WITNESS STATEMENT OF DEBORAH BERGER

1. This statement adopts the format set out in the Grenfell Inquiry ("the Inquiry") "Protocol for Witness Statements" ("the Protocol"). This document has been prepared with the assistance of counsel (Selva Ramasamy QC of QEB Hollis Whiteman, instructed on a direct access basis). This statement is my own independent account of my knowledge and understanding of the topics relevant to the issues being considered by the Inquiry.

2. In this statement I have considered and have sought to address the list of issues identified in the Inquiry's letters of 5 June 2018 (addressed to Linklaters LLP and forwarded to me by them) and 25 June 2018 (addressed to me c/o Celotex Limited ("Celotex"), via its legal representatives Linklaters LLP).

3. My understanding is that the documents to which I refer have been produced to the Inquiry by Celotex. Copies of those documents have been made available to me by Linklaters LLP. I have adopted the format "C_01234", which I understand to be the format used in the documents that have been produced to the Inquiry. I have not reproduced any of these documents or attached them to my statement since I have provided the "C_" references where necessary. I have followed the request in the Protocol to refer to each document in order with the additional reference DB/1, DB/2, DB/3 etc. and I have also created an index of documents to which I refer, as requested in the Protocol. In a few instances I have not been able to identify the "C_" reference for a document. The index makes those instances clear. I am happy to provide copies of those documents if requested.

4. By providing this statement I do not intend to waive and do not waive any entitlement to legal privilege of my former employers or myself.

5. I, Deborah Berger, of an address known to the Inquiry, will say as follows:

i. I am a former employee of Celotex, a Core Participant in the Grenfell Tower Inquiry, Celotex's address is Lady Lane Industrial Estate, Hadleigh, Ipswich, Suffolk, IP7 6BA.

ii. I make this statement in response to the Inquiry's request for evidence under rule 9 of the Inquiry Rules 2006 in its letters of 5 and 25 June 2018.

iii. I am willing for this statement to form part of the evidence before the Inquiry, but I have not, at this stage, provided a statement to the effect that I am willing for this statement to be published on the Inquiry's website.

iv. This statement is divided into the following sections:

BACKGROUND

Brief biography (paragraphs 6-8)

Roles at Celotex (paragraphs 9-27)

INQUIRY QUESTIONS

Background to my knowledge of the Grenfell Tower refurbishment (paragraphs 28-29)

Inquiry letter, issue 3) Modifications to the interior of the building 2012-2016 (a-q) (paragraph 30)

Inquiry letter, issue (4) Modifications to the exterior of the building 2012-2016 (including cladding and insulation) (a-o) (paragraphs 31-40)

FURTHER QUESTIONS REGARDING CELOTEX

(1) Describe the nature of Celotex's involvement in the refurbishment of the Tower, including all contacts it had with professionals or other representatives in relation to the project. (paragraphs 41-47)

(2) Identify the parties with whom Celotex entered into relationships in order to carry out its role, describing the purpose of those relationships. (paragraph 48)

(3) On what basis did Celotex market its RS5000 product as suitable for use in cladding systems in buildings over 18m in height? (paragraph 49 et seq., broken down as set out below)

Research into the above 18m market (paragraphs 50-55)

Regulations in the above 18m market (paragraphs 56-60)

Handover with Jon Roper – inheriting RS5000 (paragraphs 61-75)

My knowledge of 'the first test' (paragraphs 76-79)

My knowledge of 'the second test' (paragraphs 80-93)

Production of test reports – understanding of how they were produced and by whom (paragraphs 94-97)

Marketing Literature (paragraphs 98-101)

My knowledge about the process followed to prepare literature and any involvement with RS5000 literature (paragraphs 102-111)

Training or guidance re: RS5000 in relation to regulatory requirements, in my time as a Technical Services Officer and as a Product Manager (paragraphs 112-127)

What was my involvement in the development of, implementation of and revisions to marketing strategy? (paragraphs 128-153)

Certification: My knowledge and involvement in considering and or obtaining certification

Involvement in discussions around RS5000 and BBA certificate (paragraphs 154-160)

Involvement in and understanding of the LABC certificate, and content of the certificate (paragraphs 161-168)

(4) At the time of the refurbishment of Grenfell Tower, had the RS5000 product been tested as part of a cladding system using ACM panels? If so, please provide full details. (paragraphs 169 et seq., broken down as set out below)

BRE meeting 4 November 2014 – understanding scope of report (paragraphs 173-183)

Testing with Knauf (paragraphs 184-193)

A general overview of my role in commissioning and co-ordinating desktop studies, and my understanding of how they fit into the overall regulatory regime (paragraphs 194-198)

My understanding of the process for conducting desktop studies (paragraphs 199-200)

My understanding of the decision to go down the desktop study route (paragraphs 201-209)

The Celotex Exova Study, February 2015 (paragraphs 210-241, sub-headings as below)

The NHBC's letter re: compliance (paragraphs 218-220)

How did this affect Celotex's marketing of RS5000? (paragraphs 221-222)

Discussions with NHBC as the report progressed (paragraphs 223-241)

(5) To what extent, if at all, was Celotex involved in the selection of materials for use in the refurbishment of Grenfell Tower? (paragraph 242)

(6) At the outset and throughout the refurbishment works: (paragraphs 243-250)

a) What information did Celotex provide about its products and their suitability for use to those involved in the refurbishment of Grenfell Tower?

b) On what basis was any such information provided – please give full details of e.g. any relevant testing of such Celotex products?

c) What information, if any, did Celotex have about the proposed refurbishment of Grenfell Tower and the other materials to be used in the façade?

d) What consideration was given to whether the use of Celotex RS5000 as part of the façade of Grenfell Tower would comply with the relevant Building Regulations and associated guidance?

e) Did anyone at Celotex form a view as to whether the design of the façade of the Tower complied with the relevant Building Regulations and associated guidance, in particular the parts of the Building Regulations relevant to fire safety?

f) If not, why not?

g) If so, what was that view?

h) Did Celotex rely on any advice from third parties about the compliance of the design of the façade of the Tower with the relevant Building Regulations and associated guidance, in particular the parts of the Building Regulations relevant to fire safety? If so, what was the nature of that advice?

(7) Are you aware of any further testing of RS5000 that has been carried out since the refurbishment work (including after the fire) by or on behalf of Celotex? If so, what has that further testing shown? (paragraphs 251-253)

Class O tests (paragraphs 254-261)

STATEMENTS (paragraphs 262-263)

BACKGROUND

Brief biography

6. Prior to joining Celotex I had worked in a variety of other roles. After leaving school I trained and worked as a nurse (1987-1989). [redacted] Until 1998 I worked in a mixture of jobs around [redacted] these jobs included laundry assistant, child minding and delicatessen assistant.

7. From 1998 I started working in customer services roles. From 1999 to 2002 I worked for Mobile Innovations as a call centre 'Customer Service Representative' and then as a 'Retention Coordinator' in the marketing team. In 2002 I started work in another customer services role as an 'Account Executive' for Prolog Logistics (a direct mail provider for clients such as RAC and British Airways). From 2003 to 2009 I worked as

a 'Sales Office Manager' for my grandfather's company Day-Impex Ltd (a glass manufacturing company).

8. I was employed by Celotex from 4 January 2010 until 11 July 2018. During my employment I had two roles: from 4 January 2010 – 30 September 2014 I was a 'Technical Services Officer'. Then, from 1 October 2014 – 11 July 2018 I was a 'Product Manager'. I will deal with each of these in turn in more detail, below.

Roles at Celotex

9. My first role at Celotex in 2010 was as a Technical Services Officer. I left the role in 2014 so my memory is a little faded now, but from what I can recall, the duties involved performing U-value calculations and offering guidance on how to use and install Celotex products in all aspects of building envelopes.

10. Our customers calling and emailing in to the technical team would range from architects and designers right through to distributors, installers and homeowners. Each customer group required something different from the technical team. For example, architects would ring to request mainly U-values, especially if the detail was not standard and the template was unavailable on the online U-value calculator. Installers and homeowners requested U-values as well, but they mainly wanted to know which product to use and how to install it correctly. Distributors would call to ask which Celotex products were equivalent to our competitor products. They would also ask about U-value calculations.

11. The trend, as I remember it, was that architects preferred to contact the team via email. Contractors, homeowners and distributors would usually make contact by telephone. As I remember it today, the majority of the calls were divided between people asking for U-value calculations and how to insulate existing homes without causing condensation. A smaller proportion of enquiries were for new homes, and an even smaller proportion were

for new commercial buildings. The guidance we gave ranged from regulatory knowledge (outlined in approved documents) to best practice (as written in British Standards).

12. To answer questions and give information, the majority of my technical knowledge was centred around the following documents:

'Approved document L – Conservation of fuel and power in new and existing buildings. Dwellings and non-dwellings.'

'Approved document C – Site preparation and resistance to contaminants and moisture.'

'BS5250 – Code of practice for control of condensation in buildings.'

These documents are publicly available so I have not attached copies to this statement. The principles within these documents assisted with guidance we gave to prevent condensation, moisture ingress and ensure a good thermal envelope across all project types. Other support documents provided information for basic installation guidance. Jamie Hayes, Rob Warren or Tom Elwell would read new technical documents and share their knowledge with the rest of the team. *'Approved Document B'* (also publicly available) relates to fire regulations - I was not as familiar with that document at the time because most of our inquiries were centred around the three documents I have listed above.

13. When I started at Celotex I had no experience within the construction industry, but I had a lot of experience in talking to people. My colleague Jamie Hayes trained me in the basics of how insulation works and how it is used in walls, roofs and floors. I then built up my knowledge and experience on the 'phones, learning by asking questions and referencing technical documents as I went along. Jamie was the point of support and technical knowledge.

14. From October 2014 I worked for Celotex as a Product Manager. I find it difficult to quantify and describe the role and my day-to-day activities. The way I approached the job back in 2014 and the way I approached it during 2018 are different because of the experience gained during those three and a half years. Due to the passage of time I am also writing this with a faded memory.

15. As I remember it, the first year was dominated by the development and launch of a new cavity wall product - Celotex CF5000. This was a brand-new full fill product for masonry cavity walls. I inherited the project from Jon Roper and received a handover. As I remember it, I was told this should take up 75-80% of my time.

16. I was central in the project team which consisted of representatives from development, finance, purchasing, technical, IT, quality and production. So my day to day duties were varied as I worked with internal staff through the project stages: developing the product; establishing a manufacturing process; production consistency i.e. meeting quality standards, and; packaging. The job also involved communicating with the finance team to ensure this was written into the accounting and sales systems. After the product was developed, then the product was launched. So again I had a variety of duties which included working with internal staff to commercially position the product, its proposition, marketing communications, literature, and training. I relied on others in the team to play their part and to bring their expertise to the table.

17. I was also part of "SPINN" meetings. I can't remember what "SPINN" stands for but it is a high-level monthly meeting where progress and challenges of new product development are discussed. Other attendees included the Managing Director, Sales Director, Head of Marketing, Head of Development, Head of Supply Chain and other Product Managers.

18. Alongside all this, I worked with external teams connected to the new product, for example the BBA (British Board of Agrément). My understanding is that the BBA is a third-party accreditation organisation. Products and systems are vetted and validated through differing tests and investigations. When a product or system has a BBA

certificate it represents an industry badge of approval. Reading BBA certificates is a good way of understanding the technical requirements of a product or system. My understanding is that the product (CF5000) requires a BBA certificate to meet building regulations as written in *'Approved Document C'*. The BBA issues a contract to Celotex with a list of commitments relating to the individual product. Commitments relate to production standards and quality, installation of the product, and technical aspects. I worked with the development team to provide information to meet some of the contract commitments.

19. The new product (i.e. CF5000) was launched in August 2015. During 2016 I supported the product in the market for two reasons. Firstly I wanted to ensure we hadn't missed anything when understanding the product and its application. Even though I had organised user acceptance trials during the development phase and before launch, which involved building test walls with real bricklayers installing the unlaunched product, I was still keen to ensure the product was understood technically and that installation guidance within the literature said enough. So getting out onto building sites and into design rooms provided valuable insights.

20. Secondly, I supported the sales teams. On launching the product (i.e. CF5000), I made sure the technical story was told - predominantly the value to new-build homes meeting the new Part L regulations and sharing what we learnt about the installation of the product from the user acceptance trials. As I knew this inside out, the sales teams learnt a lot from my visits with them.

21. The preceding paragraphs demonstrate my involvement in the different stages of development of the new product - CF5000. In contrast, my time with RS5000 as product manager was <u>after</u> it had been launched. I therefore spent a much smaller proportion of my time with RS5000. My time was spent supporting the sales team and understanding how the product was being used in the market. The difference with RS5000 was that I didn't know it inside out. Over time I gradually began to understand its field of application and what Celotex customers required from RS5000. This involved lots of

customer and sales visits to gauge market information. It also involved working with fire engineers to understand regulations and compliance and the processes.

22. To gain an understanding of RS5000's field of application and market acceptance I mainly had contact with architects, designers and project managers. This was the business focus at the time. I had less contact with contractors or distributors.

23. Alongside the new product development (i.e. CF5000) and RS5000, I worked with Celotex IW4000 and IW5000. This is an internal wall lining system. It is used to upgrade solid walls from the inside. The product is the same as PL4000 but was renamed and marketed solely for the funded (i.e. government supported) market. My time available to support this application was again limited as the new product CF5000 was my main focus. I inherited the IW tasks as these products were already in the market and a training scheme was underway. The products were subject to an approved contractor scheme and my time was spent working with the external training company and on administration of new installers. Post sales customer enquiries were mainly dealt with by the technical team, if I remember correctly.

24. I obtained technical support from a variety of sources. The following list gives examples of such sources:

    i. Celotex's technical team, headed by Rob Warren and later Jamie Hayes. Jamie was always my first port of call. I trusted the team and in particular Jamie, having come from that department and having relied on him and the team in my previous role. As a result there were established relationships, so information and knowledge surrounding compliance, regulations and best practice was shared easily.

    ii. The BBA. As I have explained, my understanding is that the BBA is a third-party accreditation organisation. Products and systems are vetted and validated through differing tests and investigations. When a product or system has a BBA

certificate it represents an industry badge of approval. Reading BBA certificates is a good way of understanding the technical requirements of a product or system.

iii. Best practice documents - different industry bodies such as TRADA (Timber frames) would have good information in writing and on their websites. By this means, industry experience was shared and became markers of best practice.

iv. Industry experts – such as fire engineers and the NHBC. As above, they were experts in the field and provided insightful guidance on best practice.

25. Saint-Gobain acquired Celotex while I was working there. I felt there were different working cultures as between Celotex and Saint-Gobain and I think it took a while for the two cultures to bed in together, and that this spanned the build-up to the launch of RS5000 and continued for some time after that as well.

26. I felt that the approach to product development was very different. My understanding of the Celotex approach was along the lines of "test; get a pass; launch". In contrast my understanding was that the Saint-Gobain approach was along the lines of "test; pass/fail; learn; retest; pass/fail; learn some more and launch when 150 per cent certain" – in other words, testing to understand its point of failure.

27. I found the Celotex culture under which I worked influenced the way I approached my job pre-June 2017. After June 2017 and with the appointment of the new Technical Director (from recollection he was loaned to Celotex as a trusted Saint-Gobain employee in the latter half of 2017 and was later appointed Celotex Technical Director during early 2018 or thereabouts) I learnt more about the Saint-Gobain way of doing things.

INQUIRY QUESTIONS

Background to my knowledge of the Grenfell Tower refurbishment

28. Prior to the tragedy I had never heard of Grenfell Tower. I first heard about Grenfell Tower on the morning after / of the tragedy. I turned on the radio in the early morning, probably between 6 and 7am, which is my normal waking up time. My reaction was that I was horrified. It was an absolute human tragedy. I remember I switched the television on. From the images on TV I had an idea of how I thought the fire might have spread up the face of the building. From my understanding of the industry I thought that Grenfell must be a concrete building. I didn't recognise it as a steel frame building as I did not see any large gaps which I would normally associate with a steel frame building. To my mind, this made it less likely that Celotex had supplied any products - see emails (document C_00534, (DB/1)) which record my thoughts at the time. At this time I had no direct personal knowledge of whether RS5000 had been used or not.

29. I went in to the office and over the course of the day I spoke to work colleagues. We discussed the question of whether Celotex was used and how this tragedy could have happened. On my way in to the office in the morning someone asked me had I seen the news to which I replied '*yes*', they then went on to say RS5000 had been used on the project. I can't remember who said this. I didn't take it as the gospel truth. Later as the day progressed, the marketing team gathered around Daniel Steed, Marketing Communications Executive, as he had access to Celotex live social media sites. It started to become clear from social media comments that RS5000 had been used behind the cladding on Grenfell.

Inquiry letter, issue 3) Modifications to the interior of the building 2012-2016 (a-q)

30. I had and have no knowledge of the design details or modifications to the interior of the building (a-i). I had and have no knowledge of the fire strategy for both internal and external designs (j). I had and have no knowledge relating to the remaining questions under this heading (k-q).

Inquiry letter, issue (4) Modifications to the exterior of the building 2012-2016 (including cladding and insulation) (a-o)

31. I did not have, and do not have, any knowledge of the specific modifications to Grenfell Tower. The only information I now know about Grenfell Tower is from news articles available online and from conversations after the event.

32. I could *attempt* to answer the questions about exterior modifications to buildings, building regulations, fire regulations, compliance etc. in general terms. I am not an expert but I gained an understanding from my role at Celotex about exterior modifications to buildings and how and why RS5000 is generally used. At this time I have not provided general answers as I am unclear as to how useful that would be especially as I am, as I say, not an expert (questions a-g). I have therefore limited my answers to those matters I feel able to deal with. I do however, provide further details later in this statement (in the section headed "FURTHER QUESTIONS REGARDING CELOTEX") which I believe may assist with these issues.

33. With regard to '*what advice or information was available*...?' (question h) I can say the following: I understand that marketing literature and compliance guides were issued at the launch of RS5000. The technical features of the product could also be found in the marketing literature. If I had been asked for guidance about the Grenfell Tower refurbishment project and the proposed cladding details (which I now understand included some form of aluminium cladding), from around May 2015 onwards I would have said my guidance was against using RS5000 in conjunction with an aluminium cladding. This is because, from around May 2015, I was aware of an assessment conducted by Exova fire engineers commissioned by Celotex. The assessment was for Celotex's own internal understanding, to better understand how RS5000 worked with other cladding types. The assessment confirmed that the properties of an aluminium cladding would not meet the requirements of BR135, and so from around that time that would have been my guidance. This is dealt with in more detail later in this statement.

34. With regard to '*what assessments were made about the components that comprised the exterior of the building*' (question 4.h) again I could only attempt to answer this question in general terms about the assessments made in relation to RS5000, based on my knowledge today.

35. Regarding '*compliance with safety standards*' (question 4.h), the LABC (2016) certificate (document C_02067, (DB/2)) referred to compliance. This was created by a third-party independent of Celotex. It was first signed off by Jonathan Roper and then renewed by me. Test details could be read in the compliance guide and condensed BRE report. Guidance was given by the technical team, the sales team and Jonathan Roome.

36. Question 4.i) is a specific question about the combination of the exterior components on the building. I had and have no knowledge about this.

37. Question 4.j) '*How commonly used are: these particular cladding materials, this type of insulation, any other relevant parts of the exterior, in the UK and elsewhere and are there relevant lessons to be learned from the use/regulation of such matters elsewhere?* I can only comment on the insulation type. This type of rigid flammable insulation manufactured by Celotex, Xtratherm and Kingspan for use behind ventilated facades above 18m is commonly used. I do not know about use / regulations outside the UK.

38. From my experience of other projects and products in general I would note that often the construction would be designed correctly at early design stages but at the construction stage, some of the technical details might be overlooked thus compromising the final performance of the project. This doesn't just apply to technical performance related standards such as fire and energy conservation but workmanship too. This is nothing new to the construction industry. 'The performance gap' is (in my opinion) a real issue. It's a challenge to keep track of how any product is understood and used in the market. So responsibility is placed somewhere else other than the manufacturer. Projects are hard to keep track of, especially when the project is sold through a distributor. In my opinion, within the UK, the lessons to be learned from a manufacturer's perspective are around educating key persons at the different stages of a project (e.g. from architects who design

and draw the project to contractors and subcontractors who buy and install the product) and making each customer segment aware of the technical considerations and the route to compliance.

39. As to other lessons to be learned I also believe that there should be tighter control over who is buying and using the product. There might be an advantage in having an approved contractor system, with direct supply only to approved contractors. That way you know who has bought it and they have been trained and educated in the use of the product. I think responsibility should sit with the contractor who installs the product. They are the last in the build stage. The message could get lost if responsibility sat with the designer earlier in the project.

40. Questions 4. (k-o) I am unable to answer as I had, and have, no knowledge specific to the Grenfell Tower refurbishment project.

FURTHER QUESTIONS REGARDING CELOTEX

(1) Describe the nature of Celotex's involvement in the refurbishment of the Tower, including all contacts it had with professionals or other representatives in relation to the project.

41. As I have explained above, I did not have, and do not have, any knowledge of the specific modifications to Grenfell Tower. The only information I now know about Grenfell Tower is from news articles available online and from conversations after the event.

42. In an email from Richard John on 14 June 2017 (document C_00534, (DB/1)) about Grenfell Tower (mistakenly spelt 'Grendel' in the subject line), he said that "*Harley facades did the job*". At that time the name '*Harley facades*' meant nothing to me.

43. In preparing my statement for the Inquiry my attention has been drawn to an email (document C_00453, (DB/3)) dated 16 January 2015 from Daniel Anketell-Jones, Design Manager at Harley Curtain Wall Ltd , to Jonathan Roome. In the email Daniel Anketell-Jones said one of his clients had asked to see the test results and certificates for RS5000. He also asked "*to know exactly how (RS5000) was installed when tested to BS8414-2, who carried out testing, how it was fixed, what it was covered with, what cladding was used, what support structure, etc and most importantly the results. Drawings and photos of the test set up would help show how it was installed, but I imagine these form part of the test results anyway.*"

44. Jonathan Roome forwarded the email to Jamie Hayes on 19 January 2015 requesting BS476 Pt 7 test data. I note that Jonathan Roome addressed the part of the email asking for RS5000 installation details by saying "*I can always go and visit Dan to discuss the BS8414-2 test results in person*".

45. Jamie Hayes replied to Jonathan Roome, coping me in. I do not recall this particular email. Reading it now I can only think that at the time, I would have focused on Jamie Hayes' comment "*please speak to Debs*" regarding access to the BS476 pt7 fire class rating document. I would then have flicked down to Jonathan Roome's email to get the gist of the enquiry i.e. that it is a request for RS5000 BS476-pt7 test data. I would have noted that Jonathan Roome had said that he would deal with the BS8414-2 test results in person, which wouldn't have struck me as unusual, as I remember he did that a lot when working with RS5000.

46. I don't know what happened after this email exchange. In preparing this statement I have not seen any further emails in relation to this enquiry. My typical response to a request for fire class test data would have been to refer Jonathan Roome to Rob Warren for the test data as he took decisions on the sharing of test data. I would have done that either by forwarding the email to Rob Warren or by telephoning Jonathan Roome and telling him to speak to Rob Warren.

47. The email would have been unremarkable to me at the time, so I doubt I would have done anything further with it.

(2) Identify the parties with whom Celotex entered into relationships in order to carry out its role, describing the purpose of those relationships.

48. I have no direct knowledge about the parties Celotex worked with on the Grenfell Tower, I can only answer in very general terms about the multitude of partnerships I was aware of in relation to other projects. In relation to my own relationships, in general terms, see my answers in the section regarding my roles at Celotex (paragraphs 9-27) above.

(3) On what basis did Celotex market its RS5000 product as suitable for use in cladding systems in buildings over 18m in height?

49. In the following paragraphs I will set out a chronology of my knowledge of the marketing of RS5000.

Research into the above 18m market

50. A new task, RS5000 market opportunity research, was introduced to the technical team on 19 October 2011 by email from Rob Warren. (Document C_08529, (DB/4)) the email shows the original request came from Adrian Fryer and his focus was the number of enquiries and size of the opportunity in metres squared. Rob took this one step further and added project type, customer, product and thickness to the spreadsheet (no individual C_reference, the document is attached to the email at C_08529, DB/4).

51. I understood that the results would give an indication of the number of enquiries and size of the above 18m market opportunity. With my experience today, I can see that Rob Warren's spreadsheet would have provided insights on the stage of the construction

process at which we received the enquiries (e.g. design, installation or point of sale) as well as who it had come from (e.g. architect, sub-contractor, building control, distributor). The insight may have contributed to understanding the decision making process. I'm not sure if I saw the results. The success relied on the team's co-operation.

52. The same exercise was repeated in April 2013, driven by Jon Roper document C_02941 (DB/5). From the email it looks like the project had been given the green light and now the insights were more about the composition of the system to test. I was asked to do this because Rob Warren wanted the enquiries logged into Salesforce (the new Customer Relationship Management ("CRM") system). I was part of the Salesforce Project Team and represented the Technical Team. The details of each call we took was recorded into Salesforce. From what I can remember today, the technical team were struggling with the new system and it was much slower and took more time. So rather than add to the time spent entering the details into Salesforce, I suggested building on the existing spreadsheet (document C_02941, (DB/5)).

53. Documents C_08545 (DB/6) and C_08546 (DB/7) show a meeting request from Jon Roper to myself for 29 April 2013, 2pm in the marketing office. I don't remember this meeting. Looking at my notes, document C_02767 (DB/8), I believe this is more of a to-do list for that day based on the meeting. The middle section refers to the above 18m project and the notes made at the top and bottom of the same page refer to Salesforce developments. From these notes (document C_02767, (DB/8)) and the email (document C_08546, (DB/7)) I presume that the focus was to understand the composition of the systems we had contact with. That is, was the structure masonry or steel frame and cladding type? I can only assume the benefit to understanding if it was a new project or refurbishment was understanding the thickness of insulation required to meet the target U-values as outlined in '*Approved Document L*'.

54. I don't remember the data collection being very successful. I don't remember how or if the spreadsheet was shared with Rob Warren or Jon Roper. Either we didn't get that many enquiries because Celotex didn't have a product for that market or there was a lack of engagement because the Technical Team were pushed for time.

55. I was aware of an organisational interest in the above 18m market. My impression at the time of the marketing research was that our competitor Kingspan's product 'K15' was a stand-alone product in the above 18m market in that there did not appear to be any real competition for it. I understood it was specialised and application specific. I recall we did a "mystery shop", calling Kingspan to ask questions about its use. I was aware that Xtratherm had an above 18m product too but I got the impression rightly or wrongly that K15 was dominant in the market. We simply didn't have a product to match, so I didn't think about the above 18m market too much.

Regulations in the above 18m market

56. My understanding of applicable regulations relating to the above 18m market was fairly limited and standard when working as a Technical Services Officer, and was derived mainly from training given by Jamie Hayes in around October 2010 – (see document C_08465, (DB/9)). As I have explained earlier, Celotex didn't have a product to compete with K15 so I didn't get particularly involved with the above 18m market in dealing with everyday calls. It was enough to know that Approved Document B said that combustible insulation used above 18m needs to be tested to BS8414-2 or BS8414-1 and meet the requirements of BR135. It is a small paragraph amongst the five chapters that form *'Approved document B'*.

57. From my time speaking to customers over the phones as a Technical Services Officer, I learnt that when an individual product was tested as part of a system, then the system needs to be replicated for the test result to apply. For example, from memory, timber frames are tested for loadbearing capacity in the event of a fire from the inside. The loadbearing structure needs to maintain integrity for up to 30mins or 60mins. This allows the occupants time to escape the burning building before the timber frame gives way. In any construction, the composition of the system used needs to be drawn and built in exactly the same way as the tested system to claim it meets the standard i.e. that it meets the requirement of 30 or 60 minutes integrity.

58. So I understood the principle and applied it to the above 18m market. The components of the tested system that met the requirements of BR135, including the cladding type, were important for the system to be valid. This was the foundation of my knowledge when I became a Product Manager.

59. As a Product Manager, who inherited RS5000, my knowledge and understanding around the complexities of '*Approved Document B*' and compliance developed over time. I started to see how the principle of a tested system is applied realistically in the market, what this actually meant to real projects and how it fits in with project compliance.

60. During my time as a Product Manager I spent time supporting customers who were working on major projects and with fire engineers to produce desktop studies. My understanding shifted from looking at the tested system in isolation of the project to learning the importance of addressing each project individually.

Handover with Jon Roper – inheriting RS5000

61. I inherited RS5000, as Product Manager, on 1 October 2014. The product had already been launched by then – (see document C_01025, (DB/10)). Jon Roper was the product manager before me. He planned a handover meeting during September 2014, while I was still working as a Technical Services Officer. Document C_01024, (DB/11) is an email sent on 23 September 2014 but I can't be sure that was the date of the meeting. The meeting took place in one of the meeting rooms within the marketing department at Celotex.

62. Jon Roper had sent me a written summary of the main points to consider when taking on RS5000 (document C_01025, (DB/10)). As I read it today I can see it consists of a mini summary to explain briefly the size of the market, the gap in the Celotex product range, testing and launch dates together with key external stakeholders and internal project

members. It also describes the approach to testing and, again as I read this today, I can see work has been done with cladding manufacturers to understand a common cladding construction. It also hints at Kingspan using a cement particle board as a cladding to pass the BS8414-1 test. It goes on to explain NHBC ("National House Building Council")'s lack of confidence in the testing and the use of RS5000 along with some actions and considerations for future testing.

63. Document C_02549 (DB/12) shows my meeting notes, dated 26 September 2014. From reading these meeting notes, it is clear that Jon Roper talked about Kingspan and the market size and share. The numbers he described didn't really surprise me as K15 had already made an impression of having little competition (as mentioned above). Jon Roper shared his opinion that the above 18m market was very important to Kingspan.

64. From reading these meeting notes Jon Roper talked in general about basics of the BS8414 tests, both part 1 to masonry substrate and part 2 to steel frame substrate. Historically, Kingspan had only tested to a masonry substrate, but from what he said K15 was widely accepted in the market. However he said they had recently tested again, but to steel substrate.

65. I've made a note which reads ' NHBC – historically, 2014 not sure'. I don't remember exactly what I meant by that, but I recall rumours around that time that NHBC had concerns they were supporting applications that hadn't been tested to BS8414-2 and were now being very cautious.

66. We then talked about the testing of RS5000 (I deal with that in more detail in the next section of this statement). I was aware the product had been tested earlier in the year and failed. Jon Roper went through the composition of the first test highlighting details which included thickness of the cladding, fire class and type of cladding material, the gap between the fire barrier and the cladding, and the fact the 8mm cladding had burnt through.

67. We then talked about the second test. Jon Roper went through the composition highlighting the changes in the design. These included a thicker cladding board, orientation of the boards, reduced air gaps between them and a smaller gap between the cavity fire barrier and cladding. He commented on the cladding thickness and how it wasn't realistic to what was used in the market.

68. Jon Roper highlighted NHBC concerns with the test: the cladding thickness, orientation and sheathing board. The cladding thickness concern was because the boards tested were thicker and were therefore not representative of what is commonly used. The orientation concern was because when installed there were fewer joints i.e. fewer gaps between the cladding boards and therefore it was understood there would be less air flow within the cavity to fan a fire. I understood this component more easily because when I performed U-value calculations in the technical team, a ventilated cavity was included and contributed to the calculation. A fully ventilated cavity provided zero thermal performance whereas a vented and drained cavity may have a thermal performance. I therefore understood more easily the NHBC concern - the reduced number of gaps between the cladding boards was a potential issue and perhaps would make a difference to the growth of fire in that it would reduce airflow. At the time I was not clear about the precise concern about sheathing boards (although I now believe it was to do with the fire rating density of the sheathing).

69. On reviewing my handwritten notes, (document C_02549, (DB/12)) I can see that I have written "fire barrier 10mm residual clearance" which contrasted with a 25mm clearance for the first test. While Jon Roper must have told me that, at the time I wrote these notes, that aspect did not have any particular significance to me and I simply accepted it - it made no impact on me and I was given no sense or impression that there was any concern about that aspect.

70. Following the flow of those notes, the handover continued and Jon Roper then talked about customer feedback to date. This was mainly around the requirement of a black facer instead of a reflective facer. Kingspan offered this variation so I was told our customers were asking if this was available with RS5000. This means the reflective

facer of the insulation board doesn't show between the gaps between the cladding boards and also through some cladding boards.

71. The notes show the size of the board could be varied too. A smaller board of 1200x600mm would be sized to fit in the spacing between fixing brackets. Celotex products for masonry cavity walls are cut smaller to fit between wall ties so this appeared logical.

72. Two things now stick out to me as I re-read those notes. My comment after the notes around the black facer 'Tech: loss external High E 0.29 – 0.13': This is a U-value calculation detail – the sort of task I had been doing in my prior role. When a reflective facer faces into a ventilated cavity, the ventilated cavity and cladding do not have a thermal performance but the outside surface resistance is assigned a higher value – 0.29. Replacing the reflective facer with the black facer still means no thermal value for the ventilated air space and cladding but the outside surface resistance offers less value - 0.13. Potentially this may marginally affect the thickness of RS5000 required to meet the target U-value - not in all cases, but it should be considered. I believe this shows I was focused on those technical aspects with which I was more familiar at the time.

73. The second observation is if RS5000 was to be sold with a different facer and board size, as an experienced Product Manager I now realise the system would need re-testing. I made no note of this at the time, suggesting to me that through lack of experience I did not realise this need at the time.

74. I can't be sure that the note (document C_02549 (DB/12)) was all part of the same meeting. I think perhaps it is because the comment I've drawn a box around '8414 provisions – revisions – lobby with KS' makes no sense to me. I've written this down as someone has told me but I've started a new page. Assuming it is part of the same meeting, then as I read it today I think it shows a plan A and a plan B, depending on the NHBC outcome. If the test is temporary and is understood to have been engineered for a pass, while it doesn't say this explicitly, the consequence is that we would need to

retest. If it is accepted ("doesn't reject") then we consult with a fire engineer to understand the field of application.

75. There's a list of things to do to support RS5000 including the black facer, board size, and projects which have been approved by a fire engineer. SCA stands for Supply Chain Agreement so there are some customers we can work with: Countryside, Barratt Homes and Berkeley Homes. There is also a list of ideas of how to communicate positively, and a reference to sales through FGF Limited (an insulation distributor in Birmingham) and Encon Insulation Ltd. in Manchester - so the sales representatives for that area (Ian Lathbury and Tony Dooley) might be able to get me appointments with live projects.

My knowledge of 'the first test'

76. As I remember it today, the first I knew of the first test was after the test i.e. after it had failed. Jon Roper would often come into the technical centre to discuss things (not just things which were RS5000 related). He would speak to Jamie Hayes mostly. When he visited, I was aware of him in the office but I was not always aware of what was being said as I was involved with my own work. However, I do remember him coming in to the office and speaking with Jamie Hayes on this occasion. I cannot say exactly when it was. Rob Warren's office was downstairs at the time and he came out of his office to talk to the two of them. It looked serious so I asked what's going on? They said a BS8414-2 test had taken place. The conversation followed and then they said it failed. I asked what happened and they said the cladding burnt away.

77. I think it is worth mentioning now my friendship with Jamie Hayes. As I have already explained, he was a great source of knowledge and support as a Technical Services Officer and as far as I was concerned he always knew how to answer a query or perform a U-value calculation. He trained me and I had a lot of respect for his knowledge. When I worked in the technical centre, we would walk almost every day into Hadleigh to get lunch. During our walks we would talk about lots of things, but not often about work. If I was frustrated with work I might sound off i.e. vent (as would he, sometimes) but I

honestly don't recall him talking about the project or the testing in our walks/lunch breaks. If he did, then it didn't register as anything of note.

78. I honestly don't remember when I first learnt of the composition of the first test. I may have had conversations with Jamie Hayes informally but again I do not recall anything of note and it didn't register. I officially learnt of its composition at the handover given by Jon Roper. I didn't see a test report and didn't think to ask to see it. I accepted what was told to me about the first test without question.

79. Document C_01161 (DB/13) shows an email to Phil Clark at the BRE (sent in June 2016). One of the fire engineers wanted to see further test data for RS5000. I discussed this with Rob Warren and we realised there was no test report to hand for the first test. It would have been ideal to send this to the fire engineer. So I contacted the BRE and asked if there was a report. To my understanding today, there wasn't a report produced for the first test, just the test photographs and thermocouple output. So Phil Clarke emailed Celotex the photographs and thermocouple output.

My knowledge of 'the second test'

80. I only learnt informally that RS5000 was to be retested, and that it subsequently passed the test, from chat in the technical centre. I had no involvement in the original test or the re-test. The paragraphs below set out what I learned about the detail of the second test and how and when I learned it.

81. From memory I think Jamie Hayes witnessed the second test, although I am not sure of this. At some point I recall him speaking about the second test, saying it was like nothing he had seen before (and so I assume he must have witnessed it if he said that), but we didn't really discuss it much further at that point. It seemed like it was just his personal opinion. There was nothing at this stage which gave me any particular cause for concern.

82. The product (i.e. RS5000) was launched in August 2014 and we (i.e. the Technical Team) were able to read about the composition of the system tested, based on the marketing literature.

83. I officially learnt of some of the test details in the handover with Jon Roper (the details of that handover are mentioned earlier in this statement). The written handover from Jon Roper addressed technical details but essentially, looking at it now, my impression is that it had a commercial angle on it. As I have explained, other than the NHBC concerns which I noted (document C_02549, (DB/12)), there was nothing in Jon Roper's handover which suggested there was anything of particular concern.

84. To the best of my recollection, a few weeks after the Jon Roper handover I organised a couple of meetings with Jamie Hayes to understand more about the technical picture. I didn't know it well enough to talk to fire engineers, customers or the NHBC, nor to assess any future testing which might be needed for specific projects, so I wanted to talk through the relevant regulations, the test methodology of BS8414-2, the BR135 document and the test report. I wanted to know more about these topics.

85. During one of our meetings Jamie Hayes described the rig, the required test methodology, the positioning of the thermocouples throughout the rig and the key pass / fail criteria within BR135. This session with Jamie Hayes formed the foundation of my understanding of these topics. From this, I began to feel more comfortable about attending meetings and learning more about the complexity of the application.

86. Jamie Hayes and I then talked about the Celotex tests and the composition of the rigs in each but he also explained the significance of the differences between the two tests. As I have explained, Jamie Hayes and I were very comfortable talking. My impression from this meeting (at the time) was that Jamie Hayes was concerned about the re-test. He didn't like it. My memory of my impression at the time is that he felt the test was vulnerable because of the cladding boards. The thickness and orientation of the boards were not standard.

87. In the build-up to the preparation of this statement I have re-read and re-considered some of the documents from this period, including documents relating to the cavity fire barriers (specifically document C_02680 (DB/14) and document C_08472 (DB/15)), both of which date to this meeting with Jamie Hayes. He drew document C_02680 (DB/14) and I annotated document C_08472 (DB/15). On reviewing these documents I now recall that something had happened to do with the cavity fire barrier detail and that this was mentioned by Jamie Hayes in my meeting with him. My recollection is that he told me the only sign of it in the test report is in the photographs at the back of the test report. I am pretty sure in hindsight that he mentioned 6mm oxide board. While at the time I recognised he was concerned about this, in amongst all the new learning for me at that time, its significance genuinely didn't sink in properly with me. From my handover with Jon Roper the separate issue of the NHBC concerns (such as gaps between the cladding) is the main thing which stuck out in my mind.

88. With my experience today I have a greater understanding of the role of cavity fire barriers in above 18m steel frame constructions. It is my understanding that the idea behind this is it expands when activated by heat to close the gap between the cladding and the structure, thus forming a compartmentalised space behind the cladding to contain the fire.

89. On thinking back, and putting all of this together, it is my understanding today that in the re-test, a 12mm cladding board was used throughout the fire test rig, and at separating floors where a cavity fire barrier was installed this was reinforced with 6mm magnesium oxide board at those junctions – however, I wasn't present at the tests and so I don't actually have direct knowledge of what happened.

90. I note that at document C_08472 (DB/15) I have written 6mm + 8mm (see notes at p.12 of the document). This suggests to me that I did not fully understand this at the time since (based on my understanding in the preceding paragraph) it seems I got the figures wrong.

91. While I am not an expert in this area, as I have said my understanding now is that when the cavity fire barrier is activated through heat, it expands to close the cavity, thus preventing flames passing up the rig. The concern as I now see it is that by reinforcing

the cavity fire barrier sections with an extra 6mm of board, this makes those junctions more robust — which makes the tested system more likely to meet the pass criteria.

92. The reinforcement is not mentioned in the test report or the marketing literature. The importance of compartmentalisation in a fire strategy is not something I understood properly until much later on when I started to work with fire engineers. As a Technical Services Officer we focused on thermal performance, moisture and condensation which is why I think the gaps between the cladding and amount of ventilation stood out for me at the time as being more significant.

93. Document C_08472 (DB/15): I have annotated "WTF" on the BRE report (see p.12 of the document). I believe this copy of the report was sent to me by Jamie Hayes shortly before our conversation – in preparing this statement I have seen an email dated 27 October 2014 in which he forwards me the report. (I do not have a "C_" reference for that email, but I can produce it as DB/16). (NB I provide further detail as to Jamie forwarding this report at paras. 189-190 of this statement). My writing "WTF" clearly shows that I recognised there was a concern about this area. I assume I do not need to expand on what "WTF" stands for. As I have said, while at the time I recognised Jamie Hayes was expressing concern about this, and my annotation reflects that, in amongst all the new learning for me at the time its true significance genuinely didn't sink in with me. I do not recall whether Jamie Hayes said he had raised this concern with others as well. As I have said, from my handover with Jon Roper, the separate issue of the NHBC concerns (such as gaps between the cladding) is what stuck out for me at the time. It was therefore not until I came back to these documents in the build-up to writing this statement that the potential significance of this information dawned on me.

Production of test reports – understanding of how they were produced and by whom

94. I have little knowledge of the test reports and how they were produced.

95. It was Celotex policy that full test reports were not sent out to customers/clients. My understanding was that this was because such reports contained some commercially

sensitive information. Following that general policy, the full 32-page test report for RS5000 was not sent out, for the same reason - my understanding was it too contained some commercially sensitive information. This I understood to be the thermocouple graphs and the photographs of the rig burning throughout the test. The supplements at document C_03243 (DB/17) were a simplified version and a lot easier to read.

96. In the build-up to writing this statement, as the detail to do with the cavity fire barriers has become clearer in my recollection, I am also able to recall Jamie Hayes saying (at the meeting I describe above at paragraphs 84 and 85) that there had been a request that the photographs showing the reinforced cladding should not be included in the report. I cannot confidently recall what he said about who made that request. The reinforcements around the cavity fire barrier were not described in writing or diagrams within the report and since I was not involved in the test, I am unable to assist as to how or why this is so, but Jamie Hayes told me that because of this, the BRE representative said he couldn't leave the photographs out, hence they remained in the report. To be clear, I am unable to say whether Jamie Hayes meant that the BRE were aware of the reinforcement/thickening of the boards. I can only say that I understood there was a request made that the photographs should not feature in the report and that the BRE refused to comply with that request. It is important to note that all of this comes from my recollection of an informal conversation with Jamie Hayes. I was not involved in the BRE tests, nor in any conversations leading up to the report. I only have a memory of Jamie's perception and I don't know for fact what happened. My understanding is that the end result was that the photographs show a different colour cladding in some areas but the report does not explain why (see document C_08472 (DB/15) at p.12 of the report). This is clearer when comparing colour photographs of the first test (I do not have a "C_" reference for these photographs but I have been shown some which I can produce as DB/16A) with those of the re-test (document C_01834 (DB/16B)). Nor does the report make clear my (non-expert) understanding that reinforcing the cavity fire barrier section would make the tested system more likely to meet the pass criteria. As I have said, this was not something I understood properly at the time.

97. I have said that from my handover with Jon Roper, it was the separate issue of the NHBC concerns (such as gaps between the cladding) which stuck out for me at the time. I was taking in a lot of new information at the time and was getting to grips with my new role. The handover from Jon Roper was the formal process where he handed over the product to me, and I assumed that he would tell me what I needed to know. Despite the trust I placed in Jamie Hayes, the concerns he had voiced had been expressed to me on an informal basis and they receded from my thoughts as the NHBC concerns became more topical and prominent. It was therefore not until I came back to these documents in the build-up to writing this statement that the potential significance of this information dawned on me.

Marketing Literature

98. The product (RS5000) as I understand it, is as described in the literature. Its composition is described within the specification clause in the product sheet (document C_00412 (DB/18)) that is, a PIR foam of varying thicknesses with foil unprinted facer each side. Other technical details and physical properties are listed in a table in document C_00412 (DB/18), as well as the thickness range available.

99. My understanding is that the templates for the product datasheet and the application guide are consistent for all products. The specification guide is consistent for products from the 5000 range, that is, more application-specific products with a specific technical challenge as opposed to multi-purpose boards.

100. RS5000 was the only product to have a separate compliance guide, which was written by Jamie Hayes but no doubt discussed with Rob Warren. I was in the technical team at the time.

101. My understanding is that depending on the product thickness, RS5000 is manufactured from both Hipchen and Hennecke lines at the Hadleigh factory. I believe it is exactly the same product as FR5000, only marketed as RS5000. These products claimed to have a Class O fire performance. I believe either the formulation, or the fire retardant

component of the formulation, is purchased from a supplier, as opposed to Celotex knowing the recipe or blend of chemicals used, but I am not sure about this – it is beyond my direct experience.

My knowledge about the process followed to prepare literature and any involvement with RS5000 literature

102. Product Management create the product proposition and its position within the market - this is the "messaging into the market". Once the product content has been written and agreed it is passed to the Communications Team.

103. Product Management rely on the Technical Team for U-value details to meet thermal regulations along with technical details around the installation and design considerations.

104. Product Management also rely on the Development Team for the physical properties and the testing of the product. Some of the tests are standard across all products such as lambda, compressive strength, vapour resistivity and fire class. These tests are about the product isolated from its application, and describe a product's physical properties.

105. Some tests are specific to the application (otherwise known as system tests) and are required to satisfy building regulations, such as the wet wall test for cavity products and BS8414-2 for above 18m buildings. The information is collected from each of the departments and shared with the Marketing Communication Team. Marketing Communications create the "image" for each of the products and how it is communicated into the market.

106. In essence, Product Management depend on the Technical and Development Teams for the information on the physical properties and the testing of the product.

107. I had no involvement in the drafting of the RS5000 marketing material before its launch.

108. I have no independent recollection of any involvement I may have had with such literature after launch, and would need to consider any relevant documents to address this topic further. However, it is my understanding that the literature in essence didn't change from when it was launched, and that Jamie Hayes would have had far more input on any tweaks of wording which might have occurred.

109. The rainscreen cladding compliance guide (document C_01239, (DB/19)) is unique to RS5000. It goes into further detail about the regulations within '*Approved Document B*' and the requirement of combustible insulation to meet the performance criteria within BR135. It includes the details of the test and a visual explanation (see figure 3 in the document) of why the test is important. I believe this is the basis for the document.

110. I found the two references, BR135 and BS8414-2 quite confusing when I first got to grips with RS5000 as a Product Manager, but in my meetings with Jamie Hayes (described earlier in this statement), he taught me, and so I came to understand that BS8414-2 is the test methodology and the results need to meet the performance criteria written in BR135. The pass/ fail criteria is written on the first four paragraphs of page 4 of document C_01239 (DB/19). These are technical details and are informative.

111. On reflection, my view today is that the title 'Compliance Guide' (document C_01239 (DB/19)) could mean a number of things depending on who is reading it and what they are looking for. My view today is that I think the title "Regulatory Guidance" would be more accurate for this document. In fairness, the final paragraphs on the 3rd and 4th pages of document C_01239 (DB/19) comment on the fire performance and how the classification is specific to the tested system. It does state that any variations will need to be considered by the building designer.

Training or guidance re: RS5000 in relation to regulatory requirements, in my time as a Technical Services Officer and as a Product Manager

112. Training specifically relating to RS5000 first started when I was a Technical Services Officer. As I write this today, my recollection is that the training delivered to the technical team focused on the regulations surrounding buildings above 18 metres. At the time and in general for all products, I believe our understanding was that by meeting regulations, in most cases that meant compliance and acceptance of a specific system (i.e. a specific combination of materials). However, the training also acknowledged fire regulations are complex and depend on a number of variables. Providing advice is not something we did as Technical Services Officers, as we were not experts. We provided guidance.

113. The product i.e. RS5000 was launched August 2014 while I was a Technical Services Officer. There are two presentations within the documents to which I refer. As I have already explained, I had no involvement in their creation. I think document C_08672 (DB/20) could be described as an introductory presentation. It provides a summary or overview of the product and I don't remember exactly but it may have been used to introduce the product to the Technical Team

114. In the order of the slides, they show where the product fits within the Celotex range, the benefits of PIR, the applications where it can be used and examples of some of the project types, the technical properties, the proposition to the market, a little bit about how combustible materials fit with *'Approved Document B'* and the need for a combustible insulation product to be tested to BS8414-2 to meet the performance requirements of BR135, the marketing communications ("reaching new heights") and the concept, support material and branch incentives.

115. The presentation at document C_08702 (DB/21) looks more detailed, and as the title suggests was used to introduce the product to the Sales Team. Again, I had no involvement in its creation. It includes a set of slides around the "customer value

matrix". It also goes into detail around pricing and discount structures which would be of no relevance to the Technical Team.

116. Looking at the regulatory guidance within the presentations, in my view the content of both training presentations doesn't wander too far from the content of the marketing literature. The same principles are applied to training that run through the marketing literature.

117. It explains regulations and the requirement of combustible products to comply with the performance criteria of BR135. It gives an introduction to the range of fire rated insulation products and where Celotex fits in, and a visual overview of the test BS8414-2.

118. The RS5000 product proposition references 'different cladding systems' (i.e. plural – see page 7 of document C_08672 (DB/20)). My view today is that this is not accurate because the BR135 classification is for the tested system only – at the time this detail did not register with me (but see my comments re the LABC certificate, later in this statement).

119. In fairness, other published literature does state that the classification is specific to the tested system and that any variations will need to be considered by the building designer – see para. 111 above, and as a further example I am aware of a RS5000 FAQ sheet which makes similar points (I have no C_reference for this, but I can produce a copy as DB/22). Otherwise, from time to time there would be emails which touched on topics relating to RS5000 (document C_03278 (DB/23) is an example).

120. Once I became a Product Manager, I learnt about the market, and gradually over time I gained a better understanding of the regulatory guidance and the compliance process through working on the job with experts within the market, for example: fire engineers at Exova Warrington Fire; the BRE; customers, such as specialised cladding contractors and design managers, and; the NHBC. Details of my exposure and learning experiences are given throughout the remainder of this statement.

121. Jamie Hayes wrote and delivered a training module called 'Introduction to fire regulations and standards' (document C_08465 (DB/24)). It explained how products are tested to either a British Standard or Euroclass Standard and then, depending on the result, are classified into four groups ranging from unrated to non-combustible.

122. The training touched on the testing of Celotex products to each of these standards and then provided an understanding of where Celotex products fit into the classified scale, that is 'not non-combustible'.

123. The training then explained the requirements for external walls for buildings above 18m. It outlined the regulations and explained products classified as 'non-combustible' must be used - for example mineral wool.

124. The training then details an alternative to compliance, that is, if the product is not classified as non-combustible it must meet the performance criteria of BR135 and be tested to a full scale fire test namely BS8414-2. This is the basis behind Kingspan K15.

125. The training then goes on to explain what is meant by a 'timed resistance' – see p. 8 of document C_08465 (DB/24).

126. Paragraphs 8-10 on that page explain the importance of a tested system, especially paragraph 8. It reads 'The fire test is therefore only valid when the product is used exactly as it was in the fire test' This principle applies to all tested systems. The training gives examples written in paragraph 10 and 11.

127. The written test we took afterwards, see handwritten note (document C_08465, (DB/24)) shows my answers to this test which checked our understanding relating to Celotex's existing product range at the time, and why Kingspan K15 can be used in external walls when the building is above 18 metres.

What was my involvement in the development of, implementation of and revisions to marketing strategy?

128. The marketing action plan for Celotex RS5000 (document C_03373, (DB/25)) as I understand it is applicable to every new product once it has been developed and is ready to be launched. The plan shows the strategy; the why and how behind a new product. I did not have any involvement in drafting this action plan.

129. The email sent to me on18 November 2014 by Paul Evans (document C_03372, (DB/26)) had two attachments. I believe that the plans for RS5000 and FR50000/CG5000 were sent to me as examples, the reason being that I had to write a similar document for the new full fill product (i.e. Celotex CF5000 – the new product, the launch of which was taking up the majority of my time) and at that time I had no idea what such a plan looked like, or how to go about it. I used these as examples and templates. I didn't write the Celotex RS5000 one and I cannot say for sure who did. My assumption is that my boss Paul Evans wrote the FR5000 and CG5000 documents when he was a Product Manager.

130. Reading through it today, the objectives within the marketing action plan for Celotex RS5000 are echoed within parts of marketing plan for 2015 (document C_03623 (DB/27)). This shows the bigger picture and where RS5000 fitted into the marketing plan for 2015.

131. Document C_03623 (DB/27): The "54321" summary sets out corporate objectives for Celotex. Sales for new product developments and value added products were listed, among other priorities. It also sets out the marketing objectives. Bullet points 4 and 5 set out sales targets for new products and value added products. The marketing strategy (document C_03623, fourth page (DB/28)) first bullet point supports this objective by promoting the 5000 product range as the primary product offering.

132. When I read the RS5000 marketing action plan (document C_03373 second page, (DB/29)) in preparing this statement, I read the proposition section ("approved... and therefore acceptable") as stating that it had met the building regulations set out in *'Approved Document B'* since the results from the BS8414-2 test met the requirements of BR135 and such products are acceptable to be used in external walls above 18 metres. However, as parts of our literature explained, the pass was in relation to a specific tested system.

133. In reality there were a lot of other cladding types which were being specified and installed which were different to the one described in the test report. The responsibility of ensuring that the proposed system met building regulations was assigned to the designer - while this was set out in other literature, on reflection this point is not emphasised in this specific marketing action plan, which was an internal document.

134. The marketing action plan was product orientated, in that it focused on the product characteristics and that it had passed a test to meet building regulations - but the complexity of the market and the processes for the use of the product (its field of application, including that the responsibility of ensuring that the proposed system met building regulations was assigned to the designer) was not set out in the marketing plan. This plan was drawn up before I took over as Product Manager and was therefore part of the RS5000 strategy which I inherited.

135. The use of a LABC certificate as third-party accreditation may also be relevant here - I explain my understanding of the LABC certificate under the heading of "Certification", which appears in the next section of my statement.

136. After a few months as a Product Manager and working more closely with the Sales Team, I really felt the product needed to go back into development. On 20 January 2015 I emailed some ideas based on feedback from the Sales Team (document C_01279, (DB/30)) about how to approach Celotex RS5000. I sent this to Richard Millward - Senior Sales, Jonathan Roome – Specification Manager, Jamie Hayes – Technical Team Leader and my boss Paul Evans – Head of Marketing.

137. The email describes the challenge facing RS5000 and its field of application. The one test is not representative of what is commonly specified and feedback from the Sales Team suggested this limited specification and sales opportunities. In short what I was saying is: how are people supposed to use it? It's correct the designer or building control should think about the final design as Celotex are not the experts. RS5000 was selling, it was just that the market wanted more assurances.

138. The first bullet point outlined in the short term strategy is from Sales Team feedback. At this time the sales team were experiencing more success with smaller projects where approvals were not so critical (i.e. outside NHBC scope).

139. The second bullet point suggests we stick to the message around the legislative requirements of compliance, and refers to the supporting literature in the form of the compliance guide, the specification literature and the LABC approval (which I deal with in the next section of this statement). This is not ideal as a means of improving sales since it basically says, ' this is our tested system, these are the regulations, go make it work with this certificate.' I inherited this strategy from the marketing action plan. It is how the product was launched.

140. The longer term looks at putting the product back into development, working with experts to understand about facades, working with a partner to develop a system rather than a product, developing something that had a wider field of application and testing it - the development is reviewed at each stage of the project with senior management.

141. At this early stage, I recognised the application and task was beyond my experience really. I suggested a project team to put a plan together and work through the plan. I think I said more than once to Paul Evans that RS5000 needs its own resource - it was massive. My available time was limited.

142. "SPINN" meetings were regularly planned and it was an opportunity to sit down and talk about the progress of new product developments to senior management. Internal projects for new products and any challenges could be discussed and guidance given on how to move forward. I wanted to discuss RS5000 with senior management and explain the challenges the sales team were experiencing (document C_03536, (DB/31)).

143. Jonathan Roome had to work on major projects and focused on RS5000 but my understanding was that there was no process in place for the Specification Team (which at that time was only Jonathan Roome) to help customers such as architects and building designers with product's field of application. So I felt sympathy for him. He was a great source of market knowledge, he had contact with specialists and consultants who influence the design decisions. There was potential to learn more about the application, the design process and consideration and what was expected or wanted from a manufacturer. I asked him (in the previous email) about what was going on out in the market, what was his opinion and feedback? I explained I was attending a SPINN meeting and would use his feedback, so I asked him to prepare some slides for me to present. His slides are shown in document C_03540 (DB/32).

144. The slides show Jonathan Roome's understanding of the customers - he broke them down into three groups. He gave project examples and his opinion regarding next steps, that is: "Do nothing" and rely on organic growth, a "medium investment" option and a "large investment" option.

145. My understanding was that his "personal view" included further testing and working with a manufacturer to develop a system. He summarised that unless we were prepared to validate the use of RS5000 on projects (as one of our competitors was doing) then major projects in London were not really an option.

146. I presented Jonathan Roome's slides at the meeting in February 2015. I was playing my part in "team Celotex" (by which I mean playing my part representing the company), and was enthusiastic about trying to share direct market feedback with senior management. However I remember feeling confused by the slides so I'm not sure I would have

presented them with any real confidence or conviction. Ideally it would have been better if Jonathan Roome had presented them.

147. Document C_01402 (DB/33) shows my summary slides for RS5000 presented to the SPINN team in March 2015. The last page of those slides shows my key actions for the coming month, which are all focused on the new cavity wall product in development (CF5000). As I have said before, I really did feel the product (RS5000) required its own resource. The feedback from the sales team suggested we needed to do a lot more work understanding the market and how the product was used.

148. Written into the marketing action plan, the literature and website content were used as tools to communicate the messaging of RS5000 as well as the product details. I was asked to check or clarify information to the Marketing Communications Team. One such example is shown at document C_03472 (DB/34). In this email dated 17 December 2014 Lizzie Wignall (née Seaton) asked me to check some proposed wording in relation to the website. The proposed wording (cut and pasted in red in my email response) said RS5000 is suitable for use in warm steel frame buildings or fixed back to masonry for overcladding.

149. It is my understanding BS8414-2 is the full scale fire test when insulation is fixed back to a steel frame. The test to fix directly to masonry is BS8414 part 1. As we hadn't tested to part 1, the statement proposed wasn't accurate (hence my response in my email). I believe there is an understanding within the business that BS8414-2 test presents the worst case scenario therefore if you pass part 2 it automatically applied to part 1. I'm not sure where this has come from. Looking back now, I think I should have discussed it with Rob Warren or Jamie Hayes before sending the email.

150. Another example is shown in document C_01077 (DB/35) . Jonathan Roome highlighted a discrepancy with the details of the tested system within the literature. The literature stated the internal wallboard was two layers of 12.5mm but the test report showed two layers of 10mm thick.

151. My response is quite defensive because I didn't know which was correct. From my time working as a Technical Services Officer and building U-value calculations, a 10mm wallboard is unusual so 12.5mm seemed probable. I discussed this with Paul Evans and he asked me to contact the BRE and ask them to check the report. I don't think I did that. I was confused by it all and honestly didn't feel able to speak to the BRE and ask them to check the details. To this day I'm not sure of the thickness of the plasterboard used on the BS8414-2 test. It seemed unusual to use 10mm but that is what was signed off during development.

152. Paul Evans regularly had individual catch up meetings with all of his team. This provided another opportunity to discuss the strategy of RS5000. Document C_03676-7 (DB/36) shows an example of an agenda I put together for one of these meetings. The agenda is written in order of priority. The new product development for the full fill product (i.e. CF5000) took priority. I was asked to spend 75-80% of my time on the CF5000 project, after which my time was shared between Celotex IW5000 (which is an internal wall system specifically for the funded market) and RS5000, although RS5000 demanded more of my remaining time.

153. My recollection is that there was significant time pressure - the majority of the meeting was taken up talking about the new cavity wall product (CF5000) and then we would discuss headlines really. My activities around RS5000 which I fed back to Paul Evans at this meeting focused on understanding the NHBC opportunity and getting NHBC acceptance. Looking back now, with the benefit of hindsight I think it would have been better to have RS5000 as a separate priority, listing the importance of retesting and putting together a separate project team. At the time I was still finding my feet in the processes of product management.

Certification: My knowledge and involvement in considering and or obtaining certification

Involvement in discussions around RS5000 and a BBA certificate

154. When I became Product Manager there were no plans to obtain a BBA certificate for Celotex RS5000. It didn't feature in my handover from Jon Roper (document C_01024-5, (DB/37))

155. The feedback from the market suggested they wanted to see one. A BBA certificate gave assurance that a third-party has made an assessment and approved the product. It details the relevant regulations and testing undertaken along with design considerations and installation guidance.

156. The argument used by the sales team was extracted from the NHBC technical standards (see the email received from Jonathan Roome on the 22 October 2014 - document C_01395-6 (DB/38), which essentially states that RS5000 is not a "system" within those standards).

157. Page 4 of document C_01396 (DB/39) details a page within the NHBC standards. The paragraph Jonathan Roome quoted (as I read it) is the text under the heading 'Certification', 'rainscreen cladding systems…' where it says;

"Rainscreen cladding systems including panels, should have current certification confirming satisfactory assessment by an appropriate independent technical approvals authority accepted by NHBC, including: British Board of Agrément (BBA) or Building Research Establishment (BRE) Certification".

158. Jon Roper's email dated 27 November 2014 follows a similar argument (document C_02136 second page, (DB/40)). His approach to customers requesting BBA certificates was explained by a statement from '*Approved Document B*' linked with the BRE test report (2nd paragraph). Similarly to Jonathan Roome, NHBC technical standards are quoted to say they require either a BBA or BRE certification (3rd paragraph) and (4th and 5th paragraph) he refers to the Celotex BRE certification and the LABC certificate.

159. So my understanding is that the argument, or guidance, as to why a BBA certificate is not required for RS5000 is taken from NHBC standards and based on the fact RS5000 has been tested and a certificate produced by the BRE.

160. As I read the technical standard today, I think it is fair to point out that the paragraph from the NHBC technical standards quoted by the Sales Team is one of five. The third and fifth paragraph from the same page (page 4 of document C_01396, (DB/39)) read:

'Other certification bodies or test documentation may be acceptable if they are considered by NHBC to be a suitable alternative' (I think this may mean desktop studies)

and

'The use of a system should be within the scope of the certification and test documentation'

I think this is saying the materials used must be within the tested system shown on the certification and test documents.

Involvement in and understanding of the LABC certificate, and content of the certificate

161. The product (i.e. RS5000) was launched with a LABC certificate, I can't be sure if the certificate was produced before or after launch but I think it was probably at launch of the product as the certificate features in the marketing action plan as well as the launch presentations.

162. My involvement early on as a Product Manager was in relation to a revision of the certificate. Document C_02026-7 (DB/41) is an email from Jon Roper. He asked me to take out any references that RS5000 was the same product as FR5000.

163. The email at document C_02026-7 (DB/41) includes a proposed set of words. From the documents provided I cannot be confident that this was the final version as sent to the LABC but I believe I was involved in adapting the LABC wording from an earlier version. I remember feeling uncomfortable with this text and I said this to both Jamie Hayes and Jon Roper, pointing out that it was different to our literature.

164. I thought the text within the scope of registration (document C_02027 (DB/41A)), point 2 was misleading, specifically the first line of point 2 - 'test reports undertaken by BRE and BBA'. We didn't have a BBA certificate for the product.

165. Also, in the fourth line down - 'board comes in various thicknesses and can be used with a variety of cladding systems'. This wasn't correct. It was tested as part of a system and use outside of the tested system was not understood by Celotex and the Celotex literature said this should be taken into consideration by the designer.

166. I remember feeling that I did not like the particular wording used, and as I have said above, I told Jamie and Jon that – but this was a product which had already been launched and the wording had already been approved by others before me, so my understanding was it was already in use. I think I therefore found it harder to insist on changes. At the time I was still finding my feet as a Product Manager.

167. Looking back now, with hindsight, I think I should have challenged this wording more strongly.

168. From the documents available I do not know whether this revised wording was in fact adopted on the LABC website (document C_08711, (DB/42)). However, on 12 May 2015 the LABC sent an email to me at Celotex (document C_01292, (DB/42A)), in which they indicated that the wording used in earlier 'Registered Detail Certificates' had caused concern that there was an implication of global approval to the use of thermosets above 18m – they had therefore amended the wording of the certificate to make clear that "an appropriate classification report and/or supplementary report MUST evidence suitability of their proposed makeup" (see document C_01293 second page, (DB/42B)). I take this

to mean that the LABC certificate was therefore brought more into line with the Celotex literature – i.e. where the designed system varies from the tested system, any changes to the components listed will need to be considered by the building designer.

(4) At the time of the refurbishment of Grenfell Tower, had the RS5000 product been tested as part of a cladding system using ACM panels? If so, please provide full details.

169. I am unaware of the details or timing of the refurbishment of Grenfell Tower. Nevertheless, the following paragraphs set out my understanding of the details of any testing of RS5000 using aluminium panels, particularly by means of desktop studies.

170. The majority of customer queries to the Sales Team centred around confidence in the Celotex tested system and the use of the product outside its tested system. When the product was launched, the only process in place to respond to enquiries about using the product with other cladding systems (such as ACM panels) was to say, 'this is a consideration for the design team', as written in the literature.

171. Over time our customers wanted more assurances about the suitability of their designs that varied from the tested system. This proved challenging, as we were not in a position to know this. Celotex had not explored or understood the field of application or the use of the product outside of the tested system. The final assurances would still need to be signed off with Building Control.

172. The product was launched in August 2014 with the acceptance that anything that varies from the system Celotex tested to BS8414-2 is to be considered by the building designer. As I've said before, once we were active in the market with an application specific product, then people wanted to know how to use it. It's what took up the time I had available for RS5000 alongside my main work with CF5000, i.e. trying to understand how RS5000 could be used outside of the tested system.

BRE meeting 4 November 2014 – understanding the scope of the report

173. The BRE tested the system and issued the report prior to my involvement as Product Manager and I had had no role or involvement in that, so once I came into the Product Manager role, after discussions internally with Paul Evans and/or Rob Warren I set up a meeting for 4 November 2014 with Stephen Howard from the BRE (document C_01034, (DB/43)). I invited Jonathan Roome (document C_02131, (DB/44)), email dated 20 October 2014. I was so new to the role I needed someone there for support and someone more experienced to follow what was being said.

174. In that email I refer to "sensitive stuff". By that time I knew that summaries of the full 32-page report had already been created, which had removed any areas thought to be commercially sensitive . I have seen copies of such summaries in writing this statement. (I do not have "C_" references for these documents but can make copies available as DB/45 and DB/46). I had not been involved in the decision to summarise, nor the process of summarising, but I accepted that it was proper to have done this. In referring to "sensitive stuff" I was therefore referring to matters which had been removed in that summarising process.

175. From the notes at the bottom of the meeting request in document C_01034 (DB/43) I gave Stephen Howard a brief idea of what we wanted to talk about. The objective of the meeting was to explore what other cladding types would work with Celotex RS5000 - could the test data be extracted and applied on a theoretical basis? From this, the talking points listed at the bottom of the meeting request were 'to discuss use of RS5000 with CLT ("Cross-Laminated Timber") and timber frame, identify breadth of parameters for RS5000 use with cladding types, insulation thickness, helping hand systems, sheathing boards.' I've no doubt this list came from either Jamie Hayes or Jonathan Roome but I can't be sure who.

176. The meeting took place with Stephen Howard, Jonathan Roome and myself at the BRE in Watford. The outcome of the meeting was not as outlined in the previous paragraph.

An email to myself received from Jonathan Roome (document C_01265-6, (DB/47)) dated 5 November 2014 provides a summary of the actions from the meeting as understood by Jonathan Roome and document C_01266 (DB/48) is my summary of the meeting. They are almost the same in content.

177. In my summary of the meeting where Stephen Howard talked to us about the market. I've made notes of the impression I got (document C_01266 (DB/48)) and that is that the market is currently emotional and the focus is on life safety. I got the impression that all experts such as the BRE, NHBC and the BBA are sensitive to insulation sales being about sales as opposed to life safety. My impression was that this had come from the recent confusion caused by Kingspan K15's wide acceptance in the market and their BBA certificate showing the product is tested to BS8414-1 and not BS8414-2. I believe Kingspan were providing their own assessments to the suitability of the designed cladding systems.

178. Third-party accreditation bodies require more data in order to create certainty and acceptance of systems. Having heard this, Jonathan Roome and I discussed things, and again my impression of our internal discussion formed a suggested 'strategy,' and that was more testing to provide more data and so gain confidence with third-party approvals. In turn this would support a field of application.

179. The actions from the meeting are listed in both Jonathan Roome's email and my summary. They are much the same except mine include a consultation with Dave White from the NHBC on his thoughts. They involved gaining knowledge of standard systems, working with façade experts to help put together a testing regime and explore the cost and contract commitments for a BBA certificate.

180. As I write this today, the above is classic product development and an example of learning on the job. It's the background work required to understand what makes a product fit for purpose; what does it need to achieve; who will be using it; what influences their decisions? From an expert's point of view, for that moment in time, I believe Stephen Howard provided great insight. I don't know what he would have said

twelve months previously. To be fair the marketing plan 2015 referenced more testing of RS5000, but I think this was with a third-party and not internally by Celotex.

181. After the meeting and learning so much, I shared my learning with Paul Evans and Jonathan Roome, and I followed up with some of the actions. Jonathan Roome contacted Andrew Jones from Total Facades to pick his brain on standard systems and arrange a meeting (document C_03379, (DB/49)). He provided his fees to act as a consultant for Celotex. I don't think much came of it - document C_03478, (DB/50), an email chain in January 2015, shows internal conversations on another topic, but amongst it, I ask Jonathan Roome if we are still going to meet with the façade consultant? He replied 'the façade consultant would need to be appointed and paid for. I thought I had mentioned this to you and Paul last year'. He did, but Paul Evan's response when asked about paying for a façade consultant was 'let's discuss as part of our plans when we meet on the 19th' (document C_03379, (DB/49)).

182. It's a shame because the technical detailing Andrew Jones could have provided around the system, not just the cladding types but also what happened at windows and openings, cavity barrier layout as well as the different fixings would have developed our understanding of the system. He could have given us insights into the decision making and influencers as well.

183. I am not sure of the precise significance of document C_03362 (DB/51) but I believe this email shows one of the areas we were exploring and I think it shows the basis of our meeting with Stephen Howard at the BRE. We were exploring the possibility of switching out the cladding materials tested and replacing them with a cladding material of equal fire performance. Nigel Waring (an Area Sales Manager) is suggesting this as well but I go on to explain it is not as easy as that (2nd paragraph of my email).

Testing with Knauf

184. Third-party testing was written into the marketing strategy for 2015. My understanding of this is that we build a test with a partner to provide a system and test to BS8414-2 as well as the loadbearing test. Paul Reid (the then Sales Director at Celotex) was an ex-employee of Knauf I believe, and so I assume that existing relationships helped conversations when exploring this option with Knauf.

185. Paul Reid sent me an email (document C_03350-1, (DB/52)) dated 24 October 2014. Attached was a drawing of a proposed system drawn by Knauf. The system was for above 18m BS8414-2 testing and incorporated Knauf products and Celotex RS5000. I was asked to comment on it in Paul Evans' absence. In particular I was asked 'what potential this system has of passing the same above 18 metre test we have passed?'

186. I replied to Paul Reid's email on 24 October 2014 (document C_03357, DB/53). I'm sure I copied in Paul Evans but this is not clear from the copy of the email. I believe I had shown the design to Jamie Hayes for his thoughts at this point, and I may have rung Jonathan Roper for his thoughts too. But either way, my comments are after consulting with one or both of them. I provide some standard comments around the system design provided by Knauf. That is, I comment on the sheathing board, cladding, the use of insulation between the steel frame and the density of the cavity fire barriers.

187. I then refer Paul Reid to Paul Evans for the final decision. In my mind I was thinking that I could not answer Paul Reid's question about the proposed Knauf test passing the same test Celotex RS5000 did.

188. So on the 25 October 2014 (document C_03357, (DB/53)), I replied to Paul Evans only and shared with him what I had learned about the Celotex test during my handover with Jon Roper and my subsequent conversation with Jamie Hayes.

189. For clarity, I believe it was on 24 October that Jamie Hayes had first told me about his concerns about the Celotex test – this happened because I had raised the Knauf test with

him. To be clear on the sequence, I believe Jamie Hayes first voiced his concerns to me at this point i.e. 24 October and that we talked in more detail about his concerns a few days later, after he had sent me the 32-page BRE report. I believe he sent me that report on 27 October 2014 because in preparing this statement I have seen an email chain dated 27 October 2014 in which I said I did not have that report. Jamie then responded the same day by sending it to me. (I do not have a "C_" reference for that email chain but can provide a copy as (DB/54).

190. In my email of 25 October to Paul Evans (document C_03357, (DB/53)). I basically relayed the details of the Celotex test as I then understood them, based on my initial conversation with Jamie Hayes – 'design considerations included orientation of the board, the base board below the cladding that separates the fire chamber from the structure and also the thickness of the A2 cladding, we used a 12mm board'. Looking at that email now, I am not sure I had at that point understood the detail of Jamie Hayes' concerns but I knew he had concerns and I was trying to relay them. I had a more detailed conversation with Jamie Hayes after the 32-page report was sent to me on 27 October.

191. Paul Evans asked me to send the feedback to Paul Reid so I did, (document C_03357, (DB/53)). On 27 October both Paul Evans and Paul Reid replied by email to say they agreed this information would be protected within an NDA.

192. The whole topic of third-party testing seemed so risky. As I understood it then, Celotex didn't have experience of RS5000 passing a BS8414-2 test without the design tweaks. My confidence was low and working with an external partner while we tried to understand the system more seemed very uncertain. It is clear to me today that testing needs to be more internal as we try and understand the product scope.

193. In preparing this statement I have seen an email dated 18 February 2015 in which I returned to the topic of my concern about the Knauf test. (I do not have a "C_" reference for this email but can provide a copy as (DB/55)). In that email I again tried to summarise my reasons for that concern. As I have said earlier in this statement, in the wake of the

Jon Roper handover and the subsequent Jamie Hayes conversations (both of whom had raised concerns), it was the concerns Jon Roper had voiced to me which had stuck out for me. I believe that is why in this email I focused on the orientation of the boards; a Jon Roper concern based on the NHBC concerns. I also cut and pasted passages from the original Jon Roper handover (see document C_01025 (DB/10)) "considerations for future testing" which I reproduced in my email of 18 February 2015 (DB/55) The result was that to my knowledge the Knauf testing did not proceed – there was a desire to use desktop testing first (top of the email chain, 19 February 2015 (DB/55)).

A general overview of my role in commissioning and co-ordinating desktop studies, and my understanding of how they fit into the overall regulatory regime

194. My understanding is that when the proposed system varies from the tested system a desktop study can be used to assess the suitability of the proposed system. To begin with I spent time working with fire engineers at Exova in Warrington learning the basics - what was a desktop study, how does it work and what do the results look like?

195. I learnt more about the process and the information required by the fire engineers through experience over time, working on projects and with customers. My knowledge about the process developed in this way.

196. My role was really co-ordinating them; passing information on between the customer and the fire engineer. This proved really difficult at times because I didn't understand the level of detail that was being exchanged. Much later, this evolved to the fire engineer talking directly to the architect or building designer but still including Celotex in the conversations.

197. I raised purchase orders for Celotex to pay for desktop studies, which were approved by Joe Mahoney (Head of Development) when the cladding types were new to Celotex and a potential new area of learning, or by Paul Evans when the cladding was known to

Celotex and the desktop study was for commercial reasons. Being involved was a good way of staying close to the subject while we learnt more about RS5000's field of application.

198. To begin with, being so involved in the process was a really good learning experience but as desktop studies took off, I was less and less involved. The Specification Team wanted the customers to establish relationships directly with the fire engineers and not through Celotex. It was at this point that I said to my boss Paul Evans that if that happens we will lose sight of what's going on, so we discussed the need for a RS5000 project team - regular meetings between Sales, Technical and Marketing teams to talk and share information and manage the product. To my recollection it was set up in late 2016 or early 2017.

My understanding of the process for conducting desktop studies

199. My understanding is that a desktop study is done on the basis of documents and does not involve any physical testing. Instead, the proposed system is examined by the fire engineer and an early response is given as an indication to say if the report will be positive. Many assumptions are made by the fire engineer to provide this. The report is commissioned and all relevant technical details are shared with the fire engineer.

200. He then asks questions or the architect tweaks the design. This goes on until finally the report reflects the proposed design. The report is issued in draft and circulated to the customer for approval – which often results in more questions and changes. The report is then signed off by the customer. The report is issued with a report number.

My understanding of the decision to go down the desktop study route

201. As explained above, NHBC stands for the National House Building Council. My understanding is they offer a 10-year warranty on new build houses and as such have

their own set of technical standards which, to my understanding, go beyond the guidance offered in the Building Regulations. For example in a masonry cavity wall, Building Regulations will allow a 25mm residual clear cavity in sheltered areas of the country, whereas NHBC, in sheltered areas, will only accept a minimum of 50mm residual clear cavity. The wider the residual clear cavity the less chance there is of wind driven rain crossing the cavity. The build method associated with NHBC needs to be accepted by them - so it is also seen as an authority. It is therefore my understanding that the NHBC sets standards which are above the basic minimum. I also think it is fair to say they are interested in all aspects of housebuilding and it is my understanding they are seen as providing thought leadership into all aspects of the housebuilding world.

202. The housebuilding market is a key target audience as written in the company objectives and also the marketing strategy. Therefore NHBC acceptance of Celotex products is a key area of focus. Jon Roper mentioned NHBC in his product handover for RS5000 (document C_01024, (DB/11) and C_01025, (DB/10)). He said in light of the recent Kingspan test to BS8414-2 'it is imperative we find out how to support RS argumentation and conversations with Dave White @ NHBC'. He went on to cover our test report, saying that the NHBC "have a few reservations on our construction including the thickness of the cladding panel, the thickness of the sheathing board and the orientation of the external face" and 'Depending on the conclusion of NHBC's view, we may be required to re-test to be accepted for NHBC projects". Again, this was an emphasis on the NHBC concerns which Jon Roper had handed over to me and which had stuck out for me.

203. As mentioned earlier, Celotex had tested to BS8414-2 only once and NHBC had reservations about accepting RS5000. As I understood it, they after all offered a ten-year warranty and they manage risk on a daily basis. But importantly, in light of what was learnt when meeting with Steve Howard, they understood the application and project acceptance was about life safety, and they needed more assurances.

204. It was very difficult at the time because the product was live with a marketing strategy that said, 'project acceptance is outside of Celotex', NHBC had reservations about using Celotex and as a result they were not accepting it but the company focus was NHBC projects. In the background Paul Evans, Rob Warren and myself were meeting with NHBC trying to understand and satisfy their concerns.

205. Jonathan Roome's email to Rob Warren, Richard John with myself copied in (document C_01126, (DB/56)) email dated 18 June 2015) shows the pressure this situation created for Jonathan Roome who was customer facing. Jonathan Roome writes a set of words which basically says Celotex and acceptance on NHBC projects are a work in progress and until this is sorted out, customers should source another insulation type specific to above 18m projects.

206. Rob Warren replied initially (document C_01299, (DB/57)) to say wait for Paul Evans to return from holiday and then asked Jonathan Roome to send through a list of projects which may have a better chance of a positive result in a desktop study. I followed up with an email to Jonathan Roome (document C_01299, (DB/57)) to say we are working in the background to better understand their concerns and although I thought Jonathan Roome was right, as "team Celotex", I felt it conflicted with the messaging. The consequences would need to be discussed, and how it was implemented. I agreed with Rob Warren in principle that we should wait for Paul Evans to make the decision.

207. With the product in the market, our customers were engaging with desktop studies to seek NHBC acceptance independently of Celotex, which is outlined in the Marketing Strategy. Document C_02247 (DB/58) dated 10 July 2015 shows an email conversation between Elliot Mitchell (a Technical Manager for Linden Homes) and Martin Stearne (a Technical Manager for SIG Distribution). Linden Homes are planning a project (High Street, Sutton) and the building is going to be up to 43 metres tall. Elliot Mitchell says they will need a suitable product.

208. Martin Stearne replies (document C_02247 (DB/58)) and recommends three types, Kingspan K15, Rockwool and Celotex RS5000. He explains Kingspan K15 is too pricey

and the Rockwool will result in a thick wall build up which leaves Celotex RS5000. The email reads how Elliot Mitchell expresses concerns using RS5000 as previous experience meant NHBC would only accept it if it is tested in the arrangement it is to be used or backed up by a report and in this case it was a brickwork outer skin From this conversation the Distributor SIG suggested option 3 of the BCA technical note which is a desktop analysis. The email chain goes on to confirm this was done independently of Celotex, commissioned by the Linden Homes through Exova Warrington Fire.

209. The enquiry was later sent into the technical team, and then to Richard John and Paul Evans, as Exova required Celotex's permission to access the full BS8414-2 test. The email from Richard John in document C_02247 (DB/58) shows he has spoken to product management and this has been agreed. I don't remember this but he copied me in so I think Richard John is right. I would not have made this decision on my own.

The Celotex Exova Study in February 2015

210. It's actually really difficult to pinpoint who made the decision to engage with a fire engineer. I think initially it stemmed from wanting to learn more about Celotex RS5000 and its field of application and using an expert. This is why we contacted the BRE in the first place. My feeling today is testing internally was never really an option. I wasn't asked to pursue testing options for internal purposes, but I was asked to get involved with third-party testing opportunities such as Knauf (mentioned earlier in this statement). With the product live in the market and a wide range of cladding systems in the market, working with experts was thought to be a sensible and economical first step to understanding how the Celotex system worked with other cladding materials.

211. In much the same way as we approached the BRE with the intention of exploring the field of application, we approached Exova as well. Document C_03553 (DB/59) shows an action list dated 13 February 2015 from a recent SPINN meeting. This was the SPINN meeting at which I showed Jonathan Roome's slides (document C_03540, (DB/32)) The slides provided his gut feel for the market, his opinion, and some ideas for short, medium

and long term plans. The action point written is to continue work started with a fire engineer ("Warrington" i.e. Exova Warrington) and learn more about desktop studies (document C_ 03553, (DB/59)).

212. I initially made contact with Exova Warrington Fire before the SPINN meeting (document C_03544, (DB/60)) email dated 11 February 2015) The meeting invite was sent on 16 February 2015 to Andrew Evans and Frans Paap (both from Warrington Fire) and Rob Warren. The meeting took place on 20 February 2015 (document C_03543, (DB/61))

213. I don't have any notes to show the content of the meeting - I suspect Rob Warren made notes. Document C_ 02553 (DB/62) shows a diary entry dated 23 February 2015 to review RS and Warrington Fire. Document C_02668 (DB/63), dated 1 March 2015 shows another diary entry to put together an NDA and raise a purchase order, which I did. Craig Chambers signed the NDA, I believe.

214. My understanding of the first desktop study with Exova Warrington Fire was to learn how Celotex could work with other cladding types. The report, to my understanding, was for internal purposes only. It was a learning opportunity and thought to be more straightforward and simple than testing. My recollection is that the first report produced was shown (in its draft form) to the NHBC.

215. While it is right to say I knew of concerns in relation to the BRE testing and report (based on the Jonathan Roper handover and my subsequent conversations with Jamie Hayes), as I have explained, the concerns which stuck out for me were the Roper/NHBC concerns.

216. Dave White from the NHBC was very knowledgeable. Jon Roper during his handover had described him as difficult, plain talking and not very agreeable, so to some extent I inherited this impression as well. But it was important to Celotex that we had a relationship with NHBC so I rang Dave White to say we are in the process of getting a desktop study to better understand how it works with other systems and we would like

to get their thoughts. He sounded off at me for bit - he was annoyed because Jon Roper had asked the very same thing when developing the BS8414-2 test but then did something different in the actual test. I think this may have served to further focus my thoughts on the NHBC concerns as handed over to me by Jon Roper.

217. The selection of cladding types sent to Exova in March 2015, shown on document C_03585-6 (DB/64), is as a result of the conversation with Dave White. Again I learnt so much by talking to him. He explained they represent a range of options: the worst case/high risk scenario (which was the 3mm Aluminium façade with a Class O fire performance); the best case/low risk scenario (which was the 103mm brickwork which is non-combustible); the 8mm terracotta is cementitious but not as thick as the brickwork; and the cladding laminates represent fire rated cassettes such as Alucobond Plus. It was the first time I had thought of cladding boards in this way. I no doubt had internal conversations as well with Jamie Hayes and Rob Warren before sending over a summary to both Paul Evans and Craig Chambers listing the proposed build ups (document C_03583, (DB/65)). Paul Evans replied to say 'key to this is the brick outer system which could then be the quick win and open up some new project opportunities'.

The NHBC's letter re: compliance

218. Rob Warren sent an email (document C_01087-8, (DB/66)) dated 23 April 2015 with an attachment from the NHBC. The attachment was formal notice NHBC explaining the regulatory requirement for combustible materials used in buildings above 18 metres. That is, the insulation should be classified as limited combustibility or meet the performance requirements of BR135 for cladding systems using data from BS8414-1 or BS8414-2. It then goes on to detail the guidance provided within the NHBC technical standards and for the same application NHBC require compliance with Building Regulations and combustible insulation meeting the performance criteria of BR135.

219. Guidance is then provided as to the question of demonstrating compliance and this can be found within the BCA Guidance Note 18 – Use of combustible Cladding Materials on

Residential Buildings: Option 1 - The use of materials of limited combustibility; Option 2 – following BR135; and Option 3 – submission of a desktop study. They also gave a 4th option, namely fire safety engineering of the whole project.

220. No two projects are really the same. I became more aware of this reality over time, as I gained experience. We were aware of the BCA guidance note 18 'Use of combustible cladding materials on buildings exceeding 18m in height' and were in the process of firstly understanding how RS5000 worked with other cladding systems and secondly learning how a desktop study works.

How did this affect Celotex's marketing of RS5000?

221. Paul Evans' email document C_01285 (DB/67) dated 23 April 2015 is correct in the fact we couldn't give a definitive answer, however as I understand the email, he recognised project designs are individual and compliance is more than isolating the application from the overall design.

222. To the best of my recollection we did not sit down to review the marketing strategy at this point. I cannot really expand on the content of document C_01285 (DB/67).

Discussions with NHBC as the report progressed

223. The relationship with NHBC and their acceptance of Celotex RS5000 on NHBC projects was key to Celotex. Without it, working with Housebuilders becomes very difficult. When the Exova desktop study was eventually issued (see later in this statement), it seemed a breakthrough because finally we learnt from an expert how RS5000 worked with other cladding materials. The question was - what do we do now?

224. Document C_03667 (DB/68) is a meeting request from Paul Evans for a SPINN meeting on 5 May 2015. Document C_03668 (DB/69) is the agenda for the meeting. Fifteen minutes was allocated to give an update on RS5000. I honestly do not recall what was said or any conversations from the meeting. I know I thought we were finally getting somewhere because the formal guidance from NHBC meant there was a process in place to assess the suitability of a wide variation of cladding types. The Exova desktop study had been drafted (see para 226 below – we received it on 5 May 2015) and gave us an understanding of how the product worked with other cladding types. A meeting was scheduled with the NHBC for 19 May 2015 at the NHBC offices.

225. By this stage a process for project acceptance was emerging and this became the route "team Celotex" was driving. Conversations with the BRE about more testing to provide more data to support a field of application were becoming distant as our awareness of how regulations apply in reality and the recent NHBC guidance became more present. I now believe, looking back that I ended up going along with the direction of travel. At the time I felt enthusiastic about the potential breakthrough but now, with the benefit of hindsight I think this was a mistake. I feel I should acknowledge this.

226. When Frans Paap emailed the draft report on 5 May 2015 (document C_01099 (DB/70)), the email chain included some of his earlier comments from 10 April 2015: 'I have seen your report, and found the damage to the insulation larger than expected, which means I have to re-set myself in evaluating the alternative designs'. I didn't understand what this meant and just trusted this was part of the process. The report (document C_01100 (DB/71)) was informative in that it showed the first 3 cladding types assessed, when switched into the system, were expected to meet the performance requirements of BR135 and so comply with building regulations i.e. Design 1 – 103mm Brickwork, Design 2 – 8mm Terracotta, and Design 3 - Cladding laminates. However, Design 4 – Aluminium was not a positive outcome.

227. In hindsight, as I look back now, when we met with the BRE they referred to more testing required generally across the industry and not specifically from Celotex. Looking back now I think this may have suggested that the BRE did not like the Celotex test but they did not voice that specifically to me and Jonathan Roome at the time.

228. Rob Warren had emailed Graham Perrior, the standards and technical manager for the NHBC, (document C_01095, (DB/72)) on 27 April 2015 to arrange a meeting. He outlines the objective at page 2, second paragraph and that is to say, 'the update is most welcome on an area that is clearly a challenging one for us all when it comes to testing, interpretation and compliance.' He goes on to say, 'Celotex are keen to understand the compliance requirements of NHBC and, in light of your letter, we would like to meet with you, Dave White and any other relevant people to ensure that we are aware of any factors that we should consider as we continue product development and support of RS5000'.

229. On 18 May 2015 Paul Evans emailed an agenda (document C_01105-6, (DB/73)) which listed topics about: NHBC compliance requirements; Celotex progress since launch; Field of Application review; Current Celotex Projects, and; the process for future projects.

230. I was invited to the meeting. I had been working on the Exova desktop study and so my role was going to be to talk about the draft Exova report. As I became more experienced working with desktop studies I learnt the level of detail required for a desktop study. I was not an expert in the details to be able to explain them - I was just aware what was required for them. Looking back now I can see that the draft Exova report we went to the meeting with was not really a 'desktop study'. If you look at project Blackfriars which we worked on a year later (document C_02314-5 (DB/74) and document C_02379 (DB/75)) you can see the complexity of major projects and how each project is individual, making it difficult to apply a standard approach. By attending the NHBC meeting with just the Exova draft report we sort of demonstrated our lack of understanding about desktop studies.

231. The meeting did not go as outlined in the agenda. I remember it didn't go as we had hoped. We presented the draft report from Exova looking at the four different cladding types. NHBC expressed their concerns strongly about our lack of understanding about desktop studies. Firstly, they said that any assessments should take into consideration the whole of the project. Secondly, they were unhappy with the test. Dave White felt strongly about this and recalled his experience with Jon Roper during the development of the product (RS5000). Dave White was very disappointed, in his opinion the recommendations he provided Jon Roper for the BS8414-2 test appeared to have been ignored. The meeting fell apart after that. Dave White felt so strongly it made constructive conversations difficult. Today, I can understand why the meeting fell apart but at the time we just felt frustrated about how the meeting had gone. It felt like Dave White's anger had got in the way of any kind of constructive meeting. We left the meeting a little bit stunned if I'm honest. The strength of their feelings towards Celotex bought us all back down to earth. I honestly don't recall what Paul Evans or Rob Warren said. We had travelled to the meeting in separate cars.

232. Document C_02810 (DB/76) is my handwritten note. I think it's just a to-do list, it includes the date of the NHBC meeting (19 May) but other than that has nothing to do with the meeting. I am not able to elaborate on anything else on that page.

233. Document C_02650 (DB/77) looks like my handwritten note from the NHBC meeting on the 19 May 2015. My notes reflect the focus of NHBC at the meeting: 'technical standards, gapping in rainscreen, air supply, Frans etc'. They wanted to know about the air supply i.e. no gaps between the boards and the expectation of 8-6mm gap in the rainscreen. Their attention was focused on the gaps, the air supply and the assumptions made by Frans Paap in his assessment, particularly had he factored in the lack of gaps in his assessment. At the bottom I wrote Xtratherm window openings (Xtratherm are another insulation manufacturer). One of the NHBC people at the meeting was talking about how our desktop studies should go into details such as the window openings, that's

why I have noted that down. Before that I hadn't appreciated that that was the level of detail the desktop studies required.

234. In response to the meeting, Paul Evans sent an email (document C_02241, (DB/78)) to Graham Perrior. He attached the full BS8414-2 test report and the draft Exova desktop study, and said we will speak to Exova with regards to the assumptions they made on the full test report to generate the desktop study. He also asked, 'in the meantime, based on the desktop study, if you could please confirm the NHBC position on RS5000 in use with a brick outer build up'. Graham Perrior replied (document C_01110, (DB/79)).

235. It was a confusing time. The NHBC had just asked some serious questions about the BS8414-2 test and at the same time Paul Evans asked the NHBC their position on the use of RS5000 with a brickwork outer build up. The question of the suitability of brickwork with Celotex RS5000 is asked again by email dated 25 May 2015 from Paul Evans (document C_ 01124, (DB/80)) to which Graham Perrior replies (document C_01122, (DB/81)). In his reply (document C_01123, (DB/82)) Graham Perrior provided a full written explanation of what was said at the meeting, that is: that they would like to understand the basis of Exova's assessment; wanted to know if it took into account NHBC understanding of the BS8414-2 test; that NHBC's main concerns were that the test was not representative of a typical rainscreen cladding system because of the lack of gaps between the cladding boards and reduced ventilation behind the cladding.

236. In the meantime I sent an email (document C_03685 (DB/83)) dated 22 May 2015 to Frans Paap. I had spoken to him on the phone and explained the meeting with NHBC and the outcome. The email describes the lack of ventilation gaps between the cladding boards and asks what assumptions he had made in his assessment of RS5000 and a wider field of application. I remember feeling at the time as if I had been thrown back to when I first started work as a Product Manager and learnt of the test details i.e. the concerns about the gapping as voiced to me by Jon Roper. The email I sent to Frans Paap felt like it would answer my concerns about the test as I understood them at the time.

237. Paul Evans replied to Graham Perrior by email dated 12 June 2015 (document C_01124, (DB/80)). Paul Evans quoted Frans Paap explaining "We have not used any "model" of a ventilated rainscreen façade fire, but the detailed description in the test report, which describes a fire spread through the insulation layer, as well as clear cracking of the cladding boards from about 15 minutes onward. Based on this description, and our experience in fire tests and our knowledge about the alternative construction materials, we have presented arguments and conclusions why it can be reasonably expected which alternative constructions can be expected to meet the performance requirements of the BR135.''

238. Frans Paap replied to my email (document C_03707, (DB/84)) saying he hadn't addressed the joints configuration in the test set up, he confirms the dimensions of boards and steel frame set up means they were installed with no vertical joint. He describes how fire spread was influenced by cracking of the boards and heat transfer rather than failure of the joints.

239. On 12 June 2015 I forwarded the response I received from Frans Paap to Graham Perrior as well (document C_01125 (DB/85)) because it has additional technical information and I wanted him to have as much information as possible.

240. As I have said earlier in this statement, although I had been made aware of the Jon Roper / NHBC concerns and subsequently Jamie Hayes' concerns, at the time the concerns which stuck out for me were the Jon Roper / NHBC concerns. I passed the Jon Roper / NHBC concerns on to Exova and indeed passed on Exova's views to the NHBC (document C_03707, (DB/84), document C_01125, (DB/85)). However, I did not pass on the Jamie Hayes' concerns to Exova because the focus on the Roper/NHBC concerns meant they had receded from my mind. I feel for Frans Paap at Exova and Exova in general because with hindsight I can now see that they engaged with us without having the full story.

241. I note that the Exova report (document C_01100 (DB/71)) refers to a 40mm ventilation gap (see p.5 of the report) whereas the BRE report gives the figure as 54mm. I have no idea where Exova got the figure of 40mm figure from – they had the BRE report which gave the 54mm figure.

(5) To what extent, if at all, was Celotex involved in the selection of materials for use in the refurbishment of Grenfell Tower?

242. I do not know about Celotex's involvement in the selection of materials for use in Grenfell Tower.

(6) At the outset and throughout the refurbishment works:

a) What information did Celotex provide about its products and their suitability for use to those involved in the refurbishment of Grenfell Tower?

243. I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

b) On what basis was any such information provided – please give full details of e.g. any relevant testing of such Celotex products?

244. I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

c) What information, if any, did Celotex have about the proposed refurbishment of Grenfell Tower and the other materials to be used in the façade?

245. I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

d) What consideration was given to whether the use of Celotex RS5000 as part of the façade of Grenfell Tower would comply with the relevant Building Regulations and associated guidance?

246. Again I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

e) Did anyone at Celotex form a view as to whether the design of the façade of the Tower complied with the relevant Building Regulations and associated guidance, in particular the parts of the Building Regulations relevant to fire safety?

247. I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

f) If not, why not?

248. I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

g) If so, what was that view?

249. I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

h) Did Celotex rely on any advice from third parties about the compliance of the design of the façade of the Tower with the relevant Building Regulations and associated guidance, in particular the parts of the Building Regulations relevant to fire safety? If so, what was the nature of that advice?

250. I cannot assist in answering this question in terms specific to the Grenfell Tower refurbishment as I had and have no knowledge of this.

(7) Are you aware of any further testing of RS5000 that has been carried out since the refurbishment work (including after the fire) by or on behalf of Celotex? If so, what has that further testing shown?

251. I was not directly involved with RS5000 after 14 June 2017. I was therefore not involved in anything to do with further RS5000 testing, including BS8414-2 testing.

252. I recall that discussions about RS5000 after 14 June 2017 were kept strictly confidential within a small internal team that I was not part of. However, I was aware of a rumour about RS5000 being re-tested. I was naturally curious about any further testing commissioned by Celotex. I remember asking Matthew Rhodes informally in April / May 2018. I asked him if RS5000 had been re-tested, he said something like "I can't say, Debbie". In response I said something like "When was it tested then?" and Matthew Rhodes smiled and said, "I can't say". I persisted and asked, "Did it pass the test?". I remember Matthew Rhodes replying, saying "Well, let's just say it wasn't a bad result". I took that to mean that RS5000 had been re-tested and it had passed. I recall Celotex made an announcement, shortly after my conversation with Matthew Rhodes, to say that the product had been re-tested and had passed.

253. I understand from publicly available documents that the Grenfell Tower refurbishment occurred in 2014/2015. The RS5000 Class O testing was carried out in 2017 and was therefore post- refurbishment. I set out my knowledge of the O class testing and my knowledge of any third-party testing in the next section of this statement. While these tests were carried out after the refurbishment, there is nothing to my knowledge that linked the tests with the refurbishment.

Class O tests

254. My understanding is that Class O involves two tests: I believe they are BS476-6 and BS476 – 7. One tests for surface spread of flame (BS476-6) and the other for fire propagation (BS476-6). Both tests need to be passed in order to claim Class O certification.

255. The original class O testing I believe was performed on FR5000 either in 2009 or 2011 and my understanding is that it achieved Class O status. My understanding is that RS5000 is essentially the same product as FR5000, they are just marketed differently. I was told that because FR5000 had passed the test, RS5000 would have the same fire class i.e. Class O.

256. During 2016, the market was asking for test data for Celotex RS5000 and in particular the Euro-class (i.e. a European fire classification). We were the only above 18 metre product on the market without a Euro-class.

257. During 2017 Exova conducted fire tests on RS5000 to ascertain its Euro-class classification. My involvement in this was to provide a quote, raise the purchase order and book the tests which is what I did for the Exova tests. Dr Sarah Dane, from the development team, arranged the production and delivery of the samples to Exova. The test took place and the results were forwarded to me, I then emailed the results to Joe Mahoney, head of R&D. I then forwarded to Sarah Dane product description tables from Exova for reporting purposes, so that they knew how to describe the product and the composition of the product in their reports. Joe Mahoney wanted to check what Sarah Dane had written before these were sent back to Exova. From this the reports and classification were produced (see documents C_09528 (DB/86) to C_09539 (DB/87)).

258. In 2016, fire engineers wanted to see more fire test data i.e. the Class O test. In light of that it was thought by people like Rob Warren that RS5000 should have its own test certificate as opposed to using data from 2009/2011 which related to FR5000. My involvement with Class O was simply to get a quote from Exova (document C_03931, (DB/88)) and pass that on to Sarah Dane, Development Chemist at Celotex, to compare with the quote she had received from the BRE.

259. I understand that the Development Team at Celotex sent off some RS5000 product samples to the BRE for testing. As I recall the results of those tests were that the samples did not achieve a Class O pass. At that time I did not know why the samples did not pass the Class O tests, I still do not know with any certainty why they did not pass. However, looking back now, I can recall a conversation with Rob Warren at about the time when he was advising that we needed to test RS5000. Rob Warren mentioned to me that at some point after FR5000 had achieved its Class O status, the supplier had changed the raw materials. He told me that a comfort letter had been provided by the supplier as an assurance that the new material performance was equal to the material that it replaced. Rob Warren wanted to test this to be sure. To be clear, I had no involvement in this, I am relying on a faded memory of a conversation with Rob Warren dating back to about 2016, prior to the Class O retest.

260. Document C_02070 (DB/89) is an email exchange between Joe Mahoney (Head of R&D at Celotex) and myself in February 2017. I think we are talking at cross purposes - at the time I did not know what Joe Mahoney meant. Looking back at it now I still don't understand what Joe Mahoney meant. My understanding at the time and now is that the chemicals making up the core were bought by Celotex as a Class O formula and that formula then became the foam core of the product. I therefore don't understand what Joe Mahoney meant when he said about the core not being Class O. I do not recall discussing this further with Joe Mahoney.

261. Generally speaking I had very little involvement in the testing other than that I attended meetings when it was being discussed.

STATEMENTS

262. In making this statement, I have relied on my own knowledge. Where I have relied on information provided by others I have stated that this is the case and that I believe the

information to be true. This statement is my own independent account of my knowledge and understanding of the topics relevant to the issues being considered by the Inquiry. I believe that the facts stated in this witness statement are true.

263. I am willing for this statement to form part of the evidence before the Inquiry, however, I do not consent, at this stage, to this statement being published on the Inquiry website.

Signed Debbie Berger.

Dated 25th October 2018.