harley's response next.
So Harley respond with some budget costs on 18 October 2013. If we can go to that email, that's at {HAR00005515}, and it's at the bottom of that page. So 18 October 2013, Mark Harris to you, and he says:
"Hi Bruce
"Apologies for the delayed response, things have been a bit hectic in the past few weeks!
"We've put a budget spreadsheet together, which is based on using the Reynobond Natural Zinc product, fabricated into cassettes, as a starting point.
"We have included 3 other options on the bottom of the attached spreadsheet showing the effect on the overall budget if we were to consider face fixed natural zinc, and then going to a standard aluminium ACM in both cassette and face fixed."
Do you see that there?
A. Yeah.
Q. He says:
"The most expensive option is obviously the natural zinc cassettes. If standard ACM was to be considered (in a zinc colour), face fixed, the saving could potentially be over £500k."
Then he says:

"As said when we met, we have a number of examples of high rise residential blocks in London where standard aluminium face fixed ACM was used. We can forward some photo images, or arrange site visit as and when required."

So do you see all that there?

A. Yeah.

Q. Just to be clear, did you ever take up his offer of a site visit to see some other blocks clad in ACM?

A. No. No, I didn't.

Q. Then can we look at the budget cost document that Harley attached, this is at {SEA00002275}. We can see on page 1 here that they've provided costs for the Reynobond zinc cassette rainscreen cladding; do you see that there? Underneath "Insulated render" you have got "Reynobond zinc cassette rainscreen cladding finial screen crown" and then "Reynobond zinc rainscreen ... [panel] cladding and insulation", do you see that there, the next one, so the third item down?

A. Third one down, yes?

Q. Yes:

"Reynobond zinc rainscreen spandrel cladding and insulation."

And he has quoted a price of £315 --

A. Yes.



Q. -- per metre squared. So we see that there.

Then on page 3 {SEA00002275/3} what they've done -- so that's the main budget cost they have provided you for the cassette rainscreen zinc, and then if we go over the page, they've just given you some line items for alternative options for cladding. Do you see that?

A. Yes.

Q. Yes, on page 3, exactly. So we can see those there.

Now, they don't seem to have provided you with a quote for the NedZink NOVA composite panel that you had asked them about. Did that seem strange to you at the time, that you didn't have a quote for that panel? Sorry, not a quote but a budget cost.

A. No, it didn't occur to me, and not subsequently either, and I can't remember exactly what -- where that investigation went with the NOVA product.

Q. No.

A. I think it moved towards the KME, which is what --

Q. Yes.

A. -- we eventually specified.

Q. Yes. Now, just going back to page 1 {SEA00002275/1} and just looking through the budget, we noted that they've quoted you there a rate of £315, and I put to you that was per square metre; is that correct? Is that how you understood it?



A. How I understood it, yes.

Q. Yes.

We also see the same price lower down for the Reynobond column zinc column casings and insulation. You can see, four lines up from the bottom, the same figure of 315 appears under the rate. Do you see that there?

A. Yes.

Q. Then as we saw on page 3 {SEA00002275/3} you've just got the global figures for the three different types of Reynobond ACM panels.

Now, if we can go to page 2 {SEA00002275/2} of the quote, we can see at the end of it it's got paragraph 5, "Exclusions", do you see that at the bottom of the page?

A. Yeah.

Q. If you look four lines up from the bottom it says:

"No allowance for fire rated products."

Do you see that there?

A. Yes.

Q. Now, you have said in your statement that you don't recall whether you noticed this at the time. Does that remain your evidence, that you can't remember whether you noted that at the time?

A. Yes. I would have passed this on almost immediately to Appleyards, because that was its primary purpose.



Q. Yes, so you don't scrutinise in detail these exclusions?

A. No, because this -- this was really just for the sake of budgeting.

Q. Yes, I understand.

Had you noticed it, would you have queried it with Harley?

A. This page is quite detailed. If I had picked up that, I would have picked up all the other detail as well.

Q. Yes, okay.

A. So that wasn't ... that wasn't our -- that wasn't what we were looking to do at this point.

Q. By this time, were you still unaware that fire rated products were available in relation to these cladding options?

A. No, I think I -- no. I think ... I don't recall when I first became aware, but I ... the first time I think I might have come across it was when the BBA certificate was circulated.

Q. Right.

A. But I don't recall at that stage either being aware of it.

Q. I see. So you weren't aware at this stage and you don't think you were aware when --

A. If you were to glance at that, it's not clear what products are referred to.

Q. Okay. But it's a more general question of whether you were aware that fire rated or fire resistant, FR, panels were available for some of these cladding options; were you aware of that at this time?
A. No, I think I do state in my witness statement that the topic of the core was never discussed.
Q. Yes.
Now, let's just go to your response, then, to Mr Harris. This is at {SEA00009237}. So this is on 18 October, back to Mark Harris, and you say in the first line:
"Thank you for the spreadsheet. Very useful indeed."
Then you say this:
"The Reynobond Natural Zinc is VM Zinc 'Quartz' which we discussed. I don't think it is an option."
Do you see that there?
A. Yeah.
Q. So that was one of the alternatives that they had put in the build-up to that sheet. Can you explain why that wasn't an option? Why did you not think that was an option?
A. It was aesthetic.
Q. Was it that it was too dark, is that right --
A. Yeah.



Q. -- in appearance?
A. Yes, we had, even as -- it was almost a year before that, been given a steer that the building needed lifting, and a dark product wouldn't do that.
Q. Then you say:
"Could you give [an] indication the premium we would have to pay for the Nedzink (datasheet attached) vs a standard ACM. I'm worried your 'standard' is white and entirely unfeasible. We received the following guidance from Paul Cousins at SIG Zinc and Copper ..."
Then you set out the guidance you have had from SIG in that email; is that correct?
A. Yeah.
Q. And you have got a Proteus HR NedZink panel, £130 to £180 per metre squared; NedZink NOVA Composite, £90 to £150; NedZink interlocking panel. So you were asking again about the NedZink panels, aren't you, in this email?
A. Yes. Yes.
Q. You say there:
"A face-fix solution would be acceptable so I hope we would be at the low end - £90/m2."
Do you see that there?
A. Yes.
Q. Just picking it up at this stage, can we look at



paragraph 277 of your witness statement, {SEA00014273/115} to {SEA00014273/116} and I want to read just the end of -- let's just read that whole paragraph. You say at the bottom of 115:
"The same day, I emailed Mark Harris (Harley) and thanked him for the useful spreadsheet."
So that's the email we were just looking at.
"I asked for him to provide a quote for NedZink NOVA Composite (I now note the product sheet I attached said it had an 'LD-PE' core, although at the time I would not have spent time analysing the datasheet and I had no experience with PE composites)."
Do you see that there?
A. Yes.
Q. Now, what did you understand that LD-PE core to be referring to?
A. I don't recall reading it at the time.
Q. Right. But you have noted it -- I see, so you're noting it since in your statement.
Now, you say there that you wouldn't have spent any time analysing the datasheet because you had no experience with PE composites.
A. Well, I had no experience --
Q. Yes.
A. -- with composites.



Q. But it's right, isn't it, that this was a product which you were actively seeking some prices for and you were actually considering specifying, is that right, the NedZink NOVA composite?
A. Yes.
Q. You were looking closely at that panel?
A. We were, yes. But Tomas was engaged in most of the discussion with SIG and I ... I can't recall why the NedZink products went away.
Q. No.
A. I can't recall the circumstance.
Q. We will move through the chronology, but the point I want to put to you is: given you were seriously considering that panel, would you accept that it was necessary to check that there was nothing in the datasheet which rendered it unsuitable for Grenfell Tower?
A. Yes.
Q. You did --
A. Yes, would we check -- if we were going to specify it, we would ask the question directly and check, yes.
Q. Who would you ask the question of?
A. The supplier, the --
Q. I see. So would ask them: is this suitable to be used --

A. Yes.
Q. -- on our project?
A. Yes.
Q. And you would expect, what, them to be able to give a view on compliance with the Building Regulations?
A. I would expect them to have a view on it, yes.
Q. I see. But you wouldn't expect to do your own research on that panel at this stage and its compliance?
A. Because there was no knowledge of the hazard, it would not -- whereas if it was a timber product, you would think of it. But I had no knowledge of any hazard with ACM. As I said --
Q. Yes.
A. -- I had been aware of it for my entire career, I had never heard of it presenting a hazard, and I had seen it used all over.
Q. Now, we know, and we saw it a little bit earlier, that around this time you were also seeking quotes from the company called SIG.
A. Yes.
Q. They're a supplier rather than an installer; is that correct?
A. Yes.
Q. Yes.
Can we just look at what you say about that at



paragraph 282 of your statement, {SEA00014273/117}. In the second sentence, what you have done there is summarise the rates that SIG gave you for the Proteus HR panel, the NedZink NOVA composite and the NedZink interlocking panel, we saw that earlier.
Can we actually now look at the quote from SIG. This is at {SEA00009019}, and it's at the bottom of page 1, and into page 2 {SEA00009019/2}. So this is Paul Cousins from SIG on 9 October 2013 emailing Tomas Rek. You're not copied in here. He says:
"Hi Tomas
"With reference to the above mentioned project, I have spoken to KME ..."
Who were KME?
A. I think they were fabricators.
Q. Yes. Were they called KME Architectural Solutions; is that right?
A. I --
Q. Yes.
A. -- defer to you.
Q. Okay.
A. I discovered that we were in possession of some drawings of theirs in that binder --
Q. Yes.
A. -- discovered last year.



Q. Yes.
A. Which I think actually go back to 2012.
Q. Okay.
Just to carry on, he said:
"... I have spoken to KME about their Proteus HR Panel, which I believe is the most suitable for this application as this panel construction will offer a very high level of flatness and stability."
Then if we go over the page {SEA00009019/2}, he says:
"There are two other options NedZink Nova composite and interlocking panels ..."
And then he talks about a wind loading study, and then you get the prices and he says:
"... I can only provide panel prices only, an installed price can be obtained from a façade contractor."
And you have got the three prices there.
A. Yeah.
Q. And he says they're supply-only, et cetera.
Was it the case that the Proteus HR panel was being suggested as being used with NedZink flat sheets? Was that your understanding?
A. I think so.
Q. Is it right that the Proteus HR is a honeycomb panel



which can be used with different types of metal outer sheets? Was that your understanding?
A. To be honest, at the time I was only aware of it in the context of the zinc finish.
Q. I see. So you were only thinking about the zinc finish, not about the centre of the panel?
A. No, you asked if it could be used with multiple finishes, but my understanding at the time is it was specifically a zinc system with an aluminium honeycomb to provide stiffness.
Q. I see, yes.
Now, we can see that they're saying it's a panel-only quote for the Proteus HR -- that's £130 to £180 per metre squared -- and you have referred in your statement to Mr Cousins' advice that the Proteus HR was the most suitable for this application, and he says "as it will offer a very high level of flatness and stability". That's what we saw on the previous page.
Did this advice and the costs that they were giving you give you confidence that zinc would be achievable within the budget the TMO had given you?
(Pause)
A. I don't think there was enough information to be -- to derive any confidence, it was just information.
Q. Okay. Okay.

Now, I want to look a little bit more at some communication between SIG and Tomas Rek, so if we can go to {SEA00009437}. Tomas Rek is seeking quotes from SIG for zinc panels. If we go to the bottom of the email chain on page 2 {SEA00009437/2}, 18.31 on 24 October 2013, the next email chain up at the bottom of page 1 {SEA00009437/1} this is Tomas Rek to Simon Walker:

"Afternoon Simon

"With regards to the new rainscreen cladding we are liaising with Mark Harris from Harley who are envelope installers. You can find his details below ..."

Do you see that there?

A. Yeah.

Q. I think in the next email up -- no, actually, sorry, can we go back to the top of page 2 {SEA00009437/2}. Yes, so there he says:

"Mark is putting together a quote for the whole envelope element of the job ... and would like to precise their quote based on your rates. So when ready to send your quote across to us can you please address it to Mark as well?"

Is that Mark from Harley, Mark Harris?

A. I believe so.

Q. So Tomas Rek seems to be saying to SIG: can they work



with Harley on a quote for the whole of the envelope element of the job?

A. Yes.

Q. Yes. Then at the very top of page 1 {SEA00009437/1}, SIG confirm that -- they say:

"Tomas

"Matthew Irving of KME AS has made contact with Mark and will provide budgets to Harley next week."

Do you see that?

A. Yes.

Q. So that seems to be KME Architectural Solutions confirming that they will provide Harley with a price for the panels to enable Harley to look at a quote for the whole of the job; does that make sense?

A. It does. I'm sorry, I'm not connecting the previous email where I provided rates to Harley, where we -- that, I think, was a day or two before.

Q. Yes, I think that's right.

A. That's right, yeah.

Q. Now can we go to another email, {HAR00005996}. This is another email of 25 October 2013. It's an internal Harley email. Can we just zoom in on the top, I want to look right at the top of the page, the top email. Thank you.

So this was an email from Mark Harris to Ray Bailey



on 25 October 2013, and with reference to the exchanges that we were just talking about, he says to Ray Bailey:

"[For your information] FYI

"Looks like our old mates at Studio E are now referring all manufacturer's to us on Grenfell. Can't be bad! Might need to get Rebecca to knock up a sketch model before too long."

Do you see that there?

Now, I'm not suggesting you saw this at the time, but they're referring to you there as their "old mates Studio E". Do you know why they might have been referring to you as "old mates"?

(Pause)

A. I take its tone to be a bit of a ribbing tone. It's a bit ribbing, he's ...

Q. He seems to be pleased that --

A. "Can't be bad", yes.

Q. -- Studio E are referring manufacturers to them. But the "old mates" -- I think you have made clear you had never worked with Harley before on other projects.

A. No, and I don't believe anyone in the team had either.

MS GRANGE: Okay.

Mr Chairman, that might be a good moment for a break.

SIR MARTIN MOORE-BICK: Yes.



Well, we're going to have another break now, Mr Sounes. We have to have these breaks every now and then.

We will resume -- you had better have a reasonable amount of time, had you, at this stage?

MS GRANGE: No, if we start at maybe 3.25, is that okay?

SIR MARTIN MOORE-BICK: If that's long enough, yes.

We will resume at 3.25, so if you go with the usher, please, and remember not to talk to anyone about your evidence.

THE WITNESS: Thank you.

SIR MARTIN MOORE-BICK: Thank you very much.

(Pause)

Right, 3.25, please.

MS GRANGE: Thank you.

SIR MARTIN MOORE-BICK: Thank you.

(3.07 pm)

(A short break)

(3.25 pm)

SIR MARTIN MOORE-BICK: Happy to carry on, Mr Sounes?

THE WITNESS: Yes.

MS GRANGE: Yes, thank you.

So we were at the end of October 2013 and I now want to look at some emails exchanged in November 2013. If we go to {SEA00009736}, this is Mark Harris of Harley,

7 November 2013, to Tomas Rek. You're copied in there, and he says:

"Good morning Tomas

"A response has been received at last from KME, although I'm not sure it tells us a great deal. All that has been provided, is a base m2 rate for panel only, ex-works. That must have taken all of 10 minutes to think about, so quite why it's taken them 2 weeks to provide it, is a mystery to me!

"All have been able to do with this extremely limited information, is take a best guess at wastage, transport, and support rail costs ... and input into our spreadsheet to give an end figure, on the wall. The result was:

"Proteus HR Composite - £282m2."

Do you see that there?

A. Yes.

Q. He reiterates in the next paragraph:

"Quite what finish this is based on, I have no idea (due to lack of information)."

So just pausing there for a moment, the quote that Harley gives of £282 per metre squared is more expensive than the supply only price given by SIG, they had said £130 to £180 per metre squared, and is that because the SIG price was the supply-only panel price, whereas



Harley have tried to give you the price for the whole installation and the associated works? Is that correct?

A. That's how I understood it.

Q. Yes.

Then can we look at the next paragraph in Mark Harris' email. He then says, just picking up in the second sentence of that last main paragraph:

"I have to say, from a Harley selfish point of view, our preference would be to use ACM. It's tried & tested (on many Harley projects), and we are confident in the cost base. That said, we are of course an envelope contractor, and would be happy to clad the build in the material of choice."

Do you see that there?

A. Yes.

Q. So at this point did you understand Harley to be expressing a strong preference for ACM?

(Pause)

A. Strong preference? It's a preference. And the basis of that preference, he said it's tried and tested, in other words they're familiar with it, and confidence in its cost base. Now, I'm sort of volunteering a lot here, but I think I understand your question.

Q. It's how you understood it, really. Did you understand Harley to be expressing, I would say, a strong



preference for ACM, but if you think it's just a preference --

A. Not a strong preference, it's a preference, and what contractors like is reliability, so that their supply chain does not cause them problems on site in delivering materials in a timely fashion or at costs that are greater than what they anticipated. So I interpret that as being behind -- their basis for a preference for ACM.

Q. Did you feel in general at this time that Harley was trying to encourage you towards the use of ACM on the project?

A. No, I don't think that's a -- I don't think that's in any way trying to encourage us.

Q. Given Harley's preference as expressed in this email, did you ever think about going to another subcontractor to get some quotes for the installation of either the Proteus HR or the NedZink NOVA composite panels?

A. This wasn't tender; this was just research for the sake of establishing -- started out researching the viability, and it ... subsequent correspondence has focused a lot on cost, but that wasn't why we started out.

Q. I see.

A. So, no, it didn't occur to try and duplicate that exercise with yet another subcontractor.



Q. Okay.

Can we then go to {SEA00009764}. This is an email from you to Harley of 7 November. You say in the first paragraph:

"Mark,

"Thank you for your response. We share your concerns about the reliability of the proposed panel source but we set out to do zinc, and budget permitting it will be a fantastic result. We're challenged to achieve a 'natural' non-coated cladding look."

Do you see that there?

A. Yes.

Q. Then in the second bullet point, you say:

"I think I explained when we met that the VM Quartz product is an unfortunate dark tone. It may not be accepted. The Nedzink option is much better. Is the rate you've given us for the KME Nedzink cheaper overall?"

So that's a question you're asking there of him. Do you see that?

A. Yes.

Q. Then in the third bullet, you say this:

"The client is going to want to include options in the tender for ACM. The standard finish is unfortunate (' Plastic, Croyden'- Planner). We have some matt, satin

and high gloss samples in the office. Please could you indicate appropriate rates for your spreadsheet for different finishes: (Reynobond- I'm assuming Duragloss 5000)."

And you ask for some different finishes, and you also refer there to the Alucobond, spectra and Sakura 917 range at the end of that email. Do you see that there?

A. Yes.

Q. Mark Harris then responds to you on 21 November 2013. That's {SEA00009997}. So this is his response to you on 21 November 2013 and he starts off:

"Hi Bruce.

"Apologies for the delayed response. Only just received a response from Reynobond. They were holding out on us because they were originally talking with another company, and were concerned about maintaining loyalty, on the basis that the other company introduced them to the project. Once I pointed out how much business we do with Reynobond, it focused their attention !!"

Do you see that?

A. Yeah.

Q. Now, in your statement, when you're referring to this email at paragraph 280 {SEA00014273/116}, you say in



your statement that he emailed you to state that he had only heard back from Reynobond and highlighted that Harley did a lot of business with Reynobond.

In fact, would you agree with me that what he says in the first lines of his email is that he's only just received a response from Reynobond?

A. Yes.

Q. So he is not saying he has only heard from Reynobond, just that he has only just received a response from them; do you see that?

A. Yes.

Q. Was it your impression that he decided not to obtain quotes from other manufacturers? Because he goes on to talk about the Reynobond and he gives you various quotes for ACM standard and cassette towards the end.

A. He says it adds more or less the same amount to the standard rate. I think at this point I understood they were roughly equivalent.

Q. Yes. What he doesn't do in this email -- correct me if I'm wrong -- is he doesn't give you a quote for the NedZink, the Proteus HR panel, does he?

A. No.

Q. Or the NedZink composite which you looked at earlier. He doesn't give you any quotes for those, does he?

A. No.



Q. Despite you having asked for that in your earlier email.

A. This is dated 25 November, which I think is getting very close to our deadline, and as helpful as it appeared to us this exchange was, we weren't relying on it.

Q. I see, okay. So you weren't concerned that you didn't have a quote --

A. No.

Q. -- for the preferred panel despite asking more than once for that quote?

A. No, because we weren't negotiating with Harley, they were just providing this input to assist. The tender would be the proper context for --

Q. Yes.

A. -- discussing actual quotes.

Q. Yes.

Now, the email also refers, as we've just seen, to Harley doing a lot of business with Reynobond at the end of that first paragraph.

A. Yes.

Q. "Once I pointed out how much business we do with Reynobond, it focused their attention !!"

So he's telling you about that.

Did you think anything about that statement at the time you received it? Did you note it? Did it provoke any particular reaction in you?



A. Again, I think you're asking if it indicated anything untoward, and I don't think it does, no.

Q. Okay.

There is reference in the third paragraph to PPC aluminium cassette cladding. He says:

"With regards to PPC aluminium cassette cladding, we have just costed another project of a similar nature ..."

And he tells you what the "on the wall" rate is.

Do you know what the PPC aluminium cassette cladding refers to? Do you know what that is?

A. Polyester powder coated.

Q. Okay.

A. In other words, not ACM. I'm not sure what he is referring to there, I'll be honest, I don't recall.

Q. Right.

He gives an "on the wall" rate for that of £235 per square metre, including rail, insulation, fixing et cetera. Now, that was substantially cheaper than the rate for the Reynobond zinc that Harley had quoted in their budget spreadsheet of £315 per metre squared.

A. Yes.

Q. He then gives figures for the ACM standard rate, both face-fixed and cassette, at the end of £187.50 per metres squared, and then for the cassettes £232.50 per

metre squared at the end of the email. Do you see that?
A. Yes.
Q. Now, let's go to your reply, this is at {SEA00010000}, and you give this response:
"Many thanks. Tenders are due to be release shortly, subject to the client agreeing the documentation. We are virtually finished."
So I think that is what you were just --
A. Yes.
Q. -- explaining now, that you were running short of time before the tenders were due to be released.
Had you decided to include the Reynobond ACM as an option in the tender documentation before Mark Harris gave you those prices on 21 November, can you recall?
A. I don't think they connected, actually. I think the decision to include the options in a sense came from the client asking for an aluminium option.
Q. I see. So it wasn't necessarily on the basis of that cost information that you decided to include the Reynobond ACM as an alternative in the tender specification?
A. I don't think it's on the basis of the cost information that I used those products and those finishes in the tender specification, no.
Q. Okay. Yes.



Just to be clear, at this stage you hadn't carried out any investigations, had you, into whether the Reynobond ACM would comply with the Building Regulations and Approved Document B?
A. No.
SIR MARTIN MOORE-BICK: Can you just help me with this: the drafting of the tender specification was done by Studio E, was it?
A. Yes.
SIR MARTIN MOORE-BICK: And you had been putting at the front of your proposal the zinc cladding.
Did the client actually come to you and say, "Please put the ACM in as an alternative", or do you recall how it happened?
A. There is an email -- ACM to a layperson doesn't mean anything. I think there is an email from Peter Maddison asking for aluminium as an option.
SIR MARTIN MOORE-BICK: All right.
A. So I think at this point they were used interchangeably.
SIR MARTIN MOORE-BICK: But your recollection is that the request to include an alternative form of cladding came from the TMO?
A. There is an email to that effect, yes.
SIR MARTIN MOORE-BICK: Okay, thanks.
A. And I had picked it up, I mean --



MS GRANGE: Is that one of the emails we went to earlier, where they said, "What about aluminium?", the client fed back?
A. No, it's another one.
Q. Okay, we will have a look for that.
Yes, so that was my next question. So you decided to include ACM in the specification, and you're saying that's because the TMO wanted it in the specification?
A. Well, they didn't specifically want ACM in the specification; they wanted a not necessarily premium product in the specification.
Q. I see.
A. So they wanted a range, and that's how the tender -- and I believe the form of tender was drafted to ask the tenderers to provide options.
Q. So the ACM is in there because you knew it was a cheaper cladding option?
A. Yes.
Q. Is that right?
A. Yes.
Q. Can we look at paragraph 286 of your witness statement --
A. Sorry, can I just add to that?
Q. Yes, yes.
A. It's very common to negotiate with a contractor, but as



soon as you're in a position where they are favoured, in other words you've almost committed, your ability to negotiate cost diminishes. So to put in the options upfront was an effort to try and achieve best value on behalf of the client, so that you were -- you're inviting, in a sense, requests for proposals. You are asking for people to come forward with proposals, costed proposals, in a competitive situation.
Q. I see. Yes.
If we go to paragraph 286 of your statement, {SEA00014273/118}, you say there:
"As a result of the enquiries above, Studio E prepared the specification for the rainscreen cladding, based on the input provided by the specialist cladding subcontractors it had consulted with, including Harley, using a KME Architectural Solutions PROTEUS HR honeycomb rainscreen panel ... with NedZinc NOVA pre-weather finish, manufactured by NedZink ..."
So we've got that there.
I want to focus on the words you have used "based on the input provided by the specialist cladding subcontractors it had consulted with, including Harley" in the second and third lines.
Clearly that had included Harley, but you hadn't actually consulted with another subcontractor other than

Harley, had you?
A. I think via SIG we had consulted with KME. I believe there was correspondence. Not that I was party to, but --
Q. Did you understand KME to be a cladding subcontractor?
A. I think they manufactured the products.
Q. Yes. Aren't they a manufacturer rather than a cladding subcontractor like Harley?
A. I believe that's what I understood, yes.
Q. So what I'm putting to you is, in fact, the input from the specialist subcontractor that you had had was predominantly, pretty much exclusively, through Harley.
A. There was the meeting and the sample we got from Paneltec, yeah.
Q. Yes, but you said earlier you couldn't remember whether Paneltec actually provided you with any cost information.
A. No, no, they didn't, but we did meet with them and discussed the project.
Q. Okay.
A. We did for a period have a very large sample in the office of -- which I think they provided.
Q. What I want to put to you is that you asked a supplier for quotes and then asked them to liaise with Harley, and that you didn't actually ever test the price against



other suppliers or with other subcontractors?
A. Not on an informal basis. That was the purpose of the tender, is to put it out to the market.
Q. Let's now look at the NBS specification. I know we have looked at this a few times, but I want to look at it again now. {SEA00000169/63}, this is the start of H92, which is the rainscreen cladding section. If we look at page 65 {SEA00000169/65} at item 120, and we zoom in at the top of that page, we can see that the main cladding panel here that's in this specification is the Proteus HR honeycomb rainscreen panel manufactured by KME Architectural Solutions. Do you see that there?
A. Yes.
Q. So the manufacturer, KME Architectural Solutions, that's about a third of the way down that first part, and then we can see there is a product reference where it says in capitals "Proteus HR honeycomb rainscreen panel"; do you see that there?
A. Yes.
Q. You also say in the specification here that the zinc sheets manufacturer was to be NedZink; is that right? Do you see that there?
A. Yes, I believe this was prepared by Tomas. I wasn't entirely clear of the background to this or whether they were all somehow connected.



Q. I see.
Can we go to a product presentation for the Proteus panel that we have got? This is at {SIG00000248}. Did you see something like this at the time this specification was put together, a Proteus presentation?
A. This is not immediately familiar, no.
Q. Okay.
A. But maybe.
Q. On page 2 {SIG00000248/2} we see that the product is described as an "Aluminium Honeycomb structurally bonded between two thin gauges of metal". Do you see that there?
A. Yes.
Q. We can see there is a nice diagram of it on the right, and it produces a lightweight and flat composite panel.
Then if we go to page 9 {SIG00000248/9} where the brochure sets out the fire classifications for the panel, we can see it says "Tested to Fire Classification ", then there is a box, a table, BS 476 part 6, 476 part 7, and then in the note it says:
"Meets the requirements according to Class 0 of the National Building Regulations."
Then there is a table below which gives equivalent fire classifications for different countries.
Did you investigate the fire performance of this



Proteus HR panel before it went into the NBS specification?
A. I didn't.
Q. No.
A. No.
Q. Were you aware of anyone else at Studio E specifically investigating the fire performance?
A. No.
Q. If we go back to the NBS specification, this is at {SEA00000169/64}. If we can look at the bottom of that page, we can see that in section 11 of the H92 rainscreen cladding section, there was this section, "Information to be provided with the tender", and it says:
"In addition to the cladding specified in the below clauses 120 & 123 submit comparative supply and install costs per m2 of the whole cladding system for the following alternative materials ..."
We have Reynobond Duragloss 5000, and then there is three different finishes you have outlined there, and then Alucobond Spectra, Sakura, and then the quartz zinc composite polymer panel by VMZinc. Do you see that there?
A. Yes.
Q. Did you investigate the compliance of these alternative

materials with relevant statutory requirements, including the Building Regulations, before inserting those into the NBS specification?
A. I don't think these are complete specifications, they're finishes. The Duragloss refers to the coating.
Q. Right. So are you not asking here for alternative costings for Reynobond ACM panels from their Duragloss 5000 range? Isn't that a completely different type of panel --
A. Yes.
Q. -- to the Proteus HR?
A. Yes, but no, we didn't seek to check, as we've discussed before, compliance with each item.
Q. No.
A. No.
Q. Now, the NBS specification doesn't state any particular fire rating for the cladding panels, does it?
A. The NBS?
Q. Yes.
A. No. I don't think it typically does.
Q. Do you know whether any thought went into whether a fire rating of the panels ought to be specified in the NBS?
A. I don't recall it being discussed between Tomas and I.
Q. So we have been through a number of product -- sorry.
A. Or, for that matter, prior to Tomas' involvement,



because his was quite brief, with Adrian Jess in the months before.
Q. You don't recall that being dealt with, with Mr Jess?
A. No.
Q. We have been through a number of product brochures and seen that, for some of these products, they had different cores available, but it's right, isn't it, that you didn't stipulate in the NBS specification which core you were expecting the contractor to price, did you?
A. No.
Q. We can see that for some other parts of the NBS specification you did sometimes specify a fire rating. Can I just take you to an example for the birch window reveals. If we look at page 249 {SEA00000169/249} within this document, and if we can look at item 240A in the middle, this is for the plywood window reveals and cills. We can see in the fifth bullet down it says:
"Fire rating: Class 1 (using the UK testing methods) or Class C-s3, d2 (using the European testing methods)."
Do you see that?
A. Yes.
Q. We don't need to go to it, but also for the fire resistance of cavity barriers there are fire resistance requirements specified as well in the NBS.



Can you explain why you have identified fire resistance requirements for these products but not any particular fire rating or classification for the rainscreen panels or the insulation?
A. Well, this is timber, the plywood reveals are timber, which presents an obvious risk, and one which obviously we were aware of and addressed.
The cavity barriers ... I know Tomas checked the rating with Exova. I assume there might have been a requirement to enter that rating, but it is a fire barrier so it needs to be defined.
Q. Yes.
A. So I can understand why that is --
Q. Yes, so the distinction with the -- sorry.
A. But as to the boards -- sorry, the panels, we were not aware of their combustibility at all.
Q. Yes.
So you said the plywood reveals would present an obvious risk, so that was something that obviously needed to be addressed in terms of fire performance. Does it come down to because you weren't aware that there was any obvious risk in relation to the cladding panel or the insulation, no thought was given to specifying a fire performance rating?
A. That's kind of summarising hindsight. That's -- we were



not aware that we were -- accumulated experience, my accumulated experience and everyone in the team, that composite panels presented any kind of risk.
Q. Okay.
SIR MARTIN MOORE-BICK: Well, you had seen, I think, the product datasheets for some of these panels, hadn't you? Because do you remember we looked earlier at the fact that they had different cores; some had fire resistant cores and some didn't?
A. This was the Alucobond products?
SIR MARTIN MOORE-BICK: Yes.
A. Yes.
SIR MARTIN MOORE-BICK: And it was basically the same type of product, wasn't it? Did it occur to you that some might be more fire resistant than others and therefore it might be wise to specify a fire resistant variety?
A. We never spoke or invited Alucobond in to discuss their products. I was not aware at the time that the products -- you mentioned that datasheet; I didn't study that datasheet. At the time we were -- I think it came in as an enclosure with the samples that we had requested. Until the night of the fire, I had no knowledge that the products came in different varieties of core.
SIR MARTIN MOORE-BICK: Right. Thank you.

MS GRANGE: Okay, thank you.
Can we just go back within the rainscreen section to look at a little note on page 64 {SEA00000169/64} of the spec. Yes, at the end of that section 11 which sets out those alternatives, you have got:
"Note: Face fastened solutions permitted."
Do you see that there?
A. Yes.
Q. There has been some suggestion, I think, indeed in Studio E's appendix to its opening, that Studio E specified face-fixed panels. Is that because of the reference to this note?
A. Yes.
Q. Would you agree that, looking at the wording now, it's only saying face-fastened solutions are permitted; it's not saying that those are the only ones permitted?
A. No.
Q. Any reading of this would just be making clear that you can propose face-fixed solutions.
A. Face-fixed solutions are invariably cheaper.
Q. Yes, I see. So it's making clear that those cheaper face-fixed solutions are permissible?
A. Yes.
Q. Yes, that's helpful.
Then at the top of page 64 there is a similar or



equal provision. So in that top paragraph it says:
"To be read with preliminaries/general conditions."
The second bullet down says:
"The manufacturers noted within this specification are indicative and may be substituted with similar or equal alternatives."
Do you see that there?
A. Yes.
Q. Do you know who put that clause into the NBS specification? Was that something Studio E did or somebody else?
A. I would have to check. I think it is something that we might have done typically.
Q. Right, yes.
A. I'm not sure if it is a standard NBS clause. I'm not sure.
Q. There are some other changes that were made to the preliminaries and the general conditions to mirror that similar or equal alternatives, so did you have any involvement in that?
A. I may have done. As I say, that was the intention, to --
Q. To allow for similar or equal --
A. Yes.
Q. -- alternative products?



A. Yes.
Q. Yes.
Just back to the alternatives you give at the bottom of this page, can you just explain, why did the VMZinc quartz zinc appear as one of the alternatives, given I think you told us earlier, and we saw it in the documents, that you told Mr Harris that it was too dark in appearance and you wanted a lighter finish? Can you explain why that pops back into the spec at this point?
A. Because it's a completely different type of product, being a composite zinc panel, whereas the others are aluminium. I mean, that is how I would justify it now, just to get another option.
MS GRANGE: Now, Mr Chairman, if you will let me, I would like to just carry on a little bit past 4 o'clock, given we lost some time with a technical problem this morning, just so I can get to a more logical place in my notes to stop, and also just to keep making progress, because we do need to finish this witness tomorrow.
SIR MARTIN MOORE-BICK: How long do you think you would need?
MS GRANGE: I would like to go to 4.10, if I may.
SIR MARTIN MOORE-BICK: Mr Sounes, are you happy to carry on a little longer than usual?
THE WITNESS: Yes.



SIR MARTIN MOORE-BICK: I'm going to say to Ms Grange that she can pass 4 o'clock, but that we are going to stop at 4.15 in any event. Is that all right?
THE WITNESS: Yes.
SIR MARTIN MOORE-BICK: All right, Ms Grange?
MS GRANGE: Yes, thank you.
Just thinking forward now to Rydon's tender that comes in after this, was Studio E involved in the TMO's procurement of the design and build contractor for the Grenfell project?
A. Sorry --
Q. Were you involved at all in the procurement process for the design and build contractor?
A. We prepared the architectural requirements.
Q. Yes.
A. Yes.
Q. Did you have any other involvement, other than that?
A. Yes, we attended the bidders' day on site, walked around, answered questions. We responded to tender queries.
Q. Yes.
A. A fair number of them, and we -- I scored the quality sections in the three tenders that we received.
Q. Okay, great.
You read Rydon's tender submission during that

process, didn't you?
A. Yes.
Q. Can we look at an email on that. This is {SEA00010576}. This is an internal email. If we could look at the top of the page, this is you to Mr Kuszell, cc'ing Mr Crawford: "Grenfell Tower Tender Returns".
We can see from the email below that Artelia have been reporting back on the tender returns and giving a summary of the tender returns from the different companies, including Rydon.
You say this:
"Nothing like a good tender. The QS hadn't found any significant clarifications in the lowest tender when I spoke to her a few minutes ago. Perhaps Rydon have made a mistake, or two? A review is proposed next week."
Do you see that?
A. Yes.
Q. Now, can you explain to us why you made that comment, the "Nothing like a good tender ... Perhaps [they] have made a mistake or two"?
A. I must confess I haven't revisited this email since. I think I'm ... I think I'm suggesting that it was a good result. In other words, the price was close to what we wanted.



Q. Could it have actually been more of a sarcastic response because Rydon's tender, in your view, was too low at that time?
A. No, no, I don't think -- it's definitely not sarcastic. I'm -- my comment is -- "have they made a mistake" is: is it correct? In other words, it looks good, but is it correct? I don't think it's sarcastic.
Q. It comes across as you saying, "This is too good to be true", doesn't it?
A. Too good to be true?
Q. Yes, how low the tender was.
A. No, "Nothing like a good tender" -- usually you go out to tender to test the market and you're never sure what you're going to get, and that's the purpose of tendering, to get the best value.
Q. I see.
A. A good tender is when you've got a good result, a price -- a good cost.
Q. Okay. So you weren't surprised at the figure that was coming in there for Rydon at 9.2 million?
A. I'm not sure I was necessarily even commenting on the level that Rydon came in. I was commenting on the range.
Q. I see, the range between --
A. Yeah.



Q. -- Durkan, Mulalley and Rydon?
A. Yes. It clearly reveals that Rydon are much more keen, and therefore the tender process is working.
Q. Can we go to {SEA00010586}. This is an email from you to Artelia of 19 February 2014, and you say in the first paragraph that you were concentrating on Rydon's tender because the others are so far behind. Do you see that there?
A. Yes.
Q. Did you mean that Rydon's was by far the cheapest bid, the lowest bid?
A. Yes.
Q. Now, we know that there was quite a big difference in the savings being suggested between Rydon and Durkan for the ACM. Can we just look at that. This is in an Artelia tender report which appears at {TMO10040925/14}.
If we can look at that top line, they have said:
"The following cost for Alternative Design Solutions do not form part of the Tender sum."
And they have evaluated these separately.
We see in the first line:
"New Aluminium cladding including necessary support, insulation, etc to façade of tower."
Rydon are there at a saving of £243,000, Durkan at



£169,000, and then Mulalley make no offer on that.
Did the extent of the difference in saving between Rydon and Durkan for the ACM raise any questions in your mind when you looked at that?
A. I don't recall looking at it at the time, I must be honest.
Q. Okay.
A. If I can go back to that point about errors in tenders, in my experience that happens frequently. It's a very, very -- it's where a QS spends a good deal of their time, checking errors. So whether you -- a tender sum is very contingent on being able to check that there are no errors in the build-up.
Q. Yes, I understand.
Do you know looking at this why Mulalley didn't make an offer for any savings in relation to the ACM?
A. No, I don't recall.
Q. Now, Rydon come on board, and in April 2014 we know that you're informed that Rydon was proposing to use a face-fixed aluminium composite material cladding system.
For the transcript, you have addressed this at paragraph 373 of your witness statement {SEA00014273/152}, and you have also referred to the planning discharge proposals from Rydon at

paragraph 55.1 of your statement {SEA00014273/27}.

Can we go to that. These are the planning discharge proposals. If we look at {SEA00010698}. So we can see an email here from Phillip Booth of Artelia to the planners, Marc Watterson, Simon Lawrence, et cetera, of Rydon, and then you're cc'd into this. It's dated 1 April 2014, and we can see that Phillip Booth says:

"I have just left an introduction meeting with Rydon the selected contractor for Grenfell.

"We discussed planning permission and discharge of conditions and would like your opinion on the following:

"1. Rydon are proposing a face fixed Aluminium cladding system in colours to mirror those submitted for planning."

Then he asks a question. Then he also says:

"2. It is proposed to remove the crown to the top of the building as for maintenance reasons it would be prudent to enable abseil access if ever required in the future."

Do you see those?

A. Yes.

Q. If we could go, then, to paragraph 376 of your witness statement, {SEA00014273/153}, you say with reference to these conversations that:

"Studio E's input was principally providing input



from an architectural perspective."

I just want to ask you about what you mean by that, that architectural perspective.

A. I'm sorry, I'm not connecting these, this email and this paragraph. Are they connected?

Q. We had understood them to be that you were explaining that, around this time, your input was principally providing input from an architectural perspective. Is that how you understood your involvement once Rydon start to propose solutions for the cladding?

A. We're referring to the change in Studio E's role as being novated, but obviously not yet, to the successful contractor.

Q. Did you consider your role to be limited at this time?

A. Certainly our role had changed and had become limited, yes.

Q. When Mr Crawford gave his evidence, he referred to an informal conversation that he said he had had with Simon Lawrence of Rydon where Mr Lawrence said to him that Rydon tended not to use architects as much as it might do. Mr Crawford also said in evidence that Mr Lawrence had said something similar to you, and I want to ask you about this.

Did Mr Lawrence ever say something along those lines to you?



A. Yes.

Q. Can you remember exactly what he said to you?

A. Very -- almost word for word, is they tend to not -- Rydon tended to not use architects that much on projects.

Q. Can you remember when he said that to you, at what point in the project?

A. It was near the beginning and it was more than once.

Q. Near the beginning of Rydon's involvement, you mean?

A. Yes, yes.

Q. So early 2014 are we talking, spring 2014?

A. I ... yeah, but between spring and summer, I think we would have had a conversation, or two or more conversations to that effect. Yes.

Q. Were you surprised when he said that to you? Did that seem unusual to you, to come from a design and build contractor, to be saying that to the architects?

A. Yes, it was, it was a surprise, because it -- he wasn't looking to discount our fee.

Q. Okay.

A. So, yes, it was a surprise.

Q. Did you say anything in response to him when he made that comment to you?

A. No, it just -- it wasn't defined, it wasn't anything to warrant a response.



MS GRANGE: I see, okay.

Mr Chairman, I think that is a good moment.

SIR MARTIN MOORE-BICK: Is that a good point?

MS GRANGE: That's where I wanted to get to, thank you.

SIR MARTIN MOORE-BICK: You have done well, then, it's only 4.10.

Well, Mr Sounes, we are going to stop there for the day. I'm afraid we have to ask you to come back tomorrow to answer more questions.

We will resume at 10 o'clock tomorrow, if you could be here ready to start in time for then.

I know I keep saying this, but it's important: please don't talk to anyone about your evidence while you are away from the room.

THE WITNESS: Okay.

SIR MARTIN MOORE-BICK: Thank you very much indeed. If you go with the usher now.

(Pause)

Right, Ms Grange, that's that for the day.

MS GRANGE: Thank you, yes.

SIR MARTIN MOORE-BICK: We resume with Mr Sounes at 10 o'clock tomorrow.

MS GRANGE: Yes, and we should finish him. We will finish ACM first thing in the morning, and then we've got a number of separate topics, all smaller topics, to deal

with before he will finish. So I think he will go most of the day.

SIR MARTIN MOORE-BICK: The important thing is to finish him tomorrow, if at all possible.

MS GRANGE: Yes, absolutely.

SIR MARTIN MOORE-BICK: Thank you very much.

10 o'clock tomorrow, please. Thank you.

(4.10 pm)

(The hearing adjourned until 10 am on Wednesday, 15 July 2020)



INDEX

J



K



L



M